Proposed residential development at land to rear of 35 Peel Street

Preliminary Ecological Appraisal Report

Final report

December 2023

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Limitations

The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at that time.

All of the comments and opinions contained in this report, including any conclusions, are based on the information obtained by Sabina Harcenkova during her investigation.

Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only, and confirmation of intermediate ground conditions should be considered if deemed necessary.

Sabina Harcenkova makes no representation whatsoever concerning the legal significance of these findings or to other legal matters referred to in the following report.

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Executive summary

This Preliminary Ecological Appraisal (PEA) Report has been produced in relation to a proposed self-build residential development at land to the rear of 35 Peel Street, Marsden, Huddersfield, West Yorkshire, HD7 6BW.

The survey was commissioned to identify any likely ecological constraints. This report proposes mitigation measures in relation to the ecological receptors likely to be impacted as a result of the works. Where applicable, recommendations for further surveys, such as specific species surveys and mitigations, have also been proposed.

Habitats on site were mapped using the *UKHab* classification methodology and were also assessed for their potential to support protected, notable and/or invasive non-native species (INNS). Any evidence of such species on site was recorded. A desk study was also undertaken, including a data request for historical ecological records with West Yorkshire Ecological Centre.

The data request returned records of two Site of Special Scientific Interest (SSSI), one Special Protection Area (SPA), one Special Area of Conservation (SAC), four Local Wildlife Sites (LWSs) and two Local Geological Sites (LGSs) within 2km of the site, and multiple records for protected species including amphibians, bats, birds and mammals. Nine invasive non-native species have also been recorded within 2km.

The main habitats present on site are neutral grassland, sealed surface and building. The barn on site was assessed as having low bat roost potential.

Specific recommendations have been made with regards to habitats, bats and reptiles on site. General recommendations have also been made regarding prevention of accidental harm to wildlife.

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1. Introduction

1.1. Background

A Preliminary Ecological Appraisal (PEA) has been undertaken of a parcel of land in Marsden, West Yorkshire, consisting of a barn and some outdoor space. The survey was commissioned to identify any likely ecological constraints; this report proposes mitigation measures in relation to the ecological receptors likely to be impacted as a result of the works.

Furthermore, where applicable, recommendations for further surveys, such as species-specific surveys, mitigation and ecological enhancements have been provided.

1.2. Site location

The land and barn is located in central Marsden, West Yorkshire. The ordnance survey grid reference is: SE 05018 11560. The site boundaries are outlined in Figure 1-1.

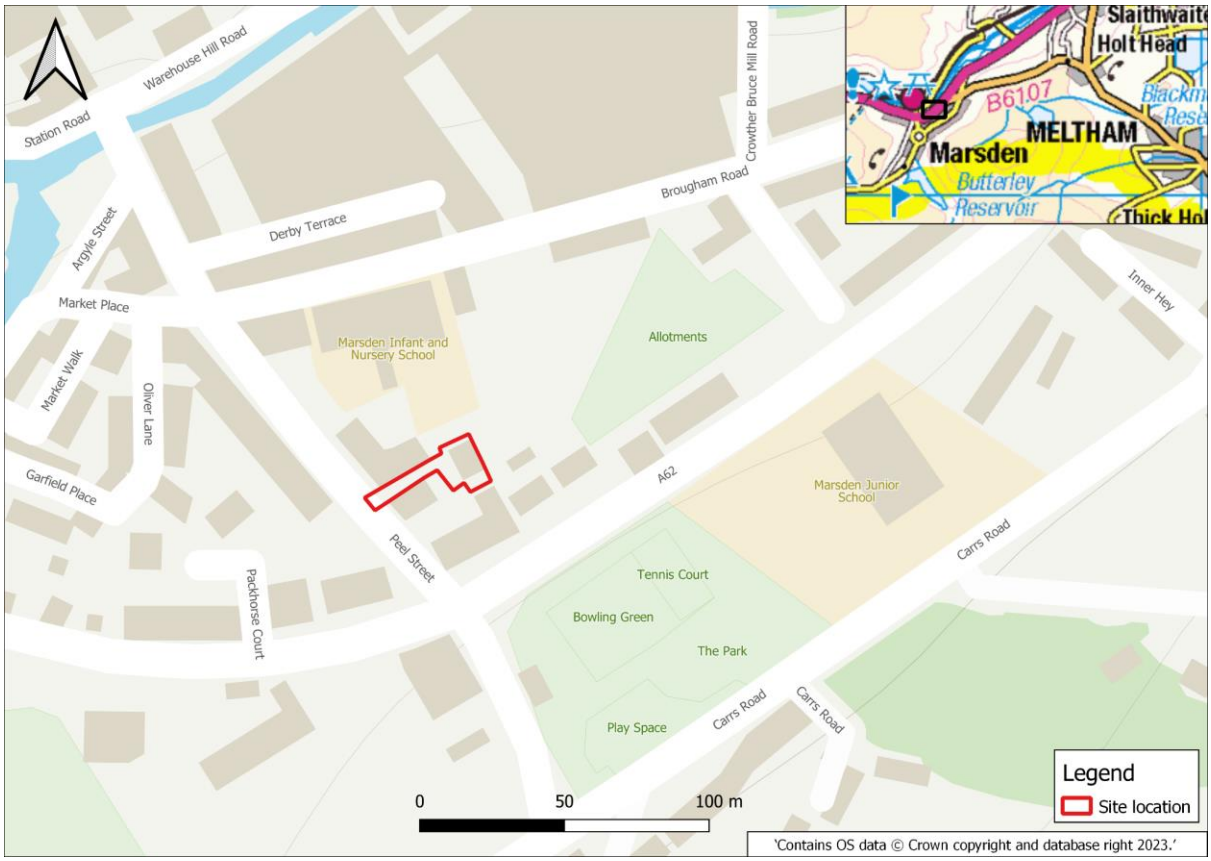

Figure 1-1: Location of Peel Street Barn

1.3. Proposed works

The detailed design of the works have not yet been established. The works will involve demolishing of the existing structure (a barn), vegetation removal, and construction of a self-build residential property. The barn to be demolished is shown in Figure 1-2.

Figure 1-2: Barn on the site

2. Method

A PEA of the site has been undertaken in line with current best practice guidance (CIEEM, 2017) and includes:

- A desk-based assessment to identify any records of protected and/or notable habitats and species, and designated nature conservation sites in the vicinity of the proposed works.
- A site survey comprising a *UKHab* survey and an assessment of the possible presence of protected or priority species, and (where relevant) an assessment of the likely importance of habitat features present for such species.
- An assessment of the potential impacts of the works on the habitats and species present at the site and the surrounding areas.

2.1. Desk-based assessment

Prior to undertaking the site survey, searches of databases containing ecological records, priority habitats, and information on statutory and non-statutory designated sites were made. The following sources were included in these searches:

- MAGIC mapping service (www.magic.gov.uk)
- Natural England GIS data (www.gis.naturalengland.org.uk/pubs/gis/GIS_register.asp)
- West Yorkshire Ecology Service

Due to the size of the site, it is considered that the search areas for protected species is 2km from the site boundary with the Zone of Influence being the development land itself, given the very urban nature of the site. Therefore the desk-based assessment was conducted within a 2km radius search area centred on the development site.

2.2. Site survey

A site survey was undertaken on the 15 August 2023 by Sabina Harcenkova BSc (Hons). The survey included all areas within the site boundary (Figure 1-1).

2.2.1. Habitats

Habitats within the site boundary surveyed to *UKHab* (Butcher et al., 2020). All habitats within the survey area were recorded during the site survey and a description of each habitat type noted. Target Notes (TN) cover additional important features recorded during the survey. Botanical names follow Stace (2019).

2.2.2. Protected and Notable Species

Habitats were assessed for their potential to support any legally protected species or species of conservation concern. Any incidental faunal sightings, or field signs discovered during the survey, were recorded. The following sections provide further details on the assessments undertaken in relation to specific species. Legislative guidance relating to protected species is outlined in Appendix A, along with details of other relevant policy and legislation.

Birds

Vegetation and habitats around the site were assessed for their suitability to support nesting birds.

Bats

Structures likely to be impacted by the proposed works were inspected to determine the potential for bat roosts to be present, using the methods specified in the Bat Conservation Trust (BCT) guidelines (Collins, 2016). Buildings, structures and trees on the site are categorised as having either 'negligible', 'low', 'moderate' or 'high' roosting potential and this was determined by applying the definitions given within the BCT Guidelines (see Table 2-1).

Evidence of bat activity associated with potential roost sites includes bat droppings, urine staining, feeding remains, scratch marks and dead/alive bats. Potential Roosting Features (PRF) on trees include cracks/splits, crevices, rot cavities, fluting, loose bark, woodpecker holes and areas of Ivy *Hedera helix.* Evidence indicating the existence of a bat roost may include dark stains running below holes or cracks, bat droppings, odours, or scratch marks.

However, roosting bats may still be present without any external evidence being recorded. Furthermore, the suitability of habitats across the site to support commuting and foraging bats was assessed in terms of habitat type, abundance, connectivity and distribution. These were categorised as having either 'negligible', 'low', 'moderate' or 'high' suitability for bats

which was determined by applying the categories given within the BCT Guidelines (Table 2-1).

Table 2-1: Guidelines for assessing the potential suitability of proposed development sites for bats based on the presence of habitat features within the landscape, to be applied using professional judgement (From: Collins, 2016)

Suitability	Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging

		bats such as broadleaved woodland, tree lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Reptiles

As part of the site survey, an assessment of the habitat suitability for common reptiles was made. This involved inspection of the site for key habitat features/microhabitats which may be favoured by reptiles, such as embankments, log, brash or rock piles, dry stone walls, hedgerows, open sandy areas, woodland edges and rides and interfaces between different habitat types (Froglife 1999).

2.2.3. Other notable species and environmental constraints

During the site survey any signs or sightings of other notable species were also recorded. In addition, any environmental features that might constrain the works were also recorded (e.g. access restrictions).

2.2.4. Invasive non-native species

Any Invasive Non-native Species (INNS) observed during the survey were recorded.

2.3. Limitations

The habitats and species present in a given area are subject to change over time. A single field visit of this nature captures and reports the situation at the time of survey. As such, the advice contained within this report is considered valid for a period of 18 months before a review of the need for an updated survey/assessment must be made by an ecologist (CIEEM 2019).

Data from biological records centres or online databases is historical information, and datasets might be incomplete, inaccurate or missing. It is important to note that even where data is held, a lack of records for a defined geographical area does not necessarily mean that the species is absent; the area may simply be under-recorded. As such, records cannot be relied on and serve only as an indication of what might/ might not be found.

3. Results and evaluation

3.1. Desk-based assessment

3.1.1. Statutory designated sites

There are five statutory designated sites within 2km of the site area, see Figure 3-1 and Table 3-1 below.

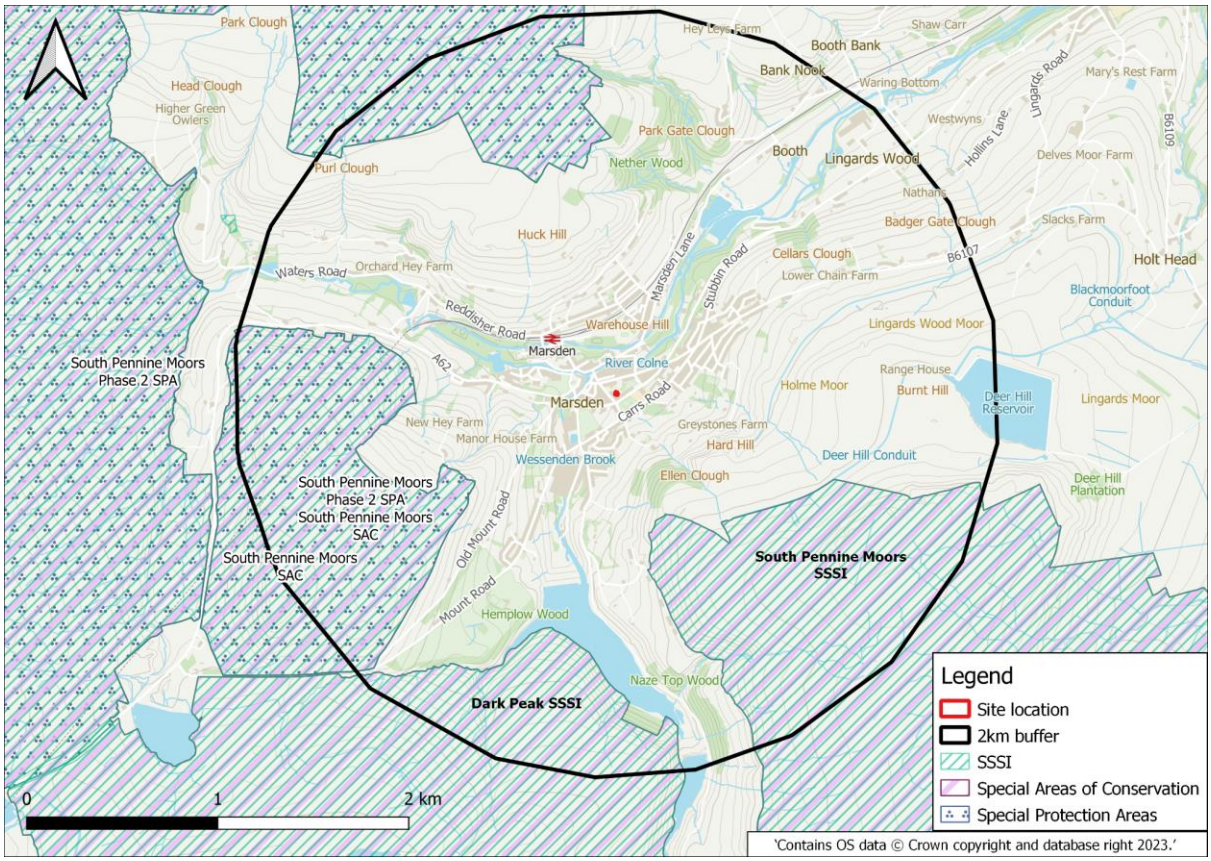

Figure 3-1: Designated conservation sites within 2km of site boundary

Table 3-1: Statutory designated sites within 2km of site

Site name	Designation	Qualifying Features/ Site description	Proximity to site
Dark Peak	SSSI	It is an upland area of international importance supporting a wide variety of breeding moorland and moorland fringe birds and invertebrates	0.6km to the south
South Pennine Moors	SSSI	The site consists of upland dry heaths that occur in transition to acid grassland, wet heath and blanket bogs,	1.2km to the north and 1km to the west
South Pennine Moors SAC	SAC		

South Pennine Moors Phase 2 SPA	SPA	transition mires and quaking bogs. Also the area of old Sessile Oak *Quercus petrea* woods are noted within the area.	

3.1.2. Non-statutory designated sites

There are five local wildlife sites and two local geological sites within 2km of the site boundary, see Figure 3-2 and Table 3-2 below.

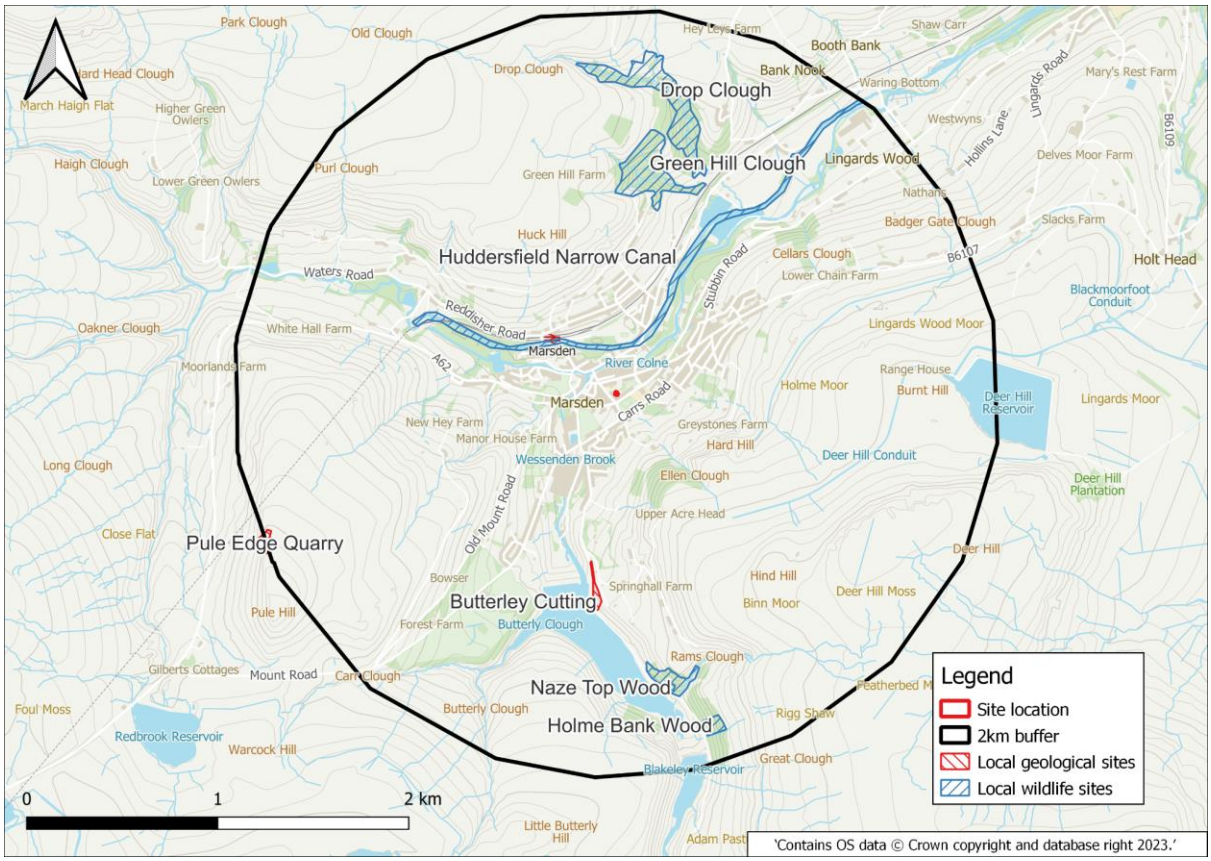

Figure 3-2: Non-statutory designated sites within 2km of site boundary

Table 3-2: Non-statutory designated sites within 2km of site

Site name	Designation	Site Description	Proximity to site
Drop Clough	LWS	The site includes species rich acid woodland and grassland	1.2km to the northeast
Green Hill Clough	LWS	The site includes species rich acid woodland	0.9km to the northeast
Holme Bank Wood	LWS	The site includes ancient & semi-natural woodland	1.8km to the south
Huddersfield Narrow	LWS	The site includes a	0.2km to the

Canal		standing open water. Notable for its value for appreciation of nature	north
Naze Top Wood	LWS	The site includes ancient & semi-natural woodland	1.5km to the south
Butterley Cutting	Local Geological Site	The rocks are Upper Carboniferous Namurian (Millstone Grit) rocks and include sandstones with cross bedding, shales and siltstones, which contain fossils.	0.8 to the south
Pule Edge Quarry	Local Geological Site	An extensive exposure of Upper Carboniferous Midgley Grit (formerly known as the Pule Hill Grit)	1.9km to the west

3.1.3. Protected species

Details of relevant records held by West Yorkshire Ecological Centre within 2km of the site are given in Table 3-3. Details of the legislative context and proximity of the records to site are also provided. The data presented below includes the most recent record, and record within closest proximity to the site for each protected species.

Table 3-3: Protected species records within 2km of the site

Common Name	Scientific Name	Designation	Location and Date
Amphibians			
Common Toad	*Bufo bufo*	Sch5_s9.5a; NERC_s41; WYBAP; Kirklees BAP	0.5km N (2012)
Common Frog	*Rana temporaria*	Sch5_s9.5a; WYBAP	Closest record: 1.2km NW (2005) Most recent record: 1.5km NE (2015)
Smooth Newt	*Lissotriton vulgaris*	Sch5_s9.5a	1.4km NE (2005)
Bats			
Bats	*Vespertilionidae*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2	0.5km N (2011)
Brown Long-eared Bat	*Plecotus auritus*	Sch5_s9.4b/9.5a/9.4c;	1.3km NW

Common Name	Scientific Name	Designation	Location and Date
		HabReg-Sch2; NERC_s41; WYBAP; Kirklees BAP	(2010)
Daubenton's Bat	*Myotis daubentonii*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2; WYBAP; Kirklees BAP	0.2km N (2013)
Lesser Noctule	*Nyctalus leisleri*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2; RDB-NT; WYBAP; Kirklees BAP	0.4km NE (2008)
Myotis Bat species	*Myotis*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2	Closest record: 0.2km W (2010) Most recent record: 1.5km N (2017)
Natterer's Bat	*Myotis nattereri*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2; WYBAP; Kirklees BAP	0.4km N (2008)
Noctule Bat	*Nyctalus noctula*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2; NERC_s41; WYBAP; Kirklees BAP	Closest record: 1.2km NE (2007) Most recent record: 1.4km W (2017)
Pipistrelle	*Pipistrellus pipistrellus*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2; WYBAP; Kirklees BAP	0.2km E (2021)
Soprano Pipistrelle	*Pipistrellus pygmaeus*	Sch5_s9.4b/9.5a/9.4c; HabReg-Sch2; NERC_s41; WYBAP; Kirklees BAP	0.4km N (2008)
Birds			
Bullfinch	*Pyrrhula pyrrhula*	BoCC-Amber; WYBAP; Kirklees BAP	1km NE (2005)
Collared Dove	*Streptopelia decaocto*	RDB-NT:Brd	Closest record: 0.5km N (2012) Most recent record: 0.6km S (2014)
Common Gull	*Larus canus*	BoCC-Amber	0.5km N (2013)
Common Sandpiper	*Actitis hypoleucos*	RDB-VU:Brd; BoCC-	1.4km S (2012)

Common Name	Scientific Name	Designation	Location and Date
		Amber	
Cuckoo	*Cuculus canorus*	NERC_s41; RDB-VU:Brd; BoCC-Red; WYBAP	1.5km N (2015)
Curlew	*Numenius arquata*	NERC_s41; RDB-EN:Brd; BoCC-Red; WYBAP; Kirklees BAP	Closest record: 0.6km S (2003) Most recent record: 1km W (2018)
Dipper	*Cinclus cinclus*	RDB-NT:Brd; BoCC-Amber	1.8km NW (2012)
Dunnock	*Prunella modularis*	BoCC-Amber; WYBAP; Kirklees BAP	0.5km N (2013)
Golden Plover	*Pluvialis apricaria*	WYBAP; Kirklees BAP	Closest record: 1km SW (2012) Most recent record: 1.3km SW (2014)
Grey Heron	*Ardea cinerea*	RDB-NT:Brd	Closest record: 1km NE (2005) Most recent record: 1.8km NE (2015)
Grey Wagtail	*Motacilla cinerea*	RDB-NT:Brd; BoCC-Amber	Closest record: 0.8km S (2012) Most recent record: 1.9km NE (2015)
Hobby	*Falco subbuteo*	Sch1_part1	1.1km N (2012)
House Sparrow	*Passer domesticus*	NERC_s41; BoCC-Red; WYBAP; Kirklees BAP	0.5km N (2013)
Kestrel	*Falco tinnunculus*	RDB-VU:Brd; BoCC-Amber; WYBAP; Kirklees BAP	1.1km SW (2016)
Kingfisher	*Alcedo atthis*	Sch1_part1	0.2km N (2015)
Lapwing	*Vanellus vanellus*	NERC_s41; RDB-EN:Brd, RDB-VU:NonBrd; BoCC-	Closest record: 1.1 NW (2012)

Common Name	Scientific Name	Designation	Location and Date
		Red; WYBAP; Kirklees BAP	Most recent record: 1.8km NW (2014)
Linnet	*Linaria cannabina*	RDB-NT:Brd; BoCC-Red; Kirklees BAP	Closest record: 0.8 SW (2012) Most recent record: 1.2km NW (2015)
Mallard	*Anas platyrhynchos*	RDB-NT:NonBrd; BoCC-Amber	1km NE (2005)
Meadow Pipit	*Anthus pratensis*	BoCC-Amber	0.5km W (2014)
Merlin	*Falco columbarius*	Sch1_part1; RDB-EN:Brd; BoCC-Red; WYBAP	Closest record: 1.3km E (2011) Most recent record: 1.7km E (2012)
Mistle Thrush	*Turdus viscivorus*	RDB-VU:Brd; BoCC-Red	1km NE (2005)
Moorhen	*Gallinula chloropus*	RDB-VU:Brd; BoCC-Amber	1.2km NW (2005)
Red Grouse	*Lagopus lagopus*	WYBAP; Kirklees BAP	1.3km S (2014)
Redwing	*Turdus iliacus*	Sch1_part1; RDB-CR:Brd; BoCC-Amber	0.7km NE (2013)
Reed Bunting	*Emberiza schoeniclus*	NERC_s41; BoCC-Amber; WYBAP; Kirklees BAP	Closest record: 0.5km N (2013) Most recent record: 1.2km SW (2014)
Short-eared Owl	*Asio flammeus*	RDB-EN:Brd; BoCC-Amber; WYBAP; Kirklees BAP	0.7km S (2016)
Skylark	*Alauda arvensis*	NERC_s41; BoCC-Red; WYBAP; Kirklees BAP	0.5km W (2014)
Snipe	*Gallinago gallinago*	RDB-NT:NonBrd; BoCC-Amber; Kirklees BAP	Closest record: 1.2km SW (2005) Most recent

Common Name	Scientific Name	Designation	Location and Date
			record: 1.3km N (2014)
Song Thrush	*Turdus philomelos*	BoCC-Amber; WYBAP; Kirklees BAP	0.4km SW (2013)
Sparrowhawk	*Accipiter nisus*	RDB-NT:Brd; BoCC-Amber	1.2km NE (2012)
Starling	*Sturnus vulgaris*	RDB-VU:Brd; BoCC-Red; WYBAP; Kirklees BAP	0.9km NW (2012)
Stock Dove	*Columba oenas*	BoCC-Amber; Kirklees BAP	1.1km SW (2012)
Swallow	*Hirundo rustica*	WYBAP; Kirklees BAP	1km W (2018)
Swift	*Apus apus*	RDB-EN:Brd; BoCC-Red; WYBAP	1.3km NE (2007)
Twite	*Linaria flavirostris*	BoCC-Red; Kirklees BAP	Closest record: 0.7km NW (2003) Most recent record: 2km SW (2014)
Wheatear	*Oenanthe oenanthe*	BoCC-Amber	Closest record: 1.3km E (2011) Most recent record: 1.7km SW (2014)
Whinchat	*Saxicola rubetra*	RDB-NT:Brd; BoCC-Red	1.3km W (2011)
Whitethroat	*Curruca communis*	BoCC-Amber	1.3km NW (2012)
Whooper Swan	*Cygnus cygnus*	Sch1_part1; RDB-EN:Brd; BoCC-Amber	1km NE (2005)
Willow Warbler	*Phylloscopus trochilus*	BoCC-Amber	1.2km NW (2012)
Woodpigeon	*Columba palumbus*	BoCC-Amber	1.5km NE (2015)
Wren	*Troglodytes troglodytes*	BoCC-Amber	Closest record: 1km SW (2014) Most recent

Common Name	Scientific Name	Designation	Location and Date
			record: 1.5km NE (2015)
Mammals			
European Water Vole	*Arvicola amphibius*	Sch5_s9.4.a/9.4b/9.4; NERC_s41;RDB-EN; Kirklees BAP	1.4km NE (2017)
Mountain Hare	*Lepus timidus*	HabReg-Sch4; NERC_s41; RDB-NT; WYBAP; Kirklees BAP	0.8km W (2015)
Weasel	*Mustela nivalis*	Kirklees BAP	1.1km NE (2015)
West European Hedgehog	*Erinaceus europaeus*	NERC_s41; RDB-VU; WYBAP; Kirklees BAP	Closest record: 0.4km N (2011) Most recent record: 0.9km W(2012)
Fish			
Brown/Sea Trout	*Salmo trutta*	NERC_s41; WYBAP; Kirklees BAP	0.5km NW (2015)

3.1.4. Invasive non-native species

The table below shows records from these sources dated post the year 2000, and includes the most recent record, and record within closest proximity to the site of each species.

Table 3-4: Invasive non-native species records within 2km of the site

Common Name	Scientific Name	Designation	Location and Date
American Mink	*Neovison vison*	Sch9-Part1	1.5km NE (2005)
Canada Goose	*Branta canadensis*		1.7km NE (2015)
Signal Crayfish	*Pacifastacus leniusculus*		0.4km N (2020)
Curly Waterweed	*Lagarosiphon major*	Sch9-Part2	1km NW (2002)
Giant Hogweed	*Heracleum*		1.7km NW

Common Name	Scientific Name	Designation	Location and Date
	mantegazzianum		(2018)
Himalayan Balsam	*Impatiens glandulifera*		0.3km W (2018)
Japanese Knotweed	*Fallopia japonica*		Closest record: 0.3km W (2009) Most recent record: 1.1km SW (2016)
New Zealand Pigmyweed	*Crassula helmsii*		1.5km NE (2005)
Rhododendron ponticum	*Rhododendron ponticum*		0.2km (2018)

3.2. Site survey

3.2.1. UKHab survey

A UKHab map of the survey area is shown in Figure 3-3. Target notes are provided in Table 3-5.

Figure 3-3: UKHab Map

Target Note	Description	Photograph
1	Piles of bricks and roof tiles	
2	Windows and roof of the barn	

Table 3-5: Target notes

The following habitats were noted on and adjacent to the site:

Developed land, sealed surface (u1b)
An access path runs from Peele Street to the building where it runs along the eastern side of the site. Piles of bricks and roof tiles (TN1) are placed within this habitat.

In addition, another sealed surface is noted between the building and the grassland area. Hoary Ragwort *Jacobaea erucifolia* grows in cracked areas within this habitat.

Building (u1b5)
The barn (TN2) is planned to be demolished. The building takes the majority of the site area. It is concrete and one storey. Overall the building is well sealed and in good condition. The wall on the east side has minor damages in the form of cracks and cavities. Most of the windows are well sealed.

Other neutral grassland (g3c)
The southern side of the site is grassland dominated and comprises of False oat grass *Arrhenatherum elatius*, Meadow buttercup *Ranunculus acris*, Large leaf avens *Geum macrophyllum,* Willowherb *Epilobium* sp., Dandelion *Taraxacum officinale* agg., Common Ragwort *Senecio jacobaea* and Common groundsel *Senecio vulgaris.*

The proposed works will have a direct impact on the identified habitats.

3.2.2. Assessment for protected species

Nesting birds
No specific bird survey was completed during the site visit. No trees or shrubs were noted on site, making it sub-optimal for nesting birds. The building is well sealed making indoor nesting unlikely. The data search returned records for multiple Schedule 1 species, such as Hobby, Kingfisher, Merlin and Redwing. However the habitats at the site have low suitability for these species.

Bats
The data search returned high levels of bat activity within 2km of the site boundary.

The barn (TN2) is a large concrete building with potential bat roost features that include small gaps in wall cracks and roofing tiles. These features have low bat roost potential. The proposed works include removal of the barn, and therefore a bat activity survey will be required. In addition, general mitigation measures will be implemented during the course of work.

Overall, the site has low suitability for commuting and foraging bats as no trees nor water bodies are present on site.

Reptiles
The data search returned no record of reptiles within 2km of the site. There are suitable terrestrial habitats on site in the grassland and piles of large tiles and bricks (TN1) within the site. It offers suitable hibernacula for reptile species.

3.2.3. Invasive non-native species

No INNS was observed on site during the survey.

The records of floral INNS returned by West Yorkshire Ecology Service are not considered to pose a constraint to the works as they are sufficiently distanced from the site and were not observed during the site survey. There is potential for Canada Goose and Grey Squirrel *Sciurus carolinensis* to be encountered on site during the works.

4. Conclusions and recommendation

4.1. Conclusions

The proposed works have minimum potential to impact the designated areas as they are located sufficiently far from the site. The area that will be lost consists of neutral grassland with low ecological potential. The habitats could support nesting birds, bats and reptiles.

4.2. Recommendations

4.2.1. Bats

The barn on site was assessed as having low bat roosting potential. Therefore, following the BCT guidelines one activity survey (one dusk emergence survey) is required to be completed between May and September.

4.2.2. Reptiles

Although no signs of reptiles were recorded during the survey visit, the habitat around the works site is suitable for them. Therefore, habitat manipulation to encourage animals out of the works area during the construction phase is recommended. This should involve a destructive hand search of all suitable refuges for reptiles such as stone piles and garden waste. An experienced ecologist should be present to supervise this work. If works continue into winter, potential hibernacula should not be disturbed to allow amphibians to hibernate.

4.2.3. General avoidance measures

General avoidance measures that should be incorporated within the scheme include:

- Limit the hours of working to daylight hours, to limit disturbance to nocturnal and crepuscular animals;
- Contractors must ensure that no harm comes to wildlife by maintaining the site efficiently and clearing away materials which are not in use, such as wire or bags in which animals can become entangled;
- Any pipes should be capped when not in use (especially at night) to prevent animals becoming trapped. Any excavations should be covered overnight to prevent animals from falling and getting trapped. If that is not possible, a strategically placed plank should be placed to allow animals to escape.

4.2.4. Toolbox talks

Due to the potential presence of protected species, all staff working on the site should receive a toolbox talk from an ecologist on the following protected habitats and species:

- Breeding birds
- Bats

The toolbox talk should cover recognition of the species and evidence of its presence, what to do if evidence is seen and a summary of the relevant legislation.

Appendices

A Relevant policy and legislation

This section is intended as a guide only and does not replace formal legal advice.

A.1 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied with a presumption in favour of sustainable development a core element of the framework.
Of relevance to the proposed works in this report, the document states in relation to conserving and enhancing biodiversity, that: "If significant harm 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" Ministry of Housing, Communities and Local Government (2019).
It also states that: "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" Ministry of Housing, Communities and Local Government (2019).

A.2 Natural Environment and Rural Communities (NERC) Act 2006

Section 40 of the Natural Environment and Rural Communities Act (2006) 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'. Section 40(3) also states that 'conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat'.
Section 41 of the NERC Act requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. To meet this requirement, the England Biodiversity List (the S41 list) has been developed. Species and habitats listed under Section 41 of the NERC Act 2006, whilst not necessarily being legally protected, can be a material planning consideration.
The S41 list, which replaces the list published under Section 74 of the Countryside and Rights of Way (CRoW) Act 2000, should be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

A.3 Statutory designated nature conservation sites

Sites with statutory designations receive varying degrees of legal protection under UK statute and European Directives. There are several statutory designations used for sites of high nature conservation value in the UK, which are applied depending upon the importance of the site in a local, regional, national or international context. This includes:

- Ramsar Sites (International designation)
- SAC and SPA (European designations)
- National Nature Reserves (NNR) and SSSI (National designations)
- Local Nature Reserves (LNR) (Local designation)

A.4 Non-statutory designated sites

Non-statutory sites are afforded no statutory legal protection, but are normally recognised by local planning authorities and statutory agencies as being of local nature conservation value. The protection afforded to such sites is usually discretionary, through Local Plan policies. Non-statutory sites are designated by the local authority, usually in partnership with the County Wildlife Trust (or equivalent).

A.5 Protected species

Several species are protected under UK and international legislation. In the UK, primary protection is provided under the Wildlife and Countryside Act 1981 (as amended). Species of European importance receive additional protection in England under the Conservation of Habitats and Species Regulations 2017 (as amended); others may receive protection through specific legislation. Further details on specific species and their levels of protection are provided below. Only species which are relevant to the proposed works location and design are considered.

A.5.1 Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built
- take, destroy or possess the egg of any wild bird.

Certain species, such as the Barn Owl *Tyto alba*, receive additional protection under Schedule 1, which makes it an offence to intentionally or recklessly disturb birds and also their young at, on or near an active nest.

A.5.3 Bats

All UK bat species are European Protected Species (EPS), protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitat and Species Regulations 2017 (as amended). This makes it an offence to:

- deliberately capture, injure or kill a bat
- intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- intentionally or recklessly obstruct access to a bat roost.

A.5.4 Reptiles and other amphibians

Legal protection varies considerably for different species. Smooth Snake *Coronella austriaca*, Sand Lizard *Lacerta agilis* and Natterjack Toad *Epidalea calamita* are EPS, and it is an offence to:

- deliberately kill, capture or disturb these species
- deliberately take or destroy the eggs of these species
- damage or destroy the breeding or resting places of these species.

Under the Wildlife and Countryside Act 1981 (as amended) Adder *Viperus berus*, Grass Snake *Natrix natrix/Natrix helvetica*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis* are protected from intentional killing or injuring, additionally Common Frog *Rana temporaria*, Common Toad Bufo bufo and other newt species are prohibited from sale.

A.6 Invasive non-native species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) lists plant species, groups of plants and animal species for which it is illegal to plant, release, allow to escape or cause to spread into the wild. Examples of species listed on Schedule 9, which are most likely to be encountered, include Japanese Knotweed *Fallopia japonica*, Himalayan Balsam *Impatiens glandulifera*, Giant Hogweed *Heracleum mantegazzanum*, Signal Crayfish *Pacifastacus leniusculus* and Spiny-cheek Crayfish *Faxonius limosus*. Zebra Mussel *Dreissena polymorpha* may also be encountered on site.

Some species are also classed as 'controlled waste' under the Environmental Protection Act 1990 and must be disposed of properly (i.e. Japanese Knotweed and Giant Hogweed). These provisions mean that, if these species occur on a site proposed for development or other work which may disturb the ground, control of these species is likely to be required.

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