



Site: Harrogate Road / New Line
Junction Improvement

Report: Bat Survey

Client: Bradford Metropolitan
District Council

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1 Introduction

1.1 Background to Development

1.1.1 A junction improvement scheme is currently being prepared for the Harrogate Road / New Line junction in Greengates, Bradford. The scheme aims to improve traffic flow and to make the junction safer for pedestrians and cyclists. The junction is located at National Grid Reference SE 19044 37278 and will hereby be referred to as 'the site'.

1.1.2 The proposed works include:

- The widening of the existing roads around the junction to provide additional lanes including the demolition of one building (No.804 Harrogate Road);
- Insertion of traffic islands to provide pedestrian crossing points on the junctions;
- Development of a new filter road providing access from Harrogate Road to New Line for east bound traffic; and
- The demolition of two buildings (No.911 and 913/915 Harrogate Road) to create a new access road to the Farmfoods store located to the south-west of the junction.

1.1.3 A drawing illustrating the proposed junction improvement is provided within Appendix 1 of this report. The development is due to commence in 2018 with the proposed works taking approximately 52 weeks. The building demolition is likely to be undertaken during the spring with the junction improvements commencing in the summer

1.2 Objectives

1.2.1 The purpose of this report is to identify the presence of bat roosts within any trees or buildings directly or indirectly impacted by the junction improvements and to recommend appropriate mitigation where necessary to ensure that the scheme is compliant with UK and European wildlife legislation.

1.3 Agreed Brief

1.3.1 BL Ecology Ltd was commissioned on 7th June 2016 to undertake a bat assessment of the site. The agreed brief was to:

- Undertake a desk study with West Yorkshire Bat Group and West Yorkshire Ecology;
- Undertake a daytime scoping assessment of the trees and buildings impacted by the proposed development;
- Undertake bat activity surveys of the trees and buildings impacted by the proposed development; and
- Submit a full technical report with associated mapping, highlighting the methods, results, legal and planning policy constraints and how these may be overcome through mitigation and licensing.

2 Methodology

2.1 Desk Study

2.1.1 A desk study was undertaken with the West Yorkshire Bat Group and West Yorkshire Ecology who provided records within 2km of the site. Desk studies are undertaken to find historic records of roosting bats within the immediate vicinity of the proposed development in order to assess the likely impact on bats.

2.2 General

2.2.1 A survey area was defined which included all trees identified in the Arboricultural Survey Report, December 2015 (report reference, Arbolution: 151209) and the buildings which are to be directly affected by the proposed works, Nos.911, 913, 915 and 804 Harrogate Road. For ease of surveying the trees are grouped into three clusters for this report; Cluster 1 to the north-east of the crossroads, Cluster 2 to the south-east of the crossroads, and Cluster 3 to the west of the crossroads (as illustrated on Figure 2).

2.2.2 The daytime assessment of the trees and buildings was carried out by Jennifer Clarke BSc (Hons) MSc MCIEEM who holds a Natural England Class 2 Bat Licence (2015-15183-CLS-CLS) and has held Natural England Development Licences. Jennifer has over 13 years experience of designing and completing bat surveys as well as providing site specific bat mitigation.

2.2.3 Dusk emergence and dawn return surveys were undertaken by the following personnel:

- Jennifer Clarke BSc;
- Emma Mackenzie BSc (Hons) MSc ACIEEM who has six years experience of designing and completing bat surveys as well as providing site specific mitigation;
- Joanna Barratt BSc (Hons) GardCIEEM who has four years of bat survey experience;
- Arabella Fox BSc (Hons) GradCIEEM who has three years of bat survey experience; and
- David Reed BSc (Hons) who has two years of bat survey experience.

2.3 Daytime Inspection for Signs of Roosting Bats

2.3.1 The trees identified by Arbolution (report reference 151209) were assessed for signs of roosting bats from ground level using binoculars. Signs searched for included bat droppings on the trunk and base of the trees, dead juvenile bats, and grease marks around entrances, and noises of bats calling from within the roost.

2.3.2 The buildings to be directly affected, numbers 804, 911, 913, and 915 Harrogate Road, were subject to an external inspection and assessment of bat roosting potential. The exterior walls, the floor, windows and ledges were assessed for signs of roosting bats using binoculars and a high powered torch. Signs searched for included bat droppings on external surfaces, dead juvenile bats, scratch and grease marks around entrances, and noises of bats calling from within the roost.

2.4 Daytime Inspection for Bat Roost Potential

2.4.1 An assessment was also made of the potential the trees and buildings had to support bats at other times of year. Suitable bat roosting features were searched for on the trees, features searched for included loose bark, woodpecker holes, rot holes, mature ivy, dead wood, and stress splits.

2.4.2 Suitable bat roosting features were searched for throughout the buildings. Features searched for included cracked/missing/ loose roof tiles, gaps in soffits/fascias/barge boards, gaps in brickwork, presence of a cavity wall, access into the eaves, access into the ridge tiles, and any other crack or gap at least 10mm in size.

2.4.3 Each tree (or group of trees) and building was then awarded a level of potential to support roosting bats in summer, the breeding period, transitionally and in winter (roost requirements can be found in Appendix 2). The level of potential is defined by the presence of suitable roosting features together with the locality, environmental conditions, age and proximity to suitable bat foraging habitat. The levels of potential are defined below:

- **Negligible** – Building or tree with no roosting potential and located in poor bat foraging habitat.
- **Low** – Building or tree with limited roosting potential with limited suitable bat foraging habitat. No suitability for breeding and/or hibernating bats.
- **Moderate** – Building or tree with some roosting potential of varying types and sizes, connected to some optimal bat foraging habitat. Some suitability for breeding bats and/or hibernating bats.
- **High** – Building or tree with multiple potential roosting cavities of varying types and sizes. High suitability for breeding bats and/or hibernating bats and connectivity to a range of optimal bat foraging habitats.
- **Confirmed roost** – Presence of droppings found internally, underneath roost access points or the presence of bats confirmed.

2.5 Dusk Emergence and Dawn Return Surveys

2.5.1 Ecologists were located around the trees and buildings to ensure all potential roosts were covered sufficiently. Each surveyor was equipped with an EM3 or Batbox Duet bat detector linked to an mp3 recorder. Surveyors tracked bat movements around the site through the use of a Yukon night vision monocular and Binatone long range radios, which allowed audio contact to remain throughout the survey period. The surveyors watched the potential roost exit or entry points constantly and noted any bats emerging from or returning to potential roost points. All activity was marked on a map.

2.5.2 Timings and other survey parameters are provided within the Tables below.

Table 1: Tree Cluster 1 – Dusk Emergence and Dawn Return Survey Parameters

	Dusk Emergence Survey		Dawn Return Survey	
Date	18/07/2016		16/08/2016	
Sunset/sunrise time	21:26		05:46	
	Start	End	Start	End
Survey timings	21:11	22:56	04:16	05:46
Temperature	23.5°C	20°C	12.5°C	11°C
Precipitation	Dry	Dry	Dry	Dry
Wind speed	Beaufort 0	Beaufort 0	0 Beaufort	0 Beaufort
Cloud cover	0/8 Oktas	2/8 Oktas	1/8 Oktas	3 /8 Oktas

Table 2: Tree Cluster 2 and Building No.804 – Dusk Emergence and Dawn Return Survey Parameters

	Dusk Emergence Survey		Dawn Return Survey	
Date	18/07/2016		17/08/2016	
Sunset/sunrise time	21:26		05:49	
	Start	End	Start	End
Survey timings	21:11	22:56	04:19	05:50
Temperature	23.5°C	20°C	14.5°C	14°C
Precipitation	Dry	Dry	Dry	Dry
Wind speed	Beaufort 0	Beaufort 0	8 Beaufort	8 Beaufort
Cloud cover	0/8 Oktas	2/8 Oktas	0/8 Oktas	1 /8 Oktas

Table 3: Tree Cluster 3 – Dusk Emergence and Dawn Return Survey Parameters

	Dusk Emergence Survey		Dawn Return Survey	
Date	19/07/2016		10/08/2016	
Sunset/sunrise time	21:24		05:37	
	Start	End	Start	End
Survey timings	21:10	22:55	04:10	05:40
Temperature	28°C	25°C	13°C	11.5°C
Precipitation	Dry	Dry	Dry	Dry
Wind speed	Beaufort 3	Beaufort 1	Beaufort 1	Beaufort 1
Cloud cover	4/8 Oktas	6/8 Oktas	6/8 Oktas	6/8 Oktas

Table 4: Building Nos. 911, 913 & 915 – Dusk Emergence and Dawn Return Survey Parameters

	Dusk Emergence Survey		Dawn Return Survey	
Date	02/08/2016		17/08/2016	
Sunset/sunrise time	21:02		05:49	
	Start	End	Start	End
Survey timings	20:45	22:35	04:19	05:50
Temperature	13°C	14°C	14.5°C	14°C
Precipitation	Dry	Dry	Dry	Dry
Wind speed	Beaufort 3	Beaufort 2	1 Beaufort	1 Beaufort
Cloud cover	6/8 Oktas	7/8 Oktas	8/8 Oktas	8/8 Oktas

2.6 Limitations

- 2.6.1 No access could be gained into the internal roof voids of the buildings surveyed, however it is considered that the level of activity surveys undertaken would identify any roosts present and therefore this is not considered to be a significant limitation.

3 Results

3.1 Desk Study

3.1.1 The desk study revealed a total of 58 bat records from West Yorkshire Bat Group and West Yorkshire Ecology. The species that were found to be present within the study area are Daubenton's bat (*Myotis daubentonii*), Noctule (*Nyctalus noctula*), pipistrelle species (*Pipistrellus sp.*), and common pipistrelle (*Pipistrellus pipistrellus*).

3.1.2 The closest and most notable of these records are:

- Field records of common pipistrelle and Daubenton's bat approximately 0.35km east of the centre of the site;
- A possible bat roost (unknown species) located 0.39km north-west from the centre of the site;
- A common pipistrelle maternity roost located approximately 0.47km north-east of the site; and
- A bat roost (unknown species) located approximately 0.65km south-west of the site.

3.1.3 The results of the desk study from West Yorkshire Bat Group can be seen illustrated on Figure 1 with the West Yorkshire Ecology bat data being shown in Appendix 3 where full details of all records can also be found.

3.2 Surrounding Habitat

3.2.1 The site is located within an urban setting of Greengates which is to the north-east of Bradford city centre. Commercial and residential properties are situated along either side of the junction to be improved. Foraging and commuting habitat for bats is limited to occasional stands of trees both along the roadside and in small residential gardens/private property, together with a small planted area known as Greengates Community Garden. However, the high levels of street lighting and the lighting of commercial properties (such as Farmfoods to the south-west and the business complex consisting of Costa Coffee, KFC and Coregym to the south-east) greatly reduces the potential of the immediate landscape for bats.

3.2.2 Within the wider landscape open fields are located approximately 100m to the north of the site, the Leeds Liverpool Canal 400m, and the River Aire 630m. Furthermore, West Wood is situated 320m to the east of the site, which connects to Bill Wood via Carr Beck 650m to the south. Whilst these habitats are highly suitable for foraging, commuting and roosting bats, connectivity from the site is limited to well-lit roads and small urban gardens.

3.3 Daytime Inspection for Signs of Roosting Bats

3.3.1 No signs of roosting bats were recorded at the time of the bat scoping surveys of the trees or that of the buildings.

3.4 Daytime Inspection for Bat Roost Potential

Trees

3.4.1 Those trees found to have bat roosting potential can be found in Table 5 below, this table also provides a brief description of the potential roosting features present. Tree number, species and age have all been taken from the arboricultural report (Arbolution: 151209).

3.4.2 The trees with bat roost potential have been marked on Figure 2, which also illustrates the grouping of trees into clusters. Photographs of the trees with bat roosting potential can be found in Figure 3.

Table 5: Trees with Bat Roost Potential

Cluster ref.	Tree number	Tree species		Tree age	Potential roosting feature			Level of bat roost potential	Photo number (Figure 3)
		English	Latin		Feature	Aspect	Height		
1	G53	Ash and sycamore	<i>Fraxinus excelsior</i> & <i>Acer pseudoplatanus</i>	Middle aged	Ivy	All	All	Low	1
	T54	Lime	<i>Tilia spp.</i>	Mature	Ivy	All	All	Low	2
	T57	Ash	<i>Fraxinus excelsior</i>	Mature	Ivy	All	All	Low	3
	T58	Sycamore	<i>Acer pseudoplatanus</i>	Mature	Ivy	All	All	Low	3 and 4
	T59	Ash	<i>Fraxinus excelsior</i>	Middle aged	Ivy	All	All	Low	5
	T61	Sycamore	<i>Acer pseudoplatanus</i>	Mature	Ivy	All	All	Low	6
	T63	Ash	<i>Fraxinus excelsior</i>	Middle aged	Ivy	All	All	Low	7
	T68	Horse-chestnut	<i>Aesculus hippocastanum</i>	Over mature	Broken limb	North	6m	Low	8
	T75	Whitebeam	<i>Sorbus aria</i>	Mature	Ivy	All	All	Low	9 and 10
	T76	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	Ivy	All	All	Low	10
2	T82	Cherry	<i>Prunus spp.</i>	Middle aged	Ivy	All	All	Low	11
	T83	Ash	<i>Fraxinus excelsior</i>	Middle aged	Ivy	All	All	Low	11
	G85	Ash, hazel, elder, hawthorn, privet	<i>Fraxinus excelsior</i> , <i>Corylus avellana</i> , <i>Crataegus monogyna</i> , & <i>Ligustrum ovalifolium</i>	Middle aged	Ivy	All	All	Low	12
3	T36	Ash	<i>Fraxinus excelsior</i>	Over mature	Rot hole	West	4m	Low	13 and 14
	T40	Ash	<i>Fraxinus excelsior</i>	Mature	Rot hole	North	4m	Low	13 and 15
	T41	Horse-chestnut	<i>Aesculus hippocastanum</i>	Mature	Broken branch	East	6m	Low	13 and 16

Buildings

3.4.3 Building No.911 Harrogate Road is a small stand alone commercial building (Figure 3: Photographs 17 and 18). This property is a brick building with a pitched, slate tiled roof with gable ends present to the north and the south. Guttering is mounted on a wooden board on the stone corbels present under the eaves. The building is in generally good condition however occasional lifted roof tiles are present.

3.4.4 No.913 and No.915 Harrogate Road are properties located within the same building; the ground floor of the property is commercial while the first floor provides residential accommodation (Figure 3: Photographs 17 and 19). The building is located within a short, stone terrace of three properties with Nos.913/915 being the most southerly of these. The building has a pitched, slate-tiled roof, gabled to the south with a return gable on the east aspect (creating an 'L' shaped building) (Figure 3: Photograph 17). Stone lintels are preset around the intact window frames.

- 3.4.5 Both buildings offer potential roosting opportunities underneath occasional lifted roof tiles and building No.913/915 offers additional roosting opportunity where mortar is missing underneath end tiles on the southern gable. Due to restrictions preventing surveyor access into the roof voids it is unknown whether underlay is present under the tiles of these properties and therefore whether the buildings could accommodate larger numbers of bats. However, given the location of the buildings within a well-lit, busy street containing limited foraging/commuting habitat it is considered that the buildings are unlikely to be utilised as maternity roosts. Furthermore, the surrounding habitat is also likely to restrict the species that would utilise the buildings to those that tolerate high light levels, such as pipistrelles and Leisler's (*Nyctalus leisleri*) rather than the *Myotis* species or brown long-eared bats (*Plecotus auritus*).
- 3.4.6 Building No.804 Harrogate Road is a modern stone building with a pitched, tile roof, large metal fascias around the eaves, corrugated metal cladding on both gables, and metal barge boards covering end tiles on the gables (Figure 3: Photograph 20). The building is set on within a small industrial estate adjacent to New Line; it is surrounded by car park and hence is subject to very high light levels. Occasional gaps are present under the large metal fascia surrounding the building due to the uneven stone walls beneath; whilst this gap has the potential to be used by a large number of bats it is considered unlikely that the building would be used as a maternity roost due to the high light levels surrounding the building.
- 3.4.7 In conclusion, it is considered that the buildings have the potential to support low numbers of a crevice-dwelling, light-tolerant species such as pipistrelles, as a day or transitional roost. Therefore, both No.911 and Nos.913/915 are considered to hold **low bat roosting potential**.

3.5 Dusk Emergence Surveys

Tree Cluster 1

- 3.5.1 Tree Cluster 1 was not found to have any roosting bats present at the time of the survey. The first bat recorded was a common pipistrelle heard at 21:50 (29 minutes after sunset) to the north of the trees, suggesting that there is a bat roost relatively close to the site based on an average emergence time of 20 minutes after sunset for this species (Jones and Rydell, 1994). The level of bat activity observed was low with a total of two bats being recorded at any one time. Foraging bats were observed predominantly within the dark area to the north of the trees and any bats seen on the periphery of the tree cluster consisted predominantly of commuting bats. Activity was heard sporadically throughout the survey period and common pipistrelles were the only species recorded.

Tree Cluster 2

- 3.5.2 No bats were observed emerging from the trees within Cluster 2 with very low number of passes recorded. Those bats recorded, which were all common pipistrelles, were seen commuting along the line of trees, one of these bats was recorded commuting towards Cluster 1 of trees and flying to the west of the site. Overall activity levels were very low with the first bat not being recorded until 22:21 (55 minutes after sunset).

Tree Cluster 3

- 3.5.3 Tree Cluster 3 was not found to support roosting bats at the time of the survey. The first bat heard was a common pipistrelle at 21:48 commuting from south to north across the site; this time is 24 minutes after sunset suggesting that the roost is nearby (Jones and Rydell, 1994). Seven more passes were observed between 21:54 and 22:15 commuting in this same direction with occasional foraging activity within the garden of dwelling No.919 Harrogate Road; after this time occasional passes were heard but no further bats seen. From analysis of the dawn survey results for this tree cluster and the nearby buildings (Nos. 911 and 913/915 Harrogate Road, see below) it is thought that the majority of these

passes are likely to be foraging bats within the car park of the nearby Farmfoods store and nearby residential buildings. All bats recorded were common pipistrelles. Overall the level of bat activity was considered to be low.

Buildings

- 3.5.4 No bats were found to emerge from the buildings to be directly affected by the development, Nos. 804, 911 and 913/915.
- 3.5.5 The level of bat activity recorded near to Nos.911 and 913/915 during the dusk emergence survey was low with only four common pipistrelle passes being recorded. The earliest of these passes was recorded 41 minutes after sunset; these bats are thought to be commuting from their roost location to more suitable foraging habitat.
- 3.5.6 The dusk emergence survey of building No.804 was undertaken in conjunction with the survey of Tree Cluster 2 and therefore the results are described in paragraph 3.5.2 above.

3.6 Dawn Return Surveys

Tree Cluster 1

- 3.6.1 The dawn return survey of Tree Cluster 1 did not reveal any bats returning to roost within the trees. The overall bat activity level recorded at this time was very low with common pipistrelles and a single soprano pipistrelle being heard. The last bat that was recorded was a common pipistrelle at 04:58 (48 minutes before dawn).

Tree Cluster 2

- 3.6.2 A total of four bat passes were heard all of which were common pipistrelles, of these the last call was recorded at 05:27 (22 minutes before dawn). No bats were seen returning to roost within this cluster of trees.

Tree Cluster 3

- 3.6.3 No bats were observed returning to the trees within Tree Cluster 3 during the dawn return survey. The level of bat activity recorded at this time was very low with only occasional sporadic passes of common pipistrelles being heard by both surveyors, assumed to be bats foraging around nearby gardens and the Farmfoods store to the south of the trees. No bat activity was associated with the trees themselves.

Buildings

- 3.6.4 No bats were observed returning to the buildings No.804, 911 or 913/915. A low level of bat activity was recorded around buildings Nos.911 and 913/915, however the level was higher than during the dusk emergence survey. Common pipistrelles were the only species heard and the majority of the activity was concentrated in the rear gardens of this terrace block and within the car park of the adjacent Farmfoods store. Only one bat was seen at any one time and the direction of movements suggested that a maximum of two bats were using the area as a foraging ground. The last bat recorded was at 05:25 which was 24 minutes before sunrise, seen heading away from the site to the west.
- 3.6.5 The dawn return survey of building No.804 was undertaken in conjunction with the survey of Tree Cluster 2 and therefore the results are described in paragraph 3.6.2 above.

3.7 Conclusions

- 3.7.1 No bats were found to be roosting within the trees and buildings surveyed. The surveys undertaken have satisfied minimum standards for bat surveys in West Yorkshire (West Yorkshire Ecology, 2009), and exceeded the recommendations set out in the Good Practise Guidelines (BCT, 2016). It is therefore considered

that there is a high level of confidence in the results gained during the surveys undertaken.

- 3.7.2 Bats are highly mobile mammals and exhibit a high level of roost switching behaviour, particularly when using tree roosts (BCT, 2016), and therefore future low conservation value roosts such as day or transitional roosts used by low numbers of a common bat species cannot be ruled out. The presence of a maternity roost is considered unlikely due to the low suitability of the immediate surrounding habitat; the use of trees and buildings as hibernacula are considered unlikely due to the exposed nature of the suitable roosting points, which would create unstable conditions.

3.8 Other Ecological Considerations

- 3.8.1 All of the trees and other vegetation noted by Arbolution (report reference 151209) have the potential to support breeding birds.
- 3.8.2 Montbretia (*Crocasmia x crocosmiiflora*) was identified in the rear garden of building No.913/915.

4 Impacts and Legislation

4.1 Potential Impacts of the Development

4.1.1 Potential impacts of the road improvement scheme have been determined from consideration of the Bat Activity Survey – Site Area drawing by the City of Bradford Metropolitan District Council, drawing reference PTH/MH/103196/BAS-1A.

Long Term Impacts: Roost Loss and Roost Modification

4.1.2 Trees with bat roost potential G53, T61, T63, T82, T83, T36, T40 and T41 are all within the footprint of the road improvement development area and therefore will be lost due to the proposed development.

4.1.3 The arboricultural report (Arbolution: 151209) recommended that in addition to those trees to be lost during the course of the development that: T68 should be felled due to its limited long term value; that T57 requires remedial pruning; that dead wood should be removed from T54; and that the ivy growing on T54, T57, T58, T59, T75, T76, and G85 should be removed.

4.1.4 Therefore, all trees with bat roost potential require felling or some form of management. The felling of trees will incur the total loss of potential roosting features, removal of deadwood and remedial pruning could incur the loss of potential roosting features. Removal of ivy from trees will be removing a potential roosting feature and may also change the conditions of any roosting features located behind the ivy.

4.1.5 Buildings No.804, No.911 and No.913/915 will be demolished; this will incur a complete loss of all potential roosting features present.

4.1.6 Whilst no bats were found to be roosting within any of the trees or buildings surveyed a low residual risk remains. If bats are roosting within the features identified at the time of demolition/felling/pruning there is the potential to kill/injure bats. It is considered that the site has the potential to support roosts of low conservation status and the loss of the roosts would have a minor adverse impact on the local bat population.

Long Term Impacts: Fragmentation and Isolation

4.1.7 Due to the sporadic locations of the trees due for removal it is concluded that none form a direct link between roosts and foraging grounds and therefore their removal would not cause fragmentation or isolation of roosts.

Short Term Impacts on Roosting Bats: Disturbance

4.1.8 The road improvement scheme has the potential to cause disturbance to foraging and commuting bats during the construction phase by increased lighting levels if work is undertaken at night. The impact would be short term and considered to impact a low number of a common species. No known roosts will be disturbed by the proposed junction improvements.

Post Construction Impacts

4.1.9 Once the junction improvement is completed there could be an increased level of artificial lighting. If a potential roosting feature is to become lit when it previously was not this could cause this feature to become less suitable or unsuitable for roosting bats as many bats species show a clear preference for avoiding well lit areas (Mitchelle-Jones, 2004). As bats show a high fidelity to roosting features additional lighting may prevent bats from returning to a previously established roost, i.e. obstructing a roost.

4.2 Legal and Planning Policy Status

4.2.1 Full details of the legislation and planning policy relating to bats can be found in Appendix 2. In summary the following legislation makes it an offence to injure or kill a bat and also to deliberately, recklessly or intentionally disturb a bat whilst in its roost or to destroy/obstruct a roost:

- The Conservation of Habitats and Species Regulations 2010;
- Wildlife and Countryside Act 1981 (as amended); and
- The Countryside and Rights of Way Act 2000.

4.2.2 In addition, the National Planning Policy Framework (NPPF) (2012) requires planning authorities to use the planning system to enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible.

4.2.3 Pipistrelles are listed as a Priority Species under the Bradford Biodiversity Action Plan, which aims to “protect and enhance their status in the Bradford District” (City of Bradford Metropolitan District Council, 2016).

4.3 Other Ecological Considerations

4.3.1 During the felling and management of the trees located around the site loss of potential breeding bird habitat will be incurred. This could lead to the killing/injuring of birds if undertaken during the breeding bird season (typically between March and August inclusive). All wild birds are afforded protection through the Wildlife and Countryside Act 1981 (as amended), which prohibits the killing, injuring, taking, or selling, of any wild bird or their nests or eggs.

4.3.2 The montbretia within the rear garden of building No.913/915 will require removal to facilitate a new access route to the Farmfoods store. This plant is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and is therefore subject to the conditions placed in Section 14 of the Act. Section 14 prohibits the planting of this species in the wild or actions which would otherwise cause it to grow. These provisions are necessary to prevent the establishment of non-native plant species which may be detrimental to our native wildlife.

5 Recommendations

5.1.1 In order to adhere to national legal policy and regional planning policy, mitigation must be undertaken to maintain the 'favourable conservation status' of bats on site and to avoid killing and injuring individual bats.

5.1.2 Prior to any works taking place all contractors working on the trees and buildings should be made aware of the low residual risk of bat presence through a toolbox talk by suitably qualified bat ecologist.

5.2 Avoidance of Killing/Injury

Tree Felling and Management – All Potential Bat Roost Trees

5.2.1 Inspection of potential roosting features should be undertaken immediately prior to felling/pruning using an endoscope. Once the ecologist/tree surgeon is confident that bats are not present within the tree it can be carefully worked on under the watching brief of a licensed bat ecologist. Cut sections should be left in place for 24 hours to allow the escape of any bats which have been missed during the endoscope survey.

5.2.2 If bats are found during the pre-felling endoscope check, the tree must be left in place and advice should be sought from Natural England; it may be necessary to obtain a licence from Natural England and further activity surveys during the optimal bat survey season (May to August) may be required if large numbers of bats are found. If bats are found after the tree has been felled, active bats should either be placed by the licensed bat worker into a bat box, which should then be erected onto a nearby retained tree, or the section of tree containing the bat should be extracted and attached to a retained tree. If the bat is in hibernation it may be necessary to take the bat into care until weather conditions are suitable for its release.

5.2.3 It is possible that additional trees will become suitable for bats within the interim period between the initial habitat assessment and tree clearance commencement through loss of limbs or woodpecker (*Dendrocopos spp.*) activity. Care should therefore be taken during tree removal and any holes/crevices should be inspected using a torch by the tree climber prior to removal. If bats are discovered within a tree whilst there is no ecologist on site, all work should cease immediately and the advice of a licensed bat ecologist should be sought (BL Ecology can be contacted on 01274 816800).

Building Demolition – Nos.804, 911 and 913/915 Harrogate Road

5.2.4 Demolition of the buildings is likely to be undertaken during the spring, thereby avoiding the sensitive breeding and hibernation periods. Prior to any demolition all gaps must be checked by a licensed bat worker using a flexible endoscope. All parts of the roof structure areas where bats could roost must be carefully dismantled by the contractor under watching brief of a licensed bat worker.

5.2.5 Once the licensed bat worker is satisfied no bats remain within the structures, the demolition and renovation can take place under caution that bats could be present.

5.2.6 In the unlikely event of bats being found to be present during the hand demolition of the roof all work must cease and advice from Natural England must be sought. It may be necessary to obtain a licence from Natural England and further activity surveys during the optimal bat survey season (May to August) may be required.

5.3 Mitigating Disturbance

5.3.1 Lighting during the construction phase should be avoided where possible; if unavoidable, a maximum of 2000 lumens (150W) lamp should be used, which

should be shaded and pointed away from potential bat roosting and foraging habitat.

- 5.3.2 Any new lighting to be installed post-development should not be directly focused on buildings or trees as this reduce their suitability for roosting bats. Where possible light should installed that minimises light spill with the spread of light being kept near to or below the horizontal (Gunnell *et al.*, 2012). This would enable bats to continue to use existing flight lines and potentially improve the suitability of the areas for commuting and foraging bats.

5.4 Potential Roost Replacement

- 5.4.1 To compensate for the loss of potential bat roosting features it is recommended that bat boxes that are suitable for low numbers of crevice dwelling species, such as the Schwegler 2F-DFP, should be erected prior to the commencement of works. It is considered that six bat boxes would compensate for the features lost. At least one of the boxes should be situated either within the site boundary or around the periphery of the site on a suitable tree to provide alternative roosting opportunities for bats utilising the site for foraging/commuting. It is recommended that the remaining bat boxes should be located within suitable foraging habitat within nearby dark corridors and stands of trees where there is a greater likelihood of uptake by bats, thereby improving the landscape for the local bat population; West Wood, the Leeds Liverpool Canal or the River Aire should be considered as suitable sites for these boxes.

- 5.4.2 New trees should be planted on the site where possible to compensate for the overall loss of trees. Species should include those that generally have a greater proportion of features suitable for roosting bats, such as oak (*Quercus spp.*), ash and beech (*Fagus sylvatica*).

5.5 Further Surveys

- 5.5.1 The data within this report is considered to be valid for a period of two years; if demolition and tree works do not take place until after 2018 update surveys are likely to be necessary.

5.6 Other Ecological Considerations

- 5.6.1 Vegetation should be removed outside the breeding bird season, between September and February inclusive. If it is not possible to remove the vegetation during these months a breeding bird check should be carried out by a suitably qualified ecologist immediately prior to its removal; if birds are found to be nesting vegetation removal will not be possible until all chicks have fledged and the nest is considered no longer in use.

- 5.6.2 The montbretia should be removed with care to ensure the plant is not spread into the wild. Schedule 9 plant material is considered a controlled waste under the Environmental Protection Act 1990, and must be disposed of in a suitable waste facility, accompanied by appropriate Waste Transfer documentation. All producers, carriers, and waste facilities have a duty of care to ensure that the waste is handled and treated properly.

6 References

6.1 Cited References

- 6.1.1 Bat Conservation Trust (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines. BCT, London.
- 6.1.2 City of Bradford Metropolitan District Council (2016). Biodiversity: Local Biodiversity Action Plan. <https://www.bradford.gov.uk/environment/countryside-and-rights-of-way/biodiversity/>
- 6.1.3 Department for Communities and Local Government (2012). National Planning Policy Framework. Department for Communities and Local Government, London.
- 6.1.4 Entwistle, A.C., Harris, S., Hutson, A.M., Racey, P.A., Walsh, A., Gibson, S.D., Hepburn, I., and Johnston, J. (2001) Habitat Management for Bats: A Guide for Land Managers, Land Owners and their Advisors. JNCC, Peterborough.
- 6.1.5 Gunnell, k., Grant, G., and Williams, C., (2012) Landscape and urban design for bats and biodiversity. Bat Conservation Trust
- 6.1.6 Institute of Lighting Engineers (2007). Bats and Lighting in the UK. Bats and the Built Environment Series
- 6.1.7 Jones, G. & Rydell, J. 1994. Foraging strategy and predation risk as factors influencing emergence time in echolocating bats. *Philosophical Transactions of the Royal Society: Series B*. **346**, 445-455
- 6.1.8 Mitchell- Jones, A .J. (2004). Bat Mitigation Guidelines. Natural England. Peterborough.
- 6.1.9 West Yorkshire Ecology WYE (2008). Minimum Standards for a Bat Survey in West Yorkshire (v3 Sept 2009). WYE, Wakefield.

7 **Figures**

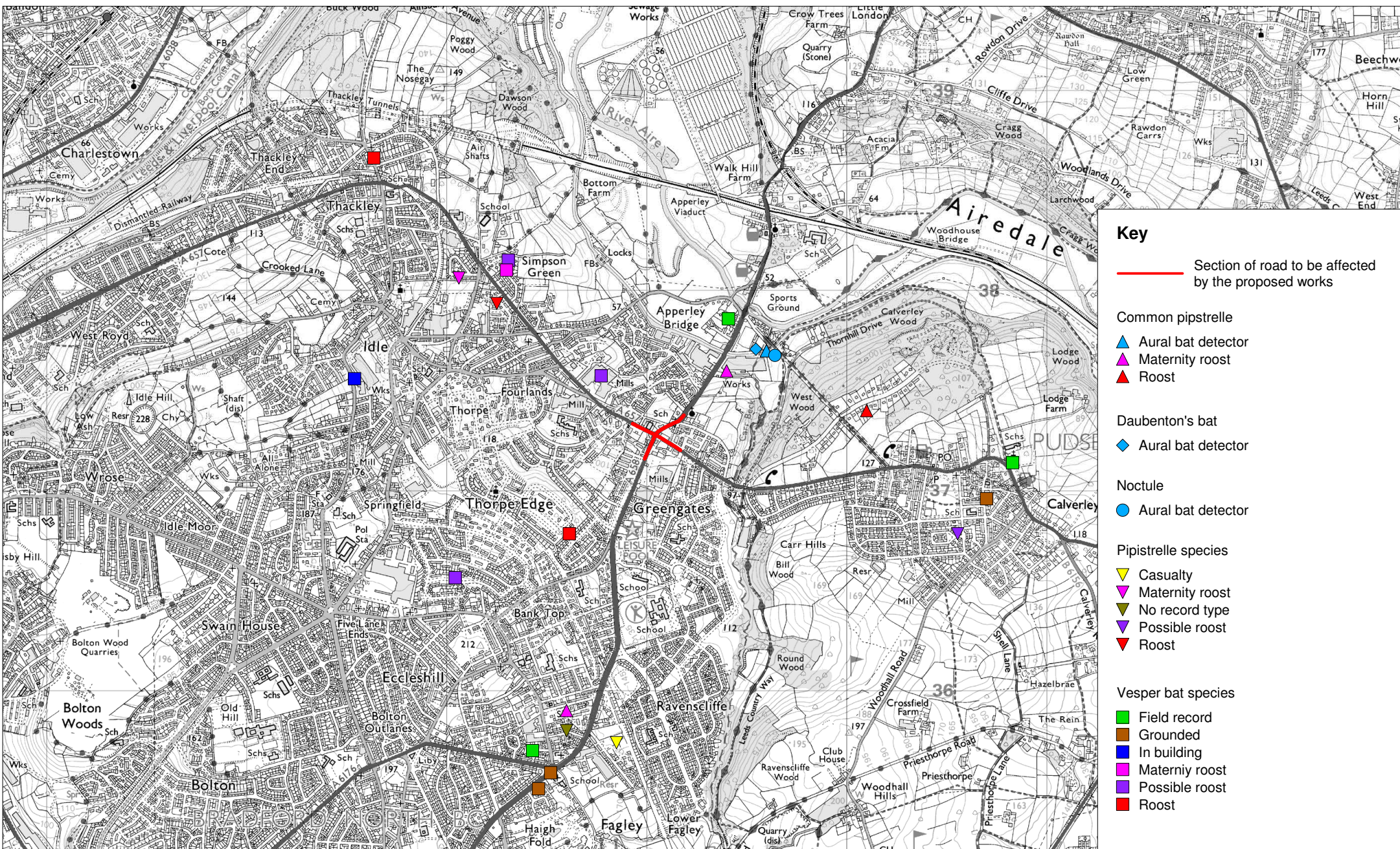
7.1 **Figure 1 – Site Location and West Yorkshire Bat Group Data**

7.2 **Figure 2 – Trees and Buildings with Bat Roosting Potential**

7.3 **Figure 3 – Photographs**

7.4 **Figure 4 – Dusk Emergence Survey Results**

7.5 **Figure 5 – Dawn Return Survey Results**



Key

- Section of road to be affected by the proposed works
- Common pipstrelle**
 - ▲ Aural bat detector
 - ▲ Maternity roost
 - ▲ Roost
- Daubenton's bat**
 - ◆ Aural bat detector
- Noctule**
 - Aural bat detector
- Pipistrelle species**
 - ▼ Casualty
 - ▼ Maternity roost
 - ▼ No record type
 - ▼ Possible roost
 - ▼ Roost
- Vesper bat species**
 - Field record
 - Grounded
 - In building
 - Maternity roost
 - Possible roost
 - Roost

Figure 1 - Site Location and West Yorkshire Bat Group Desk Study Results

Harrogate Road/New Line Junction Improvements - Bat Survey

Contains Ordnance Survey data © Crown copyright and database right [2013]
 This mapping uses OS Open Data Vector Map District (1:25,000)



Date	09/08/2016
Map reference	071_16/RE01 - FIG 1
Approved by	Jennifer Clarke
Scale	1:24'500 at A4



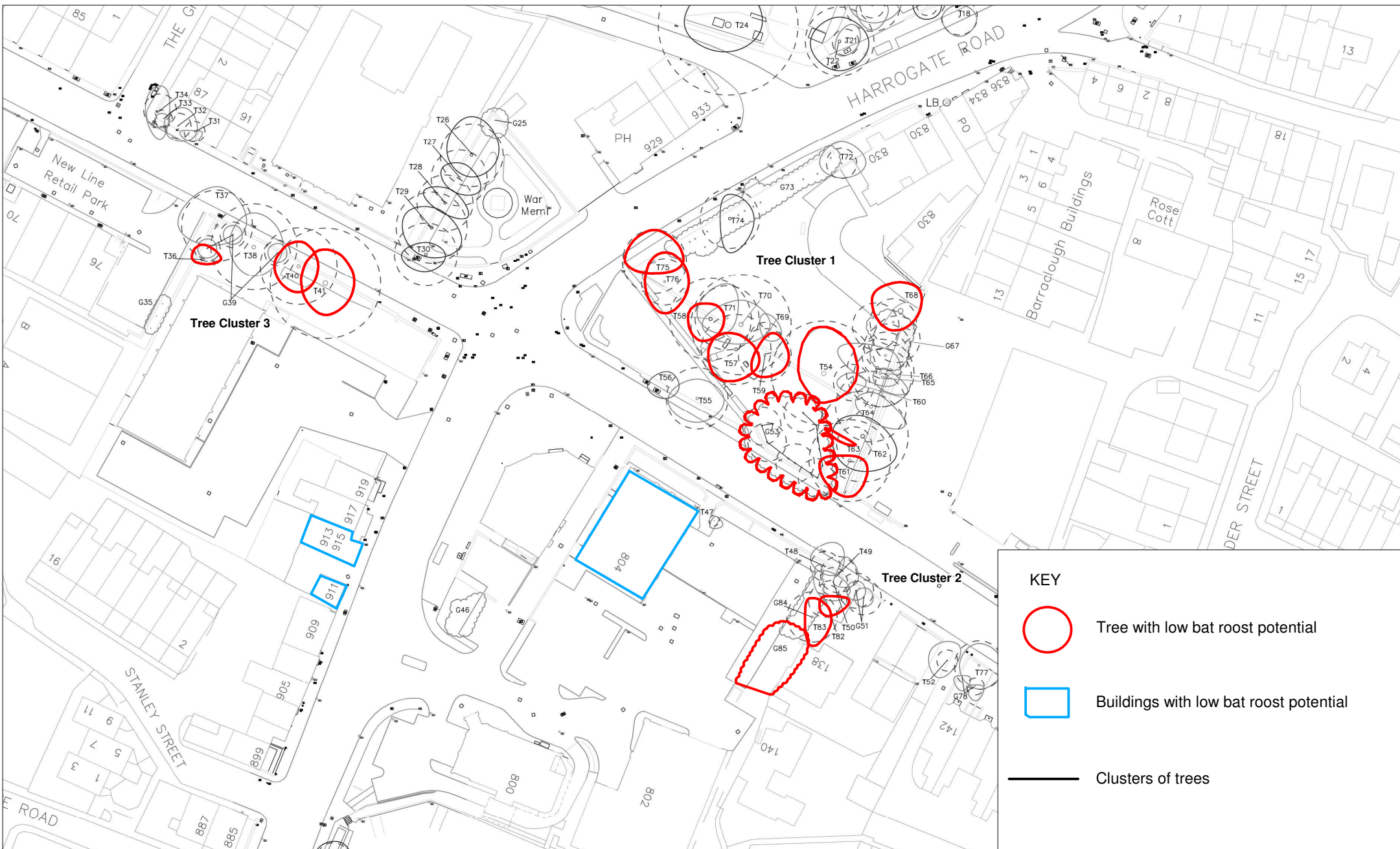





Figure 2 - Trees and Buildings with Bat Roosting Potential

Harrogate Road/New Line Junction Improvements - Bat Survey

Contains Ordnance Survey data © Crown copyright and database right [2013]
This mapping uses OS Open Data Vector Map District (1:25,000)



KEY	
	Tree with low bat roost potential
	Buildings with low bat roost potential
	Clusters of trees

Date	13/07/16
Map reference	071_12/RE01 - FIG 2
Approved by	Jennifer Clarke
Scale	1:4'000 at A4

Photograph 1: G53



Photograph 2: T54



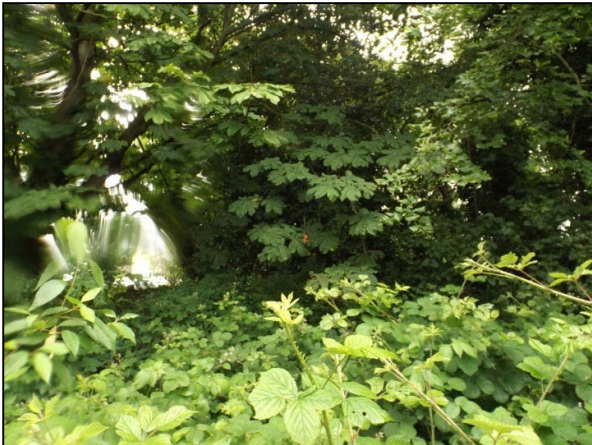
Photograph 3: T57



Photograph 4: T57 and T58




Photograph 5: T59



Photograph 6: T61



	Project	Harrogate Road/New Line Junction Improvements
	Title	Photographs
	Reference	071_16
	Figure Number	3
	Created by	Arabella Fox

Photograph 7: T63



Photograph 8: T68



Photograph 9: T75



Photograph 10: T75 and T76




Photograph 11: T82 and T83



Photograph 12: G85



	Project	Harrogate Road/New Line Junction Improvements
	Title	Photographs
	Reference	071_16
	Figure Number	3
	Created by	Arabella Fox

Photograph 13: T36, T40 and T41



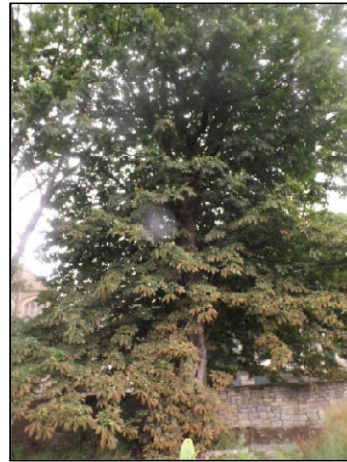
Photograph 14: T36 – rot hole



Photograph 15: T40 – rot hole



Photograph 16: T41




Photograph 17: Eastern aspect of buildings No.911 (left) and No. 913/ 915 (centre)



Photograph 18: Western aspect of building No.911



	Project	Harrogate Road/New Line Junction Improvements
	Title	Photographs
	Reference	071_16
	Figure Number	3
	Created by	Arabella Fox

Photograph 19: South-west corner of building No.913/915



Photograph 20: South-east corner of building No.804




	Project	Harrogate Road/New Line Junction Improvements
	Title	Photographs
	Reference	071_16
	Figure Number	3
	Created by	Arabella Fox



Figure 4 - Dusk Emergence Survey Results

Harrogate Road/New Line Junction Improvement - Bat Survey

Base map taken from Arbolution: 151209 TCP - Tree Constraints Plan



Date	11/08/2016
Map reference	071_16/RE01 - FIG 4
Approved by	Jennifer Clarke
Scale	NTS

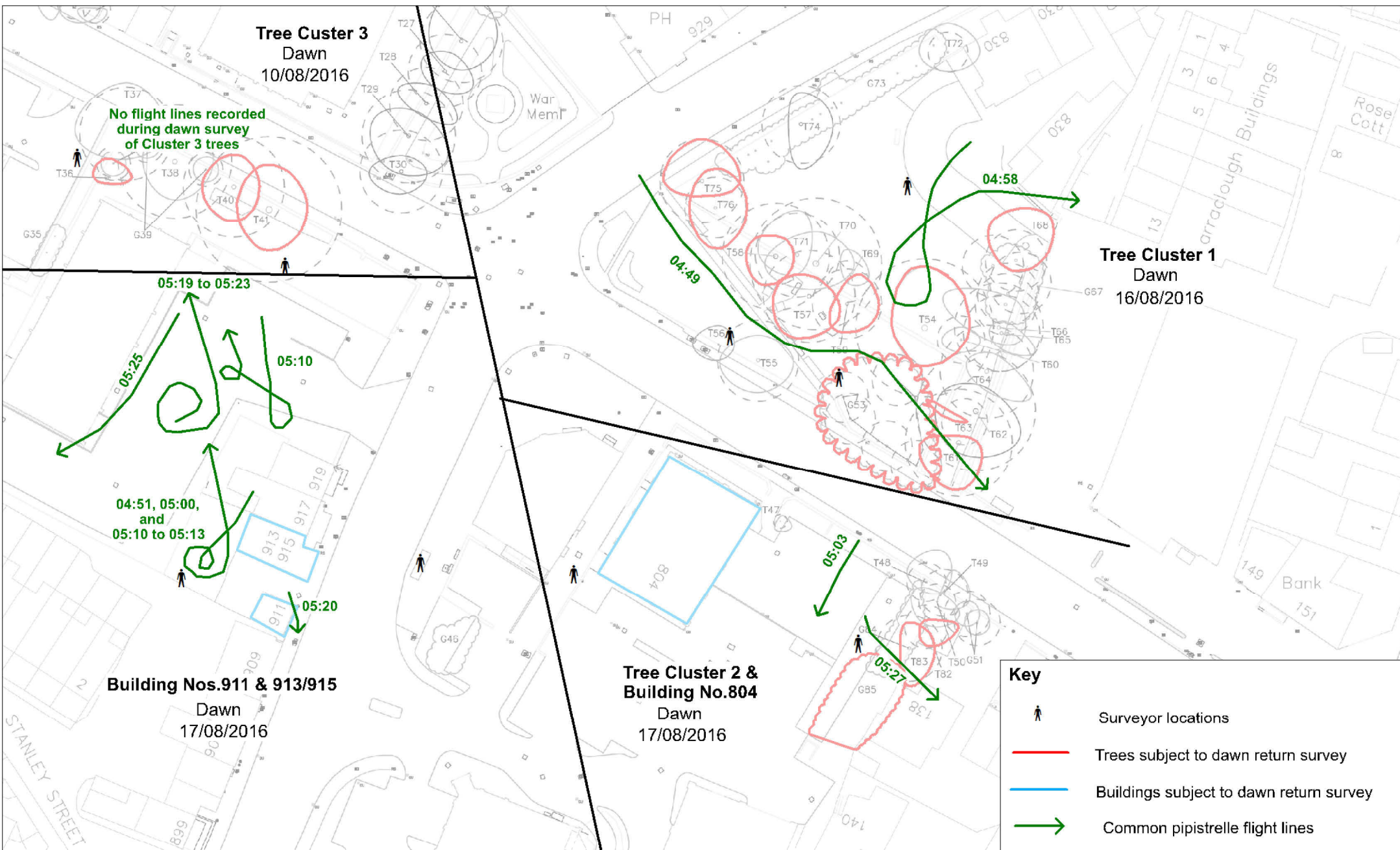


Figure 5 - Dawn Return Survey Results

Harrogate Road/New Line Junction Improvement - Bat Survey

Base map taken from Arbolution: 151209 TCP - Tree Constraints Report

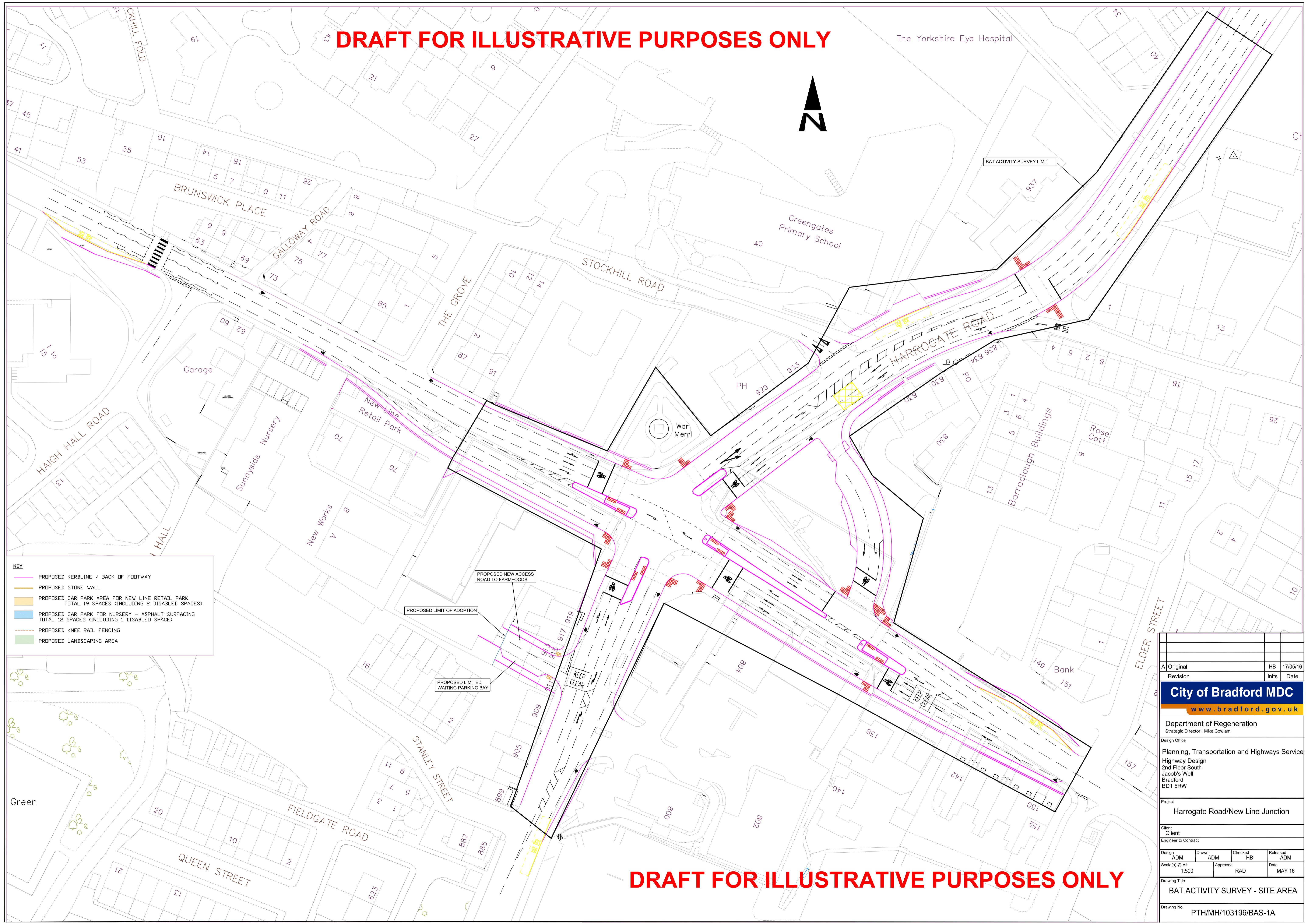


Date	11/08/2016
Map reference	071_16/RE01 - FIG 5
Approved by	Jennifer Clarke
Scale	NTS

8 Appendix 1 – Proposed Site Layout

DRAFT FOR ILLUSTRATIVE PURPOSES ONLY

The Yorkshire Eye Hospital



KEY

- PROPOSED KERBLINE / BACK OF FOOTWAY
- PROPOSED STONE WALL
- PROPOSED CAR PARK AREA FOR NEW LINE RETAIL PARK. TOTAL 19 SPACES (INCLUDING 2 DISABLED SPACES)
- PROPOSED CAR PARK FOR NURSERY - ASPHALT SURFACING TOTAL 12 SPACES (INCLUDING 1 DISABLED SPACE)
- - - PROPOSED KNEE RAIL FENCING
- PROPOSED LANDSCAPING AREA

A Original	HB 17/05/16
Revision	Inits Date
City of Bradford MDC	
www.bradford.gov.uk	
Department of Regeneration Strategic Director: Mike Cowlam	
Design Office Planning, Transportation and Highways Service	
Highway Design 2nd Floor South Jacob's Well Bradford BD1 5RW	
Project Harrogate Road/New Line Junction	
Client Client Engineer to Contract	
Design ADM	Drawn ADM
Checked HB	Released ADM
Scale(s) @ A1 1:500	Approved RAD Date MAY 16
Drawing Title BAT ACTIVITY SURVEY - SITE AREA	
Drawing No. PTH/MH/103196/BAS-1A	

DRAFT FOR ILLUSTRATIVE PURPOSES ONLY

9 Appendix 2 – Bats

9.1 Biology

- 9.1.1 Bats make up 20% of all mammal species in the world, the order *Chiroptera* has over 1100 species with 17 species of those being native to the UK.
- 9.1.2 All British bats are insectivores and eat a range of prey from midges and mosquitoes to beetles and spiders. Their nocturnal feeding habits mean they are secretive and often utilise less developed areas such as woodlands, grasslands, watercourses and hedgerows. Bats can however be seen in more urban areas with the most common bats species, common pipistrelle, preferring to roost in buildings throughout the summer.
- 9.1.3 Bats have varying requirements for roosting throughout the year and this also varies vastly between species. Certain species are fairly restricted to trees throughout the year such as the barbastelle and noctules. General bat roosting habitats can include caves, mines, trees, buildings and churches.
- 9.1.4 Female bats require warmer temperatures in the summer where they can raise their young, these summer breeding sites are often used year after year and depending on species can range between 20 individuals to several hundred. Some roosts have been recorded at over 1000 individuals. Females begin to find breeding roosts in May and are normally present all summer.
- 9.1.5 Male bats spend most of the year segregated away from females in solitary roosts or in small numbers. In autumn after the females have had their pups in summer, male bats begin to either seek out breeding females to mate with or create mating roosts or harems. After mating bats disperse to their hibernation sites and fertilisation is delayed until the following spring.
- 9.1.6 In winter when insect prey is at a minimum, bats begin to seek hibernation sites where they can slow their bodies into torpor and save energy. Hibernation sites tend to support stable temperatures with high humidity, these sites are often in caves, tree hollows or deep in stone walls. Upon warming in spring bats begin their yearly cycle once again and pregnant females begin to form their maternity colonies once more.

9.2 Legislation and Planning Policy

- 9.2.1 Bat species have suffered a massive decline over the last century due to pressures from deforestation, development and the intensification of farming practices. In addition the roosting habits of bats mean they are highly sensitive to change in roosting conditions. Therefore bats are now a fully European Protected Species (EPS).
- 9.2.2 All bat species in the UK are protected by law under the The Conservation of Habitats and Species (Amendment) Regulations 2012 ('The Habitat Regulations'). In addition the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) lists all bat species.
- 9.2.3 The legislation makes it an offence to:
- Deliberately or intentionally capture, injure or kill a bat;
 - Deliberately disturb bats in such a way as to be likely significantly to:-
 - Impair their ability to survive, breed or rear or nurture their young, or to impair their ability to hibernate or migrate; or
 - Affect significantly the local distribution or abundance of that species;

- Damage, destroy or obstruct a breeding site or resting place of bats;
- Recklessly disturb a bat (reckless defined as an intentional act undertaken knowing that it will or may disturb a bat).

9.2.4 Actions which are likely to cause one or more of the offences listed above can be licensed by Natural England (as set out in the EC Habitats Directive) providing that:

- The works are for overriding reasons of a public interest;
- There is no satisfactory alternative; and
- The works will maintain bats at a favourable conservation status during and post completion of the works.

9.2.5 In addition to this greater and lesser horseshoe (*Rhinolophus ferrumequinum* and *Rhinolophus hipposideros*), barbastelle (*Barbastella barbastellus*) and Bechstein's (*Myotis bechsteinii*) bats are included on Annex II of the Habitats Directive as implemented into UK law by the Habitats Regulations 2012. This legislation requires that areas Special Areas of Conservation (SACs) are designated in suitable areas to protect the habitat of these species.

9.3 Planning Policy

9.3.1 The National Planning Policy Framework (NPPF) states that impacts to biodiversity should be minimised and also biodiversity should be enhanced where possible. Bats are therefore considered under the NPPF; this document is therefore a material consideration when assessing planning applications. The NPPF outlines the following principles:

9.3.2 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;

9.3.3 Proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

9.3.4 Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;

9.3.5 Opportunities to incorporate biodiversity in and around developments should be encouraged;

9.3.6 Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and

9.3.7 The following wildlife sites should be given the same protection as European sites:

- Potential Special Protection Areas and possible Special Areas of Conservation;
- Listed or proposed Ramsar sites; and
- Sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

9.3.8 The 'Woolley' case refers to Woolley vs Cheshire East Borough Council and Millennium Estates Ltd (2009). The case outlined that planning authorities must have the regard of Regulation 9(5) of the Habitat Regulations when determining planning applications. As a result the findings outlined that planning authorities must demonstrate that the three tests (see section 1.4.4 above) will be satisfied when issuing planning permissions.

9.4 **Biodiversity Action Plans and Species of Principal Importance**

9.4.1 Barbastelle, Bechstein's, greater and lesser horseshoe, brown long-eared (*Plecotus auritus*), noctule (*Nyctalus noctula*) and soprano pipistrelle (*Pipistrellus pygmaeus*) are Priority Biodiversity Action Plan (BAP) species. These Priority species are transposed into the Natural Environment and Rural Communities (NERC) Act 2006. The act means all government departments must conserve these species and promote others to conserve them and their habitats.

9.4.2 The NERC Act 2006 outlines that all public bodies whilst exercising its functions must have regard for the conservation and enhancement of biodiversity in the UK, this includes the determination of planning applications. As part of the Act the following species are considered as 'priority': barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long eared, greater horseshoe and lesser horseshoe.

9.5 **Glossary of Bat Terms**

9.5.1 The following is a list of terms and their definitions commonly utilised within bat reports (BCT, 2012; English Nature, 2004):

- Autumnal swarming: Bats gathering in flight at an underground site in autumn;
- Dawn swarming: Bats gathering in flight outside a roost before and 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;
- Mating site: A site where males and females gather during the autumn for mating;
- Night roost: A site where bats rest, groom etc between bouts of foraging;
- Nursery roost: As maternity roost;
- Roost: A resting place of a bat;
- Satellite roost: A smaller roost than a maternity roost but nearby;
- Summer roost: As day roost;
- 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.

9.6 References

- 9.6.1 Bat Conservation Trust (2012). Bat Surveys: Good Practice Guidelines. BCT, London.
- 9.6.2 Entwistle, A.C., Harris, S., Hutson, A.M., Racey, P.A., Walsh, A., Gibson, S.D., Hepburn, I., and Johnston, J. (2001) Habitat Management for Bats: A Guide for Land Managers, Land Owners and their Advisors. JNCC, Peterborough.
- 9.6.3 Highways Agency (1996). Design Manual for Roads and Bridges, Volume 10 Environmental Design and Management: Section 4 The Good Roads Guide-Nature Conservation, Part 6 Nature Conservation Management Advice in Relation to Bats.
- 9.6.4 HM Government (1995). Biodiversity: The UK Steering Group Volume 2: Action Plans. JNCC, Peterborough.
- 9.6.5 Mitchell-Jones, A.J. & McLeish, A.P. (1999). Bat Workers' Manual (2nd Edition). Joint Nature Conservancy Committee, Peterborough
- 9.6.6 Office of the Deputy Prime Minister (2005). Planning Policy Statement 9; Biodiversity and Geological Conservation.
- 9.6.7 Russ, J. (1999). The Bats of Britain and Ireland. Alana Ecology, Shropshire.

10 Appendix 3 – Desk Study Results

West Yorkshire Bat Group Desk Study Results

<u>Grid Reference</u>	<u>Common Name</u>	<u>Date</u>	<u>Record Type</u>	<u>Abundance</u>	<u>Location</u>	<u>Distance from site centroid (m)</u>
SE1866638653	Daubenton's Bat	12/06/2015	field observation	2 Count	Railway viaduct nr Mitchel swing bridge Bradford	1,424
SE192376	Daubenton's Bat	03/07/2003	field record		Bradford, Apperley Mills, Tenterfields, Apperley Bridge	357
SE2012637424	Noctule	18/06/2010 - 19/06/2010	field record		54 Clara Drive, Calverley, Leeds	1,090
SE17073685	Pipistrellus	21/09/2005	Grounded	1 Count of Adult	448 Kings Road, Wrose, Shipley, Bradford	2,014
SE179376	Pipistrelle	03/04/2014	field record		Thorp Garth	1,184
SE179376	Pipistrelle	17/04/2014	field record		Thorp Garth	1,184
SE192376	Common Pipistrelle	03/07/2003	field record		Bradford, Apperley Mills, Tenterfields, Apperley Bridge	357
SE1948137633	Pipistrelle	01/08/2011	droppings		Within loft of computer room building, BPL House, 880 Harrogate Road, Apperley Bridge, Bradford	562
SE1948137633	Pipistrelle	16/08/2011	Roost		Soffit of warehouse, BPL House distribution site at 880 Harrogate Road, Apperley Bridge, Bradford	562
SE1948137633	Pipistrelle	22/08/2011	Roost		Soffit of warehouse, BPL House distribution site at 880 Harrogate Road, Apperley Bridge, Bradford	562
SE1948137633	Pipistrelle	23/08/2011	Roost		Soffit of warehouse, BPL House distribution site at 880 Harrogate Road, Apperley Bridge, Bradford	562
SE1965337778	Pipistrelle	22/10/2015	Roost	1 Count	Shaw House Farm	787
SE2011837422	Pipistrelle	18/06/2010 - 19/06/2010	Roost	1 Count	52 Clara Drive, Calverley, Leeds	1,082
SE2012337416	Pipistrelle	18/06/2010 - 19/06/2010	Roost	1 Count	52 Clara Drive, Calverley, Leeds	1,086
SE2012637424	Pipistrelle	18/06/2010 - 19/06/2010	field record		54 Clara Drive, Calverley, Leeds	1,090
SE2019237450	Pipistrelle	19/06/2010	Roost	2 Count	House to east of 54 Clara Drive, Calverley, Leeds	1,158
SE1825137937	Pipistrelle Bat species	27/07/2007	Roost		15 Furlands Drive, Idle, Bradford	1,028
SE18853574	Pipistrelle Bat species	09/10/2007	Casualty	1 Count of Adult	66 Hazelcroft, Eccleshill, Bradford	1,550

SE2055536785	Pipistrelle Bat species	08/06/2004	Roost (possible)	1 Count of Adult	79 Parkwood Gardens, Calverley, LS28 5PJ, Leeds	1,587
SE1734336621	Bats	16/04/2010	Roost		Former Rockwood House grounds, Highfield Rd, Idle, Bradford	1,818
SE17543756	Vesper Bat species	31/01/2003	in building	1 Count of Adult	Shaw House, Highfield Works, Highfield Road, Idle, Bradford	1,525
SE1763738665	Vesper Bat species	17/09/2003	Roost		The Beeches, 14 Thackley Road, Bradford	1,971
SE18433570	Vesper Bat species	18/04/2003	field record		Pullan Grove, Eccleshill, Bradford	1,692
SE18463551	Vesper Bat species	13/06/2005	Grounded	1 Count of Adult	184 Harrogate Road, Eccleshill, Bradford	1,861
SE18523559	Vesper Bat species	27/07/2005	Grounded	1 Count of Adult	Vets for Pets, 266 Harrogate Road, Eccleshill, Bradford	1,767
SE1861336785	Vesper Bat species	04/03/2004	Roost	1 Count of Adult	2 Idlethorpe Way, Bradford	654
SE1875336948	Bats	17/07/1995	Roost		New House, The Drive, Greengate, Bradford	439
SE19413786	Vesper Bat species	05/06/2003	field record		8 Apperley Gardens, Apperley bridge, Bradford	686
SE194372	Bats	14/07/2015	field observation	4 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194372	Bats	31/07/2015	field observation	6 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194372	Bats	17/06/2015	field observation	2 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194372	Bats	29/06/2015	field observation	4 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194372	Bats	11/07/2015	field observation	5 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194373	Bats	23/06/2015	field observation	2 Count	Carr Bottom Road, Greengates	357
SE194373	Bats	08/08/2015	field observation	2 Count	Carr Bottom Rd, Greengates, Bradford BD10 0BD	357
SE194373	Bats	23/09/2015	field observation	8 Count	Carr Bottom Rd, Greengates, Bradford BD10 0BD	357
SE194373	Bats	24/09/2015	field observation	4 Count	Carr Bottom Rd, Greengates, Bradford BD10 0BD	357
SE1944737480	Bats	11/10/2015	field observation	3 Count	Field adjacent to West Wood	450
SE20703696	Vesper Bat species	03/02/2005	Grounded	1 Count of Adult	21 Thornhill Street, Calverley, Leeds	1,683
SE20833714	Vesper Bat species	26/06/2003	field record		St Wildfrid's parish church, c/o 1a Thornill Grove, Leeds	1,787



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27/07/2016

Dear Arabella,

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Tel: 01924 306 793

Email: Laura.Price@wyjs.org.uk

Our ref: 20160714 B615 LP

Your ref: 071_16

RE: BAT RECORDS SEARCH – HARROGATE ROAD, GREENGATES

Thank you for your enquiry about the above site, as outlined in your email dated 14/07/2016. This letter provides a summary of the bat records held by West Yorkshire Ecology Service (WYES) within 2km of grid reference SE 19043 37279.

The information within this report is supplied subject to WYES's 'Terms and Conditions', which can be viewed on the WYES website (<http://www.ecology.wyjs.org.uk>).

BATS

West Yorkshire Ecology Service holds the following bat records within your defined search area. The West Yorkshire Bat Group holds additional records within this area, please contact them for their records on: wylbg_data@fastmail.co.uk

Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE1866638653	Daubenton's Bat	<i>Myotis daubentoni</i>	12/06/2015	field observation	2 Count	Railway viaduct nr Mitchel swing bridge Bradford	1,424
SE192376	Daubenton's Bat	<i>Myotis daubentonii</i>	03/07/2003	field record		Bradford, Apperley Mills, Tenterfields,	357



Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
						Apperley Bridge	
SE20126374 24	Noctule	<i>Nyctalus noctula</i>	18/06/ 2010 - 19/06/ 2010	field record		54 Clara Drive, Calverley, Leeds	1,090
SE17073685	Pipistrellus	<i>Pipistrellus</i>	21/09/ 2005	Grounde d	1 Count of Adult	448 Kings Road, Wrose, Shipley, Bradford	2,014
SE179376	Pipistrelle	<i>Pipistrellus pipistrellus</i>	03/04/ 2014	field record		Thorp Garth	1,184
SE179376	Pipistrelle	<i>Pipistrellus pipistrellus</i>	17/04/ 2014	field record		Thorp Garth	1,184
SE192376	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	03/07/ 2003	field record		Bradford, Apperley Mills, Tenterfiel ds, Apperley Bridge	357
SE19481376 33	Pipistrelle	<i>Pipistrellus pipistrellus</i>	01/08/ 2011	dropping s		Within loft of computer room building, BPL House, 880 Harrogate Road, Apperley Bridge, Bradford	562
SE19481376 33	Pipistrelle	<i>Pipistrellus pipistrellus</i>	16/08/ 2011	Roost		Soffit of warehouse, BPL House distributio n site at 880 Harrogate Road, Apperley Bridge, Bradford	562



Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE19481376 33	Pipistrelle	<i>Pipistrellus pipistrellus</i>	22/08/ 2011	Roost		Soffit of warehouse, BPL House distribution site at 880 Harrogate Road, Apperley Bridge, Bradford	562
SE19481376 33	Pipistrelle	<i>Pipistrellus pipistrellus</i>	23/08/ 2011	Roost		Soffit of warehouse, BPL House distribution site at 880 Harrogate Road, Apperley Bridge, Bradford	562
SE19653377 78	Pipistrelle	<i>Pipistrellus pipistrellus</i>	22/10/ 2015	Roost	1 Count	Shaw House Farm	787
SE20118374 22	Pipistrelle	<i>Pipistrellus pipistrellus</i>	18/06/ 2010 - 19/06/ 2010	Roost	1 Count	52 Clara Drive, Calverley, Leeds	1,082
SE20123374 16	Pipistrelle	<i>Pipistrellus pipistrellus</i>	18/06/ 2010 - 19/06/ 2010	Roost	1 Count	52 Clara Drive, Calverley, Leeds	1,086
SE20126374 24	Pipistrelle	<i>Pipistrellus pipistrellus</i>	18/06/ 2010 - 19/06/ 2010	field record		54 Clara Drive, Calverley, Leeds	1,090
SE20192374 50	Pipistrelle	<i>Pipistrellus pipistrellus</i>	19/06/ 2010	Roost	2 Count	House to east of 54 Clara Drive, Calverley, Leeds	1,158



Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE18251379 37	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	27/07/ 2007	Roost		15 Fourlands Drive, Idle, Bradford	1,028
SE18853574	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	09/10/ 2007	Casualty	1 Count of Adult	66 Hazelcroft, Eccleshill, Bradford	1,550
SE20555367 85	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	08/06/ 2004	Roost (possible)	1 Count of Adult	79 Parkwood Gardens, Calverley, LS28 5PJ, Leeds	1,587
SE17343366 21	Bats	<i>Vespertilionidae</i>	16/04/ 2010	Roost		Former Rockwood House grounds, Highfield Rd, Idle, Bradford	1,818
SE17543756	Vesper Bat species	<i>Vespertilionidae</i>	31/01/ 2003	in building	1 Count of Adult	Shaw House, Highfield Works, Highfield Road, Idle, Bradford	1,525
SE17637386 65	Vesper Bat species	<i>Vespertilionidae</i>	17/09/ 2003	Roost		The Beeches, 14 Thackley Road, Bradford	1,971
SE18433570	Vesper Bat species	<i>Vespertilionidae</i>	18/04/ 2003	field record		Pullan Grove, Eccleshill, Bradford	1,692
SE18463551	Vesper Bat species	<i>Vespertilionidae</i>	13/06/ 2005	Grounded	1 Count of Adult	184 Harrogate Road, Eccleshill, Bradford	1,861



Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE18523559	Vesper Bat species	<i>Vespertilionidae</i>	27/07/2005	Grounded	1 Count of Adult	Vets for Pets, 266 Harrogate Road, Eccleshill, Bradford	1,767
SE1861336785	Vesper Bat species	<i>Vespertilionidae</i>	04/03/2004	Roost	1 Count of Adult	2 Idlethorpe Way, Bradford	654
SE1875336948	Bats	<i>Vespertilionidae</i>	17/07/1995	Roost		New House, The Drive, Greengate, Bradford	439
SE19413786	Vesper Bat species	<i>Vespertilionidae</i>	05/06/2003	field record		8 Apperley Gardens, Apperley bridge, Bradford	686
SE194372	Bats	<i>Vespertilionidae</i>	14/07/2015	field observation	4 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194372	Bats	<i>Vespertilionidae</i>	31/07/2015	field observation	6 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194372	Bats	<i>Vespertilionidae</i>	17/06/2015	field observation	2 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194372	Bats	<i>Vespertilionidae</i>	29/06/2015	field observation	4 Count	84 Carr Bottom Rd Greengates BD10 0BD	365



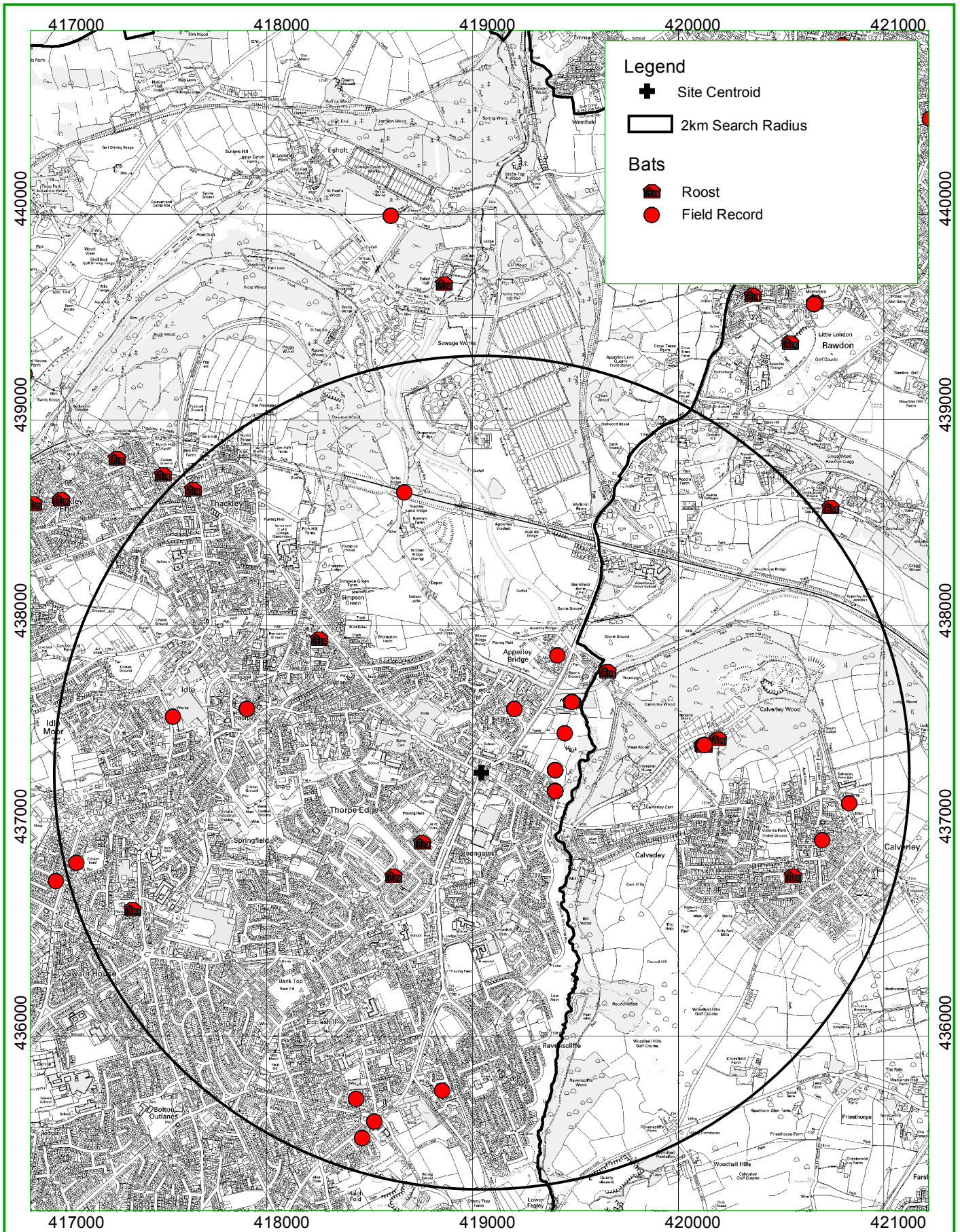
Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE194372	Bats	<i>Vespertilionidae</i>	11/07/2015	field observation	5 Count	84 Carr Bottom Rd Greengates BD10 0BD	365
SE194373	Bats	<i>Vespertilionidae</i>	23/06/2015	field observation	2 Count	Carr Bottom Road, Greengates	357
SE194373	Bats	<i>Vespertilionidae</i>	08/08/2015	field observation	2 Count	Carr Bottom Rd, Greengates, Bradford BD10 0BD	357
SE194373	Bats	<i>Vespertilionidae</i>	23/09/2015	field observation	8 Count	Carr Bottom Rd, Greengates, Bradford BD10 0BD	357
SE194373	Bats	<i>Vespertilionidae</i>	24/09/2015	field observation	4 Count	Carr Bottom Rd, Greengates, Bradford BD10 0BD	357
SE1944737480	Bats	<i>Vespertilionidae</i>	11/10/2015	field observation	3 Count	Field adjacent to West Wood	450
SE20703696	Vesper Bat species	<i>Vespertilionidae</i>	03/02/2005	Grounded	1 Count of Adult	21 Thornhill Street, Calverley, Leeds	1,683
SE20833714	Vesper Bat species	<i>Vespertilionidae</i>	26/06/2003	field record		St Wildfrid's parish	1,787

Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
						church, c/o 1a Thornill Grove, Leeds	

Bats are protected under Schedule 5 of the Wildlife & Countryside Act (1981, as amended) and are also listed under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act). They are protected by law against all of, but not limited to, the following:

- intentional or reckless killing, injuring, taking;
- damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection; and
- disturbance of animal occupying such a structure or place.

An invoice will follow in due course.



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Scale 1: 25000
At Size A4



**West Yorkshire
Ecology
Service**

**FIGURE 1:
BAT
RECORDS**

