
The Former Ernest Cookson School, Mill Lane, West Derby

Protected Species Survey Report (Bats).

Compiled by Ecology Services Ltd.

Employees are Members of the Chartered Institute of Ecology and Environmental Management.

on behalf of

Redrow Homes Lancashire

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Revision 1



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1.0 Introduction

- 1.1 Ecology Services Limited was commissioned by Redrow Homes Lancashire in November 2015, to carry out a bat investigation of buildings and trees at land off the former Ernest Cookson School, of Mill Lane, West Derby, Liverpool, L12 7JA. National Grid Reference; (NGR) 339505, 392736. See Map 1 Showing the location of the site.
- 1.2 The aim of the survey was to:
 - Undertake an inspection and assessment survey of the buildings and trees to ascertain if potential or evidence of use existed for any bat species.
 - And if found, to determine if more detailed surveys are required.
- 1.3 It is understood that the proposals at the site involves the removal of some trees and the construction of residential properties; the plans of which are shown on Map 3. Trees clearly retained have been omitted.
- 1.4 As part of the Local Authority's environmental policies, surveys are required to be undertaken on schemes which may have the potential to affect protected species, i.e. bats.

2.0 Statutory and Planning Context

Bats and their Requirements

- 2.1 All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2010 (as amended).
- 2.2 When dealing with cases where a European Protected Species (EPS) (all UK bats) may be affected, a Local Authority is a 'competent authority' within the meaning of regulation 7 of the Conservation of Habitats & Species Regulations 2010 (as amended). The Local Authority must therefore exercise their functions under the provisions made within the 2010 Regulations and planning decisions should only be made when European Protected Species are fully taken into account.
- 2.3 The National Planning Policy Framework (NPPF) places a clear responsibility on Local Planning Authorities to conserve and enhance biodiversity and to encourage on the consideration that should be given to Protected Species where they may be affected by development. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation. This is supported by a guide to good practice entitled 'Planning for Biodiversity and Geological Conservation: Building in Biodiversity' in which paragraphs 5.34 and 5.35 identify that species such as bats are highly dependant upon built structures for survival and that roosts can be easily incorporated into existing and new developments/conversions to benefit these species.
- 2.4 A Local Planning Authority (LPA) has a duty to ensure that protected species and habitats within the UK are a "material consideration" in the determination of a planning application. Therefore, a LPA is unlikely to determine an application until all relevant information relating to protected species or habitats is submitted in support of the application. Relevant information includes; adequate surveys and a method statement (the latter only if required) for their approval which will need to be submitted along with the planning application.
- 2.5 Where bats are affected by development then a licence to derogate from the Conservation of Habitats and Species Regulations 2010 (as amended) would be required. European

Protected Species (EPS) mitigation licence applications are processed and issued by Natural England and the EPS licence can only be applied for, once planning permission is granted, if planning permission is required.

2.6 Natural England may grant an EPS mitigation licence for the purpose specified in paragraphs 2 of the Regulation. The purposes are:-

- 53(2)e preserving public health or safety or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment.
- 53(2)f preventing the spread of disease.
- 53(9)a that there is no satisfactory alternative.
- 53(9)b that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable status in their natural range.

2.7 A bat roost may be defined in several ways:

- a) Maternity roost
- b) Summer roost
- c) Mating roost
- d) Feeding roost
- e) Hibernation roost
- f) Transitional or temporary (night/day) roost

2.8 Roost selection is often closely correlated, to suitable foraging habitat within a reasonable commuting distance from the roost. Different sites are used throughout their active season which is dependent upon insect densities and abundance. Climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

3.0 Methodology

Inspection & Assessment Survey Method

Buildings/Structures

3.1 The optimum time to investigate buildings for evidence of a bat roost is between May and August. Inspections and assessments may be conducted outside of this time and can often provide conclusive results which can save expense and time for Planning Applicants.

Buildings/Structure Roost Criteria

3.2 Roost assessment for buildings/structures follows the below system which is based upon the Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' (2012).

"Negligible" No features likely to be used by bats (roosting).

"Low" No features that could be used by bats (roosting).
Small number of potential (opportunistic) roosts, isolated habitat, isolated site that is not connected by suitable linear features.

"Moderate" Several potential roosts, habitat could be used by foraging bats and the site is connected to suitable habitat with the wider survey area.

"High" Significant features for roosting bats, high quality habitat for foraging, site is connected with the wider landscape and is close to known roost sites or bat foraging/commuting.

“Confirmed” Evidence that the building is being used by bats; bats seen roosting, droppings, carcasses, feeding remains, bats are recorded/observed, or bats are heard within the building/structure.

Trees

- 3.3 The optimum time to investigate trees for bat roosting potential is from October to April, when trees are not in leaf and crevices can be more easily seen. Evidence of a bat roost is best determined from May to August although inspections and assessments may be conducted outside of this time and as with the buildings/structures inspections can often provide conclusive results.

Roost Sites

- 3.4 Most tree roosts are present as one or a combination of two or more of the following:
- Old woodpecker holes;
 - Splits in trunk, bough or large branches;
 - Rot holes in trunk, bough or large branches;
 - Holes formed by two boughs or branches growing in contact;
 - Underneath loose or lifting bark;
 - Underneath a covering of dense latticed creeper, usually Ivy (*Hedera helix*).

Tree Roost Criteria

- 3.5 Criteria for roost assessment is based upon the following determinants which is based upon the Bat Conservation Trust ‘Bat Surveys: Good Practice Guidelines’ (2012):

Confirmed A tree where positive signs are found; e.g. emerging bats, droppings found or pre-emergence sounds heard;

Category 1* A tree that has multiple, highly suitable features capable of supporting larger roosts and is situated in or near good foraging habitat or near a good commuting route leading to such habitat;

Category 1 A tree that has definite features of potential for roosting bats, supporting fewer suitable features than Category 1* trees (above) or with potential for use by single bats but are less than ideal in some way, for example, may have cluttered access;

Category 2 A tree that has no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features that may have limited potential to support bats;

Category 3 A tree that has no potential to support roosting bats.

- 3.6 For both methodologies it should be borne in mind that inspections can also be inconclusive and if potential was found or the results of the survey were undetermined, then recommendations would indicate the requirement for further detailed activity surveys. Further activity (dusk emergence/pre dawn re-entry) surveys can only be undertaken at the site, during the breeding season for bats, which is between May and August inclusive. The results, conclusions and recommendations are based upon surveyor experience and knowledge of bat ecology.

- 3.7 A thorough exterior inspection of the building and ground level inspection of the trees for bat roosting and potential was undertaken. Signs surveyed for were droppings, dead bats, feeding remains (beetle, moth and butterfly remains), urine staining and grease marks around crevices and down walls, and any noises such as scratching and audible bat calls. An Explorer Premium 8803AL and a ladder were used to check accessible features. A Clulite Long Ranger LED Pistol Light (1200 lumens) and close focussing binoculars were used to check any features of interest not accessible. High resolution photographs were taken for later review.
- 3.8 During the survey the surrounding area was assessed in relation to suitable habitat that may be of value to bats.
- 3.9 Surveys were conducted following “The Bat Workers Manual “(JNCC 2004), “The Bat Mitigation Guidelines” (EN 2004) and the Bat Conservation Trust Bat Survey Good Practice Guidelines (2012) recommendations.

Personnel

- 3.10 All daytime survey works were undertaken by experienced Bat Ecologist Mrs. Z. Foster, who holds a Bat Class Licence (Registration number 2015-17219-CLS-CLS).

Timing

- 3.11 The daytime survey was conducted on the 2nd of December 2015 when the building and trees that will be affected by the proposed works were inspected for potential places that may be of value to bats and if evidence of use was present.
- 3.12 The daytime survey was conducted at a time when bats will be in a state of torpor/hibernating characterised by a lower metabolic heart rate, body temperature and slowed breathing due to a lack of food. Bats will roost on their own or in small groups at suitable hibernation sites. Presence of bats may be identified although evidence of bat occupation such as droppings and urine stains may be less obvious. However, depending upon species and roost location, it is possible to locate evidence of previous bat occupation even if the roost is only used seasonally.

Constraints

- 3.13 Internal access into the building was not gained therefore a full inspection of the building was not completed. It was not possible to view the western elevation of the building due to the proximity of the boundary fence and thick ivy growing up to the roof.
- 3.14 Due to the close proximity of one of the trees to the boundary fence, it was not possible to view all the elevations.
- 3.15 Overall, there are limitations to the survey undertaken and these have been taken into consideration when conclusions, impacts and recommendations have been made.

4.0 Survey Results

Desktop Study

UK Species of Principal Importance

- 4.1 Section 41 of the Natural Environmental and Rural Communities Act 2006 (NERC) lists several bat species as UK Species of Principal Importance, as follows:
- Noctule (*Nyctalus noctula*)
 - Soprano pipistrelle (*Pipistrellus pygmaeus*)

- Brown long-eared (*Plecotus auritus*)
- Lesser horseshoe (*Rhinolophus hipposideros*)
- Greater horseshoe (*Rhinolophus ferrumequinum*)
- Barbastelle (*Barbastella barbastellus*)
- Bechstein's (*Myotis bechsteinii*)

National Status

- 4.2 There are 18 species of bat that are native to the United Kingdom. Little is known about the status of most species although the available evidence suggests a general decline in populations nationally (Harris, S. et al. 1995). The commonest species of bats are the pipistrelle family (*Pipistrellus* sp), although these are also estimated to have declined in numbers by 70% between 1978 and 1993.

Local Biodiversity Action Plan

- 4.3 North Merseyside Biodiversity Action Plans (LBAP) list eight bat species as being present in North Merseyside, these are as follows:-
- Brown long-eared
 - Whiskered (*Myotis mystacinus*)
 - Brandt's (*Myotis brandtii*)
 - Daubenton's (*Myotis daubentonii*)
 - Noctule
 - Common pipistrelle (*Pipistrellus pipistrellus*)
 - Soprano pipistrelle
 - Natterer's (*Myotis nattereri*)

- 4.4 Nine native species of bat have been recorded in North Merseyside, which include the above list, with the addition of Nathusius pipistrelle (*Pipistrellus nathusii*).

Desktop Study Results

- 4.5 A desk-top study was undertaken and the results showed that there are records of two species of bat; Brown long-eared and Common pipistrelle, within 2km of the proposed development site. There are three records of Brown long eared bats dating between 1984 and 1993; and there are three records of Common pipistrelle bats recorded between 2003 and 2004.

Local Status

- 4.6 Populations of bats in many parts of North Merseyside are comparable in size and importance to some of the best areas in the country and the size and changes are believed to mirror national trends.
- 4.7 Pipistrelle bats occur in all four of the Merseyside districts and are widely distributed in North Merseyside, being the most encountered bats roosting within built structures and foraging in urban areas.
- 4.8 Brown long-eared and Noctule are found throughout North Merseyside but are less common.
- 4.9 The distribution of Daubenton's, which feed predominately over water are localised with records from Sefton, Liverpool and St Helens.
- 4.10 Whiskered/Brandt's and Natterer's are rare locally, Whiskered being recorded in Sefton and St. Helens and Natterer's only recorded in St. Helens so far.

Inspection & Assessment Survey Results

- 4.11 The site is located in an urban area to the south-western of West Derby and to the east of Tuebrook. Directly to the north of the site there are residential properties; along the southern boundary there is a tree-lined, disused railway line and The Bill Shankly Recreation Ground; to the south and west there are residential properties. Mill Lane runs along the northern boundary of the site. The disused railway line immediately adjacent to the site, is part of the Loop Line (Liverpool Local Wildlife Site) which stretches for 11km across Liverpool and is the longest unbroken wildlife corridor in the city. It contains a diverse mosaic of habitats on the banks and floor.
- 4.12 There are a number of connected features that would provide suitable habitat for foraging bats within the wider survey area. These include the 17 acres Norris Green Park which is located c.1km to the north of the site. The 500 acre Croxteth Country Park which is located c.500m to the north-east and which contains a Local Nature Reserve, woodlands, ponds and pastureland. West Derby Golf Club lies to the east c.1.15km which is which is a mature parkland containing water-courses, water-bodies, scattered trees and grassland.
- 4.13 Overall, habitats within the immediate and wider survey area are considered to be of moderate value for bat species. Where suitable habitat is present in close proximity to buildings then there is an increased use of the buildings/trees for roost sites given the presence of suitable foraging habitat.
- 4.14 A description of the buildings and trees can be found in the table 1 below.

Table 1: Description of Buildings/Structures and Trees.

Building A	
Description:	A single storey small shed, brick-built with a slate covered roof, located along the western boundary of the site. The brickwork and mortar were tight on the northern, eastern and southern elevations. There is no access into the building as the doorway and window had been blocked up with bricks and breeze blocks. It was not possible to view the western elevation of the building due to the proximity of the boundary fence and thick live ivy growing up to the roof.
Roost potential signs:	The roof is covered in thick stems of dead ivy and the north-eastern corner of the roof has collapsed inwards rendering the building draughty and wet. The hole in the roof was examined from a ladder but it was not possible to see clearly inside as the collapsed tiles were blocking the view. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have negligible to low potential for roosting bats.
Tree 1	
Description:	A semi-mature cherry sp. tree that is c.5m in height. On the eastern and southern elevations there are two snapped lower dead branches which are very exposed to the elements. There is also some very minor rough bark. There are no other features present which have the potential to support roosting bats.
Roost potential signs:	The tree is considered to hold Category 3 (negligible) potential for roosting bats.
Tree 2	
Description:	A mature cherry tree that is c.5.5m in height. There are no features present which have the potential

to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 5
Description:
A mature whitebeam tree that is c.5m in height. On the southern elevation there are two shallow rams-horns which do not recede into the trunk. There is also a dead branch which has a vertical split which is exposed to the elements. There are no other features which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 (negligible) potential for roosting bats.
Tree 6
Description:
A mature whitebeam tree that is c.5m in height. On the eastern elevation, c.1.5m from the ground, there is a very minor rot hole where a branch has been removed. The rot hole did not recede. There were no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 7
Description:
A semi-mature sweet chestnut tree that is c.11m in height. On the northern elevation, c.2.5m from the ground there is the remnant of a branch with a diagonal split running through it. On the southern elevation, c.2.5m from the ground there is a horizontal branch with a horizontal split through it. On the western elevation, c.1.5m from the ground, a branch has been ripped off and the base if left which has a split in it. All of the above features were examined from a ladder and none were found to hold any potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 9
Description:
A semi-mature common ash tree that is c.12m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 10
Description:
A young lime tree that is c.6m in height. On the northern elevation, c.1.5m and c.2m from the ground there are two rams-horns. Neither rams-horn recedes into the tree and there is no potential for them to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 11
Description:
A semi-mature Persian ironwood tree that is c.5m in height. There are no features which have the potential to support roosting bats.

Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 12
Description:
Young ornamental tree that is c.10m in height. There are numerous dead and dying branches on the tree but there are no features which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 13
Description:
A young sycamore tree that is c.10m in height. There are no features which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 14
Description:
A mature silver birch tree that is c.14m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 15
Description:
A semi-mature Persian ironwood tree that is c.6m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 16
Description:
A semi-mature silver birch tree that is c.10m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 19
Description:
A young silver birch tree that is c.9m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 20
Description:
A young common lime tree that is c.9m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:

The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 21
Description:
A semi-mature common ash tree that is c.12m in height. On the western elevation there is a bird box. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 22
Description:
A young sycamore tree that is c.12m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 24
Description:
A mature silver birch tree that is c.14m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 25
Description:
A mature common hawthorn that is c.4m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 26
Description:
A semi-mature common lime tree that is c.14m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 27
Description:
A semi-mature sycamore tree that is c.12m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 28
Description:
A semi-mature common lime tree that is c.14m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.

Tree 29
Description:
A semi-mature common lime tree that is c.14m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 30
Description:
A semi-mature elm sp. that is c.4m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 33
Description:
A semi-mature Persian ironwood tree that is c.5m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 37
Description:
A semi-mature sycamore tree that is c.12m in height. On the eastern elevation, c.2m from the ground, there is a rams-horn but it did not recede. There are no other features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 38
Description:
A mature silver birch tree that is c.12m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 39
Description:
A mature elm sp. that is c.11m in height. The top of the tree has broken off horizontally and is hanging from the branches. The top of the trunk is very exposed to the elements. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 40
Description:
A semi-mature sycamore tree that is c.12m in height. On all elevations there are occasional rams-horns but none of them recede and there is no potential for roosting bats to utilise any of them. There are no features present which have the potential to support roosting bats.

Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 43
Description:
A mature silver birch tree that is c.14m in height. On the northern elevation, c.3m from the ground, there is a hole where a branch has been removed. The hole recedes c.5cm, is very wet inside and is full of woodlice. There are no other features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 44
Description:
A mature Persian ironwood tree that is c.4m in height. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree 45
Description:
A mature common ash tree that is c.12m in height. On all elevations there are occasional rams-horns but none of them recede and there is no potential for roosting bats to utilise any of them. There are no features present which have the potential to support roosting bats.
Roost potential signs:
The tree is considered to hold Category 3 and no potential for roosting bats.
Tree G1
Description:
A group of three semi-mature sycamore trees. There are no features present on any of the trees, which have the potential to support roosting bats.
Roost potential signs:
The trees are considered to hold Category 3 and no potential for roosting bats.
Tree G2
Description:
A group of sycamore trees growing between the boundary wire mesh fence and the residential garden fence. The western elevations cannot be viewed due to the fence. There are no features present which have the potential to support roosting bats on the three elevations which could be observed.
Roost potential signs:
The tree is considered to hold Category 2 (negligible to low) potential for roosting bats.

5.0 Conclusion

- 5.1 From the results of the initial inspection survey Building A was found to contain negligible to low bat roost potential when considering the collapsed section of roofing slate on the north-eastern corner of the roof, allowing access inside the building.

- 5.2 The inspection survey found Trees 1, 2, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 33, 37, 38, 39, 40, 43, 44, 45 and G1 to hold Category 3 (negligible/no) potential to support roosting bats.
- 5.3 Group 2 was found to hold Category 2 (negligible to low) potential to support roosting bats.
- 5.4 No evidence of past or present use of the building or trees by roosting bats was identified.

6.0 Implications and Recommendations

Buildings

- 6.1 Building A at Ernest Cookson School site on Mill Lane, West Derby has been found contain negligible to low potential for bat species. It is not considered that further activity surveys are required, but as best practice it is recommended that areas of the building most associated with roosting bats such as beneath the roofing slates and any gaps within the brick walls, shall be carefully removed under the supervision of a licensed Bat Ecologist.
- 6.2 In the unlikely event that a bat/s or evidence of bat/s is/are suspected or found within Building A, all works must cease immediately and advice should be sought from either Natural England or the acting Consultant.

Trees

- 6.3 The inspection survey found Trees G2 to hold Category 2 negligible to low potential to support roosting bats. In line with The Bat Surveys Good Practice Guidelines produced by the Bat Conservation Trust (2012) Table 8.4 Protocol for visual inspection of trees due to be affected by arboricultural work, to assess the value of the trees to bats. For Category 2 trees the following approach shall be adopted:-
- Avoid disturbance to trees, where possible.
 - No further aerial to activity surveys are required.
 - Trees may be felled taking reasonable avoidance measures.
- 6.4 If at any time a bat/s or evidence of bat/s is/are suspected or found, all works must cease immediately and advice should be sought from either Natural England or the acting Consultant.
- 6.5 Trees 1, 2, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 33, 37, 38, 39, 40, 43, 44, 45 and G1 were found to hold Category 3 (negligible/no) potential to support roosting bats. Therefore, there are no apparent implications in relation to roosting bats and Category 3 trees.
- 6.6 As bats are mobile creatures and can form new roosts at any time if works are not started within one year of this report then it may be necessary to repeat certain surveys.

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The Environmental Damage Regulations 2009

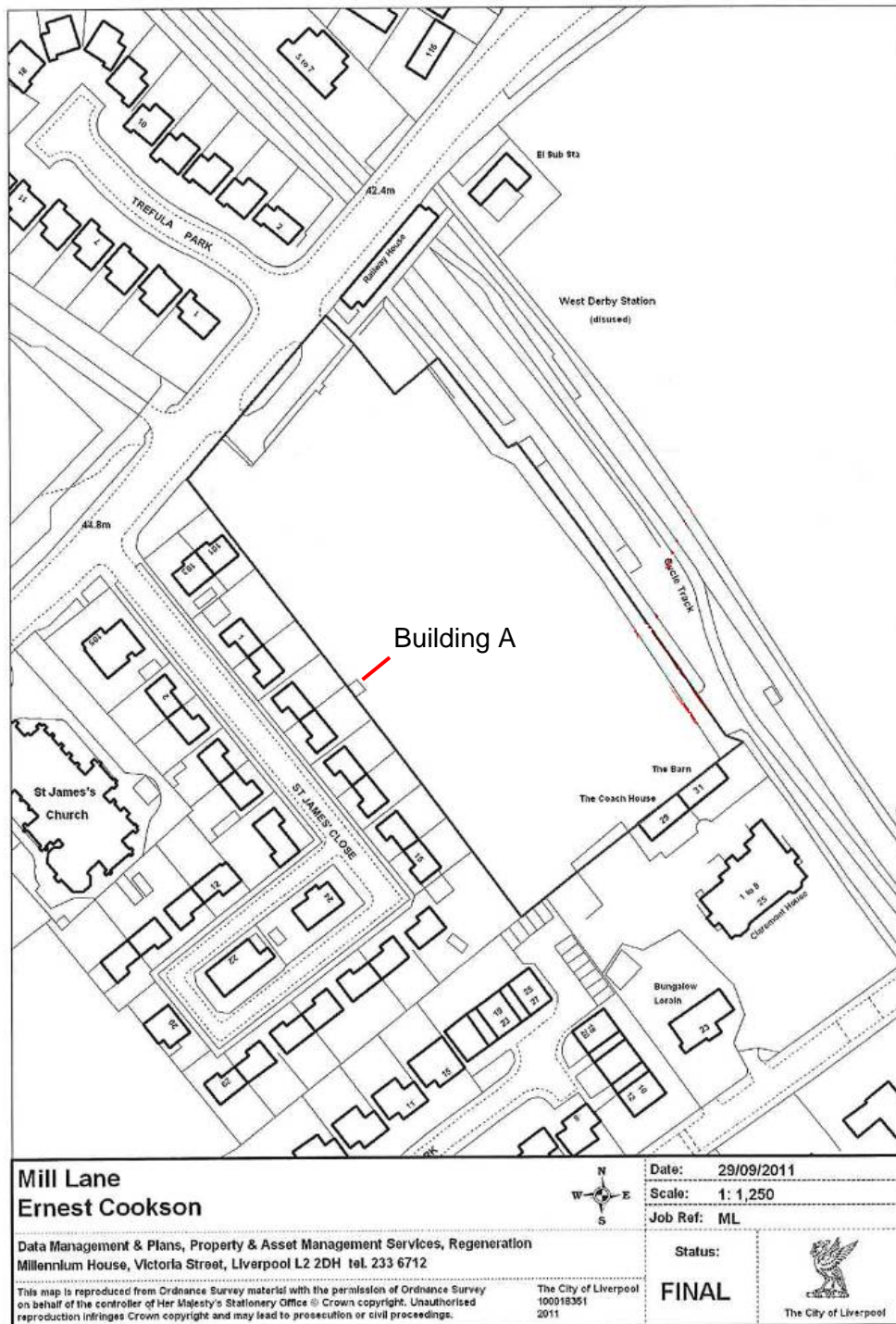
The Wildlife & Countryside Act 1981 (as amended)

UK Biodiversity Steering Group (1995) Biodiversity – the UK Steering Group Report. Volume 2: Action Plans. P89 SAP for Pipistrelle. London, HMSO.

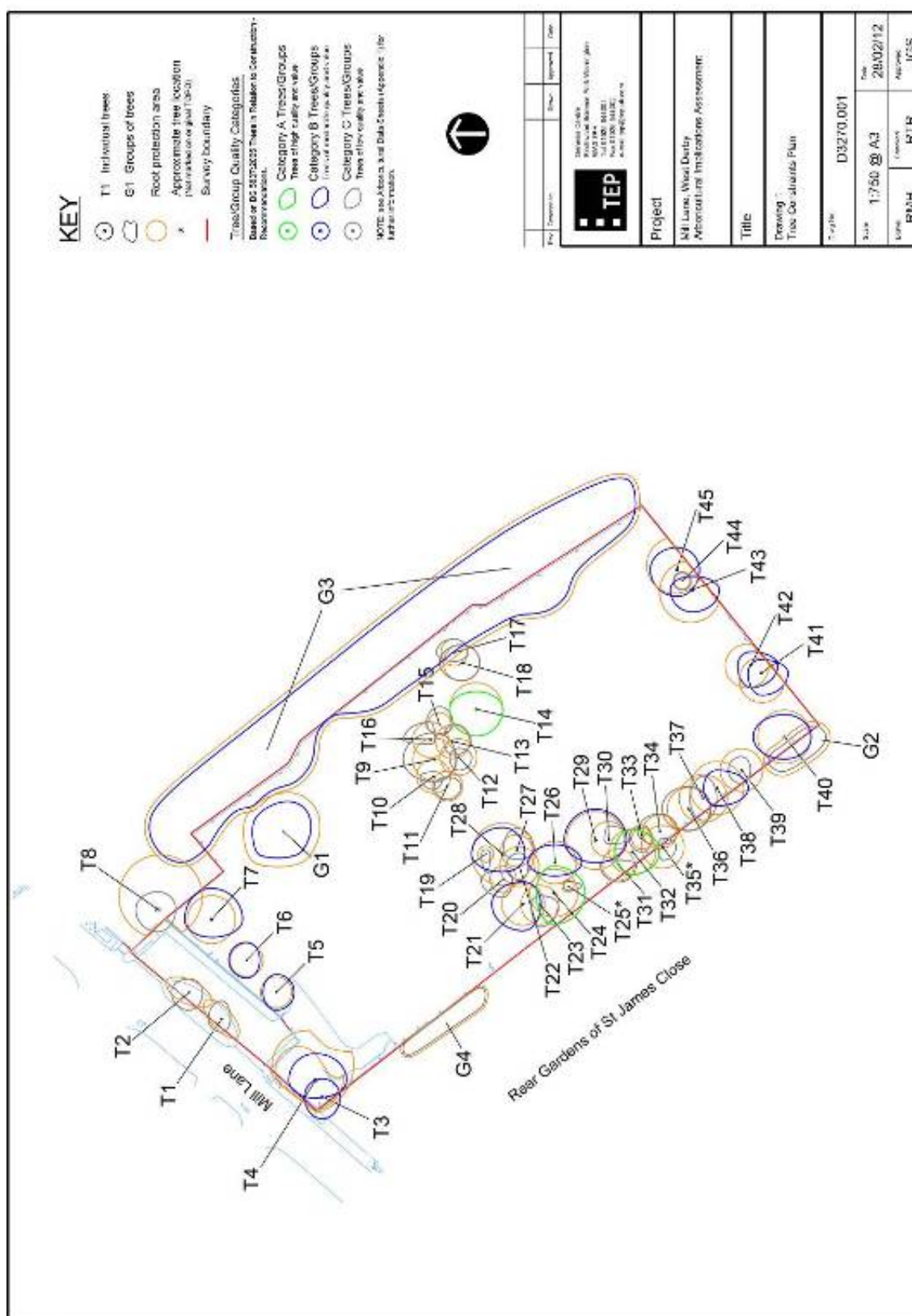
Species Population Trends, Bat Conservation Trust, Online – available from - http://www.bats.org.uk/pages/species_population_trends.html – Accessed January 2014

Individual Species Reports – 3rd UK Habitats Directive Reporting 2013, JNCC. Online – available from - <http://jncc.defra.gov.uk/page-6391> – Accessed January 2014

Map 1:
Site Plan

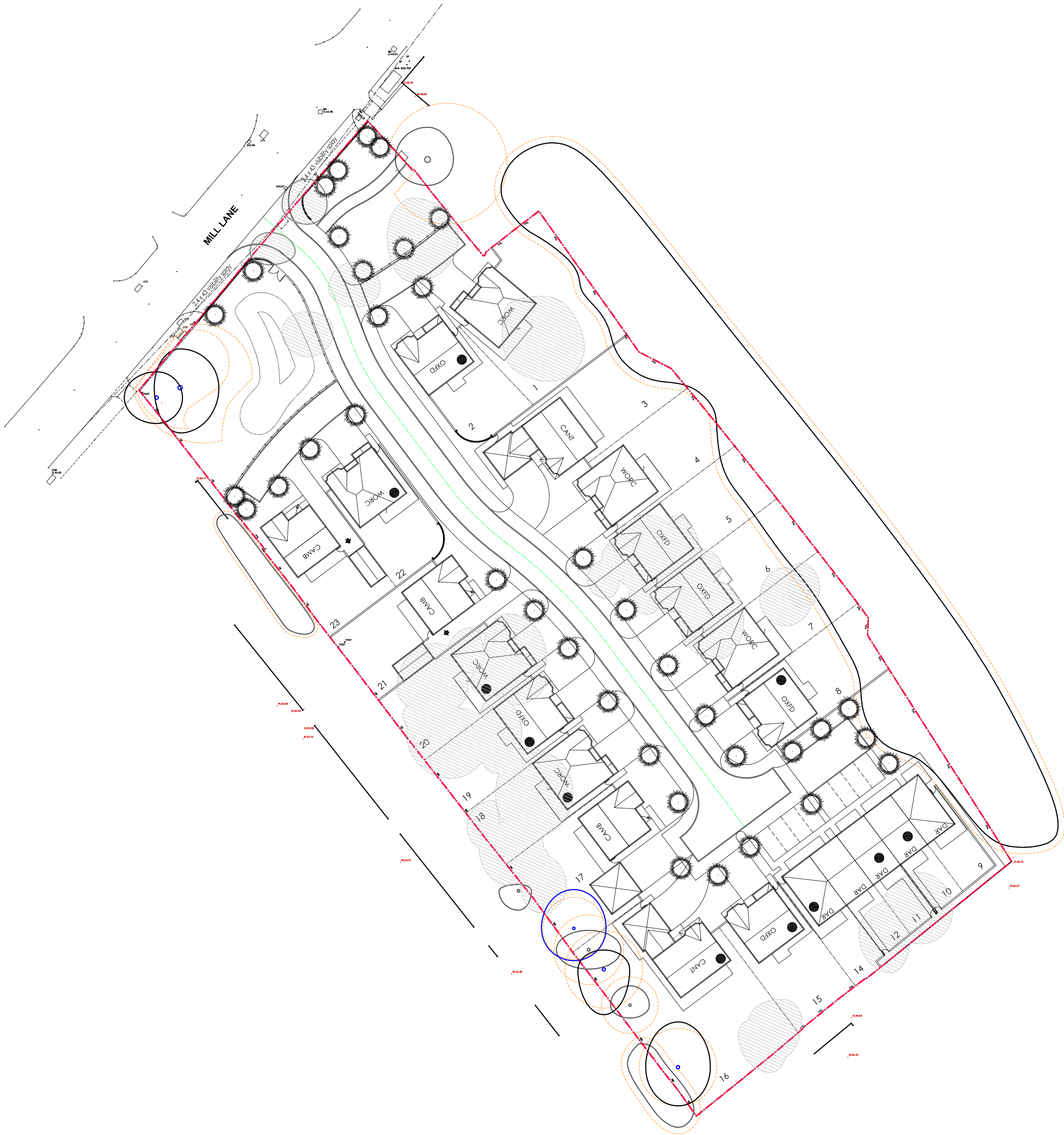


Map 2:
Plan Showing Trees



Map 3:
Proposals for the Development at the Site

Mill Lane, West Derby.



Survey Information



Legend

- Line to delineate Site Boundary
- Line to delineate extent of 1.8 metre high close boarded fencing. Refer to Redrow standard detail no. C-SD0906
- Line to delineate extent of 1.8mm high brick wall. Refer to Redrow standard detail no. C-SD0808
- Line to delineate extent of 1.2mm high metal railings.
- Indicates existing landscaping to be removed subject to Local Authority Tree Conservation Officer
- Indicates existing landscaping to be retained.
- Indicative position of new tree planting. Refer to Landscape Layout for further details.
- Proposed timber gates to be erected to rear gardens as indicated on site layout. Refer to Commercial Department for spec of gates
- Indicates house types that are handed

Revision	Date	Amendment	Initials
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Notes

Mk Schedule Haven Lane				
House Type	Sqft	No Beds	Garage	Quantity
HOUSE TYPES				
Canterbury	1408	4	IDG	2
Cambridge	1382	4	SG	3
Oxford	1300	4	ISG	6
Worcester	1245	3	ISG	6
Dart	925	3	PS	5
PS = Parking Space SG = Single Garage ISG = Integral Single Garage IDG = Integral Double Garage				
TOTAL				22

Development	MILL LANE		
Location	WEST DERBY		
Marketing Name	XXX		
Drawing Title	DETAILED SITE LAYOUT		
Drawing Number	DSL-001		
Revision	.	Scale @ A1	1:500
Drawn By	MCK	Date Started	07.12.15
Checked by		Date	

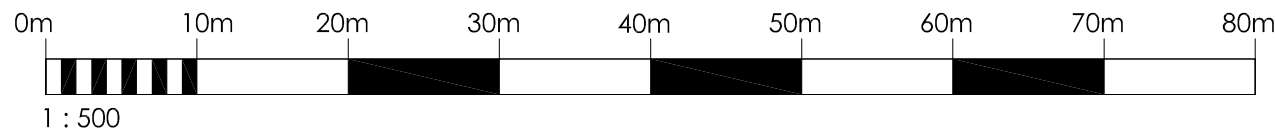


**REDROW
HOMES**

Redrow Homes Ltd - Lancs Division
Redrow House, 14 Eaton Ave, Buckshaw Village, Chorley, Lancs PR7 7NA
Tel: 01772 643700 Fax: 01772 643701 Web: www.redrow.co.uk

Legal Disclaimer TBC

This layout has been designed after due consideration of our Context & Constraints Plan



Appendix 1:

Table 8.5 Minimum Number of Presence/Absence survey visits required to provide confidence in negative preliminary roost assessment results for buildings, built structures and trees in summer. (Taken from the Bat Conservation Trust Bat Survey Good Practice Guidelines (2012))

High roost potential	Low to moderate roost potential	Low roost potential
3 dusk emergence and/or pre-dawn re-entry surveys during May to September. Optimum period May to August.	2 dusk emergence and/or pre-dawn re-entry surveys during May to September. Optimum period May to August.	1 dusk emergence and/or pre-dawn re-entry survey during May to September. Optimum period May to August.
<p>If bats are discovered emerging from any of the buildings during the surveys, the survey schedule should be appropriately adjusted to increase the survey effort so that sufficient information can be collected.</p> <p>Note: two surveys carried out within the same 24 hours period constitutes as 1 survey.</p>		

The information within the above Table 8.5 is guidance and it is up to the acting consultant to determine in their expert judgement the overall level of survey that is required, this is based upon their knowledge, experience and is site specific i.e. taking into account the site conditions.

Appendix 2:

Table 8.4 Protocol for visual inspection of trees due to be affected by arboricultural work, to assess the value of the trees to bats.

Tree category and description	Stage 1 Initial survey requirements	Stage 2 Further measures to inform proposed mitigation	Stage 3 Likely mitigation
Known or confirmed roost	Follow SNCO guidance and these guidelines wherever possible, to establish the extent to which bats use the site. This is particularly important for roosts of high risk species and/or roosts of district or higher importance and above.		The tree can be felled only under EPS licence following the installation of equivalent habitats as a replacement.
Category 1* Trees with multiple, highly suitable features capable of supporting larger roosts.	Tree identified on a map and on the ground. Further assessment to provide a best expert judgement on the likely use of the roost, numbers and species of bat, by analysis of droppings or other field evidence. A consultant ecologist is required.	Avoid disturbance to trees, where possible. Further dusk and pre-dawn survey to establish more accurately the presence, species, numbers of bats present and the type of roost, and to inform the requirements for mitigation if felling is required.	Felling would be undertaken taking reasonable avoidance measures ³ such as 'soft felling' to minimise the risk of harm to individual bats.
Category 1 Trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats.	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the potential use of suitable cavities, based on the habitat preference of bats. A consultant ecologist is required.	Avoid disturbance to trees, where possible. More detailed off the ground visual assessment. Further dusk and pre-dawn survey to establish more accurately the presence, species, numbers of bats present and the type of roost, and to inform the requirements for mitigation if felling is required.	Trees with confirmed roosts following further survey are upgraded to Category 1* and felled under licence as above. Trees with no confirmed roosts may be downgraded to Category 2 dependent on survey findings.
Category 2 Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.	None. A consultant ecologist unlikely to be required.	Avoid disturbance to trees, where possible. No further surveys.	Trees may be felled taking reasonable avoidance measures. Stop works and seek advice in the event bats are found, in order to comply with relevant legislation.
Category 3 Trees with no potential to support bats.	None. A consultant ecologist not required unless new evidence is found.	None.	No mitigation for bats required.

Appendix 3:
Site Photographs



Tree 1



Tree 5



Tree 7



Tree 7 - split limb, did not recede



Group 1



Trees 9, 10, 11, 12, 13 and 16



Trees 21, 24, 27 and 28



Building A with collapsed slates