The Royal Forester Pub, Buxton,
Derbyshire, SK17 7PE

Bat Survey Report

for The Affordable Homes Consultancy

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1.0 Summary

1.1 Solum Environmental was commissioned in September 2014 by Jo Fallon of the Affordable Homes Consultancy to undertake a single dusk emergence survey for bats, at land off Victoria Park Road, Buxton, Derbyshire SK17 7PE. The site comprises a disused pub with attached outbuildings and a large car park to the front of the property. The site is bound by Victoria Park Road to the south, a linear strip of flats and shops to the west, a community facility (including floodlit football pitch) to the east and grassland to the north. The wider area is predominantly concentrated residential dwellings, in particular to the south.

1.2 Survey was commissioned to support a planning application to redevelop the site for residential use. Our understanding is that the proposed development will include:

- Demolition of the single existing building within the survey area;
- Removal of limited amenity grassland within the survey area;
- Erection of a mixture of houses and apartments for affordable rent; and
- Associated landscaping of the site.

1.3 In line with Bat Conservation Trust Guidelines revised in 2012[1] a single dusk emergence survey was requested by the local authority in late September 2014, to ascertain presence/ absence of bat roosts within the former pub building.

1.4 Bat survey was carried out at this site by an experienced and licensed bat ecologist, working with an assistant on 2nd October 2014. Although the survey date was sub-optimal (being just beyond the September cut-off for bat surveys), this building showed low potential to support bat roosts and the survey was undertaken during a particularly warm Autumn season, during which our surveyors were consistently reporting bats active at similar sites across Cheshire, Derbyshire and Staffordshire. All other aspects of this survey followed best practice guidance as set out by the BCT and Natural England.

1.5 At the start of survey, during daylight hours, both surveyors conducted a preliminary bat roost assessment of the building on site. No bat droppings or any evidence of bat activity were found on the exterior of the property. Whilst complete access to the loft void was not possible, surveyors examined the area surrounding the entrance into the loft void and found no evidence of bat droppings or bat activity internally. On completion of this roost assessment survey the building was assessed as having low potential to support roosting bats. No other locations within the survey area had any potential to support bat roosts. As the site did not contain hedges, trees or waterbodies, there was very little potential for bat foraging within the survey boundaries and no potential for bat commuting. The urban nature of the surrounding landscape further limited this site's potential use by bats.

1.6 In line with BCT guidelines, a single dusk survey was conducted to determine presence/ absence of bat roosts prior to determination of a planning application. During this dusk survey no bats were seen to emerge from any location around the building. Furthermore, no bat activity of any kind was recorded within the survey area or in the immediate landscape throughout the survey period. It was noted that the football pitch immediately adjacent the pub building to the east was floodlit.

1.7 Subsequently it can be concluded that this site does not support bat roosting, foraging or commuting. Overall this site was assessed as having very low ecological value, with very little potential to support other protected species – only very limited potential was noted to support some breeding bird species. No protected habitats were noted on site.

1.8 The proposed development will not result in the loss of any protected species habitat and, as such, no further ecological survey or mitigation is required pre-planning.

1.9 In line with current planning guidance a small number of recommendations are made within this report to ensure that the proposed development results in a net gain in the overall biodiversity value of this site.

[1] Bat Surveys: Good Practice Guidelines, 2nd Edition (2012), Hundt L, Bat Conservation Trust

2.0 Introduction

2.1 Background and Commission

2.1.1 Solum Environmental was commissioned in September 2014 by Jo Fallon of the Affordable Homes Consultancy to undertake a single dusk emergence survey and desktop survey of land at Victoria Park Road, Buxton, SK17 7PE. Survey was commissioned to support a planning application to redevelop the site for residential use.

2.1.2 Our understanding is that the proposed development will include:

- Demolition of the single existing building within the survey area;
- Removal of very limited amenity grassland within the survey area;
- Erection of a mixture of houses and apartments for affordable rent; and
- Associated landscaping of the site.

2.1.3 Proposed site layouts were available at the time of survey and are provided at Plan 1 below.

Plan 1: Proposed development (supplied by client)

2.2 Aims of the Survey

2.2.1 This bat survey aimed to:

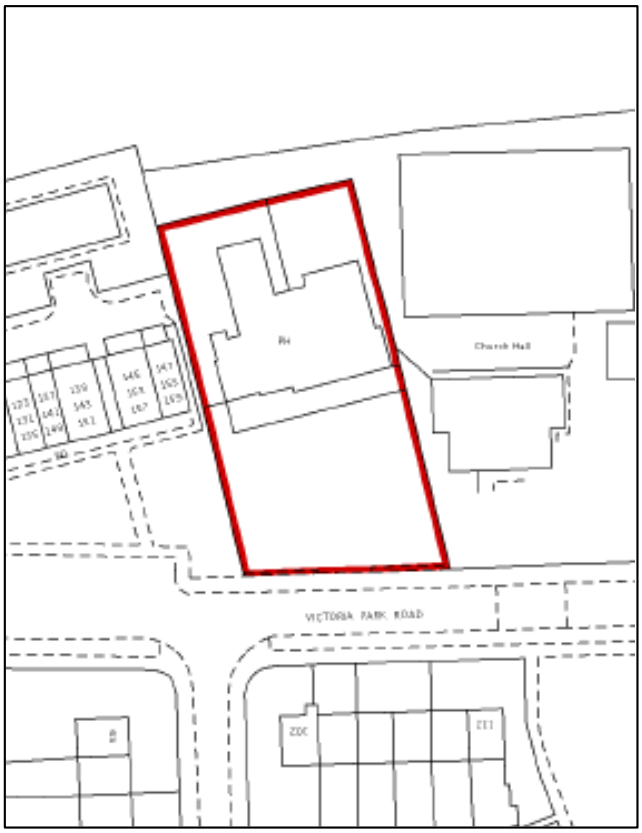
- Identify and evaluate the site's current value for bats (including commuting and foraging value);
- Identify any roosts or potential for roosts at this site;
- Highlight any potential ecological constraints to the proposed re-development of this site; and
- Advise on any further ecological survey, mitigation or licensing requirements, where re-development is likely to impact on bats.

2.3 Site Context

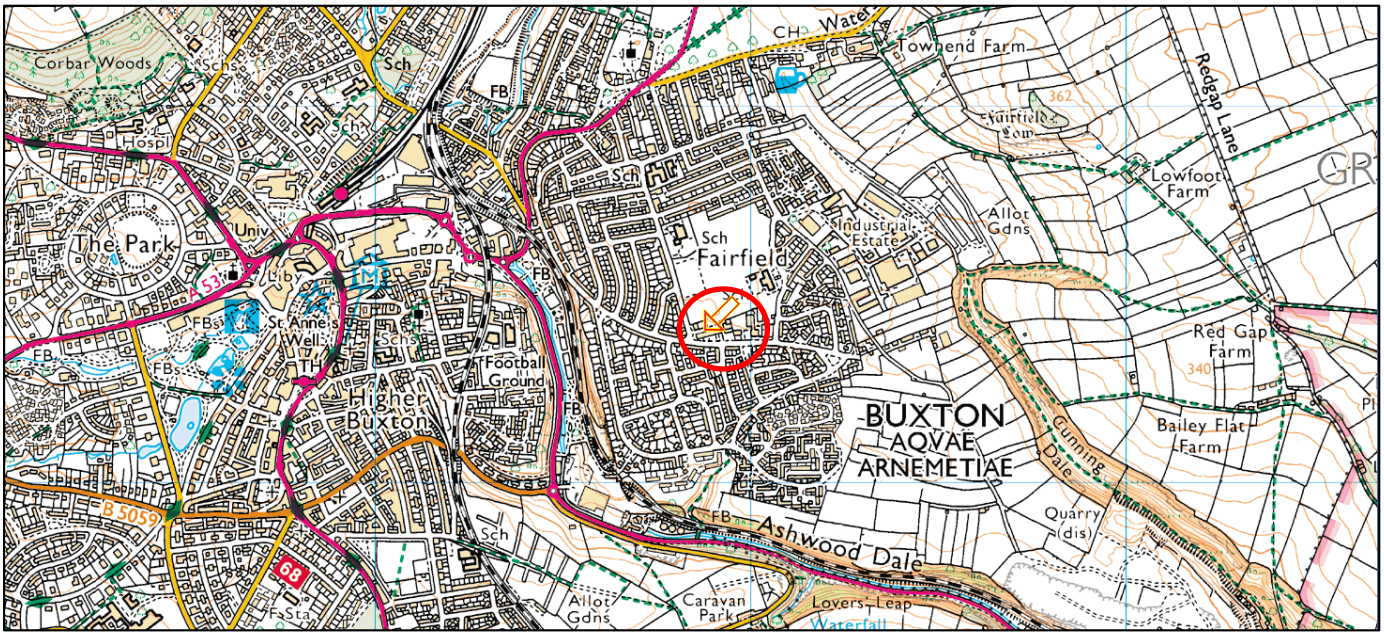
2.3.1 The site survey area is shown as a red-line boundary at Plan 1 below. The site's wider location is shown at Plan 2 below. The grid reference for the approximate centre of this site is SK 06939 73407

2.3.2 This site comprises a parcel of land within the residential road of Victoria Park Road in Buxton. It contains a disused pub and attached outbuildings, a small amenity grassland area to the rear and a hardstanding car park to the front. The site is bounded by Victoria Park Road to the south, a linear strip of flats and shops to the west, a community centre to the east and playing fields to the north. The wider area is concentrated residential dwellings to the south in particular.

Plan 2: Survey Site Boundary



Plan 3: Survey Site Location



3.0 Site survey methods

3.1 Desktop Survey Methods

3.1.1 Desk study was carried out to identify any nearby national and local nature conservation designations, and any bat species records which already exist for this area. The M*agi*C website was interrogated to determine whether any statutory or non-statutory conservation sites lay within 2km of the survey area. The data supplied was subsequently assimilated and reviewed.

3.1.2 Historic records of bats were requested from the local bat group, Derbyshire Bat Conservation Group. Details were obtained of all bat species recorded within a 1km radius of the site using the results provided. The National (UK) and local (Derbyshire region) Biodiversity Action Plans (BAPs) were also interrogated for protected habitats and species relevant to this site.

3.2 Field Survey Methodology

3.2.1 The preliminary roost assessment of the area within the red-line boundary was conducted by Verity Webster (Licensed Bat Ecologist) and Joe Dance (Ecological assistant at Solum Environmental) on 2nd October during daylight hours. During survey, weather was fair, with no rain, an air temperature of 14°C and no wind.

3.2.2 Prior to dusk survery, during daylight hours, surveyors inspected the interior and exterior of all buildings on site for direct evidence of bats, or for potential for roosting bats.

3.2.3 The single dusk roost survey conducted followed best practice guidelines, as set out by the Bat Conservation Trust[2] and Natural England. This survey began half an hour before and continued for two hours after sunset. Survey was led by an experienced and licensed bat ecologist, working with one ecological assistant. During this survey any bats observed or heard are recorded along with their location and direction of flight. The location of surveyors during survey is shown at Plan 3 below. Surveyors were distributed around the survey area ensuring that all potential emergence points from the building were visible throughout survey.

3.3 Timing of Field Surveys

3.3.1 This survey was conducted at the start of October, which represents sub-optimal season for bat surveys. By mid- to late-Auguts many summer bat maternity roosts (including those of pipistrelle spp. bats) will have dispersed, however some limited evidence of bat presence would usually be observed throughout September and into early October, provided temperatures remained high. September 2014 was particularly dry with notably warm temperatures and this weather pattern continued into early October. In addition bat surveys conducted by the same team at sites throughout Cheshire, Staffordshire and Derbyshire during the same week of the year produced many positive results of bats foraging, commuting and roosting. For these reasons the timing of this field survey is considered to be slightly sub-optimal for bat surveys but still within accepted restrictions.

3.4 Survey Team Members

3.4.1 Verity Webster BSc MSc CEcol MCIEEM is a highly experienced bat ecologist, licensed under Class Level 2 for bats. Verity is a Senior Ecologist with over seven years' experience co-ordinating and working on bat, GCN, reptile and dormice surveys and mitigation projects. She has a first class honours degree in biodiversity and an MSc in biodiversity survey. Verity is a full member of the Chartered Institute of Ecology and Environmental Management.

3.4.2 Joe Dance *BSc (Hons)* is a Graduate Ecological Assistant at Solum Environmental, experienced in both bat activity and roost categorisation surveys. Joe is also currently working as part of a wider team on a number of licensed bat projects and mitigation programmes.

3.5 Survey equipment used

3.5.1 Surveyors used dual-mode, tuneable heterodyne and frequency division bat detectors (an Anabat SD2 [with PDA], Pettersson D230 and a BatBox Duet) throughout this survey.

[2] Hundt L. (2012), *Bat Surveys: Good Practice Guidelines (2nd Edition).* Bat Conservation Trust

4.0 Survey Results

4.1 Desktop Survey Results

4.1.1 The MagiC site check returned five sites of local, national or international protected status within 2km of the survey site: Ferneydale Grassland (LNR), The Peak District National Park, The Wye Valley (SSSI), Waterswallow's Quarry (SSSI) and Poole's Cavern and Grin Low Wood (SSSI), details as below.

Table 1: Local, National or International Protected Sites within 2km of Site

Designation	Site Name	Approx location + distance from site	Reason for designation	Likely to be impacted by proposed re-development?
Local Nature Reserve (LNR)	Ferneydale Grassland	1.6km SW	A mosaic of limestone grassland, with a small stream and associated areas of wet grassland – is alongside Ferneydale Avenue and close to Harpur Hill Primary School.	No, as sufficiently distant from a respectively minor development
National Park	Peak District	Site lies within the Peak District	Natural beauty, wildlife and cultural heritage. To find out more, visit www.peakdistrict.gov.uk	No, as the proposed redevelopment is only minor in relation to size of the Peak District
SSSI	The Wye Valley	0.8km E	One of the most important areas of carboniferous limestone in Britain. The limestone is cut by valleys, the 'dales', which both expose areas of high geological and geomorphological interest and support a range of important semi-natural woodland, scrub, grassland and stream habitats.	No, as sufficiently distant from a respectively minor development
SSSI	Waterswallow's Quarry	1.8km NE	The location chosen to demonstrate the special interest of this site is a quarry face, which is approximately 260 metres long. The exposure shows part of an olivine-phyric dolerite sill which has been intruded into Dinantian limestone. The sill, which is tholeiitic in composition, shows internal variations in both mineralogy and texture at this site which may reflect pre-intrusive differentiation	No, as sufficiently distant from a respectively minor development
SSSI	Poole's Cavern and Grin Low Wood	1.6km SW	Poole's Cavern itself has formed within Carboniferous limestone and is of national importance for its cave features. Above ground, the whole area is overlain by spoil from lime burning in the formerly extensive lime kilns. Soils are therefore thin with a high calcium content and support a number as small scattered open spoil areas of greater botanical interest.	No, as sufficiently distant from a respectively minor development

4.1.2 There are no sites designated for their bat interest within 2km of the survey site.

4.1.3 Relevant local records of bats for this area were obtained from Derbyshire Bat Conservation Group. The following bat species were recorded within 1 km of the survey area within the last ten years:

Table 2: Bat Species Records within 1km of Site over Past Ten Years

Scientific Name	Common Name	Recorded	Protection (see Appendix 1)
Chiroptera sp.	Bat species	2013[1]	All UK bat species are protected under the Conservation of Habitats and Species Regulations 2010 (as amended).
Chiroptera sp.	Bat species	2006- 2012	
Myotis sp.	Myotis species	2013	
Myotis mystacinus/ Myotis brandti	Whiskered/ Brandts Bat	2013[1]	
Myotis mystacinus/ Myotis brandti	Whiskered/ Brandts Bat	2014	
Myotis nattereri	Natterer's Bat	2013[1]	
Pipistrellus pipistrellus	Common Pipistrelle	2014[2]	
Pipistrellus pipistrellus	Common Pipistrelle	2007- 2013	
Plecotus auritus	Brown long- eared Bat	2013[1]	
Plecotus auritus	Brown long- eared Bat	2005[2]	

4.1.4 Please note that [1] indicates a hibernation roost, where [2] indicates a summer day roost.

4.2 Field Survey Results

4.2.1. Surveyors, Dates and Weather Conditions

4.2.1.1 Table 3, below, sets out the date, weather conditions and surveyors present for the single dusk emergence survey.

Table 3: Field Surveys- surveyors, dates and weather conditions

Survey Type	Survey Date + Start Time	Surveyors	Weather Conditions
Dusk bat survey	2nd October 2014, 18:12- 20:42	Verity Webster (Lead surveyor), Joe Dance	11- 14°C, no wind, 30% cloud cover, no rain

4.2.2 Site description

4.2.2.1 This site is a flat 0.17 hectare parcel of land off Victoria Park Road, set within residential Buxton. It comprises a disused pub set south-facing within a predominantly hardstanding landscape, with a car park to the south of the survey area. The front of the property (to the south) is lacking in any vegetation, with the exception of a small bed of introduced shrubs along the frontage of the property which are in poor condition.

4.2.2.2 The rear of the property is likewise limited in its diversity of vegetation, with only a small patch of unmown amenity grassland present, containing indicator species of white clover *Trifolium repens*, *poa* sp, and dandelion *Taraxacum officinale*.

4.2.2.3 In addition to there being no waterbodies within the site boundaries, no other waterbodies or watercourses were visible from the survey area boundaries.

4.2.2.4 The surrounding landscape consists of concentrated residences to the south, east and west and playing fields to the north. A floodlit sports pitch lies immediately beyond this site's eastern boundary.

4.2.3 Assessment of habitat value for bats

4.2.3.1 The survey are was assessed as having low potential to support a bat roost within B1, the only location around the site with any potential to support roosting bats. Whilst no external evidence was found to suggest that bats were using this building to roost, a thorough examination of the loft void inside could not be made.

4.2.3.2 Land within the survey area was also assessed as having very low potential to support foraging and commuting bats. The site is well lit to the east by floodlights at the sports pitch immediately adjacent. Similarly, the site is well lit to the west and south from the neighbouring shops and street lights. There are no sheltered spaces within the site's boundaries which might offer suitable bat foraging. The very limited capacity of this site to support commuting and foraging bats is further compounded by the lack of suitable commuting routes (eg hedgerows/ lines of trees) into the site and a general lack of insect- attracting features for foraging. The concentrated, urban nature of the surrounding landscape also minimises the likelihood of bats being present within the immediate environment.

4.2.3.3 Whist the playing fields to the immediate north of the site may offer limited potential to support bat foraging and commuting, they are isolated within residences and are not linked to more suitable habitat through commuting corridors (eg water courses/ hedges/ lines of trees)

4.2.4 Preliminary bat roost assessment

4.2.4.1 Table 4 below provides photographs and descriptions of each building and sets out an assessment of each building's potential to support bat roosts:

Table 4: Preliminary Bat Roost Assessment of Buildings on Site (inc Photographs)

Bldg No + Name	Photographs	Description	Bat Roost Potential
B1 The Royal Forester Pub		2 storey, disused pub with a pitched tile roof on the main section and flat, felt roof sections on the adjoining outbuildings. Whilst the majority of the roof is in good condition, there are several lifted tiles across the roof which may present suitable roosting places for bats. Apex of the building is well sealed to the roof. No external evidence of bat droppings or usage by bats. Complete access to the loft void within main section of the building was not possible. No evidence of droppings found around the entrance into the loft void.	Low

4.2.5 Results of dusk emergence survey

4.2.5.1 No droppings were found at any location around the building.

4.2.5.2 No bats were seen or heard throughout the entire duration of the single dusk survey.

5.0 Assessment

5.1 Constraints of survey

5.1.1 The dual-mode, tuneable heterodyne and frequency division bat detectors (Pettersson D230s and BatBox Duets) used throughout each roost survey enabled surveyors to hear most species. However, brown long-eared bats echolocate very quietly, meaning that calls from this species cannot always be detected. During this survey surveyors had clear sightlines around the building, meaning that any brown long-eared bats present would almost certainly have been observed.

5.1.2 Whilst October is towards the end of the active bat season, all species of bat are still active during this period. The temperature during this survey was above the seasonal average for October and remained warm enough throughout the survey for bats to be active.

5.1.3 The above minor constraints were not considered to have impacted significantly on survey findings at this site. Taken as a whole, the survey programme was deemed appropriate, and sufficient good quality, optimal-season survey data was gathered to inform a picture of current bat roosts and bat usage patterns at this site.

5.2 Potential impacts of proposed development

5.2.1 Designated sites

5.2.1.1 Given the distance involved, any bats present within any of the Nature Reserves or SSSIs within 2km are highly unlikely to be affected (eg through dispersal) by the proposed development.

5.2.2 Roosts

5.2.2.1 This site was found to support no summer bat roosts. Given the lack of activity noted during this survey, as well as both the deteriorating condition of the property and antisocial behaviour noted during survey, it is highly unlikely that bats would use this building for winter hibernation roosts.

5.2.3 Foraging and commuting habitat

5.2.3.1 No bats were recorded to be commuting or foraging within the survey area.

5.3 Legislation and policy guidance

5.3.1 All species of bats are European Protected Species and their breeding and resting sites are given a high degree of legal protection under the terms of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (as amended). In addition, all bats are the subject of a UK-wide Biodiversity Action Plan (BAP).

5.3.2 This combined legislation offers bats, their roost sites and resting places strict protection from intentional or reckless disturbance. It should be noted that, under the legislation, a bat roost is defined as any structure or place which is used by bats to shelter, breed or rest.

5.3.3 As bats tend to reuse the same roosts, the roost is legally protected, whether the bats are present at the time or not. Where bats are present at a proposed development site it is usually possible to continue with the proposed project, but only upon receipt of a site-specific licence to derogate from the Regulations issued by the statutory body – in this case that statutory body is Natural England.

5.3.4 This licence application must include a suitable mitigation strategy that ensures that the favourable conservation status of the bat population will be maintained and creates a like-for-like replacement for any roosts lost to development. This site supports a summer soprano pipistrelle bat roost and as such is protected under this legislation. Therefore a licence to derogate from the Regulations will be required for proposed development works to go ahead and for planning consent to be awarded. The licence must include suitable mitigation strategies for:

- replacement of the existing roost on a like-for-like basis; and
- protection of any bats potentially present at this site during the proposed works.

5.3.5 Foraging and commuting routes are not protected under the Regulations, however preserving these key features ensures the maintenance of the favourable conservation status of bat species within a site. Loss of areas of foraging habitat within the site should be mitigated for by provision of suitable landscape design, using insect-attracting plants, and creating sheltered areas within the residential gardens. Commuting routes from the replacement soprano pipistrelle roost should not be impeded.

5.3.6 Government planning policy guidance throughout the UK requires local planning authorities to take account of the conservation of protected species when determining planning applications. This makes the presence of a protected species a material consideration when assessing whether a proposed development would be likely to result in harm to the species or its habitat, and subsequently in determining the outcome of the planning application as a whole. The developer is responsible for ensuring that sufficient detailed, optimal-survey data is provided with a planning application to allow local authorities to determine whether bats will be harmed by the proposed application, regardless of whether it is at outline or detailed planning stage.

6.0 MITIGATION AND RECOMMENDATIONS

6.1 Assessment of site's current ecological value for bats

6.1.1 This site comprises a disused pub and associated car park, set within a residential area of Buxton. A preliminary roost assessment, conducted before the single dusk emergence survey, found no external evidence of roosting bats, nor did the single dusk survey conducted in early October. No other evidence of protected species was found at this site. This, coupled with the lack of vegetation and urban nature of the surrounding landscape, has led to the site being assessed as having very low ecological value.

6.1.2 Vegetation at this site is of limited value as it is scarce, primarily non-native and represents mostly common garden species. There are no trees or hedgerows within the survey area.

6.1.3 Proposed plans supplied by the client (see Appendix 1) have been assessed for potential ecological constraints. **At this site the proposed re-development is assessed as being highly unlikely to impact negatively on the site's current very low ecological value.** Rather the proposed re-development is a good opportunity to enhance this site's potential to support native species and, potentially, bats.

6.2 Further survey required for bats

6.2.1 No further survey for bats is required at this site.

6.3 Mitigation licences

6.3.1 As no bat habitat will be lost to the proposed re-development, no mitigation for bats is required at this site.

6.4 Biodiversity Enhancement Measures

6.4.1 In line with national planning guidance, any proposed re-development at this site should aim to enhance biodiversity wherever possible. To this end the following recommendations are made:

R1 **Native trees, plants and ideally hedgerow should be introduced at this site wherever possible within the re-development.**

R2 **Planting plans should include specific native species which attract insects, in order to enhance this site's potential to support foraging bats (see Appendix 2 for specification).**

R3 **A single summer bat box should be erected on southern-facing trees within this site on completion of the proposed re-development (see Appendix 3 for specification).**

R4 **This site's biodiversity value could also be enhanced by erection of a minimum of two bird boxes targeting red-list bird species, on suitable trees within this site (see Appendix 4 for specification).**

NON SITE-SPECIFIC APPENDICES

Appendix 1 UK Legal Protection and Planning Guidance

Appendix 2 Specification for native, insect-attracting plant species

Appendix 3 Specification for summer bat roost boxes (trees)

Appendix 4 Specification for red-list bird species nest boxes

Appendix 5 References and Bibliography

Appendix 6 Definition of bat terms

APPENDIX 1: UK Legal Protection and Planning Guidance

A1 National Planning Policy Framework (NPPF)

The NPPF came into force in March 2012. It sets out the Government's planning policies for England and how these are expected to be applied. It gives guidance to local planning authorities on the content of their local plans but is also a material consideration in determining planning applications. **The NPPF states that the planning system should provide a net gain for biodiversity wherever possible.** The NPPF replaces much of the previous planning policy guidance, including PPS9: Biodiversity and Geological Conservation. However, the Government Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System (which accompanied PPS9) remains valid.

A2 Biodiversity Action Plans

UK Biodiversity Action Plans: The **UK Biodiversity Action Plan (UKBAP)** was established in response to the **Convention on Biological Diversity 1992**, signed by 150 members at the Rio Earth Summit, which aimed to promote sustainable development amongst all signatories. Specific action plans have been prepared for highly protected species. As well as a national Biodiversity Action Plan, local Biodiversity Action Plans identify species of note at local level throughout the UK.

A3 Priority Habitats and Species

Under the terms of the Natural Environment and Rural Communities Act 2006, all public bodies are required to have regard to the conservation of biodiversity when carrying out their activities. This means that efforts must be made to consider priority and protected species and habitats in particular. There would be a presumption in the land-use planning process against any development that would result in loss to an area of priority habitat or harm to the population of any priority species.

A4 Vegetation

The Wildlife and Countryside Act 1981 (as amended) lists plants which are statutorily protected. In relation to development these plants are rare and are not often encountered. The bluebell is scheduled, with commercial bulb-picking from the wild being prohibited. There is also a category of plants which it is an offence to introduce to the wild. This category includes Japanese knotweed, which is often found on brownfield sites. Care is needed to avoid spreading the species around the site during earthworks, and to ensure that any removal of infested soils off-site is to a licensed tip. Giant hogweed and Himalayan balsam are also listed in this category of invasive alien plant species. In addition the Ragwort Control Act came into force on 20 February 2004 and enables the Secretary of State to make a Code of practice to prevent the spread of common ragwort.

A5 Hedgerows

As a priority habitat for conservation concern, hedgerows also receive further protection under the Hedgerow Regulations 1997. Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Local planning authority permission is normally required before removing hedges that are at least 20 metres (66 feet) in length, more than 30 years old and contain certain plant species. The authority will assess the importance of the hedgerow using criteria set out in the regulations. The local planning authority is also the enforcement body for offences created by the Regulations. If a hedgerow is removed without permission, there may be an unlimited fine and the hedgerow may have to be replaced.

A6 Great Crested Newt (*Triturus cristatus*)

A European Protected Species (EPS) and fully protected under the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended). Under the legislation it is an offence to:

- *Intentionally or deliberately capture, kill or injure great crested newts (GCNs).*
- *Intentionally or recklessly disturb them in a place used for shelter or protection.*
- *Damage or destroy a breeding site or resting place.*
- *Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.*
- *Possess a great crested newt, or any part of it, unless acquired legally.*
- *Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.*

Where Great crested newts (GCNs) are present at a proposed development site it is usually possible to continue with the project, re-locating the animals in advance of development, but only upon receipt of a site-specific licence from Natural

England. The licence application process can be complex and can only be conducted by a suitably qualified GCN-specialist ecologist. Each licence application must be supported by:

- Full optimal-season great crested newt survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the GCN population will be maintained (this usually involves the provision by the developer of additional land with ponds as compensation for loss of habitat and breeding sites). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how GCNs will be accommodated legally if found during the development process.

A7 Bats (*Chiroptera*)

All species of bats are European Protected Species and their breeding and nesting sites (roosts) are given a high degree of legal protection under the terms of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. In addition, all bats are the subject of a UK-wide Biodiversity Action Plan (BAP). This combined legislation offers bats, their roost sites and resting places strict protection from intentional or reckless disturbance (see wording of GCN legislation above). It should be noted that, under the legislation, a bat roost is defined as any structure or place which is used by bats to shelter, breed or perch whilst feeding. As bats tend to reuse the same roosts, the roost is legally protected, whether the bats are present at the time or not.

Where bats are present at a proposed development site it is usually possible to continue with the proposed project, but only upon receipt of a site-specific licence from Natural England. The licence application process can be complex and can only be conducted by a suitably qualified bat-specialist ecologist. Each licence application must be supported by:

- Full optimal-season bat survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the bat population will be maintained (this usually involves the provision by the developer of replacement permanent bat roosts, additional bat boxes and both bat-friendly planting and lighting within the development site). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how bats will be accommodated legally if found during the development process.

A8 Otter (*Lutra lutra*)

Otters are a European Protected Species (EPS) and fully protected under the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended). Otters and their resting places are fully protected, it is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places. It is also an offence to disturb otters in their breeding or resting places.

Where otters are present at a proposed development site it is usually possible to continue with the proposed project, but only upon receipt of a site-specific licence from Natural England. The licence application process can be complex and can only be conducted by a suitably qualified otter-specialist ecologist. Each licence application must be supported by:

- Full optimal-season otter survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the otter population will be maintained (this usually involves the provision by the developer of replacement waterbodies and holts within the development site). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how otters will be accommodated legally if found during the development process.

A9 Badger (*Meles meles*)

All badgers are protected from harm under the Protection of Badgers Act (1992). Under this act it is an offence:

- To kill, injure or take a badger, or to attempt to do so;
- To use badger tongs in the course of killing or taking, or attempting to kill or take, any badger;
- To kill or take a badger with a firearm which does not fall within the specifications laid down in the Act;
- To dig for a badger;
- To cruelly ill-treat a badger;
- To possess or control a live badger;
- To sell or offer for sale a live badger;
- To mark, or attach any ring, tag or marking device to a badger;
- To possess or control any dead badger, any part of one, or anything derived from one;
- To interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

Where badgers are present at a proposed development site, it is usually possible to continue with the proposed project, but only upon receipt of a site-specific licence from Natural England. A licence is always required to shut down a badger sett or for works within 30m of a badger sett. The licence application process can be complex and can only be conducted by a suitably qualified badger-specialist ecologist. Each licence application must be supported by:

- Full optimal-season badger survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the badger population will be maintained (this usually involves the provision by the developer of replacement artificial setts, planting of suitable fruit-bearing shrubs, erection of badger gates and underpasses within the development site). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how badgers will be accommodated legally if found during the development process.

A10 Water Vole (*Arvicola amphibius*)

From 6th April 2008, water voles and their resting places gained full protection under the Wildlife and Countryside Act (1981). It is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places. It continues to be an offence to disturb them in their breeding or resting places.

Where water voles are present at a proposed development site it is usually possible to continue with the project, re-locating the animals in advance of development, but only upon receipt of a site-specific licence from Natural England. The licence application process can be complex and can only be conducted by a suitably qualified water vole-specialist ecologist. Each licence application must be supported by:

- Full optimal-season water vole survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the water vole population will be maintained (this usually involves the provision by the developer of additional land with ponds as compensation for loss of habitat and breeding sites). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how water voles will be accommodated legally if found during the development process.

A11 Reptiles

The four widespread species of reptile in the UK (i.e. common lizard, slow-worm, grass snake and adder) are all protected under the terms of the Wildlife and Countryside Act 1981 (as amended), however they are not fully protected under European law. This level of protection prohibits the intentional killing and injuring and trade of these reptiles. Where a survey identifies potential habitat for reptiles at a development site, a reptile survey may be needed prior to submission of a planning application and mitigation may be required by Natural England for any loss of reptile habitat as a result of a site's re-development

A12 Breeding Birds

All wild birds, their nests and their eggs are protected by the Wildlife & Countryside Act 1981 (as amended). It is an offence (with certain exceptions), to intentionally or recklessly kill, injure or take any wild bird (this includes chicks); to take, damage or destroy any wild bird's nest while it is use or being built; and to take or destroy the egg of any wild bird. The definition of a wild bird is 'any bird of a kind which is resident in or a visitor to Great Britain in a wild state'.

Species named in Schedule 1 of the Act are given special protection and it is an offence to disturb these species at the nest of while they are caring for dependant young. The RSPB and the UK's leading bird conservation organisations work together to regularly review the status of birds within the UK. A total of 246 species are assessed against a set of objective criteria to place each on one of three lists - green, amber and red – indicating an increasing level of conservation concern. These lists provide a tool for guiding conservation actions for birds in the UK and for setting priorities for action on individual species. The last review of these lists was completed in May 2009.

For certain species, e.g. feral pigeon, general licences are available for an authorised person to lawfully carry out the actions outlined above providing that it is in the overriding interest of public health or air safety and that all other attempts to prevent the problem caused by the species have failed.

The Barn owl has seen significant declines in recent history primarily due to habitat loss and the destruction, removal or renovation of traditional nesting sites. It is currently included in the amber-list of species of medium conservation concern, having been classified as a Species of European Conservation Concern (SPEC). In Great Britain it is listed on Schedule 1 of

the Wildlife & Countryside Act (1981) as amended. It is an offence to disturb any wild bird included in Schedule 1 while it is building a nest or is at, on or near a nest containing eggs or young; or disturbs dependent young of such a bird. Note that if any of the above resulted from a person being reckless, even if they had no intention of committing the offence, their action would still be considered an offence. A person is not guilty of an offence if it can be shown that the act was 'the incidental result of a lawful operation and could not have been reasonably avoided'; only a court can decide what is 'reasonable' in any set of circumstances.

APPENDIX 2: SPECIFICATION FOR NATIVE, INSECT-ATTRACTING PLANT SPECIES

Planting to enhance a site for bats should aim to provide a habitat rich in insects, and with the potential for alternative roosting sites. The following are examples of plant species, which can be used where appropriate, to enhance a landscape for bats.

Night-scented flowers

As bats usually feed at dusk and dawn it is advantageous to use night-scented flowers which will attract moths and other night-flying insects.

Re-seeding

Where re-seeding is to take place the choice of a 'conservation mix' of grass seed would be preferential. The management of grassland areas as hay meadows, without use of herbicides/fertilisers and allowing the grass to go to seed prior to cutting is beneficial in allowing larval stages of the insects to develop.

English Name	Latin Name
Trees and Shrubs (of local provenance where possible)	
Oak	*Quercus robur*
Ash	*Fraxinus excelsior*
Silver Birch	*Betula pendula*
Field Maple	*Acer campestre*
Hawthorn	*Crataegus monogyna*
Alder	*Alnus glutinosa*
Goat Willow	*Salix caprea*
Guelder Rose	*Viburnum opulus*
Hazel	*Coryllus avellana*
Blackthorn	*Prunus spinosa*
Elder	*Sambucus nigra*
Night-scented flowers	
Nottingham Catchfly	*Silene nutans*
Night -flowering Catchfly	*S. noctiflora*
Bladder Campion	*S. vulgaris*
Night-scented Stock	*Matthiola bicornis*
Dame's-violet	*Hesperis matronalis*
Common Evening-primrose	*Oenothera biennis*
Soapwort	*Saponaria officinalis*
Scented herbs	
Chives	*Allium schoenoprasum*
Sage	*Salvia officinalis*
Marjoram	*Origanum vulgare*
Borage	*Borago officinalus*
Mint	*Mentha* sp.
Climbers	
Honeysuckle (native)	*Lonicer periclymenum*
Traveller's-joys	*Clematis vitalba*
Dog-rose	*Rosa canina*
Sweet-briar	*R. rubiginosa*
Field-rose	*R. arvensis*
Ivy	*Hedera helix*
Bramble	*Rubus fruticosus* agg

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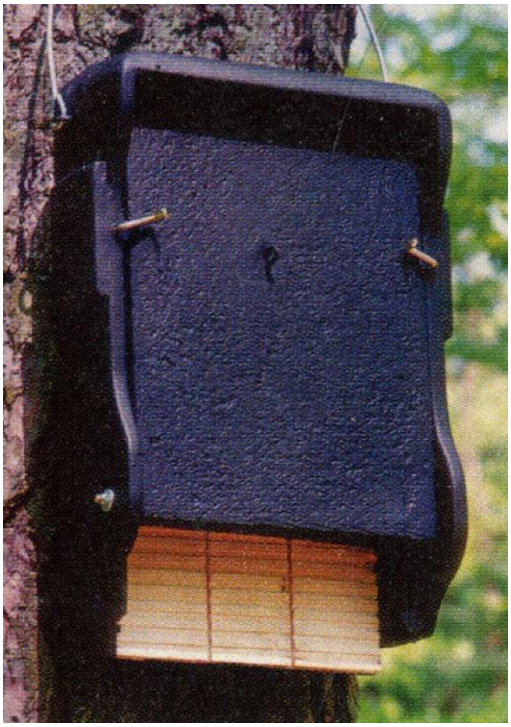
APPENDIX 3: SPECIFICATION FOR SUMMER BAT ROOST BOXES (TREES)

Bat boxes for fixing to trees:

No 1FF Schwegler Bat Box with Built-in Wooden Rear Panel



Dimensions: 43 x 27 x 14 cm
Entrance hole dim: 12 x 24 cm
Weight: 9.5kg
Material: Schwegler Woodcrete
Colour: Black with stable hard-wearing wooden insert
Supplied with: Galvanised steel hanger and aluminium tree-friendly nail.

Please note: this bat box is suitable as nursery. Once bats have inhabited a roost or nursery site they may only be disturbed by licensed bat workers.

No 1FD Schwegler Bat Box

Height: 33 cm
Diameter: 16 cm
Weight: 4.1kg
Material: Schwegler Woodcrete
Colour: Black with grey front panel
Supplied with: Galvanised steel hanger and aluminium tree-friendly nail.

APPENDIX 4: SPECIFICATION FOR RED-LIST BIRD NEST BOXES

No 35 Schwegler Starling Nest Box

Height: 28cm
Width: 19cm
Depth: 20cm
Entrance hole: 45mm
Weight: 4.4kg

No 1MR Schwegler Avianex (for House sparrow)

Height: 27cm
Width: 19cm
Depth: 23cm
Entrance hole: 32mm

APPENDIX 5: References and Bibliography

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APPENDIX 6: Definition of bat terms

Taken from Hundt L. (2012), *Bat Surveys: Good Practice Guidelines (2nd Edition).* Bat Conservation Trust

Autumn swarming	Bats gathering in flight at an underground site in autumn
Dawn swarming	Bats gathering in flight outside a roost before or during sunrise
Day roost	Site where one or more bats spend the day
Feeding perch	A place where a bat hangs while detecting prey or consuming it
Hibernaculum	A winter site where the bats enter torpor during hibernation
Maternity roost	A breeding roost where mothers give birth to and care for their young
Night roost	A site where bats rest, groom etc between bouts of feeding
Nursery roost	As maternity roost
Parturition	Giving birth
Pre-lactation	The state of a female before producing milk for suckling
Post-lactation	The state of a female after producing milk for suckling
Pre-parturition	The state of a female before giving birth
Post-parturition	The state of a female after giving birth
Roost	A resting place of a bat
Satellite roost	A smaller roost than a maternity roost but nearby
Swarming	Bats gathering outside a roost at dawn or in autumn
Torpor	Slowing the metabolic rate and entering a state of deep sleep
Transitional roost	An occasional roosting site usually used in spring and autumn before and after using a maternity roost
Volant	Able to fly