

**West Moor Farm Ecological  
Impact Assessment  
Bat and Barn Owl Report**

***IAMP LLP***

***April 2021***

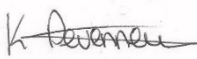

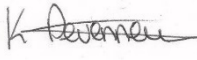


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# Quality Control

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## Ecological Impact Assessment

### West Moor Farm, Washington, SR5 3HY

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## 1.0 EXECUTIVE SUMMARY

- 1.0.1 Durham Wildlife Services Ltd was commissioned by IAMP LLP in March 2021 to undertake update bat and barn owl surveys at West Moor Farm, Washington, SR5 3HY. The approximate National Grid Reference for the centre of the site is **NZ 33140 58511**.
- 1.0.2 The survey is required prior to demolition of the buildings on site, as part of a Nationally Significant Infrastructure Project (NSIP) known as IAMP (International Advanced Manufacturing Park). A bat and barn owl *Tyto alba* risk assessment survey took place on the 24<sup>th</sup> March 2021 and was undertaken by Karen Devenney (Licence No. 2015-11466-CLS-CLS) and Sacha Elliott (Barn Owl Licence CL29/00411).
- 1.0.3 The 2021 risk assessment survey was an update, with surveys also carried out in 2015 (WYG 2015), 2018 (DWS, 2018) and E3 Ecology (2019) these reports should be read in conjunction with this one, but are summarised within this report. Only DWS surveys recorded any bat roosts in 2018, with small common pipistrelle roosts present in buildings 5 and 2 (Figure 5).
- 1.0.4 Checks for barn owls were carried out on the 24<sup>th</sup> March 2021 at the same time as the bat risk assessment. A visit was also carried out on the 16<sup>th</sup> February 2021. Previously the site was visited on the 17<sup>th</sup> June 2014 (WYG 2015), 22<sup>nd</sup> May 2018 (DWS 2018) and 13<sup>th</sup> June 2019 (E3 Ecology 2019). The 2014 surveys identified Temporary Roosting Sites (TRS) in building 7 and Active Roosting Sites and/or a Potential Nesting Site in building 8. In 2018, pellets were found again in building reference 8, and again assessed as either ARS or a PNS. However, the lack of activity during the nocturnal surveys indicates that this was an ARS only and was not used for nesting in 2018. E3 Ecology in 2019 did not find any fresh evidence.
- 1.0.5 In 2021, Barn owl pellets were present within building reference 8, on the floor at the southern end, and on a plank above a series of grain stores in the upper storey of the building. There was a large number of fresh pellets present in both February and March 2021, with a barn owl seen here during the February visit. Smaller owl pellets were also present in the adjacent upper storey room, with a little owl *Athene noctua* seen in February 2021. Barn owl pellets were also present above beams in Building 7 at the northern end. Old pellets were present in the upper section of barn 5. Overall building 8 was deemed to be a Potential Nesting Sites (PNS), with

Active Roosting Sites (ARS) in buildings 7, 8 and a Temporary Roost Site (TRS) in building 5.

- 1.0.6 The proposals will result in the loss of two common pipistrelle day roosts likely to comprise small numbers of male and/ or non-breeding female bats. There was a maximum count of two roosting bats on one survey occasion. Loss of a roost of any size requires a European Protected Species licence, which must be obtained prior to the buildings being demolished.
- 1.0.7 As all buildings are due to be demolished, it is recommended that three tree mounted bat boxes (Made of woodcrete or woodstone – similar to Schwegler 2F) are erected in the trees to the south of the farmyard (Figure 6). For maximum bat potential, these boxes should be at least 3-5m off the ground, sheltered from strong winds and exposed to the sun for part of the day (south/south-west elevations). The position of the boxes should be free from clutter (branches blocking flight path in). A hibernation box will also be erected in this area to provide alternative provision in winter. The hibernation box should be placed on the northern elevation.
- 1.0.8 In accordance with The Bat Mitigation Guidelines there are no timing constraints associated with an occasionally used roost and as such the works will be scheduled to commence following granting of the EPS Licence. However, it is recommended that work be carried out outside of the bird nesting season (March – August). Should work be carried out within this time that buildings will need to be checked for nesting birds before works commence. Works will also avoid the core hibernation period of December to February.
- 1.0.9 Demolition will result in the loss of barn owl boxes which are acting as PNS, and a number of barns being used as ARS. Barn owls are Schedule 1 species, as such it is an offence to disturb a barn owl while 'it is building a nest or is in, on or near a nest that is containing eggs or young' or to 'disturb dependent young of such a bird'. Consequently, prior to demolition the site must be checked for nesting barn owls by a suitably licenced ecologist. No barns will be demolished while barn owls are showing any breeding behaviour on site, including nest buildings or while young are dependant.
- 1.0.10 At least 30 days prior to demolition (Barn Owl Trust 2012) three barn owl boxes will be erected; one in a mature tree a short distance away, and two within Hylton

Bridge Farm (Stables and barn) (Figure 6). The tree selected is in the open and mature, with a fork to provide suitable secure locations for the box to be installed.

1.0.11 Provision is also due to be provided at Elliscope Farm, with three barn owl boxes in trees and a wildlife tower. This is to mitigate the loss of barns being used by barn owls when Elliscope Farm is demolished. However, this provision will be installed prior to the demolition of West Moor Farm.

1.0.12 Adhering to the Policy EN2 of the IAMP Area Action Plan (2017), monitoring will be undertaken on all the mitigation proposed above.

- All boxes and the wildlife tower will be checked annually to ensure they are intact and secure. Any lost or damaged boxes will be replaced.
- Monitoring surveys will be carried out every three years for the next twenty years, starting in 2022. These surveys will include checks of the bat boxes by a licenced bat ecologist and checks of the barn owl boxes by a licenced barn owl ecologist.
  - The bat boxes should be checked late summer/early Autumn (August/September) to avoid disturbing bats when they have dependant young.
  - The barn owl boxes should be checked around March – April, with later checks if it is a late start to the season. June should be avoided because they are more susceptible to disturbance around this time.

## 2.0 INTRODUCTION

### 2.1 Background

2.1.1 Durham Wildlife Services Ltd was commissioned by IAMP LLP in March 2021 to undertake update bat and barn owl surveys at West Moor Farm, Washington, SR5 3HY. The approximate National Grid Reference for the centre of the site is **NZ 33140 58511**.

2.1.2 The survey is required prior to demolition of the buildings on site, as part of a Nationally Significant Infrastructure Project (NSIP) known as IAMP (International Advanced Manufacturing Park). A bat and barn owl *Tyto alba* risk assessment survey took place on the 24<sup>th</sup> March 2021 and was undertaken by Karen Devenney (Licence No. 2015-11466-CLS-CLS) and Sacha Elliott (Barn Owl Licence CL29/00411).

2.1.3 The 2021 surveys were updates, with surveys also carried out in 2015 (WYG 2015), 2018 (DWS, 2018) and E3 Ecology (2019) these reports should be read in conjunction with this one, but are summarised within this report. Only DWS surveys recorded any bat roosts in 2018, with small common pipistrelle roosts present in buildings 5 and 2 (Figure 5).

2.1.4 Checks for barn owls were carried out on the 24<sup>th</sup> March 2021 at the same time as the bat risk assessment. A visit was also carried out on the 16<sup>th</sup> February 2021. Previously the site was visited on the 17<sup>th</sup> June 2014 (WYG 2015), 22<sup>nd</sup> May 2018 (DWS 2018) and 13<sup>th</sup> June 2019 (E3 Ecology 2019). The 2014 surveys identified Temporary Roosting Sites (TRS) in building 7 and Active Roosting Sites and/or a Potential Nesting Site in building 8. In 2018, pellets were found again in building reference 8, and again assessed as either ARS or a PNS. However, the lack of activity during the nocturnal surveys indicates that this was an ARS only and was not used for nesting in 2018. E3 Ecology in 2019 did not find any fresh evidence.

### 2.2 Site Description

2.2.1 The IAMP site totals over 300 hectares including a 115 hectare Ecological and Landscape Mitigation Area (ELMA). It is located north of Nissan Manufacturing UK in Sunderland, but spans an area of South Tyneside as well. West Moor Farm lies at the southern edge of the site within the IAMP ONE extension. Large areas of the development site are made up of arable land and improved grassland. A small number of semi-improved grasslands are present. There are a number of small woodlands present across the site, a mixture of plantation and semi-natural



(some of these woodlands also fall within a Local Wildlife Site). The River Don and Usworth Burn also flows through site. Cottages and farm holdings are scattered across the site and the A19 Dual Carriageway lies to the east.

2.2.2 West Moor Farm includes a farmhouse, a cottage with attached out-building, a second out-building, a large detached barn and a complex of attached barns. The farmhouse is a two-storey stone building with a pitched slate roof. The adjacent cottage (building reference 3) is single storey stone building with a pitched slate roof. The out-building attached to the cottage (building reference 2) is again stone, with a pitched slate roof. Building reference 4 is a small brick building used for storage. Building reference 11 is a large breezeblock wood panel barn with corrugated metal roof. The complex of adjoining barns varies greatly in construction. Building reference 6 is an open fronted barn with brick back wall. Building reference 9 is a brick byre with slate roof. The attached building reference 7 is a large breeze block and corrugated asbestos roofed barn. Building reference 8 is two storey stone and brick barn with a corrugated roof. Building reference 10 is a large brick and stone barn with corrugated metal roof. The adjacent building reference 5 is a stone and brick barn with part corrugated metal roof and part slate roof. West Moor Farm is bordered by farmland, both arable and pasture, to the north and west. The IAMP ONE development site lies to the east and Nissan Manufacturing UK lies to the south (Figures 1 and 2, Appendix A).

## **2.3 Survey Objectives**

2.3.1 Surveys were undertaken to:

- establish the presence / absence of bat roosts and barn owls in the buildings,
- assess the level of usage of confirmed roost sites and the status of the roosts,
- identify access points utilised by bats,
- assess the level of usage for barn owls,
- determine an appropriate mitigation strategy to minimise impacts on roosting bats and barn owls arising from the proposed works.

### **3.0 METHODOLOGY**

#### **3.1 Desk Study**

- 3.1.1 A request was issued to Durham Bat Group and Environmental Record Information Centre North East (ERIC NE) for any information regarding protected/controlled species on, or in the direct vicinity of the site.

#### **3.2 Survey Approach**

- 3.2.1 The survey for bats involved external and internal examination of the properties following the methodology outlined in the Bat Worker's Manual (Mitchell-Jones and Mcleish 2004). The survey for barn owls involved external and internal examination of the buildings for evidence of occupation in the form of droppings, pellets, feathers, nests and actual Barn Owls following the methodology outlined in the Barn Owl Survey Methodology and Techniques for use in Ecological Assessment (Shawyer, 2011) and the Barn Owl Conservation Handbook (The Barn Owl Trust, 2012).
- 3.2.2 The update bat and barn owl risk assessment survey took place on the 24<sup>th</sup> March 2021 and was undertaken by Karen Devenney (Licence No. 2015-11466-CLS-CLS) and Sacha Elliott (Barn Owl Licence CL29/00411). Additional checks were made for barn owls on the 16<sup>th</sup> February 2021 by Sacha Elliott.

#### **3.3 Buildings**

- 3.3.1 The building exteriors were visually assessed for potential access points and evidence of bat activity in March 2021. Features which have potential as access points were sought, such as small gaps in barge/soffit/fascia boards, raised or missing ridge tiles or flashing and gaps in mortar, brick and/or stonework. Evidence that potential access points were actively used by bats including staining within gaps and bat droppings or urine staining under gaps was recorded. Indicators that potential access points were likely to be inactive included the presence of cobwebs and general detritus within the access.
- 3.3.2 The interiors of the buildings were also visually assessed where possible for evidence of bat activity and/or for the potential to be used by bats. Evidence of a roost was determined as the presence of a dead or live bat, concentrated piles or scattered droppings, food remains such as insect wing fragments as well as scratch marks and/or staining.

3.3.3 Before entering, the exterior of each building was inspected for any holes in the outside walls which would be large enough to allow a barn owl access to the interior. These were also inspected for droppings on the walls beneath. Whilst the interior was inspected, one surveyor remained outside the building to ensure a good view of any owls that may leave the building during the inspection.

3.3.4 The interior of the building was then systematically inspected for roosting owls, pellets, droppings and feathers by working across the floor, searching the area underneath the roof beams and pipes. The area beneath all potential roosting sites was searched, and all ledges and cavities were thoroughly inspected.

### **3.4 Nocturnal Surveys**

3.4.1 The nocturnal surveys were conducted by surveyors equipped with Batbox duet, Echo Meter 3, Anabat SD1/SD2 or EM Touch bat detectors, positioned to give a clear view of all sides of the building being surveyed. The emergence surveys commenced 15 minutes before sunset and continued until all bats were considered to have emerged in accordance with the Bat Conservation Trust Guidelines (BCT, 2016). Dawn surveys commenced 90 minutes before sunrise and continued until 15 minutes after sunrise (BCT, 2016).

3.4.2 During the nocturnal bat surveys, barn owls were also recorded, with the main objective to record any barn owls entering or leaving the surveyed properties and the location of any entry/exit points. In addition, surveyors record any other barn owl activity detectable from their survey position. Where possible the time of recording, species, number of barn owls, type of activity, and flight path of observed birds is recorded. Barn owls entering or leaving a building are considered evidence of roost presence within the property.

**Table 1 Survey dates and personnel - WYG 2014 Surveys**

<b>Date</b>	<b>Building Surveyed</b>	<b>Surveyor 1</b>	<b>Licence No</b>	<b>Additional Surveyors</b>
08.07.14 Dusk Start 21.27 End 23.13 Sunset 21.43 Temp: S/14.5°C E/12.4°C Light/no wind	Buildings 1, 2 and 3	Michelle Nesbitt	Class 2 licence registration number CLS01505	Hazel Makepeace Martin Fagan Daniel Ward
18.07.14 Dawn Start 02.52 End 04.52 Sunrise 04.52 Temp: S/15.5°C E/16.5°C Light/no wind	Buildings 1, 2 and 3	Michelle Nesbitt	Class 2 licence registration number CLS01505	Kirstin Aldous (Class 2 licence registration number CLS02009) Martin Fagan Daniel Ward
25.06.14 Dawn Start 02.25 End 04.28 Sunrise 04.28 Temp: S/11.1°C E/10.0°C Light/no wind	Buildings 5, 8 and 9	Michelle Nesbitt	Class 2 licence registration number CLS01505	Kirstin Aldous (Class 2 licence registration number CLS02009) Martin Fagan Katherine Knox
17.07.14 Dusk Start 21.18 End 23.03 Sunset 21.33 Temp: S/18.4°C E/18.1°C Light/no wind	Buildings 5, 8 and 9	Michelle Nesbitt	Class 2 licence registration number CLS01505	Martin Fagan Katherine Knox Daniel Ward

**Table 2 Survey dates and personnel - DWS 2018 Surveys**

<b>Date</b>	<b>Building Surveyed</b>	<b>Surveyor 1</b>	<b>Licence No</b>	<b>Additional Surveyors</b>
02/07/2018	Buildings 1-5, 8 & 9	Karen Devenney	2015-11466-CLS-CLS	Sacha Elliott (Bat Licence Number 2017-31732-CLS-CLS, Barn Owl Licence CL29/00411) Kevin O'Hara (Licence Number 2017-28905-CLS-CLS) Emma O'Hara Jonathan Pounder (Licence Number 2015-11439-CLS-CLS) Dave Pounder Barry Thompson (licence number 2015-14078-CLS-CLS) Rebekah Bainbridge Cain Scrimgeour
Dusk Sunset: 21.46 Start: 21.31 End: 23.16				
Temp: S/15.4°C E/13.8°C				
Weather: Dry, light 9mph winds				
02/08/2018	Buildings 1-3 & 5	Jonathan Pounder	2015-11439-CLS-CLS	Andy Pounder Dave Pounder Daniel Gray Rebekah Bainbridge
Dawn Sunrise: 05.16 Start: 03.45 End: 05.31				
Temp: S/16°C E/16°C				
Weather: Dry, light wind				
04/09/2018	Buildings 2, 3 & 5	Ian Craft	2015-15085-CLS-CLS	Kevin O'Hara (Licence Number 2017-28905-CLS-CLS) Rebekah Bainbridge Damian Bubb Adrian George (Licence Number 2017-32910-CLS-CLS) Dave Pounder Andy Pounder
Dusk Sunset: 19.51 Start: 19.37 End: 21.22				
Temp: S/14.5°C E/14°C				
Weather: Dry, slight wind				

**Table 3 Survey dates and personnel - E3 Ecology 2019 Survey**

<b>Date</b>	<b>Building Surveyed</b>	<b>Surveyor 1</b>	<b>Licence No</b>	<b>Additional Surveyors</b>
13 <sup>th</sup> June 2019 Start 21.25 End 23.25 Sunset 21.44 Temp: S/13.6°C E/11°C	All	Mary Martin	2015-12822-CLS-CLS	Victoria Raitt Ellie Coleman Vince Cassidy Zoe Dunnett Adam Crolla Chloe Taggart Marius Guraliuc

Light/no wind				Jeanette Bryden Ellie Bullivant Emma Archer Matt Errington
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### 3.5 DWS Surveyor Experience

#### 3.5.1 Karen Devenney MSc MCIEEM (Bat Licence 2015-11466-CLS-CLS)

Karen is a Principal Ecologist at DWS with around eighteen years experience of working in an ecological field, in addition to a degree in Zoology and Masters in Wildlife Conservation and Management both from Newcastle University. She has extensive experience in surveying for a wide variety of protected and notable species, including water vole, otter, barn owls, brown hare and badger. She has carried out a large number of PEA's/extended Phase 1 habitat surveys and botanical surveys within her current role at DWS and one of her roles within DWT involved carrying out BAP habitat mapping and condition assessments on Local Wildlife Sites. Since 2006 she has been an active member of Durham Bat Group, through which she gained her bat licence in 2008. She has also held numerous development EPSM bat licences. Karen currently holds a great crested newt survey licence, bat survey licence (Level 2), and a current CSCS card. She is also an accredited agent on barn owl licence CL29/00411.

#### 3.5.2 Sacha Elliott (Bat Licence no. 2017-31732-CLS-CLS, Barn Owl Licence CL29/00411)

Sacha is in her seventh season of bat work which has included carrying out risk assessments, dawn and dusk surveys and hibernation surveys on a variety of projects and properties. Sacha also has extensive experience at carrying out surveys for a range of protected and notable species of mammal, as well as being an experienced ornithologist. She holds bat, great crested newt and barn owl licences.

#### **Additional Surveyors for 2018 Bat Nocturnal Surveys**

#### 3.5.3 Ian Craft (Licence no. 2015-15085-CLS-CLS)

Ian has held a bat licence for around 10 years and has been carrying out commercial bat surveys for around 15 years. During this time he has carried out on average around 20-30 risk assessments each year and 50-100 nocturnal surveys for projects ranging from wind farms to large scale housing developments

and individual barn conversions. He has also been involved in preparing and submitting EPSM bat licences for a range of developments.

#### **3.5.4 Dan Gray (Accredited Agent on Bat Licence Number 2015-15085-CLS-CLS)**

Daniel has gained a range of experience working with bats over the past 3 seasons, in voluntary, subcontractor and full time positions – completing bat risk assessments on sites from schools and hostels to cathedrals and trees. He has also completed numerous dawn and dusk surveys using point and transect methods on projects including single buildings and sites with multiple buildings, bridges and castles.

#### **3.5.5 Kevin O’Hara (licence no. 2017-28905-CLS-CLS)**

Kevin has held a bat licence for around 9 years and recently upgraded his licence as the need arose to class II; he has been carrying out commercial bat surveys for around 13 years. During this time he has carried out a range of techniques from risk assessments, dusk and dawn surveys, transects, and sound analysis a season for projects ranging from wind farms to large scale housing developments and individual property conversions and redevelopments across the Northern of England and southern Scotland.

#### **3.5.6 Jonathan Pounder (licence number 2015-11439-CLS-CLS)**

Jonathan is a licensed member of Durham Bat Group (since 2007) and has been working on commercial bat surveys since 2003. Surveys have included risk assessments, small scale domestic surveys, barn conversions, larger commercial property’s, traditional and heritage buildings, large scale developments and wind farm (development and monitoring); including emergence, dawn, feeding, transects, roost inspections, overseeing demolition work and contractors during work relating to licensed operations across the North of England.

#### **3.5.7 Dave Pounder**

David has worked on commercial bat surveys since 2005 including emergence, dawn and feeding surveys; firstly, as a supported, but now an experienced surveyor. David has worked on risk assessments, small scale domestic surveys, barn conversions, larger commercial property’s, traditional and heritage buildings, large scale developments and wind farm (development and monitoring); including emergence, dawn, feeding, transects across the North East of England.

**3.5.8 Andy Pounder**

Andrew is a member of Durham Bat Group and is working towards his bat licence. Andrew has worked on commercial bat surveys since 2004. Surveys have included risk assessments, small scale domestic surveys, barn conversions, larger commercial property's, traditional and heritage buildings, large scale developments and wind farm (development and monitoring); including emergence, dawn, feeding, transects, inspections, overseeing demolition work and contractors during work relating to licensed operations across the North East of England.

**3.5.9 Barry Thompson (licence number 2015-14078-CLS-CLS)**

Barry has eight years' experience as a bat surveyor within the private and public sectors, carrying out dusk and dawn vantage point and transect surveys. He has completed surveys on a range of buildings including churches, houses and bridges, as well as trees and wind turbine developments. Over the past two years Barry has achieved Natural England and Scottish Natural Heritage (78554) bat licences.

**3.5.10 Emma O'Hara**

Emma is in her fifth bat survey season, receiving in house and some external training carrying out and assisting on risk assessments, dusk emergence surveys and dawn re-entry surveys on a wide range of developments ranging from individual properties, schools and hospitals to large scale developments such as wind farms across the North East of England.

**3.5.11 Adrian George (licence number 2015-32910-CLS-CLS)**

Adrian is an experienced bat surveyor who has undertaken commercial bat surveys for seven years on a range of developments including bridges, residential properties and stately homes, small and large scale wind farms and power lines. Surveys have included emergence and return, transect, hibernation, swarming, building inspections, preliminary ground level roost assessments and potential roost feature inspections of trees. Surveys have been undertaken throughout mid to north England, Wales and Scotland.

**3.5.12 Rebekah Bainbridge**

Rebekah has experience in performing transect surveys which she conducted to provide data for her dissertation. For this she used both a Batbox III and a Magenta detector to analyse whether different detectors gave significantly different



population estimates, and whether any habitat preference was shown by the pipistrelles and noctules she detected.

#### **3.5.13 Cain Scrimgeour**

Cain has been undertaking bat surveys since 2014, including dusk emergence surveys, dawn re-entry surveys and transect surveys. These have been at a variety of locations including nature reserves, tree roosts, barns, and individual properties. He helps develop an understanding of bat surveys with students, as a guide for Wild Intrigue, and he is a member of Northumberland Bat Group.

#### **3.5.14 Damian Bubb**

Damien has over four years' experience of conducting bat surveys (static detectors, transects and emergence surveys). He is experienced at survey design, bat call identification (utilising Wildlife Acoustics Kaleidoscope and Analook), analysis and reporting from transects and static bat detectors. He has provided volunteer training workshops in the use of bat detectors and coordinated a project for North Pennines AONB recording and mapping bats within the AONB (in excess of 4000 georeferenced calls collated and mapped). He has a strong technical background with experience of using a wide range of monitoring and survey equipment in the field, including mobile (EM3, EM Touch, Pettersson M500 USB, Anabat) and static bat detectors (SM2, SM3, SMZC, Anabat Express).

## 4.0 SURVEY RESULTS

### 4.1 Desk Study and Consultation Response

- 4.1.1 ERIC NE provided 60 bat records within 2km of the IAMP site boundary. A large number of these are from Washington Wildfowl and Wetland Centre, which lies over 2.2km south from West Moor Farm, and Hylton Castle which lies 2.5km to the east. One record from within the site was provided, which was a common pipistrelle foraging record dating from 2006. Species recorded within 2km include Whiskered/Brandt's *Myotis brandtii/mystacinus*, natterer's *Myotis nattereri*, noctule *Nyctalus noctula*, common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared *Plecotus auritus*. However, the vast majority of the records ERIC NE provided were for common pipistrelle bats.
- 4.1.2 Durham Bat Group provided 21 records of roosts, as well as a large number of roosts found within bat boxes at Washington Wildfowl and Wetlands Centre between 2013 and 2018. The roost records are mostly common pipistrelle, with a brown long-eared, and a natterer's roost recorded. There are also a number of roosts where the species is unidentified. The bats roosting in the boxes in Washington WWT include soprano pipistrelle and common pipistrelle. DBG also provided records for a large number of flight records. No records are from the site itself. Again, a large number of records are for Washington WWT and Hylton Castle/Hylton Dene. Species recorded in the area include common pipistrelle, Daubenton's *Myotis daubentonii*, noctule, whiskered/Brandt's, soprano pipistrelle, Nathusius' pipistrelle *Pipistrellus nathusii*, natterer's and brown long-eared. The vast majority of the records are for common pipistrelle bats.
- 4.1.3 ERIC NE, including Durham Bird Club records, provided 60 records of barn owls in 2018. The vast majority are for Washington Wildfowl and Wetland Centre. 13 are for West Pastures, Nissan and Hylton Bridge. The former two fall within the IAMP site. One of these records is for a barn owl roosting in a barn, with the rest foraging activity, with the most recent dated from 2013 at Hylton Bridge. In 2021, ERIC NE provided 7 records, two records were for Nissan, the rest further afield. Data from Durham Bird Club included 48 records of barn owls. No additional records were for the IAMP site compared with the 2018 data.
- 4.1.4 The WYG 2014/15 (WYG 2015) surveys across the IAMP area found bat roosts in Make-me-rich Cottage, and Elliscope Farmhouse, with small numbers of common pipistrelles recorded in both. A soprano pipistrelle roost has also been recorded within a horse-chestnut tree in the woodland at Hylton Bridge. DWS in 2018 found

small common pipistrelle roosts in buildings 2 & 5 at West Moor Farm, Make-Me-Rich building 1, Elliscope Farm Building 6 & 8, My Pet Stop Building 3, Strother House building 2 and trees 34 & 52. Building 9 at Hylton Grove, building 8 at Elliscope Farm, and Tree 57 recorded small soprano pipistrelle roosts. Update surveys carried out in 2020 by DWS (survey work still in progress) found roosts still present within Make-me-rich, Hylton Grove, Elliscope Farm and a small common pipistrelle roost within Usworth Cottages (now demolished).

4.1.5 The WYG 2014/15 (WYG 2015) report found Temporary Roosting Sites (TRS), ARS and PNS for barn owls at West Moor Farm and Elliscope Farm, which lies 1.4km to the northeast of West Moor Farm. DWS in 2018 also found pellets within West Moor Farm and recorded barn owls during nocturnal surveys confirming the site as an ARS, and PNS, although they were not deemed to be breeding there in 2018. Old pellets were found in 2018 at Elliscope but no fresh evidence nor were any barn owls seen during nocturnal surveys. E3 Ecology (2019) recorded no fresh barn owl signs at West Moor Farm, and no barn owls were seen during the nocturnal survey.

4.1.6 Surveys in 2020 (DWS, survey work still in progress) found fresh barn owl pellets in Hylton Bridge Farm (with the stables and barn). This farm lies 1km metres to the northeast and had become vacant between the 2018 (when no signs were found) and 2020 surveys. This was deemed to be an ARS but no suitable places for nesting were observed. Fresh pellets have also been recorded at Elliscope Farm during monthly visits between July 2020 and March 2021. Elliscope Farm is deemed to be an ARS being used all year round, and a PNS, although nesting has not been confirmed.

## **4.2 Habitat Description**

4.2.1 West Moor Farm lies immediately adjacent to the A1290 road, on the northern side, with Nissan Manufacturing UK on the southern side of the road. The road is woodland lined along its southern edge, which provides the site with some connectivity between the farm and higher quality bat foraging habitat nearby. The farm is surrounded by a mixture of arable and pasture to its north and west, with the IAMP ONE development area to the east. Much of the arable land has been left fallow for the last two years and thus the habitat near the farm provides some good quality habitat for barn owl foraging. The wider IAMP development site includes additional arable fields, improved grassland, along with small pockets of

woodland and the River Don flows through the site. Cottages and farm holdings are scattered across the site.

- 4.2.2 Outside of the IAMP boundary lies additional farmland to the north, and west, with housing beyond this. To the east is the A19 dual carriageway, with farmland and housing beyond this. The river corridor provides some foraging habitat, but this quickly becomes very urban. Limited woodland lies beyond the IAMP area, with small pockets of woodland within Nissan, along with some large ponds, and Barmston Lake lies south west of Nissan. The River Wear lies just over 2km to the south, which is tree lined. (Figures 1 and 2, Appendix A).

### **4.3 Internal/ External Survey**

- 4.3.1 Full details of the findings of the building assessment can be found in Table 6 overleaf with photographs in Appendix B and building plan shown in Figure 3, Appendix A.
- 4.3.2 West Moor Farm includes a farmhouse, a cottage with attached out-building, a second out-building, a large detached barn and a complex of attached barns. The farmhouse (Building 1) is a two-storey stone building with a pitched slate roof. Numerous gaps are present, particularly under the eaves and the property was assessed as low-moderate potential for bats. The adjacent cottage (building reference 3) is single storey stone building with a pitched slate roof. The outbuilding attached to the cottage (building reference 2) is again stone, with a pitched slate roof. These two buildings are in a poorer state of repair, with slipped tiles, and gaps in the ridge and gables. The cottage was assessed as moderate potential for bats, with the attached out buildings a confirmed roost from the 2018 surveys.
- 4.4.3 Building reference 4 is a small brick building used for storage. It has a flat felt roof. Some gaps are present in the brickwork and beneath the roof and the building was assessed as having low potential for bats. Building reference 11 is a large breezeblock wood panel barn with corrugated metal roof. This was assessed as having negligible potential for bats.
- 4.4.4 The complex of adjoining barns varies greatly in construction. Building reference 6 is an open fronted barn with brick back wall. Building reference 9 is a brick byre with slate roof. The attached building reference 7 is a large breeze block and corrugated asbestos roof barn. Building reference 8 is two storey stone and brick

barn with a corrugated roof. Building reference 10 is a large brick and stone barn with corrugated metal roof. The adjacent building reference 5 is a stone and brick barn with part corrugated metal roof and part slate roof. The latter had a hay loft internally.

4.4.5 Barn owl pellets were present within building reference 8, on the floor at the southern end, and on a plank above a series of grain stores in the upper storey of the building. There was a large number of fresh pellets present in both February and March 2021, with a barn owl seen here during the February visit. Smaller owl pellets (old) were also present in the adjacent upper storey room. Barn owl pellets were also present above beams in Building 7 at the northern end. Old pellets were present in the upper section of barn 5. 4.4.1 Overall building 8 was deemed to be a Potential Nesting Sites (PNS), with Active Roosting Sites (ARS) in buildings 7, 8 and a Temporary Roost Site (TRS) in building 5.

4.4.6 Buildings 6, 7, and 10 were assessed as having negligible potential for bats. 8 and 9 were assessed as low potential and 5 a confirmed roost from the 2018 surveys. Building reference 8 is an active roost site (ARS) for barn owls and a potential nesting site (PNS). Buildings 7 is an ARS, and Building 5 a TRS because no fresh pellets were present. Overall, the buildings had changed very little since 2018.

#### 4.4.7 Table 4 Risk Assessment Results

Building Reference		Bat Potential Risk Level	Barn Owl Signs
1	Farmhouse	Low- Moderate	None
2	Out buildings	Confirmed Roost	None
3	Cottage	Moderate	None
4	Out buildings	Low	None
5	Stone barn	Confirmed Roost	Old pellets in upper storey
6	Open front barn	Negligible	Barn owl pellets where barn joins with 7.
7	Breeze block barn	Negligible	Barn owl pellets at northern end
8	2 Storey Barn	Low	Large accumulations of pellets (including fresh) at southern end on floor. Barn owl seen here in February. Pellets on plank above grain store. Old little owl pellets in upper storey of eastern part of barn. Little owl seen in February.
9	Brick byre	Low	None

10	Stone and brick barn	Negligible	None
11	Large metal barn	Negligible	None

4.3.8 **Table 5** Guidelines for assessing the potential suitability of proposed development sites for bats. (BCT, 2016).

\* For example temperature, humidity, height above ground, light levels, levels of disturbance

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

4.3.9 **Table 6** Building Structural Features.

Building Code (Figure 3, Appendix A)	Building construction details	Structural features present						Other structural features of note	Potential bat access and roosting points	Internal features	Evidence
		Gables	Barge boards	Soffit Boards	Fascia Boards	Flashing	Roof void				
1	Two storey stone built farm house. Pitched slate roofed. Small porch to south with pitched hipped slate roof. Wooden fascia.	✓	X	X	✓	X	✓	None noted.	Gaps in stonework beneath fascia and at eaves. Gaps under stone lintels above windows. Gaps behind fascias to the south. Stonework in better condition to the south. Gaps in stonework on western gable. Eastern gable in good condition.	Large roof void. Uncluttered. Some daylight visible, including at the corner at the northwest gable.	Evidence birds are using gaps in stonework on northern elevation.
2	Single storey, stone built former stable block/ series of out buildings/storage sheds, pitched slate roof.	✓	X	X	X	X	X	None noted.	Some gaps present in slate roof. Gaps in the ridge. Gaps in stonework to the north. Gaps in stonework above window to the west. Eastern gable in good condition.	Skylights. No void, except above toilet at the eastern end. Roof open to slates except for wooden sarking beneath the top row of slates.	None.
3	Single storey stone cottage with brick extension. Multi-pitched slate roof. Wood windows and doors. Wooden fascia.	X	X	X	✓	✓	✓	None noted.	Missing tiles, gaps in tiles. Gaps in roof ridge. Gap behind fascia on stone sections.	Large amounts of daylight visible. No felt/lining, old insulation Water ingress.	None.

Building Code (Figure 3, Appendix A)	Building construction details	Structural features present						Other structural features of note	Potential bat access and roosting points	Internal features	Evidence
		Gables	Barge boards	Soffit Boards	Fascia Boards	Flashing	Roof void				
4	Single storey, brick built storage units, flat felt roof	X	X	X	X	X	X	None noted.	Numerous gaps in brickwork and mortar beneath roof.	None.	None.
5	Stone and brick built barn, corrugated asbestos and slate roof. Wooden fascia.	✓	X	X	✓	X	X	None noted.	Gaps present in stone at southern gable. Gaps along roof top behind fascia. Gaps in stonework of 5 inside barn 10.	Skylights. Small upper level/hay loft in southern section of barn (asbestos roof section).	Old barn owl pellets in hay loft.
6	Open fronted barn, brick back wall, monopitched corrugated metal roof.	X	X	X	X	X	X	None noted.	None noted.	None.	None.
7	Breeze block and corrugated metal barn. Corrugated asbestos roof. Metal supports/beams.	✓	X	X	X	X	X	None noted.	None noted. Grain store potential to be used by barn owls.	Large open hay barn. Grain store inside.	Barn owl pellets at northern end where barn links through to barn 6.
8	Two storey stone and brick built barn. High, corrugated metal roof.	✓	X	X	X	X	X	None noted.	Gaps present in stonework. Gaps in stonework of 8 inside barn 10.	Narrow corridor at lower level, with large grain stores. Upper storey includes a room and access to the top of the grain stores.	Barn owl pellets – on walkway above grain stores. Little Owl pellets– in upper storey room (windows open), some fresh. Large accumulation of droppings on floor at southern end including very fresh droppings.



Building Code (Figure 3, Appendix A)	Building construction details	Structural features present						Other structural features of note	Potential bat access and roosting points	Internal features	Evidence
		Gables	Barge boards	Soffit Boards	Fascia Boards	Flashing	Roof void				
9	Brick built barn (byre). Pitched slate roof.	✓	X	X	X	X	X	None noted.	Holes in roof.	Skylights No felt or sarking	None.
10	Large breezeblock, stone, and brick barn. Corrugated metal roof. Metal beams.	✓	X	X	X	X	X	None noted.	None noted. Internal gaps in adjacent buildings.	Skylights	None.
11	Large breezeblock and wood panel barn. Pitched corrugated asbestos roof.	✓	X	X	X	X	X	None noted.	None noted.	No void.	None.

#### 4.4 Nocturnal Surveys

4.4.1 Two nocturnal surveys were carried out by WYG in 2014, followed by three nocturnal surveys in 2018 by DWS, with an update survey in 2019 by E3 Ecology. The dates and surveyor details relating to the nocturnal surveys undertaken are given in Table 1. Weather conditions during the surveys were optimal, and appropriate ambient air temperatures and timings across all.

4.4.2 Details of all roosts can be found in Table 7 below, along with Figure 5 in Appendix A and photographs 23 & 24 in Appendix B. In summary, no roosts were recorded across the 2015 and 2019 surveys. During the 2018 surveys, a single pipistrelle (possibly 2) was seen emerging from a gap under the ridge tile on building reference 2. On a separate survey a single common pipistrelle was seen emerging from under the guttering on the eastern elevation of building reference 5.

4.4.3 WYG 2014 Summary - Buildings 1, 2 and 3 West Moor Farm (Figure 4a, Appendix A)

Common pipistrelle, soprano pipistrelle and *Myotis* sp. bats were recorded during the dusk emergence and dawn re-entry surveys of Building 1, 2 and 3 at West Moor Farm. Low levels of foraging and commuting activity were recorded during the surveys. The first bat was recorded 35 minutes after sunset and the last bat was recorded 37 minutes before sunrise. No bats were recorded emerging from or re-entering the building during the surveys. It is therefore concluded unlikely that Buildings 1, 2 and 3 at West Moor Farm are being used by roosting bats.

4.4.4 WYG 2014 Summary - Buildings 5, 8 and 9 West Moor Farm (Figure 4a, Appendix A)

Common pipistrelle and soprano pipistrelle bats were recorded during the dusk emergence and dawn re-entry surveys of Building 5, 8 and 9 at West Moor Farm. Low levels of foraging and commuting activity were recorded during the surveys. The first bat was recorded 1 hour 17 minutes after sunset and the last bat was recorded 1 hour and 30 minutes before sunrise. No bats were recorded emerging from or re-entering the buildings during the surveys. It is therefore concluded unlikely that Buildings 5, 8 and 9 at West Moor Farm are being used by roosting bats.

4.4.5 2nd July 2018, Dusk Emergence Survey: West Moor Farm, Building 1-5, 8 & 9. (Figure 4b, Appendix A) (DWS)

Low levels of activity were recorded during this survey, with activity attributed to common pipistrelle and soprano pipistrelles. Most activity was recorded as either

foraging or commuting. However, at 22.29 a single common pipistrelle was seen to emerge north from under the ridge tiles of building reference 2, a possible emergence from the same location was also recorded two minutes before. No bats were seen to emerge from any other properties.

4.4.6 2nd August 2018, Dawn Return Survey: West Moor Farm, Building 1-3 & 5. (Figure 4c, Appendix A) (DWS)

Low levels of activity were recorded during this survey. Nearly all activity could be attributed to common pipistrelle bats, but a single soprano and a single unknown species of *Myotis* was also recorded. All bats were either commuting or foraging in the survey area, with the exception of one bat roost recorded in Building 5. At 4.26am a single common pipistrelle bat was recorded entering the eastern elevation of the barn, under the guttering. No bat roosts were recorded in any of the other buildings on site.

4.4.7 4<sup>th</sup> September 2018, Dusk Emergence Survey: West Moor Farm (Buildings 2, 3 & 5). (Figure 4d, Appendix A) (DWS)

Moderate activity was recorded around the farm on this survey, with most surveyors recording double figures in numbers. Most activity can be attributed to common pipistrelles, but a small number of soprano pipistrelles were also recorded. All bats were recorded foraging and commuting in the survey area, and no roosts were recorded in any of the buildings on site.

4.4.7 13<sup>th</sup> June 2019, Dusk Emergence Survey: West Moor Farm (all buildings) (Figure 4e, Appendix A) (E3 Ecology)

No roosts were recorded. There was regular foraging activity around the farmyard in some of the large open barns, but only by small numbers of common pipistrelle bats. The first bat was recorded entering the site from the south-east, to the south of the farmhouse (building 1) at 22.01, approximately 16 minutes after sunset, lux ~31), which then foraged around the farmyard for much of the survey. No more than 2 bats were seen at any one time.

**Table 7** All roost locations

Building Name	Building Reference	Species	Date	Description of Roost
West Moor Farm	2 - Out-buildings	1/ possibly 2 x Common Pipistrelle	02/07/2018	Under the ridge tiles.
	5 - Stone barn	1 x Common Pipistrelle	02/08/2018	Eastern elevation of the barn, under the guttering.

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## 5.0 IMPACT ASSESSMENT

### 5.1 Constraints to Survey

5.1.1 The 2021 daytime risk assessment was carried out too early to determine whether the site is being used for breeding. Any areas suitable for nesting have been recorded as Potential Nesting Sites (PNS) and are being mitigated for as such.

5.1.2 The most recent bat survey was in 2019 and is nearly 2 years old. Additional update surveys are planned for 2021, prior to submitting a licence application to Natural England for demolition. Given the sites location, and previous activity across site, it is likely that the site would only provide roosting opportunities for small numbers of common pipistrelle bats.

### 5.2 Description of Development

5.2.1 The sites lies within the IAMP ONE extension development site, and needs to be demolished in order for the development to progress.

### 5.3 Legislation

#### 5.3.1 *Bats*

All bat species and their roosts in Britain are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA) through their inclusion on Schedule 5. The implementation of the Countryside and Rights of Way Act 2000 (CRoW 2000) has amended the WCA 1981 to include 'reckless' damage to, or destruction of a roost, and disturbance of bats whilst in a roost.

5.3.2 Bats are also included on Annex IV of Council Directive 92/43/EEC of 21<sup>st</sup> May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the United Kingdom ratifying this directive, all British bats are protected under The Conservation of Habitats and Species Regulations 2017 (as amended). Combined, these make it an offence to kill, injure, capture or disturb bats or obstruct access to, damage or destroy roosts.

5.3.3 Paragraph 43 of the Regulations states: A person who deliberately disturbs wild animals of any such (European Protected) species, is guilty of an offence. For the purposes of this paragraph, the disturbance of animals includes in particular any disturbance which is likely: -

- a. to impair their ability-
  - i. To survive, to breed or reproduce, or to rear or nurture their young, or

- ii. In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- b. to affect significantly the local distribution or abundance of the species to which they belong.

5.3.4 Under the law, a bat roost is any structure or place used for shelter or protection e.g. a building, bridge or tree. Bats use many roost sites and feeding areas throughout the year and they tend to re-use the same roosts for generations.

### 5.3.5 **Birds**

Wildlife and Countryside Act 1981 (as amended) (WCA) provides protection for Barn Owls and most other wild bird species in England, Scotland and Wales. The eggs and nests of most bird species are protected. Specifically, under Part 1, Section 1 (1), it is an offence intentionally to:

- a) Kill, injure or take any\* wild bird
- b) take, damage or destroy the nest of any\* wild bird while that nest is in use or being built
- c) take or destroy an egg of any\* wild bird

\*a small number of species are excluded under Schedule 2 of the Act

5.3.6 Barn Owls are listed in Schedule 1 of the Wildlife and Countryside Act 1981 (WCA 1981) (as amended), therefore on top of the legal protection afforded all nesting birds it is also an offence to disturb a Barn Owl, except under licence, 'while it is building a nest or is in, on or near a nest that is containing eggs or young' or to 'disturb dependent young of such a bird'.

## 5.4 **National Planning Policy Framework**

5.4.1 The NPPF outlines government planning policies and how they should be applied within local authorities. The framework places an emphasis on sustainable development, encouraging the re-use of land that has previously been developed over using land that has a higher environmental value and by minimising impacts on biodiversity. The NPPF states that developments should aim to conserve or enhance biodiversity and encourages opportunities to incorporate biodiversity in and around developments.

## **5.5 UK and Local Biodiversity Action Plans (BAP)**

- 5.5.1 Noctule, soprano pipistrelle and brown long-eared bats are listed as UK priority species (UKBAP, 2007). Actions for conservation effort have been identified for each of these species, which include consideration of the effects of land use, the promotion of habitat creation, enhancement and improvement and the protection of roosts via the implementation of legislation and policy.
- 5.5.2 Sunderland has a generic local BAP that aims to cover all species of bats recorded within Sunderland as species of conservation concern (DBAP, 2006). Barn owls are also a local BAP species (DBAP 2006).

## **5.6 Natural Environment and Rural Communities (NERC) Act**

- 5.6.1 The Natural Environment and Rural Communities (NERC) Act (2006) identifies a list of habitats and species which are of principal importance for the conservation of biodiversity in England. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decisionmakers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. The UKBAP species list was used to create the S41 list of priority species. Several species of bat relevant to Sunderland are listed as Species of Principal Importance under Section 41 of the NERC Act (2006) including soprano pipistrelle, and brown long-eared.

## **5.7 Legal Implications of Proposed Development**

- 5.7.1 The results of the surveys indicate the presence of two small, day roosts for common pipistrelles. All buildings are due to be demolished, resulting in the loss of all roosts. All roost sites are protected by law and thus the proposed works would result in an offence being committed under The Conservation of Habitats and Species Regulations 2017 unless a European Protected Species Licence is obtained.
- 5.7.2 All British birds, their nests and eggs are protected in law under Part 1 of the Wildlife and Countryside Act 1981 (WCA 1981) (as amended). Therefore, the proposed works would result in an offence being committed under the Wildlife and Countryside Act 1981 (WCA 1981) (as amended), if nests were destroyed while in use. Barn owls are listed under Schedule 1, giving them a higher level of protection and therefore an offence would also be committed if barn owls were disturbed while

building a nest or on or near a nest that is containing eggs or young. It is also an offence to disturb dependent young of such a bird.

## 5.8 Likely Impact

5.8.1 The likely impact of the proposed works is evaluated against criteria in Table 8 below which is based on NATA (New approach to appraisal) (Byron, 2000). The evaluation is based on no mitigation works being implemented.

### 5.8.2 Table 8 Impact Assessment

Impact Magnitude	Nature Conservation Importance				
	Negligible	Local	County	National	European
<b>Beneficial Effect</b>	Non-Significant	Non-Significant	Non-Significant	Non-Significant	Non-Significant
<b>Nil Effect</b>	Non-Significant	Non-Significant	Non-Significant	Non-Significant	Non-Significant
<b>Minor (short term or reversible effects)</b>	Non-Significant	Non-Significant	Slight	Moderate	Moderate
<b>Moderate (deterioration of feature)</b>	Non-Significant	Slight	Moderate	Severe	Severe
<b>High (loss of feature)</b>	Non-Significant	Slight	Moderate	Severe	Severe

5.8.3 Nature conservation importance is based on:

#### *European*

- Habitats which are listed in Annexe 1 of the Habitats Directive or are included as candidate or proposed Special Areas of Conservation
- Species which are listed under Schedule 2 of the Habitats Directive and form a population which would qualify the site for consideration as a Special Protection Area (SPA) or SAC.

#### *National*

- Habitats which meet the criteria for designation of or occur within a Site of Special Scientific Interest (SSSI)
- Species which are protected under national wildlife legislation such as the Wildlife and Countryside Act or are listed in a national Red Data Book or

that are part of a population or assemblage that would meet the criteria for the site being designated as a SSSI.

*County*

- Habitats that are rare or uncommon in the County that would meet the criteria or are included in a second tier nature conservation site (SINC/LWS) or which for part of a local Biodiversity Action Plan (BAP) or Habitat Action Plan (HAP).
- Species that are rare or uncommon within the County or form part of a population or assemblage that would meet the criteria for inclusion in a SINC.

*Local*

- Habitats that are uncommon or threatened in the local area.
- Species that are uncommon or threatened in the local area.

*Negligible*

- Habitats or species that do not fall into any of the categories listed above.

#### **5.8.4 Bats**

##### *5.8.5 Short-term impacts: disturbance*

Without appropriate mitigation and method statement, potential impacts on roost sites at West Moor Farm will be from:

- The potential killing/ injuring of individual bats during the works.
- Disturbance of bats during the works.

5.8.6 Given the small size and status of the roosts, and the availability of similar roost sites in the immediate surrounding area for bats to utilise, it is considered that the impact arising from the disturbance of these roost sites is likely to be low (Natural England, 2004). Colonies of pipistrelle bats are known to occupy several roost sites, sometimes moving between roosts in a single season (Altringham, 2003).

##### *5.8.7 Long-term impacts: roost modification*

The proposed works to demolish the buildings will not lead to any roost modifications and no impacts are therefore expected from roost modification.

##### *5.8.8 Long-term impacts: roost loss*

The proposed works to demolish the buildings will result in the loss of two common pipistrelle day roosts, likely to comprise small numbers of male and/ or non-breeding female bats. There was a maximum count of two roosting bats on one survey occasion. These are likely to be non-breeding females and/or male bats. In



the absence of mitigation, this is of severe conservation importance. However, impacts arising from the loss of this roosting habitat are considered to be low (Bat Mitigation Guidelines, 2004). Buildings 1, 2, 3, 5 and 8 are deemed to be suitable for small numbers of hibernating bats, for common species. This is of low-moderate conservation significance (Bat Mitigation Guidelines, 2004).

#### 5.8.9 *Long-term impacts: habitat loss, fragmentation and isolation*

The proposed IAMP development would result in the loss of some hedgerows in close vicinity. However, the woodland on the opposite side of the A1290 road will be retained, therefore the site would not become isolated if retained. The loss of the barns will also result in the potential loss in wet weather foraging habitat, but given the low numbers of bats recorded across site, this is likely to be for only a very small number of bats.

#### 5.8.10 *Cumulative Impacts*

The IAMP development will result in the loss in roosts on three other sites nearby. Usworth Cottages lies 950 metres east, Make-me-rich 1.7km northeast, and Elliscope Farm 1.4km northeast. All contain day roosts for between 1 and 3 common pipistrelles. It is possible for the same bats to be impacted by the proposals. However, all roosts are very low numbers of a common species, likely to have a number of different roosts within the immediate area. Roosts within trees and Hylton Grove farm within the IAMP site will be retained. Overall, the provision of bat boxes should provide adequate mitigation, with additional mitigation proposed at subsequent stages/as part of subsequent licences, which will result in net gain overall. Furthermore, the works resulting in the loss of roosts will be phased. Overall, the proposals should not have an impact on the bat population in the local area.

#### 5.8.11 **Barn Owls**

##### *Short-term impacts: disturbance*

Without appropriate mitigation and method statement, potential impacts on barn owls at West Moor Farm will be from:

- The potential killing/ injuring of individual barn owls during the works.
- Disturbance of barn owls/ nesting barn owls during the works.
- Potential abandonment of nest/eggs/chicks through disturbance.

#### 5.8.12 *Long-term impacts*

The proposed works to demolish the buildings will result in the loss of 3 barns being used by barn owls. These barns are being used all year round. In the absence of mitigation, the conservation impact of this would be moderate.

#### 5.8.13 *Long-term impacts: habitat loss, fragmentation and isolation*

The proposed IAMP development would result in the loss of large areas of foraging habitat surrounding the site. The site is located 200 metres from the mitigation area for the development, therefore the site would become isolated if retained.

5.8.14 The proposed development will increase the numbers of roads and industry in the surrounding area, consequently there will be an increase in traffic and in particular lorries. Barn owl deaths on roads are a major issue. The site already lies just 1.5km metres west from the A19 dual carriageway. The Barn Owl Trust Conservation Handbook provides a road risk assessment (pg. 319-320) and the section of the A19 adjacent to West Moor Farm is level with the adjacent ground and has limited trees or scrub. Therefore, this section of road is very high risk of causing barn owl mortality. The A1290 immediately adjacent to the site is also a busy road and will be widened as part of the proposed works. This is mostly lined with trees and woodland in the vicinity of West Moor Farm, with these sections of low risk. However, breaks in the vegetation, including the gap in which the farm is situated, are of medium-high risk.

#### 5.8.15 *Cumulative Impacts*

Barn owls are also present within Elliscope Farm and Hylton Bridge Farm. The latter will be retained, but the former is also due to be lost. Elliscope farm lies 1.4km away, but potentially it is being used by the same birds that use West Moor Farm. Loss of both farms will result in a moderate impact on barn owls in the absence of mitigation.

## 6.0 AVOIDANCE, COMPENSATION AND MITIGATION MEASURES

- 6.0.1 The following section outlines the measures required to avoid, minimise or compensate for the impacts detailed in section 5 above by applying the mitigation hierarchy in accordance with the NPPF paragraph 118 which states:
- 6.0.2 'If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort compensated for, then planning permission should be refused.'
- 6.0.3 Table 9 below shows the recommended avoidance, mitigation and compensation that should minimise the impacts on the ecological receptors described above.

**Table 9** Avoidance, compensation and mitigation measures

Ecological Receptor	Likely impacts during construction and post construction	Avoidance, Mitigation and Compensation Measures	Residual Effects
<b>Bats</b>	Severe negative impact due to loss in roosts for common pipistrelles, as well as loss in potential hibernation sites for a small number of these species and wet weather foraging the in the barns.	Retention of existing bat roosts on site is not possible due to the farm being situated within the development area. Alternative provision will be provided in the form of 3 woodcrete or woodstone bat boxes erected within the woodland immediately south of the farm (Figure 6). A hibernation box will also be installed within this woodland. This alternative provision will all be in place prior to demolition of the buildings. Demolition of buildings 1, 2, 3, 5 and 8 will avoid the core hibernation period (December – February) to avoid disturbing hibernating bats.  Loss of a roost of any size requires a European Protected Species licence, which must be obtained prior to the buildings being demolished. Destruction of the roosts will be supervised by a licence bat worker to ensure that no bats are harmed during the demolition. Further details can be found in section 7.2 & 7.3 below.	No impact regarding summer and winter roosting provision on site.  Loss in wet weather foraging within the barns will have a slight negative impact at a local level.
<b>Barn Owls</b>	Moderate negative impact due to the loss of 3 barns, being used by	Retention of the barns on site is not possible due to the long-term maintenance and security costs associated with retaining any of the buildings on site,	Mitigation proposed will ensure long

	<p>barn owls throughout the year.</p>	<p>and due to the farm being located within the development area.</p> <p>Three barn owl boxes will be erected as mitigation, including two boxes within Hylton Bridge Farm stables and barn (1km to the northeast). Barn owl pellets have been found within these buildings and the addition of boxes will provide additional nesting opportunities. These buildings are due to be retained. This will also be done prior to the demolition of West Moor Farm. A third box will be erected in a tree located within the ELMA mitigation area (Figure 6). The tree selected is in the open, mature, and forked, thus ideal for a barn owl box.</p> <p>Demolition of all buildings on site will not be carried out while barn owls are breeding on site to ensure there is no disturbance to the owls during this period. The main breeding period is March to September but because barn owls can breed all year round, checks will be made prior to demolition.</p> <p>Mitigation for the loss of Elliscope Farm, which may have a cumulative impact on the owls using West Moor Farm, includes three barn owl boxes in trees within close proximity to the farm and a wildlife tower in the field to the south of the farm.</p> <p>All new provision will be in place for at least 30 days prior to the demolition of the buildings (Barn Owl Trust 2012).</p>	<p>term provision for barn owls within the area, including suitable features for breeding.</p> <p>Overall, there should be no long-term negative effects.</p>
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## **7.0 RECOMMENDATIONS**

### **7.1 Survey Conclusions**

7.1.1 The 2021 surveys were updates, with surveys also carried out in 2015 (WYG 2015), 2018 (DWS, 2018) and E3 Ecology (2019) these reports should be read in conjunction with this one, but are summarised within this report. Only DWS surveys recorded any bat roosts in 2018, with small common pipistrelle roosts present in buildings 5 and 2 (Figure 5).

7.1.2 Checks for barn owls were carried out on the 24<sup>th</sup> March 2021 at the same time as the bat risk assessment. A visit was also carried out on the 16<sup>th</sup> February 2021. Previously the site was visited on the 17<sup>th</sup> June 2014 (WYG 2015), 22<sup>nd</sup> May 2018 (DWS 2018) and 13<sup>th</sup> June 2019 (E3 Ecology 2019). The 2014 surveys identified Temporary Roosting Sites (TRS) in building 7 and Active Roosting Sites and/or a Potential Nesting Site in building 8. In 2018, pellets were found again in building reference 8, and again assessed as either ARS or a PNS. However, the lack of activity during the nocturnal surveys indicates that this was an ARS only and was not used for nesting in 2018. E3 Ecology in 2019 did not find any fresh evidence.

7.1.3 In 2021, Barn owl pellets were present within building reference 8, on the floor at the southern end, and on a plank above a series of grain stores in the upper storey of the building. There was a large number of fresh pellets present in both February and March 2021, with a barn owl seen here during the February visit. Smaller owl pellets were also present in the adjacent upper storey room, and a little owl was seen in February 2021. Barn owl pellets were also present above beams in Building 7 at the northern end. Old pellets were present in the upper section of barn 5. Overall building 8 was deemed to be a Potential Nesting Sites (PNS), with Active Roosting Sites (ARS) in buildings 7, 8 and a Temporary Roost Site (TRS) in building 5.

### **7.2 Mitigation Licence**

7.2.2 Bat survey data indicates the presence of two, small, common pipistrelle day roosts across buildings 5 and 2. Non-breeding female and male pipistrelle bats are known to utilise a number of such roosting sites throughout the year. As such these roost sites are likely to be part of a larger network of roosting locations.

7.2.3 Additional nocturnal surveys are due to be undertaken in the summer of 2021 to update previous surveys prior to submission of the licence.

7.2.4 Development proposals includes demolition of the buildings on site. The proposals will result in the loss of all roosts, likely to comprise small numbers of male and/ or non-breeding female bats. The Bat Mitigation Guidelines (Natural England, 2004) suggests that the loss of such roost sites is likely to result in a low / negligible impact on the local population of the species. It is considered to result in a low impact on population viability in the long term as the affected individuals are likely to have alternate roost sites in the immediate locality.

7.2.5 Loss of a roost of any size requires a European Protected Species licence, which must be obtained prior to the buildings being demolished. Furthermore, with appropriate compensation and mitigation implemented through this European Protected Species Licence, loss of the roost is unlikely to have a significant effect on the conservation status of the species.

### **7.3 Mitigation and Enhancement Measures - Bats**

7.3.1 The following mitigation strategy has been designed to offset any impacts arising from the loss of two occasionally used common pipistrelle summer bat roosts (maximum count of two bats roosting on one survey) and is in accordance with Natural England's Bat Mitigation Guidelines. Mitigation and compensation will be provided to maintain the population of bats affected at a favourable conservation status on completion of works with an overall net increase in available roost sites thereby also complying with current planning policy.

7.3.2 Replacement bat roosting habitat will be provided prior to the start of any works on site to provide roosting habitat during and after the construction phase. The proposed scheme detailed below will provide roosting habitat greatly in excess of the size of the roosting habitat lost.

7.3.3 As all buildings are due to be demolished, it is recommended that three tree mounted bat boxes (made of woodcrete or woodstone – similar to Schwegler 2F) are erected in the woodland to the south of the farmyard (Figure 6). For maximum bat potential, these boxes should be at least 3-5m off the ground, sheltered from strong winds and exposed to the sun for part of the day (south/south-west elevations). The position of the boxes should be free from clutter (branches blocking flight path in). A hibernation box will be erected in the same area to provide alternative provision in winter. The hibernation box should be placed on the northern elevation.

- 7.3.4 In accordance with The Bat Mitigation Guidelines there are no timing constraints associated with an occasionally used roost and as such the works will be scheduled to commence following granting of the EPS Licence. However, it is recommended that work be carried out outside of the bird nesting season (March – August). Should work be carried out within this time that buildings will need to be checked for nesting birds before works commence. Works will also avoid the core hibernation period of December to February.
- 7.3.5 Short term mitigation measures will be employed during the works to ensure bats are not harmed during works. Immediately prior to the start of these works a endoscope survey will be carried out, facilitated through the use of a mobile elevation work platform (MEWP), ladder or scaffold to ascertain whether any bats are currently roosting within the building. If less than five individual bats are recorded, a controlled destructive search of all features considered suitable for use by roosting bats will be undertaken under the supervision of a licensed bat ecologist. This will include all features suitable for roosting bats such as stonework, wood window frame, roofing, guttering and tiles. Any bats discovered will be caught and moved to replacement roosting habitat (bat boxes) by the bat ecologist. On completion of the destructive search, the remaining works will proceed without the need for further surveys or supervision. In the unlikely event more than five individual bats are recorded, the survey will be repeated until such time as there are five or less individuals present.
- 7.3.6 In the event additional evidence of roosting bats were to be discovered at any stage of works, operations would cease in that area immediately and further advice sought from Durham Wildlife Services Ltd and an amendment to the licence sought where required.
- 7.3.7 No foraging or commuting habitat will be lost by these proposals, consequently no habitat mitigation/ enhancements are proposed at present.

#### **7.4 Mitigation and Enhancement Measures – Barn Owls**

- 7.4.1 Demolition will result in the loss a number of barns being used as ARS all year round and a PNS. Barn owls are Schedule 1 species, as such it is an offence to disturb a barn owl while 'it is building a nest or is in, on or near a nest that is containing eggs or young' or to 'disturb dependent young of such a bird'. Consequently, prior to demolition the site must be checked for nesting barn owls by a suitably licenced ecologist. No barns will be demolished while barns owls are

showing any breeding behaviour on site, including nest buildings or while young are dependant.

7.4.2 At least 30 days prior to demolition (Barn Owl Trust 2012) three barn owl boxes will be erected; one in a mature tree a short distance away, and two within Hylton Bridge Farm (stables and barn) (Figure 6). The tree selected is in the open and mature, with a fork to provide suitable secure locations for the box to be installed.

7.4.3 Provision is also due to be provided at Elliscope Farm 1.4km to the southeast, with three barn owl boxes in trees and a wildlife tower. This is to mitigate the loss of barns being used by barn owls when Elliscope Farm is demolished. However, this provision will also be installed prior to the demolition of West Moor Farm.

## **7.5 Monitoring**

7.5.1 Adhering to the Policy EN2 of the IAMP Area Action Plan (2017), monitoring will be undertaken on all the mitigation proposed above.

- All boxes and the wildlife tower will be checked annually to ensure they are intact and secure. Any lost or damaged boxes will be replaced.
- Monitoring surveys will be carried out every three years for the next twenty years, starting in 2022. These surveys will include checks of the bat boxes by a licenced bat ecologist and checks of the barn owl boxes by a licenced barn owl ecologist.
  - The bat boxes should be checked late summer/early Autumn (August/September) to avoid disturbing bats when they have dependant young.
  - The barn owl boxes should be checked around March – April, with later checks if it is a late start to the season. June should be avoided because they are more susceptible to disturbance around this time.



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## 8.0 REFERENCES

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**Barn Owl Trust (2012)** *Barn Owl Conservation Handbook*, Pelagic Publishing

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**E3 Ecology (2019)** *Bat Survey Update West Moor Farm*

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**Mitchell-Jones, J. (2004)** *Bat Mitigation Guidelines*. English Nature.

**Mitchell- Jones, A. J & Mcleish, A. P. (2004)** *3<sup>rd</sup> Edition Bat Workers' Manual*. Joint Nature Conservation Committee, Peterborough.

**UK BAP Priority Species (2007)**<http://jncc.defra.gov.uk/page-5170>

**Natural Environment and Rural Communities Act (2006)** - Section 41 Species and Habitats.  
<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

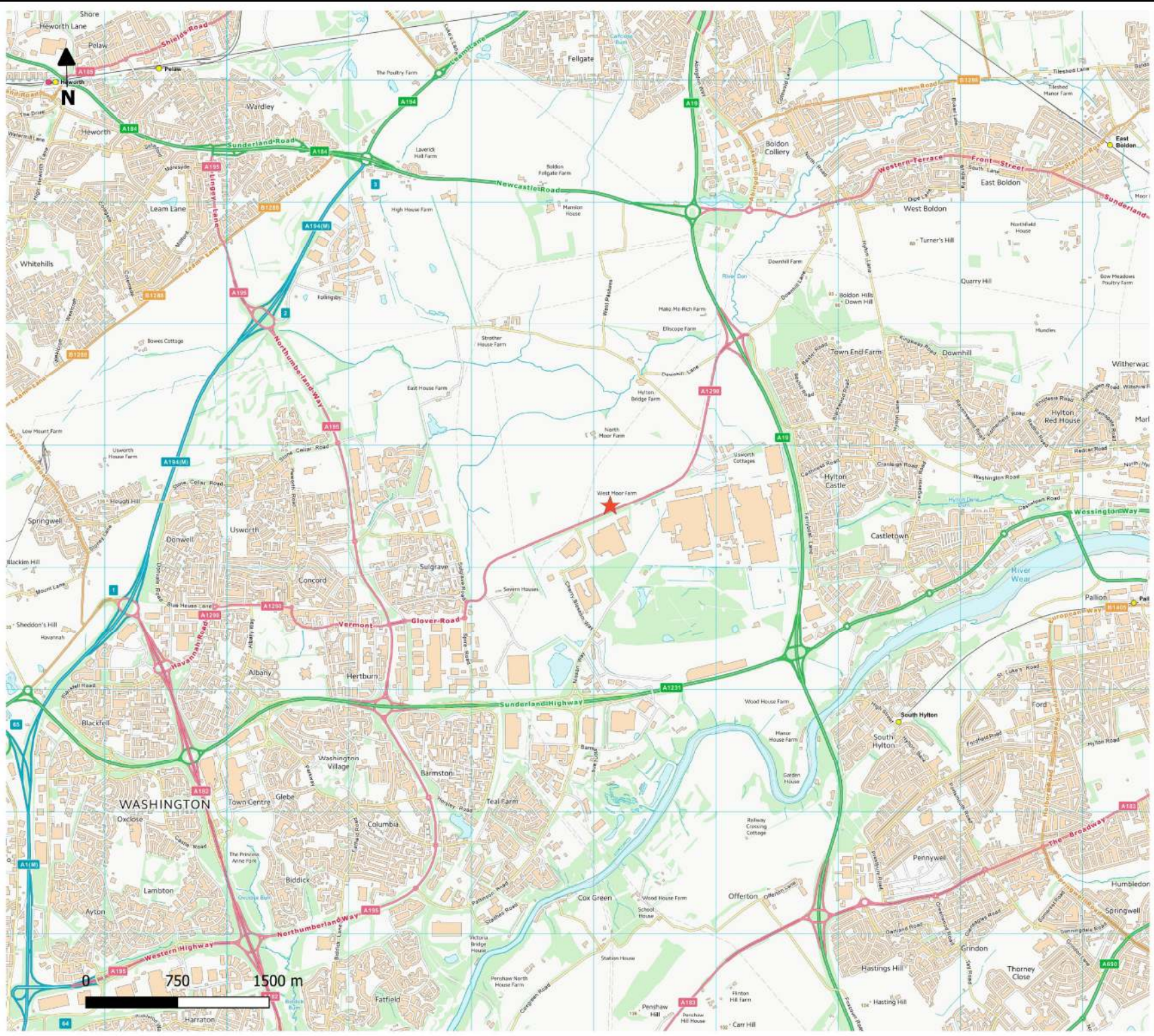
**Durham Wildlife Services (2018)** *IAMP North of Nissan, Ecology Report*

**WYG (2015)** *Land North of Nissan*

**UK BAP Priority Species (2007)** <http://jncc.defra.gov.uk/page-5170>

## **APPENDIX A**

### **Figures**



## Legend

★ Site Location

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Chilton Moor  
Houghton-le-Spring  
Tyne and Wear  
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<b>Project</b>	West Moor Farm
<b>Title</b>	Location Plan
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 1



### Legend

★ Site Location

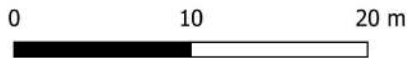
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<b>Project</b>	West Moor Farm
<b>Title</b>	Aerial Map
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 2



## Legend

 Buildings Surveyed

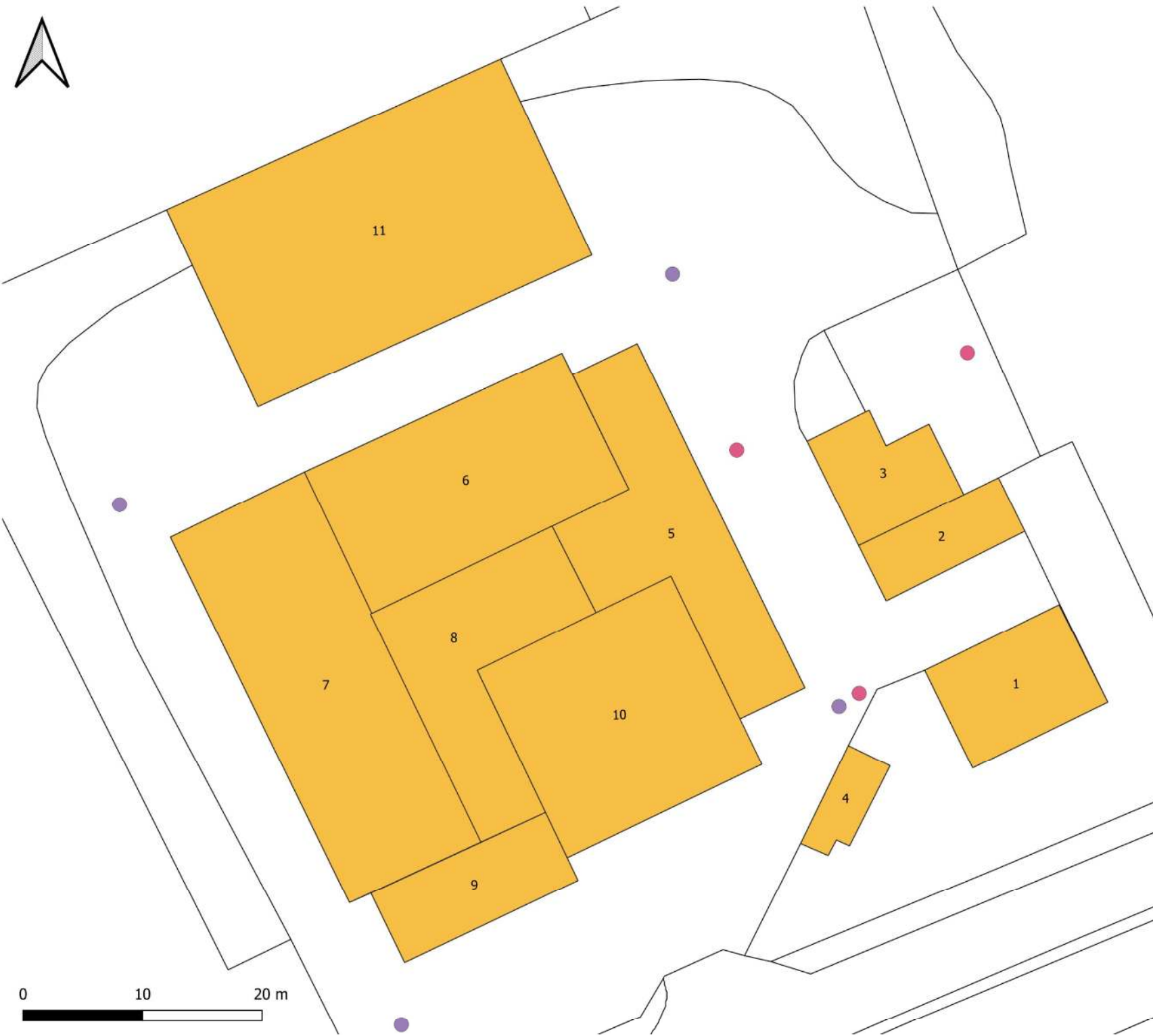
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<b>Project</b>	West Moor Farm
<b>Title</b>	Building Reference Plan
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 3



### Legend

- Survey Locations WYG Buildings 5, 8 & 9
- Survey Locations WYG Buildings 1, 2 & 3
- Buildings Surveyed

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<b>Project</b>	West Moor Farm
<b>Title</b>	WYG Surveyor Locations 2014
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 4a



### Legend

- Roost Location 1
- Commuting Route
- Surveyor Locations
- Buildings Surveyed

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<b>Project</b>	West Moor Farm
<b>Title</b>	Dusk Survey 02/07/2018
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 4b



### Legend

- Foraging Route
- Commuting Route
- Roost Location 2
- Surveyor Location
- Buildings Surveyed

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<b>Project</b>	West Moor Farm
<b>Title</b>	Dawn Survey 02/08/2018
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 4c





### Legend

- Foraging Route
- Commuting Route
- Surveyor Location
- Buildings Surveyed

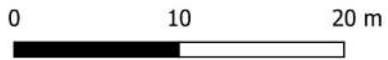
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<b>Project</b>	West Moor Farm
<b>Title</b>	Dusk Survey 04/09/2018
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 4d



### Legend

- Foraging and Commuting Routes E3
- Surveyor Location E3 Ecology
- Buildings Surveyed

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<b>Project</b>	West Moor Farm
<b>Title</b>	E3 Ecology Survey June 2019
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 4e



### Legend

- Roost Location 1
- Roost Location 2
- Buildings Surveyed

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<b>Project</b>	West Moor Farm
<b>Title</b>	Roost Location Plan
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 5



### Legend

- ★ Barn Owl Box Locations
- Proposed Bat Box Locations
- West Moor Farm

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<b>Project</b>	West Moor Farm
<b>Title</b>	Mitigation Plan
<b>Client</b>	IAMP LLP
<b>Date</b>	23/04/2021
<b>Ref</b>	Figure 6

**APPENDIX B**  
**Selected Photographs**



Photograph 1 Building reference 1, Farmhouse.



Photograph 2 Building reference 1, Farmhouse.



Photograph 3 Building Reference 1, inside loft void.



Photograph 4 Building Reference 2, south elevation.



Photograph 5 Building Reference 2 & 3, showing gaps in the roof of 2.



Photograph 6 Building Reference 3.



Photograph 7 Loft void of Building Reference 3, showing holes in roof.



Photograph 8 Building Reference 4



Photograph 9 Building Reference 5.



Photograph 10 Building Reference 5, internal showing loft.



Photograph 11 Building Reference 6.



Photograph 12 Building Reference 7.



Photograph 13 Building Reference 7, internal.



Photograph 14 Building Reference 8, internal.



Photograph 15 Building Reference 8, internal – large accumulation of barn owl pellets



Photograph 16 Building Reference 8, internal – upper room with little owl pellets





Photograph 17 Building Reference 8, internal – barn owl pellets along upper walkway of grain store.



Photograph 18 Building Reference 9 & 10, external



Photograph 19 Building Reference 9, internal.



Photograph 20 Building Reference 10, internal.



Photograph 21 Building Reference 11, external.



Photograph 22 Building Reference 11, external.



Photograph 23 West Moor Farm, Building 2, Common Pipistrelle roost under ridge tiles.



Photograph 24 West Moor Farm, Building 5, Common Pipistrelle roost eastern elevation of the barn, under the guttering.

**APPENDIX C**  
**Report Conditions**

# Durham Wildlife Services Ltd

## REPORT CONDITIONS West Moor Farm

*This report is produced solely for the benefit of IAMP LLP and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.*

*Unless otherwise instructed any records collected will be submitted to the body holding environmental records for the area.*

*This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Durham Wildlife Services Ltd. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of Durham Wildlife Services Ltd using due skill and care in the preparation of the report.*

*This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.*

*This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.*

*Reliance has been placed on the documents and information supplied to Durham Wildlife Services Ltd by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.*

*Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.*

*Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.*

*The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.*

*The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental*

*issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Durham Wildlife Services Ltd accept no liability for issues with performance arising from such factors.*

*February 2008*