SF 3154 | LAND OFF BLACKMOORFOOT RD, CROSLAND MOOR

ECOLOGICAL IMPACT ASSESSMENT

October 2021 | For Planning
REVISION A

SMEEDEN FOREMAN

Landscape Architecture • Ecology • Arboriculture

Quality Assurance

Job Title: Land off Blackmoorfoot Rd, Crosland Moor			**Job Number:** SF3154	
Document title: Ecological Impact Assessment				
Issue	**Date**	**Prepared by**	**Checked by**	**Approved by**
Original	08.10.2021	MG	CW	CW
Revision A	December 2021	MG	CW	CW

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REVISION HISTORY

Original report issued October 2021.

Revision A issued December 2021 to include details of further survey work with respect to the area of woodland on site.

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EXECUTIVE SUMMARY

Smeeden Foreman Limited has been commissioned by Redrow Homes to undertake an ecological assessment of their site at Blackmoorfoot Road, Crosland Moor, Huddersfield (central grid reference SE 11662 14685).

A desk study of relevant information has been undertaken including designated nature conservation sites and existing records of protected species; and initial site survey (extended phase 1 habitat survey and a building assessment with respect to bats).

Designated sites
A single statutorily designated nature conservation site lies within 2km of the proposals site boundary: Gledholt Wood Local Nature Reserve (LNR), located approx. 1.9km north-east of site. No connective habitat links exist between this LNR and the proposals site and no adverse impact is anticipated as a result of the development due to the distance between sites.

The proposals site lies within the outer Impact Risk Zones of a complex of different Sites of Special Scientific Interest (SSSI) including South Pennine Moors SSSI, Phase 1 Special Protection Area SPA/SAC and Dark Peak SSSI. 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 these sites. Habitats on site do not complement those associated with these statutory sites neither are they suitable for the breeding or foraging requirements of associated qualifying species.

A total of seven non-statutorily designated sites are located within 2km of the proposals site, however, 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.

Habitats
The habitats within the proposals site are generally considered to be of low conservation value, predominantly comprising buildings, hardstanding and gravel vehicle parking areas. Broadleaf woodland, areas of bramble scrub, tall ruderal vegetation and scattered/groups of trees are considered to be of site/local conservation value, as these provide suitable habitat for a range of wildlife and maintain connectivity links across site. Small areas of grassland on site are of low conservation value comprising a limited species diversity as a result of regular mowing.

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

- The retention of broadleaf woodland and individual trees at the site where feasible, or replacement planting using native species;
- Appropriate long-term management of retained woodland including control/removal of non-native invasive species;
- The incorporation of native hedgerow planting (or variants of native species of known value to wildlife) within proposals where possible, particularly to boundaries where no hedgerows are currently present;
- Inclusion of seeding in areas associated with tree groups, new hedgerow/tree planting and green space with a suitable wildflower mix;

- Use of temporary protective demarcation fencing to protect retained areas/features including existing woodland and retained trees;
- Use of directional lighting during construction, which will not shine upon woodland and trees within the site;
- Implementation of a sympathetic lighting scheme within proposals that minimises illumination of trees and areas of new planting to the boundaries of the site;
- Consideration of a sympathetic design of any Sustainable Urban Drainage Systems (SUDS) and/or new pond creation to be incorporated within the proposals, where feasible. The design of a new pond/s would ideally include aquatic planting known to be of benefit to wildlife.

Refer to section 5.1 and 5.2 for further details.

The condition assessments included within section 4.5 of this report and current landscape proposals have been used to inform a Biodiversity Net Gain Assessment taking the above recommendations into consideration in order to achieve net gains on site where possible. Refer to the corresponding report *SF3154 Biodiversity Net Gain Report October 2021 Revision A* for further details.

Protected/notable species

The potential for the following protected and notable species to be affected by the development has been assessed with potential mitigation and further survey work as follows:

- Bats – Single building B1 was assessed to provide low bat roosting potential and subjected to further survey in August 2021. A single emergence survey identified no bats to be roosting within the building. All other buildings on site assessed to be of negligible potential for supporting roosts. Trees on site were also considered to provide negligible potential for roosting bats lacking any suitable potential roost features. General mitigation to include directional lighting during construction and sympathetic design within proposals, native hedgerow/tree/shrub planting, wildflower seeding and the installation of bat roost features on retained trees/woodland/new builds on site;
- Great crested newt – No waterbodies occur on site but piles of debris in association with trees and woodland provide potential opportunities for amphibians during their terrestrial phase. Two ponds within 500m of the site assessed to be of average and good suitability to support great crested newts following a habitat suitability index assessment. Further survey of ponds P2 and P3 is recommended as a precautionary measure to determine likely presence/absence on the proposals site. Surveys can be carried out between 15th April – 30th June for eDNA testing.
- Breeding birds – Woodland, trees, scrub, ornamental planting and some buildings on site provide habitat for breeding birds. It is advised building demolition and 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. General mitigation to include native hedgerow/tree/shrub planting and installation of nest boxes on retained trees/woodland/new builds;

- **Hedgehog** – Suitable habitat is present on site for this species and precautionary working methods recommended to avoid accidental harm/injury to hedgehog. Recommended mitigation includes the creation of small gaps under sections of new fencing/walls within the development to allow passage of hedgehog and maintain connectivity across the site.

Refer to section 5.3 for further details.

Invasive non-native species (INNS)
A control programme with precautionary working methods to be implemented to prevent accidental spread in respect to Himalayan balsam, a species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Refer to section 6.0 for the impact assessment relating to ecological features identified on site.

It is anticipated that the development of the site is feasible with minimal impact to biodiversity and potential for biodiversity gains, provided that the recommended mitigation and enhancement measures are incorporated within the scheme. Further discussion with respect to biodiversity net gain and on-site enhancements/mitigation is detailed within a biodiversity net gain assessment undertaken to Defra Metric 3.0, refer to the corresponding report *SF3154 Biodiversity Net Gain Assessment October 2021 Revision A.*

1.0 INTRODUCTION

1.1.1 Smeeden Foreman Limited has been commissioned by Redrow Homes to undertake an ecological assessment of their site at Blackmoorfoot Road, Crosland Moor, Huddersfield (central grid reference SE 11662 14685), hereafter referred to as the 'site'.

1.1.2 This report will include the following information gathered by desk study, phase 1 habitat survey, building assessment, pond assessment with respect to great crested newts:

- Proximity to statutory and non-statutory designated sites;
- Proximity to existing records of protected species;
- Site habitat appraisal and potential to support protected species; and,
- Activity survey of a single building on site to determine presence/absence of roosting bats (August 2021).

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 the construction of a residential housing development.

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 and Guidelines for Ecological Impact Assessment, 2018).

2.0 SITE DESCRIPTION

2.1.1 The proposals site is located to the western edge of Crosland Moor, approximately 3km south-west of Huddersfield town centre. The site is bound to the south by Blackmoorfoot Road, to the east by Crosland Hill Road. Residential gardens abut the site partly to the north, with factory and storage units located to the north-east, refer to *Figure 01* below.

Figure 01: Aerial view of site location

2.1.2 Habitats on site predominantly comprise buildings and hardstanding with trees, small areas of grassland and ornamental planting across the site. An area of unmanaged woodland is present to the southern boundary.

2.1.3 The site lies within an area of mixed use comprising residential settlements, working and disused quarries, a golf course, public open space with a wooded valley located approximately 400m north of site.

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
- Countryside and Rights of Way Act 2000
-
- 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 a phase 1 habitat survey, building assessment and habitat suitability index pond assessment with respect to great crested newts;
- Consultation with relevant bodies to obtain existing protected species records and statutory/non-statutory designated sites information within 2km of the development site: West Yorkshire Ecology Service (WYE) and West Yorkshire Bat Group (WYBG);
- The UK Biodiversity Action Plan (UKBAP);
- The Kirklees Biodiversity Action plan (LBAP);
- Magic map, a government website for nature conservation information; and,
- Aerial photographs.

4.2 NATURE CONSERVATION DESIGNATED SITES

Statutory Designations

4.2.1 A single statutorily designated nature conservation site lies within 2km of the proposals site boundary: Gledholt Wood Local Nature Reserve (LNR), located approx. 1.9km

north-east of site. Habitats within this reserve include mature woodland, rough grassland and standing water which supports freshwater crayfish.

4.2.2 The proposals site lies within the outer Impact Risk Zones of a complex of different Sites of Special Scientific Interest (SSSI) including South Pennine Moors SSSI, Phase 1 Special Protection Area (SPA) and Special Area of Conservation (SAC) and Dark Peak SSSI located at distances of 5.5 – 7km west/south-west of the proposals site (see below footnote for site definitions). 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 these sites. Habitats on site do not complement those associated with these statutory sites neither are they suitable for the breeding or foraging requirements of associated qualifying species.

4.2.3 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.

Local Nature Reserves (LNRs): 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'.

Sites of Special Scientific Interest (SSSIs): These sites provide statutory protection for sites considered to be of national importance for their wildlife and natural heritage value, following evaluation against published guidelines. They are originally designated by English Nature under the National Park and Access to the Countryside Act 1949 and re-notified under the Wildlife and Countryside Act 1981. Improved provisions for their protection and management were introduced in the Countryside and Rights of Way Act 2000.

Special Areas of Conservation (SACs): Strictly protected sites designated under the EC Habitats Directive. Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds).

Special Protection Areas (SPAs): Land within and SPA is classified under Directive 79/409 on the Conservation of Wild Birds. SPAs are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

Non-statutory Designations

4.2.4 West Yorkshire Ecology Service provided information on a total of seven non-statutorily designated sites within 2km of the proposals site. These sites are detailed in Table 01 below with additional descriptions of their corresponding designations.

Table 01: Non-statutorily designated sites within 2km

Site Name	Designation	Grid reference	Location from site	Notes
Dean Wood	LWS[1]	SE 119133	1.2km south	Ancient semi-natural woodland, species rich acid woodland
Delves Wood	LWS	SE 123138	0.8km south east	Species rich acid woodland

Gledholt Woods	LNR, LWS	SE 134164	1.9km north east	Woodland habitat
Huddersfield Narrow Canal	LWS	SE 100151	0.9km north	Standing open water, value for appreciation of nature
Low Westwood Pond	LWS	SE 097146	1.8km west	Species rich standing water
Beaumont Park	LGS[2]	SE 128147	1.0km east	Deciduous woodland
Johnsons Wellfield Quarries	LGS	SE 1114 1113	0.4km south	Exposed rock

[1] Local Wildlife Sites (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 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.

[2] Local Geological Sites (LGS) are areas identified as being important for their geological features.

4.2.5 The proposals site does not lie within the Kirklees Wildlife Habitat Network.

4.3 EXISTING SPECIES RECORDS

4.3.1 Existing biological records were provided following consultation with West Yorkshire Ecology Service (WYE) and West Yorkshire Bat Group (WYBG). The records detailed in the following tables are those in closest proximity to the proposed development site within the 2km search area. The raw data provided by the records centre is not appended to the report but a copy can be provided on request.

Table 02: Protected species records within 2km (WYE)

Species	Grid reference	Notes
Great crested newt *Triturus cristatus*	SE 13691487 SE 137147	3 records, 2005-2009, closest dated 2008 1.8km east of site with 10 count adult male and 12 count adult female Second closest record dated 2009 also 1.8km east of site with 2 count adult male and 4 count adult female
Kingfisher *Alcedo atthis*	SE 125159	1 record dated 2015, 1.3km north east of site
Brambling *Fringilla montifringilla*	SE 1213	1 record dated 1970-1988, 1.6km south of site
White-clawed crayfish *Austropotamobius pallipes*	SE 1321613835	5 records, 2006-2011, closest dated 2006 1.6km south east of site
Slow-worm *Anguis fragilis*	SE 128145	2 historic records dating from 1884-1986, closest dated 1986 1km east of site.

Common lizard *Lacerta vivipara*	SE 1114	2 historic records, 1883-1914. Record only accurate to within 1km of the proposals site.
Grass snake *Natrix natrix*	SE 128145	2 historic records, 1868-1884, approx. 1km east of site.
Water vole *Arvicola terrestris*	SE 130145	6 records dated 1999, closest 1.2km east of site.

Table 03: Bat species records within 2km (WYE and WYBG)

Species	Grid reference	Notes
Natterer's bat *Myotis nattereri*	SE 108156	Single record in 1985, Birch Park 1.3km north west of site. 1 count of adult.
Daubenton's bat *Myotis daubentoni*	SE 1200215836	2 field records (2005-2019). Closest record at Milnsbridge (2019) 1km north of site.
Pipistrelle bat species *Pipistrellus sp.*	SE 1120615322	9 records (1995-2007); 8 roost records and 1 record of 1 count injured adult. Closest record at Cowlersley (2006) 0.8km north west of site.
Common pipistrelle *Pipistrellus pipistrellus*	SE 1120415322	34 field and roost records (1999-2019). Closest record at Cowlersley (2006) 0.7km north west of site.
Soprano pipistrelle *P. pygmaeus*	SE 1200215836	2 field records (1997-2019). Closest at Milnsbridge (2019) 1km north of site.
Vesper bat species *Vespertilionidae sp.*	SE 120147	11 roost and field records (1996-2014). Closest record at Crosland Hill (1996) 0.2km east of site.
Noctule *Nyctalus noctula*	SE 1150012719	Single field record in 2013, South Crosland 1.8km south of site.

4.3.2 A single European Protected Species Mitigation Licences (EPSML) is identified within the 2km search area radius which relates to common pipistrelle bat, licence reference *2014-1010-EPS-MIT*, dated from April 2014 – Sept 2015 (SE 12281526).

4.3.3

4.3.4 Non-native invasive species included on Schedule 9 of the Wildlife and Countryside Act 1981 (*as amended*) which have been recorded within 2km of the proposals site include: signal crayfish, large-flowered waterweed, Canadian waterweed, Japanese knotweed, Himalayan balsam, curly waterweed, yellow azalea, rhododendron, American mink and grey squirrel.

4.3.5 Records of priority UK Biodiversity Action Plan species within 2km of the study area were provided for the following species:

Birds: skylark, tree pipit, cuckoo, yellowhammer, grasshopper warbler, corn bunting, yellow wagtail, spotted flycatcher, house sparrow, tree sparrow, grey partridge, wood warbler, dunnock, bullfinch, starling, song thrush and lapwing;

Insects: white ermine and cinnabar;

Fish: sea trout;

Mammals: brown hare.

4.3.6 In addition to those species listed above, the following species have been afforded local action plans by the West Yorkshire Biodiversity Action Plan (WYBAP): Kirklees Council, refer to section 4.4.5 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.

4.4.2 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).

4.4.3 Priority habitats known to occur within 2km of the site include deciduous woodland, lowland dry acid grassland.

4.4.4 During the walkover survey deciduous woodland was recorded to the south of site and two S41 (formerly UKBAP) bird species were recorded during the site walkover - bullfinch and house sparrow.

Local Biodiversity Action Plan

4.4.5 Kirklees Biodiversity Action Plan has assigned Habitats of Principal Importance as follows (with key geographical areas in brackets):

- Arable field margins (Pennine foothills)
- Blanket bog (Uplands)
- Hedgerows
- Inland rock outcrop and scree habitats (valley slopes and quarries)
- Lowland dry acid grassland (valley slopes)
- Lowland heathland (valley slopes)
- Upland and lowland meadows (Pennine foothills and mid-altitudinal grasslands)
- Lowland mixed deciduous woodland (valley slopes and Pennine foothills)
- Open mosaic habitats on previously developed land (urban areas)
- Ponds
- Reedbeds (floodplain, Riverine Corridors Local Action Plan)
- Rivers (floodplain, Riverine Corridors Local Action Plan)
- Traditional orchards (Pennine foothills)

- Upland flushes, fens and swamps (uplands)
- Upland oak woodland and mixed ashwoods (uplands and valley slopes)
- Wet woodland (floodplain)
- Wood-pasture & parkland (Pennine foothills and valley slopes)
- Scrub (local BAP habitat – primarily valley slopes and Pennine foothills)
- Other semi-natural grassland (wet/rush pasture and rough grassland)

4.4.6 Bramble scrub occurs on site and small isolated areas of rough grassland occur on site. These habitats are located within an urban environment.

4.4.7 Kirklees Biodiversity Action Plan has assigned Species of Principal Importance as follows:
Birds: bullfinch, cuckoo, grasshopper warbler, linnet, starling, Eurasian curlew, Eurasian tree sparrow, grey partridge, dunnock, house sparrow, lesser redpoll, northern lapwing, red grouse, reed bunting, ring ouzel, skylark, song thrush, spotted flycatcher, tree pipit, twite, willow tit, wood warbler, yellow wagtail, yellowhammer.
Invertebrates: northern wood ant, small heath, wall brown, white-letter hairstreak.
Fish: Atlantic salmon and European eel;
Reptiles/amphibians: common lizard, common toad and great crested newt;
Terrestrial mammals: brown hare, brown long-eared bat, mountain hare, noctule bat, otter, soprano pipistrelle, water vole and West European hedgehog.

4.4.8 Of the above species, house sparrow and bullfinch were recorded during the walkover survey, with vegetation (trees, woodland, scrub, ornamental planting) on site likely to be used by these species. The site provides foraging and commuting habitat for bat species and is likely to be accessed by hedgehog. A single building provides bat roost potential.

4.5 SITE SURVEY – PHASE 1/UKHABS HABITAT SURVEY

Methodology

4.5.1 A walk over survey was undertaken by Senior Ecologist Maria Gill on 16th June 2021. Habitat types and key species were initially noted and presented in the Phase 1 Habitat format proposed by the Joint Nature Conservation Committee (2010). Habitats are mapped separately in accordance with the UK Habitat Classification System (*Version 1.1 UKHabs,* September 2020) with associated condition assessments. Condition assessments have been used to inform the latest version of the Defra Metric (Version 3.0) with information detailed within the corresponding Biodiversity Net Gain Assessment (*SF3154 Biodiversity Net Gain Assessment October 2021 Revision A*).

Limitations

4.5.2 The survey was undertaken during the optimal season in suitable conditions. Access to fully survey the woodland area to the south of the site was not possible due to the woodland being enclosed by a steep slope and high stone wall and dense vegetation. Where possible, views of the woodland were obtained from a vantage point within the proposals site.

Results

4.5.3 Site summary: The proposals site predominantly comprises buildings and hardstanding forming the Lowdhams caravan dealership. Areas of bare ground with colonising vegetation occur in association with boundaries and vehicle parking on site, and minor

areas of species-poor semi-improved grassland are present in association with trees and tall ruderal vegetation. An area of unmanaged broadleaf woodland is present to the south of site adjacent to Blackmoorfoot Road. Minor areas of bramble scrub and amenity grassland are also present.

4.5.4 Habitats on site comprise the following when assessed using the UKHabs classification system. This system includes the use of secondary (2°) codes to provide further information on the habitat parcels identified, where relevant:

- w1g 38 80 Other woodland; broadleaved (2°: secondary woodland, unmanaged)
- w 1170 Individual trees
- g4 64 730 Modified grassland (2°: mown, commercial premises open space)
- h3d Dense bramble scrub
- u1 17 Sparsely vegetated land (2°: ruderal/ephemeral)
- g4 66 730 Amenity grassland (2°: frequently mown, commercial open space around premises)
- u1 1160 Introduced shrub
- u1 189 Vacant/derelict land/bare ground (2°: scattered grass)
- u1b5 Buildings
- u1b 89 110 Developed land; sealed surface (2°: car park, retail)
- u1e 68 Built linear features (2°: mortared wall)
- u1e 69 Built linear features (2°: fence)

4.5.5 Where appropriate, habitats have been assessed based on the plant communities and site conditions recorded at the time of survey. Locations and extents of the habitats present are estimated using aerial photography and knowledge of the site following the ecological walkover undertaken in June 2021. Habitat descriptions and justifications are discussed below along with condition assessments based on criteria provided within The Biodiversity Metric 3.0 Auditing and accounting for biodiversity Technical Supplement (July 2021).

4.5.6 Refer to *Figure 02: Phase 1 Habitat Map* (appended) for locations of corresponding target notes included within the description text (TN). Habitat parcels for UKHabs are referenced in numerical order and mapped within *Figure 03: UK Habitats Plan* to the UK Habitat Classification System (appended).

Habitat 1: w1g 38 80 - Other woodland; broadleaved
(2° codes: secondary woodland, unmanaged)
Phase 1 habitat type: broadleaf woodland
Area measure approx. 0.2136ha

4.5.7 Description: An area of woodland is located to the south of site (*Figure 02* target note 1), enclosed by a steep bank to the northern edge and a high stone wall which runs parallel with Blackmoorfoot Road.

4.5.8 Species composition: The canopy of the woodland is dominated by sycamore *Acer pseudoplatanus* with goat willow *Salix caprea*, common alder *Alnus glutinosa*, silver birch *Betula pendula,* wild cherry *Prunus avium*, ash *Fraxinus excelsior*, horse chestnut

Aesculus hippocastanum and hybrid black poplar *Populus serotina.* A large proportion of trees are in poor condition and have fallen due to damage caused by impacted rubble and debris within the woodland. The understorey predominantly comprises elder *Sambucus nigra* with cherry laurel *P. laurocerasus* and an ornamental species box-leaved honeysuckle *Lonicera pileata* also recorded.

4.5.9 The ground flora is dominated by bramble *Rubus fruticosus* with abundant common nettle also present. Wood avens *Geum urbanum*, cleavers *Galium aparine,* bracken *Pteridium aquilinum* and coverage of the invasive non-native species Himalayan balsam *Impatiens glandulifera* evident (HB). Ivy *Hedera helix* is the dominant species to the both ends of the woodland with a number of trees subjected to ivy infestation. Areas of bare soil were also noted.

4.5.10 Deadwood is frequent throughout the woodland due to lack of management.

4.5.11 The majority of the north-western edge of the woodland comprises a steep bank of brash and waste debris with Himalayan balsam (HB) largely present along this bank and encroaching across the woodland floor. A central bund of debris measuring approx. 2.5m high almost dissects the woodland into two halves, with compacted rubble and waste impacting tree roots and stems directly. At least 50% of the woodland floor is comprised of waste debris.

4.5.12 No trees within this woodland were considered to support features suitable for roosting bats with trees generally young in age or mature trees being intact. Ivy on trees was not mature enough to provide potential roost features. The boundary wall which bounds this area of woodland to the south-east was identified to be in poor condition, its stability compromised by fallen/damaged trees and considered to be of negligible bat roost potential.

4.5.13 As a general note, the woodland environment was considered cluttered, noisy due to traffic and likely to be well-lit by adjacent streetlighting reducing bat roost suitability.

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4.5.14 Limitations: The woodland could not be fully accessed for inspection during the initial walkover survey due to steep slopes and dense undergrowth. A follow-up site visit was undertaken on 12th November 2021 when less vegetation and foliage was present to allow for better access and more detailed assessment. The following assessment has been updated following this survey.

Table 04: Condition Assessment – Woodland (Condition sheet 24)

Condition Assessment Criteria Indicator		Site Justification (points scored: Good = 3, Moderate = 2, Poor = 1)	Site Score per indicator
1	Age distribution of trees	Two age classes present	2
2	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland	3
3	Invasive plant species	Rhododendron or laurel present, or other invasive species > 10% cover – confirmed presence of >10% Himalayan balsam	1
4	Number of native tree species	Five or more native tree or shrub species found across woodland parcel	3
5	Cover of native tree and shrub species	> 80% of canopy trees and >80% of understory shrubs are native	3
6	Open space within woodland	No visible areas of temporary open space and area <10ha	3
7	Woodland regeneration	One or two classes only present in woodland	2
8	Tree health	Greater than 25% tree mortality	1
9	Vegetation and ground flora	No recognisable NVC community	1
10	Woodland vertical structure	Two storeys across all survey plots	2
11	Veteran trees	No veteran trees present in woodland	1
12	Amount of deadwood	Between 25% and 50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	2

13	Woodland disturbance	More than 20% of woodland area has damaged ground, waste debris present.	1
		Total score (out of a possible 39) = 25	POOR

Condition Assessment Result	Condition Assessment Score
Total score >32 (33 to 39)	Good (3)
Total score 26 to 32	Moderate (2)
Total score <26 (13 to 25)	Poor (1)

Individually mapped: w 1170 – Individual trees

Total number: 105

4.5.17 Trees and large shrubs on site are generally associated with boundaries and divisions between vehicle parking areas. Species present include sycamore, ash, silver birch, rowan *Sorbus aucuparia*, goat willow, hawthorn *Crataegus monogyna*, whitebeam *S. aria*, European larch *Larix decidua,* Scots pine *Pinus sylvestris*, Norway maple *A. platinoides*, Swedish whitebeam *S. intermedia*, Norway spruce *Picea abies,* Lawson cypress *Chamaecyparis lawsoniana*, cherry laurel*,* walnut *Juglans regia* and Leyland cypress *Cupressus leylandii.*

4.5.18 Stem diameters and size classes for individuals and tree groups have been obtained from the corresponding arboricultural report *SF3154 Arboricultural Survey Rev B* prepared by Smeeden Foreman, following a tree survey undertaken in February 2021.

4.5.19 Refer to the tables below for condition assessment and equivalent values for site areas.

Table 05: Variation in tree condition to calculate equivalent site areas

Condition	No. of trees per size class			Area equivalent value (ha)
	Small	Medium	Large	
Poor	5	8	0	0.0348ha
Moderate	40	40	2	0.2035ha
Good	4	6	0	0.0262ha

Table 06: Condition Assessment – Urban Trees (Condition Sheet 22)
(F denotes criteria fail, P denotes criteria pass)

					CONDITION CRITERIA						SCORE
Total trees existing on site	small (100-299mm)	med (300-499mm)	large (500+)	**Formation (urban trees)**	**1**	**2**	**3**	**4**	**5**	**6**	
T1	1			Linear block (1)	F	F	F	P	N/A	P	POOR
T2	1										
T3	1										
T4		2									
T5		1		Individual	F	N/A	P	P	N/A	F	POOR
T6		1		Linear block (2)	P	F	F	P	N/A	F	POOR
T7		1									
T8	1										
T9		1									
T10		1									
T11	1										
T12		1									
T13	4	2		Perimeter block (1)	P	P	P	P	N/A	P	GOOD
T15		1									
T16		1									
T17		2									
T18	1			Perimeter block (2)	F	P	F	P	N/A	P	MOD
T19		5	1								
T21		1									
T22			1								
T23	1										
T24	1										
T25	1										
T26	3										
T27		1									
T28	3										
T29		1									
T30	1										
T31	3										
T32	1										
T33					OSB						
T34											
T35											
T36											
T39	3			Perimeter block (3)	F	P	P	P	N/A	P	MOD
T56		4									
T40		1									
T41		1		Perimeter block (4)	F	P	F	P	N/A	P	MOD
T42		1									
T43	2										
T44	1										
T45	1										
T46	1										
T47		4									
T48	1										
T49		2									
T50	2										
T51		1									
T52		1									
T53		1									
T54		1									
T57		3		Linear block (3)	P	P	F	P	N/A	P	MOD
T58	1										
T59	1										
T60		1									
T61	1										
T62		1									
T63	1										
T64		1									
T65	1										
T66	1										
T67		1									
T68	1										
T69	1										
T70	1										
T71		1		Individual	F	N/A	P	P	N/A	P	MOD
T72		1		Perimeter block (5)	F	P	F	P	N/A	P	MOD
T73		1									
T74		1									
T75		1									
T76	1										
T77	1										
T78	1										
T79		1									
T80		1									
T81	1										
T82	1										
T83		1		Individual	F	N/A	P	P	N/A	P	MOD
TOTAL	49	54	2								

Habitat 2: **g4 64 730 Modified grassland**
(2° codes: 64 mown, 730 commercial open space around premises)
Phase 1 habitat type: species-poor semi-improved grassland
Area measure approx. 0.0579ha

4.5.20 Two minor areas of grassland are present to the north and south of site, in association with trees on site (**target note 2**). These areas had been strimmed in part at the time of survey. These areas are dominated by grasses including Yorkshire-fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius* and rough meadowgrass *Poa trivialis.* Forb diversity within the sward is limited with frequent cleavers, occasional meadow buttercup *Ranunculus acris* and ribwort plantain *Plantago lanceolata*.

Table 07: Condition Assessment – Grassland of low distinctiveness (Condition Sheet 5)

Condition Assessment Criteria		Site	Pass/fail
1	There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type. *NB - this criterion is non-negotiable for achieving good condition.*	A maximum of 6 species recorded within the sward.	Pass
2	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 insects, birds and small mammals to live and breed.	Sward height is uniform resulting from regular cutting.	Fail
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Minimal scrub present	Pass
4	Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	No physical damage evident.	Pass
5	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	No bare ground due to a dense sward .	Fail
6	Cover of bracken less than 20%.	No bracken present.	Pass
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species[1] make up less than 5% of ground cover.	No INNS or undesirable species present.	Pass
	SCORE	Passes 5 of 7 criteria	MODERATE
Passes 6 or 7 of 7 criteria including non-negotiable criterion 1	Good (3)		
Passes 4 or 5 of 7 criteria; OR Passes 6 of 7 criteria excluding non-negotiable criterion 1	Moderate (2)		
Passes 0, 1, 2 or 3 of 7 criteria	Poor (1)		

Habitat 3: **h3d – dense bramble scrub**
Phase 1 habitat type: dense scrub
Area measure approx. 0.0284ha

4.5.21 Small patches of dense bramble scrub are present on site in association with trees to the northern and southern boundaries (**target note 5**). Species recorded in association with these areas include field horsetail, Himalayan balsam, ribwort plantain, a forget-me-not species *Myosotis sp.* and bush vetch.

Table 08: Condition Assessment – Scrub (Condition Sheet 19)

Condition Assessment Criteria		Site	Pass/fail
1	Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Single species scrub (bramble)	Fail
2	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Single age bramble	Fail
3	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Presence of Himalayan balsam, an invasive non-native species	Fail
4	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Majority of edge habitat abuts hardstanding or bare ground, due to urban location.	Fail
5	There are clearings, glades or rides present within the scrub, providing sheltered edges.	None present.	Fail
	SCORE	Passes 0 of 5 criteria	POOR

Passes 5 of 5 criteria	Good (3)
Passes 3 or 4 of 5 criteria	Moderate (2)
Passes 0, 1 or 2 of 5 criteria	Poor (1)

Habitats 4 and 5: **u1 17 Sparsely vegetated land**
(2° codes: 17 ruderal/ephemeral)
Phase 1 habitat type: tall ruderal herb
Total areas measure approx. 0.1481ha

4.5.22 Stands of tall ruderal vegetation are present in association with areas of trees to the north and south of site (**target note 3**). Vegetation to the south of site is dominated by common nettle *Urtica dioica*, with frequent Himalayan balsam (**HB**), bramble, locally frequent common hogweed *Heracleum sphondylium*, garlic mustard *Alliaria petiolata,* cleavers, creeping buttercup *R. repens*, rosebay willowherb *Chamaenerion angustifolium* and occasionally occurring spear thistle *Cirsium vulgare*, dandelion *Taraxacum officinale agg.*, bush vetch *Vicia sepium*, hedge bindweed *Calystega sepium*, broad-leaved dock *Rumex obtusifolius* and herb robert *Geranium robertianum*.

4.5.23 An east-facing banking to the north-west of site formerly comprising a gravel substrate with a weed proof membrane is bounded by stone walling and has been colonised by tall ruderal species (**target note 4**). This area is dominated by field horsetail *Equisetum arvense* with frequent rough meadowgrass, Yorkshire-fog grass, herb robert and dandelion, locally frequent rosebay willowherb, creeping buttercup and creeping thistle, occasional Welsh poppy *Mecanopsis cambrica*, ragwort *Senecio jacobaea*, prickly sow-thistle *Sonchus asper*, wood avens and broad-leaved willowherb *Epilobium montanum* and a rare occurrence of yellow flag iris *Iris pseudacorus*.

Table 09: Condition Assessment – Urban (Condition Sheet 21)

Condition Assessment Criteria		Site		Pass/fail
CORE CRITERIA – applicable to all urban habitat types		Habitat parcel 4	Habitat parcel 5	
1	Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.	Structure is predominantly comprised of tall herb species (nettle, field horsetail, Himalayan balsam, hogweed).	Structure is predominantly comprised of herb species with sparse coverage (field horsetail, rosebay willowherb)	Fail
2	There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife).	Limited botanical diversity.	Limited botanical diversity.	Fail
3	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Himalayan balsam cover >5% of area.	No INNS present.	Parcel 1 – Fail Parcel 2 - Pass
Additional Criterion				
4a	The site shows spatial variation, forming a mosaic of at least four early successional communities (a) to (h) PLUS bare substrate AND pools. (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland.	N/A		N/A
4b	The water table is at or near the surface throughout the year. This could be open water or saturation of soil at the surface.	N/A		N/A
	SCORE	Passes 0 or 1 of 3 criteria		POOR
	If 3 criteria assessed:			
Passes 3 of 3 core criteria; AND Meets the requirements for good condition within criteria 2 and 3		Good (3)		
Passes 2 of 3 core criteria; AND Passes 3 of 3 core criteria but does not meet the requirements for good condition within criteria 2 and 3		Moderate (2)		
Passes 0 or 1 of 3 core criteria		Poor (1)		
	If 4 criteria assessed:			
Passes 3 of 3 core criteria; AND Meets the requirements for good condition within criteria 2 and 3 AND Passes additional criterion 4a or 4b		Good (3)		
Passes 2 of 3 core criteria; OR Passes 4 of 4 core criteria but does not meet the requirements for good condition within criteria 2 and 3		Moderate (2)		
Passes 0 or 1 of 4 core criteria		Poor (1)		

Habitat 6: **g4 66 730 Modified grassland**
(2° codes: 66 frequently mown, 730 commercial open space around premises)
Phase 1 habitat type: Amenity grassland
Area measure approx. 0.0718ha

4.5.24 Two areas of amenity grassland are present at the entrance to the site to the south-western boundary (**target note 7**) in association with tree planting. These areas had been recently mown at the time of survey. These areas are dominated by perennial rye-grass, with locally frequent dandelion, creeping buttercup, orange hawkweed

Pilosella aurantiaca and springy turf-moss *Rhytidiadelphus squarrosus*, occasionally occurring daisy, Yorkshire-fog grass, ragwort and ribwort plantain.

Table 10: Condition Assessment – Grassland of low distinctiveness (Condition Sheet 5)

Condition Assessment Criteria		Site	Pass/fail
1	There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type. *NB - this criterion is non-negotiable for achieving good condition.*	No more than 6 species recorded in one square metre of grassland.	Pass
2	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 insects, birds and small mammals to live and breed.	Sward height is uniform resulting from regular cutting.	Fail
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	No scrub present due to regular management.	Pass
4	Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	No physical damage evident.	Pass
5	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	No bare ground present.	Fail
6	Cover of bracken less than 20%.	No bracken present.	Pass
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species[1] make up less than 5% of ground cover.	No INNS or undesirable species present.	Pass
	SCORE	Passes 5 of 7 criteria	MODERATE

Passes 6 or 7 of 7 criteria including non-negotiable criterion 1	Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 6 of 7 criteria excluding non-negotiable criterion 1	Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria	Poor (1)

Habitat 7: <u>u1 189 Urban – vacant/derelict land/bare ground</u>
(2° codes: 189 scattered grass)
Phase 1 habitat type: Bare ground with colonising vegetation
Area measure approx. 0.4942ha

4.5.25 A large proportion of the site comprises a gravel substrate used for vehicle parking which has been colonised by species typically associated with waste/disturbed habitats (**target note 6**). Species recorded within this habitat include annual meadowgrass *Poa annua*, perennial rye-grass *Lolium perenne*, greater plantain *Plantago major*, lady's mantle *Alchemilla mollis*, daisy *Bellis perennis*, creeping buttercup, foxglove *Digitalis purpurea*, common hogweed, broad-leaved dock, wood avens, common nettle, self-heal *Prunella vulgaris*, buddleia *Buddleia davidii*, white clover *Trifolium repens* and bittersweet *Solanum dulcamara* (to the south-east only).

Table 11: Condition Assessment – Urban (Condition Sheet 21)

Condition Assessment Criteria		Site	Pass/fail
CORE CRITERIA – applicable to all urban habitat types			
1	**Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.**	Structure is predominantly comprised of tall herb species (nettle, field horsetail, Himalayan balsam, hogweed).	Fail
2	**There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife).**	Limited botanical diversity.	Fail

3	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Himalayan balsam cover >5% of area.	Fail
Additional Criterion			
4a	The site shows spatial variation, forming a mosaic of at least four early successional communities (a) to (h) PLUS bare substrate AND pools. (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland.	N/A	N/A
4b	The water table is at or near the surface throughout the year. This could be open water or saturation of soil at the surface.	N/A	N/A
	SCORE	Passes 0 of 3 criteria	POOR

If 3 criteria assessed:		
Passes 3 of 3 core criteria; AND Meets the requirements for good condition within criteria 2 and 3	Good (3)	
Passes 2 of 3 core criteria; AND Passes 3 of 3 core criteria but does not meet the requirements for good condition within criteria 2 and 3	Moderate (2)	
Passes 0 or 1 of 3 core criteria	Poor (1)	
If 4 criteria assessed:		
Passes 3 of 3 core criteria; AND Meets the requirements for good condition within criteria 2 and 3 AND Passes additional criterion 4a or 4b	Good (3)	
Passes 2 of 3 core criteria; OR Passes 4 of 4 core criteria but does not meet the requirements for good condition within criteria 2 and 3	Moderate (2)	
Passes 0 or 1 of 4 core criteria	Poor (1)	

Habitat 8: <u>u1 1160 Urban – introduced shrub</u>
(2° codes: 1160 introduced shrub)
Phase 1 habitat type: Introduced/ornamental planting
Area measure approx. 0.0553ha

4.5.26 Ornamental shrubs border car parking areas and access roads on site, confined within stone retaining walls. A cotoneaster species was recorded within the planting noted on site, however, this species was not found to naturally occur on site and having been originally planted on site for ornamental purposes it has not been identified establishing outside of contained areas of planting.

4.5.27 No condition assessment is required for this habitat. The condition is pre-fixed to POOR.

Habitat 9: <u>u1b5 Urban – Developed land; sealed surface</u>
Phase 1 habitat type: Buildings
Area measure approx. 0.3359ha

4.5.28 The majority of the site comprises hardstanding including access roads and vehicle parking and a range of buildings associated with the operational caravan dealership including showrooms, a workshop, storage containers, Portakabins, a toilet block, two log cabins and a substation. These buildings were further assessed with respect to roosting bats and are discussed in more detail in section 4.7 of this report.

4.5.29 No condition assessment is required for this habitat.

Habitat 10: <u>u1b 89 110 Urban – Developed land; sealed surface</u>
(2° codes: 89 car park, 110 retail)
Phase 1 habitat type: Hardstanding
Area measure approx. 1.9182ha

4.5.30 No condition assessment is required for this habitat.

Fauna

4.5.31 During the survey the following bird/mammal/insect species were recorded: goldfinch *Carduelis carduelis*, blue tit *Cyanistes caeruleus*, wren *Troglodytes troglodytes*, magpie *Pica pica*, blackbird *Turdus merula*, house sparrow *Passer domesticus*, bullfinch *Pyrrhula pyrrhula*, robin *Erithacus rubecula*, swallow *Hirundo rustica*, blackcap *Sylvia atricapilla* and cinnabar moth *Tyria jacobaeae*.

4.5.32 Photographs

Image 01: Broadleaf woodland habitat to the south of site (TN1)

Image 02: Broadleaf woodland (TN1)

Image 03: Species-poor semi-improved grassland (TN2)

Image 04: Tall ruderal vegetation (TN3)

Image 05: Non-native invasive Himalayan balsam (HB)

Image 06: Example of dense bramble scrub habitat (TN5)

Image 07: Example of bare ground with colonising vegetation (TN6)

Image 08: Amenity grassland (TN7) with tree planting

Image 09: Bare ground and containers

Image 10: Formal carparking and soft landscaping

Image 11: Formal ornamental planting

Image 12: Woodland – photo taken November 21

Image 13: Woodland – photo taken Nov 21

Image 14: Woodland – photo taken November 21

Image 15: Woodland – photo taken Nov 21

Conclusion

4.5.33 A large proportion of the site comprises habitats of low ecological value including buildings, hardstanding and gravel vehicle parking areas. Habitats of greater interest include the area of woodland to the south of site and areas of dense bramble scrub and tall ruderal vegetation in association with a range of trees scattered across site. Small isolated areas of grassland are of low ecological value comprising a limited species diversity as a result of regular mowing. None of the habitats within the site are of significant interest (in terms of the plant species composition). The plant communities at the site are of widespread occurrence and are characteristic of the habitats present in the wider area and common nationally with no rare or locally uncommon plant species recorded during the walkover survey. Himalayan balsam and cotoneaster, invasive plant species listed under the Wildlife and Countryside Act 1981 (as amended) was detected at the site. Refer to section 5.5 for further detail.

4.6 SITE SURVEY – HABITAT SUITABILITY INDEX SURVEY

Methodology – Habitat Suitability Index

4.6.1 From consulting an OS map of the local area a total of four potential waterbodies were identified within 500m of the site, see *Figure 03* below for pond locations.

Figure 03: Waterbody locations on site and within 500m

4.6.2 All four waterbodies are associated with Waterholes Quarry, the closest of which (P1) is 315m south of the proposals site. Ponds P1, P2 and P4 were found to be dry at the time of survey. P2 and P3 were subjected to a Habitat Suitability Index Assessment due to containing water (P3) and evidence of some macrophyte coverage indicating water was present until recently (P2).

4.6.3 Photographs

Image 12: Pond P2

Image 13: Pond P3

4.6.4 Waterbodies were assessed using the Habitat Suitability Index (HSI) survey methodology to consider their suitability for great crested newts and the requirement

for further assessment and appropriate mitigation in regards to the proposed development.

4.6.5 The HSI survey is a method produced by Oldham *et al.* (2000) to assess the suitability of ponds for great crested newts by quantifying ten factors (suitability indices) which can affect great crested newt occurrence, such as the presence of fish and wildfowl, shading, coverage of aquatic vegetation, etc. and provides a score which can indicate the suitability of a pond to support breeding great crested newts. The HSI is calculated as a geometric mean of the ten suitability indices using the formula below:

4.6.6 $HSI = (SI_1 \times SI_2 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/10}$

4.6.7 The score can range from 0 to 1, 0 indicating low suitability and 1 indicating a high suitability. The HSI has been adapted by the National Amphibian and Reptile Recording Scheme (NARRS) who have categorised the suitability of a pond to support great crested newts by the HSI obtained, which is as follows:

Table 12: HSI scoring system

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

Results

4.6.8 Pond 3 was the only pond holding water at the time of survey (not to full capacity) with Ponds P1 and P4 considered to be ephemeral. Ponds P2 and P3 were assessed using the Habitat Suitability Index (HSI) survey methodology as described above.

4.6.9 The results of the HSI survey are detailed in the table below:

Table 13: Habitat Suitability Index Survey

	Pond 2		Pond 3	
SI_1 Location	A	1	A	1
SI_2 Pond area[#]	*400m²*	0.8	*930m²*	0.96
SI_3 Pond drying	*Annually*	0.1	*Sometimes*	0.5
SI_4 Water quality[#]	*Poor*	0.33	*Poor*	0.33
SI_5 Perimeter Shade	*50%*	1	*70%*	0.8
SI_6 Fowl	*Absent*	1	*Absent*	1
SI_7 Fish	*Absent*	1	*Absent*	1
SI_8 Ponds within 1km	*5*	1	*5*	1
SI_9 Terrestrial habitat (within 250m)	*Good*	1	*Good*	1
SI_{10} Macrophytes*	*<10%*	0.35	*20%*	0.5
HSI Score	**0.63 = 'Average' suitability**		**0.76 = 'Good' suitability**	
[#] Estimate				

Conclusions

4.6.10 **Pond P2** obtained a suitability score of 'average' scoring low on criteria such as permanence and high on absence of predators and quality of surrounding terrestrial habitat. **Pond P3** obtained a suitability score of 'good' scoring high on criteria such as size, absence of predators and quality of surrounding terrestrial habitat.

4.7 SITE SURVEY – BUILDING ASSESSMENT

Methodology

4.7.1 Buildings on site comprise a range of buildings associated with the operational caravan dealership including showrooms, a workshop, storage containers, Portakabins, a toilet block, two log cabins and a substation. Buildings on site are proposed for demolition in order to facilitate development.

4.7.2 A detailed building inspection to the Bat Conservation Trust publication Bat Surveys Good Practice Guidelines (2016) was carried out on the 16th June 2021 to identify potential access points/roosting opportunities suitable for bats such as missing mortar, lifted tiles, cracks, gaps and missing window panes as well as actual evidence of bats in the form of droppings, fur/urine staining, scratch marks, feeding remains, distinctive smell and dead bats. The buildings were examined using close focussing binoculars and a high powered torch.

4.7.3 The survey was undertaken by experienced ecologist Maria Gill (NE Licence 2018-34259) in suitable conditions.

Results

4.7.4 The majority of buildings on site were considered to provide negligible bat roost potential with limited opportunities available for roosting bats due to the type of building materials used and the subsequent lack of potential access points.

4.7.5 A single timber log cabin to the east of site (**B1**, *Figure 02*) was identified to provide moderate potential due to supporting features which provide potential opportunities for roosting bats (PRFs) as follows:

- Torn/missing roofing felt exposing timbers
- Lifted and rotten timbers to south and western elevations

4.7.6 Photographs

Image 14: Building B1

Image 15: Close up of potential roost feature (B1)

Images 16-22 below: examples of structures on site assessed to be of negligible bat roosting potential






Conclusion

4.7.7 No signs/evidence of roosting bats were identified during the building inspections, however, due to the number of access points and potential roosting features noted during the survey and the suitability of habitat within proximity of the site for bats Building B1 is assessed to provide **low bat roost potential.**

4.8 SITE SURVEY – BAT EMERGENCE SURVEY

Methodology

4.8.1 Following the initial building inspection, building B1 was assessed to provide low bat roost potential and was subjected to a single activity survey in accordance with accepted guidance (Bat Conservation Trust, 2016). A total of two surveyors were positioned to cover all accessible aspects of building B1. To record bat activity during surveys, Titley Anabat Express and SD2 detectors were used in conjunction with Batbox

Duet detectors set on heterodyne mode. Recordings of bat echolocation calls (sonograms) were subsequently analysed to confirm species present during surveys.

4.8.2 The surveys were carried out under the supervision of licenced bat worker Maria Gill (bat licence ref. 2018-34259) during suitable weather conditions in the peak season for bat activity.

4.8.3 The locations of bat activity identified during the surveys are described below and shown in *Figure 03* (appended). Refer also to *Figure 03* for surveyor positions and static detector locations. The table below includes information on the timing and conditions of the surveys:

Table 14: Survey specifics

Date	*Start time*	*Finish time*	*Sunset/ Sunrise*	*Temp.*	*Cloud cover*	*Wind speed/ direction*	*Rain*	*Humidity*
11.08.21	20:13	22:13	20:43	19-17°C	15-10%	7-6mph WSW-SW	None	55-69%

Results

4.8.4 The first bat detected on site was a common pipistrelle 21:05, twenty-two minutes after sunset. This bat was not seen by the surveyor and was recorded commuting behind the surveyor's position. From 20:12 onwards, common pipistrelle bats were observed commuting over building B1 between the trees to the north-west and south-east of the building. Foraging activity was predominantly recorded in association with the trees to the north-west of building B1 for the remainder of the survey with a peak count of 2 bats observed on three occasions.

4.8.5 **No bats were observed emerging from building B1.** Common pipistrelle bats were the only species recorded commuting and foraging in proximity to building B1. Activity was low in general with no more than 20 passes throughout the survey. Two potential passes of soprano pipistrelle bats were recorded, one at 21:25 and the second at 22:09.

4.8.6 Recordings from static Anabat detectors were analysed, confirming common pipistrelle to be the only species utilising the site for the duration of the survey. Refer to *Figure 03* for activity locations.

4.8.7 A small bird (likely robin) was observed entering a small hole behind a fascia board timber to the north-eastern corner of the building to roost. Swift *Apus apus* were recorded flying over site during the early part of the survey.

5.0 IMPLICATIONS/RECOMMENDATIONS

5.1 NATURE CONSERVATION DESIGNATED SITES

5.1.1 A single statutorily designated nature conservation site lies within 2km of the proposals site boundary: Gledholt Wood Local Nature Reserve (LNR), located approx. 1.9km north-east of site. No connective habitat links exist between this LNR and the proposals site and no adverse impact is anticipated as a result of the development due to the distance between sites.

5.1.2 The proposals site lies within the outer Impact Risk Zones of a complex of different Sites of Special Scientific Interest (SSSI) including South Pennine Moors SSSI, Phase 1 Special

Protection Area (SPA) and Special Area of Conservation (SAC) and Dark Peak SSSI located at distances of 5.5 – 7km west/south-west of the proposals site (see below footnote for site definitions). 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 these sites. Habitats on site do not complement those associated with these statutory sites neither are they suitable for the breeding or foraging requirements of associated qualifying species.

5.1.3 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.

5.1.4 A total of seven non-statutorily designated sites are located within 2km of the proposals site, the closest of these being Johnsons Wellfield Quarries (Local Geological Site) approx. 0.4km to the south. Habitats on site do not complement those in closest proximity to site and no connective habitat links exist between sites.

5.1.5 It is therefore 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.

5.2 HABITATS

5.2.1 The habitats within the proposals site are generally considered to be of low conservation value, predominantly comprising buildings, hardstanding and gravel vehicle parking areas. Broadleaf woodland, areas of bramble scrub, tall ruderal vegetation and scattered/groups of trees are considered to be of some conservation value, as these provide suitable habitat for breeding and roosting bird species, invertebrates and small mammals such as hedgehogs and maintain connectivity links across site. Small areas of grassland on site are of low conservation value comprising a limited species diversity as a result of regular mowing.

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

- The retention of broadleaf woodland and individual trees at the site where feasible, or replacement planting using native species;
- Appropriate long-term management of retained woodland including control/removal of non-native invasive species;
- The incorporation of native hedgerow planting (or variants of native species of known value to wildlife) within proposals where possible, particularly to boundaries where no hedgerows are currently present;
- The inclusion of seeding in areas associated with tree groups, new hedgerow/tree planting and green space with a suitable wildflower mix;
- Use of temporary protective demarcation fencing to protect retained areas/features including existing woodland and retained trees. 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 woodland and trees within the site;
- 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. Reference should be made to the document published by the Bat Conservation Trust and the Institute of Lighting Professionals 'Bats and artificial lighting in the UK' (2018);
- Consideration of a sympathetic design of any Sustainable Urban Drainage Systems (SUDS) and/or new pond creation to be incorporated within the proposals, where feasible. Landscape proposals should aim to make waterbodies/water-retaining features semi-natural in appearance, including the planting of native emergent species and bank profiling to benefit a range of wildlife;

5.2.3 The condition assessments included within section 4.5 of this report and current landscape layout have been used to inform a Biodiversity Net Gain Assessment taking the above recommendations into consideration in order to achieve net gains on site where possible. Refer to the corresponding report *SF3154 Biodiversity Net Gain Report October 2021 Revision A* for further details.

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 02* for relevant species legislation).

Bats – commuting/foraging habitat

5.3.2 Bat species recorded within 2km of the proposals site include field and roost records relating to common pipistrelle, soprano pipistrelle, Daubenton's bat, Natterer's bat, noctule and unidentified bat species. The closest of these records being for an unidentified bat species approx. 0.2km east of site.

5.3.3 Woodland, trees, scrub and tall ruderal vegetation on site provide suitable habitat for foraging and commuting bats, acting as potential flight corridors and connecting the site to other suitable areas adjacent to site. It is recommended woodland and trees are retained within the development, where feasible. To enhance linear features and create habitat of benefit to local bat populations, maintain linkages to adjacent habitats and increase biodiversity, it is recommended hedgerow planting is incorporated within the landscape proposals and this planting is strengthened with additional native tree/shrub planting. The inclusion of seeding of hedge understoreys with an appropriate wildflower seed mix. Any landscaping should aim to provide 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 bat species in the local area.

5.3.4 Any new lighting should be appropriately designed including directional and low wattage luminaires to avoid illuminating areas of new and existing planting. 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 Bat Conservation Trust publication '*Bats and Artificial Lighting in the UK*' (2018) which includes the following guidelines:

- Using warm white, narrow spectrum lights with little or no UV;
- Low wattage (eg 20W);
- Directional lighting with near full horizontal cut off, mounted at a low height;
- Minimum height columns at maximum spacing.

Bats – (potential) building/tree roosts

5.3.5 A detailed inspection was carried out of the various buildings proposed for demolition on site. The majority of the buildings inspected were identified to provide negligible potential for roosting bats with limited roosting opportunities present. A single log cabin to the east of site (**B1**, *Figure 02*) was identified as having low potential to support roosting bat species with potential roosting features noted to include gaps beneath torn and missing roofing felt and within rotten timber. Further assessment of Building B1 was undertaken in August 2021 to determine likely presence/absence of roosting bats. No bats were recorded roosting within Building B1 during the survey. It is therefore considered that the buildings do not support bat roosts and the proposed demolition is not considered to contravene the legislation afforded to roosting bats.

5.3.6 Common pipistrelle bats were the only species recorded during the emergence survey, with foraging activity noted in association with trees to the north-west and south-east of the building.

5.3.7 On a precautionary basis, as bats are a mobile species which use a number of different roost sites through the season, site workers should be aware of the possibility of encountering bats. During the demolition works good working practices can be undertaken to minimise the potential for accidental harm to bats should bats use the building as a temporary roost site in the interim period as follows:

- Roof tiles and lead flashing should be lifted up and away from the roof instead of sliding them out of position.
- If required, the removal of old roofing membrane should be undertaken by hand,
- If bats are found during the removal of potential roost features at any time during demolition activities, works should be stopped, the features replaced carefully and advice sought from an appropriately qualified ecologist.

5.3.8 If proposed works to building B1 are not undertaken within 1 year of the emergence/re-entry surveys being carried out, updating surveys are recommended to re-assess the use of the building by bats prior to works commencing.

5.3.9 Trees on site were considered to provide negligible potential for roosting bats lacking any suitable features which are associated with bats for roosting or sheltering purposes.

5.3.10 The installation of bat roosting features on new buildings/retained trees is recommended irrespective of whether roosts are found to enhance site biodiversity in line with the National Planning Policy Framework (NPPF).

Great Crested Newts

5.3.11 No areas of standing water occur within the site and habitats present are largely considered to be unsuitable for amphibian species during their terrestrial phase, predominantly comprising buildings, hardstanding and vehicle parking areas. Piles of debris on site in association with trees and woodland provide potential opportunities for amphibians during their terrestrial phase, such as refuge, cover and hibernation habitat. From consulting an OS base of the site a total of four waterbodies were located within 500m of the proposals site, all associated with quarry workings to the south, with the closest pond approximately 315m from the site boundary. Two of the four ponds are considered ephemeral and unsuitable for the requirements of great crested newt, with the two remaining ponds (P2 and P3) obtaining suitability scores of 'average' and 'good' respectively when subjected to a habitat suitability index assessment.

5.3.12 No records of great crested newt were provided within 500m of the site following consultation with the local records centre. A total of three records of great crested newt were provided within 2km of the proposals site, all located approx. 1.8km east (most recent record dated 2009). Considering the location of the site adjacent to Blackmoorfoot Road which provides a degree of severance from ponds to the south, the lack of other ponds being present and the lack of records within 500m, the presence of great crested newts on site is considered unlikely but cannot be wholly discounted. As ponds P2 and P3 have obtained suitability scores of 'average' and 'good', it is recommended further survey of these ponds is undertaken as a precautionary measure to determine likely presence/absence on the proposals site. Surveys can be carried out between 15th April – 30th June for eDNA testing.

5.3.13 As Huddersfield is not an area currently listed on the national District Level Licensing scheme (DLL), if great crested newts are found to occur in ponds, population size class assessments (undertaken during the period March to June inclusive) will be additionally required to consider the potential impact of the proposed development and the appropriate level of mitigation required.

5.3.14 If great crested newts are found to be present and the proposed development is assessed as having an adverse impact on this species, a European Protected Species Licence obtained from Natural England will be required. This will ensure that newts are cleared from the site prior to development works commencing, using newt proof fencing and that appropriate mitigation is adopted to maintain a favourable conservation status of this species.

Breeding Birds

5.3.15 Bird species recorded during the walkover survey included goldfinch, blue tit, wren, magpie, blackbird, house sparrow, bullfinch, robin, swallow and blackcap. Woodland, trees, scrub and buildings on site are likely to be used by the majority of these species and local breeding and roosting bird populations in general.

5.3.16 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.

5.3.17 Consideration for the enhancement of the site in relation to birds could include appropriate native hedgerow and tree planting and the creation of wildflower grassland. The installation of nest boxes on suitable buildings and retained trees, including species-specific boxes, would provide nesting opportunities for bird species known to be of conservation concern and local bird populations in general.

5.3.18 Sympathetic management of existing and newly planted hedgerows should be considered to avoid disturbance to breeding birds. This involves the avoidance of management during the core active season March – August and preferably only to be carried out during January and February when the berry crop is mostly finished to benefit species during winter.

Reptiles

5.3.22 Historic reptile records for common lizard, grass snake and slow-worm were provided approximately 1km east of site with no recent records provided since 1986. Habitats located to the south of site such as hardstanding, piles of debris and grass cuttings may offer potential basking and breeding habitat for reptiles, with adjacent tall ruderal vegetation providing sheltering and foraging opportunities. The site is, however, currently operating as a caravan dealership and subject to disturbance across the area reducing its suitability for use by these species.

5.3.23 Use of directional clearance towards retained habitat during site works would serve to protect any individuals from accidental harm should they be present. Vegetation clearance would ideally take place whilst reptiles are active (generally March – October) to avoid harming/killing hibernating reptiles. Consideration would however have to be given to nesting birds for the majority of this period. During vegetation clearance it is recommended that brash piles are removed off site immediately to avoid the creation of suitable reptile refuges, which could lead to reptile species being harmed if these were to be burnt or removed with heavy machinery.

Other protected species

5.3.24 Due to the lack of records for otter within the surrounding area and the lack of suitable river/pond habitat for water vole/otter/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 Some habitats on site, such as woodland/scrub/tall ruderal vegetation/grassland are considered to be suitable for foraging and sheltering hedgehog and some buildings may provide suitable sheltering/hibernation opportunities. 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 maintain use of the site by 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.

Priority bird species

5.4.3 Bullfinch and house sparrow were recorded during site survey. Both species are listed under Section 41 of the NERC act (formerly afforded priority within UK Biodiversity Action Plan) and have also been assigned red status on the UK Red List due to population declines as a result of habitat loss.

5.4.4 Consideration should be given to the installation of species-specific bird boxes onto retained trees/woodland/hedgerows/new buildings and native planting is recommended to enhance the site for species of known conservation concern.

5.4.5 The inclusion of native berry-bearing tree and shrub species within planting proposals will benefit thrush species and breeding/wintering bird populations in general. Particular consideration should be given to the incorporation of berry-bearing species such as rowan *Sorbus aucuparia*, guelder-rose *Viburnum opulus*, holly *Ilex aquifolium*, hawthorn, blackthorn and ivy as a climber.

5.5 INVASIVE NON-NATIVE SPECIES (INNS)

Himalayan Balsam

5.5.1 Himalayan balsam is present on site with self-seeded plants occurring in association with tall ruderal vegetation, trees and woodland to the south of site. This species is a non-native invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to plant or otherwise cause to grow this species in the wild and it is therefore recommended that this species is removed/treated on site prior to proposed development works commencing on site. Soils containing the seeds of this species are classified as controlled waste and should be disposed of at a licenced landfill site. Care to avoid /prevent the spread of these plants should be taken throughout the works.

5.5.2 Cotoneaster is listed under the Wildlife and Countryside Act 1981 (as amended) as non-native invasive species in England and Wales, however this species was originally planted for ornamental purposes and was not noted to occur naturally on site, contained within the soft landscaping features associated with the car park. Care to avoid /prevent the spread of these plants should be taken throughout the works.

6.0 IMPACT ASSESSMENT

6.1.1 The baseline condition of the site is established through a combination of desk study and site survey. This identifies the ecological features present on and within the vicinity of the site. These features are evaluated to establish their level of importance and their potential to be significantly affected by the project. Features which are judged to be important and likely to be significantly affected by the project are assessed.

6.1.2 The resulting impact assessment is based upon the Chartered Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (2018) (see *Appendix 03* for methodology) and provided in Table 07.

6.2 MAGNITUDE OF IMPACT – IDENTIFICATION OF LIKELY EFFECTS

6.2.1 Ecological features which are to be retained on site will be protected during the construction process according to best practice in relation to the prevention of accidental pollution or damage to vegetation as follows, such that the likely effects will not be discussed within the assessment of effects in the next section.

- Appropriate working methods to minimise dust would be in place during the construction phase;
- Where areas of vegetation are to be retained these would be protected from accidental damage or encroachment during construction by the erection of temporary protective fencing to BS5837 (2012).

6.3 RECEPTORS AND RECEPTOR SENSITIVITY IDENTIFICATION OF 'IMPORTANT ECOLOGICAL RECEPTORS'

6.3.1 Based upon the information provided in the existing baseline, ecological features which would likely be affected by the proposals are as follows:

Nature Conservation Sites – None

Habitats

- Broadleaf woodland
- Species-poor semi-improved grassland;
- Dense bramble scrub
- Tall ruderal vegetation
- Trees

Species

- Bats;
- Breeding birds;

-
- Great crested newts;
- Hedgehog.

6.3.2 The following sections provide an assessment of whether the above ecological features are 'important' in relation to the evaluation criteria outlined in the *Appendix 03* and at what geographical scale this applies:

Table 15: Levels of importance for ecological features on site

Ecological feature	Assessment	Geographical scale of importance
Habitats		
Broadleaf woodland	Habitat of some conservation value but does not constitute UK BAP or local priority habitat. Condition assessed to be poor.	Site
Species-poor semi-improved grassland	Small isolated areas – habitat of low conservation value, common and abundant within the local area.	Site
Dense bramble scrub	Local BAP priority habitat – small patches in association with woodland, tree groups and boundaries within an urban environment.	Site
Tall ruderal vegetation	Habitat of low conservation value, common and abundant within the local area.	Site
Trees	Habitat of some conservation value, trees present individually and in groups.	Site/local
Species		
Bats	Protected under European and UK legislation, UK and local BAP priority species. Suitable habitat for commuting and foraging bats. Trees and buildings generally unsuitable for roosting bats. Single building surveyed during active 2021 season identified no evidence of roosting bats.	Site
Breeding birds	Protected under UK legislation when breeding. UK BAP and LBAP priority species identified on site.	Local
Amphibians	Protected under European and UK legislation, UK and Local BAP priority species. Suitable terrestrial habitat on site, no suitable breeding habitat.	Site/local
Hedgehog	UKBAP and Local BAP species. Suitable habitat on site.	Local
Himalayan balsam	Non-native invasive species listed under Schedule 9 of the Wildlife and Countryside Act	Negative

6.4 SIGNIFICANCE OF EFFECT CRITERIA

Habitats within the Site

6.4.1 A linear area of **broadleaf woodland** occurs to the southern boundary of site, comprising mature trees and shrubs. This habitat occupies an isolated location next to Blackmoorfoot Road, bounded by a steep slope and a high stone wall. Bat species recorded during the activity survey undertaken in 2021 identified use of the site by commuting and foraging individuals of a common and widespread bat species. The woodland is unmanaged with a ground flora dominated by bramble scrub and invasive Himalayan balsam and large piles of waste debris. This habitat is therefore considered to be of **site** value and is not considered important within the context of this assessment.

6.4.2 Small areas of **grassland**, **tall ruderal vegetation** and **bramble-dominated scrub** also occur on site in association with tree groups. These habitats are of low conservation interest in terms of their plant species composition, are of widespread occurrence and are characteristic of habitats present in the local/wider are being common nationally. These habitats are therefore considered to be of **site** value only and are not considered important within the context of this assessment.

6.4.3 A number of trees occur on site and have generally been planted within an ornamental setting comprising a mix of native, non-native, broadleaved and coniferous species. Trees and groups provide foraging/commuting habitat for bat species and connect the site to adjacent residential gardens and more favourable foraging habitats offsite. No trees were identified to support suitable bat roost features. A low number of trees are subject to a Tree Preservation Order. No trees exhibit veteran characteristics. Trees are considered to be of **site-local** level importance.

Species

6.4.4 **Bats** – No bat roosts were identified within the single building which provides bat roost potential on site following an activity survey undertaken in August 2021. This survey identified use of the site mainly by common pipistrelle bats and potentially occasional use by soprano pipistrelle. No trees on site were identified to provide suitable features for roosting bats. When referring to the IEEM article *Valuing Bats in Ecological Impact Assessment* (Wray *et al*., 2010) the species recorded on site are considered as common (common pipistrelle and soprano pipistrelle) or rarer (noctule and *Myotis* species), with no species classed as rarest being recorded on site. The site's value in terms of commuting and foraging bats is considered to be of **site** importance, where small numbers of a common species use the site, a low number/unknown number of roosts/potential roosts occur nearby.

6.4.5 **Breeding birds** – Two species of conservation priority were identified during the site walkover, bullfinch and house sparrow. Woodland, tree, shrub and scrub habitat provide breeding opportunities for these species and local bird populations in general. Due to the site being identified to support species of conservation concern, the site is considered to be of **local** level importance for breeding bird species.

6.4.6

6.4.7 **Amphibians** – The site provides terrestrial habitat for amphibians and may support common toad. Great crested newts are known to occur within 2km and suitable ponds are present within 500m of the site therefore although presence of great crested newts is considered unlikely, it cannot be completely ruled out. Further eDNA survey of two ponds has been recommended to confirm likely presence/absence on a precautionary basis. The site is anticipated to be of **site-local** level importance for amphibians until further survey is undertaken.

6.4.8 **Hedgehog** – Records exist within the local area and the site provides suitable habitat for supporting this species with foraging, sheltering and refuge opportunities present, including woodland, grassland, ruderal, scrub and building habitats. The site connects to residential gardens which may support hedgehog populations. The importance of the site for this species is therefore considered to be at a **local** level.

6.4.9 **Himalayan balsam** was identified within the woodland and in association with tree groups to the south of site. This species is a **non-native invasive plant** listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The presence of this species on site is of **negative** importance.

6.4.10 The ecological receptors listed in Table 08 have been identified with the potential to be affected by the project and carried forward for further ecological impact assessment.

Table 16: List of important ecological receptors

Receptor	Level of Ecological Importance and Sensitivity
Dense bramble scrub	Site/Local
Species:	
Breeding birds	Local
Great crested newts	Site/Local (to be confirmed)
Hedgehog	Local

6.5 ASSESSMENT OF RESIDUAL EFFECTS

6.5.1 With the mitigation and enhancement measures detailed within this report incorporated within the site proposals, residual ecological impacts have been assessed as being neutral to beneficial.

6.5.2 It is generally the case that no significant effect can occur to features of less than local importance, other than in exceptional circumstances such as where a feature has high social or economic value, or the magnitude of the effect is particularly high.

6.5.3 Mitigation and compensation recommendations are detailed within the following summary impact tables. Recommendations are made to reduce any significant effect on ecological receptors. The impact assessment on ecological receptors detailed within this table is then reconsidered in light of mitigation and compensation recommendations made to give the residual effect.

Table 17: Summary of Ecological Impacts

Ecological Feature (to be affected by the proposals)	Geographical level of importance (of local level and above)	Identified impacts	Magnitude of impact	Duration of impact (reversibility)	Impact significant without mitigation	Mitigation and enhancement proposals	Residual impact.
Habitats							
Woodland	Site	Accidental damage. Potential to spread invasive species.	Minor negative	Temporary	Yes	Retention of woodland. Temporary protective fencing during construction works. Removal/treatment and approved disposal of non-native invasive plant species (Himalayan balsam). Appropriate management plan to ensure long-term conservation of habitat.	Neutral – beneficial
Trees	Site/local	Direct loss. Accidental damage.	Minor negative	Permanent	Yes	Retention of trees where possible. Temporary protective fencing. Replacement planting of appropriate native species and species of value to wildlife within the landscape proposals.	Neutral – minor beneficial
Bramble scrub	Site/local	Direct loss.	Minor negative	Permanent	Yes	Replacement planting of appropriate native species and species of value to wildlife.	Neutral
Species							
Bats (foraging)	Site	Loss of foraging / commuting and effects of light pollution. Disruption of routes and displacement of foraging bats.	Negative	Permanent	Yes	Retention of principle foraging /commuting habitat to site boundaries. Inclusion of native species within the landscape proposals. Directional lighting during construction and sympathetic final lighting design to minimise light spill on ecological features.	Neutral
Bats (roosting)	Site	No roosts identified following site survey. Trees do not support suitable features for bat roosts.	n/a	n/a	n/a	Provision of roost features in new builds and bat boxes in retained trees.	Neutral – minor beneficial
Birds	Local	Loss of habitat.	Minor negative	Permanent/ temporary	Yes	Vegetation clearance outside the nesting season (or following checks for active nests).	Neutral

						Replacement planting to include appropriate native species. Installation of nest boxes in retained trees/ woodland/ new builds.	
Amphibians	Site/Local*	eDNA survey to confirm likely presence/absence in suitable ponds within 500m.	Minor negative	Permanent	Yes	Provision of habitat piles within areas of green space where possible. Provision of wildlife-friendly SuDs drainage features within the development.	Neutral – minor beneficial
Hedgehog	Local	Loss of habitat. Increased harm /injury.	Minor negative	Permanent	Yes	Working methods during construction and measures to maintain habitat connectivity and quality within the development.	Neutral
Invasive non-native species	Site/local	Potential to spread Himalayan balsam further on and off site.	Negative	Permanent	Yes	Appropriate biosecurity measures in place during site clearance and construction. Plants and soil to be removed/treated on site prior works commencing.	Neutral – minor beneficial
* *Subject to further survey.*							

7.0 CONCLUSIONS

7.1.1 A large proportion of the site is generally considered to be of low conservation value, predominantly comprising buildings, hardstanding and gravel vehicle parking areas. Broadleaf woodland, areas of bramble scrub, tall ruderal vegetation and scattered/groups of trees are considered to be of site/local conservation value, providing opportunities for a range of wildlife.

7.1.2 No adverse impact on designated sites is anticipated 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.

7.1.3 No bat roosts were identified within Building B1 following further survey undertaken in August 2021. The demolition of buildings on site can therefore take place with no constraints to roosting bats. If If proposed works are not undertaken within 1 year of the activity survey being carried out, updating surveys are recommended to re-assess the use of the building by bats prior to works commencing.

7.1.4

7.1.5 Recommendations for general site enhancements include appropriate native species planting, wildflower seeding, incorporation of bird/bat nesting/roosting features and sympathetic lighting and SuDs design/pond creation.

7.1.6

7.1.7 It is anticipated that the development of the site is feasible with minimal impact to biodiversity and potential for biodiversity gains, provided that the recommended mitigation and enhancement measures are incorporated within the scheme. Further discussion with respect to biodiversity net gain and on-site enhancements/mitigation is detailed within a biodiversity net gain assessment undertaken to Defra Metric 3.0, refer to the corresponding report *SF3154 Biodiversity Net Gain Assessment October 2021 Revision A.*

8.0 REFERENCES

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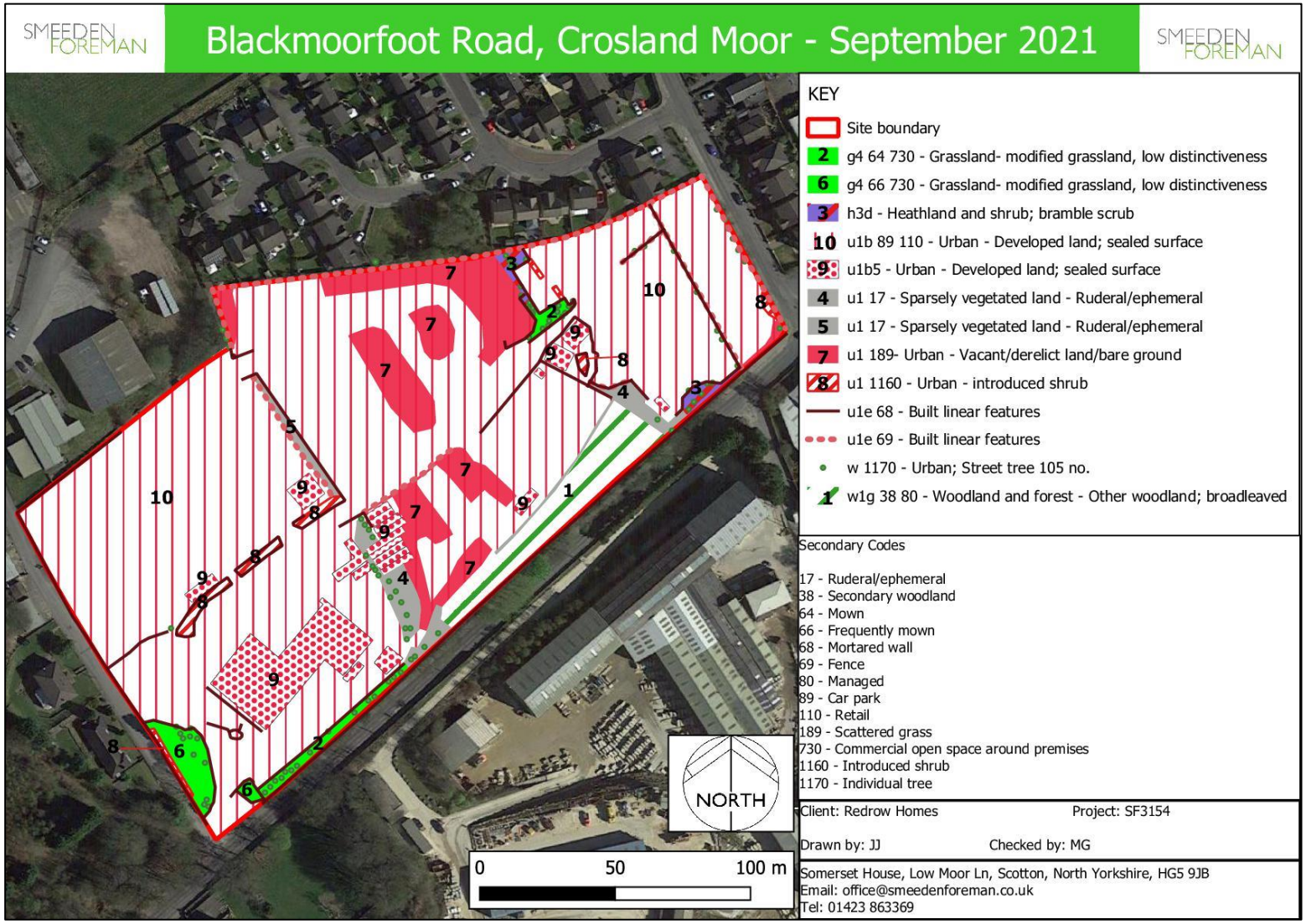
FIGURES

FIGURE 02: PHASE 1 HABITAT PLAN

FIGURE 03: UK HABITATS PLAN



APPENDICES

Appendix 01: Principle Legislation and Policies

Appendix 02: Protected Species Legislation

Appendix 03: Ecological Assessment Methodology

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.

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.

For species-specific legislation, please refer to *Appendix 02* for further information.

Policy

National Planning Policy Framework (2018)

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, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- 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;
- 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 reasons58 and 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 encouraged, especially where this can secure measurable net gains for biodiversity."

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: 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.

Great crested newts

The Wildlife and Countryside Act 1981 (as amended) transposes into UK law and the Convention on the Conservation of European and Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'). The 1981 Act was amended by the Countryside and Rights of Way ['CRoW'] Act 2000.

The great crested newt is listed on Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which make it an offence to:

- Intentionally kill, injure of take a great crested newt [Section 9 (1)];
- Possess or control any live or dead specimen or anything derived from a great crested newt [Section 9 (2)];
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt [Section 9 (4)(a)];

- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose [Section 9(4)(b)].

The Conservation of Habitats and Species Regulations 2017 transpose into the UK law Council Directive 92/43/EEC of 21st May 1992 on the conservation of Natural Habitats and of Wild Fauna and Flora (often referred to as the 'Habitats [and Species] Directive'). The great crested newt is listed on Annex II and Annex IV of the Directive. The former Annex relates to the designation of Special Areas of Conservation (SACs) for this species; even where great crested newts occur outside SACs, the inclusion on Annex II serves to underline their conservation significance. Inclusion of the Annex IV ('European Protected Species') means that member states are required to put in place a system of strict protection as outlined in Article 12, and this is done through inclusion on Schedule 2 of the Regulations. Regulation 43 makes it an offence to:

- Deliberately capture or kill a great crested newt [Regulation 43(1)(a)]
- Deliberately disturb a great crested newt [Regulation 43(1)(b)]
- Deliberately take or destroy the eggs of a great crested newt [Regulation 43(1)(c)]
- Damage or destroy a breeding site or resting place of a great crested newt [Regulation 43(1)(d)]

The legislation applies to all life stages of great crested newts.

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.

APPENDIX 03: ECOLOGICAL ASSESSMENT METHODOLOGY

The assessment of the impact of the proposed development on ecological features is based upon the Chartered Institute of Ecology and Environmental Management publication Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (2018).

The baseline condition of the site is established through a combination of desk study and site survey.

This identifies the ecological features present on and within the vicinity of the site. These features are evaluated to establish their level of importance and their potential to be significantly affected by the proposed development. Features which are judged to be important and likely to be significantly affected by the proposed development are assessed.

The importance of an ecological feature is based upon consideration of the following:

- *Designation: European, national and local designated wildlife sites;*
- *Listing: Country Biodiversity, Biodiversity Action Plan, Red Listed, Rare and Legally Protected Species;*
- *Function: e.g. as a buffer, corridor or 'stepping stone' etc.;*
- *Characteristics: naturalness, rarity, diversity, connectivity, trend, assemblage, typicality, range.*

The guidelines suggest that the importance of the ecological feature is considered within a defined geographical context. The following frame of reference is recommended:

- *International and European e.g Ramsar sites;*
- *National e.g. Sites of Special Scientific Interest;*
- *Regional e.g. North West England;*
- *Metropolitan, County vice-county or other local authority wide area e.g. West Yorkshire;*
- *Local.*

The following table illustrates how the concept of importance of the ecological features has been applied to assess the impacts of the development.

Level of importance	*Description of ecological features*
International	*Internationally designated sites (Special Protection Area (SPA), Ramsar, Special Area for Conservation (SAC))* *Habitats listed on Annex 1 of the Habitats Directive.* *Species listed on Annexes II, IV and V of the Habitats directive.* *Species listed on Annex 1 of the Birds Directive.*
	e.g. A significant population of a European protected species in this geographical region (a population of bird species representative of more than 1% of the international population).
National	*Nationally designated sites (Site of Special Scientific Interest (SSSI), National Nature Reserve).* *Habitats listed as habitats of principle importance under section 41/42 of the NERC Act 2006.* *Species listed as species of principle importance under section 41/42 of the NERC Act 2006.*

	e.g. A significant population of a more common and widespread European protected species in this geographical region (a population of bird species representative of more than 1% of the national population). *e.g. A significant population of a protected species under all parts of Schedule 1, 5 or 6 of the Wildlife and Countryside Act 1981 e.g. water vole.*
Regional	*e.g. A good/typical example of a UK BAP Priority Habitat that satisfies all the criteria in the Priority Habitat definition but is in some way slightly enhanced (e.g. presence of a species that is localised in the region).* *e.g. A regularly occurring, locally significant population of a species listed as being nationally scarce.*
County	*Sites of county importance (non-statutory) designated by local authorities to allow their importance to be considered within the planning system. Names vary between authorities including Local Wildlife Sites (LWS), Sites of Interest for Nature Conservation (SINC). Local Biodiversity Action Plan (LBAP) Priority Habitats and Species considered to be exceptional or of significance in the local (county/district) geographical area.*
Local	*Populations of BAP Priority Species which are not considered to be exceptional or of significance in the local geographical area.* *Areas of habitat which contribute towards habitat resources at the local level but are not of significant ecological importance e.g. local greenspaces and wildlife corridors within an urban area.* *Priority habitats and species listed on the LBAP (but not already listed under UK BAP).*
Negative	*Presence of a legally controlled animal or plant species listed under Schedule 9 of the wildlife and Countryside Act 1981 or other non-native invasive/injurious species that have potential to have a significant impact on the native flora and fauna and could be considered to have an ecological commercial or social adverse effect, usually at the local or site level.*

Site level has been used for ecological features of less than local importance such as:

- species-poor vegetation communities;
- typical populations of common and widespread mammal, bird, amphibian and/or invertebrate species;
- habitats common and abundant within the local area, where that within the site does not represent a significant concentration.

Once the important ecological features are identified, consideration is given to the likelihood of change to these features as a result of the development and associated activities i.e. the predicted impacts of the development.

This change may be either positive or negative and includes consideration of the following characteristics of the impact:

- *Extent*
- *Magnitude*
- *Duration*
- *Timing*
- *Frequency*
- *Reversibility*

Positive and negative effects are defined as follows:

- *Positive impact: a change that improves the quality of the environment e.g. by increasing species diversity, extending habitat or improving water quality; halting or slowing an existing decline.*
- *Negative impact: a change which reduces the quality of the environment e.g. destruction of habitat, removal of species foraging habitat, habitat fragmentation, pollution.*

The identification of whether these effects are significant is based upon whether the effect supports or undermines biodiversity conservation objectives of the features which have been judged to be 'important' and is considered at the relevant geographical scale. It is generally the case that no significant effect can occur to features of less than local importance, other than in exceptional circumstances such as where a feature has high social or economic value, or the magnitude of effect is particularly high.

The identification of a significant effect then forms the basis for further consideration of the effects on the feature concerned and the potential to reduce effects by employing appropriate mitigation measures or providing compensation. The 'mitigation hierarchy' is applied to reduce identified impacts, and provide enhancements, by avoidance in the first instance, then mitigation and finally compensation.

The overall effects of the proposed development with appropriate mitigation and/or compensation incorporated within the project proposals provide the residual impacts of the scheme.