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Ecological Consultants
Environmental and Rural Chartered Surveyors

Preliminary Ecological Appraisal

Wappy Springs

Green at Heart BEN GOLD

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ACCURACY OF REPORT

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, all of the protected species this survey covers are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and/or in their interaction with protected species. If protected species are found during a work programme, and continuing the work programme could result in their disturbance, injury or death, either directly or indirectly an offence may be committed.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

This report has been printed on recycled paper as part of our commitment to achieving both the ISO 9001 Quality Assurance and ISO 14001 Environmental Assurance standards. Envirotech have been awarded the Gold standard by the Cumbria Business Environmental Network for its Environmental management systems.

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Contents

1. EXECUTIVE SUMMARY

1.1.1 Envirotech NW Ltd were commissioned in March 2021 to carry out a Preliminary Ecological Appraisal of land and buildings at Wappy Springs, Huddersfield. It is proposed that new industrial units are constructed on the site.

1.1.2 A data search and desk study of the site and an area within 2km of the site were undertaken to establish the presence of protected species and notable habitats.

1.1.3 The site was then visited by a licenced ecologist from Envirotech NW Ltd on the 30th March 2021. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of notable species at the site or in proximity such that they may be affected by the proposed development.

1.1.4 The plant species assemblages recorded at the site are all common in the local area and are considered to be of low ecological value.

1.1.5 No bats were recorded roosting on or near site.

1.1.6 Birds are likely to utilise scrub on site and eaves of the public house for nesting between March and September. Any vegetation clearance or demolition should therefore be undertaken outside of this period or following a check for active nest sites.

1.1.7 No other notable or protected species were recorded on the site.

2. INTRODUCTION

2.1 Background

2.1.1 In March 2021 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land at Wappy Springs, Huddersfield, central grid reference SE104 188 (Figure 1). A site investigation was undertaken and a report compiled which includes recommendations for any future actions and or mitigation required.

2.1.2 The survey was requested in connection with the proposed construction of new industrial units.

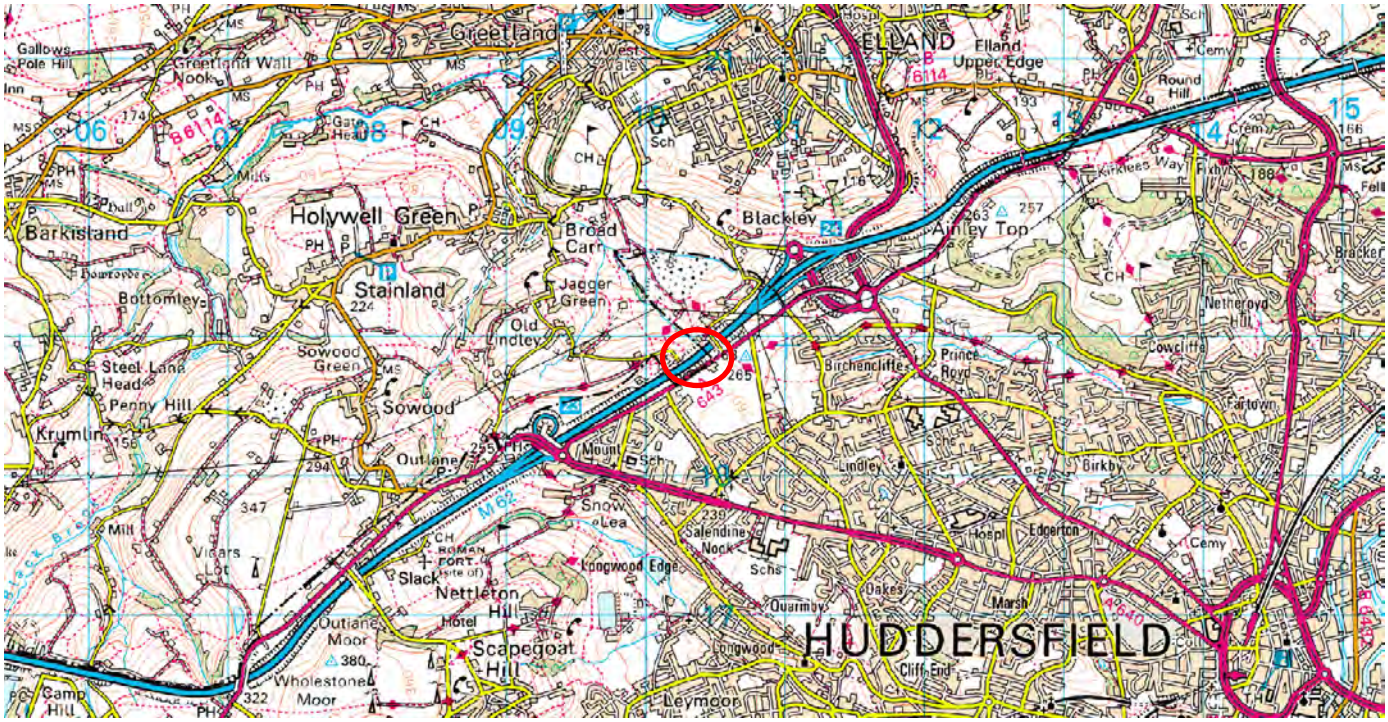

Figure 1 *Site location at SE104188 circled red.*

2.2 Objectives

2.2.1 The main objectives of the study were:

- The completion of a Phase 1 Habitat Survey including the preparation of a vegetation and habitat map of the site and the immediate surrounding area.
- The survey and assessment of all habitats for statutorily protected species.
- An evaluation of the ecological significance of the site.
- The identification of any potential development constraints and the specification of the scope of mitigation and enhancement required in accordance with wildlife legislation, planning policy and other relevant guidance, and;
- The identification of any further surveys or precautionary assessments that may be required prior to the commencement of any development activities.

3. METHODOLOGY AND SOURCES OF INFORMATION

3.1 Data Search

3.1.1 The Biological Records centre for West Yorkshire "WYE", the Envirotech dataset, and the Multi-Agency Geographic Information for the Countryside (MAGIC) were searched to establish the presence of any records of statutorily protected, notable or rare species, and any designated sites of international, national, regional or local importance within a 2km radius of the site boundary.

3.1.2 The Envirotech dataset is compiled from extensive field surveys from the period 2004-present, as well as records obtained from third parties during this time.

3.1.3 Google Earth and Google Street View were consulted to establish the presence of any features of ecological importance within the local area.

3.2 Vegetation and Habitats

3.2.1 A vegetation and habitat map was produced for the site and the immediate surrounding area. The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC 2003).

3.2.2 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act (1981) and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (1991).

3.2.3 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the Wildlife and Countryside Act (1981), namely Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) on terrestrial habitat and aquatic species such as floating pennywort (*Hydrocotyle ranunculoides*), water hyacinth (*Eichhornia crassipes*) and New Zealand pygmyweed (*Crassula helmsii*).

3.2.4 The survey was also informed by questioning the landowner/site agent to ascertain the recent history of the site.

3.3 Timing and Personnel

3.3.1 During the visit, weather conditions were suitable for the survey types undertaken being warm and dry in early spring.

3.3.2 The site and surrounding land was visited on the 30th March 2021 by

- (AG) Mr Andrew Gardner BSc (Hons), MSc, MRICS, CEnv
  Natural England Bat Class Licence (Level 2)
  Natural England Bat Low Impact Class Licence
  Natural England Barn Owl Licence

Natural England Great Crested Newt Licence (Level 1)
Natural England Badger Class Licence
Natural England White Clawed Crayfish Licence

4. SPECIES SURVEY METHODOLOGY

4.1 Amphibian

4.1.1 Great crested newts (*Triturus cristatus*) are protected under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule 5 of the Wildlife & Countryside Act (1981).

4.1.2 Water-bodies located within or adjacent to the study area were identified and where access was possible were assessed for their potential to support great crested newts.

4.1.3 The criteria used in the assessment are based on those contained in the Herpetofauna Workers Manual and Oldham et al, 2000, and in applying these criteria a precautionary approach was adopted. Following the criteria developed by Oldham et al (2000), the HSI tool developed for use with great crested newts and forming part of Natural England's Licensing process was used to determine the suitability of ponds for great crested newts.

4.1.4 The site was however considered sufficiently low risk for GCN that no further assessments were warranted.

4.2 Badger

4.2.1 Badgers (*Meles meles*) and their setts are protected under the Protection of Badgers Act (1992). This legislation arises from animal welfare issues (rather than on the basis of nature conservation grounds) and protects badgers from being killed, injured or disturbed whilst occupying a sett.

4.2.2 A disturbance to badgers in their setts may occur as a result of construction operations. Natural England recommends that the use of heavy machinery in proximity of a sett entrance should be avoided, with a 'disturbance free-zone' being established.

4.2.3 The degree of disturbance attributed to construction activity is a function of the background level of activity badgers are accustomed to and that which will be attributed to a proposed activity. The "disturbance free zone" is therefore site specific.

4.2.4 The survey for badgers comprised an assessment of all suitable habitat within and outside the study area boundary (where this was possible) to a distance of 30m for indications of use by badgers.

4.2.5 Signs of badgers which were searched for included:

- Setts - 'D' shaped entrances at least 25cms wide and wider than they are high with large spoil mounds
- Discarded bedding at sett entrances (this includes grass and leaves)
- Scratching posts on shrubs and trees close to a sett entrance
- The presence of badger hairs which are coarse, up to 100mm long with a long black section and a white tip
- Dung pit latrines and footprints

- Habitual runs through vegetation and beneath fences
- Hedgehog carcases

4.3 Bats

4.3.1 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981), and are included on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, as a Protected Species. Taken together, these pieces of legislation make it an offence to:

- Intentionally or recklessly kill, injure or capture bats;
- Deliberately or recklessly disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts.

4.3.2 The Bat Conservation Trust (Hundt (2012) and Collins, J. (ed) (2016) issued guidelines on bat survey methodology, a key feature of their recommendation is for the undertaking of a pre-survey assessment – an initial desk-study and a walkover assessment of the survey area and its surrounding area to identify the relative value of the habitats present for bats and likely commuting routes. This is to be followed by a survey program that is appropriate to the likely level of bat activity within the survey area to be determined by and based on the experience of the surveyor.

4.3.3 The potential value of the survey area for foraging bats was assessed through consideration of two main factors: professional knowledge of bat ecology and foraging behaviour in combination with the geographical location, topography and habitats present within the survey area and surrounds.

4.3.4 Trees and structures on and within the survey area boundary were assessed for their potential to support roosting or hibernating bats. This comprised a close inspection of all trees and buildings on the site to allow an assessment of their potential to be used by bats to be made by a licensed surveyor.

4.3.5 Trees were all assessed in accordance with Collins, J. (ed) (2016).

4.4 Birds

4.4.1 All breeding birds, other than pest species, are protected under the Wildlife and Countryside Act of 1981 when building a nest, rearing young or sitting on eggs. Some bird species, such as barn owl (*Tyto alba*), are protected when near an active nest site. Several birds are listed as UK and or County BAP species.

4.4.2 Bird species and behaviour was noted during the other field surveys. All areas are covered equally, in order to avoid the subjective survey of better quality 'bird habitat'. All birds displaying breeding behaviour were recorded.

4.5 Brown Hare

4.5.1 The brown hare (*Lepus europaeus*) is a UK BAP species.

4.5.2 The survey method involved walking boundaries and surveying with binoculars. The survey was conducted at a suitable distance to ensure that the hares were not disturbed. Generally, surveys were undertaken throughout the early afternoon and evening when hares are thought to be most active and feeding.

4.5.3 Where present the number of brown hares in each field or hedgerow was recorded, together with the nature and use of the field, climatic conditions and time of day. The presence of forms and faeces where present were also recorded.

4.6 Survey limitations

4.6.1 The survey was undertaken in early spring. At this time of year plant species are less easily identified and the activity of some species is reduced.

4.6.2 Due to the habitats present on site there were no significant constraints in respect of identifying the botanical interest of the site. Bats were active at the time of the survey.

4.6.3 The duration, extent and scope of the surveys were considered sufficient to plan appropriate mitigation and recommend additional precautionary survey work required prior to the commencement of work.

4.6.4 No significant survey limitations were encountered.

5. RESULTS

5.1 Data Search

5.1.1 Envirotech and WYE hold no records of protected or notable species for the site. There are however records of protected or notable species within 2km (Figure 2). These are discussed in the relevant sections below.

5.1.2 The nearest non-statutory protected sites are shown on Table 1 and Figure 2.

Name of Site	**Designation**
Shaw Wood	Local Wildlife Site
Old Lindley Moor	Local Geological Site

Table 1- *Non-statutory protected sites*

5.1.3 There are no internationally/nationally designated sites within 2km. The site does not lie within the Kirklees Wildlife Habitat Network. There is no Ancient Semi-natural Woodland/Ancient Replanted Woodland within 100m of the site centroid.

Figure 1 – Species and Designated Sites

Redacted

West Yorkshire Joint Services are provided by a Joint Committee of the Metropolitan Districts of Bradford, Calderdale, Kirklees, Leeds and Wakefield.

West Yorkshire Joint Services

Figure 2 *Notable species records and non-statutory designated sites*

6. PHASE 1 SURVEY RESULTS

6.1 Habitat Results

6.1.1 The site comprises poor semi-improved grassland, a beer garden, carpark and public house. There is the M62 to the North and Lindley Moor Road to the South. The site sites between these two busy roads with more poor semi-improved grassland to the East and West.

6.1.2 See Figure 3 for the Phase 1 Habitat Plan and Table 1 for the descriptive Target Notes.

Target Note	Description	Comment
TN1	Hardstanding	An open area of compacted gravel comprising a carpark with no vegetation cover
TN2	Poor semi-improved grassland	Two fields which are short grazed by ponies. Extensive bare ground. Sward very short and impoverished as is typical of intensive grazing by horses. Annual Meadow Grass *(Poa annua)*, Creeping Buttercup (*Ranunculus repens*), Broad-leaved dock (*Rumex obtusifolius),* Nettle *(Urtica dioica)* and Yorkshire Fog *(Holcus lanatus).*
TN3	Poor semi-improved grassland	To the edge of the carpark and extending into an overgrown beer garden to the rear of the buildings. Sward longer but appears to be occasionally cut. Annual Meadow Grass, Creeping Buttercup, Broad-leaved dock, Nettle, Yorkshire Fog, Common Bent (*Agrostis capillaris)*, Ragwort *(Senecio jacobaea)*, Red clover *(Trifolium pratense),* Daisy *(Bellis perennis)* and Hawkweed *(Hieracium sp)*.
TN4	Scattered trees/ shrubs	Small trees both ornamental and native include Goat Willow *(Salix caprea)*, Sycamore (*Acer pseudoplatanus)*, Leylandii *(Leylandii x Cupressocyparis leylandii)* and Ash *(Fraxinus excelsior).*
TN5	Buildings	Buildings comprising a public house as well as outbuilding sheds
TN6	Trees	A row of Sycamore to the roadside wall, one of which has significant decay cavities
TN7	Stable	A timber stable building
TN8	Plantation woodland	To the motorway embankment small trees comprise Ash, Beech *(Fagus sylvatica),* Goat Willow and Sycamore. There appears to be no true woodland understory. Vegetation at ground level comprising grass and forb species as per TN2.

Table 1 *Details of Target Notes.*

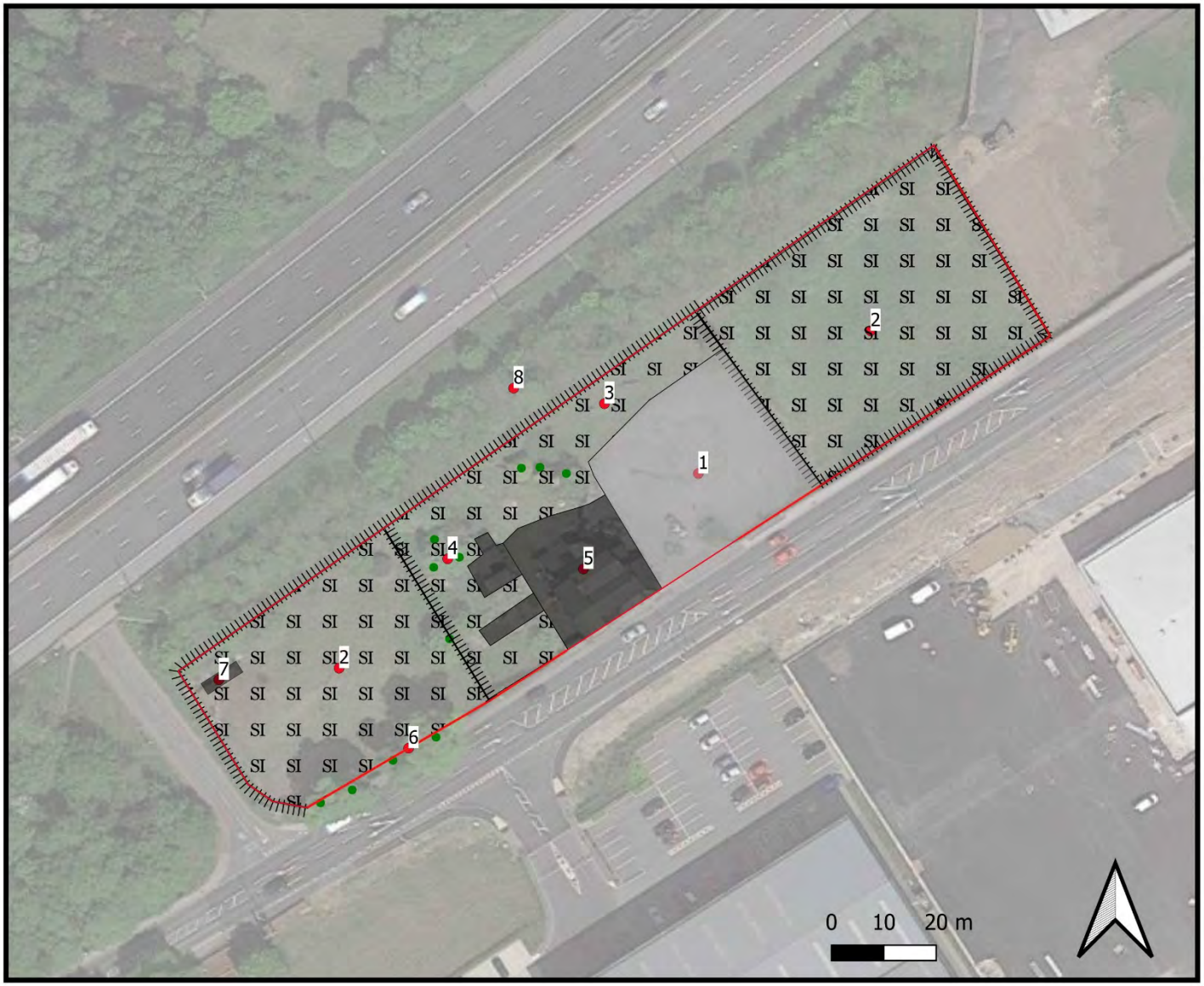

Figure 3

Phase 1 Habitat Survey

Wappy Brook

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	A gravel car park has no vegetation associated with it
 	Poor semi-improved grassland pony paddocks are short grazed and species poor. Extensive areas of bare ground

Sharp contrast in sward length between the pony paddock and edge of the carpark

Poor semi-improved grassland to the side of the carpark and rear beer garden with small buildings.

	Small Ash and Sycamore in the rear beer garden
 	Wappy Springs Public House

	Sycamore trees to the road side
	One tree has significant decay cavities in its main stem
	Timber stable building

Table 2 *Photographs*

6.2 Vegetation

6.2.1 Details of the plant species found on site are included in the target notes. Species recorded are all commonly occurring and undoubtedly occur elsewhere in similar habitats in the local area.

6.2.2 The poor semi-improved grassland has a very low species diversity and ecological value. It is heavily grazed and poached and or part of a formal garden when the public house is operational.

6.2.3 Small trees within the garden are impacted by the proximity of buildings. A row of sycamore to the roadside boundary are of higher ecological value but also likely impacted by the adjacent road.

6.2.4 There are no hedgerows on site.

6.2.5 The boundary woodland to the side of the motorway is well established but has not yet developed a true woodland understory.

6.2.6 There is no evidence of Japanese knotweed, giant hogweed or Himalayan balsam on the site. No other invasive or notable weed species listed on Schedule 9 (Section 14) of the Wildlife and Countryside Act (1981) (as amended) was identified within the site or adjacent land.

6.3 Amphibian

6.3.1 There are 46 records for amphibians within 2km of the site including two records for great crested newt. The majority and the closest records (42) are 1236m from the site. Records for great crested newts are 1750m from the site.

6.3.2 There are no ponds within 250m of the site which are not isolated from it by a motorway.

6.3.3 The core development area has a low value to amphibians being open and exposed grassland. The boundary woodland and longer grassland in the garden could be utilised as refuges and/or hibernacula but there are no breeding ponds in proximity to the site.

6.3.4 The proposed development will not result in the permanent loss of or a substantial negative effect on any waterbodies or foraging areas linked to them. Boundary areas which may provide foraging or refuge sites, are to be retained.

6.4 Badger

6.4.1 There are no records of badgers within 200m of the site. The nearest known sett is more than 2km from the site.

6.4.2 Badger setts do not occur on site and a lack of feeding signs or runs across the site would suggest that they do not occur within 30m of site boundaries.

6.4.3 The proposed development will not impact on any existing badger runs or setts. The porosity of the surrounding fields to the passage of badgers will not be affected.

6.5 Bats

6.5.1 There are 67 records of at least six species of bat within 2km of the site. There are records from 30/06/2009 for a transitional roost of Common Pipistrelle 174m from the site (bats). This may be from a former farmstead (Peat Ponds Farm) to the South-west which was demolished prior to new industrial buildings being erected.

6.5.2 The foraging habitat at the site is very poor for bat species being open and exposed grassland and buildings/ hardstanding. The poor semi-improved grassland offers negligible foraging opportunities for bats. The tree lines are poor in terms of their structure, diversity and interconnectivity. The site sits between a busy road and motorway. More extensive areas of medium and high quality habitat occur locally, on the opposite side of the motorway.

6.5.3 The boundary woodland to the motorway embankment does provide a linear foraging/ commuting route past the site but is not considered optimal for use by bats.

6.5.4 It is not considered there would be significant degradation of foraging habitat as a result of the proposal so long as the boundary woodland is retained and not subject to additional light spill.

6.5.5 All trees around the site perimeter were also assessed in accordance with Collins ed. (2016) and assigned a risk category. All of the trees on site were category 2 (low) or category 3 (negligible) risk. A row of sycamore to the roadside provide the highest potential for use by roosting bats category 2 (low).

6.5.6 One sycamore had a decay hole in its main stem just above head height, this is large and open to rain. Others showed past signs of pruning from the roadside with scarring to the main stem. The cavities were all inspected. No indications of roosting or highly suitable roost sites were located within the trees.

6.5.7 The buildings on site were inspected. Outbuildings and the stable are all sealed and provide negligible potential for use by bats,

6.5.8 The public house comprises a two story building with natural stone walls under a stone slate roof.

6.5.9 The external walls appear well sealed, the pointing between the dressed stone being in good condition. There were small gaps along the eaves on the South elevation, facing Lindley Moor Road. These were inspected and found to be full of cobwebs and dust. In one location there were indications of past nesting by birds, likely House Sparrow *(Passer domesticus)*.

6.5.10 The roof verges are also well sealed other than on the East elevation where a small amount of mortar has been displaced. There were no indications of past or current use by bats in this area.

6.5.11 A flat roof extension to the rear and lead flashing to the roof are well sealed.

6.5.12 The roof coverings have several gaps beneath them as the stone slates are irregularly sized. No staining or other outward signs of past or current use by bats was noted.

6.5.13 The roof voids were inspected and found to be small, the ceilings internally being partly vaulted. Cobwebs were noted spanning the roof voids. Insultation was present, and the roofs were lined. No evidence of use by bats was noted.

6.5.14 We consider bat species are highly unlikely to rely on the site for feeding but may occur in the local area. No indications of roosting by bats was found on site. The site would not provide optimal roosting potential due to its location.

6.5.15 Section 2.1 of Collins, (2016) states *"It is reasonable to request surveys where proposed activities are likely to negatively impact bats and their habitats. However, surveys should always be tailored to the predicted, specific impacts of the proposed activities (see Section 2.2.2). Excessive, speculative surveys are expensive and cause reputational damage to the ecological profession."*

6.5.16 In addition Section 2.2.5 states *"When planning surveys it is important to take a proportionate approach. The type of survey (or suite of surveys) undertaken and the amount of effort expended should be proportionate to the predicted impacts of the proposed activities on bats. Clause 4.1.2 of BS42020 (BSI, 2013) states that 'professionals should take a proportionate approach to ensure that the provision of information with the (planning) application is appropriate to the environmental risk associated with the development and its location.*

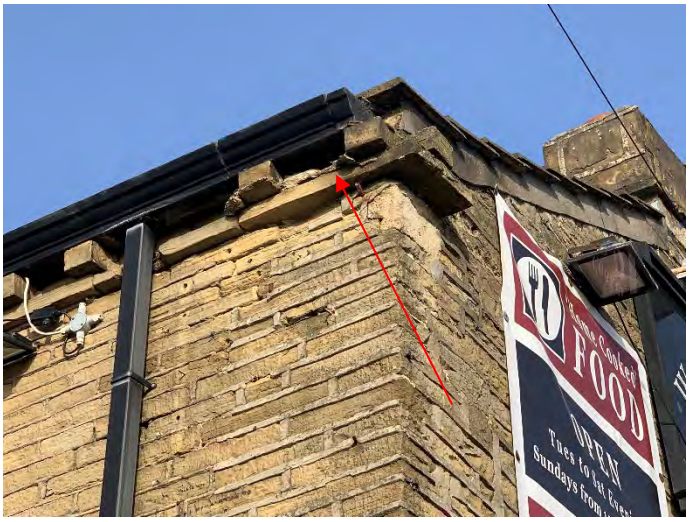
If the structure has been classified as having low suitability for bats (see Table 4.1), an ecologist should make a professional judgement on how to proceed based on all of the evidence available.

If sufficient areas (including voids, cracks and crevices) of a structure have been inspected and no evidence found (and is unlikely to have been removed by weather or cleaning or be hidden) then further surveys may not be appropriate.

Information (photographs and detailed descriptions) should be presented in the survey report to justify this conclusion and the likelihood of bats being present at other times of the year estimated. If there is a reasonable likelihood that bat roosts could be present, and particularly if there are areas that are inaccessible for survey, then further surveys may be needed and these should be proportionate to the circumstances (see Section 2.2.5)."

6.5.17 In our professional judgement the site lies between negligible and low risk. As the potential roost sites have been inspected sufficiently close enough to be reasonably confident in the absence of bats. It is our professional judgement that additional survey is not warranted. Additional survey would be *"excessive; speculative surveys are expensive and cause reputational damage to the ecological profession"* Collins, (2016)

6.5.18 We will propose mitigation to be undertaken during demolition. We will propose compensation for the creation of new, high quality and permanent new roost sites in the new structures. The favourable conservation status of bats in the local area can be assured. The proposal should have negligible impact upon them. Indeed, overall the proposed should deliver net gain for bats.

 	The external walls are well sealed Gaps noted along the roof verge on the South elevation with past nesting by birds noted in one location
	Roof verge is well sealed

	Roof coverings are slightly lifted due to the mismatched size of the stone slates Lead flashings in good order
	Flat roof extension to rear is well sealed
	Cobwebs in the roof voids which are clean

 	Sycamore trees to the road side One tree has significant decay cavities in its main stem

Table 3 *Photographs*

6.6 Birds

6.6.1 There are 104 records of birds within 2km of the site. Birds were not recorded on site during the survey.

6.6.2 There are no hedgerows on site but shrubs within the garden area may be used by birds for nesting. The paddocks are too small and disturbed for use by ground nesting species.

6.6.3 There were no rot holes or cracks in the trees within the site boundary which would support tree hole nesting species such as woodpeckers. A rot hole in a Sycamore to the roadside does not provide a cavity.

6.6.4 Indications of past use of the eaves of the public house were found, likely by House Sparrow *(Passer domesticus)*.

6.6.5 A risk assessment of the site in respect of its future potential for and value to nesting birds could be adequately made.

6.6.6 Precautionary mitigation is considered appropriate. The landscaping scheme should include species such as rowan (*Sorbus aucuparia*) which are seed bearing and will provide food for birds in the winter.

6.6.7 The habitat on site is not considered to be of anything more than of local significance, habitats present are well represented in the local area. The impact on nesting birds is therefore considered likely to be minor.

6.7 Brown Hare

6.7.1 Brown hare are a UK BAP priority species. There are no records of brown hares within 2km of the site.

6.7.2 No indication of brown hares was recorded on the site.

6.7.3 The site boundary has some potential for brown hares to create forms but use of the site is likely to be limited due to its open and exposed nature and regular human presence.

6.7.4 A risk assessment of the site in respect of its future potential for and value to brown hares could be adequately made. We consider the risk to brown hares is very low.

6.8 Other

6.8.1 The boundary hedgerows are species poor and provide little potential for use by hedgehog (*Erinaceus europaeus*). Fragmentation of habitat locally and existing land use do not provide optimal conditions for the free passage of this species across the site and slugs and snails are likely to occur only at very low numbers.

6.8.2 The site may be crossed by species such as fox (*Vulpes vulpes*) and rabbit (*Oryctolagus cuniculus*) are known to occur locally.

6.8.3 The boundary hedgerows may provide suitable habitat for small mammals such as field vole (*Microtus agrestis*) but these areas are small and the sites value to small mammals is limited.

6.9 Statutory and Non-Statutory Sites

Direct Impacts:

6.9.1 There are no statutory or non-statutory sites which are connected to the site such that site development would directly affect the dispersal of species between them or directly impact upon their integrity.

6.9.2 The habitats on site do not represent or are linked to those found in any of the statutory or non-statutory sites locally.

Indirect Impacts:

6.9.3 There are no statutory or non-statutory sites which are connected to the site such that site development would indirectly affect the dispersal of species between them or indirectly impact upon their integrity.

7. MITIGATION/RECOMMENDATIONS

7.1 Compensatory planting and habitat enhancement

7.1.1 The roots of trees on the site and its boundaries should be adequately protected during work in accordance with industry standards. All trees should as far as possible be retained in the scheme.

7.1.2 The landscaping scheme should utilise plants which are native and wildlife friendly. In particular night flowering species would be beneficial to bats. Wildflower seed could be used to plant verges to enhance the ecological value of the site and continuity between the site and the wider area.

7.1.3 The existing and proposed scheme were run against the DEFRA Biodiversity Metric 3.1 Calculation Tool.

7.1.4 The existing site scores 1.02 Biodiversity units. The outline proposal scores 0.37 Biodiversity units, a gain of 0.37 Units or 35.86%. Table 4.

On-site baseline	*Habitat units*	**1.02**
	Hedgerow units	**0.00**
	River units	**0.00**
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	**1.39**
	Hedgerow units	**0.00**
	River units	**0.00**
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	**35.86%**
	Hedgerow units	**0.00%**
	River units	**0.00%**
Off-site baseline	*Habitat units*	**0.00**
	Hedgerow units	**0.00**
	River units	**0.00**
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	**0.00**
	Hedgerow units	**0.00**
	River units	**0.00**
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	**0.37**
	Hedgerow units	**0.00**
	River units	**0.00**
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	**35.86%**
	Hedgerow units	**0.00%**
	River units	**0.00%**
Trading rules Satisfied?		**Yes✓**

Table 4- *Biodiversity Net Gain Initial Calculations*

7.2 Amphibians

7.2.1 There is no requirement for specific mitigation for these species. There are currently no suitable breeding sites on or near the site. However, as a precautionary measure, in the unlikely event that any signs of any amphibian activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.3 Badger

7.3.1 Badger setts are not known to occur within 2km of the site. In order to minimise potential impacts on badgers passing over the site the following points should also be followed.

- All work must take place during daylight hours as badgers are more likely to be commuting over the site at night and this will ensure the risk to any badgers passing through the site will be minimised.

- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure badgers are not trapped during work.

- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

7.4 Bats

7.4.1 Work at night should be restricted, new planting within the site should enhance structural diversity and light spill onto the boundary woodland should be minimised.

7.4.2 New roosting provision for crevice dwelling bats will be incorporated into the buildings on site or bat boxes could be erected in retained trees.

7.4.3 If the Sycamore trees along the roadside are to be removed, they should be re-inspected for bats to confirm they remain absent.

7.4.4 The roof of the public house should be stripped by hand. Should evidence of bats be found, stop all works and contact the ecologist for this project.

7.4.5 Overall it is considered there is more than sufficient scope for mitigation and compensation at the site such that there will be no adverse impact on the favourable conservation status of bats affected by the proposal.

7.5 Birds

7.5.1 Nesting by birds within the development area is considered likely to occur along the roof verge and potentially in shrubs in the rear garden.

7.5.2 Any vegetation to be trimmed or cleared should be checked for nesting birds before it is removed. Ideally this should occur outside the bird nesting period March- September. If vegetation clearance is to occur in the March-September period a check for nesting birds should be conducted first by a suitably qualified individual.

7.5.3 New planting within the site and the retention of trees and shrubs on the site boundary will maintain the ecological functionality of the site for breeding birds.

7.5.4 If nesting birds are found at the site all site works shall cease and further ecological advice shall be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.6 Brown Hares

7.6.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any brown hare activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.6.2 The points in respect of not working at night and leaving open trenches with means of escape detailed for badgers are also applicable to this species.

8. CONCLUSION

8.1.1 Ecological surveys, site appraisals and impact assessments were carried out with respect to land and buildings known as Wappy Spring at Huddersfield. It is proposed new industrial units will be constructed on the site.

8.1.2 Bats, Amphibians and nesting birds are known to occur in the local area, there was however no conclusive evidence of any specifically protected species regularly occurring on the site or the surrounding areas which would be negatively affected by site development following the mitigation proposed.

8.1.3 The vegetation to be cleared has a low ecological significance in the local area.

8.1.4 The protection of trees on the site boundary and landscaping will promote structural diversity in both the canopy and at ground level and will encourage a wider variety of wildlife to use the site than already occurs.

8.1.5 Contractors will be observant for protected species and all nesting birds. Should any species be found during construction, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

9. REFERENCES

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	Habitats and areas			Distinctiveness		Condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline	Retention category biodiversity value					
Ref	Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic Significance multiplier		Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost
1	Urban	Developed land; sealed surface	0.16	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00			0.00	0.00	0.16	0.00
2	Grassland	Modified grassland	0.39	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required ≥	0.78			0.00	0.00	0.39	0.78
3	Urban	Vegetated garden	0.12	Low	2	Condition Assessment N/A	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required ≥	0.24			0.00	0.00	0.12	0.24
4																		
5																		
6																		
7																		
8																		
		Total habitat area	0.67									1.02	0.00	0.00	0.00	0.00	0.67	1.02

Total area lost (excluding area of Urban trees and Green walls)	0.67

			Distinctiveness		Condition		Strategic significance			Temporal multiplier					Difficulty multipliers				Habitat units delivered	Comments	
Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Standard time to target condition/years	Habitat created in advance/years	Delay in starting habitat creation/years	Standard or adjusted time to target condition	Final time to target condition/years	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied		Assessor comments	Reviewer comments
Heathland and shrub	Mixed scrub	0.207	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	1.39		
Urban	Developed land; sealed surface	0.46	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	0	0	Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00		
	Total habitat area	0.67																Total Units	1.39			
	Site Area (Excluding area of Urban trees and Green walls)	0.67																				