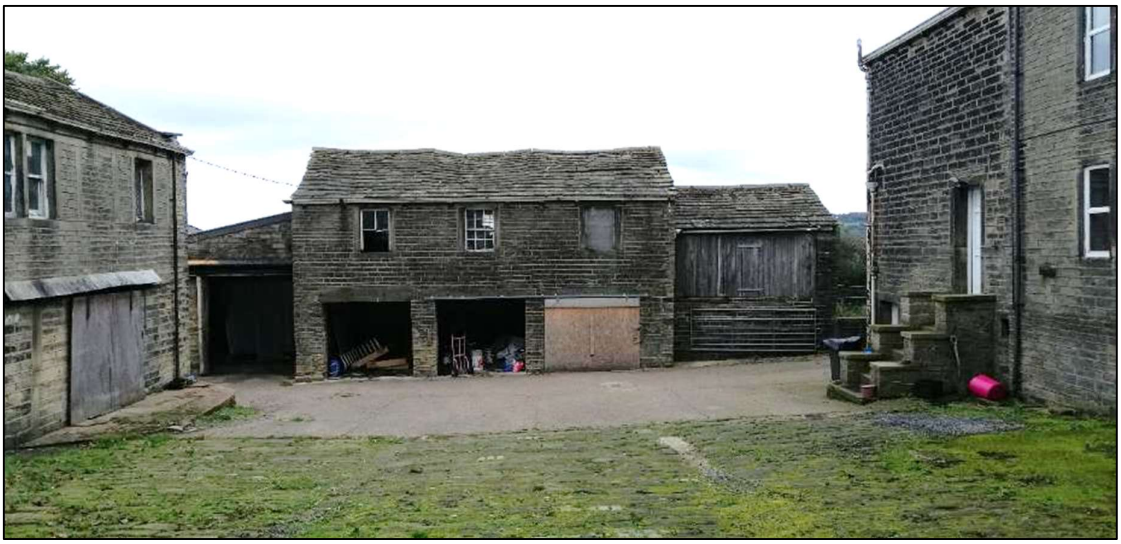
Oldfield House Farm, Honley

Bat Survey Report

16th October 2023



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Purpose and Description	Originated	Checked	Reviewed	Date
For Planning	G Slack MCIEEM	P Middleton MCIEEM	G Slack MCIEEM	16/10/23

Contents

1. Summary

1.1.1 The original bat survey was commissioned in October 2021. Further hibernation and nocturnal survey works were commissioned in January 2022. The survey was undertaken to inform a planning application for the proposed renovation of a Grade 2 listed farmhouse (Oldfield House) and conversion of associated farm buildings to residential use and storage at Oldfield House Farm, Oldfield Road, Honley.

1.1.2 The preliminary roost assessment survey was conducted in October 2021 with hibernation survey visits in January and February 2022. Emergence and re-entry surveys were undertaken in May, and June 2022.

1.1.3 Of the seven buildings on site, one offered high bat roost suitability, whilst three had moderate suitability, two had low suitability and one had negligible bat roost suitability.

1.1.4 One of the barns was identified as a common pipistrelle hibernation roost and summer day roost used by up to two bats. Two bats were recorded using the hibernation roost and another roost on the same internal wall. A brown long-eared bat was also recorded using the barn as a day and night roost. No other bat roosts were recorded.

1.1.5 A total of 12 swallow nests were recorded across three of the surveyed buildings, with an old house martin nest recorded from one barn.

1.1.6 All of the buildings will have roofs covered with natural stone slates. The sealing of such roofs to exclude bats is unfeasible. Therefore, all of the renovations of buildings will use hessian-backed Type 1F bituminous roofing felt beneath stone slates rather than non-bitumen coated roofing membranes (formally known as breathable roofing membranes).

1.1.7 The redevelopment of the bat roost building will require the exclusion of the bat roosts during the bats active season March to October inclusive. This will need to be completed under a bat mitigation licence. The licence application will include the mitigation identified within this report and can only be applied for once planning permission has been granted and any wildlife related conditions have been discharged.

1.1.8 On completion of the works, a permanent opening will be retained above the main barn doors to allow brown long-eared bats, swallows and house martins access to the building.

1.1.9 To compensate for the loss of the bat roosts, a total of six bat boxes will be installed in, or on the buildings. The boxes will be installed on gables facing the following directions: northeast; northwest; southeast; and southwest. The varied aspects will provide suitable roosting conditions year-round.

1.1.10 A landscape plan has been drawn up to deliver an improved area of foraging habitat for bats and other wildlife.

1.1.11 Lighting inside the building with the retained opening for bats, and all exterior lighting, including communal access lighting, will be controlled by PIR sensors. This will mean that the lights are only lit when they are needed, retaining as much dark space for bats (and other wildlife) as possible.

1.1.12 Measures have been proposed to ensure the safety of any bats present during the

proposed works.

2. Introduction

2.1.1 The original bat survey was commissioned by planning consultant James Roberts on behalf of the client Josh Turner on 11th October 2021. Further hibernation and nocturnal survey works were commissioned on 7th January 2022. The survey was undertaken to inform a planning application for the proposed renovation of a Grade 2 listed farmhouse (Oldfield House) and conversion of associated farm buildings to residential use and storage at Oldfield House Farm, Oldfield Road, Honley.

2.1.2 Middleton Bell Ecology were contracted to conduct a baseline assessment to determine the likely presence or absence of roosting bats and to identify roost locations, access points, species present, level of bat use and the importance of nearby landscape features. The presence of other protected or notable species such as nesting birds was also recorded where identified.

2.1.3 The surveyed buildings were situated in a rural location off Oldfield Road Lane approximately 700m south of the village of Honley.

2.1.4 The legislative context to the survey and assessment reported here is included in Appendix 1.

3. Habitat Assessment

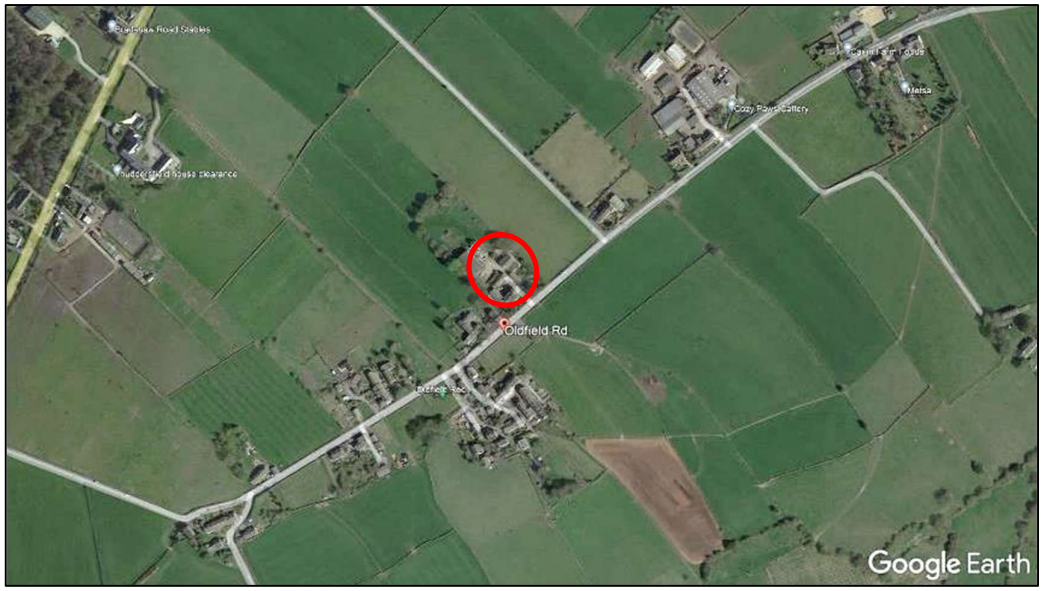
3.1.1 The surrounding area comprises mainly grassland of which most is modified and/or used for silage production (see Figure 1). There are no woodlands in the immediate area and therefore this locality provides sub-optimal bat foraging habitat. Nevertheless, it is expected to support a moderate abundance and diversity of species.

3.1.2 Table 1 summarises the habitats present, adjacent to and further afield of the surveyed buildings

Table 1. Location and habitat table

Name and address: Oldfield House Farm, Oldfield Road, Honley HD9 6RL			
OS Grid Ref. SE 1362 1046		Altitude. 220m	
Local Planning Authority: Kirklees Council			
Features on site and adjacent to site			
Feature	On site	Adjacent	Comments
Buildings	✔	✔	Residential and other farms
River bordered by trees			River Holme 1.5km east
Standing water			
Bridges tunnels and culverts			Associated with River Holme
Trees	✔	✔	Large trees adjacent to southwest elevation of B4
Woodland			Nearest 480m west-northwest
Grassland	✔	✔	Pasture and silage

Figure 1. Site location, as indicated by red circle



4. Methodology

4.1 Data Consultation

4.1.1 Records were requested from West Yorkshire Bat Group (WYBG) and the local records centre (West Yorkshire Ecology (WYE)) for locations within a 2km radius of the site.

4.1.2 A search of the Multi-Agency Geographical Information for the Countryside (MAGIC) website was undertaken to identify historic European Protected Species (EPS) licences obtained for locations within 2km of the site.

4.2 Field Survey

Internal and External Visual Inspection

4.2.1 The survey on 13th October 2021 was conducted by Peter Middleton (MCIEEM; Class licence WML-A34-Level 4, 2017-27977-CLS-CLS)

4.2.2 The following activities were carried out during the surveys in compliance with relevant Bat Survey Guidelines (Collins 2016; and Anon 2022):

- A brief inspection and assessment of the site and habitats present to within 300m.
- An extensive examination of all parts of the buildings both inside and out to record structural features and condition and to record features that may be suitable for roosting bats. Particular attention was paid to any crevices or gaps in walls, lintels, gaps between beams and joists and to the possibility of finding droppings stuck to walls, floors or other surfaces, or insect remains below beams, among a number of other factors. All and signs indicative of a bat roost

presence including live or dead bats, droppings, feeding remains, scratch marks and staining were recorded.
- An assessment of the buildings' suitability to support roosting bats (negligible, low, moderate, high or confirmed roost).

4.2.3 In addition, any signs of nesting bird usage of the buildings were recorded.

4.2.4 The following equipment was used or at hand during the survey:

- Clulight
- Binoculars
- Endoscope
- Ladders
- Camera

Bat Hibernation Survey

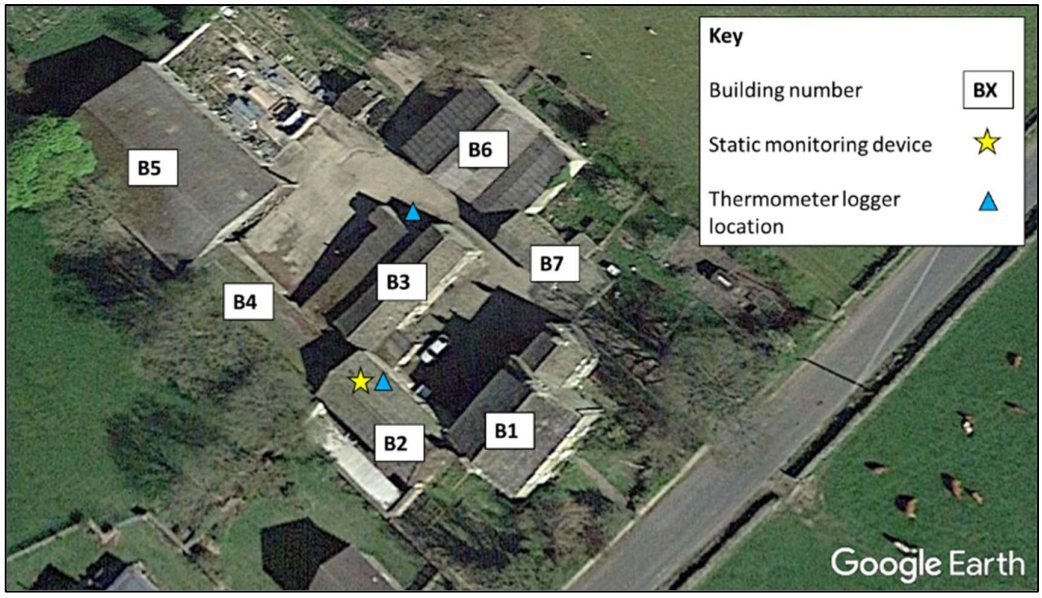
4.2.5 A two-visit bat hibernation survey was undertaken by Peter Middleton and Robert Bell (MCIEEM; Class licence WML-A34-Level 4, 2016-25236-CLS-CLS).

4.2.6 The hibernation survey included an internal and external visual inspection of site buildings undertaken on 26th January and 11th February 2022. The exteriors of all buildings were included in the survey, together with an internal inspection of Buildings 2-7 (Figure 2). Surveyors used torches, with endoscopes available, where required. All evidence of bat roosting was recorded. The roof void of B1 was not inspected during bat hibernation survey works. The decision was made not to inspect the roof void of B1 during the hibernation survey works as it was considered this area did not display potential to support hibernating bats.

4.2.7 In addition to the visual inspection, temperature loggers and a static monitoring bat detector were installed on site between survey visits. The static monitoring device comprised a Wildlife Acoustics SM4 recorder, installed on the first floor of the largest barn (B2) and set to record from 30 minutes before sunset until 30 minutes after sunrise each night. A pair of temperature loggers were also deployed, with a Tinytag Plus 2 thermometer installed in a sheltered external location and a Tinytag Ultra 2 thermometer and hygrometer installed close to the static monitoring device, in a potential roost location, on the first floor of B2.

4.2.8 Sound files recorded by the static monitoring device were analysed using Kaleidoscope software, with reference to published species identification parameters. Tinytag Explorer software was used to download and examine temperature data.

Figure 2. Building numbering and hibernation plan



Nocturnal Surveys

4.2.9 Emergence and re-entry surveys were undertaken on 5th May, 24th May, and 14th June 2022 by the following personnel:

- Robert Bell;
- Greg Slack (MCIEEM; Class licence WML-A34-Level 4, 2017-28068-CLS-CLS);
- Paul Liptrot (MCIEEM; Class licence WML-A34-Level 4, CL20-2018-37087-CLS-CLS);
- Amanda Murphy (Qual CIEEM; Bat Survey Class licence WML-A34-Level 2, 2016-25236-CLS-CLS);
- Andrew Hill (ACIEEM; Bat Survey Class licence WML-A34-Level 2, 2018-33316-CLS-CLS);
- Louisa Malloy (Grad CIEEM; Class licence WML-A34-Level 1, 2016-22694-CLS-CLS);
- Carl Dixon (experienced surveyor); and
- Ian Wright (Bat Survey Class licence WML-A34-Level 2, 2023-11218-CLS-CLS).

4.2.10 The nocturnal surveys required up to seven surveyor positions[1]. The surveyor positions were covered either by a surveyor using an EM Touch bat detector, an unsupervised infrared (IR) camera and IR lighting system with an EM Touch bat detector, or a combination of a surveyor and IR camera[2]. The surveyor positions are

[1] During the initial survey only B2 was covered from Surveyor Position B. In subsequent surveys B1, B2, B3 and B7 were covered from this position but four IR Camera systems were used to ensure coverage of all aspects. The surveyor concentrated on B1, B2, and B3. B7 was covered independently by a camera that was subsequently reviewed in full.
[2] The cameras used were all from the Cannon XA series. Every camera location was accompanied by at least one additional IR floodlight. Cameras and lights were mounted on separate tripods.

shown in Figure 2 and coverage during each survey is shown in Table 2.

Figure 3 – Nocturnal survey surveyor positions

Table 2. Surveyor position coverage during nocturnal surveys.

Surveyor Position	Coverage		
	5th May 222	24th May 22	14th June 22
A	N/A	Surveyor and IR Camera	Surveyor without IR Camera
B	Surveyor and IR Camera	Surveyor and 3 x IR Cameras (B1, B2, & B3); & Surveyor without IR Camera (B7)	Surveyor and 3 x IR Cameras (B1, B2, & B3); & Surveyor without IR Camera (B7)
C	Surveyor and IR Camera	Surveyor without IR Camera	Surveyor without IR Camera
D	N/A	N/A	Unsupervised IR Camera
E	N/A	Surveyor without IR Camera	Surveyor and IR Camera
F	N/A	Surveyor and IR Camera	N/A
G	N/A	Surveyor and IR Camera	Surveyor and IR Camera

4.2.11 The camera footage from locations where a surveyor was also present was reviewed as required to check and confirm the observations made by the surveyors. Camera footage from unmanned locations was reviewed in full by an experienced bat surveyor, with all observations noted in a table. The start and end view shown on the camera is provided in Appendix 2 for all unmanned camera locations to demonstrate the lighting levels present in these areas.

4.3 Survey Limitations

4.3.1 No significant survey limitations were recorded.

5. Results

5.1 Summary

5.1.1 A common pipistrelle *Pipistrellus pipistrellus* hibernation roost and day roost, used by

two bats was identified during survey works. This building was also used by a single brown long-eared bat as a day and night roost during the summer. This building had initially been determined as having high suitability to support roosting bats. Three of the buildings displayed moderate suitability, two buildings were identified as having low suitability, and one building was identified as having negligible suitability to support roosting bats. Table 2 below identifies the bat roost suitability of each building present on site.

Table 2 – bat roosts and suitability present on site

Building	Suitability	Results summary
1	Moderate	No roosting bats recorded
2	High (also a confirmed roost)	Hibernation roost and summer day roost (two roost locations) used by two common pipistrelle. Day and night roost used by one brown long-eared bat.
3	Moderate	No roosting bats recorded
4	Low	No roosting bats recorded
5	Negligible	No roosting bats recorded
6	Low	No roosting bats recorded
7	Moderate	No roosting bats recorded

5.2 Data Consultation

5.2.1 West Yorkshire Ecology provided 105 records for locations within a 2km radius of the site. Species positively identified included common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, Daubenton's bat *Myotis daubentonii*, noctule *Nyctalus noctula* and Leisler's bat *Nyctalus leisleri*. Other records related to either an unidentified pipistrelle species or unidentified species of bat.

5.2.2 The nearest record to site comprised a common pipistrelle field record, collected in 2012 from a location 538m from the site centroid.

5.2.3 West Yorkshire Bat Group provided 42 records for locations with a 2km radius of the site. Species positively identified included common pipistrelle, soprano pipistrelle and noctule. Other records related to either an unidentified pipistrelle species or unidentified species of bat.

5.2.4 The nearest record to site comprised a common pipistrelle field record, collected in 2013 from a location 830m from the site.

5.2.5 Three historical bat EPS mitigation licences have been issued for locations within 2km of the surveyed buildings. The nearest was issued in 2016 to permit the destruction of a common pipistrelle resting place 1.1km southeast of the site.

5.3 Field Survey

Internal and External Visual Inspection

5.3.1 No definitive evidence of bat roosting was recorded on site. The buildings displayed a varying number and diversity of bat roost features ranging from negligible to high. Of the seven buildings surveyed, Building 2 (B2) offered high bat roost suitability with B1, B3 & B7 having moderate suitability and B4 & B6 having low suitability. Building 5 displayed negligible bat roost suitability. The buildings are described in detail below.

Description of buildings

5.3.2 For ease of description, site buildings are numbered and shown in Figure 2, and Figure 3.

Plate 1. Southeast elevation of B1 (Oldfield House), viewed from Oldfield Road

Plate 2. Northwest elevation of B1, with extension (Annex) on left

Building 1

5.3.3 Building 1 (B1) is a large 19th Century three-storey (at the rear) Grade II listed dwelling

(Oldfield House) which comprises part of a farm group built of stone beneath a pitched stone-slate roof with stone copings and chimneys above gables (Plate 1). A later two storey extension with a roof line lower than the main building is attached to the northeast facing gable (Plate 2). The front of the farmhouse overlooks Oldfield Road whilst the rear is accessed from a courtyard. The building has single pane wood-framed sash windows at the front and ordinary single pane wood-framed windows at the rear. The building has cast iron guttering and a combination of uPVC and cast-iron rainwater goods and soil/vent pipes.

Building 2

5.3.4 Building 2 (B2) is a traditional 19th Century barn beneath a pitched stone-slate roof with stone copings and ridges. The barn has a large ground floor opening (uncovered), a single wood door, two ground floor single pane wood-framed windows and three loft hatches on the front (northeast) elevation, whilst at the rear, there is a further wood door. This building has cast iron guttering and a uPVC down pipe. The front (southeast elevation) is accessed from the courtyard (Plate 3).

Plate 3. Front (southeast elevation) of B2, B1 on left and B3 on right

Building 3

5.3.5 Building 3 (B3) is a rectangular 19th Century two-storey outbuilding beneath a pitched stone slate roof with stone copings and ridges. The front elevation (southeast) which faces the courtyard has a flat roofed single-storey extension, single pane wood-framed windows, two timber sliding doors, cast iron guttering and a uPVC down pipe (Plate 4). At the rear (northwest) (Plate 5) there is a stone built, part open-fronted extension with a mono-pitched corrugated asbestos cement roof.

Plate 4. B3 from courtyard

5.3.6 *Building 4*

5.3.7 Building 4 (B4) is a long rectangular stone-built livestock building beneath a pitched corrugated asbestos-cement sheet roof, covered in mosses. The building has just one large entrance on the northeast elevation (Plate 5).

Plate 5. Rear (northwest elevation) of B3 on left with B4 on right

Building 5

5.3.8 Building 5 (B5) is a fairly modern large concrete-framed agricultural building with a pitched corrugated asbestos-cement sheet roof. The building has single skin concrete block walls with frequent strengthening pillars on the exterior which are 3m in height. Above the concrete walls is asbestos-cement sheet cladding which also covers the gables (Plate 6).

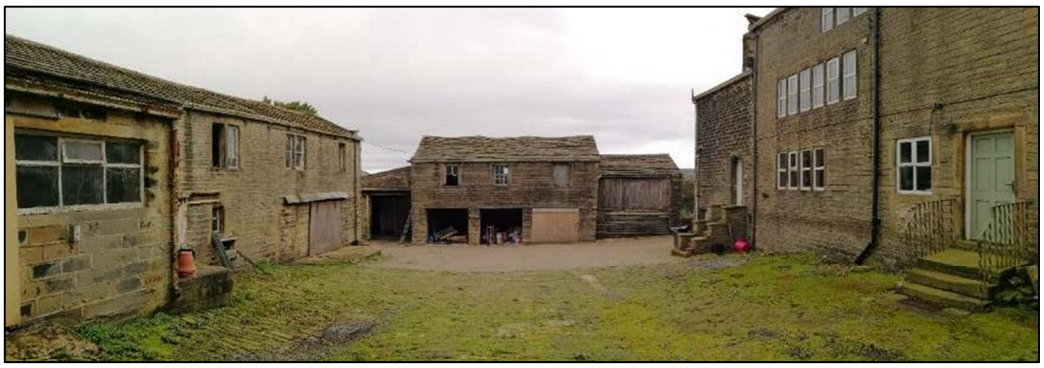
Plate 6. B5 with B4 on left

Building 6

5.3.9 Building 6 (B6) comprises a later addition to the farm (livestock building), it has a stone façade and a pitched corrugated asbestos-cement sheet roof with the south-eastern end having a sloping (mono-pitched) asbestos roof (there is a rainwater channel between the two sections). Asbestos-cement verge cladding is present on gables. This building has a large timber sliding door whilst the south-eastern end is partly open-fronted (Plate 7).

Plate 7. B6 in foreground and B7 in distance, B3 is on the right of photo

Plate 8. B7 (southwest elevation) in centre distance with B1 on right and B3 on left



Building 7

5.3.10 Building 7 (B7) is a 19th Century small stone-built two-storey barn beneath a pitched stone-slate roof. The barn has three large front openings one of which has a wood sliding door. The upper floor has six single pane wood-framed windows (one is now boarded up) and cast-iron guttering. At the side of this building is a small stone-built extension with a pitched stone-slate roof.

Potential Roost Features

Building 1

5.3.11 The roof-space of B1 has a height to the ridge of 2.5m. The roof is supported by queen-post roof trusses, purlins, rafters, battens and a ridge board. There is no roofing membrane beneath the slates, but all slates are back pointed. There is no insulation on the ceiling and light enters the void from a window on the northeast gable. The space and ridge board were found to be extremely 'cobwebby' and no signs of bats were found (Plate 9).

Plate 9. Roof-space of B1

5.3.12 Features identified on the exterior of B1 with potential to accommodate roosting bats include the wall tops and gaps between stone slates.

Plate 10. Inside of B2

Building 2

5.3.13 The inside of the barn is open to the underside of the roof covering which is supported by recently built queen-post roof trusses, purlins, rafters, battens and a ridge board (Plate 10). There is a breathable roofing membrane beneath the slates and several swallow *Hirundo rustica* nests were recorded. A third of the building has a second floor which was accessed from a ladder, several probable old (degraded to fragments) bat droppings were found in amongst the swallow droppings. There is a moderate number of features associated with mortar joints of the masonry on the walls of the interior of the building.

5.3.14 Features on the exterior of B2 displaying potential to accommodate roosting bats include wall tops, holes in the mortar of masonry, crevices between slates, the void between slates and membrane and a gap behind a wood fascia board on the rear southwest elevation.

Building 3

5.3.15 The upper floors of this building are open to the underside of the Type 1F bitumen felt beneath the slates in parts. The roof is supported by king-post roof trusses, purlins, rafters, battens and a ridge board (Plate 11). Several swallow nests were recorded on both floors of this buildings with a former house martin *Delichon urbicum* nest recorded from one window. No definitive signs of bat occupation were noted (one old probable bat dropping was found). The ridges were found to be very 'cobwebby'.

Plate 11. Inside of B3 showing Type 1F felt

5.3.16 Features identified on the exterior of B3 with potential to support roosting bats include the wall tops and the void between slates and also between slates and the roof membrane.

Building 4

5.3.17 The inside of B3 is open to the underside of the roof covering which is supported by a steel frame. The internal walls are cement rendered and there is a large 75-100mm gap between the wall top and asbestos sheet roof covering, thus rendering the wall top unsuitable for use by roosting bats (Plate 12). The exterior of this building lacks features with potential to accommodate roosting bats.

Plate 12. Inside B4

Building 5

5.3.18 The inside of B5 is open to the underside of the roof covering. This building has a concrete frame and rafters (see Plate 13). The only possible roost features are the voids between the corrugations of the asbestos sheets and the concrete rafters. The exterior of this building lacks features with potential to accommodate roosting bats.

Plate 13. Inside of B5

Building 6

5.3.19 The inside of B6 is open to the underside of the asbestos roof covering which is supported by a prefabricated bolted roof trusses which were heavily cobwebbed (Plate 14). The walls both inside and out plus the internal livestock compartments are cement rendered. No signs of bats were found. Bat roost features on the exterior of the building are restricted to the wall tops of the gables potentially accessed from behind the asbestos verge capping.

Plate 14. Roof trusses of B6

Building 7

5.3.20 The upper floor of B7 is open to the underside of the stone slates which are supported by king-post roof trusses, purlins, rafters, battens and a ridge beam (Plate 15). Access to this space was limited for reasons of health and safety, nevertheless, the ridge was found to be fairly 'cobwebby'.

Plate 15. Upper floor of B7

5.3.21 Features identified on the exterior of this building offering potential to accommodate roosting bats include wall tops and gaps between slates.

Bat Hibernation Survey

26th January 2022 visit

5.3.22 Weather during the first hibernation survey visit was relatively dry and mild for the time of year with a temperature of 7°C, 70% cloud with a moderate breeze (Beaufort Scale (BS) 2).

5.3.23 Two common pipistrelle bats were recorded hibernating in a crevice c.20mm wide x 100mm deep and 200mm high within an open masonry joint, associated with an infilled window in the northeast elevation of B2 (Figure 2, and Figure 3; and Plates 16 & 17). No other evidence of bat roosting was recorded.

11th February 2022 visit

5.3.24 Weather during the second hibernation survey visit was cool and dry, with a temperature of 2°C with frost the preceding night. There was 20% cloud and a light breeze (BS 2).

5.3.25 The two roosting common pipistrelle bats in B2, recorded during the first visit were both observed in the same roost location. No other evidence of bat roosting was recorded.

Plate 16. Common pipistrelle hibernation roost location in B2

Plate 17. Two common pipistrelle hibernating in B2

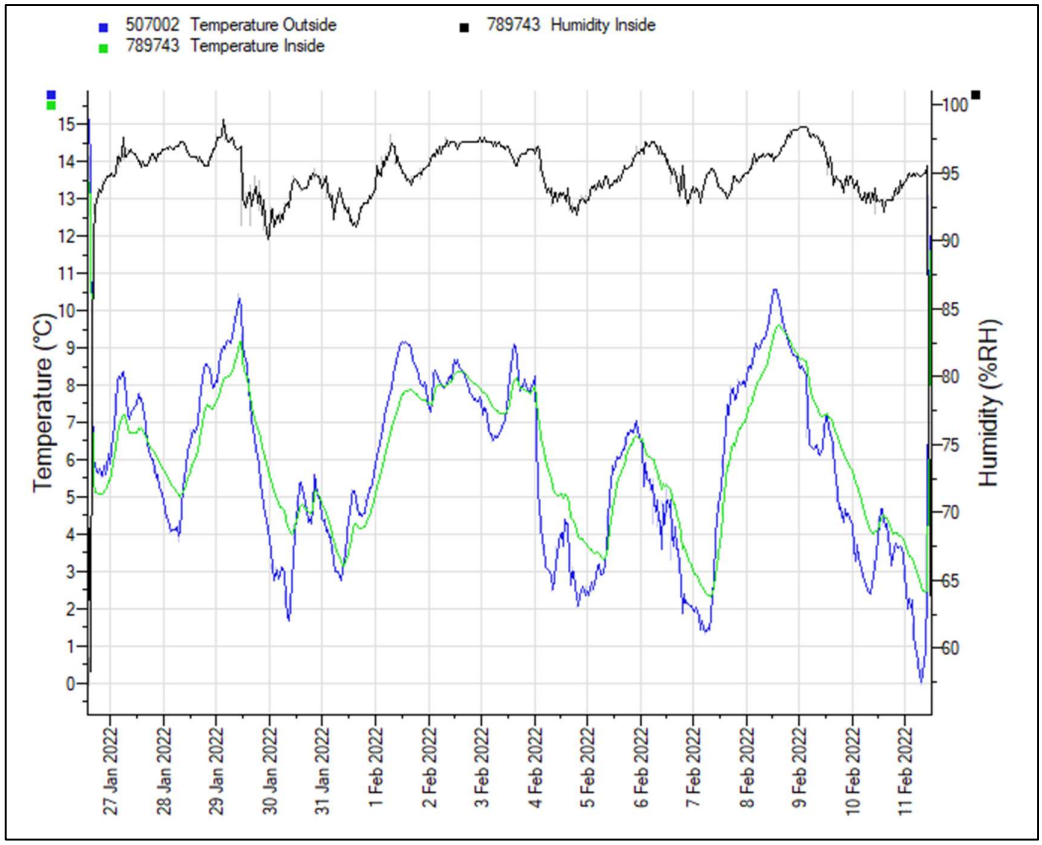
Static monitoring data from hibernation survey

5.3.26 The only bat species recorded during the static monitoring survey comprised common pipistrelle with a total of 511 sound files, recorded from this species across nine of the 14 nights. A high proportion of social calls were recorded amongst the calls with a high of 145 sound files recorded in a single night (26th January 2022).

Temperature study

5.3.27 A graph showing the logged internal and external temperature, together with the internal relative humidity, as recorded during the hibernation study, is shown in Figure 4. The internal thermometer location was chosen to replicate closely the recorded common pipistrelle roost. The temperature data recorded shows temperature variations within the barn are only slightly reduced relative to those in external locations, however it appears from recordings made on 11th February that the roost location within the barn is likely to offer a good degree of frost protection.

Figure 4. Results of temperature study



Nocturnal Bat Surveys

5th May 2022 emergence survey

5.3.28 Sunset was at 20:43. The temperature at the beginning of monitoring was 12ºC, the wind speed was Beaufort 2, with 100% cloud cover. The temperature decreased to 10ºC by the end of the survey and the other conditions remained the same. It remained dry throughout.

5.3.29 One common pipistrelle was observed in the formerly recorded hibernation roost prior to the start of the survey. This bat was observed emerging from the building at 20:59. A second bat was recorded emerging from a second roost location on the inside of the building on the same wall. The second roost location was located to the northwest of the initial roost location, on the other side of the barn door. The roost locations are shown on Figure 5.

5.3.30 At 21:24 (41 minutes after sunset) a brown long-eared bat was recorded by the surveyor inside the barn. This is earlier than the average emergence time for this species, although they have been recorded emerging from roosts as early as 33 minutes before sunset (Andrews, & Pearson, 2016). The bat passed through the barn fairly swiftly and out of the large barn door.

5.3.31 No other bat species were recorded during the survey.

Figure 5. Bat roost summary plan

24th May 2022 re-entry survey

5.3.32 Sunrise was at 04:53. The temperature at the beginning of monitoring was 9ºC, the wind speed was Beaufort 3, with 100% cloud cover. The temperature increased to 10ºC with the cloud cover decreasing to approximately 80% by the end of the survey. The other conditions remained the same. Spots of rain were recorded at the start of the survey but quickly stopped.

5.3.33 No bat roosts were recorded during the survey. Low levels of common pipistrelle activity were recorded. The maximum number of bats recorded at any one time by one surveyor was two. No other bat species were recorded during the survey.

5.3.34 Due to the low level of activity recorded, the surveyor in Position 2.1 was confident that they had covered not only the visible sections of Building 2, but also the adjacent visible areas of Building B1, and B3 (i.e. those areas covered by the cameras in positions 1.2 and 3.1).

14th June 2022 emergence survey

5.3.35 Sunset was at 21:30. The temperature at the beginning of monitoring was 12ºC, the wind speed was Beaufort 1, with 100% cloud cover. The temperature decreased to 9ºC by the end of the survey, the wind ceased, and the cloud cover disappeared. It remained dry throughout.

5.3.36 One common pipistrelle was recorded emerging from the northern interior wall of B2 at 22:05 (35 minutes after sunset). Regular common pipistrelle activity was recorded within the site between 22:00 and the end of the survey.

5.3.37 A brown long-eared bat was recorded flying within B2 at 22:46 (1 hour and 16 minutes after sunset). An inspection of the barn at the end of the survey identified a brown long-eared bat on the interior wall at the northern gable. The bat disappeared behind a timber at the apex of the gable.

5.3.38 No other bat species were recorded during the survey.

6. Assessment

6.1 Summary and Evaluation of Findings

6.1.1 No bats were found roosting in the buildings during the preliminary daytime assessment.

6.1.2 Building 2 had two common pipistrelle roost locations used by a maximum of two bats during summer, and winter. The building was also used as a summer day and night roost used by one brown long-eared bat.

6.1.3 No other bat roosts were recorded.

6.1.4 Buildings B1, B3 & B7 had moderate suitability to support roosting bats, whilst B4 & B6 had low suitability and B5 negligible suitability for use as a bat roost.

6.1.5 Swallow nests totalling 12 were recorded in three of the surveyed buildings (B2, B3, and B7) with an old house martin nest recorded from one barn (B3), however, no signs of barn owl *Tyto alba* were recorded.

6.2 Recommendations/Mitigation

6.2.1 The proposals will comprise the demolition of Building 5 and the conversion of Buildings 1 and 2 to create House 1, the conversion of Buildings 3 and 4 to create House 3, and the conversion of Buildings 6 and 7 to create House 2[3] (Figure 6).

Bats

Licensing

6.2.2 A bat mitigation licence will be required to permit re-development of B2, due to the confirmed presence of the common pipistrelle bat hibernation roost, two common pipistrelle summer day roost locations, and brown long-eared bat day and night roost used by one bat within this building. The licence application will include the mitigation identified within this report and can only be applied for once planning permission has been granted and any wildlife related conditions have been discharged.

Roost provision and access

6.2.3 Many of the new roofs will be covered with natural stone slates. The sealing of such roofs to exclude bats is not feasible. Non-bitumen coated roofing membranes (formerly known as breathable membranes) are degraded where bats come into regular contact with them. This can cause the loss of the breathable nature of the product and can cause the membrane to develop fibres which can entangle and trap bats. Therefore, all of the stone slate roofs will use hessian-backed Type 1F bituminous roofing felt, rather than non-bitumen coated roofing membranes.

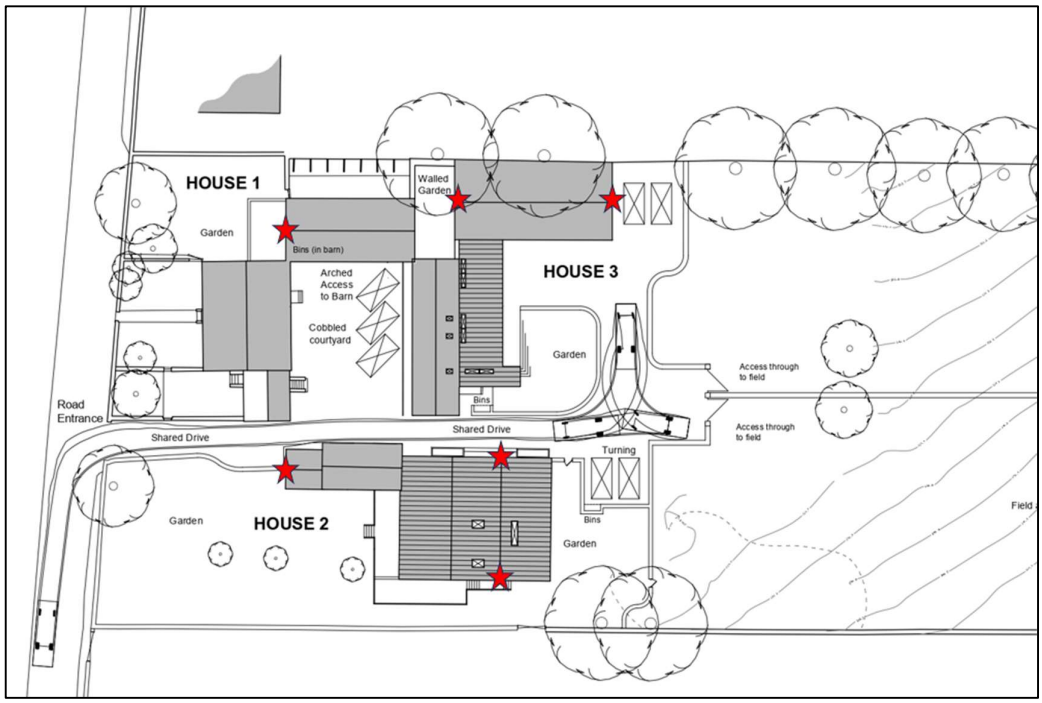
6.2.4 To compensate for the loss of the bat roosts, a total of six ‘build-in’ bat boxes will be installed in or on the renovated buildings. The boxes must be installed near the top of the gable ends. The bat boxes will be on gables facing a variety of aspects. The varied

[3] The proposals are shown in Studio Gedye (2023) Oldfield Road, Honley, Holmfirth, HD9 6RL Drawing 200 to 207.

aspects will provide suitable roosting conditions year-round.

6.2.5 Access into B2 via the opening above the barn doors will be retained. This will retain the potential for B2 to be used as a roost by the brown long-eared bat. The bat boxes provided on site will provide additional roost provision for single, or low numbers of brown long-eared bats, and common pipistrelle.

Figure 6. Plan view of the proposed site layout with stars representing the location of bat boxes



6.2.6 Exterior lighting, including communal access lighting, should be controlled by PIR sensors. This will mean that the lights are only lit when they are needed, retaining as much dark space for bats, particularly brown long-eared bats (and other wildlife) as possible.

Protection of roosting bats during the works

6.2.7 It is recommended that the proposed works follow the precautionary working practices detailed below[4]:

- A pre-works check of the bat roosts on site will be completed by the licensed ecologist.
- The redevelopment of Building B2 will require the exclusion of the bat roosts within the building to allow the construction of the mezzanine area.
- A Greenwoods Ecohabitats single crevice bat box (or similar) will be installed on a retained boundary tree prior to the start of works[5]. The box will be used to house any bats present during the supervision works. If no bats are moved into this box during the works, it could be removed upon completion.

[4] These will be included in the licence application for the site.
[5] https://www.greenwoodsecohabitats.co.uk/shop [accessed 6th June 2022]

- The licensed ecologist will supervise any removal of stone slates required. Any bats present will be moved to the tree mounted bat box by the licensed ecologist, and a cloth will be used to block the entrance to the box until the end of the day.
- The licensed ecologist will deliver a toolbox talk (included as Appendix 6) to the contractors detailing bat legislation, signs of bats and places where they are likely to be encountered and actions to take should bats be found.
- The bat roosts will be excluded, and the stone slate roofs stripped during the bats active season (March to October inclusive).

Birds

6.2.8 Mitigation for nesting birds will comprise the retention of access into B2. This will be a barn associated with House 1 used for car parking and bin storage. In this location four swallow nest cups will be installed in a suitable location, away from parked cars. An artificial house martin nest will be installed in a suitable overhung location.

6.2.9 Habitats

6.2.10 The landscaping included in the Outline Landscaping Plan and Specification figure (Drawing PWP 663 001, Appendix 4) includes:

- Retention and protection of mature trees and an existing hedgerow along southwestern boundary during development. The hedgerow will be infilled and extended with native species where necessary.
- Creation of two ponds (one in the north, and one in the west of the site).
- Grassland at the northwest end of the site to receive four widely spaced standard trees comprising rowan *sorbus aucuparia*, silver birch *Betula pendula*, goat willow *Salix caprea*, and wild cherry *Prunus avium*.
- Remaining grassland will be enhanced by scarification of surface followed by oversowing with a species rich wildflower seed mix including species such as yellow rattle *Rhinanthus minor*, ox-eye daisy *Leucanthemum vulgare* etc. This grassland will be subject to a reduced mowing regime to encourage the establishment of wildflowers and increased diversity.

6.2.11 This will result in a substantially improved area of foraging habitat for bats and other wildlife.

6.3 Conclusion

6.3.1 The surveyed buildings display a range of bat roost suitability from negligible to high, with a common pipistrelle hibernation roost, two common pipistrelle day roosts, and a brown long-eared bat day and night roost recorded during the surveys undertaken.

6.3.2 If the recommendations and mitigation measures identified in this document are enacted, it is considered likely that the local bat populations would be maintained at a favourable conservation status.

6.3.3 Mitigation for nesting birds (notably swallows and house martin) is also agreed and included in the retained barn associated with House 1.

7. References

Anon (2022) Interim Guidance Note: Use of Night Vision Aids for Bat Emergence Surveys And Further Comment On Dawn Surveys. The Bat Conservation Trust, London.

Andrews H., & Pearson L. (2016) *A review of Empirical Data in Respect of Emergence and Return Times Reported for the UK's 17 Native Bat Species*. Andrews Ecology.

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. The Bat Conservation Trust. London.

Studio Gedye (2023) Oldfield Road, Honley, Holmfirth, HD9 6RL Drawing 200 to 207

Appendix 1. Legislation and Policy Guidance

Bats

Bats receive protection under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981 (as amended).

It is an offence to:

- Deliberately capture (or take), injure or kill a bat.
- Intentionally or recklessly disturb bats whilst they are occupying a structure or place used for shelter or protection or obstruct access to any such place.
- Damage or destroy the breeding or resting place (roost) of a bat.
- Possess a bat (live or dead), or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.
- Sell (or offer for sale) or exchange bats (dead or alive), or parts of parts.

The Convention on Biological Diversity, signed in Rio de Janeiro, Brazil in 1992, requires member states to develop national strategies and to undertake a range of actions aimed at maintaining or restoring biodiversity. The UK Biodiversity Strategy was produced in response to the Convention.

In England & Wales, the Natural Environment and Rural Communities (NERC) Act, 2006 imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, "to have due regard, as far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". It notes that "conserving biodiversity includes restoring or enhancing a population or habitat". Barbastelle *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum*, lesser horseshoe bat *Rhinolophus hipposideros*, noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus* are included as priority species within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. At a more local level there are Local Biodiversity Action Plans for smaller geographical areas which may cover a greater or lesser range of bat species.

Where it is proposed to carry out works which will have an adverse impact on roosting bats, the site must either be registered on the Bat Mitigation Class Licence (BMCL), or a European Protected Species (EPS) license must first be obtained from Natural England. This requirement applies even if no bats are expected to be present when the work is carried out.

The National Planning Policy Framework for England was revised in 2021. This document states that plans should 'promote the conservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity'.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended

by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to:

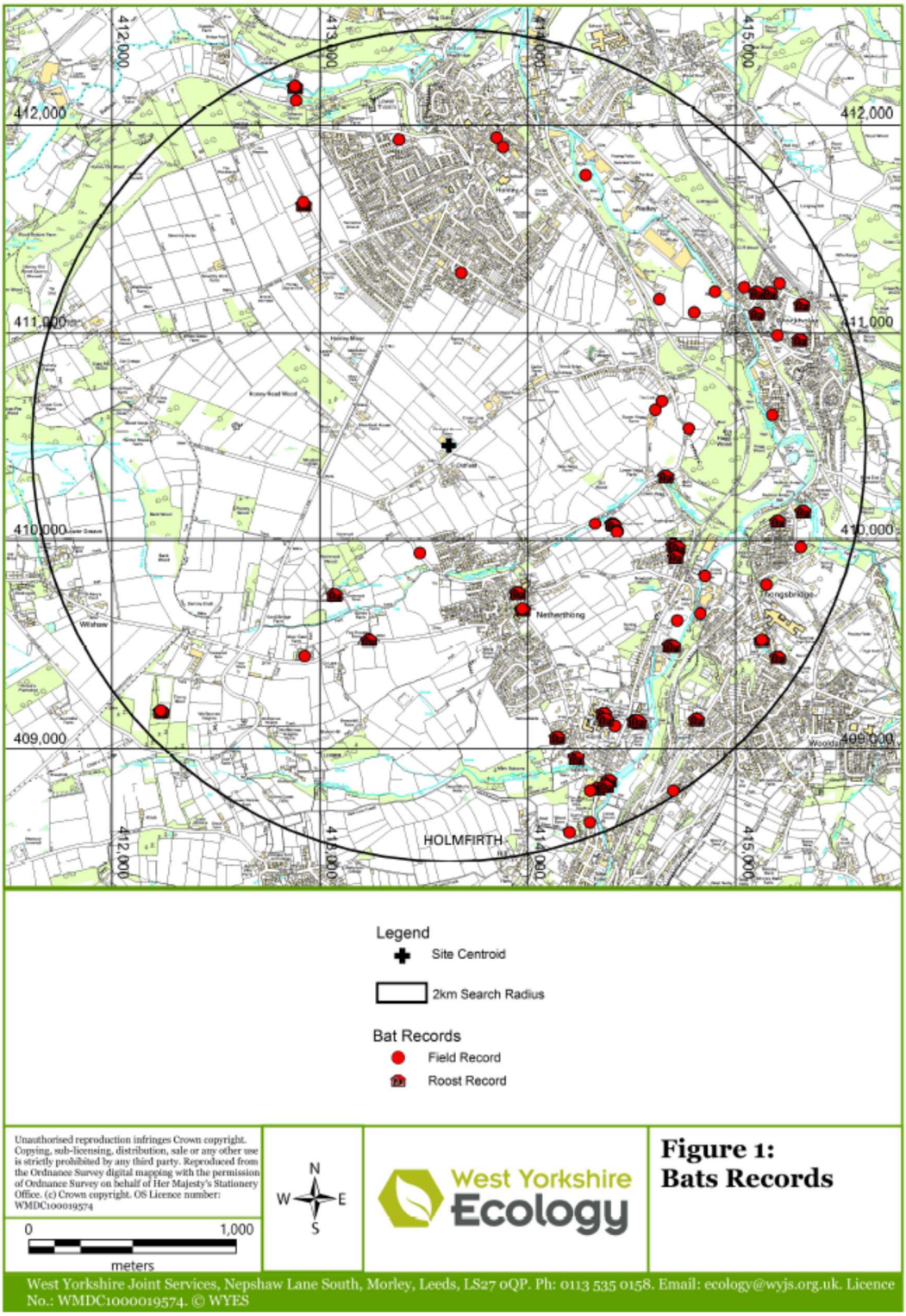
- Intentionally kill, injure or take any wild bird.
- Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.

Appendix 2. Unsupervised Camera Views

Surveyor Position 7.2 camera view during the darkest point of the survey

Surveyor Position 7.2 camera view at the end of the survey

Appendix 3. WYE Bat Records



Appendix 4. Outline Landscaping Plan and Specification Figure

Drawing PWP 663 001 overleaf identifies the proposed landscaping associated with the development.

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PLANTING SCHEDULE:

Trees Planting:

To be planted as per specification.

NATIVE TREES (PADDOCK)						
Total	Abr.	Species	Height	Girth	Size	Spec.
3	Bp	Betula pendula	250-300	8-10	S	B, clear stem 175-200mm
2	Pa	Prunus avium	250-300	8-10	S	B, clear stem 175-200mm
4	Sc	Salix caprea	250-300	8-10	S	B, clear stem 175-200mm
4	Sa	Sorbus aucuparia	250-300	8-10	S	B, clear stem 175-200mm
3	Tc	Tilia cordata	250-300	8-10	S	B, clear stem 175-200mm

NATIVE TREES (REAR GARDEN)						
Total	Abr.	Species	Height	Girth	Size	Spec.
1	Ac	Acer campestre	350-425	12-14	HS	RB, clear stem 175-200mm
1	Bp	Betula pendula	350-425	12-14	HS	RB, clear stem 175-200mm
1	Sa	Sorbus aucuparia	350-425	12-14	HS	RB, clear stem 175-200mm

Note: Biodegradable plastic free tree tubes and spiral guards to be provided to each tree, where required.

Hedge Planting:

To be planted as per specification.

SINGLE SPECIES LOW LEVEL CLIPPED HEDGE			
Species	Size (cm)	Spec	Notes
Taxus baccata	40-60	2L, C	3-5 per linear metre

SINGLE SPECIES NATIVE HEDGE			
Species	Size (cm)	Spec	Notes
Fagus sylvatica	60-90	5L, C	5 per linear m in a double staggered row.

MIXED SPECIES NATIVE HEDGE				
Species	Size (cm)	Spec	Notes	% of mix
Crataegus monogyna	40-60	BR	5 per linear m in a double staggered row	40
Prunus spinosa	60-80	BR	5 per linear m in a double staggered row	20
Corylus avellana	60-80	BR	5 per linear m in a double staggered row	10
Sambucus nigra	60-80	BR	5 per linear m in a double staggered row	10
Viburnum opulus	60-80	BR	5 per linear m in a double staggered row	10
Ilex aquifolium	40-60	C	5 per linear m in a double staggered row	5
Rosa canina	40-60	BR	5 per linear m in a double staggered row	5

Note: Protective fencing/guards: Newly planted areas or individual plants are to include rabbit/deer proof fencing. Either perimeter mesh fencing or individual biodegradable plastic free spiral guards/shelters/tubes are to be installed around all planting where required. Where areas are fenced, mesh to be 1m min above ground and buried 300mm below ground. Each plant should have cane support.

Seeding / Turf:

All grass and wildflower seeding is to be carried out in accordance with specification or similar approved by landscape architect.

LAWN
John Chambers Grass Seed Utility
Sowing rate @ 35g/m²
Amenity PRG, Slender Creeping Red Fescue, Strong Creeping Red Fescue, Browntop Bent, Amenity PRG

TURF
John Chambers Premier Lawn Turf
Hard wearing turf to include rye grass
To be laid where require instant coverage/areas to be made good following construction. (Supplier as approved by landscape architect)

MEADOW
John Chambers Pro Basic 20% 80% Grass Wildflower Mix
Sowing rate @ 5g/m²
Low Maintenance Grass Seed, Lady's Bedstraw, Common Bird's Foot Trefoil, Salad Burnet, Meadow Buttercup, White Campion, Wild Carrot, Oxeye Daisy, Common Knapweed, Black Medick, Ribwort Plantain, Selfheal, Yellow-Rattle, Yarrow, Common Sorrel, Red Campion, Kidney Vetch

Existing grassland to be enhanced by scarification of the surface followed by oversowing with a species rich meadow seed mix. Grassland subject to a reduced mowing regime to allow to flower and to minimise disturbance within the meadow.

Wildlife Pond and Associated Embankment Seeding:

WILDLIFE POND MIX
John Chambers Pro Wet and Moist Soils 80% Grass Seed Wildflower Mix
Sowing rate @ 5g/m²
Low Maintenance Grass Seed, Greater Bird's Foot Trefoil, Meadow Buttercup, Meadowsweet, Purple Loosestrife, Ragged-Robin, Red Campion, Selfheal, Teasel, Water Avens, Yellow Iris, Gipsywort

Products as per specification or similar approved by landscape architect. Appropriate seed mix to be chosen depending on anticipated water level within pond.

Wetland Edge Planting (for wildlife pond):

Schedule provides an indicative but not exhaustive list of species.

AQUATIC, MARGINAL & WATERS EDGE PLANTING		
Name	Size/Specification	Density
Callitriche stagnalis	To be sourced from local ponds where possible and not from outside the local region. Where planting is not available species are to be grown in the UK and certified, to ensure the introduction of exotic or highly invasive species is avoided. Planting to be plugs/baskets where applicable	Between 2-5/m² species depedent
Caltha palustris		
Filipendula ulmaria		
Hydrocharis morsus-ranae		
Iris pseudacorus		
Lythrum salicaria		
Lychnis flos-cuculi		
Mentha aquatica		
Myosotis scorpioides		
Nymphaea alba		
Persicaria amphibia		
Ranunculus aquatilis		
Veronica beccabunga		

Species to be planted along the edge of permanent wet edges of pond. Locations to be determined on site and approved by Ecologist. Where feasible plants are to be sourced from local ponds. Species selected to be chosen form the list above where available/able to source. A mix of floating, submerged and emergent native species. Quantities to be based on the below densities and assume an approx. even % of each species planted on ground.

LANDSCAPE KEY

SOFT LANDSCAPE
(Planting: refer to planting schedule & specification for planting details).

- Existing trees and vegetation to be retained and to be protected (i.e. no dig) as required for duration of works in accordance with Arboricultural consultants recommendations and BS 5837:2012
- Existing trees and vegetation to be removed to facilitate development. See Arboricultural Method Statement for more details
- Proposed native parkland trees
- Proposed native rear garden trees
- Proposed single species low level clipped hedge See specification for more details
- Proposed single species native hedge See specification for more details
- Proposed mixed species native hedge Existing to be retained and enhanced with native hedge species. See specification for more details
- Existing and proposed grass seed/turf See specification for more details
- Existing grassland enhanced See specification for more details
- Proposed wet and dry seed mix See specification for more details
- Proposed marginal planting See specification for more details

HARD LANDSCAPE
Refer to Architects drawing for more detail

- Proposed shared drive
- Proposed driveway / courtyard
- Proposed patios / pathways in rear gardens
- Existing cobbles to be retained and made good where required

BOUNDARIES
Refer to Architects drawing for more detail

- Red line boundary.
- Existing / proposed wall
- Existing access field gate
- Proposed access field gate

NOTES:

TREES & SERVICES

- Where paths and hard surfacing is proposed within close proximity to trees all construction is to be in accordance with BS 5837: 2012.
- Root barriers / root protection measures are to be incorporated in accordance with guidelines where existing and proposed trees and vegetation are within 2m of proposed building or trees are in close proximity to services (details to be agreed).
- Tree and shrub planting proposed within drainage easements to be approved by local water authority. Planting to incorporate root protection measures around services and planting pits to ensure the sewer system is resistant to tree root ingress in accordance with the current Code for Design.
- Contractor shall comply with NJUG publication, volume 4 'Guidelines For The Planning, Installation And Maintenance Of Utility Services In Proximity To Trees' together with BS 5837:2012 Trees in Relation to Construction. Where conflict arises refer to the British Standard.

SOFTWORKS SPECIFICATION NOTES

The contractor is responsible to ensure that no products or practices are to be used that do not comply with relevant British Standards, Codes of Practice and Construction Regulations. Contractor to be fully satisfied with locations and off sets of services prior to excavations.

Site clearance generally: Where necessary remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil. Remove stones exceeding 75 mm. Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

Retain and protect trees and vegetation in accordance with BS 5837 where necessary. Grub up any large roots and dispose of without undue disturbance of soil and adjacent areas. In order to comply with UK legislation in regard to the Wildlife and Countryside Act 1981 (as amended), any tree or vegetation removal and/or management must take place outside of the bird nesting season (March to September inclusive). Where this cannot be achieved, nesting bird checks must be undertaken by a suitably qualified ecologist within 24 hours of the works.

Works within the root protection area (RPA):There shall be no areas of storage, trafficking of machinery, cultivation, ripping or mechanical rotivation, or importing of top soil, within the root protection area (RPA) of the existing trees to be retained. Where paths and hard surfacing is proposed within the retained tree RPA's, a No Dig methodology is to be adopted. Underground reinforcement, such as Cell Web (or similar approved) to be utilised in these locations. No trenches shall be dug within the RPA of the existing trees. New hedging plants within the RPA of the existing trees shall be notch planted. All of the above must be in accordance with BS 5837.

SOIL
Site preparation: Where required all existing topsoil and subsoil shall be stripped and stored separately on site. Heaps must not exceed 3m in height and should be used within 12 months in accordance with BS 4425 (Code of practice for general landscape operations).

Soil Sampling - Existing topsoil and inert sub soils, shall be analysed in accordance with BS 3882 to determine available nutrients, texture, organic matter content and pH. Where require, existing soils are to be improved in accordance with BS 3882:2015
Cultivation - Flail existing ruderal vegetation to ground level and remove arisings prior to cultivation. All areas to receive final layers of topsoil are to be de-compacted prior to spreading. Earth works vehicles to be small scale and tracked (loose-tipping) to minimise compaction, however chosen method for decompaction will be site specific dependant on size and soil conditions. Additional care must be taken as to not damage soil structure. All objects and stones over 75mm brought to the surface during decompaction are to be removed from the prepared surface layer. If existing subsoil horizon is found to consist of heavy clay, all proposed seeded areas to be tine ripped to 200mm depth at 300mm centres to increase drainage. Areas to be seeded to be chain harrowed to a fine tilth and lightly rolled to provide firm seed bed. Remove all stones over 30mm dia in any direction. Imported soil material: Import as necessary to make up any deficiency of topsoil and/or subsoil existing on site to complete the work and mitigate deficiencies. All imported material must conform with industry standards BS 8601 (Subsoil), BS 3882 Topsoil) and CLEA limits on heavy metals. Topsoil to be General purpose, 10mm screened and locally sourced (unless otherwise stated)

Soil build up: Existing topsoil and subsoil to be retained and reused on site within the landscape scheme where possible. Prior to spreading all topsoil to be screened to remove large stones and other deleterious materials, such as plant roots, leaves and clay. Topsoil to be loose-tipped and spread over de-compacted subsoil/receiving area. The total minimum rooting depth for planting, after settlement, should be: Grass 450mm; Planted areas 600mm; Trees 900mm. Topsoil depths for these areas should not normally exceed 300mm with the following minimum depths for each area: Grass 150mm; Planted areas 300mm; Trees 300mm. Meadow & wildflower seeding to be sown directly onto prepared subsoil.

Finished level of topsoil after settlement: Above adjoining paving or kerbs: 25 mm; Below dpc of adjoining buildings: Not less than 150 mm; Shrub areas: Higher than adjoining grass areas by 50 mm; Within root spread of existing trees: Unchanged; Adjoining soil areas: Marry in; Thickness of turf or mulch: Included.)

ADDITIVES
Compost to tree/shrub pits: To be as per BS PAS 100: well rotted sterilised spent mushroom compost max. pH 6.7 or Target Treestart compost. The contractor shall provide a Certificate of Analysis to show that the material being supplied complies with the above criteria. Incorporate spent mushroom compost or equivalent approved peat free compost into tree and planting pits at a rate of 3 parts topsoil to 1 part compost, thoroughly mixed together.

Fertiliser to ornamental shrub beds - Apply slow release fertiliser, Scotts 'Enmag' 4.19.10 NPK or equivalent approved at a rate of 50 gms/sq. metre over topsoil surface and fork into top 225mm spit.

PLANTING
Generally: Minimise trafficking of graded slopes. All plants to be preferably planted between Nov. - March. Nursery stock trees and shrubs to be in accordance with BS 3936 and BS 8545, to be supplied and planted in accordance with British Standards and the Horticultural Association's Plant Handling Guide. Container grown shrubs to be thoroughly watered before planting; trees and bare root shrubs watered after planting.

Times of year for planting: Deciduous Trees, hedges and shrubs: Late October to late March. Evergreen hedges and shrubs: September/ October or April/ May. Container grown plants: At any time if ground and weather conditions are favourable. Watering and weed control to be provided as necessary.

Shrub/Hedge planting pits: Timing: Excavate 1-2 days (maximum) before planting. Pit sizes: Wide enough to accommodate roots/toughs when fully spread and 75 mm deeper than root system. Pit bottom improvement Break up to a depth of 150 mm, incorporating 25g of slow-release fertiliser per planting pit. Where existing planting and roots are present plants are to be notch planted to minimise disruption/root damage. Backfilling material: Reuse excavated material. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil. Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.

Tree pit sizes: Standard trees excavate a tree pit 1.2m x 1.2m x 900mm. Break up sides and bottom of pits to a depth of 100mm to ensure free drainage.Tree pit treatment: Soil ameliorant worked into pit bottoms. Pit sides to be scarified and backfilling material to be in accordance with topsoil and subsoil specification. Drainage Layer: Provide 200mm layer washed, clean gravel to base of pits to aid drainage (tree pit to be actively drained if poor draining soil or clay discovered by contractor).

Tree Accessories: Typically trees in soft landscape to be staked unless stated otherwise by the Landscape Architect. Underground guying is recommended for semi mature trees or trees within hard landscape and in public areas. Trees to be staked using 1m long x 75mm dia. round timber stakes (size of stakes to be adjusted to suit size of tree). Cross member to be installed 75mm x 25mm (larger trees will need large cross members). Locate proprietary Hessian ties on cross member to secure tree and prevent rubbing. Short stakes (<1.0m high) with biodegradable Hessian ties are recommended to encourage wind tolerance and prevent rubbing. Tree pit accessories by Green Tech or similar: Underground guying and perforated plastic irrigation/ ventilation pipe to landscape architects approval.

Root Barriers: To be used wherever the installed rootball will be within 2m of a building foundation or within proximity to underground utilities (distance at which root barrier is required is as per utility providers standards and should be confirmed prior to installation). Root barrier by Green Tech or similar to be installed vertically in accordance with supplier recommendations.

Protective fencing/guards: Newly planted areas or individual plants are to include rabbit/deer proof fencing. Either perimeter mesh fencing or individual biodegradable plastic free spiral guards/shelters/tubes are to be installed around all planting where required. Where areas are fenced, mesh to be 1m min above ground and buried 300mm below ground.

Mulching: Approved medium course chipped tree bark composted for at least 4 weeks. Particle size 25-75mm dia, max. 20% fines, pests and disease free and free of Methyl Bromide contamination. Clear any weeds, ensure soil is thoroughly moistened prior to applying mulch. All planting areas inc. trees, hedges and planting beds should receive an even 75mm depth of bark mulch, adjoining edge of mulch to be 15mm min. below adjacent hardstanding to avoid spillage. 50mm depth of mulch is only suitable for higher quality ornamental bark (<5% fines, 5-35mm size etc.). All bark should be FSC certified. Option to use biodegradable mulch mats to control moisture, soil temperature, erosion and weeds. All trees within grass are to have a 1.5m diameter mulch circle.

Seeding and making good existing grass areas: Steep embankments to be hydroseeded where required. After cultivating, grading and fertilizing prepare seed bed to fine, firm tilth with good crumb structure (Depth: 25 mm). Rake to a true, even surface, friable and lightly firmed but not over compacted. Remove surface stones/earth clods. Extend cultivation into existing adjacent amenity grassed areas sufficient to ensure full marrying in of levels where required. Evenly distribute seeds at an application rate of 35g/m² or as per supplier recommendations. Establish good seed contact with the root zone to promote healthy, consistent growth. Lightly harrow or rake to cover seed. Thoroughly water completed seeding until germination as necessary to keep the surface damp and soil most but not water logged.

Cutting In: Where cutting planting beds into existing grassed areas, the surrounding grass shall be protected and made good as necessary. These areas to be made good by preparing and re-seeding area. Seed mixes: John Chambers Lawn/Meadow seed or similar approved.

Turf Preparation - Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist. Do not lift turf in frosty weather or if ground waterlogged. Arrange phased delivery timescales to avoid need for excessive stacking. Stacking height 1m (max). Do not use dried out or deteriorated turf. After cultivating, grading and fertilizing prepare seed bed to fine, firm tilth with good crumb structure (Depth: 25 mm). Rake to a true, even surface, friable and lightly firmed but not over compacted. Remove surface stones/earth clods. Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

Turf Implementation - Turf to be laid in Spring and summer within 18 hours of delivery; and Autumn and winter within 24 hours of delivery. Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry. Planks to be laid on previously laid turf. Do not walk on prepared bed or newly laid turf. Turf laid along contours with staggered, close butted joints. Do not stretch turf. At the edges, whole turfs to overlap line, trimmed to a true line. Remove high spots and fill hollows with fine soil to adjust levels Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers. Dress turf with Sharp sand at a rate of 2kg/m2 and brushed in to completely fill joints. Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below. Use hardy low maintenance amenity turf suitable for use in shade (To BS 3969).

Seed Preparation and Implementation for Wildflower Areas: No addition of nutrient to soil required. Method to suit soil type, proposed usage, location and weather conditions during and after sowing. A friable firm seed bed required, weed free, alleviation of compaction to a depth of 100-200mm, sowed on a firm and fine tilth. Seed bed preparation to be conducted in dry conditions, close to the time of sowing Remove surface stones/earth clods. Marry in with adjacent levels where required. Evenly distribute seeds at the manufacturers recommended application rate. Establish good seed contact with the root zone to promote healthy, consistent growth. Lightly harrow or rake to cover seed. Thoroughly water completed seeding.

MAINTENANCE
1 year Defects Liability Period applies. All dead or failing plants to be replaced the following growing season. Maintain a weedfree bare earth area 600mm dia minimum around individual trees and shrubs. Herbicide shall only be used where necessary and if use is required it should be a non-residual translocated herbicide and spot applied/applied with spray guard. Application and use to be in accordance with EA guidance. Prior to spraying ensure all spirals are tight to ground level and leaves within spray range are fully enclosed. Arisings: Remove. Trim all edges. Weed control: Substantially free of broad leaved weeds. Method: Application of a suitable selective herbicide. Remove any stones 25 mm in any dimension brought to the surface. Watering: To ensure establishment.

NOTE: Works to be carried out in accordance with the most up to date and current British Standards referenced within this specification.

Project: Oldfield Road, Honley	**Client:** JR Planning		
Title: Outline Landscape Plan & Specification	**Drawn:** CP	**Chk'd:** LW	**App'd** SH
Drawing Number: PWP 663 001	**Revision:** 01	**Drawing Scale:** 1:200@A0	

Rev	Date	Detail	Made	Chk'd	App'd
01	29.09.23	For planning purposes	CP	LW	SH
00	04.05.22	For planning purposes	CP	LW	SH
DR	29.04.22	Draft issue for client comment	CP	LW	SH

Notes:
1. Not for construction all dimensions to be confirmed on site.
2. Based on 21030 200 C Site Masterplan by Studio Gedye.
3. Refer to architects/engineers drawing for site levels, drainage, retaining walls, services and utilities .
4. Build ups/footings to engineers specification.
5. Location of services to be confirmed by contractor prior to installation of any planting.
6. All existing trees to be protected to BS 5837:2012.

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PWP DESIGN

Appendix 5. Records Appendix

In accordance with the legal requirements of bat survey licensing, bat records collected during surveys are supplied to the relevant biological record centres and bat groups. The records to be supplied in accordance with this survey are shown below.

Date	Species	Site Address	OS Grid Reference	Notes
11/02/2022	Common pipistrelle	Oldfield Farm, Honley	SE 13618 10452	Hibernation roost (two bats present)
05/05/2022	Common pipistrelle	Oldfield Farm, Honley	SE 13618 10452	Two summer day roosts (one bat present in each) located in the same building.
14/06/2022	Brown long-eared bat	Oldfield Farm, Honley	SE 13618 10452	Day and night roost (single bat)
14/06/2022	Common pipistrelle	Oldfield Farm, Honley	SE 13618 10452	Up to two foraging bats.

Appendix 6. Toolbox Talk – Oldfield House Farm

Bats roosts have been recorded in Building 2 and may be present during the proposed works.

Without a bat licence, it is illegal to deliberately capture, injure or kill a bat, with bats also protected from disturbance and their roosts are also protected[6].

A pipistrelle approximately 5 cm in length

UK bats are very small animals, and the bodies of the smallest bats are able to fit inside a match box. Several species of UK bat are able to conceal themselves in gaps and crevices little wider than 1 cm.

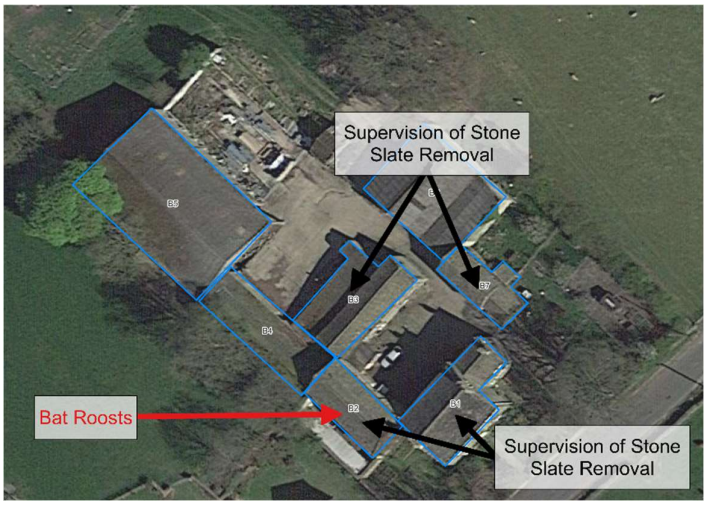
Any material forming a crevice should be removed by hand with care. Suitable crevices/features should be searched using a torch prior to removal. All material over a crevice/void should be lifted in such a way as to avoid crushing any bats underneath. If bat droppings are found then all works in the surrounding area should cease and the licensed bat worker should be contacted.

Stone slate removal must be overseen by a licensed bat worker and the exterior of the building must be inspected prior to any re-pointing works.

Only hessian backed Type 1F bituminous roofing felt should be used for stone slate roofs[7].

Six 'build in' bat boxes are to be installed.

Construction staff should not handle bats[8].



Roost locations and roofing supervision required

Bat droppings look like mouse droppings, but crumble to dust, unlike mouse droppings. They may be present between roofing materials, in crevices in walls and on the wall tops.

If bats are recorded, then all works in the surrounding area should cease and a licensed bat worker should be contacted immediately (Greg Slack – 07514940990).

[6] Disturbing or destroying a bat roost can lead to unlimited fines, up to six months in prison and seizing of items used to commit the offence, e.g. vehicles, plant or machinery.
[7] The reason for this prescription it that modern non-bitumen coated roofing membranes (including all breathable roof membranes) have been shown to often cause the death of roosting bats, which can become entangled within the component filaments of these materials.
[8] Bats in the UK have on rare occasions been shown carry rabies and are easily injured.

Development staff that have received: ***Toolbox Talk – Oldfield House Farm***

Signature	Name	Organisation	Date