SF 22186 | SMITHYWOOD BUSINESS PARK, PHASE 2

PRELIMINARY ECOLOGICAL APPRAISAL

September 2025 | For Planning

CONFIDENTIAL INFORMATION RELATING TO PROTECTED SPECIES WITHIN THIS REPORT – NOT TO BE MADE AVAILABLE IN THE PUBLIC DOMAIN

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Quality Assurance

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EXECUTIVE SUMMARY

Smeeden Foreman Limited has been commissioned by JEH Planning to undertake a preliminary ecological appraisal of their site at Smithywood, Phase 2 (central grid reference SK3678394483).

A desk study of relevant information has been undertaken including designated nature conservation sites and existing records of protected species; and initial site survey mapping to the UK Habitats Classification System with extended phase 1 survey for protected species.

Designated sites
Two statutorily designated nature conservation sites and twenty-two non-statutory designated sites lie within 2km of the proposals site boundary. The proposal site also lies within six SSSI impact risk zones. The relevant Natural England (NE) Geographic Information System (GIS) dataset indicates that the nature and scale of the proposed works are unlikely to impact upon this statutory site due to the distance and nature and scale of the proposal.

Potential indirect effects would be minimised or avoided by incorporating appropriate mitigation measures such as protective fencing to prevent encroachment and measures to avoid effects on water quality.

With respect to Smithy Wood (LWS 190), this forms part of the northern boundary of the site, mitigation and enhancement measures would be put in place to avoid potential impacts and improve the condition of the retained woodland habitats as follows: -

- Incorporation of a Root protection zone based on calculated root protection areas (minimum 15m) along the woodland edge should be incorporated into the development proposals.
- A temporary protective fence should be used to protect the retained trees and ground flora from accidental damage or encroachment during construction.
- This should be retained as a mix of scrub and grassland with management to maximise structural and botanical diversity.
- Consider Lighting design and Obtrusive light (or light pollution) which can have a profound negative impact or change the character of a locality and significantly altering wildlife habitats and ecological patterns, aims should be to produce a dark corridor along the woodland edge.
- Implementation of an appropriate woodland management plan aiming to manage invasive species and natural regeneration.

Habitats
Habitats on site have local to county level of ecological value. Grasslands, derelict land and scrub are of local value, while the woodland, hedgerows and acid grassland on site are considered of county value. The habitats on site and immediately bounding offer roosting, breeding and sheltering opportunities for breeding birds and wildlife in general.

To protect habitats of ecological value present and ensure that the proposed development provides enhancement to wildlife, the following is recommended:

- The retention of trees particularly mature trees, those with bat roost potential and associated hedgerows on site where possible, or replacement planting using native species.

- Use of temporary protective demarcation fencing to protect retained areas/features with the incorporation of a buffer zone (minimum 15m) adjacent to Smithy woodland standoff's from retained hedgerows (minimum 3m).
- Implementation of a sympathetic lighting scheme within proposals that minimises illumination of woodland, trees and areas of new planting throughout the site.
- Use of directional lighting during construction and post-development, which will not shine upon the site boundaries, adjacent woodland and areas of existing/new planting.

In order to protect habitats of ecological value present and ensure that the proposed development provides enhancement to wildlife, the following is recommended:

- The retention of the trees and boundary hedgerows at the site where feasible, or replacement planting using native species;
- The gapping up of the existing hedgerow (H5) with appropriate native species;
- Use of temporary protective demarcation fencing to protect retained areas/features. The fencing must be in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction', extend outside the canopy of the retained trees, and remain in position until construction is complete;
- The incorporation of a buffer zone (minimum 15m) adjacent to areas of semi-natural ancient woodland and standoffs from retained hedgerows (minimum 3m) which should be utilised for provision of areas of semi-natural habitat such as scrub and wildflower grassland;
- Incorporation of appropriate native tree and shrub species along with suitable wildflower mixes within all landscape proposals. Inclusion of native species of local provenance and ornamental species of known benefit to wildlife within the landscape proposals where possible;
- Consider a habitat improvement plan for the Acid Grassland that is likely to become overgrown with agricultural weeds due to nutrient enrichment and grazing management. The aim of the plan should be to reduce/ remove vigorous grass growth, reduce fertiliser inputs and manage scrub.
- Consider a woodland management plan where woodland habitat retained on site;
- Use of directional lighting during construction, which will not shine upon the site boundaries, hedgerows or trees within the site;
- Consideration given to the incorporation of SUDs drainage features such as rain gardens, swales and green/blue/brown roofs/walls where appropriate;
- Provision of compensatory habitat off-site to mitigate for loss of hedgerow or grassland condition to facilitate the scheme, in accordance with mandatory requirements for delivery of biodiversity net gains;
- Implementation of a sympathetic lighting scheme within proposals that minimises illumination of trees and areas of new planting to the boundaries of the site. Incorporation of appropriate luminaire specifications and locations should be considered in the interest of minimising impacts on ecological

receptors, including light sensitive species i.e. bats.

Refer to section 5.2 for further details.

Species
To further assess the potential impact of the proposed development and/or inform the mitigation requirements further survey work is recommended in respect of the following: -

- Bats – The hedgerow on site and adjacent woodland habitats provide suitable habitat for foraging and commuting bats (Moderate). Bat transect surveys recommended to assess the actual use of the site and inform the scheme design would be recommended. This would consist of nocturnal walkover and automated surveys over the active season from April through to October in line with Bat Conservation Trust Survey Guidelines (2023). Recommendations for site enhancements include retention of existing hedgerows where possible, provision of new hedgerow, tree/shrub planting associated with wildflower grassland areas to increase foraging opportunities, a sympathetic lighting design and incorporation of dark corridors.
- Bats (roosting in trees) – Eight trees identified on site (T1-T8) to offer bat roost suitability. Further assessment in the form of a detailed ground level tree assessment (GLTA, winter optimal) and subsequent aerial inspection and/or bat activity surveys (emergence/re-entry surveys, May-August/September) to Bat Conservation Trust Survey Guidelines (2023) where required to further determine the use of the trees by roosting bats.
- Breeding birds – Due to the presence of woodland habitat and potential for farmland bird species to be affected further survey work is recommended to assess the value of the site for breeding birds (March-mid July inclusive). General mitigation to include incorporation of appropriate native species within the landscape proposals and installation of appropriate bird boxes on retained trees/new build. Recommendations to enhance the site for nesting birds include appropriate native planting, the installation of species-specific nest boxes and sympathetic management of new planting.
- Badger – Evidence of badgers were recorded during the walkover surveys, with the identification of an outlier within the scheme, it is therefore recommended that further survey is undertaken to inform the site design and licencing requirements or works to a method statement. Precautionary working methods during construction would also be required.
- Reptiles – Suitable habitat present on site, with further surveys recommended to determine presence/likely absence of reptile species (April or September).
- Hedgehog – precautionary working methods to be used during construction to avoid accidental harm or injury, with appropriate design of fencing in respect to hedgehog (0.15m gaps below boundary fences/walls).

Refer to section 5.3 and 5.4 for further details.

Further survey work is likely to be required to confirm presence and populations of these species, to inform any future ecological impact assessment and identify what necessary impact avoidance and mitigation measures will be required to progress development at the site. Where impacts on protected species cannot be avoided, licences may also be required to be sought from Natural England prior to commencement of the proposed development.

An initial draft BNG calculation using the DEFRA Statutory Biodiversity Metric has been completed. This provides a baseline value for the biodiversity of the site with which any habitat retention, creation or enhancement proposed within the scheme's landscape proposals can be compared to indicate whether the project can provide Biodiversity Net Gain. The calculations indicates that the site has a potential value of 37.28 habitat units with 36.42 hedgerow units (refer to the Biodiversity Metric 4.0 Calculation Tool spread sheet SF22186 Biodiversity Metric 4.0 Calculation Spreadsheet DRAFT 1, Sep-25).

The Proposed Development masterplan should, where possible, include the retention of habitats of principal importance, or replacement on a 2:1 basis with like-for-like habitat if removal is unavoidable. Important habitats within the within or bounding the proposal site included Lowland Mixed Deciduous Woodland, Acid grassland and Hedgerows.

Opportunities in the masterplan scheme design should be explored to enhance, create and incorporate biodiverse and species-rich habitat within the scheme and built environment with a focus on creation of features to support protected species, and local nature recovery strategies and LBAP targets.

1.0 INTRODUCTION

1.1.1 Smeeden Foreman Limited has been commissioned by JEH Planning to undertake a preliminary ecological appraisal of their site at Smithywood, Phase 2 (central grid reference SK3678394483), hereafter referred to as the 'site'.

1.1.2 This report will include the following information gathered by desk study and initial walkovers undertaken:

- Proximity to statutory and non-statutory designated sites.
- Proximity to existing records of protected species; and,
- Site habitat appraisal and potential to support protected species.

1.1.3 A review of the above information will be made to identify any features or sites of ecological interest which may be affected by the development proposals. Where potential impacts or protected species are identified the need for mitigation measures and requirements for further surveys will be discussed.

1.1.4 The report has been commissioned to inform a planning application for Business Park use.

1.1.5 The methodologies used to survey and assess the ecological value and potential impacts on the site are based upon guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) (Guidelines for Preliminary Ecological Appraisal, 2017).

2.0 SITE DESCRIPTION

2.1.1 The site is located on the northeastern edge of Ecclesfield, Sheffield; adjacent to the existing Smithywood Business Park. It is approximately 15 hectares principally comprising of farmland pasture and grassland, bounded and dissected by hedgerows. Refer to Figure 01 below.

Figure 01: Aerial view of site location

2.1.2 The site is bounded to the east by the M1 motorway, with woodland and pasture farmland beyond. To the immediate west is the existing Smithywood Business Park, Hydra Business Park and other industrial/retail developments. Road infrastructure separates the site from further pasture farmland to the South and Southwest. To the north, are habitats including woodland and grassland which continue North alongside the M1.

2.1.3 Smithy Wood lies directly north of the site and is designated Local Nature Reserve (LNR). Lady Clough LWS is separated from the site by the M1 corridor is similarly designated. Other LWSs within close proximity of the site include Hesley Tip LWS 0.3km to the north, Smithy Wood Tip LWS 0.4km to the west and Blackburn Brook LWS 0.3km to the south. The closest water course is Blackburn Brook which runs within a tree lined corridor approximately 130m to the west of the southern section of the site, separated by woodland and an area of industrial land.

3.0 PRINCIPLE LEGISLATION AND POLICIES

3.1.1 The national nature conservation legislation and policies that may be relevant to the proposed development are listed below. A brief explanation of the principle legislation and policies relating to nature conservation, biodiversity and ecology is provided in *Appendix 01*.

Principle Legislation and Policies

- Wildlife and Countryside Act 1981 (*as amended*)
- EC Habitats Directive (92/43/EEC)
- EC Birds Directive (79/409/EEC)
- Conservation of Habitats and Species Regulations 2017 (*as amended*)
- Countryside and Rights of Way Act 2000
- Protection of Badgers Act 1992
- United Kingdom Biodiversity Action Plan (UKBAP)
- Natural Environment and Rural Communities Act (NERC) 2006 – Biodiversity Duty
- Hedgerow Regulations 1997
- National Planning Policy Framework (NPPF)

4.0 BASELINE INFORMATION

4.1 METHODOLOGY

4.1.1 The ecological interest of the site and its surroundings has been investigated by a combination of the following:

- Field survey of the site and immediate surroundings including an extended phase 1 habitat survey to UK Habitats Classification System.
- Consultation with relevant bodies to obtain existing protected species records and statutory / non-statutory designated sites information within 2km of the development site: Sheffield Biological Records Centre (SBRC), Rotherham Biological Records Centre (RBRC), and South Yorkshire Bat Group (SYBG);
- Previous ecological reports for this site prepared by Smeeden Foreman (*SF3182_Preliminary Ecological Appraisal Smithywood Phase 2_June 2021*)
- The UK Biodiversity Action Plan (UKBAP);
- The Sheffield Biodiversity Action plan (SBAP), and The Rotherham Biodiversity Action plan (RBAP).
- Magic map, a government website for nature conservation information; and,
- Aerial photographs.

4.2 NATURE CONSERVATION DESIGNATED SITES

Statutory Designations

4.2.1 Two statutorily designated nature conservation sites lie within 2km of the proposals site boundary: Woolley Wood Local Nature Reserve (LNR) located approx. 1.2km southeast and Scholes Coppice and Keppel's Field LNR located approx. 1.9km east, refer to Table 01 below.

Table 01: Statutorily designated sites within 2km

Site Name	Designation	Grid reference	Location from site	Notes
Scholes Coppice and Keppel's Field	LNR [1]	SK38939513	1.9km east	An area of ancient woodland, containing a number of archaeological sites, the most significant of which is thought to be an Iron Age hill fort
Woolley Wood	LNR	SK380927	1.0km south	34-hectare woodland with good native bluebell cover

[1] Local Nature Reserves are designated by local authorities under the National Parks and Access to the Countryside Act 1949. They cover sites of local significance in terms of their nature conservation value and can contribute to opportunities for public education and enjoyment of wildlife. Local Authorities are required to consult English Nature regarding such designation and the criteria for site selection is published by them in 'Local Nature Reserves in England'.

4.2.2 The proposal site lies within six SSSI outer impact risk zones (IRZ): Canyards Hills SSSI (approx. 11km west), Dark Peak SSSI (approx. 12km West), Wadsley Fossil Forest SSSI (approx. 5.7km Southwest), Easter Peak District Moors SSSI (approx. 11.5km Southwest), Dearne Valley SSSI (approx. 7km North), Denaby Ings SSSI (approx. 14.3km Northeast).

4.2.3 Designated Sites of Special Scientific Interest (SSSIs) are of national importance for their wildlife and natural heritage value. They are designated by Natural England, following evaluation against published guidelines, under the Wildlife and Countryside Act 1981.

4.2.4 The relevant Natural England (NE) Geographic Information System (GIS) dataset indicates that the nature and scale of the proposed works are unlikely to impact upon this statutory site due to the distance and nature and scale of the proposal.

4.2.5 No other European or national statutory designated sites are present within 2km of the proposed development site such as Ramsar Sites, Special Protection Areas (SPA), Special Areas of Conservation (SAC), National Nature Reserves (NNR), Areas of Outstanding Natural Beauty (AONB) and National Parks.

Non-statutory Designations

4.2.6 Sheffield Biological Record Centre (SBRC) and Rotherham Biological Record Centre (RBRC) provided information on twenty-two non-statutorily designated sites within 2km of the proposals site. These sites are detailed in Table 02 below with additional descriptions of their corresponding designations.

Table 02: Non-statutorily designated sites within 2km (SBRC/RBRC)

Site Name	Designation	Grid reference	Location from site	Notes
Blackburn Brook	SINC 215 [1]	SK36619393	0.2km west	Two stretches retain their natural course with meanders, elsewhere, short lengths of the watercourse run between embankments
Brook at Ecclesfield Common	SINC 211	SK36229408	0.4km southwest	three stretches of a stream include wet grassland with cuckoo flower, woodland with ancient woodland ground flora species, and scrub
Ecclesfield Allotments	SINC 208	SK35499411	1.1km west	Old dense hedges, orchard trees and streamside crack willows provide habitat for a number of birds of high conservation concern
Ecclesfield Cemetery	SINC 205	SK35159420	1.4km west	Unimproved, species-rich grassland, woodland species, mature trees
Ecclesfield Dam	SINC 206	SK35409451	1.1km west	The streamside vegetation is dominated by old alders, with a rich ancient woodland ground flora. Large crack willows dominate the marshy area
Field at Yew Lane	SINC 245	SK35149394	1.5km west	An extensive pasture on a slope, with a watercourse below, unimproved grassland, wet flushes and small marshy areas and diverse flora
Hartley Brook, Tongue Gutter & Sheffield Lane Dike	LWS 212 [2]	SK36539372	0.4km south	Different types of grassland (acid and neutral), areas of scrub and planted trees, wet woodland and running water in the form of a stream which threads the whole site
Hesley Tip	SINC 187	SK36159600	1.0km north	Open woodland, ancient woodland, Scots pine plantation, scrub and a pond
Hesley Wood & Chapeltown Park	SINC 188	SK36209670	1.71km north	Semi-natural broad-leaved woodland, mixed broad-leaved and coniferous plantation, amenity

Site Name	Designation	Grid reference	Location from site	Notes
				grassland, old spoil heaps that are scrubbed over, two small ponds with an associated ditch
Hunshelf Quarry	LWS 184	SK35329505	1.2km west	Oak dominated woodland with areas of scrub and grassland
Lee Shrogs Wood	LWS 242	SK34879435	1.7km west	A stream runs along the lower boundary of the wood, with a rich flora, particularly in the ancient part of the wood
Smithy Wood	LWS 190	SK36719542	0.4km north	Ancient woodland supporting priority species and habitats. Grassland, scrub, wetland and open pools
Smithy Wood Tip	SINC 189	SK36229497	0.3km west	Species of ephemeral habitats such as the bare dry tipped material occur here, including adonis ladybird (a Notable species), and a range of Odonata frequent the southern pond. Palmate newts (UKBAP species) are recorded from the northern ponds. Skylark (UKBAP and National Red Listed species) are also present
Whitely Hall and Green Lane Farm	SINC 201	SK343951	1.9km east	Mixed ancient woodland with watercourses running into a dam. unimproved, neutral to acid hay meadow and pasture on a south-facing slope. Hay meadow species include bulbous buttercup and cuckoo flower; the pasture is very species-rich, with eyebright being the most notable
Whitely Lane	SINC 243	SK34669487	1.9km west	This site follows a small watercourse with wooded bank, dominated by very large beech trees. strip of unimproved neutral grassland with hedgerows

Site Name	Designation	Grid reference	Location from site	Notes
Windmill Hill Lane	LWS 203	SK34769532	1.8km west	Ancient lane with small stream, unimproved neutral grassland, mature trees, marshy grassland, scrub, open grassland
Woolley Wood	SINC 219	SK380927	1.0km south	34-hectare ancient woodland with good native bluebell cover
Grange Park	LWS 068	SK38599390	1.8km southeast	Extensive area characterised by remnants of historic park landscape, ancient broadleaved woodland and unimproved grassland
Helsey Wood	LWS 071	SK35859709	2.0km north	Qualifies as an LWS under ancient, acid, and neutral/calcareous woodland criteria
Lady Clough and Smithy Wood	LWS 070	SK36869537	Northern boundary of site	An area of over 15ha of mixed ancient semi-natural woodland and plantation on acid grassland
Thorpe Mine	LWS 117	SK38189620	1.9km northeast	A former colliery site with mine and pumping station; the woodland along the north and east edges is a mix of silver birch and oak. There are large areas of hawthorn scrub throughout the site and areas of urban common in the centre of the site illustrating evidence of previous industrial use
Thundercliffe Grange (Grange Hall)	RIGS[3]	SK38059356	1.4km Southeast	This house was a Grange of the Cistercian Abbey of Kirkstead, in Lincolnshire, which had forges and other considerable property

[1] Sites of Importance for Nature Conservation e.g. SINCs form part of a wider national network of non-statutory locally valued wildlife sites. SINCs were initially identified through the Phase 1 Habitat Survey of the District undertaken in the 1990s. Most of these sites have been resurveyed in greater detail by the North Yorkshire SINC Panel and a number of additional sites have also been identified and surveyed since the last Harrogate District Local Plan was published in 2001

[2] Local wildlife sites e.g. LWS are areas identified and selected locally for their wildlife value. The designation is non-statutory but is recognition of a site's significance with many LWS being of county and often regional importance for wildlife. Examples range from field ponds, streams and reed beds to ancient woodlands, flower-rich meadows and hedgerows. This

Site Name	Designation	Grid reference	Location from site	Notes
designation is equivalent to a SINC. This designation is used by local authorities to allow the ecological value of a site to be considered within the planning system				
[3] Regionally Important Geodiversity Sites e.g. RIGS are non-statutory sites designated to protect important places for geology, geomorphology, and soils. Selected for their scientific, educational, historical, or aesthetic value, RIGS are protected through local planning policies rather than legislation, requiring local consultation for their consideration in development plans. They are also known as Local Geological Sites (LGS) or Local Geodiversity Sites (LGS), with RIGS being the older term				

4.2.7 Blackburn Brook Valley and its tributaries are recognised under the Sheffield Development Framework (Policy CS12, Promoting Economic Prosperity and Providing Sustainable Employment, adopted: March 2009) as Strategic Green Network will be maintained and where possible enhanced, which will follow the rivers and streams of the main valleys. The Blackburn valley is also a priority of the South Yorkshire Forest Plan and Sheffield Countryside Management Strategy for environmental improvements, including the maintenance and enhancement of existing features of value where possible, for example, the TransPennine Trail and the wider footpath/cycle network together with landscape features such as woodland along Blackburn Brook and at Woolley Wood and habitat creation.

4.2.8 Under Core Strategy CS73 Sheffield Council have identified biodiversity areas within the Sheffield region with priorities, objectives and opportunities The Network will be secured by preserving open space through development control, enhancing existing open space, creating new open space as part of new development and through developer contributions. The draft Public Rights of Way Improvement Plan proposes to enhance the provision of good quality paths and network links to and along the river corridors. It also proposes to integrate parks, woodlands site facilities, canal/riverside, and open country access into the overall path network. New lengths of footpaths and cycle routes and improvements will be funded, for example, through Natural England and the Public Rights of Way budget for the Local Transport Plan.

4.2.9 Refer to *Appendix 02* which shows the locations of the designated sites in relation to the application site.

4.3 EXISTING SPECIES RECORDS

4.3.1 Existing biological records were provided following consultation with Sheffield biological record centre (SBRC) and Rotherham biological record centre (RBRC). The records detailed in the following tables are those in closest proximity to the proposed development site within the 2km search area.

Table 04: Protected species records within 2km (SBRC/RBRC)

Species	No. of records	Date range and record type
Barn owl *Tyto alba*	7	1976-1997 (historic)
Black redstart *Phoenicurus ochruros*	1	Record from 1989 (historic)
Brambling *Fringilla montifringilla*	19	1963-2004 (historic)

Species	No. of records	Date range and record type
Brown long-eared bat *Plecotus auritus*	2	2006-2010
Common pipistrelle *Pipistrellus pipistrellus*	6	1993-2022 (some historic)
Daubenton's bat *Myotis Daubentonii*	1	1996 (historic)
Fieldfare *Turdus pilaris*	74	1954-2016 (some historic)
Firecrest *Regulus ignicapillus*	11	1980-1995 (historic)
Golden oriole *Oriolus oriolus*	1	1983 (historic)
Goshawk *Accipiter gentilis*	1	1989 (historic)
Great crested newt *Triturus cristatus*	5	1968-2001 (historic)
Hobby *Falco subbuteo*	1	2001
Kingfisher *Alcedo atthis*	18	1951-2000 (historic)
Leisler's bat *Nyctalus leisleri*	12	1993-1996 (historic)
Little ringed plover *Charadrius dubius*	6	1986-2008 (some historic)
Noctule bat *Nyctalus noctula*	4	1994-1997 (historic)
Otter *Lutra lutra*	1	2007
Peregrine *Falco peregrinus*	1	2013
Redwing *Turdus iliacus*	199	1950-2017 (some historic)
Water vole *Arvicola amphibius*	1	1977 (historic)
Whimbrel *Numenius phaeopus*	1	1988 (historic)
Whiskered bat *Myotis mystacinus*	2	2003
Whooper swan *Cygnus cygnus*	2	2011-2016
Woodlark *Lullula arborea*	1	1987 (historic)

Table 05: Bat species records within 2km (SYBG)

Species	No. of records	Notes
Brown long-eared bat	2	2006-2010 includes roost record
Common pipistrelle	7	2005-2017 includes roost record
Daubenton's bat	1	unknown
Leisler's bat	1	unknown
Myotis species *Myotis sp.*	1	2016
Noctule bat	5	2001-2017
Soprano pipistrelle *Pipistrellus Pygmaeus*	1	2016
Unidentified pipistrelle *Pipistrellus sp.*	5	2010-2015 includes roost record
Unidentified bat *Vesper sp.*	11	2003-2011 includes roost record

4.3.2 No European Protected Species Licences were identified within the 2km search area. The locations of the nearest EPS licences are approximately 2.5km North of the proposals site (*2019-41551-EPS-MIT* for common pipistrelle and brown long-eared bats, 2019-2029) and 5.3km north-west of the proposals site (2019-41739-EPS-MIT-2 for great crested newt, 2019-2021).

4.3.3 The site falls within an Amber Great Crested Newt Risk Zone and therefore qualifies for registration on the District Level Licencing scheme operating within the Sheffield and Rotherham district.

4.3.4 One pond located 1.3km Northeast of site has returned a negative result for the presence of great crested newt (including egg presence) following environmental DNA surveys carried out by Natural England to inform the District Level Licencing Scheme. The survey was undertaken in June 2018 (SK3784895840). A further pond located 3.6km West of site have returned positive results for the presence of great crested newt following environmental DNA surveys carried out by Natural England. The survey were undertaken in May 2017 (SK330949).

4.3.5 Badger have also been recorded within 2km of the proposals site, with the closest sett record within 1.4km of the site. Recent field records of badger have also been recorded within the vicinity of the site.

4.3.6 No non-native invasive species included on Schedule 9 of the Wildlife and Countryside Act 1981 have been recorded within 2km of the proposals site.

4.3.7 Records of priority Section 41/UK Biodiversity Action Plan species within 2km of the study area were provided for the following species:

Amphibians: Common frog, Common toad, Smooth newt

Birds: cuckoo, grasshopper warbler, grey partridge, hawfinch, house sparrow, lapwing, lesser redpoll, nightjar, reed bunting, skylark, spotted flycatcher, tree pipit, tree sparrow, turtle dove, wood warbler, yellow wagtail, yellowhammer

Insects: blood vein moth, cinnabar moth, dingy skipper butterfly, grayling butterfly, mouse moth, shaded broad-bar moth, small heath butterfly, small phoenix moth, small square-spot moth, wall butterfly, white-letter hairstreak butterfly

Plants: Monk's rhubarb

Mammals: brown hare, hedgehog, red squirrel, water vole

4.3.8 In addition to those species listed above, the following species have been afforded local action plans by Sheffield Council, refer to section 5.2.4 below.

4.4 BIODIVERSITY ACTION PLANS

National Biodiversity Action Plan

4.4.1 The UK Biodiversity Action Plan (UK BAP) identifies priority species and habitats which are those considered to be the most threatened and therefore most in need of conservation action. The lists were updated in 2007 to include 1150 species and 65 habitats. The UK Post-2010 Biodiversity Framework (July 2012) has succeeded the UKBAP, however priority species and habitats listed under the UKBAP remain a valuable reference source and have been used to inform statutory lists at a national level including Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (England).

4.4.2 Priority habitats known to occur within 2km of the site include:

- Ancient Woodland
- Ash Elm woodland
- Lowland mixed deciduous woodland
- Oak Birch Woodland
- Wet woodland
- Neutral grassland
- Ponds and Lakes
- Traditional orchard
- Woodland Pasture and Parkland

4.4.3 During the walkover survey the following habitats were identified:

- Lowland mixed deciduous woodland
- Native species rich hedgerows

Local Biodiversity Action Plan

4.4.4 Habitat types for which action plans have been prepared for Sheffield BAP include:

- Woodland
- Grassland
- Wetland
- Heathland

4.4.5 Habitat types for which action plans have been prepared for Rotherham BAP include:

- Woodland
- Grassland
- Wetland

- Brownfield
- Orchard
- Hedgerow

4.4.6 Habitats which occur on site:

- Woodland (Sheffield's Local Biodiversity Action Plan (LBAP)
- Grassland (Sheffield's Local Biodiversity Action Plan (LBAP)

4.4.7 Species for which action plans have been prepared for Sheffield BAP include:

- White-clawed crayfish

4.4.8 There are no species included in action plans prepared for Rotherham BAP. Habitats on site are considered unsuitable for supporting the species listed above.

4.5 SITE SURVEY – HABITAT SURVEY

Methodology

4.5.1 A walk over survey was undertaken by ecologists Neil Page and Georgina Southon (FISC: Level 4) on 20 August 2025. Habitat types and key species were noted and are presented in accordance with the UK Habitats Classification System (*Version 2.0 UKHab Ltd., 2023a and 2023b*) including associated condition assessments undertaken in accordance with the Natural England technical supplement (Panks *et al.*, 2024a). Condition assessments have been used to inform the latest version of the Defra Metric (Statutory Biodiversity Metric), refer to section 5.6 for high-level biodiversity outputs in the absence of an indicative layout. Full details of the assessment are to be commissioned at a later date.

4.5.2 The UKHabs system includes the use of primary and secondary (2°) codes to provide further information on the habitat parcels present, where relevant, as described in more detail within individual habitat descriptions below.

4.5.3 The survey was undertaken within the optimal survey season during suitable weather conditions on a dry sunny day However, as the survey was conducted during the autumn period, there is a possibility that early-flowering plant species may have been absent, and sward height and density may not fully reflect peak seasonal conditions., however due to the habitat types found and the experience of the surveyor it is considered that this is not a significant limitation to the findings of this report.

Results

4.5.4 The site consists of approximately 15 hectares principally comprising farmland pasture and woodland. The pasture is **modified grassland (g4-110/115**) bounded and dissected by **hedgerows (h2-118);** and **other lowland acid grassland (g1d) types. The woodland (w1) is considered likely to comprises areas of priority habitat lowland mixed deciduous woodland (w1f) with areas of other woodland, broadleaved (w1g) and dense mixed scrub (h3h), and derelict / vacant land (u82)**. Refer to *Figure 02* (appended) for locations of existing habitats on site.

Grassland (modified g4-(110/115)

4.5.5 Eight fields of agricultural grassland form the dominant habitat on the site. The modified grassland onsite is grazed by cattle with a herd present in the adjacent field to the northern boundary with a short sward height. Grass species are dominant, species fields, confirmed modified grassland (g4) dominated by perennial rye grass

Lolium perenne with other species including meadow fox tail *Alopecurus pratensis*, Timothy *Phleum pratense*, Yorkshire fog *Holcus lanatus* and soft brome *Bromus hordaceus*. A low number of common forbs were present typical of this grassland type including occasional clover *Trifolium sp*. and with occasional creeping buttercup *Ranunculus repens*, common mouse-ear *Cerastium fontanum*, broadleaved dock *Rumex obtusifolia* and rarely occurring dandelion *Taraxacum officinale* agg*.,* and fat hen *Chenopodium bonus-henricus*.

4.5.6 Based upon the characteristic above, a condition assessment for grassland types and condition assessment criterion with respect to BNG (The Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology Version: July 2025 (v1.0.2)), this is included within Table 06 below.

Table 06 Condition Assessment: Grassland

Attributes	Condition Assessment Criteria	G1	G2	G3	G4	G5	G6	G7	G8
A	There are 6-8 vascular plant species per m2 present, including at least 2 forbs[1]. Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m2.	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	Pass	Fail	Fail	Fail	Fail	Fail	Pass	Pass
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble Rubus fruticosus agg. may be present).	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

[1] Creeping thistle *Cirsium arvense*, spear thistle *C. vulgare*, curled dock *Rumex crispus*, broad-leaved dock *R. obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major,* white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*.

	Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.								
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Pass
F	Cover of bracken Pteridium aquilinum is less than 20%.	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
G	There is an absence of invasive non-native plant species2(as listed on Schedule 9 of WCA).	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Score		Poor							

4.5.7 As shown in Table 06 the condition of the grasslands is unfavourable with low distinctiveness and relatedly low species diversity within the sward suggesting high agricultural improvement.

Other lowland acid grassland g1d

4.5.8 Within the field to the northeast is an earth mound feature, potential a colliery shale mound, which consists of grassland, anticipated to be acidic with Early hair grass *Aira praecox*, Mat grass *Nardus stricta* and forbs including cat's ear *Hypochaeris radicata*, common ragwort *Senecio jacobaea*, hawkweed spp. *Hieracium spp and* sheep sorrel *Rumex acetosella*, with bare ground supporting lichens and mosses including 7 species of lichen (two *Peltigera spp*, and five species of *Cladonia spp*), and 7 separate species of mosses.

4.5.9 This also was assessed in relation to a condition assessment for grassland types and condition assessment criterion with respect to BNG (*The Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology Version: July 2025* (v1.0.2)). The Acid grassland passed 4 of 5 of the conditions assessment criteria, giving an overall good condition but limited by the small nature and colonisation of bare ground by scrub (refer to h3f).

[2] Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Hedgerows (h2a)

4.5.10 Hedgerows bound all nine fields of modified grassland which form the site. All hedgerows consist of at least 1 native woody species (predominantly hawthorn *Crataegus monogyna*) and exceed 20m in length therefore meeting the criteria for UKBAP priority habitat (h2a).

4.5.11 Two hedgerows (H1 and H2) to the eastern boundaries of site are anticipated to meet the ecological criteria for importance under the Hedgerow Regulations 1997. This is due to the number of species and associated features including associated banks and early mature trees at regular intervals, although some of the hedgerow units fall within or along the boundaries of private gardens.

4.5.12 **(H2a5) Native species-rich hedgerow with trees - H1**: Managed hedgerow with single tree (oak Quercus sp.), on earth bank along Loicher Lane. Height approx. 0.5-2.0m (each side of bank), width approx. 1.5m. Species rich hedge containing hawthorn, blackthorn *Prunus spinosa*, field maple *Acer campestre*, Ash *Fraxinus excelsior*, holly *Ilex aquifolium*, hazel *Corylus avellana*, dog rose Rosa canina and elder *Sambucus nigra*. Ground flora dominated by ivy *Hedera helix* and cleavers *Galium aparine* but includes dog's mercury *Mercurialis perennis*, greater stitchwort *Stellaria holostea*, field bindweed *Convolvulus arvensis,* prickly sow thistle *Sonchus asper*, common vetch *Vicia sativa*, broad-leaved dock Rumex *obtusifoliu*s, white clover *Trifolium repens*.

4.5.13 **(H2a5) Native species-rich hedgerow with trees and bank - H2:** Managed hedgerow with ash and oak, on earth bank along Jumbles Lane. Height approx. 2.0m, width approx. 1.5m. Species rich hedge containing hawthorn, blackthorn, field maple, ash, holly, sycamore *Acer psuedoplatanus*, apple *Malus spp*. and elder. Ground flora dominated by ivy.

4.5.14 **(H2a6) Native hedgerow - H3**: Managed hedgerow, with gaps. Height approx. 1.5-2m, width approx. 1.5m. Species poor hedge containing hawthorn, elder and ivy, Ground flora dominated by Blackberry spp., *Rubus fruticosus agg.*

4.5.15 **(H2a6) Native hedgerow - H4:** Managed hedgerow, with gaps. Height approx. 2 -3 m, width approx. 1.5- 2m. Species poor hedge dominated by hawthorn, with rare dog rose and elder, some areas of replanting near pylon with hawthorn. Ground flora dominated by Blackberry spp., *Rubus fruticosus agg.*

4.5.16 **(H2a6) Native hedgerow - H5:** Managed hedgerow, with gaps and defunct sections between H6, H4 and H2. Height approx. 1.5-2m, width approx. 1.5m. Species poor hedge containing hawthorn, dog rose and elder only.

4.5.17 **(H2a6) Native hedgerow - H6:** Managed hedgerow, with gaps. Height approx. 1.5-2m, width approx. 1.5m. Species poor hedge containing hawthorn, dog rose and elder, evidence of grazing by cattle.

4.5.18 **(H2a6) Native hedgerow - H7:** Managed hedgerow, with some gaps near ends of hedgerow unit and single oak tree. Height approx. 1.5-2m, width approx. 1.5m. Species poor hedge containing hawthorn, field maple, holly and blackthorn, oak and dog rose.

4.5.19 **(H2a6) Native hedgerow with trees - H8:** Managed hedgerow, with trees and associated woodland block. Height approx. 1-1.5m, width approx. 1.5m. Species poor hedge containing hawthorn, ash, field maple, oak, dog rose and elder.

4.5.20 **(H2a6) Native hedgerow H9:** Managed hedgerow, with single tree. Height approx. 1-1.5m, width approx. 1.5m. Species poor hedge containing hawthorn, dog rose and elder.

4.5.21 Based upon the characteristics above, a condition assessment for the hedgerows has been undertaken in respect to the Hedgerow Survey Handbook and Favourable Conservation Status document BNG (Hedgerow habitat type, condition table, BNG Technical Supplement, 2020) and is included within **Table 07** below.

Table 07 Condition Assessment: Hedgerows

Attributes	Condition Assessment Criteria									
		H1	H2	H3	H4	H5	H6	H7	H8	H9
A1. Height	>1.5 m average along length	Y	Y	Y	Y	Y	Y	Y	Y	Y
A2. Width	>1.5 m average along length	Y	Y	Y	Y	Y	Y	Y	Y	Y
B1. Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	Y	Y	Y	Y	N	N	Y	Y	Y
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	Y	Y	N	Y	N	Y	Y	Y	Y
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: measured from outer edge of hedgerow; and is present on one side of the hedgerow (at least)	Y	Y	Y	N	Y	Y	Y	Y	Y
C2. Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Y	Y	Y	Y	Y	Y	Y	Y	Y
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species	Y	Y	Y	Y	Y	Y	Y	Y	Y
E1. Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow	Y	Y	N/A	N/A	N/A	N/A	Y	Y	N
E2. Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y	Y	N/A	N/A	N/A	N/A	Y	Y	N
Score		G	G	G	G	G	G	G	G	G

G = Good: No more than 2 failures in total and no more than 1 in any functional group.
M = Moderate: No more than 4 failures in total and fails both attributes in a maximum of one functional group.
P = Poor: Fails a total of more than 4 attributes or both attributes in more than one functional group.

Other Woodland, broadleaved W1g

4.5.22 A small area of woodland within a field, is associated with a remnant colliery shale mound along H8, this comprises woodland with limited canopy species consisting of oak, hawthorn and ash in two distinct age groups. The understorey is dominated by blackberry and ivy with disturbance from footpath users and considered likely other broadleaved woodland (w1g).

4.5.23 Based upon the characteristic, a condition assessment criterion for the woodland with respect to BNG (Woodland habitat type, condition table, *The Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology Version: July 2025* (v1.0.2)) and is summarised within Table 08 below, the woodland is considered to be in moderate condition.

Table 08 Condition Assessment: Woodlands

Indicator	Criteria	Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator
A	Age distribution of trees	Three age-classes present.	Two age-classes present.	One age-class present.	2
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland.	Evidence of significant browsing pressure is present in less than 40% of whole woodland.	Evidence of significant browsing pressure is present in 40% or more of whole woodland.	3
C	Invasive plant species	No invasive species present in woodland.	Rhododendron Rhododendron ponticum or cherry laurel Prunus laurocerasus not present, and other invasive species <10% cover.	Rhododendron or cherry laurel present, or other invasive species ≥10% cover.	3
D	Number of native tree species	Five or more native tree or shrub species found across woodland parcel.	Three to four native tree or shrub species found across woodland parcel.	Two or less native tree or shrub species across woodland parcel.	2
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native.	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native.	<50% of canopy trees and <50% of understory shrubs are native.	3
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted.	21 - 40% of woodland has areas of temporary open space6.	<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see good category.	2
G	Woodland regeneration	All three classes present in woodland8; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland.	No classes or coppice regrowth present in woodland.	2

H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback.	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present.	Greater than 25% tree mortality and or any high-risk pest or disease present.	3
I	Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community at ground layer present.	No recognisable woodland NVC plant community at ground layer present.	1
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland.	Two storeys across all survey plots.	One or less storey across all survey plots.	2
K	Veteran trees	Two or more veteran trees per hectare.	One veteran tree per hectare.	No veteran trees present in woodland.	1
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities.	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	2
M	Woodland disturbance	No nutrient enrichment or damaged ground evident.	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground.	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground.	2
Total Score (out of a possible 39)					28

Good = Total score >32 (33 to 39)
Moderate = Total score 26 to 32
Poor = Total score <26 (13 to 25).

4.5.24 The woodland fails to meet good condition due to the limited variable age and height structure of the woodland and immaturity of the woodland understory which should improve with age naturally.

Mixed Native Scrub (h3h)

4.5.25 Areas of dense mixed scrub (h3h) occur on the western slopes of the site, originating from planting associated with the existing Smithy Wood Business Park.

4.5.26 Species include hawthorn, dog rose, guelder rose *Viburnum opulus*, dogwood Cornus sanguinea, ash, rowan *Sorbus acucuparia,* hazel *Corylus avellana, Italian alder Alnus cordata, goat willow Salix caprea,* silver birch *Betula pendula,* and blackthorn.

Mixed Native Scrub (h3f)

4.5.27 Areas of dense scrub are situated in association with the remnant colliery shale mound. The scrub is predominantly blackberry, holly, blackthorn and with other species including great willowherb, and creeping thistle also being abundant. Within the dense scrub concentrated to the southern slope of the shale mound.

4.5.28 As indicated in Table 09 shows the condition assessment criteria for scrub with respect to BNG, the scrub is of moderate condition, with some of the criteria being met.

4.5.29 Table 9 shows the condition assessment criteria for scrub with respect to BNG (Scrub habitat type, condition table, The Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology Version: July 2025 (v1.0.2)) indicating that the scrub is in moderate condition, with some of the criteria being met.

Table 09 Condition Assessment: Scrub

Condition Assessment Criteria		H3h	H3f
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). - At least 80% of scrub is native, - There are at least three native woody species, - No single species comprises more than 75% of the cover (except hazel Corylus avellana, common juniper Juniperus communis, sea buckthorn Hippophae rhamnoides (only in its restricted native range), or box Buxus sempervirens, which can be up to 100% cover).	Yes	Yes
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	No	No
C	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA5) and species indicative of suboptimal condition make up less than 5% of ground cover.	Yes	Yes
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes	No
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	No	No

Good = Total score= 5
Moderate = Total score 3 or 4
Poor = Total score 2 or 1

Line of Trees (W33)

Woodland boundary

4.5.30 The habitat adjacent to residential properties along Jumbles Lane comprises woodland with canopy and understory species consisting of ornamental species, including Lombardy poplar Populus nigra x 'Italica' sycamore *Acer pseudoplatanus 'Crimson king'*, Purple beech *Fagus sylvatica 'Purpurea'*, Scots pine *Pinus sylvestris.* Condition was assessed in relation to Ecologically valuable line of trees.

Table 10 Condition Assessment: Line of Trees

Condition Assessment Criteria		
A	At least 70% of trees are native species.	No
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	No
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	No

D	There is an undisturbed naturally vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice.	No
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Yes

4.5.31 Table 10 shows the condition assessment criteria for the line of trees with respect to BNG (*The Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology Version: July 2025* (v1.0.2)).

Derelict/ Vacant land (u82)

4.5.32 Area comprised vacant and derelict land. The area had previously been bare ground, hardstanding, and cleared for construction of the existing industrial units. This has then been encroached by adjacent habitats and small areas of bramble *Rubus fruticosus*, ruderal, ephemeral, and grassland were present. Within this area various ephemeral, tall forbs and scattered scrub, along with building waste, hardstanding and rubble.

4.5.33 Species recorded in this area included: goat willow, silver birch, buddleia *Buddliea davidii*, ragwort, St Michaelmas daisy *Aster x salignus,* bird's foot trefoil *Lotus corniculatus,* red clover, broadleaved dock, broadleaved willowherb *Epilobium montanum,* rosebay willowherb *Chamaenerion angustifolium,* cat's ear, teasel *Dipsacus fullonum,* perforated St John's wort *Hypericum perforatum,* creeping cinquefoil *Potentilla reptans,* and bush vetch *Vicia sepium.*

4.5.34 The derelict land was assessed in relation to *The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology Version: July 2025* (v1.0.2)). The derelict land parcel matches all three criteria for good condition in relation to the criteria provided in Table 11 below. The condition fails to meet the criterion of Open Mosaic on Previously Developed Land due to its limited complexity, structure and the diversity of habitats within the area.

Table 11 Condition Assessment: derelict / vacant land

Condition Assessment Criteria		
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	Yes
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	Yes
C	"Invasive non-native plant species (listed on Schedule 9 of WCA1) and others which are to the detriment of native wildlife (using professional judgement)2 cover less than 5% of the total vegetated area3.	Yes
	Additional criterion of Open Mosaic on Previously Developed Land	
D	"The parcel shows spatial variation and forms a mosaic of bare substrate with at least four early successional communities (a) to (i). Communities: (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland, (i) pools."	No

Fauna

4.5.35 During the survey the following bird species were recorded:

Birds: Blackbird *Turdus merula*, wood pigeon *Columba palumbus*, dunnock *Prunella modularis*, robin *Erithacus rubecula* and chiffchaff *Phylloscopus collybita.*

Insects: Wall brown butterfly *Lasiommata megera*, Small white butterfly *Pieris rapae*, speckled wood butterfly *Pararge aegeria*, and Common carder bee *Bombus pascorum*

4.5.36 Photographs

Image 01: Example of boundary hedgerows on site.

Image 02: Modified Grassland.

Image 03: Scrub (h3f) on remnant colliery shale mound.

Image 04: Acid grassland on remnant colliery shale mound.

Image 05: Woodland (w1g) on remnant colliery shale mound.

Image 06: Areas of dense mixed scrub (h3h) associated with the existing Smithy Wood Business Park.

Image 07: Areas of derelict / vacant land associated with the existing Smithy Wood Business Park.

Image 08: Line of ornamental trees to rear of residential property.

Limitations

4.5.37 The botanical survey was conducted late in the season, which may have affected the detectability of certain species. Additionally, the prolonged period of drought experienced during the 2025 growing season resulted in significant stress to the sward and other perishable vegetation. Consequently, some species typically present within the acid grassland habitat may have been under-recorded or entirely missed due to reduced visibility, dieback, or delayed phenological development.

Conclusion

4.5.38 Habitats on site are considered to have low ecological value. The semi natural habitats including the woodland blocks, hedgerows and acid grassland habitats are of greater interest possibly of local value consisting of UK habitats of principal importance. The hedgerows are all UK priority habitat but of variable quality; with hedgerows to the southern (H1) and eastern boundary (H2) being species rich with associated woodland ground flora anticipated to meet the criteria for importance under the Hedgerow Regulations 1997. Remaining hedgerows are dominated by hawthorn with few other species and ground flora consistent with adjacent field grassland.

4.5.39 The acid grassland is considered the area of highest importance within the scheme, and it is recommended that this is retained, with management of scrub encroachment undertaken, and grassland management to focus on removing fodder species.

4.5.40 Grasslands on site are generally of limited ecological value, having been highly impacted and modified by agricultural improvement through use of fertiliser, and grazing.

4.5.41 Boundary hedgerows, woodland and scrub provide nesting opportunities for breeding birds and foraging/sheltering opportunities for bats, small mammals and invertebrates.

4.5.42 No invasive species as listed under the Wildlife and Countryside Act 1981 (as amended) were detected at the site.

4.6 SITE SURVEY – TREE ASSESSMENT FOR BAT ROOST POTENTIAL

Methodology

4.6.1 Trees on site were surveyed during the walkover survey in order to identify if they had features present with the potential to support roosting bats. All aspects of the trees

were surveyed using close focusing binoculars and high-powered torch light. The surveyor looked for features which are commonly used by bats for roosting or shelter, such as natural holes, woodpecker holes, cracks and splits, cavities, epicormic growth and bat boxes; and, for signs of bats utilising a tree for roosting purposes such as scratches on the bark at entry points, staining, droppings, audible noise, distinctive smells and the smoothing of surfaces near to cavities.

4.6.2 The trees potential to support roosting bats has been categorised to relate to the value of identified features. These categories are provided by the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition* (2023) and are summarised in the Table 12 below.

Table 12: Summary of BCT tree categories following preliminary assessment

Potential suitability	*Description*
NONE	Either no potential roost features (PRFs) in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

Results

4.6.3 During the walkover survey a total of eight trees were considered to have bat potential, refer to *Figure 02* for approximate locations. Refer to Table 13 below for details of potential roost features (PRFs) identified.

Table 13: Trees identified with bat roost potential

Tree Ref.	OS grid reference	Species	Comments	Roost Suitability
T1	SK 36654 94327	Oak	*Large mature oak of suitable structure and size to warrant further investigation due to dense ivy cover*	FAR
T2	SK 36683 94468	Laburnum	*Outwith site boundary (OSB) large cavity on east elevation with large fruiting body, limb split on the south facing elevation with east facing limb rot. Potential to be impacted by the development.*	FAR
T3	SK 36917 94553	Ash	*Entire main stem rotted away/ lightning strike leaving only outer bark. Cavity 6m down to root buttress. Large area of decay along branch at Southern aspects*	FAR
T4	SK 36902 94640	Beech	*Outwith site boundary (OSB) to the east. Limited inspection due to residential ownership. Dieback within mainstem at 12m above ground level (AGL)*	FAR

			with large fruiting body of shelf mushroom (Ganodermataceae) on branch union suggesting potential hollow branches.	
T5	SK 36911 94631	Oak	*Outwith site boundary (OSB) to the east Limited inspection due to residential ownership. Dieback within canopy with snagged branches at 12m AGL with snagging leading into branches.*	FAR
T6	SK 36814 94757	Ash	*Mature ash with large cavity at 3.5m AGL on the SE elevation. Substantial cavity with opening of 40 x10 cm on northern elevation small hole leading into dead branch.*	FAR
T7	SK 36850 94775	Oak	*Limb scar 3.5 m AGL on western elevation, scar leading into main stem.*	FAR
T8	SK 36927 94820	Oak	*Early mature tree in grassland, with snagged branch on northern elevation.*	FAR

4.6.4 Photographs

Image 09: T1: Oak

Image 10: T2 Laburnum

Image 11: T3 Ash

Image 12: T4 Beech (OSB)

Image 13: T5 Oak (OSB)

Image 14: T6 Ash

Image 15: T7 Oak

Image 16: T8 Oak

4.6.5 Recommendations for further survey and mitigation are presented based on the most recent guidance (Collins, 2023). Therefore, suitability of trees was assigned to each surveyed tree based on information collected in the field. As far as possible, it should be noted that ground level assessments are limited by visual ranges and access, as with T2, T4 and T5 where trees span property boundaries (OSB) all elevations could not be assessed.

4.7 SITE SURVEY – BADGER SURVEY

4.7.1 Areas to be affected by the proposals and any suitable habitats within proximity of these areas were surveyed for signs of badger. This included a search of the boundaries, woodland and scrub habitats for evidence of badgers including:

- Setts, comprising either single isolated holes or a series of holes, likely to be interconnected underground.
- Latrines: Badgers usually deposit their faeces in excavated pits which can mark their boundaries;
- Paths between setts or leading to feeding areas;
- Scratching posts at the base of tree trunks;
- Snuffle holes (small scrapes where badgers have searched for insects, earthworms and plant tubers);
- Badger hair;
- Footprints.

4.7.2 Where found, activity levels at setts were scored using the following criteria:

- Number of well used holes (within one of more of the features: well-worn entrance; freshly excavated soil; bedding material);
- Number of partially used holes (leaves or twigs in entrance and/or mosses and other plants growing in or around entrance);
- Number of disused holes (partially or completely blocked, with considerable amount of excavation required for reoccupation).

4.7.3 Setts should also be classified using the definitions shown in the following table:

Table 14: Badger Sett Types

Sett Type	Definition
Main	Several holes with large spoil heaps and obvious paths leading from and between sett entrances.
Annexe	Normally less than 150m from main sett, comprising several holes. May not be in use all the time, even if main sett is very active.
Subsidiary	Usually at least 50m from main sett with no obvious paths connecting to other setts. May only be used intermittently.
Outlier	Little spoil outside holes. No obvious paths connecting to other setts and only used sporadically. May be used by foxes and rabbits.

Results

4.7.4 Badger have been recorded within 2km of the proposals site with multiple records dating from 2013-2021. The closest records are at 700-900m to the east, separated from the site by the M1, and north where habitat connectivity to the site is good (data has not been included in the interest of animal protection), but six setts are known to occur within the general area.

4.7.5 A badger sett was observed within the scrub surrounding the remnant colliery shale mound, considered to be an outlier (TN01). This showed signs of active use at present. Additional field signs observed in the form of dung pits, foraging signs (snuffle holes),

and well-worn paths. Refer to photographs below for details of field signs (TN) identified and *Figure 02* (appended) for locations.

4.7.6 Photographs

Image 17: Potential outlier recorded on site (TN01)

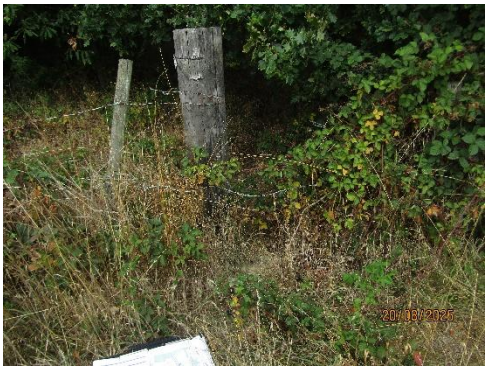

Image 18: Push through on western boundary (TN02).

Image 19: Badger dung found on path near Smithy Wood Business Park (TN03).

Image 20: Disused badger dung pit below T6: Ash (TN04)

4.8 SITE SURVEY – REPTILE ASSESSMENT

4.8.1 No reptile records were identified within 2km of the site; however, reptiles are frequently under-recorded, so their absence in the data does not confirm their absence from the area.

4.8.2 The majority of the site offered limited habitat for reptile suitable foraging and hibernating habitat were bases of the hedges, however the derelict/ vacant land offered varied slopes with a mosaic of habitats including open ground, scrub and grassland with a range of invertebrates.

5.0 IMPLICATIONS/RECOMMENDATIONS

5.1 NATURE CONSERVATION DESIGNATED SITES

5.1.1 Two statutorily designated nature conservation sites lie within 2km of the proposals site boundary: Woolley Wood Local Nature reserve (LNR) located approx. 1.2km southeast and Scholes Coppice and Keppel's field LNR located approx. 1.9km east. Habitats within these sites do not complement those within the proposals site and no connective habitat links exist between the sites.

5.1.2 The proposal site lies within six SSSI impact risk zones (IRZ): Canyards Hills SSSI (approx. 11km west), Dark Peak SSSI (approx. 12km West), Wadsley Fossil Forest SSSI (approx. 5.7km Southwest), Easter Peak District Moors SSSI (approx. 11.5km Southwest), Dearne Valley SSSI (approx. 7km North), Denaby Ings SSSI (approx. 14.3km Northeast). The relevant Natural England (NE) Geographic Information System (GIS) dataset indicates that the nature and scale of the proposed works are unlikely to impact upon this site.

5.1.3 It is considered that there will be no adverse impact upon these designated sites as a result of the development due to a combination of distance from the proposals site, the lack of complementary habitats, intervening land uses (roads and built-up areas) and the nature and scale of the proposals.

5.1.4 No other European or national statutory designated sites are present within 2km of the proposed development site such as Ramsar Sites, Special Protection Areas (SPA), Special Areas of Conservation (SAC), National Nature Reserves (NNR), Areas of Outstanding Natural Beauty (AONB) and National Parks.

5.1.5 Sheffield biological record centre (SBRC) and Rotherham biological record centre (RBRC) provided information on twenty-two non-statutorily designated sites within 2km of the proposals site. For the majority of these sites it is considered that there will be no adverse impact upon these designated sites as a result of the development due to a combination of distance from the proposals site, intervening land uses (roads and built up areas) and the nature and scale of the proposals.

5.1.6 Smithy Wood (LWS 190) is an area of broadleaved woodland designated as semi-natural ancient woodland which occurs adjacent to the northern site boundary. During site design potential impacts on the woodland would be minimised or avoided by incorporating the following mitigation measures:-

- Incorporation of a Root protection zone based on calculated root protection areas (minimum 15m) along the woodland edge should be incorporated into the development proposals.
- A temporary protective fence should be used to protect the retained trees and ground flora from accidental damage or encroachment during construction.
- This should be retained as a mix of scrub and grassland with management to maximise structural and botanical diversity.
- Consider Lighting design and Obtrusive light (or light pollution) which can have a profound negative impact or change the character of a locality and significantly altering wildlife habitats and ecological patterns, aims should be to produce a dark corridor along the woodland edge.
- Implementation of an appropriate woodland management plan aiming to manage invasive species and natural regeneration.

5.1.7 No direct impacts are anticipated on the designated sites which lie in close proximity of the site, Lady Clough and Smithy Wood which is separated from the site by the M1 corridor, Hesley Tip (LWS 187) 0.3km to the north, Smithy Wood Tip (LWS 189) 0.4km to the west and Blackburn Brook (LWS 215) 0.3km to the south, however potential indirect effects would be minimised or avoided by incorporating the following mitigation measures:-

- A temporary protective fence should be used to protect the retained trees and ground flora from accidental damage or encroachment during construction.

- Potential effects on water quality should be minimised by the implementation of appropriate pollution control measures such as bunding of fuel tanks if used, cut off drains, sediment fencing and accident procedures during construction and a drainage scheme which includes appropriate attenuation and pollution control features such as oil/grit interceptors.

5.2 HABITATS

5.2.1 The habitats within the proposals site are of variable ecological value, predominantly comprising managed grassland pastures used for grazing which are generally considered to be of low conservation value having been modified by re-sowing, fertiliser/herbicide application.

5.2.2 Derelict land, agricultural pasture and scrub are of local value, while the woodland, hedgerows and acid grassland on site are considered to be of county value.

5.2.3 The network of traditional hedgerows to field boundaries and woodland are of greater ecological interest, providing connectivity across the site and to adjacent habitats of value such as the ancient woodland to the north. The hedgerows are all UK priority habitat but of variable quality; with hedgerows to the southern and eastern boundary being species rich with associated woodland ground flora. Remaining hedgerows are dominated by hawthorn with few other species and ground flora consistent with adjacent field grassland. It is anticipated that it will be possible to retain the more valuable hedgerows to the site boundary within any proposed layout.

5.2.4 The post-industrial shale piles with the acid grassland, developing woodland and species rich hedgerows within the site are of the most conservation value, as these provide suitable habitat for breeding, foraging and roosting/ sheltering of bird species, badger, and small mammals such as bats, and hedgehogs.

5.2.5 In order to protect habitats of ecological value present and ensure that the proposed development provides enhancement to wildlife, the following is recommended:

- The retention of the trees and boundary hedgerows at the site where feasible, or replacement planting using native species;
- The gapping up of the existing hedgerow (H5) with appropriate native species;
- The retention of the hedgerows at the site, particularly those along the southern and eastern boundaries which have a higher species diversity and the associated ground flora species are of more interest. Where hedgerows must be removed to facilitate access or accommodate layout, replacement hedgerow planting of appropriate native species with associated wildflower seeding should be provided in suitable locations;
- The incorporation of a buffer zone (minimum 15m) adjacent to areas of semi-natural ancient woodland and standoffs from retained hedgerows (minimum 3m) which should be utilised for provision of areas of semi-natural habitat such as scrub and wildflower grassland;
- Incorporation of appropriate native tree and shrub species along with suitable wildflower mixes within all landscape proposals. Inclusion of native species of local provenance and ornamental species of known benefit to wildlife within the landscape proposals where possible;

- Consider a habitat improvement plan for the Acid Grassland that is likely to become overgrown with agricultural weeds due to nutrient enrichment and grazing management. The aim of the plan should be to reduce/ remove vigorous grass growth, reduce fertiliser inputs and manage scrub;
- Consider a woodland management plan where woodland habitat retained on site;
- Use of temporary protective demarcation fencing to protect retained areas/features. The fencing must be in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction', extend outside the canopy of the retained trees, and remain in position until construction is complete;
- Use of directional lighting during construction, which will not shine upon the site boundaries, hedgerows or trees within the site;
- Consideration given to the incorporation of SUDs drainage features such as rain gardens, swales and green/blue/brown roofs/walls where appropriate;
- Provision of compensatory habitat off-site to mitigate for loss of hedgerow or grassland condition to facilitate the scheme, in accordance with mandatory requirements for delivery of biodiversity net gains;
- Implementation of a sympathetic lighting scheme within proposals that minimises illumination of trees and areas of new planting to the boundaries of the site. Incorporation of appropriate luminaire specifications and locations should be considered in the interest of minimising impacts on ecological receptors, including light sensitive species i.e. bats.

5.3 PROTECTED SPECIES

5.3.1 Existing records data and site survey have noted the potential for various protected species to occur within the search area or on site, upon which the potential effects of the proposed development are discussed in the following sections (refer to *Appendix 03* for relevant species legislation).

Great Crested Newts

5.3.2 Records provided for great crested newt within 2km of the site are historic, and beyond the M1 motorway to the east. Suitable terrestrial habitat exists on site, in the form of hedgerows and woodland, however grassland pastures offer sub-optimal habitat for this species. There were no waterbodies or watercourses identified on or directly adjacent to the site. Previous habitat suitability assessments of three shallow artificial ponds created in association with Smithywood Business Park were undertaken in June 2021 by Smeeden Foreman which found these to be below average and average (single pond located within 250m to west), these are separated from site by existing development and Blackburn Brook.

5.3.3 Given the above, no adverse impact upon great crested newt is anticipated as a result of the proposed development. No further survey for this species is therefore considered necessary.

Bats – commuting/foraging habitat

5.3.4 Mature trees, woodland, linear natural features, scrub and unmanaged grassland on site provide suitable habitat for foraging and commuting bats, acting as potential flight corridors and providing connectivity between the site and other suitable areas adjacent. As a result, further survey in the form of three night-time bat walkover (NBW)

surveys and a suite of automated bat detector surveys should be undertaken on-site encompassing the adjacent woodland. A single NBW survey would be undertaken during each season e.g. spring (April – May), summer (June – August) and autumn (September – October). For moderate suitability habitat, automated bat detector surveys are required in conjunction with the above NBWs. These surveys require the deployment of automated bat detector units within suitable habitat for a minimum of a 5-day period, each month from April – October as per the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition* (2023) recommendations.

5.3.5 Any landscaping around the proposed development should aim to enhance the site for the local bat population and other local wildlife, to maintain linkages to adjacent habitats and increase biodiversity. It is recommended new native hedgerow/trees are planted to site boundaries where none currently exist to strengthen connectivity across the local area. Providing a variety of berry, nut-bearing and flowering trees, shrubs and plants would offer year-round interest for a range of invertebrates, and as such provide feeding opportunities for the local bat population.

5.3.6 To maintain connectivity and foraging corridors it is recommended the boundary hedgerow and trees are retained within the development, where feasible. To enhance these linear features, it is recommended existing hedgerow planting is strengthened with additional native tree/shrub planting and where possible, seeding of hedge understoreys with an appropriate wildflower seed mix.

5.3.7 New lighting should be appropriately designed, including directional and low wattage luminaires to avoid illuminating the areas of planting. Where feasible, a lux contour plan and lighting specifications should be reviewed by an appropriately qualified ecologist to minimise impacts on light sensitive bat species and ecological receptors on/adjacent to site. Reference should be made to the Institute of Lighting Professionals (ILP) and Bat Conservation Trust publication '*Bats and Artificial Lighting at Night*' (2023) which includes the following guidelines:

- Remove or minimize artificial lighting close to vegetative commuting corridors;
- Using warm white, narrow spectrum lights (LEDs) with little or no UV;
- Directional lighting with near full horizontal cut off;
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance.
- Use of bollards or low-level downward-directional luminaires should only be considered in specific circumstances due to issues such as glare, poor illumination and unacceptable light outputs.

Bats – potential tree roosts

5.3.8 A total of eight trees on site were assessed as having the potential to support roosting bats, with potential roost features identified including large cavities, dieback and deadwood. If trees are to be impacted by the development, further assessment is recommended to fully investigate the suitability of features and establish the presence/likely absence of roosts prior to tree surgery/felling/development works, as per guidance (BCT, 2023).

5.3.9 Further assessment of trees for bats would initially consist of a ground level tree inspection (GLTA) to provide a detailed assessment of bat roosting resource on site.

The optimal survey period for undertaking GLTAs is during the winter months to limit the potential for PRFs to be obscured by foliage. Dependent on findings, this GLTA inspection would be followed by up to three PRF aerial inspection surveys. Aerial inspection surveys involve the use of tree-climbing or access equipment to inspect trees for signs of bat use prior to works (no timing restrictions are applicable to this type of survey). Where an aerial inspection survey is not possible due to health and safety reasons, species type (i.e. ash), or cavity too large for thorough inspection, trees would be subject to up to three bat emergence/re-entry surveys during the appropriate survey season (May to September).

5.3.10 Should roosts be present, any adverse impacts because of the development, direct (i.e. damage/destruction due to tree removal) or indirect (disturbance), can be assessed. A European Protected Species Mitigation licence from Natural England may be required dependent on the development impacts, with appropriate mitigation and working methods.

5.3.11 Consideration should be given to the installation of bat roosting features on new and retained trees irrespective of whether roosts are found to enhance site biodiversity in line with the National Planning Policy Framework (NPPF).

Breeding Birds

5.3.12 Bird species recorded during the walkover survey included blackbird, wood pigeon, dunnock, robin and chiffchaff. Hedgerows, trees and scrub on site are likely to be used by all these species and local breeding and roosting bird populations in general.

5.3.13 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) during breeding. It is therefore recommended that any vegetation clearance takes place outside the core bird nesting period (March – August inclusive) unless checks by an appropriately qualified ecologist find active nests to be absent immediately prior to clearance works. If nesting birds are identified advice will be sought. The advising ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. Measures such as applying a set boundary around the nest may be necessary until the young birds have fledged.

5.3.14 A variety of suitable nesting habitats exist on site including woodland, scrub, individual trees, and natural linear features. This, together with the surrounding agricultural land use, indicate the potential for the site to support a number of farmland and woodland bird species of conservation concern. Breeding bird surveys for the site are therefore recommended to assess likely impacts of the development. As defined by the Bird Survey & Assessment Steering Group (2025), a minimum of six transect surveys are recommended to be undertaken within the optimal breeding bird survey season (core nesting period March – early July). Breeding bird surveys are typically conducted at dawn with at least one survey completed at dusk to identify the potential presence of roosts and crepuscular/nocturnal bird species.

5.3.15 Consideration for the enhancement of the site in relation to birds could include appropriate woodland planting, green/ brown roofs, or the installation of species-specific boxes upon suitable trees based and informed by the additional surveys.

Badger

5.3.16 A single badger sett is present on site, therefore sett monitoring surveys should be undertaken to ascertain the level of activity on site. This should be conducted by a suitably qualified ecologist over a period of 21 days , using infrared cameras placed in front of sett entrance in accordance with guidance *Badger Protection Best Practice*

Guidance for Developers, Ecologists and Planners (August 2023). The results of these surveys would inform mitigation measures if required.

5.3.17 In addition, it is recommended that a detailed survey is undertaken incorporating the immediate surrounding habitats including Smithy Wood, and the large earth mound within the derelict / vacant area of Smithy Wood Business Park is undertaken prior to any works.

5.3.18 If works are to take place within 30m of an active sett, a protected species mitigation licence obtained from Natural England is likely to be required and the sett may have to be subject to temporary closure whilst construction works are taking place. Mitigation works would be carried out, if necessary, as detailed below:

- Prior to works commencing an updated badger survey at the site would be undertaken by an appropriately qualified ecologist to re-assess the status of the badger setts on site;
- If the single badger hole (outlier sett) is still actively used by badger and is within 30m of construction works a licence application would be made to Natural England to exclude badgers from the sett prior to construction works commencing.
- If necessary, exclusion works would take place from 1st July to 30th November, to avoid times when juvenile badgers may be present within the sett. Exclusion works will involve the installation of chain link fencing around the sett and a one-way gate to allow any badgers to vacate the sett but not re-enter.
- Monitoring works would be undertaken by appropriately qualified ecologists during exclusion works to ensure the sett has been vacated by badgers prior to construction works commencing and the sett will be monitored during construction works to ensure the sett has not been re-accessed.

5.3.19 Outside the 30m from the setts and therefore works could be undertaken to a method statement which would require approval from the Local Planning Authority. A method statement would recommend precautionary working methods to be adopted during proposed development works, such as the covering or providing a means of escape to trenches and capping of any open pipework at the end of each day. Recommendations will also include the installation of protective fencing at the boundary of the designated buffer zone to prevent encroachment by heavy machinery and the storage of plant/building materials within this area.

Reptiles

5.3.20 The derelict / vacant land within the western extent of the site is considered to be suitable for use by reptiles providing opportunities for basking, foraging, cover and hibernation. It is therefore recommended that further assessment is carried out to assess the presence/absence of reptiles within the site. Surveys would be undertaken to the methodology detailed within the Froglife Advice Sheet 10: Reptile Survey (1999) within the appropriate survey season (April – September). Prior to undertaking the surveys refugia (e.g. squares of roofing felt) will be located within areas of suitable habitat of the site and ideally left to 'bed-down' for a two week prior to commencing the surveys. Seven survey visits would then be carried out to check the refuges and search for reptile species using direct observation methods.

5.3.21 If reptiles are identified as present within the site and the proposed development is considered to have a potential impact upon such species a method statement

approved by the LPA/Natural England would be required prior to works commencing. This would ensure that reptiles are not harmed during works, potentially by excluding reptiles from the working area using reptile fencing and that appropriate mitigation is incorporated within the site to ensure the favourable conservation status of the reptile population detected.

Other protected species

5.3.22 Due to the lack of suitable habitat for water vole, otter and white-clawed crayfish the presence of these species is considered unlikely. No adverse impact upon such species is anticipated as a result of the proposed development.

5.4 NOTABLE SPECIES

Hedgehog

5.4.1 Records within 2km of the site included hedgehog and some habitats on site, such hedgerows, hedge banks and woodland, are considered to be suitable for this species. Precautionary working methods will therefore be adopted to ensure hedgehogs are not harmed/killed during works. Such works would include the removal of any tree/shrub cuttings from site, once vegetation is cut so as to avoid the creation of brash piles; these may be attractive to hedgehogs, which could subsequently be harmed if the brash pile is burnt or removed with machinery. In addition, any trenches created on site will be covered or a means of escape shall be provided and any open pipe work will be capped at the end of each working day.

5.4.2 To enhance the site for hedgehog, it is recommended that small gaps (0.15m) are left under sections of new fencing/walls within the development to allow passage of hedgehog and maintain connectivity across the site.

5.5 INVASIVE NON-NATIVE SPECIES

5.5.1 No non-native invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded on site. It is understood Himalayan balsam *Impatiens glandulifera* has been previously identified within the woodland area adjacent to the north of site and precautionary working methods should be adopted during construction works to prevent accidental spread. Monitoring of the site for colonisation by this species should be incorporated within long-term management plans for the site.

5.6 BIODIVERSITY NET GAIN

5.6.1 This section outlines the details of an initial Biodiversity Net Gain assessment which has been undertaken to provide an indication of the current value of the site in terms of habitat units and hedgerows units.

5.6.2 The calculation was undertaken using the DEFRA Statutory Biodiversity Metric with reference made to *The Statutory Biodiversity Metric User Guide* (Panks *et al.* February 2024).

5.6.3 Site habitat baseline data used to inform the Metric has been obtained from the initial ecological appraisal presented in section 5.0 of this report as well as the condition assessments detailed. An assumption has been made in the absence of an indicative

layout that all existing on-site habitats are to be lost, with the exception of the acid grassland area and established woodland.

5.6.4 The Local Nature Recovery Strategy (LNRS) map outlines areas in England designated for nature recovery efforts, detailing responsible authorities and their strategies for enhancing biodiversity. Currently the South Yorkshire Nature LNRS is in preparation but the LNRS is likely to identify areas like Smithy Wood and Hesley Tip as key ecological assets and likely wish developments to avoid severing these networks and instead aim to enhance connectivity through green infrastructure and habitat creation.

5.6.5 Details of the on-site habitats baseline data are summarised in Table 15 below, including measurements taken from GIS mapping data (see Figure 02).

Table 15: Site Habitat Baseline Value (BNG): Indicative Summary

Unit Type	Target	Baseline Units	Units Required
Area habitat units	10.00%	80.11	88.13
Hedgerow units	10.00%	24.35	26.79
Watercourse units	10.00%	0.00	0.00

6.0 CONCLUSIONS

6.1.1 Two statutorily designated nature conservation sites and twenty-two non-statutory designated sites lie within 2km of the proposals site boundary. The proposal site also lies within six SSSI impact risk zones. Potential indirect effects upon those in closest proximity (Smithy Wood LWS 190, Smithy Wood Tip LWS 189, Hesley Tip LWS 187 and Blackburn Brook LWS 215) would be minimised or avoided by incorporating appropriate mitigation measures such as protective fencing to prevent encroachment and measures to avoid effects on water quality. No adverse impacts are anticipated as a result of the development on remaining designated sites within 2km.

6.1.2 The habitats within the proposals site are of varying ecological value. The majority of the grassland is considered to be of limited/low conservation value, predominantly comprising improved pasture. The majority of the woodland habitat and hedgerow is of local to county value been linked to designated Local Wildlife Site. The hedgerows are UKBAP habitat with boundary hedgerows (H1 & H2) meet the criteria for importance under the Hedgerow Regulations 1997.

6.1.3 The Proposed Development masterplan should, where possible, include the retention of habitats of principal importance, or replacement on a 2:1 basis with like-for-like habitat if removal is unavoidable. Important habitats within the within or bounding the proposal site included Lowland Mixed Deciduous Woodland, Acid grassland and Hedgerows.

6.1.4 To further assess the potential impact of the proposed development and/or inform the mitigation requirements further survey work is recommended in respect to protected species including badger, bats, birds, and reptiles.

6.1.5 Further survey work is likely to be required to confirm presence and populations of these species, to inform any future ecological impact assessment and identify what necessary impact avoidance and mitigation measures will be required to progress development at the site. Where impacts on protected species cannot be avoided, licences may also be required to be sought from Natural England prior to commencement of the proposed development.

6.1.6 Opportunities exist in the masterplan scheme design to enhance, create and incorporate biodiverse and species-rich habitat within the scheme and built environment with a focus on creation of features to support protected species, contributing to local nature recovery strategies and Local Biodiversity Action Plan targets.

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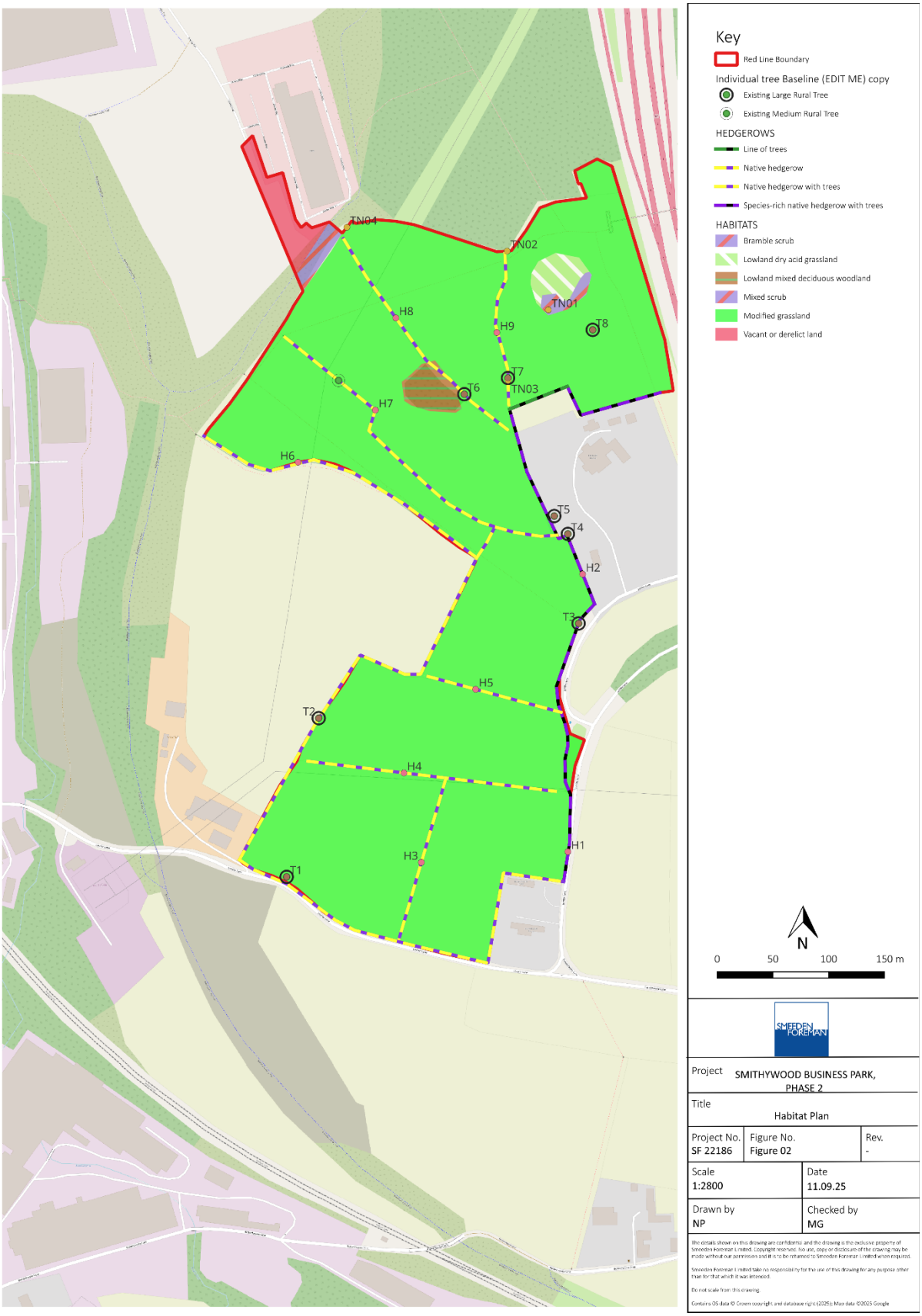
FIGURES

Figure 01: Aerial view of site location (included within body of report)

Figure 02: UKHabs Habitat Plan

FIGURE 02: UKHABS HABITAT PLAN



APPENDICES

Appendix 01: Principle Legislation and Policies

Appendix 02: Designated Site map

Appendix 03: Protected Species Legislation

APPENDIX 01: PRINCIPLE LEGISLATION AND POLICIES

Principle Legislation

Wildlife and Countryside Act 1981 (as amended)

This is the primary legislation for nature conservation in England and Wales. It confers varying degrees of protection on selected species according to their conservation status, ranging from making it an offence to take a species from the wild for profit, to full protection of a species and its habitat. The Act also gives guidance and instruction on statutory sites, such as sites of Special Scientific Interest (SSSI). License exempting specific works can be granted by Natural England. Such licenses are only granted once a full assessment has been made and an appropriate, sustainable mitigation package devised.

Protection of Badgers Act 1992

Allied to the Wildlife and Countryside Act, 1981 are subsidiary Acts such as the Protection of Badgers Act, 1992 which consolidated and added to previous legislation. According to the PBA it is an offence to wilfully kill, injure or maim a badger. Badger setts are also protected from interference unless such activities are licensed through Natural England. Any mitigation packages devised for badgers found on development sites must be agreed by Natural England and all mitigation activities must be fully licensed.

Countryside and Rights of Way Act 2000

As well as providing measures to improve countryside access for walkers, ramblers and horse riders, this Act also strengthens the protection of species and designated sites made in the Wildlife and Countryside Act 1981. This Act also gives the importance of biodiversity conservation statutory basis requiring government departments to have regard for biodiversity in carrying out their functions, and to take positive steps to further the conservation of listed species and habitats.

Natural Environment and Rural Communities Act (NERC), 2006 – Biodiversity Duty

NERC received royal assent in March 2006. Section 40 of the Act replaces and extends a duty, from Section 74 of the Countryside and Rights Of Way Act 2000, on Ministers and Government which already requires them to have regard to the purpose of conserving biodiversity. Section 40(1) states that, "*Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity*."

EC Habitats Directive (92/43/EEC)

This Directive aims to give Europe-wide protection to certain rare and threatened habitats on land and at sea. It builds on legislation already established under the Birds Directive of 1979, and aims to establish a series of protected sites known as Natura 2000 series. These sites are intended to protect the unique and special wildlife of Europe and to preserve it for future generations. In Britain these Natura 2000 sites include those areas designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The Habitats Directive is implemented in the UK through the Conservation of Habitats and Species Regulations 2017.

EC Birds Directive (79/409/EEC)

The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It sets broad objectives for a wide range of activities, although the precise legal mechanisms for their achievements are at the discretion of each Member State (in the UK delivery is via several different statutes). The Directive applies to the UK and to its overseas territory of Gibraltar.

The main provisions of the Directive include:

The maintenance of the favourable conservation status of all wild bird species across their distributional range with the encouragement of various activities to that end;

The identification and classification of Special Protection Areas (SPAs) for the rare and vulnerable species listed in Annex I of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance;

The establishment of a general scheme of protection for all wild birds; Restrictions on the sale and keeping of wild birds.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Policy

National Planning Policy Framework (2024)

The National Planning Policy Framework replaces Planning Policy Statement 9 (PPS 9) Biodiversity and Geological Conservation but the accompanying guidance document (ODPM 06/2005: Biodiversity and Geological Conservation-Statutory Obligations and their impact within the Planning System) has not been withdrawn.

The NPPF sets out the Government's policies on the protection of biodiversity and sites of geological interest through the planning system. It required local planning authorities, when taking decisions, to ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species and to biodiversity and sites of recognised geological interest within the wider environment. It states:

'Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing values landscapes, sites of biodiversity or geological value and soils;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;

- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. 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; and,
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

'When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasonsand a suitable compensation strategy exists; and,
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Biodiversity Action Plan (BAP)

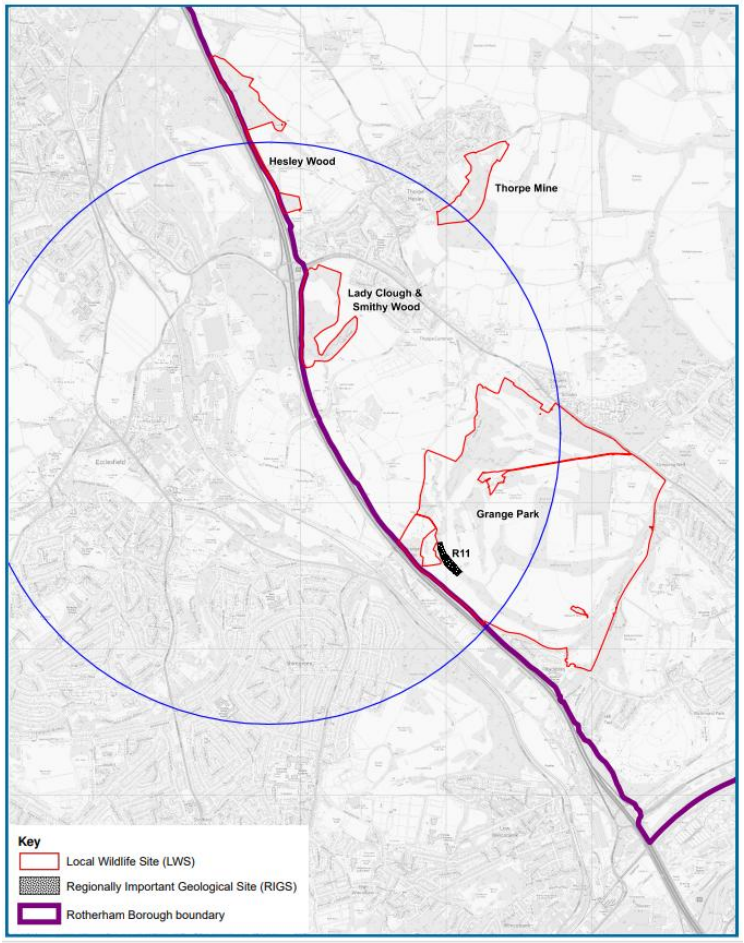
In 1993, the UK government consulted over three hundred organisations throughout the UK and held a two day seminar to debate the key issues raised at the Convention of Biological Diversity. The product of this was the launch of Biodiversity: the UK Action Plan in 1994 which outlined the UK Biodiversity Action Plan for dealing with biodiversity conservation in response to the Rio Convention.

The UK Biodiversity Steering Group was created in 1994 and published Biodiversity: the UK Steering Group Report – meeting the Rio challenge. This established the framework and criteria for identifying species and habitat types of conservation concern.

From this list, action plans for 391 species and 45 broad habitat types were produced. As well as having national priorities and targets, action was also taken at a local level. The Steering Group drew up as set of guidelines that were discussed with the Local Authority Association and the Local Government Board.

Today there are 162 Local Biodiversity Action Plans in the UK. A review of the UK BAP was undertaken between 2003 and 2006.

APPENDIX 02: DESIGNATED SITES MAP



APPENDIX 03: PROTECTED SPECIES LEGISLATION

Bats

Bats and their roosts are afforded full legal protection under both UK and European legislation. Conservation of Habitats and Species Regulations 2017 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately disturb a bat;
- deliberately kill, injure or capture a bat;
- damage, destroy or obstruct access to a breeding site or resting place (note this applies to both deliberate and reckless actions).

The Wildlife and Countryside Act 1981 (as amended) (Schedule 5) made it an offence to:

- intentionally kill, injure or take a bat ;
- damage, destroy or obstruct a bat roost *;
- disturb a bat at a roost *;
- possess or control a bat or any part thereof;
- sell, offer for sale, possess or transport for sale any bat or part thereof;
- set traps for catching, killing or injuring bats;
- possess articles for the purposes of committing offences against bats;

[*= intentional and reckless offences covered].

Legal protection under the Habitats Directive applies to the animals and their breeding sites and resting places. This means that bat roosts are fully protected, whether they are in use at the time or not. Where roosts or resting/breeding sites are identified, any works which may contravene the protection afforded to them require derogation from the provisions of the legislation in the form of a licence from Natural England..

Breeding birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built or,
- take or destroy an egg of any wild bird.

This protection applies from the moment the nest is being built. Additional protection against disturbance on the nest or of dependent young is provided for birds included on Schedule 1.

Badger

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under the Act it is illegal to:

- Wilfully kill, injure or take a badger or attempt to do so;
- Cruelly ill-treat a badger; and,
- Interfere with a sett by doing any of the following:

  (i) damaging a badger sett or any part of it;

  (ii) destroying a badger sett;

  (iii) obstructing access to a badger sett;

  (iv) causing a dog to enter a sett; and,

  (v) disturbing a badger while it is occupying a sett.

Reptiles

The Wildlife and Countryside Act 1981 makes it an offence to intentionally kill any of our native snakes and lizards. The sand lizard and smooth snake receive additional protection; for these species, it is unlawful to capture or possess them, or to damage/obstruct access to places they use for shelter or protection, or to disturb them whilst in such a place.