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Hainsworth Road – DAVRIC land

Preliminary Ecological Appraisal



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Author: Sebastian Ashton
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Declaration of Compliance

This Preliminary Ecological Appraisal has been undertaken in accordance with British Standard 42020:2013 “Biodiversity: Code of practice for planning and development” (BSI 2013), the CIEEM Guidelines for Preliminary Ecological Appraisal (CIEEM 2017a) and Ecological Impact Assessment (CIEEM 2016). The information has been prepared and provided in compliance with the CIEEM’s Code of Professional Conduct (CIEEM 2019) and Guidelines for Ecological Report Writing (CIEEM 2017b).

PBA Applied Ecology Ltd
New Croft
Stackhouse Lane
Giggleswick
Settle
North Yorkshire
BD24 0DL
t. 01729 822063
e. enquiries@pba-ecology.co.uk
www.pba-ecology.co.uk

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KEY FINDINGS

This report assesses the ecological baseline conditions at Hainsworth Road, Silsden, West Yorkshire, and identifies any potential ecological constraints to the proposed development. A desktop study of site attributes and an ‘Extended’ habitat survey (using UK Habitat Classifications) identified features of apparent or potential ecological significance. Potential ecological impact of the proposed development is assessed, and recommendations are detailed to limit impact on biodiversity and ecological features.

Designated Sites

There are no statutory designated sites within 2km of the area proposed for development.

There are nine non-statutory designated sites within 2 km of the area proposed for development, including one along the southern boundary of the site.

Habitats & Species

Habitats present include modified grassland (g4), native hedgerow with trees (h2), developed land sealed surface (u1b) and artificial unvegetated unsealed surface (u1b). The hedgerow is connected to a hedgerow that is part of a Local Wildlife Site (LWS).

Mallard *Anas platyrhynchos* was observed on site. No surrogate signs of other animals were recorded, however habitats on site have potential to support notable species.

The building (B1) on the developed land with sealed surface has a feature with moderate bat roost potential in the soffit on the south gable.

Within the modified grassland there are two rubble piles with refugial potential for reptiles (see Appendix F – Photographs and Target Notes).

Recommendations

- An Invasive Non-native Species (INNS) survey during the summer months.
- Bat activity surveys to assess likely presence/absence of bats in building B1.
- The hedgerow along the south border should be retained and enhanced.
- If any vegetation is to be removed, vegetation clearance works should be timed to avoid the nesting bird season which runs from March to August inclusive. Alternatively, a nesting bird check will be required immediately prior to vegetation clearance.
- Strict biosecurity measures should be adhered to including the washing of all equipment (boots, machinery etc.) on arrival to and removal from site.
- Opportunities for biodiversity enhancement should be incorporated into a Biodiversity Net Gain Assessment and Biodiversity Enhancement Plan.

1. INTRODUCTION

1.1. TERMS OF REFERENCE

PBA Applied Ecology Ltd (PBA) was commissioned by Skipton Properties. to undertake a Preliminary Ecological Appraisal (PEA) at Hainsworth Road, Silsden, West Yorkshire. This report assesses the ecological baseline conditions at the site and identifies any potential ecological constraints to the proposed development. The objectives of the ecological appraisal were to:

- determine the habitats present on site.
- determine the protected/notable species evident or potentially present on site.
- identify likely constraints and assess potential impacts of the proposed development.
- highlight further survey work which may be required.
- provide recommendations for mitigation/avoidance measures.

The level of detail in this appraisal and report is intended to be proportionate to the scale of development and complexity of its potential impacts.

Unless stated otherwise, the information provided within this report is valid for a maximum period of 24 months from the date of survey. If works at the site have not progressed by this time an updated site visit may be required to determine any changes in site composition and ecological constraints.

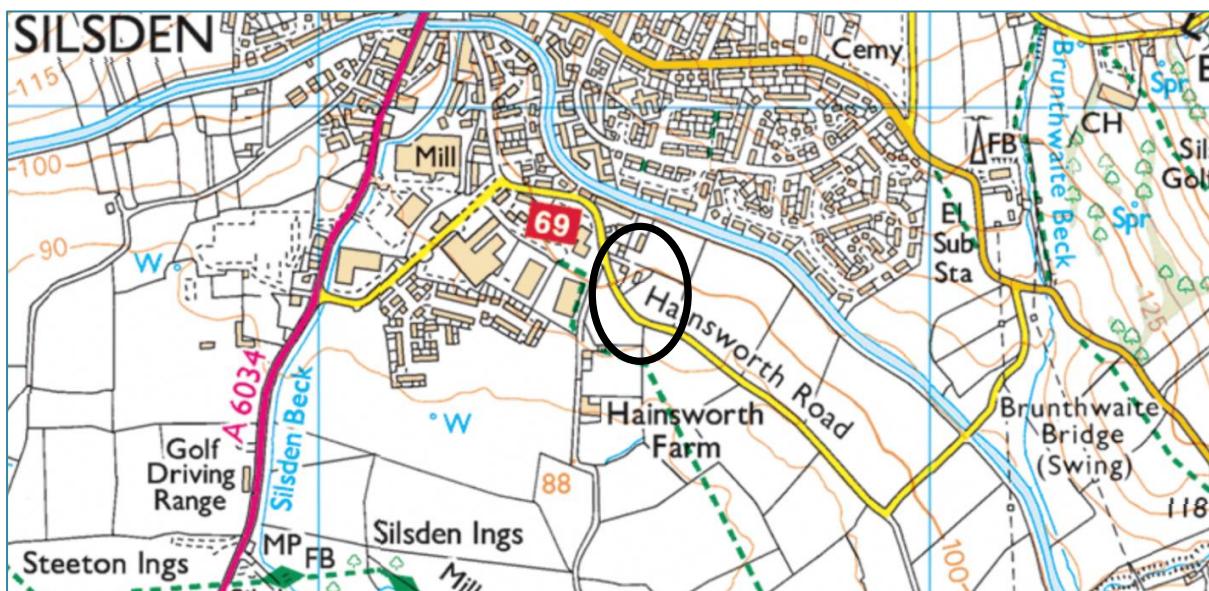


Figure 1: Site location (Bing Maps, 2023)

1.2. ADDITIONAL SURVEYS & REPORTS

PBA will produce a separate report that details a Biodiversity Net Gain Assessment that will be undertaken for the site (PBA, 2023a). In addition, a Biodiversity Enhancement Plan will be produced which details how the works can be undertaken in an ecologically sensitive way and to provide as much gain for biodiversity as is possible on site (PBA, 2023b).

1.3. SITE DESCRIPTION AND CONTEXT

The survey site is located along Hainsworth Road in Silsden (SE 04519 45726, Figures 1 & 2). The site comprises a combined industrial and office building surrounded by hardstanding, grassland, and scrub.

The wider landscape consists of arable land and suburban mosaic with the Leeds and Liverpool Canal to the north of site (Figures 1 & 2).



Figure 2: Site context (Google Maps, 2023)

1.4. DESCRIPTION OF WORKS

The proposed development is expected to include the construction of three new residential buildings with an access road (Appendix E).

1.5. WILDLIFE LEGISLATION AND PLANNING POLICY

This PEA has been undertaken with reference to relevant environmental and wildlife legislation and planning policy. Key international and national legislation considered within the scope of this document includes:

- EC Habitats Directive 1992 (Council Directive 92/43/EEC)
- Wildlife and Countryside Act 1981 (as amended)
- Countryside and Rights of Way Act 2000
- Natural Environment and Rural Communities Act 2006
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Protection of Badgers Act 1992
- Hedgerow Regulations 1997
- Environmental Protection Act 1990
- National Parks and Access to the Countryside Act 1949

The most recent amendments to the Conservation of Habitats and Species Regulations 2017 take account of the UK's exit from the European Union. These amendments are found in the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019.

In addition to obligations under wildlife legislation, Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services sets the Government's main objective for protecting UK biodiversity as "*to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological*

networks, with more and better places for nature for the benefit of wildlife and people.” (DEFRA 2011). The National Planning Policy Framework 2012 promotes decision-making with a presumption in favour of sustainable development and requires planning decisions to “contribute to and enhance the natural environment”, including “minimising impacts on biodiversity and providing net gains in biodiversity where possible” (Appendix A). Biodiversity is therefore a material consideration in planning decisions.

Further information on legislation and policy is provided later in this report (5. Evaluation) and in Appendix A, including levels of protection granted to the species and habitats identified at this site.

2. APPROACH

This PEA is based on a desktop study of site attributes and an ‘extended’ habitat survey. The standard habitat mapping survey (using UK Habitat Classifications (UK HCWG 2018)) is ‘extended’ to highlight features of apparent or potential ecological significance, in relation to habitats present that have the potential to support notable or protected species (CIEEM 2017a). The fieldwork to support this PEA was undertaken on 31st March 2023 by Neil Wilkinson MSc ACIEEM and Sebastian Ashton MA(oxon).

2.1. DESKTOP STUDY

Information on local, national and international designations, including statutory wildlife sites (e.g., SSSI, SAC), within a 2 km radius of the site were identified using the Natural England online facility ‘Magic Map’.

Records of rare and protected species, and non-statutory wildlife sites within a 2 km radius of the site were provided by the West Yorkshire Joint Services (WYJS) in April 2023. Data provided by the WYJS was interpreted to determine the presence of protected and notable species and habitats. Although biological records are rarely comprehensive, they may provide valuable information on the presence of species not recorded during field surveys. Such records are generally collected through *ad hoc* surveys; therefore, the absence of records does not demonstrate the absence of species.

To identify habitat suitability for amphibians, especially great crested newts (GCN) *Triturus cristatus*; aerial photographs and OS maps were consulted to identify any waterbodies within 500 m of the survey site. The site was also identified as a GCN risk zone using data provided by Natural England (NE, 2023).

2.2. HABITAT SURVEY

The habitat survey consisted in mapping the vegetation communities present on-site. The survey area covered 0.2 hectares. The habitat survey followed standard UK Habitat Classification habitats definitions, condition assessments and mapping methodology (UK HCWG 2018). Each habitat type is recorded by way of colour or code, allowing simple display and interpretation on the resulting habitat map. Dominant and indicator plant species were observed and recorded within each habitat type. Additional description is provided as supplementary information relating to species composition, habitat structure, management and features of local ecological interest or potential significance.

2.3. SPECIES SCOPING SURVEY

In line with standard practice (JNCC 2010, CIEEM 2017a), an assessment of the potential for the habitats on site to support protected or notable species was made. Notable species are those which are legally protected, are nationally or locally rare or endangered, or are identified as a ‘priority’ species in the UK or locally. The likelihood of presence at the site of each notable species was determined; the assessment was based on the results of the desktop study, visual evidence of animal activity on site, and the quality and extent of suitable habitats. Impact of the proposed development on notable species and supporting habitats was determined. An impact assessment was conducted to the extent that can be supported by the completed surveys; in cases where further surveys are recommended, more specific impact assessment can be developed subsequently.

The building B1 was assessed with an internal and external inspection for features with bat roost potential.

In addition, any invasive non-native and/or controlled species present on site were recorded.

2.4. SURVEY CONDITIONS AND CONSTRAINTS

Weather conditions at the time of survey were dry and overcast with low wind, and an ambient temperature of ~8 °C. All target fauna will have been active at the time of survey, and average temperatures had been appropriate in the period prior to and during the survey.

In accordance with Clause 6.7 of BS 42020:2013, any limitations to the survey and ecological assessment are detailed below and within the results.

The species scoping survey does not constitute a full survey for each taxon and cannot categorically ascertain the presence or absence of any species. Where there is potential for protected species of florally rich communities, additional survey work may be required to confirm and detail their presence.

Whilst a representation of the habitat types is achievable, some plant species are likely to have been missed due to the suboptimal timing of survey for botanical identification.

Where impact could not be confidently ascertained, checks by an ecologist are recommended immediately prior to commencement of works.

3. DESKTOP STUDY RESULTS

The following chapter has been produced based upon information gathered from the desk study.

3.1. DESIGNATED SITES

The site lies within the Impact Risk Zone of the South Pennine Moors Site of Special Scientific Interest (SSSI). The designation requires that the Local Planning Authority (LPA) consults Natural England on likely risks from the following proposed developments:

- Airports, helipads, and other aviation infrastructure,
- Wind turbines,
- Planning applications for quarries,
- Any industrial/agricultural development that could cause air pollution,
- General combustion processes with >50MW energy input,
- Landfill,
- Pipelines,
- Pylons and overhead cables,
- Any transport proposal including road, rail and by water,
- Solar schemes with footprint > 0.5ha,
- Large non-residential developments outside existing settlements/urban areas,
- Any residential development of 10 or more houses outside existing settlements/urban areas,
- Any composting proposal with more than 500 tonnes maximum annual operational throughput,
- Large infrastructure such as warehousing / industry, mechanical and biological waste treatment.

There are nine non-statutory sites within a 2 km radius of the proposed development (Table 1; Appendix B). These are designated for the presence of species-rich woodlands, a hedgerow, native bluebell cover and a rare geological feature.

There are six different priority habitats identified within 2km of the site boundary. These include ancient semi-natural woodland, ancient replanted woodland, deciduous woodland, traditional orchards, lowland fens, coastal and floodplain grazing marsh.

Table 1: Designated sites within 2 km of Hainsworth Road.

Non-statutory designated sites			
Name	Designation	Distance	Reason for designation
Brackenhill Ghyll	Local Wildlife Site (LWS)	1.4 km northwest	Species rich acid woodland and native bluebell cover.
Hainsworth hedges	Local Wildlife Site	0.0 km south	Species rich hedgerow.
Hawkcliffe Wood, Steeton	Local Wildlife Site	1.5 km south	Extensive native bluebell cover.
Jacob's Wood/ Holden Beck	Local Wildlife Site	1.5 km east	Species rich acid woodland.
Leeds Liverpool Canal	Local Wildlife Site	0.1 km north	Species rich standing water.
Silsden Reservoir Woodland	Local Wildlife Site	1.5 km north	Extensive native bluebell cover.
Spring Crag and Alder Carr Wood	Local Wildlife Site	1.4 km southeast	Semi-natural ancient woodland, species rich woodland, extensive native bluebell cover.
Swartha Wood	Local Wildlife Site	1.1 km northeast	Species rich acid woodland, native bluebell cover.
Throstle Nest	Local Geological Site (LGS)	1.2 km northwest	Exposed upper carboniferous mudstones, clays, and sandstone beds.

3.2. SPECIES RECORDS

The data records provided by WYJS (Appendix C) show that a range of nationally and internationally protected species are present within 2 km of the site. Detailed below is a summary of the most significant results of relevance to the survey area and proposed works. Distances are taken from a central grid reference.

Ninety-three records of various species were returned by the record centre. There were several notable invasive species records, including: signal crayfish *Pacifastacus leniusculus*, giant hogweed *Heracleum mantegazzianum*, Himalayan balsam *Impatiens glandulifera* and Japanese knotweed *Fallopia japonica*.

There were records of protected mammal species including otter *Lutra lutra* and several species of bat including brown long-eared bat *Plecotus auritus*. Several protected bird species including kingfisher *Alcedo atthis* and merlin *Falco columbarius*, barn owl *Tyto alba*, tawny owl *Strix aluco*, and several wading bird and waterfowl species.

There were two records of the rare and threatened freshwater species white-clawed crayfish *Austropotamobius pallipes* and 32 records of the Schedule 8 plant species English bluebell *Hyacinthoides non-scripta*.

The site is within an area of increased probability of badger activity, with a known sett within 2km of the site boundary.

4. FIELD SURVEY RESULTS

The following provides an assessment of the habitat categories identified within the survey area, and any notable species observed or potentially present. Habitats present include modified grassland (g4), native hedgerow with trees (h2), developed land sealed surface (u1b) and artificial unvegetated unsealed surface (u1c) (Appendix D). One pair of mallards (*Anas platyrhynchos*) was also observed during the survey. Moreover, the ecological appraisal identified potential for the habitats on site to support other notable species. One aspect of the building has a potential roost feature for bats (see TN 4).

Habitat distribution and location of Target Notes are recorded on the UK Habitat Classifications Map (Appendix D) and photographs are provided in Appendix F.

4.1. MODIFIED GRASSLAND (G4)

The site contains several strips of modified grassland around the perimeter of the site. All 3 strips are in moderate condition and are dominated by perennial ryegrass *Lolium perenne*, Yorkshire fog *Holcus lanatus*, stinging nettle *Urtica dioica* and thistle *Cirsium* sp. Other occasional to rarely occurring species included ivy *Hedera helix*, rose *Rosa* sp. and cleavers *Galium aparine*.

On site is a standalone tree of hazel *Corylus avellana* marked as TN1 on the habitat map. There is a pile of rubble at TN 2 as well as a pile of rubble and a small patch of mixed scrub at TN 3 consisting mainly of bramble *Rubus fruticosus* agg.

The southern section of grassland has a section of bare ground (UKHab secondary code 73).

The grassland offers low potential as habitat for any protected species; however, the rubble piles and scrub patches (TN 2 and 3) provide potential refugia for small mammals, reptiles, and amphibians. Moreover, the hazel tree (TN1) could provide nesting bird habitat during the breeding season.

4.2. NATIVE HEDGEROW WITH TREES (H2)

This hedgerow extends along the southern border of the site and consists of elder *Sambucus nigra*, holly *Ilex aquifolium*, hawthorn *Crataegus monogyna*, hazel and ivy in approximately equal proportions.

A condition assessment found this habitat to be in moderate condition.

The hedgerow connects to a hedgerow that is part of a local wildlife site and has high potential for supporting breeding birds.

4.3. DEVELOPED LAND, SEALED SURFACE (U1B)

In the centre of the site is a modern, mostly good condition building (B1) with two roofs, one of which consists of corrugated cement and the other of plastic rubber. B1 has one potential bat roost potential feature (see TN 4) within the soffit of an unsealed fascia on the south gable end as well as a broken window on its western side.

4.4. ARTIFICIAL UNVEGETATED, UNSEALED SURFACE (U1C)

An area of hardstanding extends along the western, eastern, and northern edges of B1. This habitat has negligible potential to support protected species.

Table 2: Summary of desktop study and field survey results.

Taxa	Recorded in desk study <i>(Full records in Appendix C)</i>	Evidence on site <i>(Locations and photos in Appendices D & F)</i>	Potential of site to support presence
Birds	Yes – Several species and genera including owls, waders, waterfowl, kingfisher, and merlin.	Yes – Mallard (<i>Anas platyrhynchos</i>)	High – Hedgerow along edge of site provides suitable habitat. The site boundary borders the Hainsworth hedges LWS.
Bats	Yes – Several species including common pipistrelle <i>Pipistrellus pipistrellus</i> , Daubenton's <i>Myotis daubentonii</i> , natterer's (<i>M. nattereri</i>), and brown-long eared bat <i>Plecotus auritus</i> .	Unconfirmed – Potential bat roost feature identified.	Moderate – Potential suitable roost features in and building B1 (see TN4); habitat for foraging at nearby canal and hedgerows.
Otter	Yes – Closest record 0.6km from site.	No – None found	Low – No running freshwater habitat on site, but transient individuals could move through the site.
Badger	Yes - Known sett within 1.3 km of site.	No – None found	Moderate - Increased probability of transient badgers.
Amphibians	Yes - 35 records of common frog.	No – None found	Moderate – No waterbodies on site, there are several within 500m outside the site boundary: a pond and ditch to the south, the Leeds Liverpool canal to the north and the Silsden Beck to the west. Transient amphibian presence possible.
Reptiles	No – None recorded	No – None found	Low - Lack of vegetation cover and undergrowth across site, but the rubble piles at TN 2 and TN 3 offer potential refugia.
Fish	Yes - European eel <i>Anguilla anguilla</i> and brown trout <i>Salmo trutta</i>	No – None found	None – No waterbodies on site.
Plants	Yes - English bluebell.	No – None found	Low – No English bluebell or protected species seen; however, the survey took place at a suboptimal time of year when not all plant species are visible.
Invasive Non-Native Species	Yes - Giant hogweed, Japanese knotweed, signal crayfish and Himalayan balsam	No – None found	High – INNS could easily spread onto site if not adequately controlled. Survey took place at a suboptimal time of year when not all plant species are visible.

5. EVALUATION AND RECOMMENDATIONS

The 'Hainsworth Hedges' species-rich hedgerow is connects to the south boundary of the site and the Leeds and Liverpool canal is within 100m to the north. Several other local wildlife sites and a geological site, detailed in Table 1, are situated within 2 km of the site. Several bird species were confirmed to use habitats on and near the site. There is potential for other protected and notable species to use habitats on site. In addition, it is likely that transient mammals and birds will use the habitats on site. Significant ecological features of interest are marked on the UK Habitat Classifications Map in Appendix D and photographs provided in Appendix F.

Below is an evaluation of the ecological features found on site as well as the potential impact and effect of the proposed development in the absence of any mitigation. Recommendations are made to avoid the potential risk of short or long-term adverse impacts on local biodiversity due to the proposed development, and to prevent contravention of environmental and wildlife legislation (Table 3).

Mitigation measures as recommended below must be implemented to avoid adverse effects on habitats and species. Consent may be required from the local planning authority for works that impact the Hainsworth Hedges.

Table 3: Ecological features – Evaluation and recommendations

Ecological Feature	Potential impact of proposed development	Recommendations for mitigation and/or further surveys
Hainsworth Hedges	High – This hedgerow connecting to a local wildlife site will be lost due to the development with no current plans to replace them within the development.	The hedgerow should be retained, enhanced and any impact upon the health or structure of the trees within it should be avoided.
Leeds and Liverpool Canal	Moderate – Uncontrolled run-off or spillage could impact the water quality of the canal.	The works should minimise risk of water contamination by using measures such as silt curtains and drip trays
Hawkcliffe Wood, Steeton	Negligible – The proposed works are at a sufficient distance to be very unlikely to be impacted.	See general good practice guidelines below.
Jacob's Wood/ Holden Beck	Negligible – The proposed works are at a sufficient distance to be very unlikely to be impacted.	See general good practice guidelines below.
Brackenhill Ghyll	Negligible – The proposed works are at a sufficient distance to be very unlikely to be impacted.	See general good practice guidelines below.
Silsden Reservoir Woodland	Negligible – The proposed works are at a sufficient distance to be very unlikely to be impacted.	See general good practice guidelines below.
Spring Crag and Alder Carr Wood	Negligible – The proposed works are at a sufficient distance to be very unlikely to be impacted.	See general good practice guidelines below.
Swartha Wood	Negligible – The proposed works are at a sufficient distance to be very unlikely to be impacted.	See general good practice guidelines below.
Throstle Nest	Negligible – The proposed works are at a sufficient distance to be very unlikely to be impacted.	See general good practice guidelines below.

Ecological Feature	Potential impact of proposed development	Recommendations for mitigation and/or further surveys
Modified grassland	These habitats will be lost due to the development with no current plans to replace them within the development.	As part of the BNG assessment (PBA, 2023a) it is likely to be necessary to retain and improve some of these habitats or compensate for their loss.
Birds	<p>High – Suitable nesting bird habitat present on site.</p>	<p>All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), as such it is a criminal offence to intentionally or recklessly kill or injure any wild bird, damage, or destroy the nest of any wild bird while it is in use or under construction, or take or destroy the egg of any wild bird.</p> <p>Vegetation clearance works should be timed to avoid the nesting bird season which runs from March to August inclusive.</p>
Bats	<p>Moderate – The building to be demolished as part of the proposed plans has a moderate potential bat roost feature (PRF).</p>	Bat activity surveys must be conducted by a suitably qualified ecologist before any works can take place.
INNS	<p>High – No species observed; however, survey was performed at sub-optimal time of year. Local records centre shows several invasive species within 1km of site.</p>	<p>A further INNS survey is recommended in the summer months when invasive plant species are readily visible.</p> <p>No vegetation or ground substrate is to be removed from site. If material is required to be removed from site this must be treated as controlled waste and transported by a licensed waste carrier to an authorised landfill site. Strict biosecurity measures should be adhered to including the washing of all equipment (boots, machinery etc) on arrival to and removal from site.</p>
Reptiles and amphibians	<p>Low – Modified grassland and unvegetated habitats offer little potential for these species. Some potential within rubble piles at TN 2 and 3.</p>	An inspection of these refugia by an experienced ecologist is recommended before they are removed to make way for the works.
	<ul style="list-style-type: none"> - Ecologist to give a toolbox talk at the start of works to ensure all site personnel are aware of the potential presence of protected species, designated sites, and their legal obligations to protect the environment. - Any excavations created during the development/works should be left covered overnight or fitted with a ramp to allow any trapped mammals to escape. 	

The National Planning Policy Framework 2012 requires planning decisions to “enhance the natural environment” and provide “net gains in biodiversity where possible” (Appendix A). At Hainsworth road there are several **biodiversity enhancement opportunities** that can be implemented with the proposed development. These are listed below and discussed further within the BNG assessment (PBA, 2023a) and Biodiversity Enhancement Plan (PBA, 2023b):

- Compensation for loss of nesting bird habitat through integrated bird boxes within the fabric of the new buildings.
- Creation of bat roosting habitat through integrated bat boxes within the fabric of the new buildings.
- Compensation for loss of grassland with inclusion of native species within gardens and communal spaces (road verges, hedgerows etc) which will provide nectar for pollinators.
- Compensation for loss of habitats (including rubble refugia) will be included within the Biodiversity Enhancement Plan (BEP) within the Biodiversity Net Gain (BNG) assessment.

6. CONCLUSION

In furtherance to this PEA, more detailed bat and INNS surveys are required to better determine the ecological impact of the works before they can proceed.

REFERENCES

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APPENDICES

Appendix A – Policy and Legislation

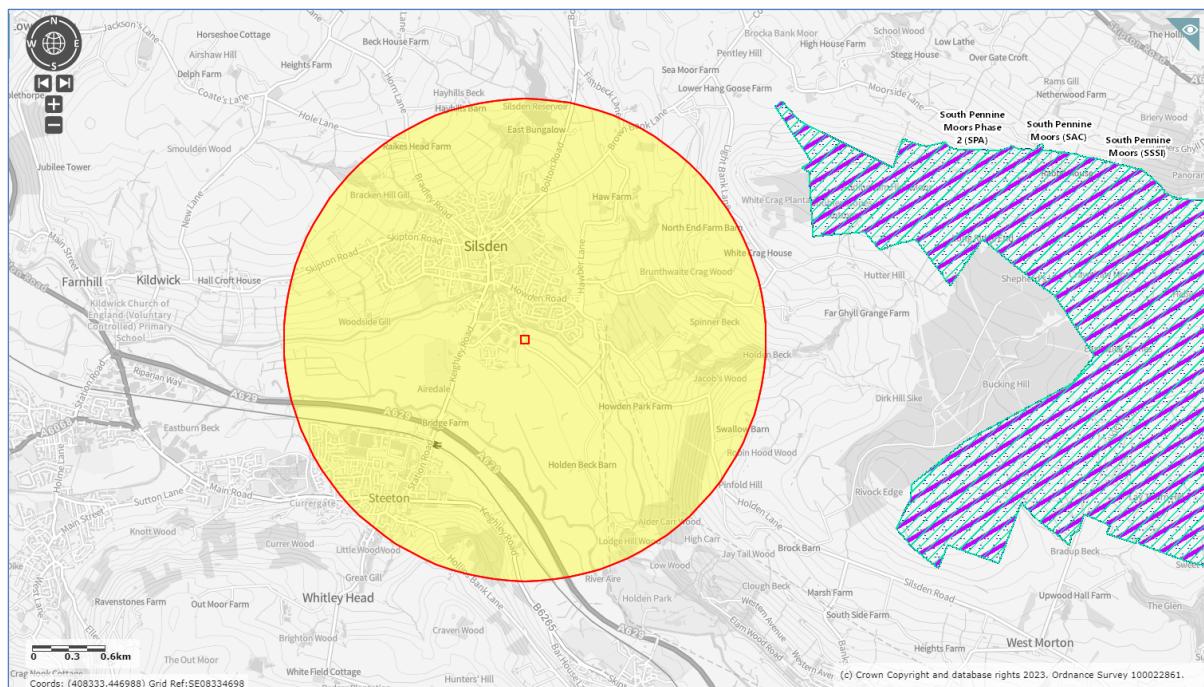
Statutory measures are in place to protect habitats and wildlife; these measures range from the global to the local, and variously give protection to whole ecosystems or single species. Included is a summary of legislation and planning policy, this is not an exhaustive list. The original texts of the relevant legislation should be consulted for further details.

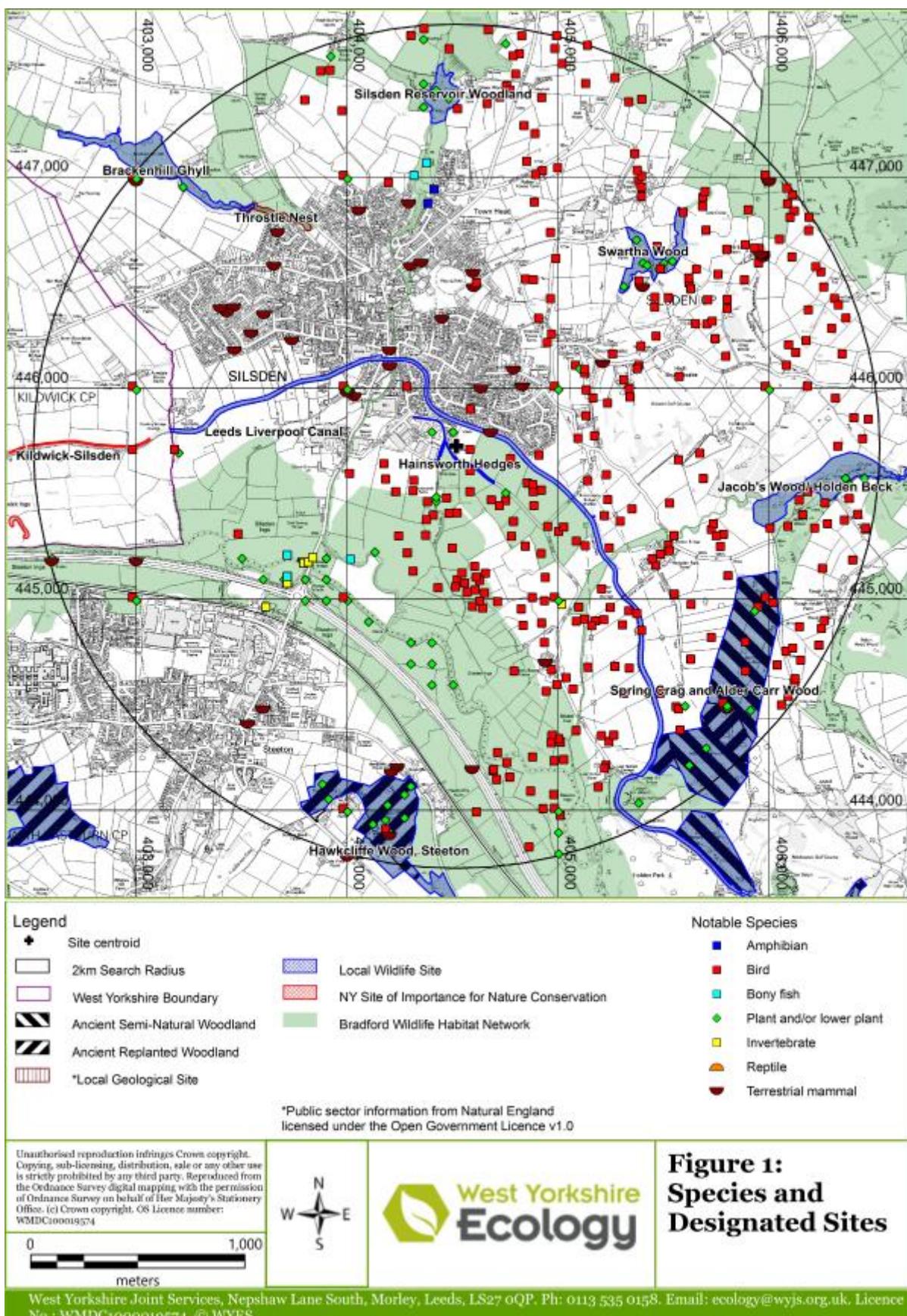
	Legislation	Description
INTERNATIONAL	Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Bern Convention)	Parties are required to protect all wild plant and animal species and their natural habitats; and to afford special protection to the most vulnerable or threatened species.
	Convention on Biological Diversity 1992	Parties are required to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity. In the UK, this is implemented through the UK Post-2010 Biodiversity Framework.
	Habitats Directive 1992/43/EEC	European member states are required to implement legislation to designate a network of protected sites and maintain their ecological integrity. Certain species are also strictly protected through this Directive. In England, this is implemented through the Conservation of Habitats & Species Regulations 2010.
	Water Framework Directive 2000/60/EC	European member states must implement legislation to designate, monitor and maintain or improve the ecological status of river basins and coastal waters. In England, this is implemented through the Water Environment Regulations 2003.
	Birds Directive 2009/147/EC	European member states are required to provide general protection to all wild birds and to designate protected sites for rare or vulnerable species. In the UK, this is implemented through the Wildlife and Countryside Act 1981.
NATIONAL	National Parks and Access to the Countryside Act 1949 (as amended)	Provides the protection of National Parks and is still the primary legislation under which some local sites for nature conservation are designated.
	Wildlife and Countryside Act 1981 (as amended)	Provides for the protection of sites and species of national importance for nature conservation. The level of protection depends on the Schedule of the Act on which the species is listed. Species protection includes prohibition of some or all of: killing, injuring, disturbing or taking, and also protection of breeding and sheltering places. Schedule 9 (with 2010 amendments) lists invasive non-native species, for which it is an offence to not adequately control and thus cause to grow in the wild.
	Countryside and Rights of Way Act 2000	Amends and strengthens existing legislation for protection of threatened species and SSSIs. For example, some offences under the Wildlife and Countryside Act can now result in imprisonment.

	Legislation	Description
NATIONAL	Natural Environment and Rural Communities Act 2006	Places a duty on all public authorities to consider biodiversity in their work. The duty extends beyond just conserving what is already there to carrying out, supporting, and requiring actions that may also restore or enhance biodiversity. Requires the Secretary of State to produce a list of species and habitats of principal importance for the conservation of biodiversity; this list is used to guide authorities when implementing their duty.
	The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	An amendment to the Conservation of Habitats and Species Regulations 2017 to transpose these EU regulations to UK law post-Brexit. Provides for the protection of sites in the UK that support habitats and species in need of conservation across Europe (SPAs/SACs). Provides full protection of species of European importance. The Regulations also set out how licensing for European protected species should work and makes breaching the conditions of a licence an offence.
	Environmental Sanctions Regulations 2010	Under these Regulations, Natural England and the Environment Agency can halt illegal activities, to order the restoration of environmental damage and to impose fines (up to £250,000) where legislation has been breached.
	National Planning Policy Framework 2012	States that the planning system should help minimise the impacts that development can have on biodiversity and provide net gains in biodiversity where possible.
	Hedgerows Regulations 1997	Allow the identification of important hedgerows which are protected under the Regulations. Permission to remove important hedgerows must be obtained from the local planning authority.
	Infrastructure Act 2015	Contains amendments to the Wildlife and Countryside Act in relation to non-native invasive species. Enables an environmental authority to issue a species control order requiring a landowner to undertake control measures or the authority to do so, at the landowner's expense.
	Protection of Badgers Act 1992	Provides for strict protection of badgers and their setts. Offences under the Act include killing, injuring or disturbing a badger, or to damage or interfere with a sett unless an appropriate licence is obtained beforehand.

Legislation	Description
Environmental Protection Act 1990	This Act makes provision for the improved control of pollution to the air, water and land by regulating the management of waste and the control of emissions. Key provisions of the Act impose a duty of care on any business or person who produces, carries, keeps, treats, disposes of or import controlled waste to do so safely.
Salmon and Freshwater Fisheries Act 1975	Legislation to protect freshwater fish, with a particularly strong focus on salmonids. Activities that constitute an offence include causing direct mortality of fish, creating barriers to migration, and causing degradation of habitats. It is also an offence to discharge toxic substances into waters containing fish or their spawn.

Appendix B – Designated Sites





Non-statutory designated sites within 2 km of works site.

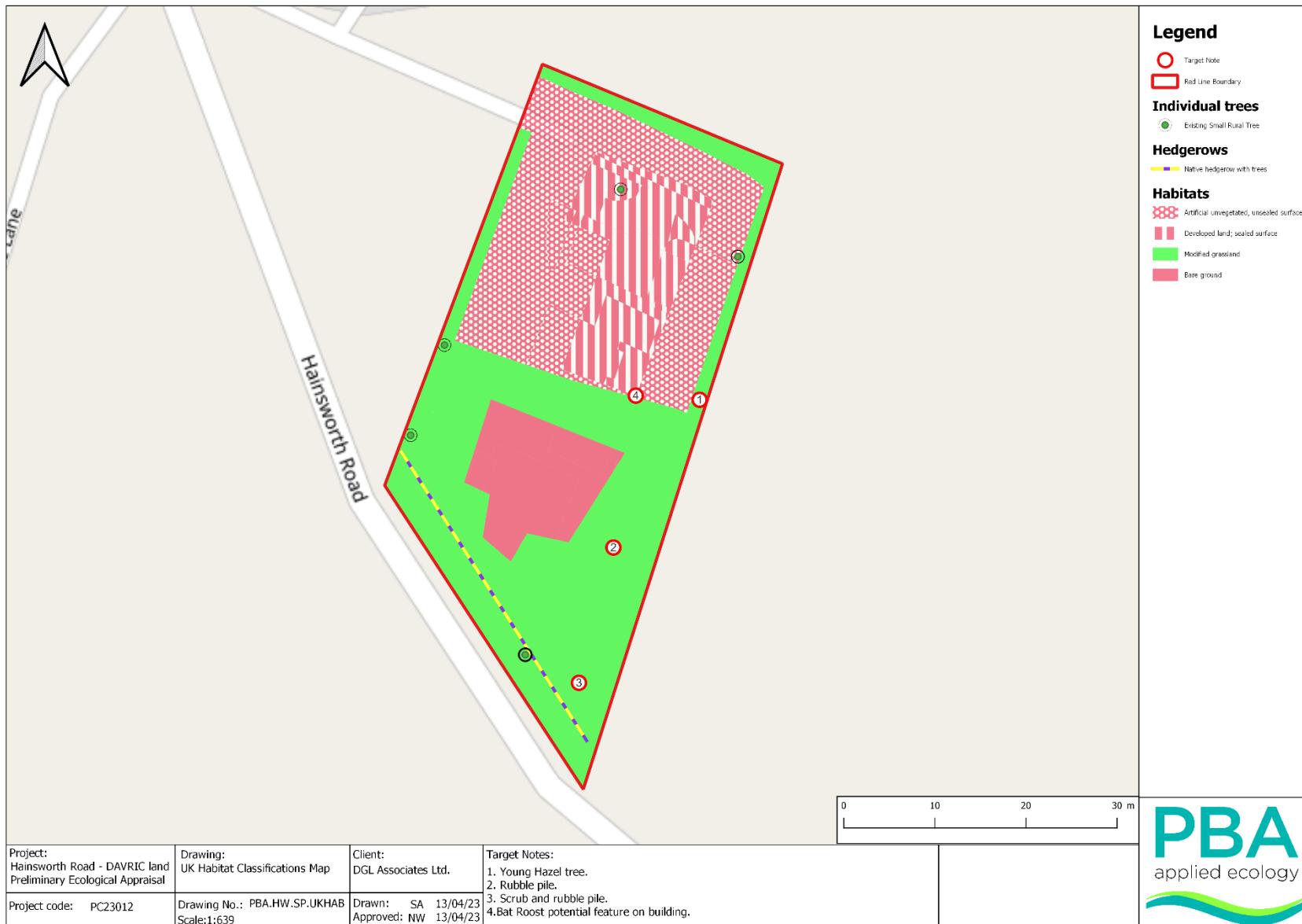
Appendix C – Species Records

Taxon group	Binomial name	Common name	Most recent record	Closest record (KM)
bird	<i>Accipiter nisus</i>	Sparrowhawk	2013	1.3
bird	<i>Actitis hypoleucus</i>	Common Sandpiper	1988	1.3
bird	<i>Alauda arvensis</i>	Skylark	2013	0.9
bird	<i>Alcedo atthis</i>	Kingfisher	2018	0.1
bird	<i>Anas platyrhynchos</i>	Mallard	2012	0.9
flowering plant	<i>Andromeda polifolia</i>	Bog-rosemary	2016	1.9
bony fish (Actinopterygii)	<i>Anguilla anguilla</i>	European Eel	2007	0.8
bird	<i>Anser anser</i>	Greylag Goose	2012	1.9
bird	<i>Anthus pratensis</i>	Meadow Pipit	2013	0.7
bird	<i>Anthus trivialis</i>	Tree Pipit	1988	0.9
bird	<i>Apus apus</i>	Swift	2012	0.6
bird	<i>Ardea cinerea</i>	Grey Heron	2012	1.3
crustacean	<i>Austropotamobius pallipes</i>	White-clawed Crayfish	2005	0.9
bird	<i>Aythya fuligula</i>	Tufted Duck	1988	1.4
bird	<i>Branta canadensis</i>	Canada Goose	2012	1.9
bird	<i>Bucephala clangula</i>	Goldeneye	1988	1.4
bird	<i>Calidris alpina</i>	Dunlin	2008	1.1
bird	<i>Caprimulgus europaeus</i>	Nightjar	1988	1.8
bird	<i>Carduelis cannabina</i>	Linnet	2013	0.7
bird	<i>Carduelis chloris</i>	Greenfinch	2019	0.1
bird	<i>Carduelis flammea</i>	Redpoll (Common\Lesser)	2013	0.7
bird	<i>Carduelis flavirostris</i>	Twite	1988	1.3
flowering plant	<i>Chrysosplenium alternifolium</i>	Alternate-leaved Golden-saxifrage	2009	0.6
bird	<i>Cinclus cinclus</i>	Dipper	1988	0.9
bird	<i>Columba palumbus</i>	Woodpigeon	2013	0.6
bird	<i>Corvus frugilegus</i>	Rook	2013	0.2
bird	<i>Cuculus canorus</i>	Cuckoo	2013	0.9
bird	<i>Cygnus olor</i>	Mute Swan	1996	0.9
bird	<i>Delichon urbica</i>	House Martin	1988	1.3
bird	<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	1988	1.8
flowering plant	<i>Elodea canadensis</i>	Canadian Waterweed	2001	0.6
flowering plant	<i>Elodea nuttallii</i>	Nuttall's Waterweed	1993	1.7
bird	<i>Emberiza citrinella</i>	Yellowhammer	1988	0.9
bird	<i>Emberiza schoeniclus</i>	Reed Bunting	2013	1.2
bird	<i>Falco columbarius</i>	Merlin	2013	1.8
bird	<i>Falco peregrinus</i>	Peregrine	1988	1.3
bird	<i>Falco tinnunculus</i>	Kestrel	2018	0.1
flowering plant	<i>Fallopia japonica</i>	Japanese Knotweed	2012	0.6
bird	<i>Gallinula chloropus</i>	Moorhen	2012	0.9
bird	<i>Gavia immer</i>	Great Northern Diver	1988	1.4
bird	<i>Haematopus ostralegus</i>	Oystercatcher	2013	0.3

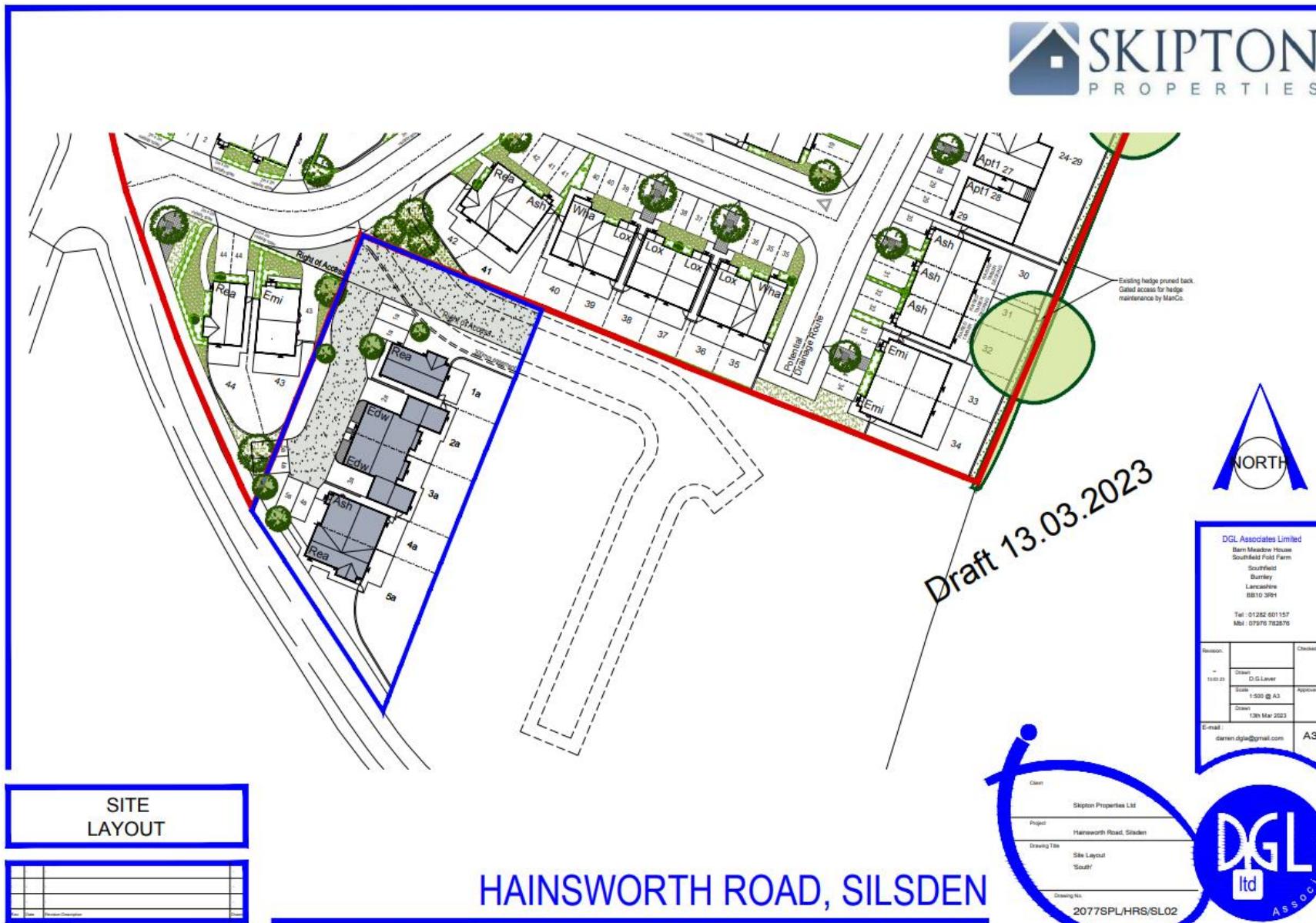
Taxon group	Binomial name	Common name	Most recent record	Closest record (KM)
flowering plant	<i>Heracleum mantegazzianum</i>	Giant Hogweed	2018	0.1
bird	<i>Hirundo rustica</i>	Swallow	2017	0.8
flowering plant	<i>Hyacinthoides non-scripta</i>	Bluebell	2009	0.1
flowering plant	<i>Impatiens glandulifera</i>	Himalayan Balsam	2015	0.3
bird	<i>Larus argentatus</i>	Herring Gull	1988	0.9
bird	<i>Larus canus</i>	Common Gull	1988	0.9
bird	<i>Larus fuscus</i>	Lesser Black-backed Gull	2013	0.9
bird	<i>Larus ridibundus</i>	Black-headed Gull	2013	0.4
terrestrial mammal	<i>Lepus europaeus</i>	Brown Hare	2012	1.2
terrestrial mammal	<i>Lutra lutra</i>	Eurasian Otter	2021	0.6
bird	<i>Motacilla cinerea</i>	Grey Wagtail	2019	0.7
bird	<i>Muscicapa striata</i>	Spotted Flycatcher	1988	1.8
terrestrial mammal	<i>Myotis daubentonii</i>	Daubenton's Bat	2011	2.0
terrestrial mammal	<i>Myotis nattereri</i>	Natterer's Bat	2016	1.6
flowering plant	<i>Narcissus pseudonarcissus</i>	Daffodil	1993	0.5
bird	<i>Numenius arquata</i>	Curlew	2013	0.6
bird	<i>Oenanthe oenanthe</i>	Wheatear	2013	0.3
crustacean	<i>Pacifastacus leniusculus</i>	Signal Crayfish	2015	1.0
bird	<i>Passer domesticus</i>	House Sparrow	2017	0.2
bird	<i>Passer montanus</i>	Tree Sparrow	1988	0.9
bird	<i>Perdix perdix</i>	Grey Partridge	2013	0.9
bird	<i>Phoenicurus phoenicurus</i>	Redstart	1988	0.9
bird	<i>Phylloscopus sibilatrix</i>	Wood Warbler	1988	1.8
bird	<i>Phylloscopus trochilus</i>	Willow Warbler	2012	0.9
bird	<i>Picus viridis</i>	Green Woodpecker	1988	0.9
terrestrial mammal	<i>Pipistrellus</i>	Pipistrelle Bat species	2005	0.3
terrestrial mammal	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	2021	0.5
terrestrial mammal	<i>Pipistrellus sp.</i>	Pipistrelle Bat species	2007	0.2
terrestrial mammal	<i>Plecotus auritus</i>	Brown Long-eared Bat	2010	1.7
bird	<i>Pluvialis apricaria</i>	Golden Plover	1988	1.7
bird	<i>Prunella modularis</i>	Dunnock	2012	0.2
bird	<i>Pyrrhula pyrrhula</i>	Bullfinch	1988	0.9
amphibian	<i>Rana temporaria</i>	Common Frog	2008	1.2
flowering plant	<i>Rhododendron ponticum</i>	Rhododendron ponticum	2012	1.7
bird	<i>Riparia riparia</i>	Sand Martin	2013	0.9

Taxon group	Binomial name	Common name	Most recent record	Closest record (KM)
flowering plant	<i>Rosa rubiginosa</i>	Sweet briar	2018	1.9
bony fish (Actinopterygii)	<i>Salmo trutta</i>	Brown/Sea Trout	2014	1.0
bird	<i>Saxicola rubetra</i>	Whinchat	1988	1.7
terrestrial mammal	<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	2018	0.6
bird	<i>Scolopax rusticola</i>	Woodcock	1988	1.8
bird	<i>Strix aluco</i>	Tawny Owl	2012	0.9
bird	<i>Sturnus vulgaris</i>	Starling	2018	0.2
bird	<i>Tachybaptus ruficollis</i>	Little Grebe	1988	1.3
bird	<i>Tringa totanus</i>	Redshank	1988	1.7
bird	<i>Troglodytes troglodytes</i>	Wren	2012	0.2
bird	<i>Turdus iliacus</i>	Redwing	2018	0.9
bird	<i>Turdus philomelos</i>	Song Thrush	2019	0.2
bird	<i>Turdus pilaris</i>	Fieldfare	1988	0.6
bird	<i>Turdus viscivorus</i>	Mistle Thrush	1988	0.9
bird	<i>Tyto alba</i>	Barn Owl	1988	1.5
bird	<i>Vanellus vanellus</i>	Lapwing	2013	0.4
terrestrial mammal	<i>Vespertilionidae</i>	Bats	2007	0.2

Appendix D – UK Habitat Classifications Map



Appendix E – Proposed Site Plan



Appendix F – Photographs and Target Notes

TN ref	Photograph	Notes
TN1		Young Hazel tree
TN2		Rubble pile
TN3		Scrub and rubble pile. Hedgerow and modified grassland habitat also visible.
TN4		Bat roost potential feature – Gap in soffit. Moderate potential.