Bat Activity Survey
Land at Shilton Road
Barwell
Leicestershire
NGR SP45371 97076

Survey by
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Non-Technical Summary

The site surveyed comprises two parcels of residential garden located at 167 and 169 Shilton Road near the junction with Leicester Road, Barwell, Leicestershire, centred at NGR SP45371 97076. The defined site area comprises two residential garden areas situated close to the edge of the village of Barwell with a small parcel of open grassland presumably used for agricultural purposes in the past. There is housing to the north, east and west. To the south and south west is open agricultural land.

The property owner has submitted planning for development of the land to replace the existing building with new residential development. As part of the application an ecological appraisal of the site area was completed and a Preliminary Ecological Appraisal (PEA) report was prepared by CBE Consulting (report reference P2914 /0125 /01 dated 26 March 2025) which has been submitted to the Planning Authority.

The Planning Authority have requested that further bat activity surveys should be completed during the optimum survey period to provide additional information on the extent and significance of bat foraging and commuting activity in this area to determine what impact any proposed development might have on this.

Surveys were completed on 30 July 2025 and 29th August 2025 using six survey positions located around the proposed development area with two infra-red camera providing supporting information after darkness. The two surveys have identified that there is activity by seven species of bat in this area and that it is highly likely that there is a Common Pipistrelle roost somewhere nearby, most likely to the west or north west, based on the earliest flight times and direction. There existing garden areas are quite sheltered, particularly the western garden, and provide a useful foraging area where multiple Pipistrelle congregate shortly after emergence to forage before moving off. Most bats appeared to be heading roughly west to east which suggests the site is on-route to a more significant foraging area, likely to be the woodland to the east on the opposite side of Leicester Road.

It is concluded from the activity surveys carried out that the site does fall on a commuting route for local Common Pipistrelle likely to be roosting relatively close by based on timings and bat concentrations. There is no indication or evidence that the site is used by bats or any species for immediate pre/ post emergence swarming for a roost location but it does seem likely that the sheltered rear garden on the west side of the survey area is a convenient foraging stop on-route to the larger foraging area to the east of Leicester Road. The bats appear to cross the garden generally from west to east.

The development proposed will not create a significant barrier to the use of the site for commuting purposes and since the majority of the bats using the site are Common Pipistrelle, it is likely that the use of the gardens after development will continue. However, with the provision of a landscaped surface water drainage area to the south of the new housing and the establishment of tree and shrub planting across this area, a strong link across the survey area between the western trees and the trees along Leicester Road to the east will be present which will facilitate the continued used of the area by commuting and foraging bats. This route would be available for all species as there should be minimal artificial light pollution along this route.

To benefit the local bats and maintain the use of the area by foraging and commuting bats of all species after development, the following recommendations are made:

- As originally recommended within he PEA, the design of any external lighting associated with the new housing should ensure that there is minimal increase in artificial lighting which could impact bat foraging around this area. Dark commuting and foraging routes should be provided along the site boundaries, particularly the gardens facing the western boundary and those adjacent to the southern boundary facing the landscaped surface water drainage area.

- As originally recommended within the PEA at least four integral bat roost tubes should be incorporated into the new development in suitable positions identified by an ecologist. These should ideally be facing west within the houses nearest the western boundary and along the southern edge of the development facing south towards the landscaped surface water drainage area.

- The use of artificial lighting during any approved construction / demolition work should be restricted so that all such lighting is directions with hoods fitted and none are placed facing the western or southern boundaries of the working area.

- It is also recommended that a further activity survey is completed at the start of any development works in the appropriate bat activity season to assess the impact of works on the local bats and confirm the lighting associated with the work is appropriately sited and not causing any constraint. In addition, a post development activity survey is also recommended. This should be completed a minimum of 12 months after the landscaped surface water area is completed to monitor the use of this connection area by the local bat populations.

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1 Introduction and Background

The site surveyed comprises two parcels of residential garden located at 167 and 169 Shilton Road near the junction with Leicester Road, Barwell, Leicestershire, centred at NGR SP45371 97076. The defined site area comprises two residential garden areas situated close to the edge of the village of Barwell with a small parcel of open grassland presumably used for agricultural purposes in the past. There is housing to the north, east and west. To the south and south west is open agricultural land.

The location of the site is shown on the plan within **Figure 1** and an aerial photograph has been provided within **Figure 2** to place the site in context.

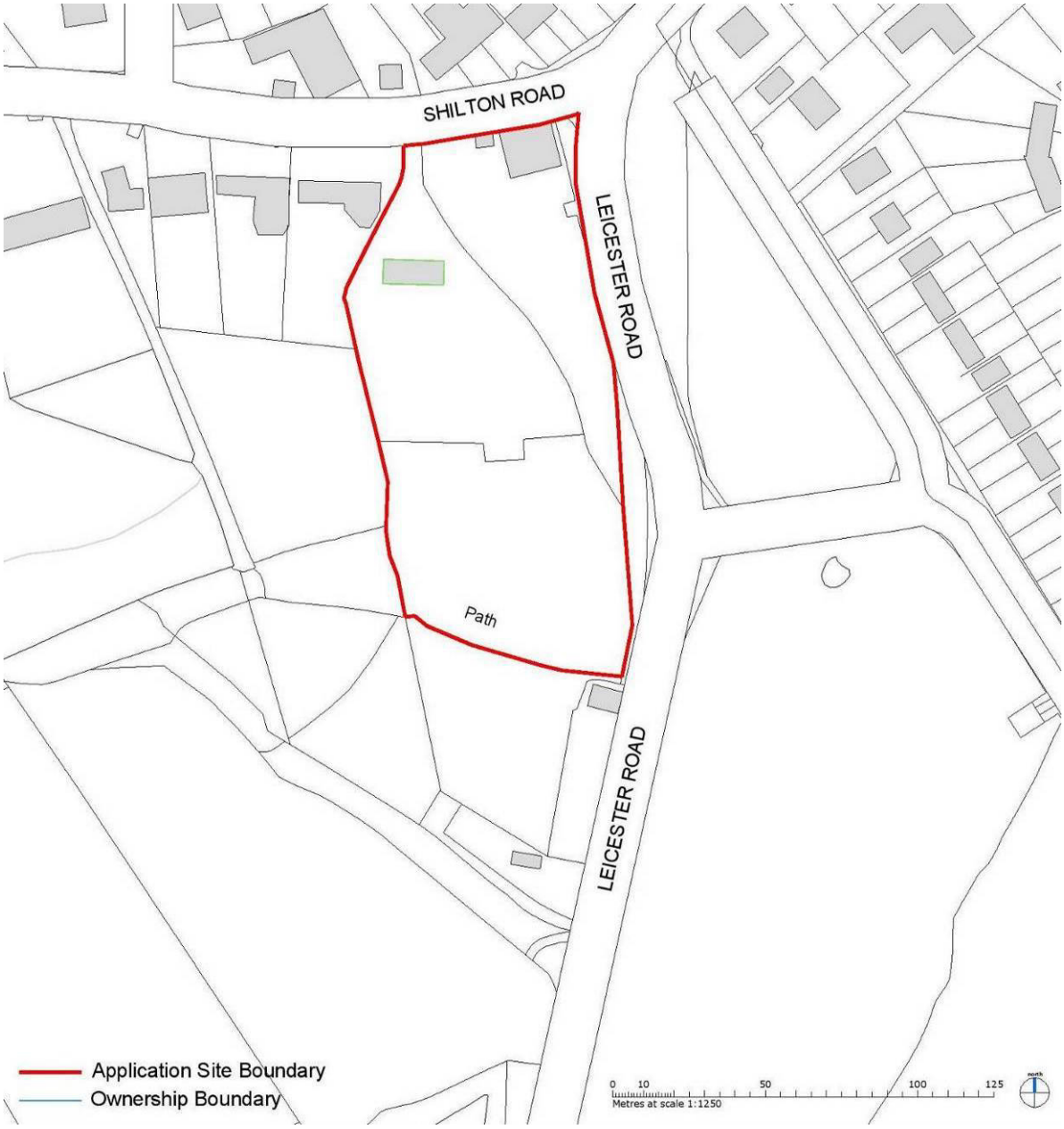

Figure 1: Site location.

The property owner has submitted planning for development of the land to replace the existing building with new residential development. As part of the application an ecological appraisal of the site area was completed and a Preliminary Ecological Appraisal (PEA) report was prepared by CBE Consulting (report reference P2914 /0125 /01 dated 26 March 2025) which has been submitted to the Planning Authority. This report provide additional information and must be read in conjunction with the PEA report.

Within the PEA report two emergence surveys were completed for the buildings and trees present within the survey area and details of these surveys were provided within Appendix 4 of the PEA. The surveys concluded that there was no roosting activity associated with the buildings or trees.

However, the emergence survey did identify that "*there is activity by at least six species of bat in this area and that it is likely that there is a Common Pipistrelle roost somewhere nearby, perhaps to the west, based on the earliest flight times and the arrival of this species. However, no evidence of any roosting activity was found in either of the two buildings under surveillance. It is clear that the rear garden area is an attractive foraging area for local Common Pipistrelle and there was a concentration of foraging activity noted, particularly during the first emergence survey*."

The Planning Authority have requested that further bat activity surveys should be completed during the optimum survey period to provide additional information on the extent and significance of bat foraging and commuting activity in this area to determine what impact any proposed development might have on this. A contextual aerial photograph has been provided below.

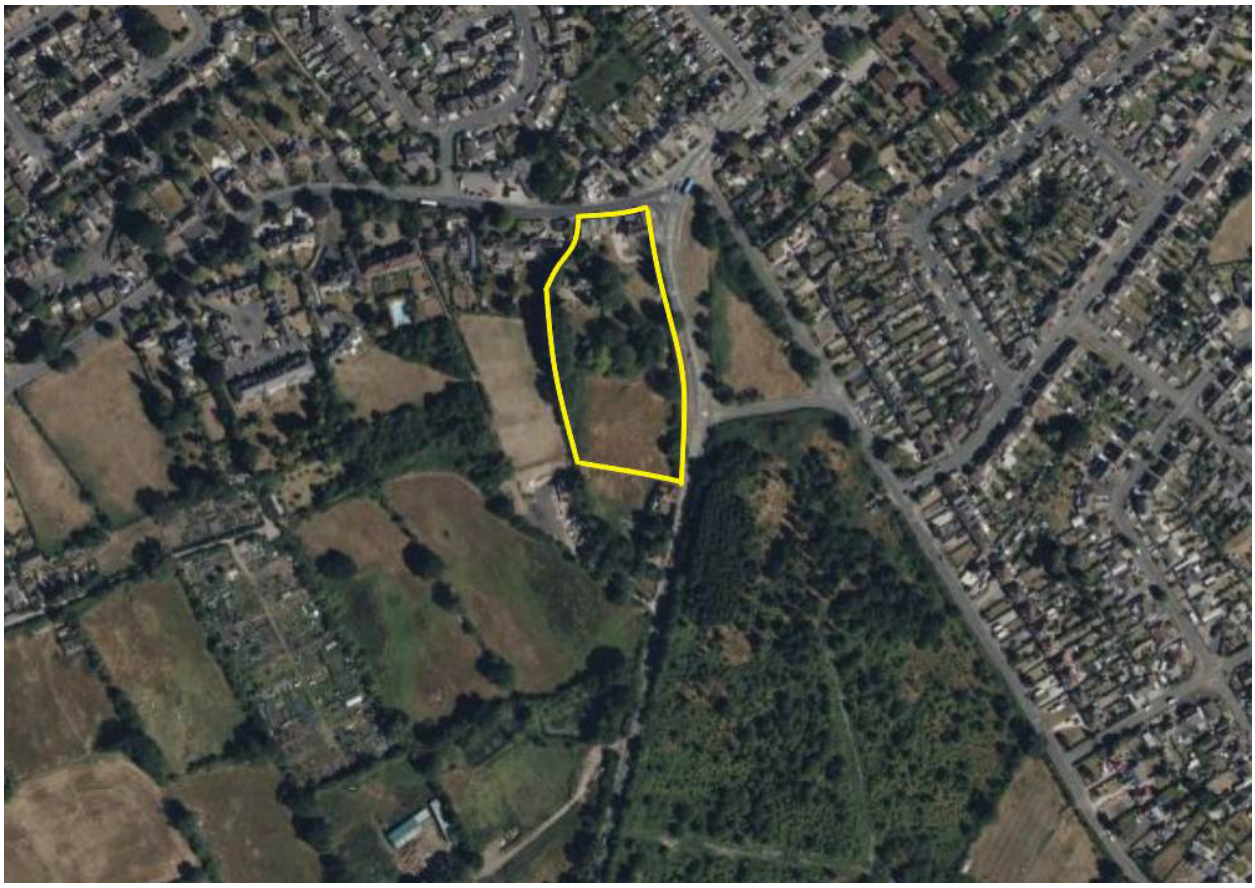

Figure 2: Site Contextual Aerial Photograph Image Copyright Microsoft Mapping 2025

2. Survey Methodology

Following on for the emergence surveys completed in July and August 2024, two additional surveys have been carried out with a wider scope and purpose, targeting the entire survey area proposed for development to identify bat activity across this area.

The full details of the two bat activity surveys completed are provided in the survey records within **Appendix 1** and this appendix also contains photographs. The time and conditions of the surveys are summarised in the table below.

Date of Survey	Survey Time	Temperature and weather	Survey conditions
30 July 2025	20.45 – 23.00	Clear with occasional cloud. 18°C at 20.45. Breeze 10mph from the north west. Humidity 57% at 1019hPa.	Excellent conditions for bat emergence and foraging. Sunset at 21.03.
29 August 2025	19.45 – 21.40	Clear sky with occasional cloud. 17°C, breeze 12mph from the south west. Humidity 77% at 997hPa	Suitable surveying conditions for bat foraging. Sunset 20.01.

The survey rationale for both surveys was for two surveyors and four fixed point survey recording positions to be set up over the survey area with two infra-red cameras also set up to cover key points. These survey positions are shown within the plan below.

Surveyor 1 – (L McDonald) positioned in the rear garden along the western boundary where previously quite significant foraging activity was noted during the emergence surveys.

Surveyor 2 – (C Barker) positioned in the eastern garden at a pinch point between the mature tree line and the boundary hedgerow most likely to be used by foraging bats.

Static Point 3 –(Echometer detector) positioned in the courtyard to the north west side of the second house, close to the western boundary.

Static Point 4 –(Echometer detector) positioned in the open grassland close to the trees and hedgerow along the eastern boundary to the south of the garden area where development is proposed.

Static Point 5 –(Echometer detector) positioned in the open grassland close to a mature Ash along the eastern boundary hedgerow to the south of the area where development is proposed.

Static Point 6 –(Echometer detector) positioned in the north eastern area of the garden close to the mature and semi-mature trees running between the two properties.

Infra-red Camera 7 positioned to watch the eastern garden area and monitor the level of activity in this area.

Infra-red Camera 8 positioned to watch the western garden area and monitor the level of activity in this area.

During the activity survey the two surveyors also carried an Echometer detector. The night vision equipment used in support of the survey to watch key features after darkness had fallen were both Nightfox Corsac 10 X HD magnification infra-red cameras.

Figure 3 – Survey Positions Plan

3. Survey Findings

Details of the number of bat passes recorded in each position during the two surveys are provided in **Appendix 1**. The tables below summarise the number of bat passes on each of the survey dates and the timings of these.

July Survey: A total of 865 bat passes were recorded in the six locations over the survey period. Of these, 755 were Common Pipistrelle (87%). The majority of the remainder were individual Soprano Pipistrelle and Noctule with occasional Leislers and infrequent Nathusius Pipistrelle, Brown Long-eared and Whiskered / Brants bats. It is very likely there is some double counting between the survey positions and that some individual bats made repeated passes, particularly near to S1 and S4.

Species	Passes	First pass Sunset 21.03	Greatest Activity Period (+/- 15 minutes after sunset)
Common Pipistrelle	755	21.23	21.41
Noctule	41	20.52	21.05
Soprano Pipistrelle	37	21.36	21.45
Leislers	13	21.06	n/a limited activity
Brown Long-eared bat	12	22.19	n/a limited activity
Nathusius Pipistrelle	3	21.41	n/a limited activity
Whiskered / Brants	3	22.17	n/a limited activity
Total	**865**		

The survey confirmed there is activity by seven species of bat in this area and that it is highly likely that there is a Common Pipistrelle somewhere nearby, most likely to the west or north west based on the earliest flight times and direction.

The key findings of the July 2025 survey are:

- The most significant foraging activity is by Common Pipistrelle which represented 87% of recorded flights.
- The majority of activity in terms of number of flights and intensity of bat activity was at positions S1 and S4 along the western boundary of the survey area.
- The western garden area provides a sheltered foraging spot adjacent to the west boundary used by multiple Pipistrelle bats early in the evening as part of an established foraging route. Open land and garden further west adjacent to this tree belt is also used for the same purpose.
- The majority of bats appear to be generally heading from the west and north west to the east and south east where there is an area of established woodland and access to two ponds further to the south

August Survey: Slightly less activity noted with a total of 738 bat passes by five species recorded in the six locations over the survey period. Of these, 651 were Common Pipistrelle (88%). The majority of the remainder were individual Soprano Pipistrelle and Noctule with occasional Leislers and infrequent Brown Long-eared bats. No activity by Nathusius Pipistrelle or Myotis species was picked up in any position during the August survey. Once again it is very likely there is some double counting between the survey positions and that some individual bats made repeated passes, particularly near to S1 and S4.

Species	Passes	First pass Sunset 20.01	Greatest Activity Period (+/- 15 minutes after sunset)
Common Pipistrelle	651	20.14	20.35
Noctule	41	20.11	20.15
Soprano Pipistrelle	35	20.29	20.45
Leislers	8	20.11	n/a limited activity
Brown Long-eared bat	3	21.16	n/a limited activity
Total	**738**		

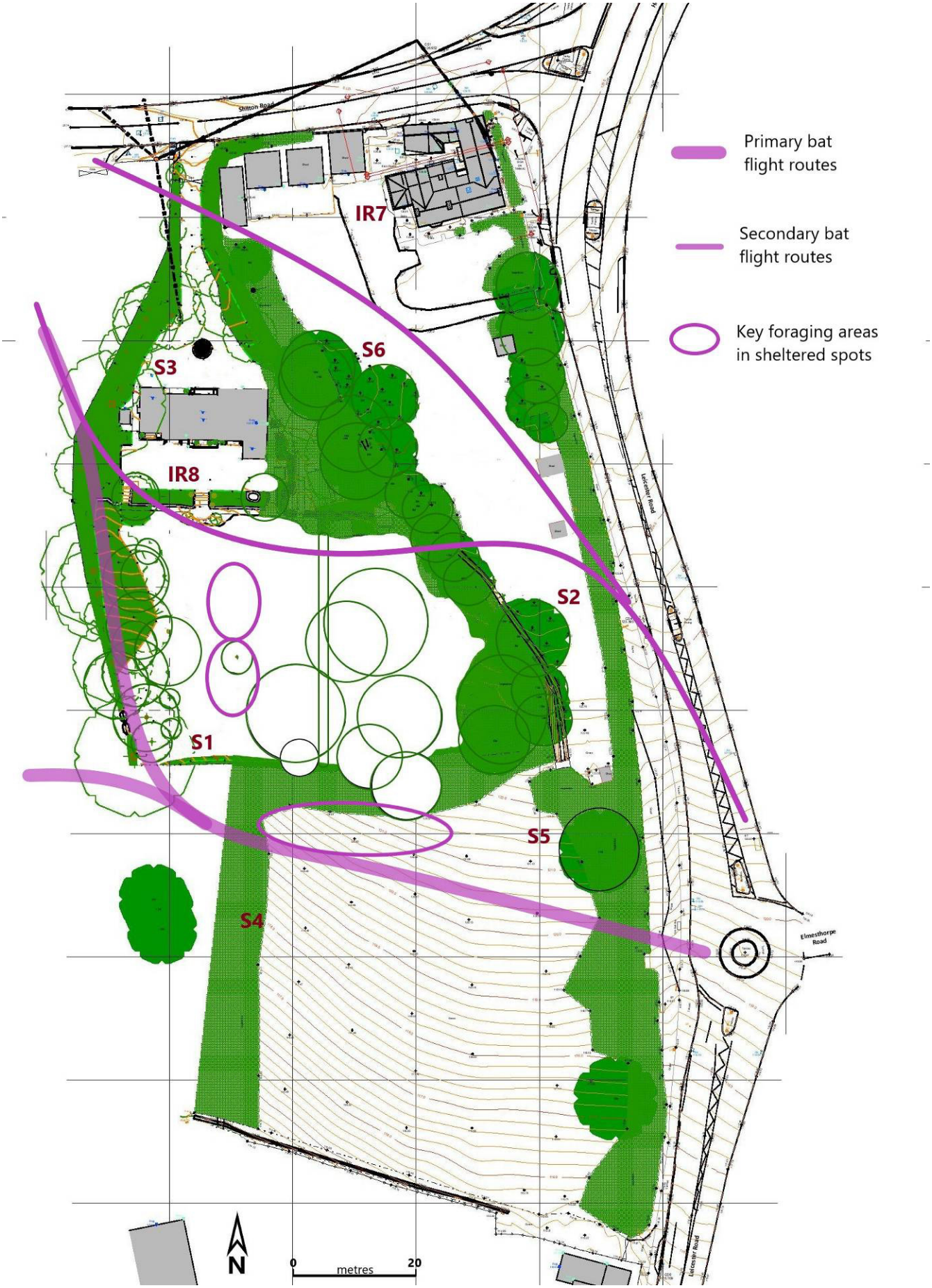

Figure 4 – Primary and Secondary Bat Flight Routes

The August survey confirmed there is activity by five species of bat in this area and the extent and timing of the Common Pipistrelle activity seems to support the view that there is a Common Pipistrelle somewhere nearby and that these bats access the survey area following gardens and tree lines from the west.

The key findings of the August 2025 survey are:

- The most significant foraging activity is by Common Pipistrelle which represented 88% of recorded flights which is consistent with the previous survey even though overall flight numbers are reduced.
- The majority of activity in terms of number of flights and intensity of bat activity was once again at positions S1 and S4 along the western boundary of the survey area with noticeable activity at S5 with bats crossing the site west to east.
- The western garden area once again provided a sheltered foraging spot adjacent to the west boundary used by Pipistrelle bats early in the evening as part of an established foraging route but the level and intensity of activity was reduced with no more than 3 individual bats being seen at any one time. The open land and garden further west adjacent to this tree belt was also used for the same purpose.
- Consistent with the July activity survey the majority of bats appeared to be generally heading from the west and north west to the east and south east where there is an area of established woodland and access to two ponds further to the south

4. Appraisal and Recommendations

The proposed footprint of the residential development is shown within **Figure 5** below.

The development will retain the majority of the trees along the western boundary of the site area. There will be gardens adjacent to the trees on either side to provide an open foraging space and Pipistrelle are perfectly happy forging across garden areas, particularly close to established broadleaved trees such as those being retained along the western boundary.

The two surveys have identified that there is activity by seven species of bat in this area and that it is highly likely that there is a Common Pipistrelle somewhere nearby, most likely to the west or north west based on the earliest flight times and direction. There existing garden areas are quite sheltered, particularly the western garden, and provide a useful foraging area where multiple Pipistrelle congregate shortly after emergence to forage before moving off. Most bats appeared to be heading roughly west to east which suggests the site is on-route to a more significant foraging area, likely to be the woodland to the east on the opposite side of Leicester Road.

Provided artificial lighting along the western boundary is minimised, the use of this boundary tree line and garden areas for foraging by Pipistrelle is unlikely to be significantly impacted. Other species less tolerant of artificial light may avoid this route but there is no evidence that these other species are making significant use of this area at the present time. Noctule and Leislers foraging to the west and south across the open agricultural land will not be significantly impacted by the development.

Bats arriving at the site from the west or the north could continue to use the trees and hedgerows retained along the western boundary to move south and then cross to the east to arrive at the larger woodland foraging area without difficulty.

The development proposal includes a significant landscaping area on the southern edge of the new housing which will have tree planting and a surface water drainage area and this could provide an excellent sheltered foraging area for Pipistrelle and other species once it establishes. It is likely that the main commuting and foraging route for the local bat populations will move slightly south and follow the edge of the development but this is a minor deviation from what is currently taking place.

Figure 5 – Conceptual Development Plan

The requirements of Part IV of ODPM / Defra Circular 06/2005 in regard to the protection of certain species are applicable under NPPF and the presence of protected species using the site must be taken into consideration.

It is concluded from the activity surveys carried out that the site does fall on a commuting route for local Common Pipistrelle likely to be roosting relatively close by based on timings and bat concentrations. There is no indication or evidence that the site is used by bats or any species for immediate pre/ post emergence swarming for a roost location but it does seem likely that the sheltered rear garden on the west side of the survey area is a convenient foraging stop on-route to the larger foraging area to the east of Leicester Road. The bats appear to cross the garden generally from west to east.

The development proposed will not create a significant barrier to the use of the site for commuting purposes and since the majority of the bats using the site are Common Pipistrelle, it is likely that the use of the gardens after development may continue. However, with the provision of a landscaped surface water drainage area to the south of the new housing and the establishment of tree and shrub planting across this area, a strong link across the survey area between the western trees and the trees along Leicester Road to the east will be present which will facilitate the continued used of the area by commuting and foraging bats. This route would be available for all species as there will be minimal artificial light pollution along this route.

To benefit the local bats and maintain the use of the area by foraging and commuting bats of all species after development, the following recommendations are made:

- As originally recommended within he PEA, the design of any external lighting associated with the new housing should ensure that there is minimal increase in artificial lighting which could impact bat foraging around this area. Dark commuting and foraging routes should be provided along the site boundaries, particularly the gardens facing the western boundary and those adjacent to the southern boundary facing the landscaped surface water drainage area.

- As originally recommended within the PEA at least four integral bat roost tubes should be incorporated into the new development in suitable positions identified by an ecologist. These should ideally be facing west within the houses nearest the western boundary and along the southern edge of the development facing south towards the landscaped surface water drainage area.

- The use of artificial lighting during any approved construction / demolition work should be restricted so that all such lighting is directions with hoods fitted and none are placed facing the western or southern boundaries of the working area.

- It is also recommended that a further activity survey is completed at the start of any development works in the appropriate bat activity season to assess the impact of works on the local bats and confirm the lighting associated with the work is appropriately sited and not causing any constraint. In addition, a post development activity survey is also recommended. This should be completed a minimum of 12 months after the landscaped surface water area is completed to monitor the use of this connection area by the local bat populations.

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British Standard 42020 – British Standard for Biodiversity: Code of Practice for planning and development. British Standards Institute 2013.

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Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland (2018). Institute of Ecology and Environmental Management (CIEEM)

Web references

MAGIC: Designated area data downloaded from URL http://www.magic.gov.uk.html

National Biodiversity Network: Protected species data downloaded from URL http://data.nbn.org/interactive/map

Appendix 1 Bat Survey Records and Photographs

Date	Survey Time	Temperature and weather	Comments
30 July 2025	20.45 – 23.00	Clear with occasional cloud. 18°C at 20.45. Breeze 10mph from the north west. Humidity 57% at 1019hPa.	Excellent conditions for bat emergence and foraging. Sunset at 21.03.

Flight / Forage activity: Detectors confirmed presence of three species of Pipistrelle, predominantly Common Pipistrelle foraging within the garden areas and passing foraging flights by Noctule, Leislers, Brown Long-eared and Whiskered / Brants bats.

Species	S1 bat passes	S2 bat passes	S3 bat passes	S4 bat passes	S5 bat passes	S6 bat passes
Common Pipistrelle	213	125	66	171	132	48
Nathusius Pipistrelle	2	-	-	1	-	-
Soprano Pipistrelle	9	5	6	8	5	4
Noctule	7	8	3	11	8	4
Leislers	3	3	3	3	1	1
Brown Long-eared	4	1	-	5	2	-
Whiskered / Brants	-	-	-	2	-	1
Totals	**238**	**142**	**78**	**201**	**148**	**58**

Surveyor S1 – Noted foraging around the sheltered rear garden by up to 5 individual Common Pipistrelle at one time. First Pipistrelle appeared from the west at 21.23 with others quickly arriving to forage in the sheltered area for around 5 minutes before moving off. Impression gained is of bats moving along the western boundary both inside and outside the garden further to the west. Occasional flights by Soprano Pipistrelle (arriving 21.36) and Nathusius Pipstrelle (21.41) were noted but these were individual bats passing through. Noctule and Leislers were picked up quite early but not seen. Brown Long-eared bat passes were picked up late in the survey period from 22.19 but these individual bat passes were not seen.

Surveyor S2 – Noted foraging around the sheltered rear garden by up to 3 individual Common Pipistrelle at one time. First Pipistrelle appeared from the north at 21.26 with others quickly arriving to forage in the sheltered garden. Impression gained is of individual bats moving along the garden boundaries following the tree line across the garden. Occasional flights by Soprano Pipistrelle (arriving 21.37) were noted but these were individual bats passing through. Noctule and Leislers were picked up quite early but not seen. A single Brown Long-eared bat pass was picked up late in the survey period at 22.38.

Static Survey point 3 – 78 passes in total (84% Common Pipistrelle). Majority of bat passes between 21.30 and 22.00 after which the intensity of foraging dropped off quite significantly.

Static Survey point 4 – 201 passes in total (85% Common Pipistrelle). Majority of bat passes fairly evenly distributed between 21.30 and 22.30 after which the intensity of foraging dropped off quite significantly. Two Whiskered / Brants passes were picked up along this boundary position from 22.17

Static Survey point 5 – 148 passes in total (89% Common Pipistrelle). Majority of bat passes between 21.30 and 22.00 after which the intensity of foraging dropped off quite significantly.

Static Survey point 6 – 58 passes in total (82% Common Pipistrelle). Majority of bat passes between 21.30 and 22.00 after which the intensity of foraging dropped off quite significantly.

Date	Survey Time	Temperature and weather	Comments
29 August 2025	19.45 – 21.40	Clear sky with occasional cloud. 17°C, breeze 12mph from the south west. Humidity 77% at 997hPa	Suitable surveying conditions for bat foraging. Sunset 20.01.

Flight / Forage activity: Detectors confirmed presence of three species of Pipistrelle, predominantly Common Pipistrelle foraging within the garden areas and passing foraging flights by Noctule, Leislers, Brown Long-eared and Whiskered / Brants bats.

Species	S1 bat passes	S2 bat passes	S3 bat passes	S4 bat passes	S5 bat passes	S6 bat passes
Common Pipistrelle	167	91	56	166	132	39
Nathusius Pipistrelle	-	-	-	1	-	-
Soprano Pipistrelle	10	6	9	5	2	3
Noctule	7	8	3	11	8	4
Leislers	2	1	-	3	2	-
Brown Long-eared	1	2	-	-	-	-
Whiskered / Brants	-	-	-	-	-	-
Totals	**187**	**108**	**68**	**186**	**144**	**46**

Surveyor S1 – Noted foraging around the sheltered rear garden by up to 3 individual Common Pipistrelle at one time but intensity of foraging far lower than the July survey. First Pipistrelle appeared from the west at 20.14 with other individual bats appearing within 10 minutes. Impression gained is once again of bats moving along the western boundary both inside and outside the garden further to the west. Occasional flights by Soprano Pipistrelle (arriving 20.29) were noted but no activity by Nathusius Pipstrelle was recorded. All were individual bats passing through. Noctule and Leislers were picked up quite early but not seen. Only a single Brown Long-eared bat pass was picked up at 21.16 but this individual bat was not seen.

Surveyor S2 – Noted foraging around the sheltered rear garden by solitary Common Pipistrelle with only two bats being seen at any one time. The intensity of foraging was lower than the July survey. First Pipistrelle appeared from the west at 20.19 with other individual bats appearing within a few minutes. No particular pattern of activity noted but bats appears to predominantly come from the south west. Occasional flights by individual Soprano Pipistrelle (arriving 20.33) were noted but no activity by Nathusius Pipstrelle was recorded. Noctule and Leislers were picked up quite early but not seen. No activity by Plecotus or Myotis species was recorded at all.

Static Survey point 3 – 68 passes in total (82% Common Pipistrelle). Majority of bat passes between 20.00 and 20.30 after which the intensity of foraging dropped off quite significantly.

Static Survey point 4 – 186 passes in total (89% Common Pipistrelle). Majority of bat passes fairly between 20.30 and 21.00 after which the intensity of foraging dropped off quite significantly.

Static Survey point 5 – 144 passes in total (91% Common Pipistrelle). Majority of bat passes quite even between 20.00 and 21.00 after which the intensity of foraging dropped off quite significantly.

Static Survey point 6 – 46 passes in total (84% Common Pipistrelle). Majority of bat passes between 20.30 and 21.00 after which the intensity of foraging dropped off quite significantly.

View south from IR7

View north from S1

View south from S5

View west from S5

View south from S4

View east from S4

View north across western garden

View north west across western garden

View south from IR8

View south from IR7