

Dunsbury Hill Farm Updated Bat Survey Report

Client: Portsmouth City Council

November 2012

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1. Introduction

- 1.1. Atkins Limited was commissioned by Portsmouth County Council to undertake ecological surveys of an area of Dunsbury Hill Farm, Havant, Hampshire. This report presents the findings of updated bat surveys carried out in September 2012. Surveys included walked transect surveys, and tree inspections.
- 1.2. This report should be read in conjunction with Dunsbury Hill Environmental Statement Volume 3 Appendix 15.4 Bat Survey Report.
- 1.3. The Environmental Statement was reviewed by Hampshire County Council Ecologist Peter McKeon who recommended that further bat surveys of the trees highlighted as potentially being lost to the proposed link road and roundabout off Hulbert Road should be undertaken. Further bat surveys of these trees were recommended as part of the mitigation measures within the Environmental Statement.

Legislative Background

- 1.4. All UK bats and their roost sites are protected from harm and disturbance under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (as amended).
- 1.5. As bats are a European Protected Species, licences are required from Natural England for any works that would result in an otherwise unlawful activity (e.g. damage to a bat roost). These licences are issued if Natural England are satisfied that the following three conditions are met:
 - Works are for the purpose of 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'.
 - There is no satisfactory alternative;
 - The action authorised by the licence will not be detrimental to the maintenance of bat populations at a favourable conservation status in their natural range.
- 1.6. The Natural Environment and Rural Communities Act 2006 also requires Government departments to have regard to the purpose of conserving biological diversity and to promote the action required to further the conservation of habitats and species listed as being of **principal importance for the purpose of conserving biodiversity**. **Barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long-eared, greater horseshoe and lesser horseshoe bats** are included on this list as well as being priority species on the UK Biodiversity Action Plan (BAP). **Serotines, Bechstein's, barbastelles, pipistrelles and greater horseshoe bats** are all Hampshire BAP Priority Species.

2. Methodology

Desk Study

- 2.1. Existing records of bats within 5 km of the proposed development were obtained from the Hampshire Biodiversity Information Centre.
- 2.2. A topographical survey was undertaken in spring 2011 whereby trees within the site were marked using metal tags. A tree survey of the site was subsequently carried out by Atkins in

August 2011¹ and was reviewed as it included information about the trees that would be lost to the proposed link road, based on the latest alignment.

Field Surveys

- 2.3. A combination of a single dusk and dawn transect survey, and tree inspections were undertaken in order to gain an understanding of how bats use the habitat around the site. A plan of the chosen transect route is provided in Appendix A. Methodologies for the different types of surveys are described below.

Transect Survey

- 2.4. A single dusk transect survey was undertaken on 13th September 2012 and a single dawn transect survey was undertaken on 14th September 2012, within habitats along the alignment of the proposed link road and roundabout off Hulbert Road to obtain information on bat species using the habitats along this route and identify commuting routes and foraging areas used by these species along the proposed link road and roundabout. This route incorporated potential foraging and commuting routes such as woodland, woodland edge, and field margins. Such features are known to be important habitats for bats. The methodology follows Bat Conservation Trust's (BCT) Good Practice Survey Guidelines 2nd Edition (2012)². The results of this survey are provided in **Appendix B**.
- 2.5. The transect route was walked by two surveyors who noted any observations of bats or bat calls detected, the species, location and activity (e.g. foraging, commuting, emerging or entering a roost) and the time the bat was recorded. An MP3 recorder (Zoom H2) was used to record any bat activity along the transect route, so that the bat calls could be analysed using BatSound v4.1.
- 2.6. The transect route was started at listening station no 1 (SN1) from Hulbert Road by woodland edge habitat where trees overhang the road, and the two surveyors recorded any bat activity at this listening station. The surveyors then entered the woodland off Hulbert Road and recorded at listening station no 2 at a mature oak tree (tag no 0837). The surveyors recorded between each listening station along the whole transect route. The surveyors recorded for five minutes and noted any bat activity at each listening station.
- 2.7. The surveyors walked from listening station no 2 out of the woodland and past some stables and into an area of grassland with groups of mature oak and ash trees. Listening station no's 3 and 4 were by mature oak trees (tag no's 0770 and 0751) within this grassland area. The surveyors then moved into more open grassland habitat and listening station no 5 was by boundary fence with hawthorn and bramble scrub. The surveyors moved towards mature oak tree (tag no 0678) which was listening station no 6, before then proceeding north towards the Hermitage Stream, stopping at an area of bramble scrub (listening station no 7) and then next to the Hermitage Stream itself at the location for the proposed link road crossing bridge (listening station no 8). Photos of some parts of the route are provided in **Appendix C**.

Tree Inspections

- 2.8. An inspection of the trees highlighted as potentially being lost to the proposed link road by the draft tree survey report (Atkins, August 2011)³ was carried out on 26th September 2012 by two suitably qualified ecologists from the ground to assess them for bat roosting potential, such as cracks, woodpecker holes, flaking bark, splits, ivy and broken branches.
- 2.9. The inspections above were aided by binoculars and a powerful torch. The photographs from these inspections are provided in **Appendix C**.

¹ Atkins (2011). *Dunsbury Hill Farm Development, Havant, Portsmouth. Draft Tree Survey Report and drawings 5099849-TP-LA-002 Tree Survey Plan 1 and 5099849-TP-LA-003 Tree Survey Plan 2* dated 24th August 2011.

² Bat Conservation Trust (2012). *Bat Surveys: Good Practice Guidelines 2nd Edition*.

³ Atkins (2011). *Dunsbury Hill Farm Development, Havant, Portsmouth. Draft Tree Survey Report and drawings 5099849-TP-LA-002 Tree Survey Plan 1 and 5099849-TP-LA-003 Tree Survey Plan 2* dated 24th August 2011.

- 2.10. A climbing inspection of the trees assessed as having bat roosting potential was carried out in early October 2012 by two suitably qualified ecologists. The climbing inspection was aided by a video endoscope to inspect features.
- 2.11. All the trees that were assessed as having medium – high bat roosting potential from the ground inspections were climbed in order to inspect any features, such as cracks, splits, peeling bark and woodpecker holes for signs of roosting bats. Following the climbing inspection, each tree was categorised as having negligible, low, medium or high bat roosting potential. The criteria for each category are detailed below. Following the categorisation of the tree, recommendation was made as to the further ecological consideration that the tree would likely require.

Negligible

- No features present that are suitable for roosting bats;

Low

- No cracking or flaking bark;
- No crevices, splits or holes;
- Smooth bark;
- Very little or no standing deadwood;

Medium

- Presence of one or two holes;
- Low ivy cover;
- Deadwood present in canopy or stem

High

- Cracks, crevices and splits;
- Loose and flaking bark;
- Medium / high ivy cover;
- Hollow stems present;
- Deadwood in canopy or on stems;
- Twisted / snagged branches.

- 2.12. Any such features on the trees that did not have signs of roosting bats were blocked up using leaves in order to discourage bats from using these features.

Limitations

- 2.13. Ecological surveys are limited by a variety of factors which affect the presence of flora and fauna such as season, climate, migration patterns and species behaviour. Even if evidence of bats is not discovered during the tree inspections, this does not mean that bats are not present, or that they will not be present in the future.
- 2.14. With regards to the tree inspections, this was carried out in September 2012 when the alignment of the link road was known. At this time of year the trees were in leaf, which made it difficult for the surveyors to see all the potential features that could be used by bats as some could have been obstructed by foliage. For this reason, a precautionary approach was taken and the trees were generally assessed as having medium to high bat roosting potential, as opposed to low. Some trees were assessed as having low or negligible potential by the two surveyors where there were no suitable features for roosting bats.

3. Results

Desk Study

- 3.1. Data obtained from the Hampshire Biodiversity Information Centre has shown that there are numerous records of bats within 5 km of the proposed development. Species include common pipistrelle, a pipistrelle species not identified down to species level, noctule, serotine, Bechstein's, Brandt's, whiskered, Daubenton's, natterers, brown long-eared and a species of long-eared bats not identified down to species level. No roosts were identified.
- 3.2. The 2011 draft tree survey report (Atkins, August 2011)⁴ divided the trees to be lost into standard arboricultural categories. For example, Category A trees are those of high quality in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested). Category B trees are those of moderate quality and value in such a condition as to make a significant contribution (a minimum of 20 years is suggested). Category B trees might have been included in the higher category, but are downgraded because of impaired condition such as minor storm damage or unsympathetic past management. The draft tree survey report indicated that a minimum of 16 trees of category B would be potentially lost to the proposed link road.
- 3.3. Category C trees are those of low quality and currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm. Category R trees are those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management. There are three category C trees (772, 749 and 834) and one category R tree (830) with potential to support bats that would be potentially lost to the Scheme according to the tree survey.
- 3.4. No trees that were of the highest category (A) would currently be lost to the scheme. More details about these trees as well as their tag number are provided in Table 1 below. The location of these trees is provided in the 2011 draft tree survey report drawings 5099849-TP-LA-002 Tree Survey Plan 1 and 5099849-TP-LA-003 Tree Survey Plan 2 (Atkins, August 2011) as part of the Environmental Statement⁵.

⁴ Atkins (2011). *Dunsbury Hill Farm Development, Havant, Portsmouth. Draft Tree Survey Report and drawings 5099849-TP-LA-002 Tree Survey Plan 1 and 5099849-TP-LA-003 Tree Survey Plan 2* dated 24th August 2011.

⁵ Atkins (2011). *Dunsbury Hill Farm Development, Havant, Portsmouth. Draft Tree Survey Report and drawings 5099849-TP-LA-002 Tree Survey Plan 1 and 5099849-TP-LA-003 Tree Survey Plan 2* dated 24th August 2011.

Table 1 – Trees with potential to support bats that would be potentially lost to the Scheme according to the 2011 draft tree survey report (Atkins, August 2011).

Tree tag number	Species	Description of feature providing potential for bats to use as roosts
771	English oak	5 % minor deadwood in crown
772	Common ash	5 % minor deadwood in crown
773	English oak	Deadwood
775	English oak	5 % major deadwood in crown
776	English oak	Crown partially suppressed by surrounding trees
782	English oak	5 % major deadwood in crown
783	English oak	Decay on north side of main stem
784	English oak	5 % major deadwood in crown
746	English oak	5 % minor deadwood in crown
749	English oak	5 % minor deadwood in crown
751	English oak	5 % minor deadwood in crown
822	English oak	-
873	English oak	5 % minor deadwood in crown
678	English oak	Less than 5 % minor deadwood in crown
598	English oak	Less than 5 % minor deadwood in crown
3027	English oak	-
3028	English oak	-
830	Alder	Dead co-dominant stem
834	Alder	Less than 5 % dead wood in crown
837	English oak	Dense ivy encroaching main stem to 6 m 5 % major deadwood in crown
3001	English oak	Ivy encroaching main stem to 15 m Less than 5 % minor deadwood in crown

Field Surveys

Transect Survey

- 3.5. The dusk and dawn transect survey along the proposed route of the link road and roundabout revealed bat activity amongst groups of mature oak trees in the pasture and along the edge of the Hermitage Stream adjoining the woodland edge of Cherry Tree Row SINC. A summary of the results of these surveys is provided in Appendix B. This drawing indicates where bats were seen foraging and commuting. Full details can be found in Appendix A. Photographs of the habitat along parts of the transect are provided in Appendix C.
- 3.6. At least three species of bats were recorded using the site during the transect survey in 2012, namely common pipistrelle, noctule, and a myotis species⁶. The species most recorded was the common pipistrelle whilst the noctule and myotis species were only recorded sporadically.
- 3.7. Recordings along this transect showed that the woodland edges and scrub/grassland margins to the Hermitage Stream provided important foraging grounds for bats. The scrub/grassland margins to the Hermitage Stream will be lost to the Scheme, however, the woodland edges along the Hermitage Stream will not be lost to the Scheme.

⁶ It is difficult to distinguish myotis species from each other using calls alone.

- 3.8. Tree Inspection
- 3.9. The tree inspection concentrated on the trees that are most likely to be lost as part of the proposed link road and roundabout, and was based on the trees listed in Table 1 above. Photographs of some of these trees are provided in Appendix C.
- 3.10. The following trees with tags were assessed by the two surveyors as having low or negligible bat roosting potential from the ground inspections and were not climbed; 771; 772; 775; 776; 784; 746; 749; 598; and 830.
- 3.11. The following trees with tags were assessed by the two surveyors as having low bat roosting potential from the climbing inspections; 773; 751; 873; 882; and 679. The other trees were assessed as having negligible potential following climbing inspections. The climbing inspections found no direct evidence of bats within the features inspected.

4. Conclusion and Recommendations

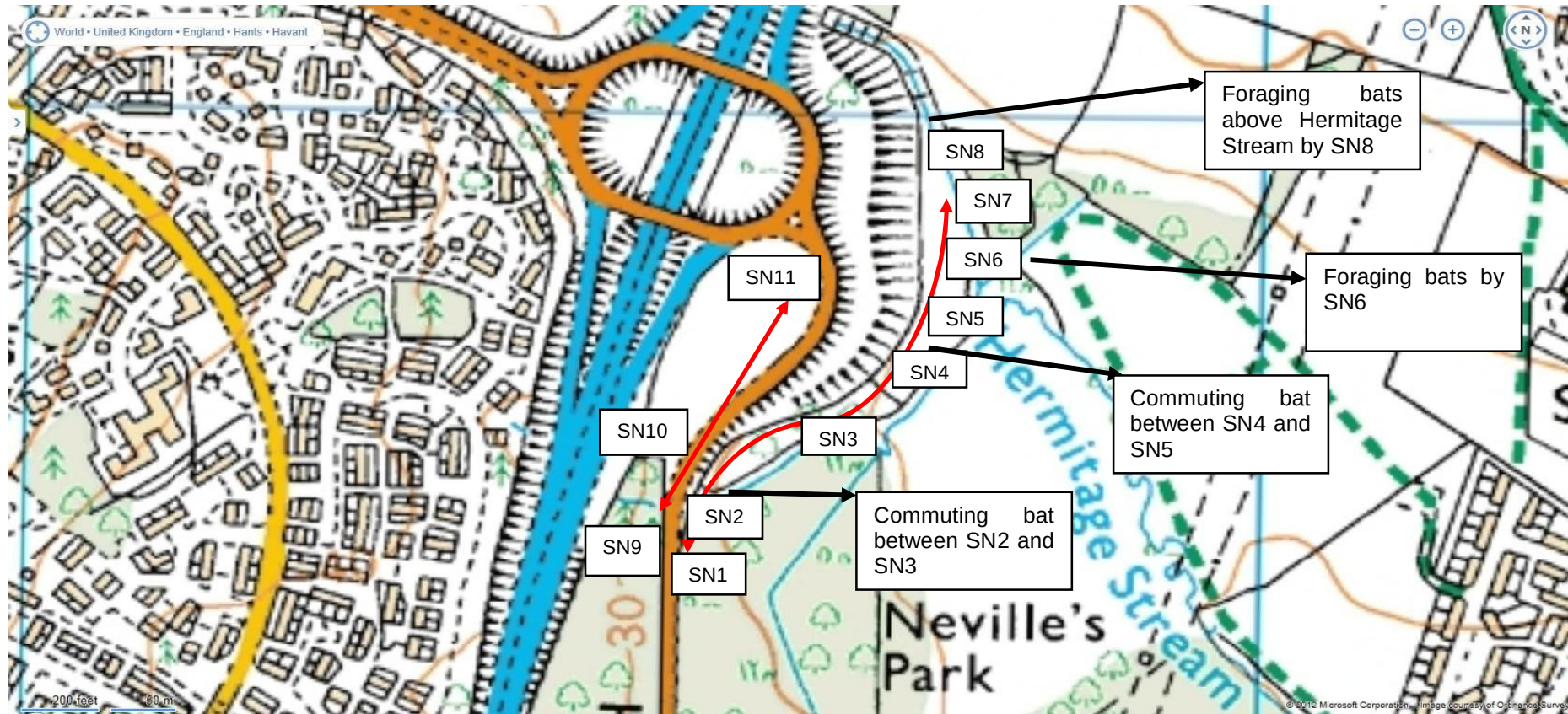
- 4.1. The woodland, mixed scrub and grassland and the Hermitage Stream provide good habitats for bats. These habitats attract insects which encourage foraging bats. In addition, tree lines and woodland edges in particular are used as flight lines for both commuting and foraging. Areas of woodland, such as Cherry Tree Row SINC, have the potential for roosting and hibernating bats, particularly where mature trees have features, such as cracks, woodpecker holes, loose bark and dense ivy covered limbs.
- 4.2. Mitigation measures are discussed in the Ecology section (Chapter 15, Paragraphs 15.132 – 15.139) of the Environmental Statement⁷.
- 4.3. The climbing inspections found no direct evidence of bats within the features inspected. It is recommended that five of the trees that were assessed as having low bat roosting potential, be **soft felled**. **These are trees with tag no's 773, 751, 873, 882 and 679.** Soft felling is defined as 'Limbs should be removed in sections, keeping (if possible) hollow sections intact. Limbs should be slowly lowered to the ground, inspected carefully, and left lying for at least 24 hours (48 hours in cold weather) **for any concealed bats to escape**'⁸. Any splits should be wedged open before they are left. These limbs should be kept away from further tree felling works.
- 4.4. The other trees were assessed as having negligible bat roosting potential following the climbing inspections, and as a result no further considerations in relation to bats are recommended for these trees.

⁷ Atkins (March 2012). *Dunsbury Hill Farm Environmental Statement Volume 1 Chapter 15 Ecology*.

⁸ Highways Agency (1999). *Design Manual for Roads and Bridges: Volume 10 Section 4 Part 3 Nature Conservation in Relation to Bats*

Appendix A. Transect Route and Listening Stations

Key: SN1 – 11 = Listening Station Number



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Appendix B. Transect Survey Results 2012

Date	13 th September 2012	Project number	5099849.1595.667
Site	Dunsbury Hill Farm, Havant, Hampshire		
Surveyors	DW + SL		
Transect/Location of surveyor	From Hulbert Road (west to east) and along route of proposed link road towards Hermitage Stream crossing	Start Time	19:00
Weather (Temp, rain, cloud, wind etc.)	Partial cloud, dry, moderate breeze. 15.5°C at start of survey, 14°C at the end	End time	21:19
		Sunset time	19:20

Station Number (SN)/ location	Time	MP3 recorder file no and time	Bat species / size	Bat passes heard / description of activity
SN1 (Hulbert Road verge at woodland edge)	19:22 – 19:28	Folder 6 File 000	No bats recorded	No activity recorded
Transect 1-2	19:28 – 19:32	Folder 6 File 001	No bats recorded	No activity recorded
SN2 (Tree tag no 0837)	19:32 – 19:39	Folder 6 File 002	No bats recorded	No activity recorded
Transect 2-3	19:40	Folder 6 File 003 (01:00)	Common pipistrelle and <i>Myotis</i> sp.	Single bat seen heading east towards woodland (Neville's Park SINC) behind stables
SN3 (Tree tag no 0770)	19:44 – 19:50	Folder 6 File 004	No bats recorded	No activity recorded
Transect 3-4	19:50	Folder 6 File 005 (01:00)	Common pipistrelle	Brief pass but bat not seen
SN4 (Tree tag no 0751)	19:53 – 19:57	Folder 6 File 006	No bats recorded	No activity recorded
Transect 4 -5	19:57	Folder 6 File 007	No bats recorded	No activity recorded
Transect 4 -5	19:58	Folder 6 File 007 (00:16)	Common pipistrelle	Brief pass but bat not seen
Transect 4 -5	19:59	Folder 6	Common pipistrelle	Brief pass but bat not seen

		File 007 (00:20)		
Transect 4-5	20:02	Folder 6 File 007	Common pipistrelle	Brief pass and bat seen passing overhead
SN5 (By fence and field edge)	20:02	Folder 6 File 008 (00:30)	Common pipistrelle	Bat heard foraging (feeding buzzes) but not seen
Transect 5-6	20:07	Folder 6 File 009	No bats recorded	No activity recorded
SN6 (Tree tag no 0678)	20:10	Folder 6 File 010 (00:35)	Common pipistrelle	Bat heard foraging (feeding buzzes) but not seen
Transect 6-7	20:15	Folder 6 File 011	No bats recorded	No activity recorded
Transect 6-7	20:17	Folder 6 File 011 (02:16)	Common pipistrelle	Brief pass but bat not seen
SN7 (By bramble scrub close to Hermitage Stream)	20:18	Folder 6 File 012	No bats recorded	No activity recorded, however lots of insects recorded
SN7	20:19	Folder 6 File 012 (01:00)	<i>Myotis</i> sp	Bat seen and heard foraging north to south along scrub by side of the Hermitage Stream
SN7	20:20	Folder 6 File 012 (01:00)	<i>Myotis</i> sp	Bat heard but not seen but call was loud
SN7	20:24	Folder 6 File 012	Common pipistrelle	Bat seen and heard foraging above small oak and bramble to the north west of the Hermitage Stream
Transect 7-8	20:25	Folder 6 File 013	No bats recorded	No activity recorded, however lots of insects recorded
SN8 (By Hermitage Stream at proposed bridge crossing)	20:27	Folder 6 File 013	<i>Myotis</i> sp and Noctule	<i>Myotis</i> bat heard but not seen foraging with brief call from a passing noctule
Transect 8-9	20:29	Folder 6 File 013	Common pipistrelle	Bat heard whilst passing SN 7 but not seen
Transect 8-9	20:35	Folder 6 File 014	No bats recorded	No activity recorded
Transect 8-9 (Between SN 2	20:37	Folder 6 File 015	No bats recorded	No activity recorded

and 1)				
Transect 8-9 (Between SN 2 and 1)	20:38	Folder 6 File 015	Unidentified bat sp.	Brief call recorded but bat not seen
SN9 (Hulbert Road verge by woodland edge opposite SN1)	20:41	Folder 6 File 016	No bats recorded	No activity recorded
Transect 9-10	20:46	Folder 6 File 017	No bats recorded	No activity recorded
SN10 (Hulbert Road grassland verge and young trees)	20:48	Folder 6 File 018	<i>Myotis</i> sp	Bat heard but not seen
Transect 10-11	20:53	Folder 6 File 019	No bats recorded	No activity recorded
SN11 (Hulbert Road grassland verge by A3(M) road sign)	20:56	Folder 6 File 020	No bats recorded	No activity recorded
Transect 11-2 (Transect between east verge lay-by and gate off Hulbert Road)	21:01 – 21:10	Folder 6 Files 021 and 022	No bats recorded	No activity recorded
Transect between gate and SN2	21:10	Folder 6 File 023	No bats recorded	No activity recorded
SN2 (Tree tag no 0837)	21:11	Folder 6 File 024 (00:45)	Common pipistrelle	Bat heard but not seen while facing tree no 0837
Walk from SN2 back towards east verge lay-by	21:16 – 21:19	Folder 6 File 025	No bats recorded	No activity recorded and survey ended at 21:19

Date	14 th September 2012	Project number	5099849.1595.667
Site	Dunsbury Hill Farm, Havant, Hampshire		
Surveyors	DW + SL		
Transect/Location of surveyor	From Hulbert Road (west to east) and along route of proposed link road towards Hermitage Stream crossing	Start Time	04:15
Weather (Temp, rain, cloud, wind etc.)	Total cloud cover, dry, strong breeze. 14°C at start of survey, 15°C at the end	End time	06:35
		Sunset time	06:34

Station Number (SN)/ location	Time	MP3 recorder file no and time	Bat species / size	Bat passes heard / description of activity
SN11 (Hulbert Road grassland verge by A3(M) road sign)	04:15	Folder 7 File 000	No bats recorded	No activity recorded
Transect 11-10	04:19	Folder 7 File 001	No bats recorded	No activity recorded
SN10 (Hulbert Road grassland verge and young trees)	04:21	Folder 7 File 002	No bats recorded	No activity recorded
Transect 10-9	04:26	Folder 7 File 003	No bats recorded	No activity recorded
SN9 (Hulbert Road verge by woodland edge opposite SN1)	04:28	Folder 7 File 004	No bats recorded	No activity recorded
SN9	04:30	Folder 7 File 004 (03:50)	Noctule	Brief call as overhead pass but bat not seen
Transect 9-1	04:32	Folder 7 File 004	No bats recorded	No activity recorded
SN1 (Hulbert Road verge at woodland edge)	04:33	Folder 7 File 005	No bats recorded	No activity recorded
Transect 1-2	04:38	Folder 7 File 006	No bats recorded	No activity recorded
SN2 (Tree tag no 0837)	04:41	Folder 7 File 007	No bats recorded	No activity recorded

Transect 2-3	04:47	Folder 7 File 008	No bats recorded	No activity recorded
Transect 2-3	04:48	Folder 7 File 008 (00:30)	<i>Myotis</i> sp	Brief pass as surveyors passing stables and bat not seen
Transect 2-3	04:49	Folder 7 File 008 (00:55)	<i>Myotis</i> sp	Brief call as overhead pass but bat not seen
SN3 (Tree tag no 0770)	04:53	Folder 7 File 009	No bats recorded	No activity recorded
Transect 3-4	04:57	Folder 7 File 010	No bats recorded	No activity recorded
SN4 (Tree tag no 0751)	04:58	Folder 7 File 011	No bats recorded	No activity recorded
SN4	04:59 – 05:04	Folder 7 File 011	<i>Myotis</i> sp	Two passes by surveyors. Bat heard but not seen.
Transect 4-5	05:05	Folder 7 File 012	No bats recorded	No activity recorded
SN5 (By fence and field edge)	05:06	Folder 7 File 013	No bats recorded	No activity recorded
Transect 5-6	05:11	Folder 7 File 014 (00:49)	Unidentified bat sp.	Brief call recorded but bat not seen
SN6 (Tree tag no 0678)	05:13	Folder 7 File 015	No bats recorded	No activity recorded
Transect 6-8	05:18	Folder 7 File 016	No bats recorded	No activity recorded
SN8 (By Hermitage Stream at proposed bridge crossing)	05:20	Folder 7 File 017	No bats recorded	No activity recorded
Transect 8-6	05:25	Folder 7 File 018	No bats recorded	No activity recorded
SN6 (Tree tag no 0678)	05:26	Folder 7 File 019	No bats recorded	No activity recorded
Transect 6-5	05:34	Folder 7	No bats recorded	No activity recorded

(changed batteries en-route and created new folder)		File 019		
Transect 6-5	05:36	Folder 8 File 000	No bats recorded	No activity recorded
SN5 (By fence and field edge)	05:38	Folder 8 File 001	No bats recorded	No activity recorded
Transect 5-4	05:44	Folder 8 File 002	No bats recorded	No activity recorded
SN4 (Tree tag no 0751)	05:46	Folder 8 File 003	No bats recorded	No activity recorded
SN4	05:48	Folder 8 File 003 (01:55)	<i>Myotis</i> sp	Brief call recorded but bat not seen
Transect 4-3	05:50	Folder 8 File 004	No bats recorded	No activity recorded
SN3 (Tree tag no 0770)	05:52	Folder 8 File 005	No bats recorded	No activity recorded
Transect 3-2	05:57	Folder 8 File 006	Unidentified bat sp.	Brief call recorded but bat not seen
SN2 (Tree tag no 0837)	06:01	Folder 8 File 007	Unidentified bat sp.	Brief call recorded but bat not seen
Transect 2-1	06:11	Folder 8 File 008	No bats recorded	No activity recorded
SN1 (Hulbert Road verge at woodland edge)	06:12	Folder 8 File 009	No bats recorded	No activity recorded
Transect 1-9	06:16	Folder 8 File 009	No bats recorded	No activity recorded
SN9 (Hulbert Road verge by woodland edge opposite SN1)	06:17	Folder 8 File 010	No bats recorded	No activity recorded
Transect 9-10	06:22	Folder 8 File 011	No bats recorded	No activity recorded
SN10 (Hulbert Road grassland verge and young trees)	06:23	Folder 8 File 012	No bats recorded	No activity recorded
Transect 10-11	06:28	Folder 8 File 013	No bats recorded	No activity recorded
SN11 (Hulbert Road grassland verge by A3(M) road sign)	06:30	Folder 8 File 014	No bats recorded	No activity recorded and survey ended at 06:35

Appendix C. Photographs of trees with the potential to support bats and photographs of habitat along transect route



Photograph 1. Overall view of mature oak trees that will potentially be lost to the link road (south of site off Hulbert Road) (Photograph taken from walkover survey in 2011 and habitats have not changed prior to transect survey in 2012).



Photograph 2. Mature oak trees that will potentially be lost to the link road (south of site off Hulbert Road).



Photograph 3. Mature oak trees (Listening station no 6) within grassland with Hermitage Stream and woodland of Cherry Tree Row SINC beyond. (Photograph taken from walkover survey in 2011 and habitats have not changed prior to transect survey in 2012).



Photograph 4. Hawthorn and bramble scrub on left of photo (Listening station no 5) within grassland looking towards Hermitage Stream. (Photograph taken from walkover survey in 2011 and habitats have not changed prior to transect survey in 2012).



Photograph 5. Hermitage Stream showing bramble scrub at proposed link road crossing bridge location (Listening station no 8). (Photograph taken from walkover survey in 2011 and habitats have not changed prior to transect survey in 2012).

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