
EXTENDED PHASE 1 HABITAT SURVEY

Land off Swallow Lane, Golcar

Jones Homes (Yorkshire) Ltd.



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Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals upon which this report was based on.

Report Reference & History: Document 1, V2.

Issue Status	Prepared by:	Approved / Date
Version 1	Dr Caroline Hillier MCIEEM	10/06/2020
Version 2	Charlotte Mercer M.Sc, B.Sc (Hons)	21/08/2020
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EXECUTIVE SUMMARY

CONTENTS	SUMMARY
Site Location	An area of land off Swallow Lane, Golcar, Kirklees, HD7 4NB
Approximate Central Grid Reference	SE 09262 15996
Development Proposals	Site clearance and construction of 19 dwellings and associated infrastructure
Scope of this Survey(s)	Extended phase 1 habitat survey including a risk assessment for protected / notable species and invasive species. The survey was undertaken to identify any potential ecological constraints to development of the site and provide advice for works to comply with UK and /or European nature conservation legislation.
Designated Sites	<p>There are two statutory sites of International conservation interest within 5km of the site; South Pennine Moors SAC and South Pennine Moors Phase 2 SPA</p> <p>There are four non-statutory sites within the 2km search area, as well as an area of Ancient woodland and Kirklees Wildlife Habitat Network.</p>
Priority Habitats	<p>There are two UK BAP, NERC S. 41 or Kirklees BAP priority habitats within or immediately adjacent to the survey area:</p> <ul style="list-style-type: none"> · Hedgerows · Scrub
Protected / Priority Species	<p>The site supports, or has the potential to support the following protected and priority species:</p> <ul style="list-style-type: none"> · Foraging bats · Birds/nesting birds
Invasive non-native species	Two species listed on Schedule 9 are present within the site giant hogweed and montbretia.
Recommendations for Further Survey	<ul style="list-style-type: none"> · Tree survey; · Arboricultural Impact Assessment;
Reasonable Avoidance Measures	<ul style="list-style-type: none"> · Retain peripheral trees and hedgerows where possible, implement measures to prevent root damage to these features using the Arboricultural Impact Assessment; · Avoid vegetation clearance during the bird nesting season (March until August (inclusive) or, if necessary, preceded by a search for nesting birds by a suitably qualified and experienced ecologist; · Avoid illuminating retained or adjacent habitat (hedgerows and trees) within or adjacent to the site

	<ul style="list-style-type: none"> Contractors to be made aware of the potential presence of hedgehogs, which if encountered should be carefully moved to a 'safe area'.
<p>Recommendation for enhancements to the site</p>	<p>Landscaping of the site should provide:</p> <ul style="list-style-type: none"> Areas of native planting of local provenance where possible; Use of plants which bear berries / seeds where possible; Bird boxes (sparrow terraces – birdbrickhouses / schwegler or similar) to be incorporated into the walls of at least 5 of the properties; Bat boxes: Habibat / birdbrickhouses or similar to be incorporated into at least x 5 of the properties; Hedgehog highways consisting of 15 x 15cm gaps will be incorporated into the fences of the properties to allow hedgehogs to forage across the gardens.

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1.0 INTRODUCTION

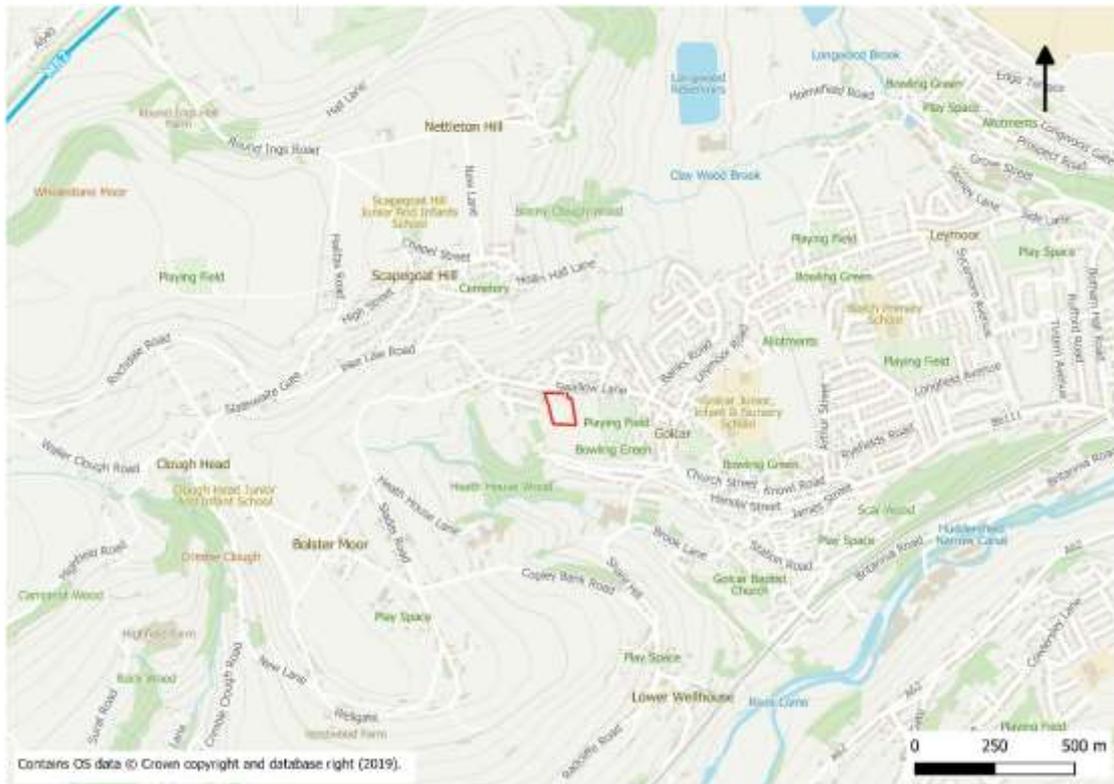
- 1.1 Applied Ecological Services Ltd. was commissioned by Jones Homes (Yorkshire) Ltd. to undertake an Extended Phase 1 Habitat Survey of an area of land off Swallow Lane, Golcar, Kirklees, HD7 4NB. The purpose of the survey was to map and identify habitats and species that are present within the site boundary and to provide baseline data regarding the site and highlight areas for further investigation that may provide a constraint to development. This report presents an assessment of these potential ecological constraints to redevelopment based on the results of the survey, along with recommendations for further, more detailed surveys to be undertaken, as appropriate.
- 1.2 The land within the site boundary at Golcar covers an area of approximately 0.74ha (1.83 acres) shown with a red line boundary on **Figure 1**. The site is situated to the south of Swallow Lane, to the west of the Town of Golcar and approximately 5.0km to the west south west of Huddersfield. The centre of the potential development site is at OS grid reference SE 09262 15996.
- 1.3 The proposed development site comprises a garden with amenity grassland and ornamental beds, scrub and hedgerows, an access road, and several buildings.

2.0 THE PROPOSED DEVELOPMENT

SITE LOCATION

- 2.1 The proposed development area (red line boundary) covers approximately 0.74ha (1.83 acres) and is located at grid reference SE 09262 15996 (approximate central point).

Figure 1: Site Location



- 2.2 It is understood that the development proposals include the redevelopment of the site to provide a small-scale residential scheme comprising 19 dwellings.

3.0 SURVEY AND SITE ASSESSMENT METHODS

DESK STUDY

3.1 In order to compile existing baseline information, relevant ecological information was requested from the following organisations which for the purposes of this report, included:

- Multi Agency Geographic Information for the Countryside (Magic) website, and
- West Yorkshire Ecology (WYES).

3.2 A 5km radius from the centre of the site was searched for sites of International nature conservation importance, such as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). A 2km area was searched for statutory sites of national, regional and local importance, such as Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves (LNRs). WYES returned information for the presence of non-statutory designated sites such as Local Wildlife Sites (LWS) and also for records of protected and priority species within 2km of the site boundary.

3.3 Further inspection, using colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk), was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider area.

FIELD SURVEY

HABITATS / FLORA

3.4 The site was surveyed on 13th May, 2020 by Dr Caroline Hillier MCIEEM. Caroline is senior ecologist at Applied Ecological Services Ltd. (AES-LTD) and an experienced field biologist. Caroline holds Natural England Survey licences for both bats (2015-155181-CLS-CLS) and great crested newt (2015-16700-CLS-CLS). The habitat survey was undertaken using the standard Extended Phase 1 Habitat Survey methodology (JNCC, 2010)¹ as recommended by Natural England to identify specific habitats of ecological interest. Target notes were used to record features of interest or specific habitats and species identified during the survey.

¹ JNCC, (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit

Whilst a species list should not be regarded as exhaustive, sufficient information was gained during the survey to enable classification and assessment of major habitat types.

- 3.5 Any habitats suitable for, or features with the potential to support, protected or notable species were also assessed and recorded.
- 3.6 Checks for notifiable plant species, such as Japanese knotweed *Fallopia japonica* were also made during the survey.

SURVEY LIMITATIONS

- 3.7 There were no limitations associated with the habitat survey.

SITE ASSESSMENT

- 3.8 In order to determine the value of the habitats and species found throughout the surveys detailed above, the baseline and survey results were assessed against the criteria in **Table 1**, below:

Table 1: Hierarchy of Receptors

Designation
International (Europe);
National (UK);
Regional (Yorkshire & The Humber);
County/District (Kirklees);
Local (up to approximately 2km from the Proposed Site);
Less than local or value in the Proposed Site only

- 3.9 Receptors of less than local value are referred to as being of 'less than local' value. Effects are only assessed for receptors of sufficient value that impacts upon them could be significant in terms of either legislation or policy, i.e. in this case, those considered to be of local, or greater, ecological value.

4.0 RELEVANT LEGISLATION & POLICY

LEGISLATION

HABITAT REGULATIONS

- 4.1 The Conservation of Habitats and Species Regulations 2017 transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb² wild animals listed under Schedule 2) of the Regulations (such as all bat species and great crested newts). It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

WILDLIFE & COUNTRYSIDE ACT

- 4.2 The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CROW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention, making it an offence to:
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection; and
 - Pick or uproot any wild plant listed under Schedule 8 of the Act. Sites of Special Scientific Interest (SSSI) are designated under this Act.

POLICY

NATIONAL PLANNING POLICY FRAMEWORK

- 4.3 The Government published the revised National Planning Policy Framework (NPPF) in February 2019. This sets out new guidance for local authorities, focusing on helping to produce planning policies that are clear and easier to understand. The NPPF is effective

² Disturbance, as defined by the Conservation of Habitats and Species Regulations 2017, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

immediately; however, the local plans are still valid, for the time being, even if they have been produced prior to the revised NPPF. There is emphasis on the need for economic growth through designing planning policies which are in favour of development but this will not be achieved in isolation from social and environmental development.

- 4.4 Section 11 sets out policies to promote an effective use of land in meeting the needs for homes and other uses, whilst safeguarding and improving the environment and ensuring safe and healthy living conditions. Section 11 states that strategic policies should be clearly set out that makes as much use as possible of previously-developed or brownfield land. Section 13 draws attention to the importance that the Government attaches to Green Belts. The fundamental aim of the Government is to prevent urban sprawl by keeping land permanently open. Section 15 sets out the requirements for conserving and enhancing the natural environment. The NPPF asks that valued landscapes are protected and enhanced. Sites of biodiversity or geological value and soils are protected commensurate with their statutory status or identified quality in the local development plan. The document also requires the recognition of the intrinsic character and beauty of the countryside, maintaining the character of the undeveloped coast whilst improving public access to it where appropriate and most importantly minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. It also asks that new and existing development is prevented from contributing to, or being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air water or noise pollution or land instability. It is demanded that development should wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans. Finally, it requires that where appropriate remediating and mitigation of despoiled, degraded, derelict, contaminated and unstable land is carried out.
- 4.5 The Framework is guidance for local planning authorities on the content of their Local Plans but is also a material consideration in determining planning applications. The NPPF and revised NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. However, the government circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System, which accompanied PPS9 remains valid.

BIODIVERSITY ACTION PLANS / BIODIVERSITY 2020

- 4.6 The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A list of national priority species and habitats has been produced with all listed species/habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.
- 4.7 The '[UK Post-2010 Biodiversity Framework](#)', published in July 2012, succeeds the UK BAP and 'Conserving Biodiversity – the UK Approach', and is the result of a change in strategic thinking following the publication of the CBD's '[Strategic Plan for Biodiversity 2011–2020](#)' and its 20 'Aichi Biodiversity Targets', at Nagoya, Japan in October 2010, and the launch of the new [EU Biodiversity Strategy \(EUBS\)](#) in May 2011. The Framework demonstrates how the work of the four countries and the UK contributes to achieving the Aichi Biodiversity Targets, and identifies the activities required to complement the country biodiversity strategies in achieving the targets. The UKBAP is no longer an active strategy, and has been replaced by biodiversity strategies in England, Northern Ireland, Scotland and Wales. While the UKBAP is no longer an active policy, species listed on the UKBAP have been incorporated into the new biodiversity strategies for each country. In England under Biodiversity 2020: A strategy for England's wildlife and ecosystem services and under section 41 of The Natural Environment and Rural Communities (NERC) Act 2006, where UKBAP species were recognised as of principal importance for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their function. This is commonly referred to as the '**biodiversity duty**'.

LOCAL DEVELOPMENT PLANS

- 4.8 County, District and Local Councils have Structure Plans and other policy documents that include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions. Kirklees adopted Local Plan (February, 2019) makes various references to biodiversity including:

Natural Environment

- 4.9 The National Planning Policy Framework (NPPF) recognises that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interests and soils and minimise impacts on biodiversity, providing net gains in biodiversity where possible. Local authorities should also plan positively for networks of biodiversity and green infrastructure. A key objective of the Local Plan and the locally distinctive qualities which contribute to its character, including the district's varied landscapes and natural assets.
- 4.10 Kirklees contains a natural environment of very diverse character and varied landscapes. Extensive areas and a large number of sites are designated and protected for their biodiversity and geodiversity importance. At an international level, the South Pennine Moors Special Protection Area (SPA) has the highest level of statutory protection being of European importance for several upland breeding bird species and is also designated a Special Area of Conservation (SAC). The South Pennine Moors SPA/SAC is also a Site of Special Scientific Interest (SSSI). There are a further two SSSIs in Kirklees and many important local wildlife and geological sites.
- 4.11 The Wildlife Habitat Network in Kirklees has been identified by West Yorkshire Ecology and connects designated sites of biodiversity and geological importance and notable habitat links. It is intended to protect and strengthen ecological links within the district and to adjoining authorities.
- 4.12 Some of these areas have been identified as strategic green infrastructure through Natural England's Yorkshire and the Humber Green Infrastructure Mapping Project. These provide defined networks of accessible greenspaces and natural habitats which occur within, and connects, towns and villages and comprise the river corridors and the South Pennine Moors SPA/SAC.
- 4.13 The landscape of Kirklees is diverse and a number of distinct landscape character types have been identified throughout the district in the Kirklees Landscape Character Assessment 2015, ranging from moorland to industrial lowland valleys. In the west, upland moorland provides a continuation of character from the Peak District National Park which provides a nationally important landscape and backdrop to many views throughout Kirklees. Further

east, there is a transition to mature farmland and wooded river valleys of the Colne, Holme, Fenay Beck and the Dearne and rural moorland around Emley Moor and Flockton Moor.

- 4.15 The policies in the Plan will ensure the protection of the special attributes of these areas and seek to protect the areas of highest biodiversity and the best examples of local habitat types. The council recognises the importance of protecting and enhancing the hierarchy of international, national and locally designated sites and aims to conserve and enhance biodiversity through development proposals. It is important to ensure that development is also sensitive to its location and considers its impact on the landscape character of the area and on important trees.

Policy LP30 - Biodiversity & Geodiversity

- 4.16 **Biodiversity & Geodiversity** - The council will seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network.
- 4.17 **South Pennine Moors** – Proposals which may directly or indirectly compromise achieving the conservation objectives of a designated or candidate European protected site will not be permitted unless the proposal meets the conditions specified in Article 6 (3) - (4) of the Habitats Directive. Statutory Designated Sites Statutory designated sites, including the South Pennine Moors Special Protection Area (SPA) and Special Area for Conservation (SAC) and Sites of Special Scientific Interest, are already highly protected through existing laws and legislation. In accordance with legislation, the Council will seek to ensure that harmful impacts to these areas as a result of development proposals are avoided. Development proposed within or outside a Site of Special Scientific Interest, likely to have an adverse effect on the site's special nature conservation features, will not normally be permitted. Exceptionally development will be allowed where the benefits of the development clearly outweigh the impacts on the site's special conservation features and measures are provided to mitigate harmful impacts.
- 4.18 **The Dark Peak Nature Improvement Area** - Proposals that contribute to the aims and objectives of the Dark Peak Nature Improvement Area will in principle be supported, subject

to other policies in this plan. Development likely to have an adverse impact on the aims and objectives of the NIA will not be permitted.

4.19 Local Designated Sites & Important Local Ecological Features - Proposals having a direct or indirect adverse effect on a Local Wildlife Site or Local Geological Site, Ancient Woodland, Veteran Tree or other important tree, will not be permitted unless the benefits of the development can be clearly shown to outweigh the need to safeguard the local conservation value of the site or feature and there is no alternative means to deliver the proposal. In all cases, full compensatory measures would be required and secured in the long term.

4.20 Habitats and Species of Principal Importance - Proposals will be required to protect Habitats and Species of Principal Importance unless the benefits of the development clearly outweigh the importance of the biodiversity interest, in which case long term compensatory measures will need to be secured.

4.21 Biodiversity and Development - Development proposals will be required to:-

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

Policy LP31 Strategic Green Infrastructure Network

- 4.22 Within the Strategic Green Infrastructure Network identified on the Policies Map, priority will be given to safeguarding and enhancing green infrastructure networks, green infrastructure assets and the range of functions they provide.
- 4.23 Development proposals within and adjacent to the Strategic Green Infrastructure Network should ensure:-
- (i) the function and connectivity of green infrastructure networks and assets are retained or replaced;
 - (ii) new or enhanced green infrastructure is designed and integrated into the development scheme where appropriate, including natural greenspace, woodland and street trees;
 - (iii) the scheme integrates into existing and proposed cycling, bridleway and walking routes, particularly the Core Walking and Cycling Network, by providing new connecting links where opportunities exist;
 - (iv) the protection and enhancement of biodiversity and ecological links, particularly within and connecting to the Kirklees Wildlife Habitat Network. The council will support proposals for the creation of new or enhanced green infrastructure provided these do not conflict with other Local Plan policies.

Policy LP32 Landscape

- 4.24 Proposals should be designed to take into account and seek to enhance the landscape character of the area considering in particular:
- a. the need to protect the setting and special qualities of the Peak District National park, views in and out of the park and views from surrounding viewpoints;
 - b. the setting of settlements and buildings within the landscape;
 - c. the patterns of woodland, trees and field boundaries;
 - d. the appearance of rivers, canals, reservoirs and other water features within the landscape.

Policy LP33 Trees

- 4.25 The Council will not grant planning permission for developments which directly or indirectly threaten trees or woodlands of significant amenity. Proposals should normally retain any valuable or important trees where they make a contribution to public amenity, the

distinctiveness of a specific location or contribute to the environment, including the Wildlife Habitat Network and green infrastructure networks. Proposals will need to comply with relevant national standards regarding the protection of trees in relation to design, demolition and construction. Where tree loss is deemed to be acceptable, developers will be required to submit a detailed mitigation scheme.

LP34 Conserving and enhancing the water environment

4.26 Proposals must:

1. Ensure no deterioration of watercourses or waterbodies (including groundwater) by conserving and, where practicable, enhancing:
 - a. the natural geomorphology of watercourses, including reinstating watercourses to their natural state through removal of modifications resulting from past industrial uses;
 - b. water quality; and
 - c. the ecological value of the water environment, including the functionality of habitat networks.

2. Ensure Source Protection Zones are protected from contamination as a result of the proposal in line with national guidance.

3. Dispose of surface water appropriately (in accordance with the Local Plan drainage policy) adhering to the following networks in order of preference:
 - a. to an infiltration-based system wherever possible (such as soakaways);
 - b. discharge into a watercourse with the prior approval of the landowner, navigation authority or Environment Agency, where applicable. To comply with part 1 of this policy this must be following treatment where necessary or where no treatment is required to prevent pollution of the receiving watercourse;
 - c. discharge to a public sewer.

Proposals are encouraged to:

4. Make positive progress towards achieving 'good status or potential' under the Water Framework Directive in surface and ground waterbodies.

5. Manage water demand and improve water efficiency through appropriate water conservation techniques including rainwater harvesting and grey-water recycling as well as considering water availability from surface water and ground water sources.

6. Improve water quality through the incorporation of appropriately constructed and maintained Sustainable Drainage Systems and surface water management techniques taking into account the sensitivity of groundwater.

NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT (2006)

4.27 Public authorities have a duty to conserve biodiversity under the Natural Environment and Rural Communities (NERC) Act, which came into force in 2006. This states that ‘any public body or statutory undertaker in England and Wales must have regard to the purpose of conservation of biological diversity in the exercise of their function and that decisions of public bodies work with the grain of nature and not against it’ (Part 3, Paragraph 60). The Act also includes a range of measures to strengthen the protection of wildlife and habitats.

WILDLIFE LEGISLATION

4.28 In addition to the above, a range of legislation is in place to ensure that habitats and species of conservation importance are protected from harm, either directly or indirectly. A summary of this legislation is given in **Table 2**.

4.29 Due to its location the site may have the potential to support or provide habitat for a number of those species protected by the various pieces of legislation summarised in **Table 2**. A summary of the key legislation for protected species is given in **Table 3**.

Table 2: Overview of Key Legislation

Legislation	Relevance
The Conservation of Habitats and Species Regulations 2010	<p>This transposes the EC Habitats Directive 1992 (<i>Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna</i>) and the EC Birds Directive 1979 (<i>Council Directive 79/409/EEC on the protection of wild birds</i>) into UK law.</p> <p>Annexes I and II of the Habitats Directive list (respectively) habitats and species for which member states are required to establish and monitor SACs. The EC Birds Directive provides a similar network of sites (SPAs) for all rare or vulnerable species listed in Annex I and all regularly occurring migratory species, with particular focus on wetlands of international importance. Together with SACs, SPAs form a network of pan-European protected areas known as ‘Natura 2000’ sites.</p> <p>The Habitats Regulations also make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4.</p>
The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979)	The Bern Convention aims to ensure conservation and protection of all wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to afford special protection to the most vulnerable or threatened species (including migratory species).
The Wildlife and Countryside Act (WCA) 1981 (as amended)	The WCA is the primary UK mechanism for statutory site designation (Sites of Special Scientific Interest, SSSIs) and the protection of individual species listed under Schedules 1, 2, 5 and 8 of the Act, each subject to varying levels of protection
The Countryside and Rights of Way Act 2000	This legislation strengthens the provision of the 1981 WCA (as amended), both in respect of statutory sites such as SSSIs and protected species. It also places a statutory obligation on Local Authorities and other public bodies to further conservation of biodiversity in the exercise of their functions, thus providing a statutory basis to the Biodiversity Action Plan (BAP) process, which began in 1994. Section 74 of the Act lists the habitat types and species of principal importance in England.
Hedgerow Regulations 1997	The Hedgerow Regulations 1997 are intended to protect important countryside hedges from destruction or damage in England and Wales.
Natural Environment and Rural Communities Act 2006	The ‘NERC’ Act makes provision in respect of biodiversity, pesticides harmful to wildlife, protection of birds and invasive non-native species. Section 40 of the act also introduced a new duty on public bodies to have regard to the purpose of conserving biodiversity in the exercise of their functions.

Table 3: Key Legislation for protected species

Species	Key legal protection
Bats (all species)	<p>All European species of bat are listed on Annex IV of the EC Habitats Directive as being in need of “strict protection”. This is implemented in Britain under The Conservation of Habitats and Species Regulations 2010. All British bats are included on Schedule 5 of the WCA (1981) and the whole of Section 9 of The Act applies to European bat species. In summary, the above legislation collectively prohibits the following:</p> <ul style="list-style-type: none"> • Deliberately or recklessly capturing, injuring, taking or killing of a bat; • Deliberately or recklessly harassing a bat; • Intentionally or recklessly disturbing of a bat in its place of rest (roost), or which is used for protection or rearing young; • Deliberately or recklessly damaging, destroying or obstructing access to any resting place or breeding area used by bats; • Deliberately or recklessly disturbing a bat in any way which is likely to significantly affect the local populations of the species, either through affecting their distribution or abundance, or affect any individuals ability to survive, reproduce or rear young; • Possession or advertisement/sale/exchange of a bat (dead or alive) or any part of a bat. <p>In England, licences are issued by Natural England for any actions that may compromise the protection of a European protected species, including bats, under the Habitats Regulations 2010. This includes all developments, regardless of whether or not they require planning permission. Bats are also protected by the Wild Mammals (Protection) Act 1996 and selected species are listed on the UK Biodiversity Action Plan (BAP) and often within the local Biodiversity Action Plan (LBAP)</p>
Great crested newt	<p>Great crested newts are protected under European and British law, having the same level of protection as bats (see above). Licenses are issued by Natural England for any actions that may compromise the protection of this species, under the Habitat Regulations 2010. This includes all developments, regardless of whether or not they require planning permission. The species is also listed on the UK and Local BAPs.</p>
Otter	<p>Otter are protected under European and British law and receive the same level of protection as bats (see above.) The species is listed under Annex II and IV of the Habitats Directive, which is implemented in Britain under The Conservation of Habitats and Species Regulations 2010. Otter are also protected under Schedules 5 and 6 of the WCA 1981, The Wild Mammals (Protection) Act 1996 and are listed as a priority species in Appendix II of the Bern Convention. The species is also listed on the UK and Local BAPs.</p>
Water Vole	<p>Water vole is protected under Schedule 5 of the WCA 1981 (as amended). This makes it an offence to:</p> <ul style="list-style-type: none"> • Intentionally kill, injure or take water voles; • Possess or control the species; • Damage or destroy any place used by water vole for shelter or protection; • Disturb water vole while they occupy such places of shelter; • Sell, possess or transport water vole for the purpose of sale; and • Advertise the buying or selling of water vole. <p>The species is also protected under the Wild Mammals (Protection) Act 1996 and listed on the UK and Local BAPs.</p>

Species	Key legal protection
Birds	<p>The majority of bird species, with the exception of some species listed on Schedule 2, are protected under the WCA 1981 (as amended). This makes it an offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> • Kill, injure or take any wild bird; • Take, damage or destroy any nest which is in use or being built; and • Take, damage or destroy the eggs of any such bird. <p>Additional protection against disturbance whilst at the nest is also afforded to any bird species, whether an adult bird or their dependant young, which is listed on Schedule 1 of the Act.</p> <p>Council Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive') provides for the conservation and management of all wild bird species naturally occurring in the European Union, their nests, eggs and habitats. The Birds Directive bans activities that directly threaten birds (e.g. deliberate killing and destruction of nests and young), regulates hunting of selected species, bans non-selective and large scale killing of birds, and promotes research for bird conservation and management.</p> <p>Article 4(4) of the Birds Directive requires that member states "should strive to avoid pollution or deterioration of habitats." The Conservation of Habitats and Species (Amendment) Regulations 2012 provide a fuller transposition of the Birds Directive into English law. Regulation 8 introduces a new Regulation 9A to the Habitats Regulations for duties of appropriate authorities in relation to wild bird habitat. Regulation 9A (3) addresses the transposition of Article 2 of the Birds Directive, while Regulation 9A (8), requiring competent authorities to "use all reasonable endeavours" to "avoid any pollution or deterioration of habitats of wild birds."</p> <p>Certain species are also listed as being of priority conservation importance on the UK and Local BAPs.</p>
Badger	<p>Badger are protected under the Protection of Badgers Act 1992, which makes it an offence to:</p> <ul style="list-style-type: none"> • Knowingly kill, capture, injure or disturb any individual; • Intentionally damage or destroy a badger sett, or any part thereof; • Obstruct access to an area which is used for breeding, resting or shelter; and • Disturb a badger while it is using any place used for breeding, resting or shelter. <p>The species is also protected by the Wild Mammals (Protection) Act 1996.</p>

5.0 RESULTS

DESKTOP ASSESSMENT

Statutory designated Sites

- 5.1 A site check report was generated on Multi Agency Geographic Information for the Countryside (Magic) website on 11th May 2020. The results indicate that there are no statutory sites of national nature conservation interest within 2km of the site centroid (SE 09262 15996).
- 5.2 The desktop assessment indicates that there are two statutory sites of International nature conservation interest within 5km of the site centroid.
- **South Pennine Moors SAC** – 4.92km SW
 - **South Pennine Moors Phase 2 SPA** – 4.92km SW
- 5.3 **South Pennine Moors** (SAC) is designated due to the presence of a number of Annex I habitats of international importance. Annex 1 habitats that are the primary reason for the selection of this site are:
- **European dry heaths** - The site is representative of upland dry heath at the southern end of the Pennine range, the habitat's most south-easterly upland location in the UK. Dry heath covers extensive areas, occupies the lower slopes of the moors on mineral soils or where peat is thin, and occurs in transitions to acid grassland, wet heath and blanket bogs. The upland heath of the South Pennines is strongly dominated by heather *Calluna vulgaris*. Its main NVC types are H9 *Calluna vulgaris* – *Deschampsia flexuosa* heath and H12 *Calluna vulgaris* – *Vaccinium myrtillus* heath. More rarely H8 *Calluna vulgaris* – *Ulex gallii* heath and H10 *Calluna vulgaris* – *Erica cinerea* heath are found. On the higher, more exposed ground H18 *Vaccinium myrtillus* – *Deschampsia flexuosa* heath becomes more prominent. In the cloughs, or valleys, which extend into the heather moorlands, a greater mix of dwarf shrubs can be found together with more lichens and mosses. The moors support a rich invertebrate fauna, especially moths, and important bird assemblages.
 - **Blanket bogs** - This site represents blanket bog in the south Pennines, the most south-easterly occurrence of the habitat in Europe. The bog vegetation communities are botanically poor. Hare's-tail cottongrass *Eriophorum vaginatum* is often overwhelmingly dominant and the usual bog-building *Sphagnum* mosses are

scarce. Where the blanket peats are slightly drier, heather *Calluna vulgaris*, crowberry *Empetrum nigrum* and bilberry *Vaccinium myrtillus* become more prominent. The uncommon cloudberry *Rubus chamaemorus* is locally abundant in bog vegetation. Bog pools provide diversity and are often characterised by common cottongrass *E. angustifolium*. Substantial areas of the bog surface are eroding, and there are extensive areas of bare peat. In some areas erosion may be a natural process reflecting the great age (9000 years) of the south Pennine peats.

- **Old sessile oak woods with Ilex and Blechnum in the British Isles** - Around the fringes of the upland heath and bog of the south Pennines are blocks of old sessile oak woods, usually on slopes. These tend to be dryer than those further north and west, such that the bryophyte communities are less developed (although this lowered diversity may in some instances have been exaggerated by the effects of 19th century air pollution). Other components of the ground flora such as grasses, dwarf shrubs and ferns are common. Small areas of alder woodland along stream-sides add to the overall richness of the woods.

5.4 **South Pennine Moors Phase 2** (SPA) is within an upland area and it provides habitat for an important assemblage of breeding moorland and moorland fringe birds. The South Pennine Moors support the southernmost assemblage in Britain of breeding merlin *Falco columbarius*, red grouse *Lagopus lagopus*, golden plover *Pluvialis apricaria*, dunlin *Calidris alpina*, short-eared owl *Asio flammeus* and twite *Carduelis flavirostris*. These species are either extremely local, rare or absent further south. Together with the scattered populations of merlin golden plover, dunlin and twite in Ireland these are the most southwestern breeding population in the world. The South Pennine Moors thus have an important role in maintaining the breeding range of these species.

Non-statutory designated sites

5.5 There are four non-statutory sites of nature conservation interest within a 2km radius the proposed development site, they are as follows.

- **Huddersfield Narrow Canal LWS** – 1.05km SE

A 16.77ha site located at OS grid reference SE 083 141. The LWS supports a range of wetland plants including reedmace *Typha latifolia*, reed canary-grass *Phalaris arundinaceae*, water horsetail *Equisetum fluviatile*, soft rush *Juncus effusus*, pondweed *Potamogeton sp.*, sedges *Carex sp.*, starwort *Callitriche sp.*, meadowsweet

Filipendula ulmaria, opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*, great willowherb *Epilobium hirsutum*, marsh horsetail *Equisetum palustre*, reed sweet-grass *Glyceria maxima*, purple loosestrife *Lythrum salicaria*, water mint *Mentha aquatica*, water-cress *Rorippa nasturtium-aquaticum* and yellow-flag iris *Iris pseudacorus*. The invasive non-native species Japanese knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera* are also present. Kingfisher *Alcedo atthis* and otter *Lutra lutra* are noted as present within the site.

- **Low Westwood Pond LWS – 1.33km NNW**

Small (0.1ha) disused Mill Pond in Linthwaite (OS grid reference SE 097 146), with the Huddersfield Narrow Canal to the north west and the River Colne to the south east. The pond has steep concrete sides on three sides and a sloping muddy edge to the north. The surrounding habitat is dense scrub and tall ruderal vegetation. Open water areas of the pond were closest to A2 common duckweed *Lemna minor* community, typically found in moderately-rich to eutrophic standing waters, with common and star duckweed *Lemna trisulca*. The northern edge of the pond comprised great reedmace *Typha latifolia* swamp (S12) with frequent soft rush, purple loosestrife and occasional great willowherb, reed canary-grass, common skullcap *Scutellaria galericulata*, water plantain *Alisma plantago-aquatica* and common starwort *Callitriche stagnalis*. To the west of the pond there is an area of emergent vegetation closest to NVC community S28 reed canary-grass tall-herb fen with abundant reed canary-grass, frequent great willowherb, Himalayan balsam, great reedmace and common duckweed. Occasional species include bittersweet *Solanum dulcamara*, lady-fern *Athyrium filix-femina*, soft rush, stinging nettle and purple loosestrife. Damselflies and dragonflies are present.

- **Shaw Wood LWS – 1.49km NNW**

Shaw Wood is a plantation woodland on an ancient woodland site. The wood is acidic and lies in a very steep sided ravine cut by Longwood Brook to the west of Huddersfield (OS grid reference SE 088 176) at a height of 20 to 24m AOD. The canopy supports abundant sessile oak *Quercus petraea*, sycamore *Acer pseudoplatanus* and locally beech *Fagus sylvatica* and ash *Fraxinus excelsior*. The age structure is good from seedlings through to mature trees although the former are mainly ash in a localised area. The understorey contains frequent hazel and holly *Ilex aquifolium* with occasional rowan *Sorbus aucuparia*, elder *Sambucus nigra* and goat willow *Salix caprea*, and rare hawthorn *Crataegus monogyna*. The ground flora

comprises locally abundant native bluebell *Hyacinthoides non-scripta*, particularly on the upper slopes (15% of the site with 40-80% coverage). This area also supports abundant creeping soft-grass *Holcus mollis*, frequent greater woodrush *Luzula sylvatica* and dog's mercury *Mercurialis perennis*, occasional wood anemone *Anemone nemorosa*, honeysuckle *Lonicera periclymenum*, bramble *Rubus fruticosus agg.*, male fern *Dryopteris felix-mas*, bilberry *Vaccinium myrtillus*, hard fern *Blechnum spicant*, bracken *Pteridium aquilinum*, wood avens *Geum urbanum* and sweet vernal-grass *Anthoxanthum odoratum*. There are sandstone exposures on both sides of the brook with abundant opposite-leaved golden-saxifrage, frequent wood sorrel *Oxalis acetosella* and *Polytrichum* moss. Adjacent to the brook are occasional large stands of common bistort *Perscaria bistorta*, abundant ramsons *Allium ursinum*, frequent yellow archangel *Lamium galeobdolon* and meadowsweet. At the eastern end of the site is a flush dominated by opposite-leaved golden-saxifrage and a large stand of yellow flag iris.

- **Clough Head Quarry LGS – 1.05km WSW**

Clough Head Quarry stands on Clough Road at the head of Crimble Clough to the north of Slaithwaite, overlooking the Colne Valley (OS grid reference Se 082 157). The quarry face is approximately 5m long and 10m high. Exposures of Upper Carboniferous Namurian (Millstone Grit) Huddersfield WhiteRock illustrate the mineralogy of the grit, renowned for its weathering resistant properties. The rock illustrates a range of sedimentary features including massive bedding, cross bedding and jointing.

5.6 WYES provided information that indicates that the site does not lie within the Kirklees Wildlife Habitat Network. There is one ancient semi-natural woodland within the 2km search area, Shaw Wood.

5.7 Special Areas of Conservation are sites of European conservation importance, protected under Article 3 of the European Union Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC; the 'Habitats Directive'), implemented in English law through the 2010 Conservation of Habitats & Species Regulations. They have been established in order to conserve habitat types and species considered to be most in need of conservation at a European level, identified on Annexes I and II of the Habitats Directive.

- 5.8 Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive (EC Directive on the conservation of wild birds (79/409/EEC)), which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.
- 5.9 Local Wildlife Sites (LWS) are areas of land which are rich in wildlife and are equivalent to Sites of Importance for Nature Conservation (SNCI). Criteria for selection take in threats and declines in certain species, national priorities and local distinctiveness. The LWS system is managed, in partnership, by The Wildlife Trust, local authorities, statutory nature conservation agencies, local naturalists and landowners. Local Wildlife Sites were previously known as County Wildlife Site (CWS) in the past. LWS are non-statutory sites of County level importance, and protected under planning policies of the component district authorities. Candidate Local Wildlife Sites are offered the same protection as LWS.
- 5.10 Local Geological Sites (LGS), including RIGS are the most important places for geology and geomorphology outside of the statutory SSSIs. The sites are designated using locally developed criteria and are assessed by the local geological group. In many areas the selection and designation process relies on significant amounts of volunteer effort. Once designated through notification to the local planning authority, they are conserved and protected as a material consideration through local and national planning policies. There are currently 56 RIGS groups in the United Kingdom. Depending on the decisions of the members of the Local Sites partnership, in some local areas locally designated sites including RIGS with substantive geological interest may now be called Local Geological Sites (LGS).
- 5.11 The location of non-statutory designated sites in relation to the proposed development area is illustrated on **Drawing 1**.

ECOLOGICAL RECORDS

- 5.12 A total of 345 protected and priority species records were returned by West Yorkshire Ecology Records Centre from a 2km radius data search undertaken by WYES 8th May, 2020. These records were filtered to include only records from the last 10 years leaving 93 contemporary records.

- 5.13 The location of protected species records in relation to the site is illustrated on **Drawing 2**. This includes historical records to provide better ecological context, as the only contemporary protected species records are for bats.

PROTECTED SPECIES

Great crested newt

- 5.14 WYES hold no records of great crested newt within the 2km search area and a search on Multi Agency Geographic Information for the Countryside (Magic) website for granted European Protected Species Applications indicates that there are no licence applications relating to GCN within 2km of the site.

Mammals

Bats

- 5.15 WYES returned a total of sixty seven bat records within a 2km radius of the site, only 30 of these records were for the last decade. There were no roost records within 500m of the site and the remaining records were all over 0.8km from the site. The nearest roost record is for four records at the same 10-figure grid reference and it is for a colony of **unidentified bats** (Vespertilionidae) 1.59km to the south south east of the site. There are another two records of a roost of unidentified bats 1.6km to the south south east and single records of **unidentified bat** roosts 1.61km and 1.62km to the south south east. All of these records are within an area of woodland and relate to hibernacula. The 14 historical roost records are all over 1.5km from the site with the exception of one records of a maternity roost of unidentified bats 1.km from the site. The remainder of the contemporary records are bats recorded in flight, foraging and commuting and include **common pipistrelle** *Pipistrellus pipistrellus*, **soprano pipistrelle** *Pipistrellus pygmaeus*, **Daubenton's bat** *Myotis daubentonii* and *Myotis sp.* Historical records also include **whiskered bats** *Myotis mystacinus*, **Natterer's bats** *Myotis nattereri* and brown long-eared bats *Plecotus auritus*.

- 5.16 A search on Magic website for granted European Protected Species Applications indicates that there are no licence applications relating to bats within 2km of the site.

Otter

- 5.17 WYES do not hold any modern records of **otter** *Lutra lutra*. The citation for Huddersfield Narrow Canal LWS, 1.05km to the south east of the site notes the presence of otter.

Badger

- 5.18 WYES provided confidential badger records which stated that there were no badger records within 200m of the site centroid and no sett records within a 2km radius of the site.

Bird species

- 5.20 WYES provided 171 records of birds in their entirety, comprising 36 species. The majority of these records were historical, they do not hold any modern records of protected bird species, but they do hold eight historical records between 1970 and 1991 of **barn owl** *Tyto alba*, **kingfisher** *Alcedo attis*, **fieldfare** *Turdus pilaris* and **redwing** *Turdus iliacus*, all of which are recorded over 1.0km from the site.
- 5.21 The citation for **Huddersfield Narrow Canal LWS**, 1.05km to the south east of the site notes the presence of **Kingfisher**.

Reptiles

- 5.22 There are no contemporary records of reptiles held by WYES, they did provide two historical records of **adder** *Vipera berus* within the 2km search area. These records lie 0.55km to the north north east and 0.84km to the north west of the site.

Flowering plants

- 5.23 WYES did not hold any modern records of plants listed on Schedule 8 of the Wildlife & Countryside Act (1981) as amended. WYES did hold six historical records of **floating water plantain** *Luronium natans*, all of which were over 1.0km from the site.
- 5.24 **Bluebells** *Hyacinthoides non-scripta* are noted as present in the citation for Shaw Wood LWS, 1.49km to the north north west of the site. It must be noted that bluebell is now protected in respect of Section 13(2) only, and it is illegal to take part in the following:
- selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a), or
 - advertising (any of these) for buying or selling (Section 13 2b).

PRIORITY SPECIES

5.25 WYES provided a number of priority species records which included United Kingdom (UKBAP), Kirklees (KirkleesBAP) and West Yorkshire (WYBAP) Biodiversity Action Plan 'Priority Species', NERC Section 41 species, Birds of Conservation Concern (BoCC) and Notable insects.

Amphibians

5.26 WYES hold 30 historical records of **common toad** *Bufo bufo* (UK BAP, Kirklees BAP, WYBAP), nineteen historical records of **common frog** *Rana temporaria* (WYBAP) and one contemporary and one historical record of **palmate newt** *Triturus helveticus* (WYBAP) from the same location. The nearest records of common toad is multiple records 1.61km to the north north east at Compensation Reservoir. The nearest record for common frog is 1.09km to the south east near Ramsden Mill Lane. The palmate newt records relate to a residential area 1.59km to the north east.

Birds

5.24 WYES provided 171 records of birds in their entirety, comprising 36 species. DLRC returned 10 records comprising 9 bird species that were either UK BAP, NERC S. 41 or local BAP Priority Species and they included:

- **Bullfinch** *Pyrrhula pyrrhula* (UK BAP, Kirklees BAP, WYBAP)
- **Cuckoo** *Cuculus canorus* (UK BAP, NERC S. 41, WYBAP)
- **Dunnock** *Prunella modularis* (UK BAP, Kirklees BAP, WYBAP)
- **Goldfinch** *Carduelis carduelis* (KirkleesBAP)
- **House martin** *Delichon urbica* (WYBAP)
- **House sparrow** *Passer domesticus* (UK BAP, Kirklees BAP, WYBAP)
- **Kestrel** *Falco tinnunculus* (Kirklees BAP, WYBAP)
- **Lapwing** *Vanellus vanellus* (UK BAP, Kirklees BAP, WYBAP)
- **Linnet** *Carduelis cannabina* (UK BAP, Kirklees BAP, WYBAP)
- **Reed bunting** *Emberiza schoeniclus* (UK BAP, Kirklees BAP, WYBAP)
- **Skylark** *Alauda arvensis* (UK BAP, Kirklees BAP, WYBAP)
- **Song thrush** *Turdus philomelos* (UK BAP, Kirklees BAP, WYBAP)
- **Spotted flycatcher** *Muscicapa striata* (UK BAP, Kirklees BAP, WYBAP)
- **Starling** *Sturnus vulgaris* (UK BAP, Kirklees BAP, WYBAP)

- **Swallow** *Hirundo rustica* (Kirklees BAP, WYBAP)
- **Swift** *Apus apus* (WYBAP)
- **Tree sparrow** *Passer montanus* (UK BAP, Kirklees BAP, WYBAP)
- **Water rail** *Rallus aquaticus* (KirkleesBAP)
- **Yellowhammer** *Emberiza citrinella* (UK BAP, Kirklees BAP, WYBAP)

5.25 The nearest record is of **linnet** 0.8km to the north west near Scapegoat Hill.

Fish

5.26 WYES provided eight contemporary records of **sea trout** *Salmo trutta* on the River Colne between 1.46km and 1.85km from the site.

Mammals

5.27 There are no contemporary records of mammals, but there are three historical records of **brown hare** *Lepus europaeus*, all of which are over 1.5km from the site and the most recent record is from 1999.

Terrestrial invertebrates

5.27 WYES returned five records of priority/notable invertebrates within the 2km search area, these records comprised five different species:

- A beetle **Helophorus griseus** (Notable B)
- A beetle **Rhizophagus nitidulus** (Notable B)
- A beetle **Xylostiba monilicornis** (Notable)
- **Small heath** *Coenonympha pamphilus* (UKBAP)
- **White ermine** *Spilosoma lubricipeda* (UKBAP, WYBAP)

5.28 The nearest record is of **white ermine** 1.1km to the south east.

Plants

5.29 There are no priority plant species or plant species of note within the 2km search area.

INVASIVE/NON-NATIVE SPECIES

5.30 There are 80 records of invasive/non-native plants or animals listed on Schedule 9 of the Wildlife & Countryside Act (1981), as amended. They comprise:

- **Signal crayfish** *Pacifastacus leniusculus* – Two records from the same location 1.4km to the north east of the site near Compensation Reservoir;
- **Canadian waterweed** *Elodea canadensis* – 14 records, all historical and over 1.km from the site;
- **Japanese knotweed** *Fallopia japonica* – 30 records, mostly contemporary, all over 1.1km from the site;
- **Himalayan/Indian balsam** *Impatiens glandulifera* - 28 records, mostly historical, all over 1.0km from the site;
- **Rhododendron** *Rhododendron ponticum* – Two records, nearest record from 2018, 1.32km to the north east;
- **American mink** *Mustela vison* – 2005 record 1.23km to the south south east of the site, and
- **Grey squirrel** *Sciurus carolinensis* – Two contemporary records, the nearest record relates to an area of woodland 1.06km to the south east.

FIELD SURVEY

GENERAL SITE DESCRIPTION - HABITATS

- 5.31 The proposed development site comprises a garden with amenity grassland (lawn) and ornamental shrub beds, scattered and dense scrub and hedgerows, ornamental hedgerows, piles of rubble an access road, and five buildings.
- 5.32 The locations of the habitats described in the following sections can be found on the Phase I Habitat Plan **Drawing 3**.

BARE GROUND

- 5.33 The access track from Swallow Lane (T1) at the north of the site is made of compacted earth and building rubble. The areas subject to heavy footfall and traffic are bare but there are grasses and tall herbs at the periphery where it is less disturbed. Grasses included occasional cock's-foot *Dactylis glomerata*, smooth meadow-grass *Poa pratensis*, soft brome *Bromus hordaceus* and Yorkshire fog *Holcus lanatus*. Herbaceous species included locally frequent common ragwort *Senecio jacobaea*, frequent broad-leaved dock *Rumex obtusifolius*, herb Robert *Geranium robertianum*, dandelion *Taraxacum officinale* agg., cleavers *Galium aparine*, bramble *Rubus fruticosus* agg. great willowherb *Epilobium hirsutum*, wavy bitter-cress *Cardamine flexuosa*, meadow buttercup *Ranunculus acris* and rare groundsel *Senecio vulgare*.

Gaps in between the concrete supported rare regenerating sycamore *Acer pseudoplatanus* and elder *Sambucus nigra*.

- 5.34 The area of concrete hardstanding to the east of the site (T13) comprised frequent red fescue *Festuca rubra* and dandelion *Taraxacum officinale agg.* with occasional bramble underscrub, creeping thistle, cock's-foot, common mouse-ear *Cerastium fontanum*, creeping bent *Agrostis stolonifera*, herb Robert and rare meadow buttercup.

AMENITY GRASSLAND

- 5.34 The recently mown garden lawn (T2) comprised locally frequent red fescue *Festuca rubra*, with frequent Yorkshire fog, rough-stalked meadow-grass *Poa trivialis*, meadow foxtail *Alopecurus pratensis*, perennial rye-grass *Lolium perenne*, sweet vernal-grass *Anthoxanthum odoratum* with occasional annual meadow-grass *Poa annua*. Herbaceous species within the lawn included locally frequent ribwort plantain *Plantago lanceolata*, with occasional dandelion and meadow buttercup with rare common ragwort. Springy turf-moss *Rhytidiadelphus squarrosus* was also locally abundant.

TALL HERB

- 5.36 The southern boundary of the lawn is a combination of tall herb and scrub (T3). Tall herbaceous species included locally abundant rosebay willowherb *Chamerion angustifolium*, locally frequent stinging nettle *Urtica dioica* and meadow buttercup with frequent creeping buttercup *Ranunculus repens* and occasional broad-leaved dock. Cock's-foot was also occasional. Scrub species included locally frequent raspberry *Rubus ideus* and bramble with occasional holly *Ilex aquifolium* and elder.

DENSE SCRUB

- 5.37 T4 relates to a pile of soil and rubble within the lawned area that has been colonised by dense bramble scrub. The habitat compartment is characterised by dominant bramble with locally frequent stinging nettle and red fescue, frequent cock's-foot, bush vetch *Vicia sepium*, meadow foxtail and ribwort plantain. Occasional species included garlic mustard *Alliaria petiolata*, creeping thistle *Cirsium arvense*, creeping buttercup and common ragwort with rare regenerating elder. A garden variety of *Geranium sp.* was also locally abundant.

- 5.38 T11 is an area of garden which is no longer maintained and is now overgrown with ornamental shrubs, bramble and regenerating trees. A bridewort *Spiraea sp.* was locally dominant, other species included locally abundant bramble and honeysuckle *Lonicera periclymenum*, locally frequent raspberry and rosebay willowherb. The grass red fescue was abundant, occasionally recorded species included regenerating sycamore, broad-leaved dock, goat willow *Salix caprea*, ribwort plantain, cock's-foot, great willowherb and rare **montbretia** *Crocsmia x crocosmiiflora* and **giant hogweed** *Heracleum mantegazzianum*.

T12 relates to an area of scattered and dense scrub surrounding an area of concrete hardstanding with dilapidated cars and caravans being stored on it. The fence line to the south of the access track had occasional cherry laurel, probably the remnants of an ornamental hedgerow, the remainder of the area comprised abundant bramble with occasional goat willow. There was a matrix of coarse neutral grasses and tall herbs, with Yorkshire fog most frequent as was stinging nettle, locally frequent broad-leaved dock and rosebay willowherb with occasional great willowherb and rare herb Robert and soft rush *Juncus effuses*.

HEDGEROWS

- 5.39 T7 is a mostly native, defunct hedgerow that runs along the western boundary of the garden. To the south it comprises a short length of Leyland cypress *Cupressus x leylandii* the remainder of the hedgerow comprises abundant cherry with occasional goat willow with rare gorse *Ulex europaeus*, elder and osier *Salix viminalis*. Bramble scrub becomes locally abundant to the south, ivy *Hedera helix* is locally abundant and the field layer includes frequent stinging nettle.

ORNAMENTAL HEDGEROW

- 5.40 T5 is an ornamental hedgerow along the eastern side of the garden dividing the garden from the working area/laydown area. The ornamental hedgerow is dominated by cherry laurel *Prunus laurocerasus* with locally abundant honeysuckle and frequent goat willow *Salix caprea*. Also associated with the ornamental hedgerow, on the western side there is locally frequent raspberry, there are frequent cherry trees *Prunus sp.*, bramble and honeysuckle, with occasional cow parsley *Anthriscus sylvestris*, ribwort plantain and holly, and rare goat willow.

- 5.41 T9 is an area of ornamental hedgerow dominated by Lawson cypress *Chamaecyparis lawsoniana*.

ORNAMENTAL SHRUBS

- 5.42 T8 is a round bed of ornamental shrubs and trees including locally abundant bramble. Shrubs planted for ornament included cherry *Prunus sp.* variegated holly, *Hebe sp.*, *Photinia sp.* and juniper *Juniperus sp.*

SCATTERED TREES

- 5.43 Scattered trees within the survey area included cherry, goat willow, silver birch *Betula pendula*, apple *Malus domestica* and sycamore.

SPOIL

- 5.44 T6 is a grassy pile of garden waste and soil with locally abundant stinging nettle, locally frequent rosebay willowherb, abundant cock's-foot, occasional dandelion and ribwort plantain with rare creeping buttercup.

PATIO

- 5.45 T10 is the terraced garden area with clothes dryer, small flower beds planted for ornament with annual bedding plants and perennials, ornamental conifers, holly and apple trees. Silver birch and sycamore are associated with the eastern boundary.

BUILDINGS

- 5.46 There are five buildings within the survey area.
- **Building 1: 109 Swallow Lane** – Two storey, stone built terraced property with a slate pitched roof with minor gaps under slates and gaps in mortar under ridge tiles. Velux windows in the roof indicate that the loft has been converted into bedrooms. The building has also been extended to the rear and the pitched roof of the extension runs perpendicular to the main pitch. The gable end of the extension has a mortared verge which is in good condition with no gaps. The building has open soffits and lead flashing around the chimney and in valleys which appears tight. The property has uPVC windows and doors, tightly fitted with no gaps around frames evident, with stone lintels and window ledges. There is a uPVC conservatory to the rear overlooking the garden. The house is assessed as being **of low bat roosting potential**.

- **Building 2: Corrugated shed** – Tall single storey light industrial building with metal profile sheet walls. The northern end of the building has a pitched roof comprising profile metal sheets with metal trim and metal guttering directly attached to the walls. The southern part of the building is not as tall, but is of the same construction, but has an uneven pitched roof. The building has a wooden door and metal roller shutter door on the eastern aspect with a security light above the roller shutter door, and a wooden door and metal roller shutter door on the northern aspect. The building is assessed as being **of negligible bat roosting potential**.
- **Building 3: Garage** – Single storey, stone built, detached double garage. There is a uPVC door and two garage doors on the southern aspect of the building and a window that had been filled in with breeze blocks on the western aspect. The building has a half pitched felt roof with a metal trim over the edge of the felt. Some gaps between the stonework and the felted roof but these were associated with cobwebs indicated no recent use by bats. No staining or droppings evident either. The building is assessed as being **of negligible bat roosting potential**.
- **Building 4: Storage building** – Metal storage container to north attached to a stone building to the south with a flat, concrete slab roof. No windows, just a wooden framed wooden door on the southern aspect, tightly fitted. The building is assessed as being **of negligible bat roosting potential**.
- **Building 5: Storage building/workshop** – Detached workshop/agricultural building, brick-built with a shallow half-pitched roof comprising a concrete slab. Eastern aspect of main building has a bricked up window and a wooden door. There is a small, brick-built entrance porch to the south of the building with a uPVC door, all tightly fitted. The building is assessed as being **of negligible bat roosting potential**.

FAUNA

- 5.47 Fauna noted during the phase 1 habitat survey include **blackbird** *Turdus merula* and wood pigeon *Columba palumbus*.

6.0 SITE ASSESSMENT AND EVALUATION

DESIGNATED SITES

6.1 The desktop assessment indicates that there are two statutory sites of International nature conservation interest within 5km of the site centroid.

- **South Pennine Moors SAC** – 4.92km SW
- **South Pennine Moors Phase 2 SPA** – 4.92km SW

6.2 There are four non-statutory sites of nature conservation interest within a 2km radius the proposed development site, they are as follows.

- **Huddersfield Narrow Canal LWS** – 1.05km SE
- **Low Westwood Pond LWS** – 1.33km NNW
- **Shaw Wood LWS** – 1.49km NNW
- **Clough Head Quarry LGS** – 1.05km WSW

6.3 WYES provided information that indicates that the site does not lie within the Kirklees Wildlife Habitat Network. In addition, there is one ancient semi-natural woodland within the 2km search area, Shaw Wood.

6.4 There are no anticipated impacts expected on the statutory and non-statutory sites as a result of the proposed development; there is no feasible mechanism by which the development could impact on these sites.

PROTECTED AND PRIORITY SPECIES

PLANTS/HABITATS

6.5 There are no Priority Species of plants recorded within the proposed development area.

6.6 UK BAP, NERC S.41 and Local BAP priority habitats in the Kirklees Biodiversity Action Plan (January, 2007) within the survey area include:

- Hedgerows (UK BAP, S.41 & Kirklees BAP);
- Scrub (Kirklees BAP)

- 6.7 Maddock, 2008³ defines a hedgerow as any boundary line of trees or shrubs over 20m long and less than 20m wide, where any gaps between the trees or shrub species are less than 20m wide (Bickmore, 2002)⁴. Any bank, wall ditch, tree and herbaceous vegetation within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat. All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat. Based on an analysis of Countryside Survey data, using the threshold of at least 80% cover or any UK native woody species it is estimated that 84% of countryside hedgerows in GB would be included. With the exception of the defunct hedgerows, the remainder of the hedgerows within the site would be considered to be UK BAP Priority Habitat.
- 6.8 The primary location for important scrub habitats in Kirklees is that which occurs primarily on valley slopes and the Pennine Foothills, but can occur elsewhere. Important scrub habitats include, for example, scrub occurring in Open Mosaic Habitats on Previously Developed Land (mostly in Urban Areas). The scrub is of within site interest only.

INVASIVE/NON-NATIVE PLANT SPECIES

- 6.9 The records from WYES indicated the presence of four invasive, non-native plant species, none of which were within 1.0km of the site. The phase 1 habitat survey recorded the presence of two plant species recorded on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended), **montbretia** and **giant hogweed**.

PROTECTED SPECIES

BATS

- 6.10 WYES returned a total of sixty seven bat records within a 2km radius of the site, only 30 of these records were for the last decade. There were no bat records within the site and no roost records within 500m of the site. A search on Magic website for granted European Protected Species Applications indicates that there are no licence applications relating to bats within 2km of the site.

³ UK Biodiversity Action Plan; Priority Habitats Descriptions. BRIG (ed. Maddock, A.), 2008. (Updated 2011)

⁴ Bickmore, C.J. (2002). Hedgerow survey handbook: a standard procedure for local surveys in the UK. DEFRA, London.

6.11 Surveyors did not undertake internal inspections of any of the buildings on site due to the current Coronavirus pandemic. There were five buildings within the survey area, Building 1, the residential property had low bat roosting potential for crevice dwelling bats during the summer months. The remaining buildings/structures on site were all assessed as having negligible bat roosting potential. The gardens, surrounding agricultural land, hedgerows and scattered tree lines all provide suitable foraging and commuting habitat for local bats such as common pipistrelle, soprano pipistrelle, Daubenton's bat and other *Myotis* bats recorded within the 2km search area. There is also connectivity across the landscape to the wooded areas to the south and along wooded tributary streams to the River Colne and the canal, all of which provide excellent foraging habitat. There were no trees within the survey area that had bat roosting potential, most were early mature/semi-mature and did not have any potential roosting features associated with them as they were in good condition. There are no proposals to either demolish or alter the residential property in any way and in this respect no further survey of the property is required. Bats are not considered an ecological constraint for the proposed scheme but they should be considered within the development proposals with regard to a sensitive lighting regime and appropriate habitat enhancement in line with best practice.

OTTER

6.12 There are only historical records of otter and there is no suitable riparian habitat for otter within the site. Otter are not an ecological constraint for the development.

BADGER

6.13 There are no records within 200m, no known setts within 2km and no field sign indicative of their presence. Badgers are not an ecological constraint for the development.

BIRDS

6.14 WYES did not hold any record of Schedule 1 birds for the last decade within 1km of the site. The hedgerows, scrub and trees within the survey provide good foraging and nesting habitat for a variety of birds and birds/nesting birds that utilise gardens. Schedule 1 overwintering species such as fieldfare and redwing are common garden visitors in the winter months feeding on seeds and berries and have the potential to use the site, but the site is very small and unlikely to be an important resource for overwintering populations as a whole.

REPTILES

- 6.15 There are only historical records of adder and they are separated from the site by residential areas. The site does not provide suitable habitat for adder, which show a preference for open habitats such as heathland, moorland, open woodland and sea cliffs, typically on free-draining soils such as chalk or sand. In addition, in most of their range adders rarely enter gardens. Reptiles are not an ecological constraint for the development.

PRIORITY SPECIES

BIRDS

- 6.16 WYES supplied records of nine bird species that were either UK BAP, NERC S. 41 or local BAP Priority Species, all of which are relatively common and widespread BAP species and have the potential to use the site for foraging or nesting. The nearest record being linnet 0.8km to the north west near Scapegoat Hill. The hedgerows, scrub and trees within the survey provide good foraging and nesting habitat for a variety of birds and birds/nesting birds and they will need to be considered in the development proposals.

AMPHIBIANS

- 6.17 There are historical records of common toad, common frog and palmate newt, but there are no ponds within the site, or within 500m of the site. Amphibians are not considered an ecological constraint for the development.

FISH

- 6.18 Sea trout are recorded on the River Colne. There is no habitat for sea trout within the survey area and there is no feasible ecological mechanism by which the development could negatively impact the river habitats. Fish are not a constraint to development.

BROWN HARE

- 6.19 WYES held three historical records of brown hare. Brown hare are most common in grassland habitats and at woodland edges, favouring a mosaic of arable fields, grassland and hedgerows. They tend to graze on vegetation and the bark of young trees and bushes. The site could provide some foraging for brown hare if they are still present in the area, but as the majority of the site is a residential garden adjacent to a housing development currently being built, the lack of suitable habitat and level of disturbance make it unlikely to be important habitat for brown hare.

INVERTEBRATES

- 6.20 Five species of priority/notable invertebrates are noted in the 2km search area: The nearest record is of the moth white ermine. The food plant of the caterpillar of the white ermine includes a wide range of herbaceous plants including common nettle and docks. They are found in most rural and urban habitats including gardens, hedgerows, grassland, heathland, moorland, woodland and on the coast. The site comprises nettles and docks and does provide habitat suitable for white ermine and other common and widespread BAP priority invertebrates, for example, small heath. Given the small size of the site and the amount of alternative habitat, it is unlikely to be an important resource for invertebrates and they are not considered an ecological constraint for the proposed development.

INVASIVE NON-NATIVE SPECIES

- 6.21 Signal crayfish, American mink and grey squirrel are recorded within the 2km search area. There is no habitat suitable for signal crayfish or mink. Grey squirrel could occasionally use the garden, but their presence will have no impact on the development proposals.

7.0 SUMMARY & RECOMMENDATIONS

SUMMARY

- 7.1 There are two statutory sites of International nature conservation interest within 5km of the survey area. South Pennine Moors SAC and South Pennine Moors Phase 2 SPA. There are no significant impacts expected on the statutory sites of international importance in the wider area as a result of the proposed development; there is no feasible mechanism by which the development could impact on these sites or their associated features of ecological interest.
- 7.2 There are four non-statutory sites of nature conservation interest within a 2km radius the proposed development site as well as the Kirklees Wildlife Habitat Network and one ancient semi-natural woodland. There are no anticipated impacts expected on the non-statutory sites as a result of the proposed development; there is no feasible mechanism by which the development could impact on these sites.
- 7.3 The proposed development off Swallow Lane supports a range of habitat types and has some potential for protected/priority species to be present and other species that would be considered an ecological constraint to the proposed development. These include:
- Breeding/nesting birds;
 - Giant hogweed, and Montbretia.
- 7.4 UK BAP, NERC S.41 and Local BAP priority habitats in the Kirklees Biodiversity Action Plan (January, 2007) within the survey area include:
- Hedgerows (UK BAP, S.41 & Kirklees BAP);
 - Scrub (Kirklees BAP)

RECOMMENDATIONS

7.5 There are no plans to demolish or alter the residential property and therefore no further survey is required. Residential gardens are recognised as being of moderate quality for foraging and commuting bats, however the temporary removal of the garden habitat within the application site is unlikely to cause disruption because of other mature adjacent gardens and connectivity to other excellent habitat in the wider area. Recommendations for appropriate habitat enhancement and a sensitive lighting strategy are given below.

7.6 In line with good practice guidelines, an excellent way to enhance habitat for bats is to introduce bat roosting habitat into a new build. The Habibat bat box (<http://www.habibat.co.uk/>) is recommended by the Bat Conservation Trust for enhancing homes for bats. Manufactured to suit any existing brick or stonework finish. Unobtrusive and aesthetically pleasing, Habibats can be joined side by side to increase the roost space. This box is made to order and faced in brick to match your building. Facing products include brick, granite, slate, tile timber, stone, masonry and terracotta or they can be bespoke if provided with a specific facing material. It is recommended that a habibat bat box is incorporated into five of the new dwellings on either a south or west facing aspect at a height of between 3 – 5m avoiding placement above windows or doors.



7.7 As per the most recent guidance (BLE & BCT, 2018 and Voight *et al.* 2018)⁵, a lighting strategy is recommended to avoid impacting on foraging and commuting bats. The Institute of Lighting Engineers and The Bat Conservation Trust guidelines suggest avoiding lighting any key habitats and features altogether. This particularly applies hedgerows and trees that are likely to be used by foraging and commuting bats.

7.8 It is recommended that any vegetation clearance be undertaken outside of the bird breeding season. This includes removal / lopping or cutting back of trees, shrubs and native/ornamental hedgerows and ground clearance. The bird breeding season can extend

⁵ Institute of Lighting Professionals/Bat Conservation Trust (2018) Guidance Note 08/18. *Bats and artificial lighting in the UK. Bats and the Built Environment Series.*

Voight *et al.* (2018) *Guidelines for consideration of bats in lighting projects.* EUROBATs publication Series No. 8. UNEP/EUROBATs Secretariat, Bonn, Germany, 62pp.

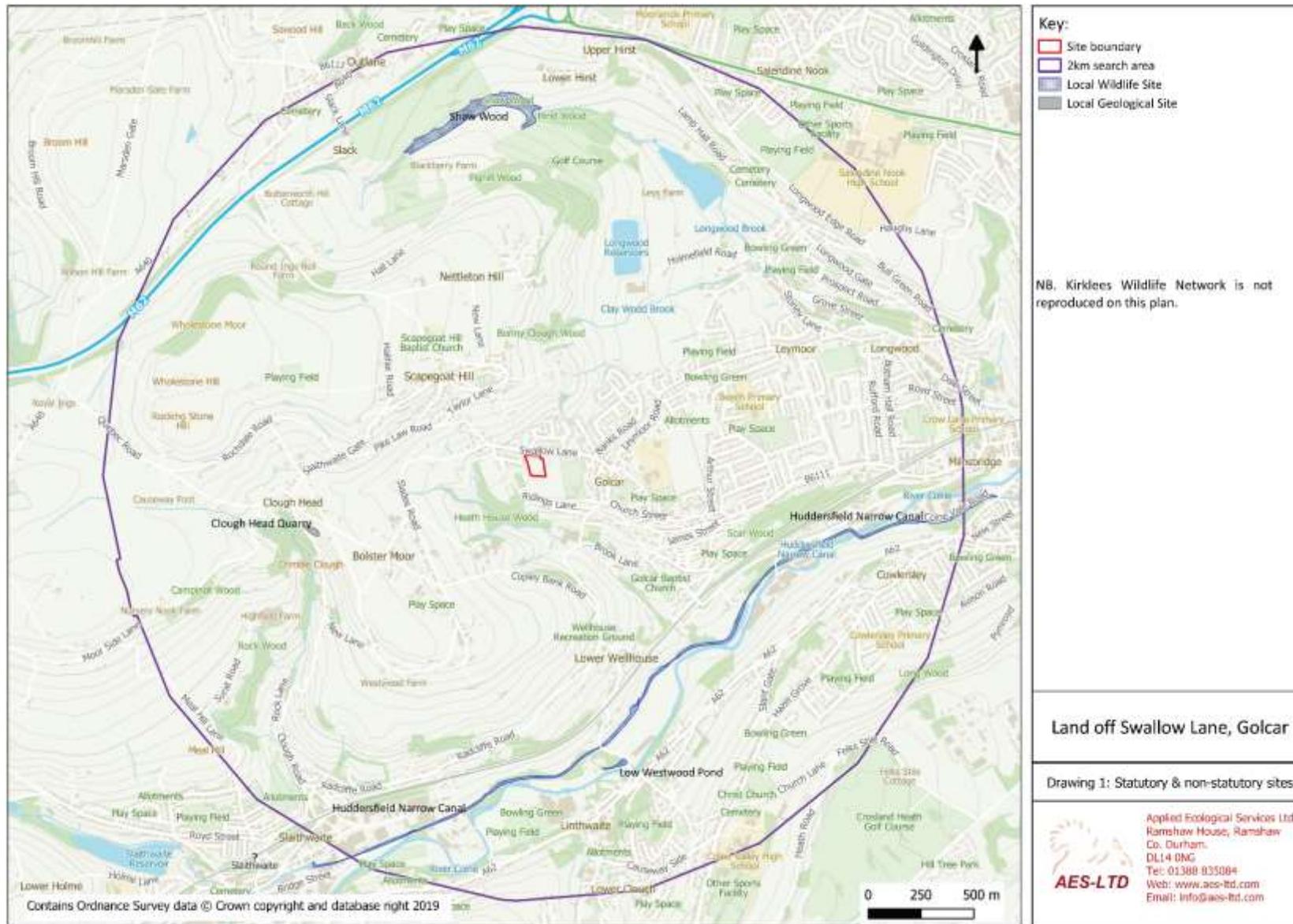
from March until August (inclusive), weather and species depending, but generally birds have completed breeding by the end of July. Where vegetation clearance/demolition works cannot be undertaken outside the bird breeding season, all such areas would be subject to a thorough walkover survey by a suitably qualified ecologist prior to any clearance or disturbance work being undertaken.

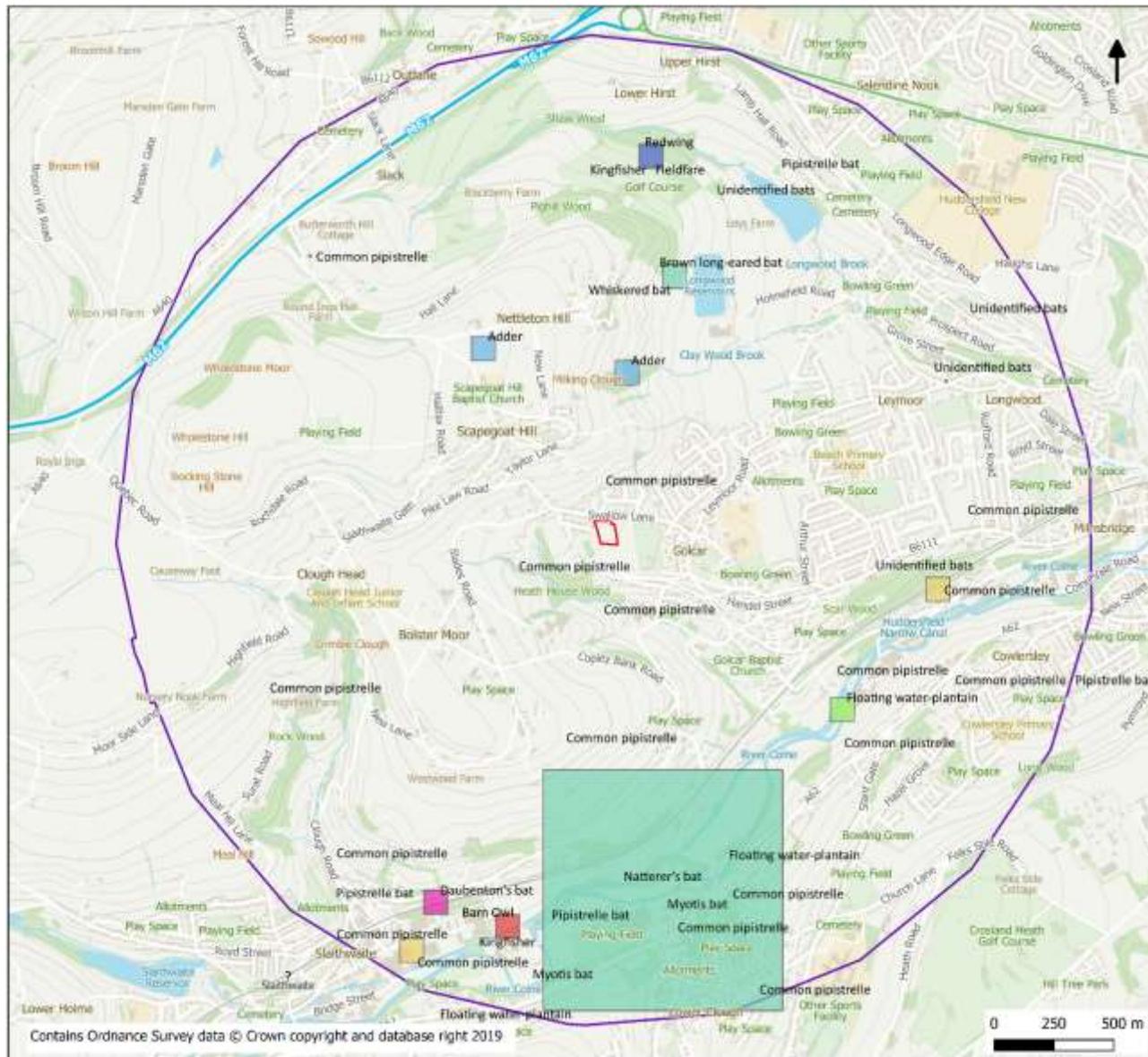
- 7.9 Biodiversity Action Plan (BAP) priority habitats such as hedgerows will be retained wherever possible as will peripheral trees. It is recommended that an Arboricultural Impact Assessment (AIA) is carried out to identify the root protection area of retained features.
- 7.10 Hedgerows being retained will be gapped-up with native species of local provenance and native species-rich hedgerows created wherever possible, plants which bear berries will be incorporated into the planting design; for example rowan, elder, honeysuckle, ivy, holly, hawthorn, blackthorn and rose which will benefit foraging winter birds. Shrub beds will include native species of local provenance wherever possible and will include berry bearing shrubs such as firethorn *Pyracanth spp.* and barberry *Berberis spp.* to provide food for foraging birds.
- 7.11 Hedgehogs have not been recorded in the area, but lack of records does not indicate they are not present in the area. Residential gardens are an important resource for hedgehogs and they have suffered a dramatic decline in numbers in recent years. To enhance habitats within the site for hedgehogs it is recommended that a 'hedgehog highway' is created within any fences proposed within the new development. For example, it would be appropriate to leave a 15cm x 15cm gap at the bottom of the fence to allow hedgehogs to forage across the gardens. This idea can be implemented in a variety of fencing materials by retaining a suitable sized gap with no sharp edges that could injure hedgehogs.



Hedgehog highway

- 7.12 Bird boxes (sparrow terraces – birdbrickhouses / Schwegler or similar) to be incorporated into the walls of at least 5 of the properties.
- 7.13 It is recommended that the landscape scheme incorporates native species of local provenance where possible and includes flowers and fruits that flower early, mid- and late-season to provide food and a nectar source for insects, birds and small mammals over a long period.





Key:

- Site boundary
- 2km search area

WYES protected species records

- Common pipistrelle
- Brown long-eared bat
- Daubenton's bat
- Myotis bat
- Natterer's bat
- Pipistrelle bat
- Unidentified bats
- Soprano Pipistrelle
- Whiskered bat
- Adder
- Barn Owl
- Fieldfare
- Kingfisher
- Redwing
- Floating water-plantain

Land off Swallow Lane, Golcar

Drawing 2: WYES protected species records



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APPENDIX 1 PHOTOGRAPHS



Photograph 1 109 Swallow Lane (Building 1), Golcar, northern aspect.



Photograph 2 Rear of 109 Swallow Lane, Golcar, southern aspect.



Photograph 3 Corrugated shed (Building 2), northern and eastern aspect. Bare ground (T1).



Photograph 4 Double garage (Building 3), southern aspect.



Photograph 5 Storage container extension to stone built store (Building 4), southern and western aspect. Vegetated pile of garden waste/spoil (T6).



Photograph 6 Storage building (Building 5), northern and eastern aspect.



Photograph 7 Building 5 -Eastern and southern aspect showing entrance porch.



Photograph 8 Garden lawn (T2) and area of tall ruderals and scrub with scattered hedgerow trees (T3).



Photograph 9 Rubble pile with dense bramble scrub (T4) in foreground, hedgerow (T5) in background.



Photograph 9 Ornamental hedgerow and scattered trees along western boundary (T7).



Photograph 10 Decking area, ornamental shrubs (T8) and ornamental hedgerow (T9).



Photograph 11 Terraced garden (T10).



Photograph 12 Dense scrub (T11).



Photograph 13 Scattered and dense scrub (T12) around bare ground (T13) where old caravans and cars are stored. Stored soil mound in working area can be seen in the background behind fencing.