Whitcher Wildlife Ltd.
Wildlife Consultants.

PENISTONE GRAMMAR SCHOOL.

PHASE I HABITAT AND PROTECTED FAUNA SURVEY.

Ref No:- **130473.**

Date:- **23rd July 2013.**

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1. INTRODUCTION.

1.1. Bellway Homes Ltd plan to develop part of the old Pensitone Grammar School site. The development area includes the old Fulford and Weirfield buildings on the site.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out a Phase I Habitat and Protected Fauna Survey of the site plus Bat and Great Crested Newt Surveys, to establish whether there are any issues that may affect the proposed works.

1.3. The site surveys were carried out between 30th April and 12th July 2013. This report outlines the findings of those surveys and makes appropriate recommendations.

1.4. Appendices I and II of this report provide additional information on specific species and are designed to assist the reader to understand the contents of this report.

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2. SURVEY METHODOLOGY.

2.1. Prior to visiting the site the survey area was cross referenced to maps and aerial photographs to give a general idea of the habitats and potential issues within the area and to identify potential access and walking routes.

2.2. The survey area and immediate surrounding area was thoroughly searched for evidence of badger (*Meles meles*) activity by looking for the following signs in line with Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*. Mammal Society:-

* Badger setts.
* Badger latrines or dung pits.
* Badger snuffle holes and evidence of foraging.
* Badger paths.
* Badger prints in areas of soft mud.
* Badger hairs caught on fencing.

2.3. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Rob Strachan, Tom Moorhouse and Merryl Gelling (2011). *Water Vole Handbook: Third Edition*:-

* Water vole burrows.
* Water vole faeces and latrines.
* Water vole feeding stations.
* Water vole runs.
* Water vole prints in areas of soft mud.
* Water vole lawns.
* Predator field signs.

2.4. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of otter (*Lutra lutra*) activity by looking for the following signs in line with the P Chanin (2003). *Monitoring the Otter* and *Conserving Natura 2000 Rivers: Monitoring Series No10 Guidelines:-*

* Otter prints in soft mud.
* Otter spraints.
* Otter Holts.

2.5. The survey area was searched for mature trees and derelict buildings and where found these were checked for potential bat roosting sites in line with L Hundt (2012). *Bat Conservation Trust Good Practice Guidelines* by looking for the following signs:-

* Holes, cracks or crevices.
* Bat Droppings.

2.6. The land immediately adjacent to the survey area was assessed for bat roosting potential and bat foraging potential. Connective routes and flight lines were also assessed whilst on site and using maps of the area.

2.7. The area within 500m of the survey site was cross referenced to maps to highlight all ponds close to the site. Where possible, all ponds identified were accessed using agreed access or public rights of way to assess the potential for great crested newts (*Triturus cristatus*) to be present.

2.8. The survey area was searched for watercourses and waterbodies and where found all watercourses and waterbodies within the survey area and for approximately 50m in each direction were thoroughly searched for the presence of crayfish where safe to enter the water. The survey was carried out in accordance with the *Conserving Natural 2000 Rivers Monitoring Series No 1, Protocol for Monitoring the White Clawed Crayfish.*

2.9. The survey area was assessed for the potential for reptiles and suitable reptile habitats. Where applicable the area was also searched for the presence of reptiles.

2.10. All surveys were carried out in line with the Chartered Institute of Ecological and Environmental Management (CIEEM) survey standards and advice.

2.11. The survey was undertaken by Derek Whitcher and colleagues from Whitcher Wildlife Ltd. Derek has over twenty years experience of surveying for wildlife and has run his own wildlife consultancy since 1998. He has extensive experience of a wide variety of survey techniques for a variety of species of protected wildlife supplemented by attendance on a wide range of training courses through CIEEM, FSC and BCT. As a member of CIEEM he is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership. He holds current Natural England survey licences for barn owl, bat, great crested newt and white clawed crayfish.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A data search for existing bat roost records in the area around the site was submitted to South Yorkshire Bat Group. The full results are provided in Appendix IV of this report.

3.1.2. The records include one record of a bat being trapped in part of the school in 2008 but it does not indicate whether this is a part of the school included within this development site or whether it was within that part of the school already demolished.

3.1.3. All other records apply to the area around the site, some to roosts and some to call outs to individual bats.

3.1.4. The NBN Gateway website holds records of a variety of protected species within the surrounding 10km grid square but none relevant to the site.

3.1.5. The MAGIC website shows no designated sites within 2km of the site.

3.1.6. The Barnsley Records Centre provided one Natural Heritage Site in the area around the site. Scout Dyke Reservoir lies 900m from the site and is designated for its higher value aquatic, woodland and grassland communities and is also noted for its bat species.

3.1.7. Barnsley Records Centre has provided an extensive list of species recorded within 1km of the site, some of which have been recorded on the site itself. None are protected species.

3.2. The Surveyed Area.

The aerial photograph below shows the site and the immediate surrounding area.



3.3. Description of Habitats.

3.3.1. Appendix III of this report contains annotated maps marked up with the varying habitats found on the site. The habitats on and adjacent to the site are:-

- **Semi Natural Broadleaved Woodland.**

A large area of broadleaved woodland occupies the eastern side of the site extending down to the adjacent Scout Dam. Tree species present include mature and immature beech (*Fagus sylvatica*), ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplantus*), willow (*Salix sp*), alder (*Alnus glutinosa*), poplar (*populus sp*) with hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*), bramble (*Rubus fruticosus*), ivy (*Hedera helix*) and nettle (*Urtica dioica*) beneath. There are also large areas of boxleaf honeysuckle (*lonicera nitida*), which is spreading across the area and occasional rhododendron.



- **Scattered Scrub.**

The areas of previous gardens and grassland within the site and to the east of the buildings and areas of hard standing have long been neglected and are now over run with bramble (*Rubus fruticosus*).



- **Parkland Scattered Trees**

There are two rows of mature beech trees, one at the western side of the site adjacent to the main road and the other forming a row across the hard standing area to the north of the main buildings. No bat roosting opportunities were identified in any of these trees viewed from the ground.



- **Standing Water.**

There are two ponds within the site boundary. One is a plastic lined, rectangular pond covered with a thick layer of duckweed and containing an abundance of rubbish and the other a small ornamental pond that has been neglected and overgrown with bramble and contains an abundance of leaf litter and algae.



- **Amenity Grassland.**

Areas of amenity grassland around the temporary buildings are becoming neglected and overgrown.



- **Fence.**

There are occasional fences around the site, predominantly metal security fences and hand rails with a post and rail fence along the eastern site boundary.



- **Wall.**

There are a number of dry stone walls around the site including the one shown below alongside the adjacent main road.



- **Buildings.**

Three main buildings remain on the site and two temporary classrooms. These are dealt with in more detail later in the report.



- **Bare Ground.**

A large part of the site comprises tarmac hard standing areas. These are becoming neglected with grass and weeds growing through.

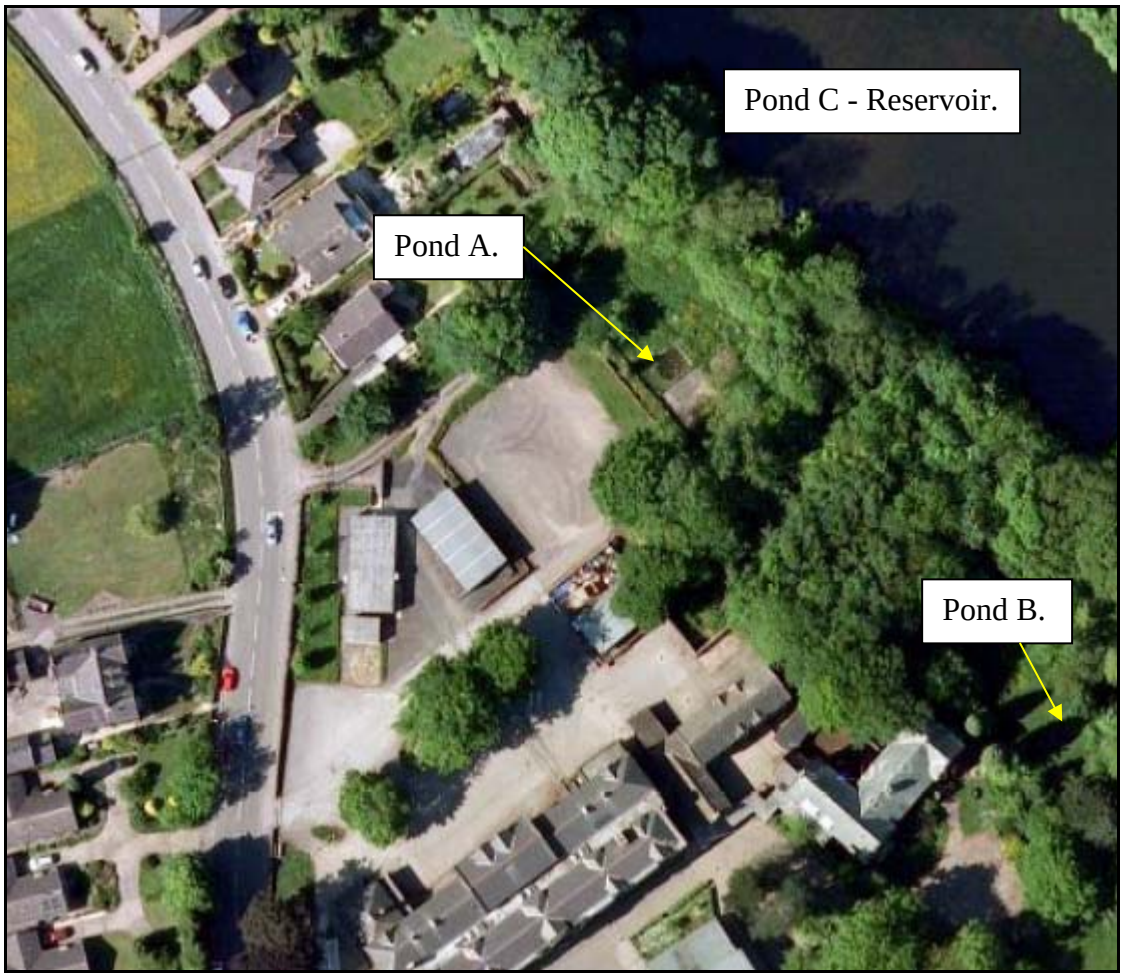


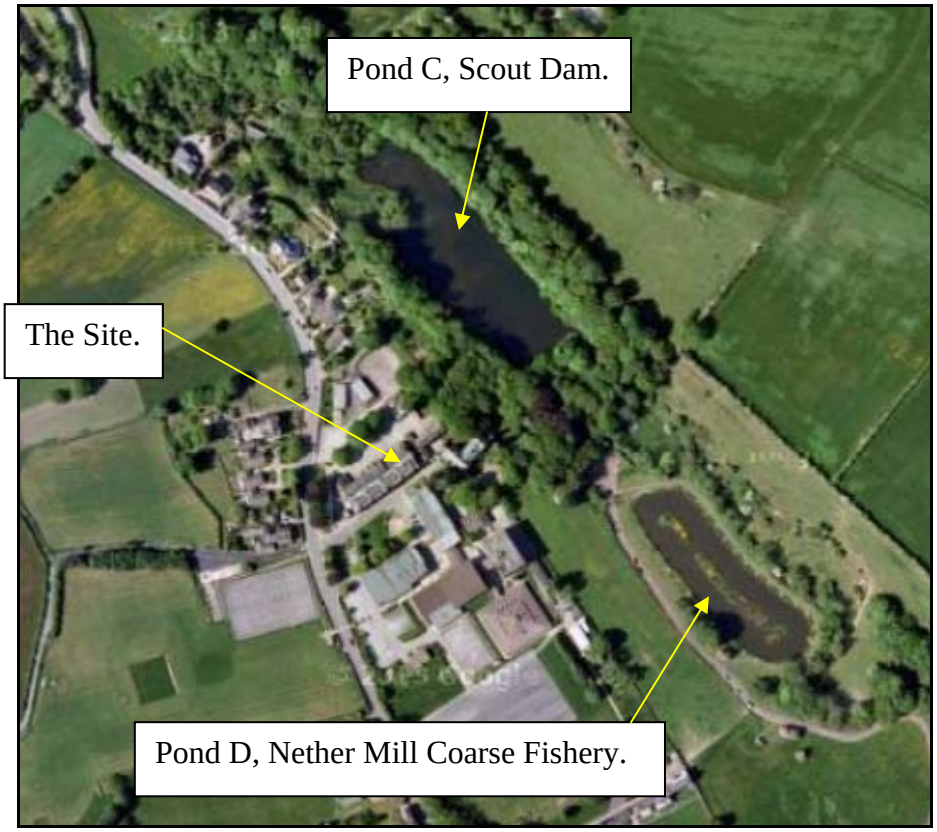
3.4. Description of Fauna.

3.4.1. No badger setts or badger field signs were identified in the survey area.

3.4.2. No watercourses that would provide habitat for water voles, otters or crayfish were identified in the survey area. There is a watercourse to the southeast of the site, the outflow from the reservoir. This is outside the site boundary and is stone and concrete lined.

3.4.3. Two ponds, A and B, were identified on the site that may provide habitat for breeding amphibians. The location of the ponds is shown on the aerial map below. In addition, to the east of the site is a large artificial fishing lake, C, Scout Dam and to the southeast of the site a relatively new and stocked fishing pond, D, called Nether Mill Coarse Fishery, both within 500m of the site.





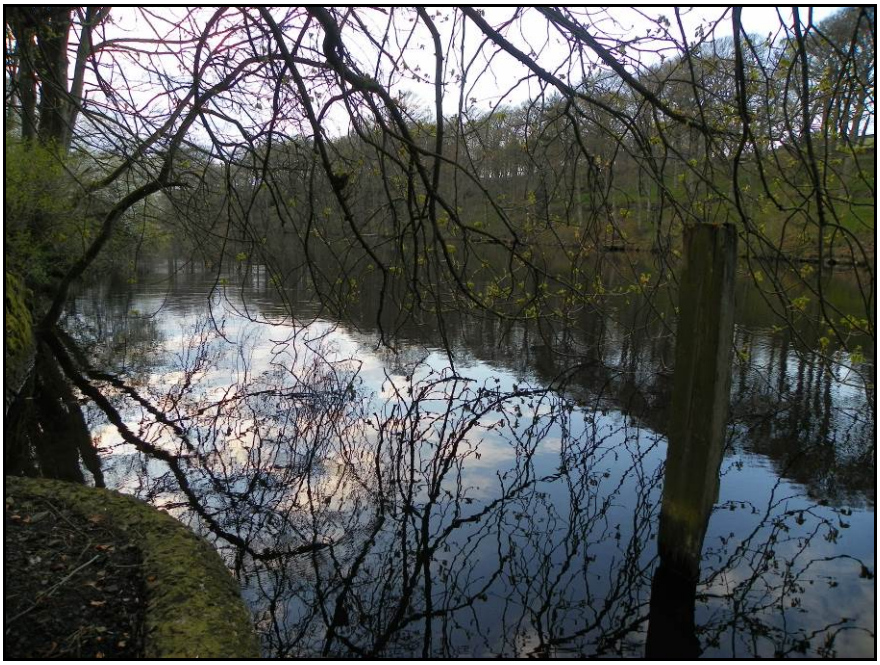
3.4.3.1. Pond A is located towards the north of the site. The pond is shallow, lined, covered with a dense layer of duck weed and contains an abundance of brick rubble, tyres and junk. There is no marginal or emergent vegetation.



3.4.3.2. Pond B is a small ornamental pond located at the southeast corner of the site in the corner of a neglected lawn. The pond is shallow and lined with an abundance of duck weed and algae and leaf debris.



3.4.3.3. Scout Dam is a large fishing lake with a dam at the southeastern end, located in woodland to the east of the survey area.



3.4.3.4. Pond D is the Nether Mill Coarse Fishery, a large water body created recently for the express purpose of coarse fishing. This is located to the southeast of the site.



3.4.3.5. The following table shows the Habitat Suitability Index Scores for each of the ponds. This is a method of calculating the potential presence of great crested newts in a pond by awarding points against specified criteria. An explanation of the HSI criteria is included in Appendix V of this report.

HSI		**Pond A**	**Pond B**	**Pond C**	**Pond D**
SI1	Location	1	1	1	1
SI2	Pond Area	0.1	0.1	*	0.8
SI3	Pond Drying	0.5	0.5	0.9	0.9
SI4	Water Quality	0.01	0.33	0.33	0.33
SI5	Shade	1	1	1	1
SI6	Fowl	1	1	1	1
SI7	Fish	1	1	0.01	0.01
SI8	Ponds	0.8	0.8	0.8	0.8
SI9	Terrestrial Habitat	1	1	1	1
SI10	Macrophytes	0.3	0.3	0.3	0.5
Total score		0.41	0.58	0.45	0.50
Presence		Poor	Below Average	Poor	Below Average

3.4.3.6. The results show that the potential presence of great crested newts in each of the ponds is poor for Pond A, Below Average for Pond B, Poor for Pond C and Below Average for Pond D.

3.4.3.7. In addition, four torch surveys and four netting surveys were carried out in the two ponds on the site, Ponds A and B. The results are shown in the table below.

Pond A

Survey Date		30th April	3rd May	22nd May	13th June
PM	**Weather**	Overcast	Clear	Bright and dry	Overcast and dry
	Temp	10	12	15	14
AM	**Weather**	N/A	N/A	N/A	N/A
	Temp	N/A	N/A	N/A	N/A
Surveyors		Derek	Steven	Derek	Derek
		Sheila	-	-	Steven
Bottle Traps	**Traps**	0	0	0	0
	Netting	0	0	0	0
Torch Search		0	0	0	0
Egg Search		0	0	0	0

Pond B

Survey Date		30th April	3rd May	22nd May	13th June
PM	**Weather**	Overcast	Clear	Bright and dry	Overcast and dry
	Temp	10	12	15	14
AM	**Weather**	N/A	N/A	N/A	N/A
	Temp	N/A	N/A	N/A	N/A
Surveyors		Derek	Steven	Derek	Derek
		Sheila	-	-	Steven
Bottle Traps	**Traps**	0	0	0	0
	Netting	0	0	0	0
Torch Search		0	0	0	0
Egg Search		0	0	0	0

3.4.3.8. No amphibians were identified in either of the two ponds during any of the four presence/absence surveys.

3.4.3.9. There is potential for roosting bats in the buildings on the site. The issue of the possible presence of bats in the building is dealt with later in this report.

3.4.3.10. There is some potential for roosting bats in the trees within the woodland to the east of the site although these trees are along the site boundary with Scout Dam and will not be affected by the proposed development of the site.

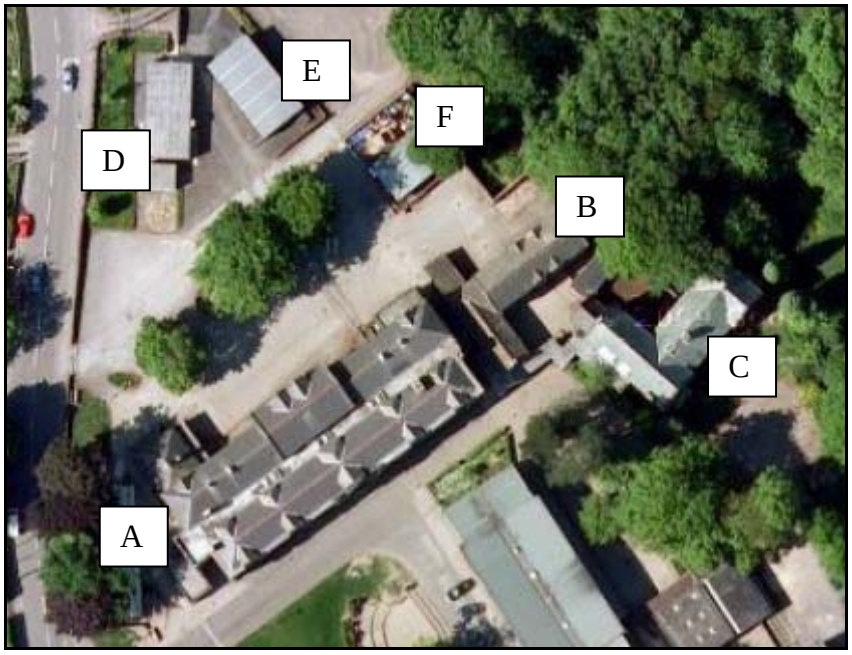
3.4.3.11. Occasional Rhododendron was identified within the woodland to the east of the site. No other alien, invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 were identified on the site.

3.4.3.12. The habitat on the site was assessed to be unsuitable for reptiles as there are large areas of hard standing and bare earth and the remainder of the site is heavily shaded.

3.4.3.13. There are abundant opportunities for nesting birds in the buildings and the vegetation across the site.

3.5. Day Time Bat Survey Results.

The aerial photograph below shows the buildings present on the site. Each building is dealt with separately below.



3.5.1. Building A.

3.5.1.1. Building A is the old Fulford block, a purpose built two storey stone school building.



3.5.1.2. The stone walls are all generally in good condition with few holes, cracks or crevices that would provide potential bat roosting opportunities.

3.5.1.3. The roof of the building comprises a double pitch with a central flat area between, as can be seen in the photograph below. The roofs are generally in quite good condition but there are gaps beneath the ridge tiles, occasional displaced slates and areas of loose lead flashing that provide opportunities for small numbers of crevice loving bats.



3.5.1.4. There are two long loft spaces, each running the entire length of the building under each ridge. The rooms below extend underneath the pitch and therefore the loft spaces above are quite low, as can be seen below. There is a felt layer beneath the roof slates that is generally in good condition.



3.5.1.5. A small number of very old and very dry brown long eared bat droppings were identified on the floor in the south eastern of the two loft spaces. No other bats or bat field signs were found.

3.5.2. Building B.

3.5.2.1. Building B is the old stables block, located on the northeastern end of Building A. The building is an old, L shaped, stone building built with stone walls and a pitched tiled roof.



3.5.2.2. The walls are well pointed and generally in good condition with no holes, cracks or crevices that would provide opportunities for roosting bats.

3.5.2.3. The roof appears to have been replaced at some point in time and is now covered with tiles. These are generally in good condition although there are some that do not sit flat thus providing gaps beneath them and there is lead flashing around the valleys that may provide opportunities for a small number of crevice dwelling bats.

3.5.2.4. The loft space is low and accessible only through a hole in the ceiling. A search identified no field signs to suggest the presence of roosting bats and the loft was assessed to be too small and unsuitable for roosting bats.

3.5.3. Building C.

3.5.3.1. Building C is a large stone building U shaped with two side wings. It is a two storey building although in the south western half of the building the loft space has been utilised with additional rooms.



3.5.3.2. The walls of the building are of well pointed, coursed stone with no cracks crevices or open joints that would provide opportunities for roosting bats.

3.5.3.3. The pitched roofs appear to have been replaced at some point in time and are covered with slate with a felt lining. These are all close fitting with no apparent opportunities for roosting bats.

3.5.3.4. The southwestern half of the building contains no loft space as there are rooms beneath the pitched roof. Within the north eastern end of the building there is a large loft space occupying half of the central section of the building and all of the north eastern wing, with an internal supporting brick wall with open arches.



3.5.3.5. The loft is a large open space unobstructed by timber and with only a small number of timber cross beams.

3.5.3.6. A small number of bat droppings were identified in the eastern corner of the loft beneath the ridge during the first loft inspection. A sample was collected and compared to library samples and these were clearly brown long eared bat droppings. During subsequent loft inspections no new droppings were found.

3.5.4. Building D.

3.5.4.1. Building D is a single storey classroom building with brick cavity walls and a flat felt roof. The walls are in good condition with no cracks or gaps that would provide opportunities for roosting bats. The windows were all boarded up and sealed.

3.5.4.2. The flat felt roof is totally unsuitable for roosting bats.

3.5.4.3. The weatherboard fascias around the building are all closely sealed providing no opportunities for roosting bats.

3.5.4.4. This building was assessed to be totally unsuitable for roosting bats.



3.5.5. Building E.



Building E is a pre-fabricated temporary class room building at on brick columns. The design and materials of the building make it totally unsuitable for roosting bats and no bat field signs were identified.

3.5.6. Building F.

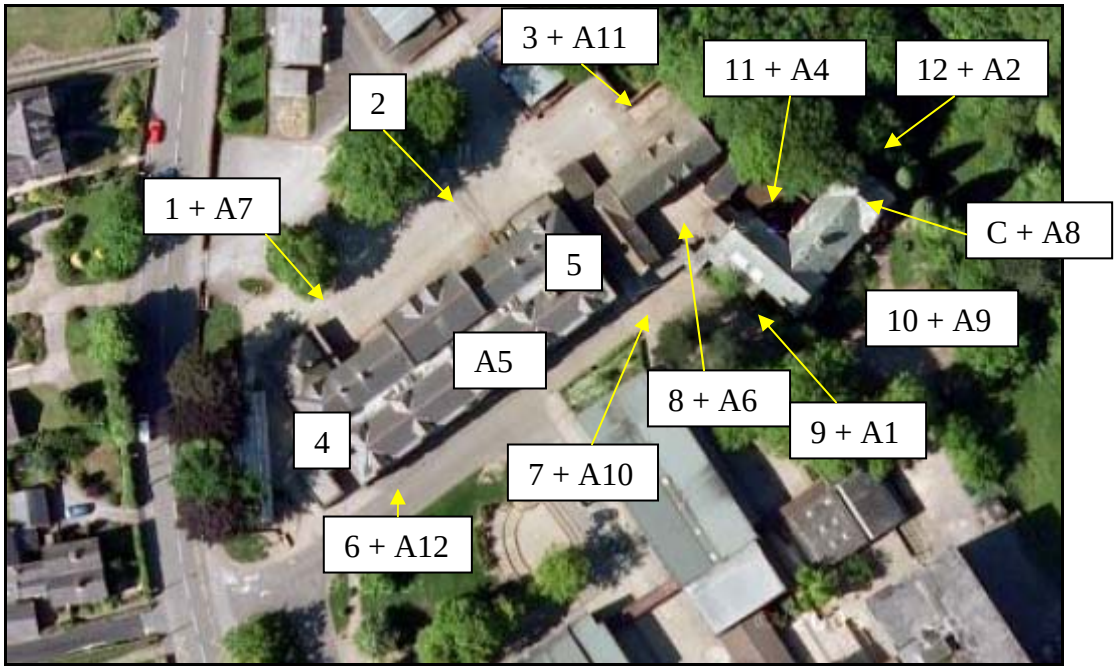
Building F is a relatively new, single storey boiler house with well pointed stone walls and a pitched and hipped slate roof. The building is new and very well sealed throughout with no opportunities for roosting bats.



3.6. First Dusk Emergence Survey Results.

3.6.1. Twelve surveyors carried out the initial dusk emergence surveys of the buildings on the evening of 13th June 2013.

3.6.2. The surveyors were positioned around the buildings in order to be able to view all sides of the three main buildings simultaneously. The positions of the surveyors are shown on the aerial photograph below. Static Anabat recorders were distributed around the site to record bat activity for subsequent computer analysis are shown as “A” followed by the unit number and “C” is a video camera.



3.6.3. Surveyors 4 and 5 were positioned on the roof of Building A and the camera was positioned inside the loft of Building C where the bat droppings were found.

3.6.4. All surveyors were equipped with a Batbox Duet detector and a two way radio for communication between surveyors.

3.6.5. Seven of the surveyors hold current Natural England bat survey licences and the rest of the surveyors were experienced assistants.

3.6.6. The evening was warm and overcast with a light breeze and a temperature of 14°C at 22:00.

3.6.7. The following are the observations of the surveyors.

Surveyor 1.

22:19. Pipistrelle 45 passed west to east over Building A.
22:21. Pipistrelle 45 passed east to west over Building A.
22:44. Pipistrelle 45 passed east to west over Building A.
22:45. Pipistrelle 45 foraging over top of Building A.
22:55. Pipistrelle 45 passed east to west over Building A.

Surveyor 2.

22:00. Pipistrelle 45 passed west to east.
22:06. Pipistrelle flew off the buildings. Thought to have emerged from Building A. (Not recorded by Surveyor 4 on the roof.)
22:12. Pipistrelle passed east to west.
22:13. Pipistrelle 45 heard not seen.
22:20. Pipistrelle 45 from west, foraged overhead and away to east.
22:21. Bat foraging overhead, no echolocation call.
22:23. Pipistrelle 45 foraging overhead.
22:25. Pipistrelle 45 foraging over trees to the north.
22:26. Two Pipistrelle 45s passed west to east.
22:28. Two Pipistrelle 45s foraging overhead and over trees to north.
22:30. Pipistrelle 45 foraging over trees north of buildings, continued throughout the survey until 23:00.

Surveyor 3.

21:43. Blackbird entered under gutter.
21:45. Pipistrelle 45 heard not seen.
22:04. Pipistrelle 45 heard not seen.
22:05. Pipistrelle 45 emerged from Building B.
22:06. Pipistrelle 45 heard not seen.
22:09. Bat seen foraging low down near ground until 22:20.
22:11. Pipistrelle 45 passed south to north.
22:23. Pipistrelle 45 foraging overhead until 22:31, left to the south.
22:35. Pipistrelle 45 passed over trees to the east.
22:37. Pipistrelle 45 heard not seen.
22:39. Pipistrelle 45 heard not seen.
22:44. Pipistrelle 45 heard not seen.
22:46. Pipistrelle 45 foraging along north side of Building B until 22:48, left to the east.
22:51. Pipistrelle 45 heard not seen.
22:53. Pipistrelle 45 heard not seen.

Surveyor 4.

Surveyor 4 saw and heard no bat activity on the western end of the roof of the Building A.

Surveyor 5.

22:01. Bat briefly heard but not seen.
22:03. Pipistrelle 45s heard continuously foraging over Surveyors 8 and 11.
22:13. Pipistrelle 45 overhead and northeast towards Surveyor 3.
22:18. Pipistrelle 45 overhead and northeast towards Surveyor 3.

Surveyor 6.

22:24. Heard distant Pipistrelle 45, not seen.

Surveyor 7.

22:03. Distant Pipistrelle 45 heard not seen. Distant Pipistrelle 45 foraging activity all evening from the direction of Surveyor 8.
22:18. Pipistrelle 45 passed west to east.
22:24. Pipistrelle 45 passed west to east.
22:47. Bat heard not seen.

Surveyor 8.

22:02. Pipistrelle 45 from the east and Surveyor 11 foraging overhead.
22:03. Pipistrelle 45 foraging overhead and round to Surveyor 11. This activity continued throughout the evening.
22:07. Two Pipistrelle 45s foraging overhead.
22:21. Saw two bats but no echolocation call.
22:34. Two bats from Surveyor 11, overhead to north side of Building A.
22:36. Quiet bat plus Pipistrelle 45 foraging.

Surveyor 9.

22:07. Pipistrelle 45 heard foraging, not seen. This continued throughout the survey.
22:40. Quiet bat heard not seen.

Surveyor 10.

22:07. Continuous Pipistrelle 45 foraging southeast of buildings until 22:20.
22:16. Pipistrelle 45 from the north and foraging overhead.
22:20. Quiet bat foraging overhead until 22:28.
22:26. Pipistrelle 45 passed from west to east.
22:29. Pipistrelle 45 foraging around the eastern end of the Building C.
22:30. Quiet bat foraging overhead until end of survey at 23:00.

Surveyor 11.

21:57. Continuous Pipistrelle 45 foraging overhead all evening.
22:04. Two Pipistrelle 45s foraging overhead at the same time.
22:19. Three Pipistrelle 45s foraging at the same time.
22:28. Two Pipistrelle 45s foraging.
22:33. Silent bat passed towards Surveyor 12.
22:35. Silent bat passed towards Surveyor 8.
22:35. Pipistrelle 45s foraging again, continuous until 22:54.

Surveyor 12.

21:58 onwards, continual Pipistrelle 45 foraging overhead throughout the survey, between Surveyors 10 and 11. Dense tree cover close to the buildings made it impossible to see bats.

3.6.8. The following bat activity was recorded by the Anabat recorders.

Anabat 7, by Surveyor 1.

Four Pipistrelle 45 calls were recorded at 22:22, 22:22, 22:36 and 22:54.

Anabat 11 by Surveyor 3.

One hundred and seven Pipistrelle 45 calls were recorded between 21:59 and 23:03. No other species of bat was recorded.

Anabat 5 inside the Fulford Building loft.

No bat activity was recorded on this Anabat.

Anabat 12 by Surveyor 6.

Two Pipistrelle 45s were briefly recorded at 22:23 and 22:30. No other species of bat was recorded.

Anabat 10 by Surveyor 7

Seventy six Pipistrelle 45 calls were recorded between 22:00 and 22:55, most very brief and quiet. No other species of bat was recorded.

Anabat 6 by Surveyor 8.

One hundred and ninety eight Pipistrelle 45 calls recorded between 21:598 and 22:57. One brief myotis call was recorded at 22:06 but the call was too brief to identify the species.

Anabat 1 by Surveyor 9.

Four Pipistrelle 45 calls were recorded at 22:18, 22:49, 22:51 and 22:57. No other species of bat was recorded.

Anabat 9 by Surveyor 10.

Two hundred and twenty Pipistrelle 45 calls were recorded between 22:12 and 23:07. No other species on bat was recorded.

Anabat 4 by Surveyor 11.

Two hundred and twenty four Pipistrelle 45 calls between 21:44 and 22:54. One myotis call was recorded at 22:51 but the call was too brief to identify.

Anabat 2 by Surveyor 12.

Fifty two Pipistrelle 45 calls, some very faint, were recorded between 21:57 and 22:53 and three myotis calls at 22:06, 22:51 and 22:52. The myotis calls were very brief but appeared to be Natterer's bats.

Anabat 8 inside the loft of Building C.

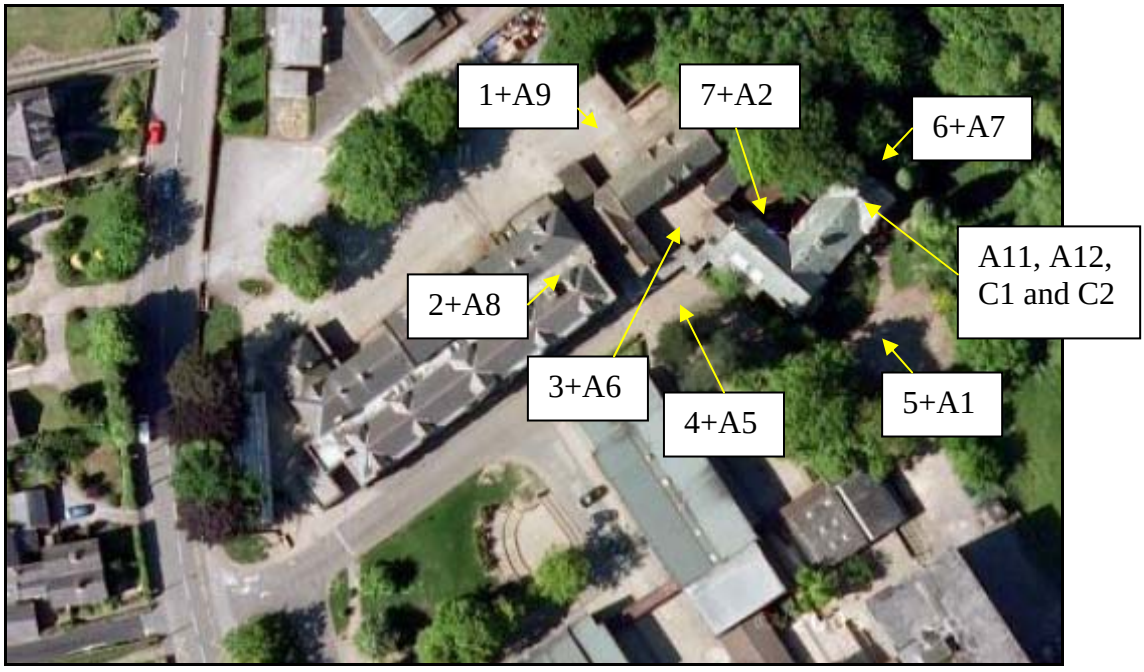
No bat activity was recorded.

3.6.9. No bat activity was recorded on the video camera in the loft of Building C.

3.7. First Dawn Survey Results.

3.7.1. Seven surveyors carried out a dawn survey on the morning of 26th June 2013.

3.7.2. The surveyors were positioned around the buildings in order to be able to view all sides of the three main buildings simultaneously.



3.7.3. The positions of the surveyors are shown on the aerial photograph above. Static Anabat recorders were distributed around the site to record bat activity for subsequent computer analysis are shown as “A” followed by the unit number and C is a video camera.

3.7.3. Surveyor 2 was positioned on the roof of Building A, two cameras and Anabats 11 and 12 were positioned in the loft of Building C.

3.7.4. All surveyors were equipped with a Batbox Duet detector and a two way radio for communication between surveyors.

3.7.5. Six of the surveyors hold current Natural England bat survey licences and the seventh surveyor was an experienced assistant.

3.7.6. The morning was warm and overcast with a light breeze and a temperature of 11°C at 04:00.

3.7.7. The following are the observations of the surveyors.

Surveyor 1.

03:31. Pipistrelle 45 heard not seen.
03:32. Pipistrelle 45 heard not seen.
03:34. Pipistrelle 45 from the west to the east over buildings.
03:37. Pipistrelle 45 heard not seen.
03:46.Pipistrelle 45 foraging over trees to the east.
03:52. Pipistrelle 45 heard not seen.
03:59. Quiet bat flew from the east over Building A.
04:00. Two Pipistrelle 45s foraging over buildings, faint calls.
04:01 to 04:04. Pipistrelle 45 circling and foraging over buildings.
04:09. Two Pipistrelle 45s flew across the site and buildings, east to west.
04:14. Pipistrelle 45 entered Building A.
04:17. Pipistrelle 45 entered Building A.

Surveyor 2.

03:32. Pipistrelle 45 foraging over Surveyor 3.
03:53. Pipistrelle 45 foraging over Surveyor 3.

04:02. Pipistrelle 45 from the north over the buildings and then foraging over Surveyor 3 until 04:06.
04:06. Pipistrelle 45 from west, foraged overhead and away to east.
04:23. Bat from roof near Surveyor 3 and east over Surveyor 7.

Surveyor 3.

03:31. Pipistrelle 45 from over Surveyor 7, foraged and then left to the north.
03:34. Pipistrelle 45 heard not seen.
03:52. Pipistrelle 45 from over Surveyor 7, foraged and went back again.
04:01. Pipistrelle 45 from over Surveyor 1, foraged overhead until 04:06.
04:06. Pipistrelle 45 from over Surveyor 7 tapped up to the roof, left side of dormer window of Building B, tapped up a second time and then entered roost under roof tile at 04:09.
04:14. Pipistrelle 45 foraging overhead.
04:16. Pipistrelle 45 out of roost and away over Surveyor 7. 2nd Pipistrelle 45 emerged and followed.
04:18. Pipistrelle 45 flew into roost under the eaves of Building B.
04:20. Pipistrelle 45 from Surveyor 7 and entered roost under the eaves of Building B. (Different location to previous bat).
04:23. Pipistrelle 45 flew out from between roof tiles and overhead.
04:26. Pipistrelle 45 flew across overhead, east to west.

Surveyor 4.

03:33. Pipistrelle 45 foraging over yard between buildings.
03:40. Pipistrelle from Surveyor 5, north to courtyard to forage.
03:54. Pipistrelle 45 foraging in courtyard over Surveyor 3.
04:03. Pipistrelle 45 circling and foraging.
04:04. Pipistrelle 45 foraging around south side of Building A.
04:16. Pipistrelle 45 foraging over courtyard, continued intermittently.
04:27. Pipistrelle 45 from over Surveyor 5, circled over Surveyor 3 and back again.

Surveyor 5.

03:39. Pipistrelle 45 passed from south and away to the northwest.
03:44. Pipistrelle 45 passed, heard not seen.

04:11. Pipistrelle 45 from the south, circled and away to the south.
04:27. Pipistrelle 45 from the east, foraged and then flew into the southeast of the Building C.

Surveyor 6.

03:57. Heard distant Pipistrelle 45, not seen.
03:58. Pipistrelle 45 foraging over the trees to the north of the buildings, on going until 04:03.
04:05. Pipistrelle 45 heard not seen.
04:12. Brief Pipistrelle 45 heard not seen.
04:21. Pipistrelle 45 flew over head towards Surveyor 7.

Surveyor 7.

03:30. Pipistrelle 45 seen to fly southeast over Building C towards Surveyor 5.
03:33. Pipistrelle 55 flew southeast over Building C towards Surveyor 5.
03:35. Pipistrelle 45 heard foraging over trees.
03:39. Pipistrelle 45 heard foraging off site.
03:55. Pipistrelle 45 flew southeast over Building C towards Surveyor 5.
03:55. Quiet bat heard not seen.
04:01. Pipistrelle 45 foraging over site to 04:03.
04:07. Pipistrelle 45 foraged overhead and towards Surveyor 6.
04:15. Pipistrelle 45 circling over Building B to the northwest.
04:17. Pipistrelle 45 circling over Building C to the south.
04:21. Pipistrelle 45 flew towards Surveyor 3.
04:23. Pipistrelle 45 circling Building C and towards Surveyor 3.

3.7.8. The following bat activity was recorded by the Anabat recorders.

Anabat 9, by Surveyor 1.

Twenty four Pipistrelle 45 calls were recorded between 03:37 and 04:22.No other species of bat was recorded.

Anabat 8 by Surveyor 2.

Eleven Pipistrelle 45 calls were recorded between 04:00 and 04:25. No other species of bat was recorded.

Anabat 6 by Surveyor 3.

Thirty Nine Pipistrelle 45 calls were recorded between 03:37 and 04:25. Ten myotis calls were recorded between 03:53 and 04:08.

Anabat 5 by Surveyor 4.

Nine Pipistrelle 45s were recorded between 03:38 and 04:25. No other species of bat was recorded.

Anabat 1 by Surveyor 5

Four Pipistrelle 45 calls were recorded at 03:38, 03:39 and two at 04:10, One Pipistrelle 55 call was recorded at 03:44.

Anabat 7 by Surveyor 6.

Three Pipistrelle 45 calls recorded at 03:32, 03:34 and 04:22. No other species of bat was recorded.

Anabat 2 by Surveyor 7.

Fifty four Pipistrelle 45 calls were recorded between 03:30 and 04:25. One myotis was recorded at 04:06.

Anabat 11 and Anabat12 inside the loft of Building C.

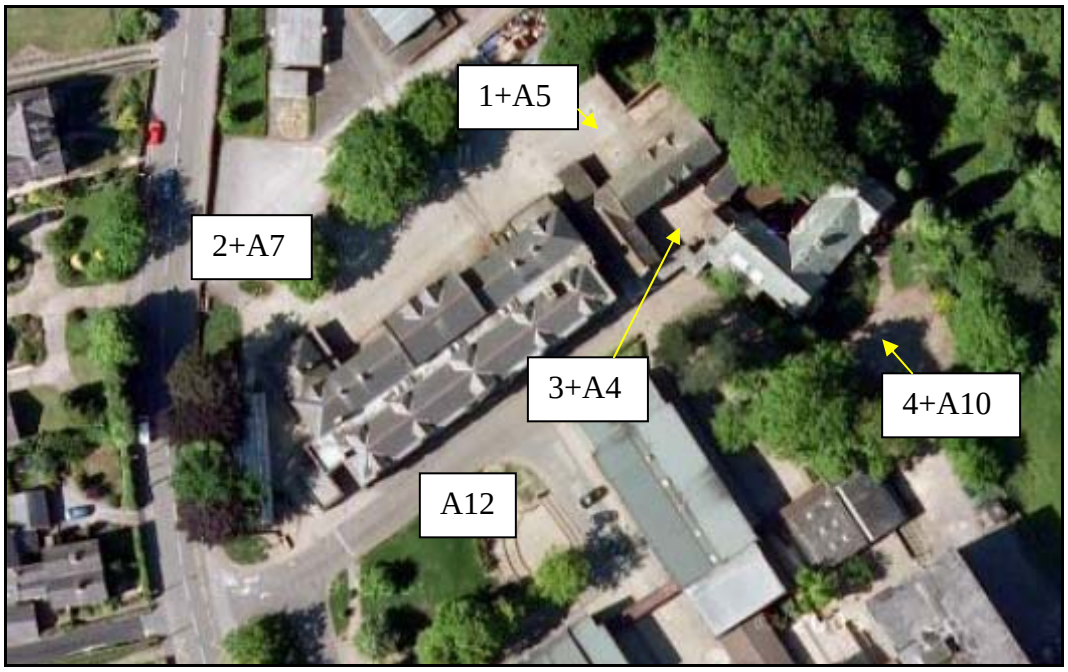
No bat activity was recorded on either Anabat.

3.7.9. No bat activity was recorded on the video cameras in the loft of Building C.

3.8. Second Dawn Survey Results.

3.8.1. Four surveyors carried out a dawn survey on the morning of 12th July 2013.

3.8.2. The surveyors were positioned around the buildings in order to be able to view the sides of the three main buildings where previous bat activity had been identified. The positions of the surveyors are shown on the aerial photograph below. Static Anabat recorders were distributed around the site to record bat activity for subsequent computer analysis are shown as "A" followed by the unit number.



3.8.3. All surveyors were equipped with a Batbox Duet detector and a two way radio for communication between surveyors.

3.8.4. Three of the surveyors hold current Natural England bat survey licences and the fourth surveyor was an experienced assistant.

3.8.5. The morning was warm, still and bright with a light breeze and a temperature of 10°C at 04:00.

3.8.6. The following are the observations of the surveyors.

Surveyor 1.

03:42. Pipistrelle 45 seen passing north to south over the buildings.
04:10. Two Pipistrelle 45s flew directly from the north, over the roof and away to the south.
04:26. Pipistrelle 45 from the north, into roost between hanging tiles on the side of the dormer.

Surveyor 2.

03:42. Pipistrelle 45 heard not seen passing over.
04:02. Pipistrelle 45 heard not seen passing over.
04:10. Two Pipistrelle 45s flew directly from the north, over the roof and away to the south.
04:14.Pipistrelle 45 flew along side of building to the southwest, returned and flew into a roost under hanging tiles at the south western side of the dormer window.
04:20. Pipistrelle 45 flew along the southwest side of the buildings and away over trees.
04:26. Pipistrelle 45 from the north, into roost between hanging tiles on the side of the dormer.
04:26. After twenty seconds, Pipistrelle 45 flew out of roost between hanging tiles and away to the north.

Surveyor 3.

03:37. Pipistrelle 45 passed over the site, southeast to northwest.
03:39. Pipistrelle 45 passed over site from south to north.
03:41. Pipistrelle 45 passed over site from south to north.
03:45. Pipistrelle 45 passed over site from south to north.
03:49. Pipistrelle 45 from the south, briefly foraged and left to the east.
04:00. Pipistrelle 45 from the south, briefly foraged and left to the east.
04:01. Two bats foraging in the courtyard.
04:02. Pipistrelle 45 into roost under roof tiles at south western end of roof.
04:04. Pipistrelle 45 foraging in the courtyard.
04:06. Pipistrelle 45 foraging over trees to the east.
04:10. Pipistrelle 45 foraging in courtyard.
04:16. Pipistrelle 45 from the south, briefly foraged and left to the east.

04:21. Pipistrelle 45 from the south, briefly foraged and left to the east.
04:22. Pipistrelle 45 foraging in courtyard.
04:23. Pipistrelle 45 flew from north to south over the courtyard.
04:25. Pipistrelle 45 from the south and foraged over the courtyard.
04:27. Pipistrelle 45 flew into roost under the roof tiles on north eastern dormer.
04:27. Pipistrelle 45 Pipistrelle 45 came from the south and foraged over the courtyard.
04:27. Pipistrelle 45 into roost behind gutter at south western end of roof.
04:30. Pipistrelle 45 foraging over courtyard.
04:34. Pipistrelle 45 into roost behind gutter at south western end of roof.

Surveyor 4.

03:33. Pipistrelle 45 heard foraging briefly but not seen.
03:37. Pipistrelle 45 heard quiet and brief but not seen.
03:40. Pipistrelle 45 heard briefly but not seen.
03:45. Pipistrelle 45 flew over the building east to west.
03:46. Pipistrelle 45 flew over the building west to east off site.
03:48. Pipistrelle 45 flew over the building east to west.
03:52. Pipistrelle 45 briefly heard but not seen.
03:57. Pipistrelle 45 briefly heard but not seen.
04:01. Pipistrelle 45 briefly heard but not seen.
04:02. Pipistrelle 45 round south side of the building and off the site to the east.
04:05. Pipistrelle 45 foraging overhead.
04:07. Two Pipistrelle 45s over building west to east.
04:12. Pipistrelle 45 round north end of building and off the site to the east.
04:15. Bat foraged briefly overhead then went west round southern side of building.
04:16. Pipistrelle 45 returned from southern side of building and off the site to the east.
04:19. Pipistrelle 45 round north of building and off the site to the east.
04:21. Pipistrelle 45 foraging overhead.
04:23. Pipistrelle 45 from the east and briefly round the southern side of the building then back and off the site to the east.
04:26. Pipistrelle 45 foraging at the southern side of the building.
04:31. Two Pipistrelle 45s across the building north to south.

3.8.7. The following bat activity was recorded on the Anabat recorders.

Anabat 4 – In the Courtyard with Surveyor 3.

This Anabat recorded a fairly high level of Pipistrelle 45 activity with sixty one calls between 03:30 and 04:33. Seven myotis calls were recorded at 03:30, 03:35, 03:58, two at 03:59 and two at 04:00.

Anabat 5 – North of Building A with Surveyor 1.

Failed to record.

Anabat 7 – North of Building A with Surveyor 2.

Only three Pipistrelle 45 calls were recorded at 04:07, 04:14 and 04:21.

Anabat 10 – South of Building 2 with Surveyor 4.

Twenty eight Pipistrelle 45 calls were recorded between 03:32 and 04:30.

Anabat 12 – South of Building A.

One Pipistrelle 45 call was recorded at 03:32.

3.9. Bat Survey Results Summary.

3.9.1. Building A.

3.9.1.1. During the initial day time inspection, low potential was identified for bats to roost in the roof of the building and old brown long eared bat droppings were identified in one of the lofts.

3.9.1.2. During the dusk and dawn surveys, no bat activity was identified in the loft. During the dusk survey Pipistrelle 45s were suspected to have emerged from the sides of the dormer windows on the north side of the building. During the first dawn survey two Pipistrelle 45s entered roosts at these locations and during the second dawn survey one entered a roost in the western of the two dormers.

3.9.1.3. The conclusion is that brown long eared bats no longer roost in the loft space but a small number of male Pipistrelle 45s roost in the hanging tiles on the sides of the two northern dormer windows.



3.9.2. Building B.

3.9.2.1. During the initial day time inspection, some potential was identified for bats to roost in the roof of the building and beneath the lead flashings.

3.9.2.2. During the dusk survey abundant Pipistrelle 45 activity was identified over the yards to the south of the building and Pipistrelles were thought to have emerged from the roof but there was some doubt. During both dawn surveys Pipistrelle 45s were seen to enter and leave roosts at a number of locations beneath the roof tiles and under the lead flashings.



3.9.2.3. The conclusion is that a small number of male Pipistrelle 45s roost under the roof tiles and lead flashing on the south side of the building. They entered at four places during the first dawn survey and four during the second dawn survey but not necessarily the same four places.

3.9.3. Building C.

3.9.3.1. During the initial day time inspection, brown long eared bat droppings were identified in the southeast corner of the loft space but no bat activity was identified on Anabat recorders and a video camera in the loft. New brown long eared bat droppings were identified during the second survey indicating that bats had used the roosts since the first survey but no bat activity was identified on two Anabat recorders and two video cameras during the first dawn survey.

3.9.3.2. During the first dusk emergence survey and the second dawn survey dawn surveys no bats entered or emerged from the outside of the building but during the first dawn survey one Pipistrelle 45 entered a roost under the eaves of the southern side of the building.

3.9.3.3. The conclusion is that brown long eared bats occasionally roost in the loft space and male Pipistrelle 45s occasionally roost under the eaves of the southern side of the building.



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4. EVALUATION OF FINDINGS.

4.1. There are no designated sites or local nature reserves close to the site that would be affected by the proposed development site and therefore the development will have no impact on such sites.

4.2. There are two ponds within the site and ponds are a habitat included within the Barnsley Biodiversity Action Plan. The proposed development of the site would therefore result in the loss of the two ponds. This is considered to be a very low impact because the two ponds are poor examples. Pond A is little more than a plastic lined area of water containing abundant rubbish and stale water. Pond B is a small ornamental pond that has been neglected and is becoming overgrown. No amphibians were found in either pond during the four pond surveys.

4.3. There are no other BAP habitats present on the site and therefore the development of the site will have no impact on other BAP habitats.

4.4. No badger setts or badger field signs were identified on the site and therefore the proposed development will have no impact on badgers.

4.5. There are no watercourses on the site that would provide potential habitat for water vole, otter or white clawed crayfish and therefore the proposed development will have no impact on those species.

4.6. The HSI assessments of the four ponds within 500m of the ponds indicated that all have a poor or below average potential for amphibians. Two of these are fishing ponds outside the site boundary and were therefore not given any further consideration. As a precautionary measure, four pond surveys were carried out on the ponds within the site boundary and these identified no amphibian activity. Therefore the proposed development will have no impact on amphibians.

4.7. Three bat surveys were carried out on the site. The first was a visual inspection survey followed by a dusk emergence survey, the second and third surveys were a visual inspection survey followed by a dawn survey.

4.8. The survey results show that Buildings A, B and C all contain small Pipistrelle 45 roosts with a maximum of two roosting in Building A, four in Building B and one in

Building C. There is also an occasionally used brown long eared roost in the loft of Building C.

4.9. It is understood that Building A will be entirely demolished, Building B will be re-roofed and the roof over the loft in Building C will be retained but works are planned to provide additional insulation and ventilation while that section of Building C where the rooms extend into the loft space will be stripped out and refurbished. Therefore works to each of these buildings has the potential to have a significant impact on roosting bats.

4.10. No bat roosting potential was identified in the trees that will be affected by the proposed development and therefore clearing these trees will have no impact on roosting bats.

4.11. One alien, invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 was identified on the site and that was rhododendron. This was growing in an area of woodland that is planned to be developed and therefore there is a low level of potential to spread this plant.

4.12. The site is assessed to be unsuitable for reptiles and therefore the proposed development will have no impact on reptiles.

4.13. There are abundant opportunities for nesting birds in the vegetation and the buildings on the site and a blackbird was seen entering into the northern side of Building B during the dusk emergence survey. Clearance of vegetation and works to the buildings during the nesting bird season, which extends from March to September, will have a significant impact on any birds nesting.

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5. RECOMMENDATIONS.

5.1. Two ponds, albeit poor examples, will be lost as a result of the development and these are Barnsley BAP habitats. It is therefore recommended that at least one pond is incorporated into the landscaping on the site to compensate for the loss.

5.2. Roosting bats have been identified in Buildings A, B and C on the site. Therefore the Local Authority will require a mitigation strategy outlining how the bats will be dealt with during and after the development and subsequently a Natural England bat licence will be required before works can commence on those three buildings. The mitigation strategy in Section 6 of this report fulfills the first requirement and will be used as a basis for the Natural England licence application.

5.3. It is recommended that all necessary vegetation clearance is undertaken outside the nesting bird season.

5.4. It is recommended that any vegetation clearance undertaken within the nesting bird season is immediately preceded by a nesting bird survey carried out by a suitable experienced person and that any active nests are left undisturbed until the young have fledged.

5.5. It is also recommended that all development works to the buildings during the nesting season is preceded by a nesting bird survey to determine whether there are birds nesting within the buildings. Any active nests found must be left undisturbed until the young have fledged.

5.6. It is recommended that additional nesting opportunities are provided on site by erecting nest boxes on the remaining mature trees on the site to provide nesting opportunities for a variety of bird species.

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6. MITIGATION STRATEGY.

6.1. Bats

The following mitigation strategy is written in the format of the Natural England licence application. Section D covers the impact assessment section of Document 1 and the remainder is Document 2, the delivery information.

D. Impact assessment in absence of mitigation.

D1. Short-term impacts: disturbance.

There will be a significant short term impact on the brown long eared bat roost as a result of the noise and vibration caused during the works.

D2. Long-term impacts: roost modification.

D2.1. The existing brown long eared bat roost will be subject to modification during the works but this will mainly comprise works to the ceilings and insulation of the loft space.

D2.2. The Pipistrelle 45 roosts in Buildings B and C will be modified during roof repairs and without mitigation the roosts would be lost. This would be a minor impact as they are small male summer roosts.

D3. Long-term impacts: roost loss.

The Pipistrelle 45 roosts within Building A will be lost when the building is demolished. This would be a minor impact as the roosts are small male summer roosts.

D4. Long-term impacts: fragmentation and isolation.

There will be no fragmentation or isolation impacts. Good continuity of habitat will remain between the site and the adjacent woodlands.

D5. Post-development interference impacts.

There will be minimal post development interference impacts. There will be new houses on the site but this will not be any greater impact than when the site was a large grammar school.

D6. Predicted scale of impact.

D6.1. The scale of negative impact will be low but significant without mitigation as it will potentially destroy the small summer brown long eared bat roost in the Building C and result in the loss of the small male summer Pipistrelle 45 roosts in Buildings A, B and C.

A. Mitigation and compensation.

A1. Summary of mitigation strategy.

A1.1. The mitigation strategy is based on undertaking the majority of the works to the existing buildings during the winter when there will be no bats within the buildings as they will have moved to their hibernation roosts during the winter.

A1.2. As a precautionary measure, a bat box suitable for winter hibernation will be provided on site before those works commence as a location in which bats found can be released if necessary.

A1.3. The existing brown long eared at roost in Building C will be retained.

A1.4. The existing Pipistrelle 45 roost in Building C will be retained.

A1.5. The existing Pipistrelle 45 roosts in Buildings B will be modified.

A1.6. The existing Pipistrelle 45 roosts in Building A will be replaced by additional bat bricks in the new buildings.

B. Works to be undertaken by the ecologist.

B1. Capture and exclusion.

B1.1. Prior to works commencing on Buildings A, B and C, the ecologist will ensure that a Shwegler 1FW Bat Hibernation Box is erected on a suitable tree close to Buildings B and C.

B1.2. The ecologist will inspect each roost location before works commence in that specific area and where works are to be undertaken to roof areas close to the identified roosts, the ecologist will be present to rescue any bats found and move them to the Schwegler 1F bat box. Once satisfied, the ecologist will release each building for works to continue.

B1.3. The ecologist will brief all roofing and demolition contractors to ensure they are familiar with their responsibilities.

B1.4. The ecologist will inspect all retained, modified and replacement roosts as they are completed.

C. Works to be undertaken by the Developer/Landowner.

C1. Bat roosts.

C1.1. In situ retention of roost(s).

C1.1.1. The existing brown long eared bat roost in the loft of Building C will be retained.

C1.1.2. All works that will affect the loft space will be undertaken with care during the winter months between October and April when bats would be expected to be elsewhere in their hibernation roost.

C1.1.3. The roost will be enhanced by adding six new bat roosting opportunities on the existing rafters. The additional roosting locations will be provided by fixing false rafters approximately 600mm long to the side of the rafters with 15mm spacers forming a narrow slot butted up to the ridge board at the top end and with the upper half bridged over with 75mm x 15mm untreated sawn timbers, or equivalent, to form a long narrow cavity.



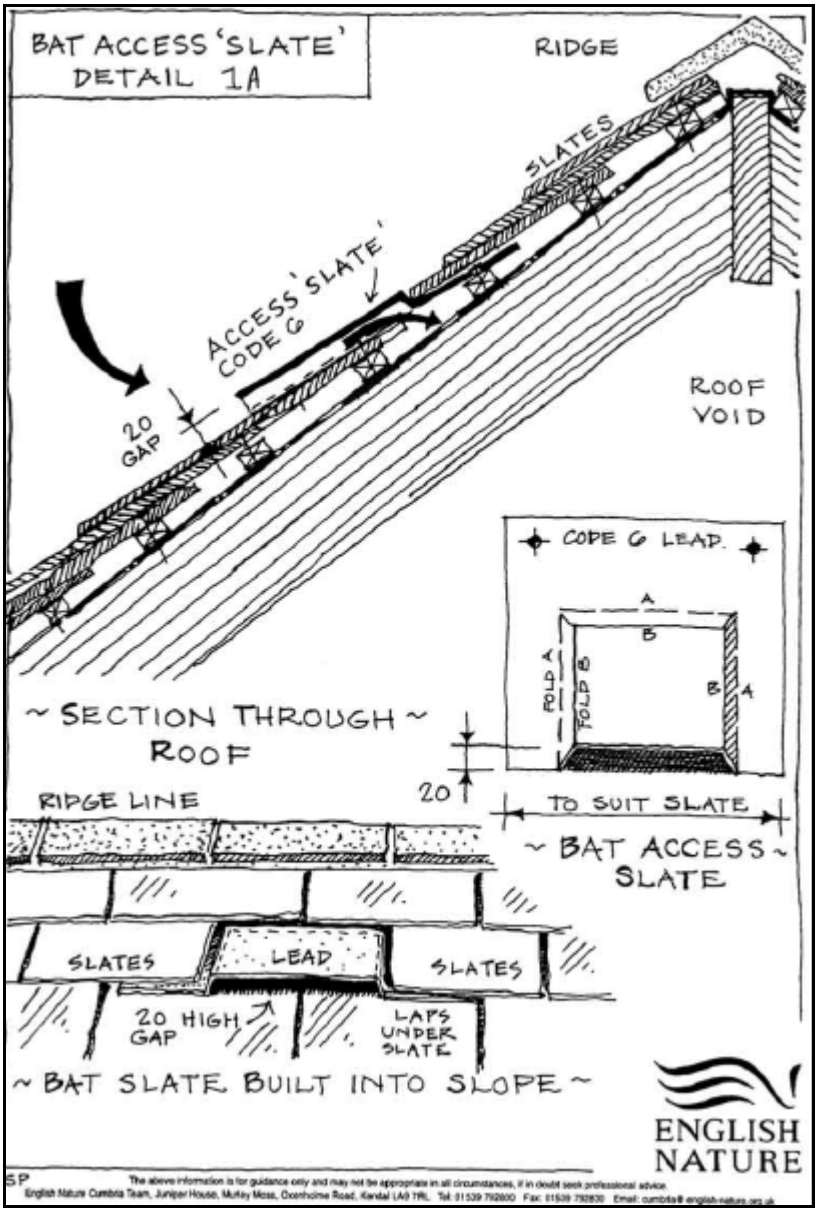
C1.1.4. Internal partitioning of the loft apex will be provided with triangular shaped pieces of 50mm insulation board (rough faced) or equivalent fastened to the rafters and hanging down 600mm below the ridge. These will be provided at three locations in the roost to maintain heat in the ridge.

C1.1.5. The existing Pipistrelle 45 roost in Building C will be retained. Once scaffolding has been erected around the building the existing roost location will be inspected by the ecologist and the builder and ecologist will agree an appropriate course of action to ensure the roost is retained.

C1.2. Modification of existing roosts.

C1.2.1. The Pipistrelle 45 roosts will be retained in Building B but will be modified. During the re-roofing operations replacement roosting opportunities will be provided in the south side of the roof. Four bat access slates will be incorporated into the roof.

C1.2.2. Each access slate will be constructed generally in accordance with the sketch shown below to enable bats to enter and roost between the roof tiles and the felt lining.



C1.2.3. In addition, when the ridge tiles are replaced, two additional bat access points will be provided beneath the ridge tiles as shown in the photograph below. This can be achieved by laying one ridge tile on top of the adjacent ridge tiles and leaving a 25mm square opening in the pointing on the south side of the ridge.

C1.2.4. When the adjacent ridge tiles are laid it is important to ensure the space under the ridge tiles remains unfilled by mortar forming a small tunnel in which the bats can roost. The ridge tiles will be laid on a run of mortar along either side leaving a small open cavity under the middle of the ridge tiles. The ridge ends will be well pointed to avoid through draughts.



C1.2.5.

C1.3. New roost creation.

C1.3.1. Four new bat bricks will be constructed in the new houses to be built on the site. Because the buildings will have stone walls, in each case a bat tube as shown below will be built into the wall and stone faced leaving only a narrow access into the box.



BAT TUBE 1FR

The Bat Tube 1FR requires no maintenance or cleaning, the sloping entrance area allows droppings to simply fall out of the chamber. The 1FR mimics the cavities that species such as the pipistrelles favour and the wooden back panel helps maintain the optimum climatic conditions and also provides surface on which the bats can cling. The depth of this box (125mm) makes it ideal for use in 9" solid walls or where the outer skin of a property is of stone. The box can also be recessed into the wall and rendered over, just leaving the access section clear.

Size: 470x200x125mm

Weight: 9.5kg

C1.3.2. The positions of the additional roosting opportunities will be as shown below. Each position has been based upon the optimum position for the bats, close to their foraging territory while taking account of house designs and placing them where they will not be above doors or windows.



D. Post-development site safeguard.

D1.2. Population monitoring, roost usage etc.

One visual inspection of the brown long eared roost and one bat activity survey will be undertaken in the first year after work has been completed to assess the success of the mitigation measures.

D1.3. Mechanism for ensuring delivery of post-development works.

There will be a clause in the deeds of each of the houses containing a bat roost stating that the roosts must be retained.

E. Land Ownership.

The site will be in the ownership of Bellway Homes once planning consent has been granted.

E1. Mitigation Site Ownership.

E.1.1 I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts onto land outside the applicant's ownership –N/A

E.1.2 I confirm that landownership consent/s has/have been granted to allow the creation of the proposed habitat compensation on land outside the applicant's ownership – N/A

E.1.3 I confirm that consent/s has/have been granted by the relevant landowner/s for monitoring and maintenance purposes on land outside the applicant's ownership – N/A

F. Timetable of Works.

The following timescales are indicative at this time.

A: Development activities and timing		
Activity	**Timing**	**Notes**
Planning consent and Natural England licence.	By October 2013.	
Erect Schwegler 1F bat box.	By October 2013.	
Works to Buildings A, B and C that will affect the roosts.	October 2013 to April 2014.	On receipt of licence.
New roosts in new buildings.	2014.	

Complete **Table B** to show the years in which post development monitoring will take place. Details should include the type of survey e.g. emergence survey, bat box checks, and the time of year this will take place.

B: Post development monitoring						
Year	2014					
Details	Day time visual and dusk emergence survey. May to August.					

6.2. Pond Mitigation.

6.2.1. Because ponds are a Barnsley BAP habitat and because two small and rather poor examples of ponds will be lost during the development, a replacement pond will be provided in the area of public open space at the southern end of the site, as shown on the plan below.

6.2.2. The pond will be approximately 6m long and 3m wide. It will be lined and planted with natural species that will create a wildlife pond. No fish will be introduced.



6.3. Birds.

Six additional bird boxes will be erected on the remaining trees on the site. Various boxes will be utilised to provide nesting opportunities for a variety of bird species.

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Prepared by:	
Derek Whitcher. BSc, MCIEEM, MCMI.	Date: 23rd July 2013.

Checked by:	
Steven Whitcher, MCIEEM.	Date: 24th July 2013.

Appendix I. BAT INFORMATION.

It is necessary to understand a little about bats, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

Over 15 species of bat have been recorded in Britain. These fall into two families, the horseshoe bats and the 'ordinary bats'. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to shortage of food, caused by pesticides, as insects are their sole diet, and habitat change.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to man made structures and will readily use these to roost and to rear their young.

Bats are protected under the Wildlife and Countryside Act 1981, The Habitats Regulations 1994 and the Countryside & Rights of Way Act 2000.

It is an offence to intentionally or recklessly kill, injure or capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

A breeding or resting site of any bat is known as a bat roost. A bat roost is therefore any structure a bat uses for shelter or protection. Because bats tend to use the same roosts each year, legal opinion is that the roost site is protected whether or not the bats are present at that time.

Bat roosts can be identified by looking for:-

- Suitable holes, cracks and crevices.
- Bat droppings.
- Prey remains.
- By carrying out night observations using a bat detector.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

The person applying for that licence has to be suitably qualified and experienced in bat matters. That person is then responsible for ensuring that the measures contained in the licence are carried out.

Appendix II. NESTING BIRD INFORMATION.

It is necessary to understand a little about the legal protection offered to nesting birds in order to evaluate the findings of this report.

Part 1.-(1) Of the Wildlife and Countryside Act 1981states that:-

If any person intentionally:-

(a) kills, injures or takes any wild bird;
(b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
(c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.

Part 1.-(5) of the Act states that:-

If any person intentionally:-

(a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on, or near a nest containing eggs or young; or
(b) disturbs dependant young of such a bird,

he shall be guilty of an offence and liable to a special penalty.

The Countryside and Rights of Way Act 2000 amends the above by inserting after “intentionally” the words “or recklessly”.

The nesting season will vary according to the weather each year but generally commences in March, peaks during May and June and continues until September.

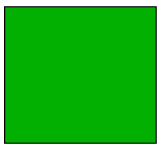
It is also worth remembering that some birds nest in trees, scrub and buildings but others are ground nesting.

The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

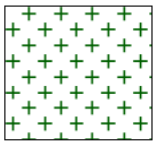
Appendix III. ANNOTATED MAP OF THE SURVEY AREA.



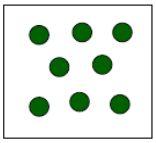
Key.



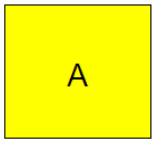
Broad Leaved Woodland



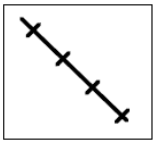
Scattered Scrub



Parkland Trees



Amenity Grassland



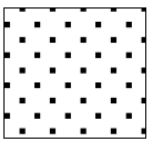
Fence



Wall



Building



Bare Ground

Appendix IV. DATA SEARCH RESULTS.

Bat Conservation Trust
Partner Group

Sue Whitcher
Whitcher Wildlife Ltd,
Cliff Edge,
Cliff Road,
Darfield,
Barnsley,
S73 9HR

11th May 2013

Project: SE242041 Penistone Grammar: Ref. 130473

Dear Sue

Further to your request, all grid squares around 1 km of SE242041 were searched in the South Yorkshire Bat Group Database. The records found from the search can be seen on the following page.

Our charge for performing this data search is £30.00 and an invoice will be sent in due course.

To ensure that our database is as comprehensive as possible and therefore of greatest benefit to users in the future, we would appreciate a copy of any bat records made during your project.

Please note the South Yorkshire Bat Group data-set contains information gathered as part of the National Bat Monitoring Programme via the Bat Conservation Trust. Please see the enclosed notes or interpreting the metadata from NBMP surveys.

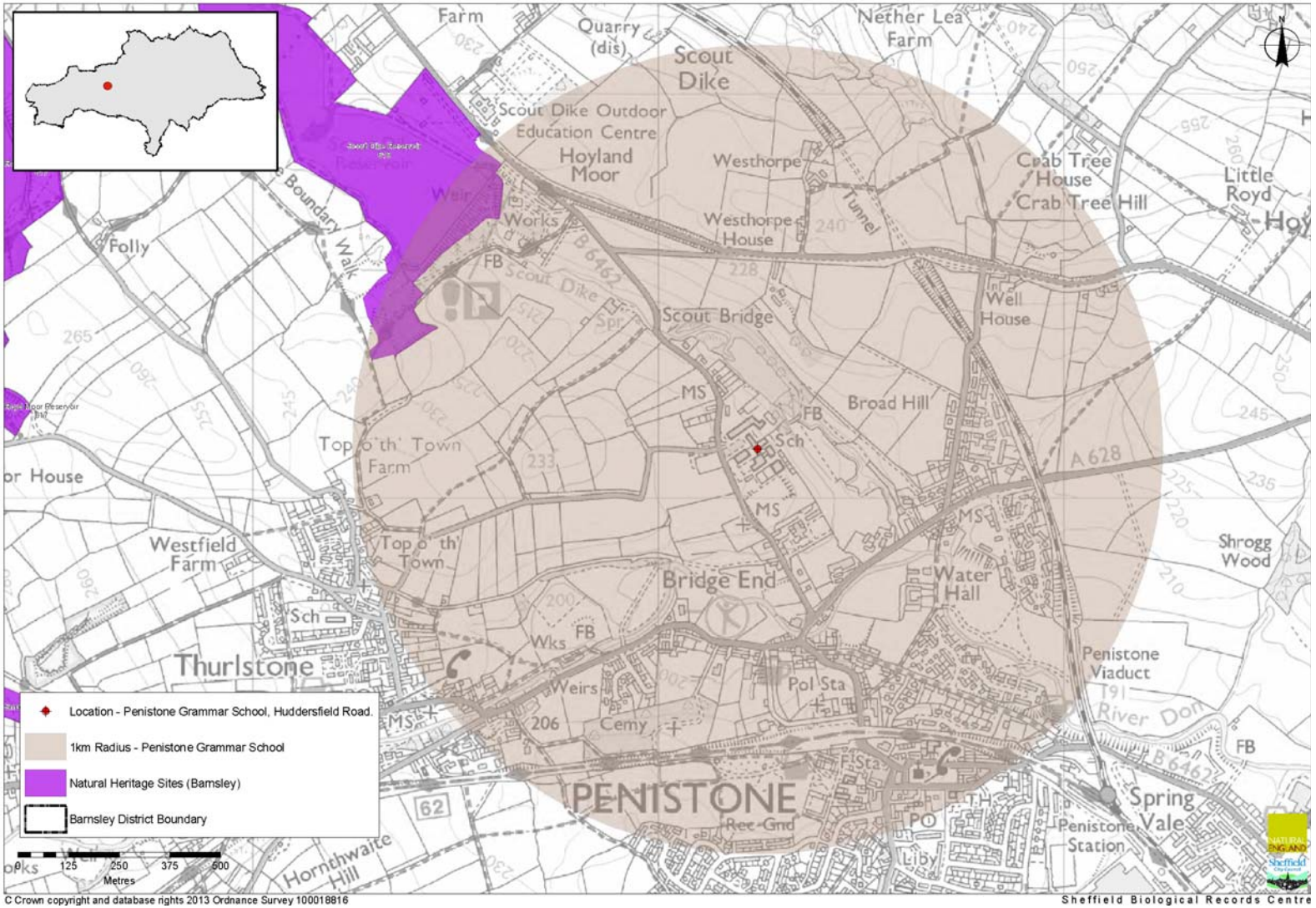
Please do not hesitate to contact us if you require any further information.

South Yorkshire Bat Group

Grid square	Date	Location	Recorder	Survey type	Species	Roost/type	Notes
SE2304	2011	Penistone (no more detail)	C. Blanco	Field Transect	Common pipistrelle		
SE2304	2011	Penistone (no more detail)	C. Blanco	Field Transect	Noctule		
SE2303	2011	Penistone (no more detail)	C. Blanco	Sun set survey	Possibly pipistrelle		
SE246036	2005	Keats Grove, Penistone	English Nature	Call out		Roost	Bat got into house – successfully released
SE247036	2005	Shelley Close, Penistone	English Nature	Call out		Roost	25 counted emerging from porch
SE248059	2003	Cat Hill Foot farm, Gunthwaite	English Nature	Call out		Roost	
SE242041	2008	Penistone Grammar	Natural England	Call out	Pipistrelle		Bat in school at Easter. Successfully released.
SE248035	2008	Tennyson Close, Penistone	Natural England	Call out	Pipistrelle	Roost	A lot of bats reported in the area.

Statutory and Non-statutory Nature Conservation Sites - Penistone Grammar School, Huddersfield Road.

Date - 18 Jul 2013



C Crown copyright and database rights 2013 Ordnance Survey 100018816

Sheffield Biological Records Centre

Grid Ref	Location	Date	Group	Common Name	Comments	BAP Species	W & C A	Red and Amber birds	
SE2304	Scout Dike Reservoir	17/04/2009	bird	Common Scoter	Between: 09:00-11:19.	1	1	1	
SE2403	River Don, Water Hall Bridge,	01/03/1998	bird	Kingfisher		0	1	1	
SE2403	River Don, Water Hall Bridge, Penistone	21/07/1999	bird	Kingfisher	several sightings - not seen previously this year as had moved further up	0	1	1	
SE2403	River Don, Water Hall Bridge,	01/11/1999	bird	Kingfisher		0	1	1	
SE2403	River Don, Water Hall Bridge,	01/12/1999	bird	Kingfisher		0	1	1	
SE2304	Scout Dike Reservoir	17/04/2009	bird	Greylag Goose	Between: 09:00-11:19.	0	1	1	
SE2304	Scout Dyke Reservoir LWS	01/06/2011	bird	Quail	1 Count	0	1	1	
SE249039	Penistone	28/06/2001	terrestrial	Bats	exit count	0	1	0	
SE233038	'BARNSLEY MBC'	01/08/1998	terrestrial	Pipistrelle	1	0	1	0	
SE2404		16/04/2008	terrestrial mammal	Pipistrelle		0	1	0	
SE2403		31/07/2008	mammal	Pipistrelle	roost	0	1	0	
SE2403	Water Hall Lane, Penistone	01/03/1998	bird	Yellowhammer		1	0	1	
SE2304	Scout Dike Reservoir	01/03/1998	bird	Yellowhammer		1	0	1	

	garden Watersmeet, Water Hall							
SE2403	Lane, Penistone	01/05/1998	bird	Yellowhammer	several dates	1	0	1
SE2304	Scout Dike Reservoir	01/03/1999	bird	Yellowhammer		1	0	1
	fields in vicinity of Scout Dike							
SE2304	Reservoir and village	08/05/1999	bird	Yellowhammer		1	0	1
SE2304	Scout Dike Reservoir	01/03/2000	bird	Yellowhammer		1	0	1
SE2304	Scout Dike Reservoir	01/03/2001	bird	Yellowhammer		1	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Yellowhammer	Between: 09:00-11:19.	1	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Yellowhammer	Breeding confirmed	1	0	1
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Yellowhammer		1	0	1
SE237033	Thurlstone	05/03/2013	bird	Yellowhammer	Singing tree next to trail.	1	0	1
SE2304	Scout Dike Reservoir	01/03/1998	bird	Reed Bunting		1	0	1
SE2304	Scout Dike Reservoir	01/03/1999	bird	Reed Bunting		1	0	1
SE2304	Scout Dike Reservoir	01/03/2000	bird	Reed Bunting		1	0	1
SE2304	Scout Dike Reservoir	01/03/2001	bird	Reed Bunting		1	0	1
SE2304	Scout Dike Reservoir	01/03/2002	bird	Reed Bunting		1	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Reed Bunting		1	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Reed Bunting	Between: 09:00-11:19.	1	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Grasshopper	Between: 09:00-11:19.	1	0	1
	garden Watersmeet, Water Hall			Spotted				
SE2403	Lane, Penistone	07/05/1999	bird	Flycatcher		1	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Curlew		1	0	1
	garden Watersmeet, Water Hall							
SE247037	Lane, Penistone	01/06/1999	bird	House Sparrow	"back again after weeks"	1	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	House Sparrow	Breeding confirmed	1	0	1
SE242040	Penistone Grammar School	21/09/2012	bird	House Sparrow		1	0	1
SE232039	Thurlstone	05/03/2013	bird	House Sparrow	At least 10 around former farm buildings and adjoining properties.	1	0	1
SE2304	Scout Dike Reservoir	01/03/1998	bird	Tree Sparrow		1	0	1

SE2304	Scout Dike Reservoir	01/03/1999	bird	Tree Sparrow		1	0	1
SE2304	Scout Dike Reservoir	01/03/2000	bird	Tree Sparrow		1	0	1
SE2304	Scout Dike Reservoir	01/03/2002	bird	Tree Sparrow		1	0	1
SE2304	Scout Dike Reservoir	01/03/1999	bird	Grey Partridge		1	0	1
SE2304	Scout Dike Reservoir	01/03/1999	bird	Grey Partridge		1	0	1
SE2304	Scout Dike Reservoir	01/03/2000	bird	Grey Partridge		1	0	1
SE2304	Scout Dike Reservoir	01/03/2001	bird	Grey Partridge		1	0	1
SE2304	Scout Dike Reservoir	01/03/2002	bird	Grey Partridge		1	0	1
SE2304	Scout Dike Reservoir	01/03/1998	bird	Lapwing		1	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Lapwing		1	0	1
SE2304	Scout Dyke Reservoir LWS	22/06/2008	bird	Lapwing	pair with 2+ chicks	1	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Lapwing	Between: 09:00-11:19.	1	0	1
SE2304	Scout Dyke Reservoir LWS	14/06/2012	bony fish	Sea Trout		1	0	0
SE2403	River Don Penistone area	22/09/2012	bony fish	Sea Trout		1	0	0
SE2304	Scout Dike Reservoir	01/03/1998	bird	Skylark		0	0	1
SE2304	Scout Dike Reservoir	01/03/1999	bird	Skylark		0	0	1
SE2304	Scout Dike Reservoir	01/03/2001	bird	Skylark		0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Skylark		0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Skylark	Breeding probable	0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Meadow Pipit		0	0	1
SE2304	Scout Dike Reservoir	01/03/1999	bird	Linnet		0	0	1
SE2304	Scout Dike Reservoir	01/03/2000	bird	Linnet		0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Linnet		0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Linnet	Between: 09:00-11:19.	0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Linnet	Breeding confirmed	0	0	1
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Linnet		0	0	1
SE2403	garden Watersmeet, Water Hall Lane, Penistone	30/04/1998	bird	Goldfinch		0	0	1

SE2304	Scout Dike Reservoir	21/04/2007	bird	Goldfinch		0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Goldfinch	Breeding confirmed	0	0	1
SE242040	Penistone Grammar School	21/09/2012	bird	Goldfinch		0	0	1
SE247033	Penistone	19/04/2013	bird	European Goldfinch		0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Stock Dove		0	0	1
SE243048	'BARNSLEY MBC'	01/01/2011	bird	Stock Dove	2 eggs in SITA nest box	0	0	1
SE243049	Ingbirchworth	19/05/2011	bird	Stock Dove	2 eggs in box	0	0	1
SE243049	'BARNSLEY MBC'	19/05/2011	bird	Stock Dove	1 pair proven	0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	House Martin	Between: 09:00-11:19.	0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	House Martin	Breeding possible	0	0	1
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/01/1998	bird	Kestrel	several sightings	0	0	1
SE2403	Water Hall Lane, Penistone	01/11/1999	bird	Kestrel	hovering	0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Kestrel		0	0	1
SE246049	'BARNSLEY MBC'	01/01/2011	bird	Kestrel	5 young in SITA nest box	0	0	1
SE246049	Ingbirchworth	19/05/2011	bird	Kestrel	5 eggs in box	0	0	1
SE246049	'BARNSLEY MBC'	19/05/2011	bird	Kestrel	1 pair proven	0	0	1
SE248045	Penistone	27/01/2012	bird	Kestrel		0	0	1
SE248045	Penistone	11/02/2012	bird	Kestrel		0	0	1
SE2304	Scout Dyke Reservoir LWS	22/06/2008	bird	Snipe	in suitable breeding	0	0	1
SE2403	Penistone Town	25/04/1998	bird	Swallow	returned to last years nest in barn	0	0	1
SE240037	Wellhouse Lane, Penistone	01/08/1999	bird	Swallow	nests in stable, broods successful	0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Swallow		0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Swallow	Between: 09:00-11:19.	0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Swallow	Breeding probable	0	0	1

SE2304	Scout Dike Reservoir	03/05/2009	bird	Swallow	Between: 15:40-16:40.	0	0	1
SE235046	Scout Dyke Reservoir LWS	21/09/2012	bird	Lesser Black-		0	0	1
SE247037	River Don, Water Hall Bridge,	01/06/1999	bird	Grey Wagtail		0	0	1
SE2403	River Don, Water Hall Bridge,	17/07/1999	bird	Grey Wagtail		0	0	1
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Grey Wagtail		0	0	1
SE2304	Scout Dike Reservoir	01/03/1998	bird	Yellow Wagtail		0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Willow Tit	Between: 09:00-11:19.	0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Cormorant		0	0	1
SE2403	Water Hall Lane, Penistone	27/04/1998	bird	Willow Warbler		0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Willow Warbler		0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Willow Warbler	Between: 09:00-11:19.	0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Willow Warbler	Breeding confirmed	0	0	1
SE2403	Water Hall Lane, Penistone garden Watersmeet, Water Hall	01/03/1998	bird	Green Green	often	0	0	1
SE247037	Lane, Penistone	24/06/1999	bird	Woodpecker		0	0	1
SE2403	Water Hall Lane, Penistone garden Watersmeet, Water Hall	01/07/1999	bird	Green Green	frequently recorded	0	0	1
SE2403	Lane, Penistone	01/11/1999	bird	Woodpecker	occasionally	0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Dunnock		0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Dunnock	Between: 09:00-11:19.	0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Dunnock	Breeding probable	0	0	1
SE247033	Penistone	19/04/2013	bird	Hedge Accentor	Singing.	0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Bullfinch	Between: 09:00-11:19.	0	0	1
SE248038	Water Hall Park, Penistone garden Watersmeet, Water Hall	01/10/1998	bird	Goldcrest	on bird table	0	0	1
SE2403	Lane, Penistone garden Watersmeet, Water Hall	01/12/1998	bird	Goldcrest	occasional visitor	0	0	1
SE2403	Lane, Penistone	01/12/1999	bird	Goldcrest		0	0	1

SE2304	Scout Dike Reservoir	21/04/2007	bird	Starling		0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Starling	Breeding confirmed	0	0	1
SE247042	Penistone	23/02/2012	bird	Starling		0	0	1
SE247043	Penistone	23/03/2012	bird	Starling	starling 9 No. on tel. wire	0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Blackbird		0	0	1
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Blackbird	Breeding confirmed	0	0	1
SE242040	Penistone Grammar School	21/09/2012	bird	Blackbird Common		0	0	1
SE247033	Penistone	19/04/2013	bird	Blackbird	Singing.	0	0	1
SE2403	garden Watersmeet, Water Hall Lane, Penistone	28/04/1998	bird	Song Thrush	feeding one young	0	0	1
SE2403	garden Watersmeet, Water Hall Lane, Penistone	30/04/1998	bird	Song Thrush		0	0	1
SE2403	garden Watersmeet, Water Hall Lane, Penistone	03/05/1998	bird	Song Thrush		0	0	1
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/05/1999	bird	Song Thrush	This occurrence was originally an associated species in Recorder 3.	0	0	1
SE247037	garden Watersmeet, Water Hall Lane, Penistone	01/06/1999	bird	Song Thrush		0	0	1
SE2403	garden Watersmeet, Water Hall Lane, Penistone	06/07/1999	bird	Song Thrush	on garage roof at 21.00h	0	0	1
SE2304	Scout Dike Reservoir	21/04/2007	bird	Song Thrush		0	0	1
SE246034	Penistone	05/03/2013	bird	Song Thrush		0	0	1
SE247034	Penistone	05/03/2013	bird	Song Thrush	Singing.	0	0	1
SE247033	Penistone	19/04/2013	bird	Song Thrush	Singing.	0	0	1
SE2403	Water Hall Lane, Penistone	06/04/1998	bird	Mistle Thrush		0	0	1

	garden Watersmeet, Water Hall							
SE2403	Lane, Penistone	01/01/2000	bird	Mistle Thrush		0	0	1
SE2304	Scout Dike Reservoir	17/04/2009	bird	Mistle Thrush	Between: 09:00-11:19.	0	0	1
	garden Watersmeet, Water Hall							
SE2403	Lane, Penistone	31/01/1998	bird	Sparrowhawk		0	0	0
	garden Watersmeet, Water Hall				several dates attacked			
SE2403	Lane, Penistone	01/05/1998	bird	Sparrowhawk	Bantam	0	0	0
	garden Watersmeet, Water Hall							
SE2403	Lane, Penistone	01/02/1999	bird	Sparrowhawk	occasionally	0	0	0
SE235033	Thurlstone	13/02/2012	bird	Sparrowhawk		0	0	0
SE248045	Penistone	02/03/2012	bird	Sparrowhawk		0	0	0
					sparrowhawk over			
SE241037	Penistone	24/03/2012	bird	Sparrowhawk	leisure centre	0	0	0
	garden Watersmeet, Water Hall							
SE2403	Lane, Penistone	01/05/1998	bird	Long-Tailed Tit	several dates	0	0	0
	garden Watersmeet, Water Hall							
SE2403	Lane, Penistone	01/02/1999	bird	Long-Tailed Tit	on nuts	0	0	0
	garden Watersmeet, Water Hall							
SE2403	Lane, Penistone	01/11/1999	bird	Long-Tailed Tit	occasionally on nuts	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Long-tailed Tit		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Long-Tailed Tit	Between: 09:00-11:19.	0	0	0
SE2403	River Don, Water Hall Bridge,	25/05/1999	bird	Mallard		0	0	0
SE2304	Scout Dike Reservoir	13/01/2007	bird	Mallard		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Mallard		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Mallard	Between: 09:00-11:19.	0	0	0
SE2304	Scout Dike Reservoir	28/11/2009	bird	Mallard	Between: 15:20-15:50.	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Mallard		0	0	0
SE2403	River Don, Water Hall Bridge,	01/05/1998	bird	Grey Heron	several dates	0	0	0
SE247037	River Don, Water Hall Bridge,	01/06/1999	bird	Grey Heron	occasionally	0	0	0
SE2403	River Don, Water Hall Bridge,	21/07/1999	bird	Grey Heron		0	0	0

SE2403	Penistone Town	01/08/1999	bird	Grey Heron	bird skimmed over rooftops near church, landing on high chimney pot - stood on one leg for	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Grey Heron		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Grey Heron	Between: 09:00-11:19.	0	0	0
SE235046	Scout Dyke Reservoir LWS	21/09/2012	bird	Grey Heron		0	0	0
SE2304	Scout Dike Reservoir	13/01/2007	bird	Tufted Duck		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Tufted Duck		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Tufted Duck	Between: 09:00-11:19.	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/02/1999	bird	Canada Goose	regularly commute am & pm between Castle Dam & Scout Dike Reservoir	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Canada Goose		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Canada Goose	Between: 09:00-11:19.	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Canada Goose		0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Greenfinch	Breeding confirmed	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/01/1998	bird	Siskin		0	0	0
SE248038	garden Watersmeet, Water Hall Lane, Penistone	01/10/1998	bird	Siskin	on nuts	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/02/1999	bird	Siskin	on nuts	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/01/2000	bird	Siskin	on nuts	0	0	0
SE236033	Thurlstone	05/03/2013	bird	Siskin	Approx 35 in sycamores next to trail.	0	0	0
SE2403	Water Hall Lane, Penistone	01/03/1998	bird	Treecreeper		0	0	0

SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/02/1999	bird	Treecreeper		0	0	0
SE246037	Water Hall Lane, Penistone	28/03/1999	bird	Treecreeper		0	0	0
SE247037	garden Watersmeet, Water Hall Lane, Penistone	01/06/1999	bird	Treecreeper		0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/01/2000	bird	Treecreeper		0	0	0
SE2403	River Don, Water Hall Bridge, Penistone	01/11/1999	bird	Dipper	1st sighting in many years on R.Don in Penistone - ? result of removal of ochre by treatment plant at	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Feral Pigeon	Breeding confirmed	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Woodpigeon		0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Woodpigeon	Breeding confirmed	0	0	0
SE235046	Scout Dyke Reservoir LWS	21/09/2012	bird	Woodpigeon		0	0	0
SE242040	Penistone Grammar School	21/09/2012	bird	Woodpigeon		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Carrion Crow		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Carrion Crow	Between: 09:00-11:19.	0	0	0
SE242040	Penistone Grammar School	21/09/2012	bird	Carrion Crow		0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Carrion Crow	Breeding confirmed	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Rook		0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Rook	Breeding confirmed	0	0	0
SE2304	Scout Dike Reservoir	03/05/2009	bird	Rook	Between: 15:40-16:40.	0	0	0
SE247033	Penistone	19/04/2013	bird	Rook	Approx 20 nests in trees towards eastern end of churchyard.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Jackdaw	Breeding confirmed	0	0	0

SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Jackdaw		0	0	0
SE242040	Penistone Grammar School	21/09/2012	bird	Jackdaw		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Blue Tit		0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/12/1998	bird	Great Spotted Woodpecker	occasional visitor	0	0	0
SE246037	Water Hall Lane, Penistone	28/03/1999	bird	Great Spotted		0	0	0
SE247037	garden Watersmeet, Water Hall Lane, Penistone	01/06/1999	bird	Great Spotted Woodpecker	regularly	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/12/1999	bird	Great Spotted Woodpecker	feeding on nuts	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/01/2000	bird	Great Spotted Woodpecker	on nuts	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Robin		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Robin	Between: 09:00-11:19.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Robin	Breeding confirmed	0	0	0
SE242040	Penistone Grammar School	21/09/2012	bird	Robin	' stunned itself against window - male stood alongside until it came round!"	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/05/1999	bird	Chaffinch		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Chaffinch		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Chaffinch	Between: 09:00-11:19.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Chaffinch	Breeding confirmed	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Chaffinch		0	0	0
SE2304	Scout Dike Reservoir	13/01/2007	bird	Coot		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Coot		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Coot	Between: 09:00-11:19.	0	0	0
SE2304	Scout Dike Reservoir	03/05/2009	bird	Coot	Between: 15:40-16:40.	0	0	0

SE235047	Scout Dyke Reservoir LWS	14/06/2012	bird	Coot	2+4 chicks	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Coot		0	0	0
SE2403	River Don, Water Hall Bridge,	01/05/1998	bird	Moorhen	several dates	0	0	0
SE2403	River Don, Water Hall Bridge,	01/02/1999	bird	Moorhen		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Moorhen		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Moorhen	Between: 09:00-11:19.	0	0	0
SE235046	Scout Dyke Reservoir LWS	21/09/2012	bird	Moorhen		0	0	0
SE248038	garden Watersmeet, Water Hall Lane, Penistone	01/10/1998	bird	Jay	on bird table	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/12/1998	bird	Jay	frequent visitor	0	0	0
SE2403	Lane, Penistone	01/02/1999	bird	Jay		0	0	0
SE246037	Water Hall Lane, Penistone	28/03/1999	bird	Jay		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Jay		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Common Crossbill	Between: 09:00-11:19.	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Pied Wagtail		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Pied Wagtail	Between: 09:00-11:19.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Pied Wagtail	Breeding confirmed	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Pied Wagtail		0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/12/1998	bird	Coal Tit	occasional visitor	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/02/1999	bird	Coal Tit	on nuts	0	0	0
SE247037	Lane, Penistone	01/06/1999	bird	Blue Tit	two successful families from boxes	0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Blue Tit	Between: 09:00-11:19.	0	0	0

SE2303	'BARNSLEY MBC'	26/04/2009	bird	Blue Tit	Breeding confirmed	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Great Tit		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Great Tit	Between: 09:00-11:19.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Great Tit	Breeding probable	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Pheasant		0	0	0
SE247037	garden Watersmeet, Water Hall Lane, Penistone	01/06/1999	bird	Chiffchaff	"resident for weeks"	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Chiffchaff		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Chiffchaff	Between: 09:00-11:19.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Chiffchaff	Breeding probable	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/05/1999	bird	Magpie	magpie destroyed nest	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Magpie		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Magpie	Between: 09:00-11:19.	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Great Crested Grebe		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Great Crested	Between: 09:00-11:19.	0	0	0
SE235046	Scout Dyke Reservoir LWS	21/09/2012	bird	Great Crested		0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/12/1999	bird	Collared Dove	on seeds	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/01/2000	bird	Collared Dove	in fir tree	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Collared Dove	Breeding confirmed	0	0	0
SE247033	Penistone	19/04/2013	bird	Eurasian Collared Dove	Singing.	0	0	0
SE247037	garden Watersmeet, Water Hall Lane, Penistone	01/06/1999	bird	Tawny Owl	regularly at night	0	0	0

SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/10/1999	bird	Tawny Owl	most evenings and once early a.m. from TV areal	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/11/1999	bird	Tawny Owl	occasionally	0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Blackcap		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Blackcap	Between: 09:00-11:19.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Blackcap	Breeding confirmed	0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	10/05/1998	bird	Garden Warbler		0	0	0
SE235048	Scout Dyke Reservoir LWS	14/06/2012	bird	Garden Warbler	singing	0	0	0
SE2304	Scout Dike Reservoir	01/03/1998	bird	Whitethroat		0	0	0
SE2304	Scout Dike Reservoir	01/03/1999	bird	Whitethroat		0	0	0
SE2304	Scout Dike Reservoir	01/03/2001	bird	Whitethroat		0	0	0
SE2304	Scout Dike Reservoir	01/03/2002	bird	Whitethroat		0	0	0
SE2304	Scout Dike Reservoir	01/03/2004	bird	Whitethroat		0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Common	Breeding probable	0	0	0
SE2304	Scout Dike Reservoir	01/03/2000	bird	Lesser		0	0	0
SE2304	Scout Dike Reservoir	01/03/2001	bird	Lesser		0	0	0
SE2404	Water Hall Park, Penistone	01/03/2001	bird	Lesser		0	0	0
SE2304	Scout Dike Reservoir	01/03/2002	bird	Lesser		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Little Grebe		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Little Grebe	Between: 09:00-11:19.	0	0	0
SE235046	Scout Dyke Reservoir LWS	21/09/2012	bird	Little Grebe		0	0	0
SE2304	Scout Dike Reservoir	21/04/2007	bird	Wren		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Wren	Between: 09:00-11:19.	0	0	0
SE2303	'BARNSLEY MBC'	26/04/2009	bird	Wren	Breeding confirmed	0	0	0
SE234034	'BARNSLEY MBC'	06/11/2011	bony fish	Bullhead		0	0	0
SE2403	River Don Penistone area	22/09/2012	bony fish	Grayling		0	0	0
SE242040	Penistone Grammar School	21/09/2012	centipede	Lithobius		0	0	0

SE235046	Scout Dyke Reservoir LWS	21/09/2012	conifer	Larch		0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	conifer	Sitka Spruce		0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	conifer	Scots Pine		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	conifer	Scots Pine		0	0	0
SE242040	Penistone Grammar School	21/09/2012	crustacean	Oniscus asellus		0	0	0
SE240033	Penistone	05/03/2013	fern	Hart's-tongue	Few plants in retaining wall alongside trail.	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Sycamore		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Yarrow		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Yarrow		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Yarrow		0	0	0
SE2304	Scout Dyke Reservoir LWS	10/08/2010	flowering plant	Sneezewort	fairly numerous on E side of reservoir	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Sneezewort		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Sneezewort		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Ground-Elder		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Horse-Chestnut		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Bent		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Bent		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Bent		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Creeping Bent		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping Bent		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping Bent		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping Bent		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping Bent		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Water-Plantain		0	0	0
SE2403	garden Watersmeet, Water Hall Lane, Penistone	01/01/1998	flowering plant	Alder	This occurrence was originally an associated species in Recorder 3.	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Alder		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Marsh Foxtail		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Sweet Vernal		0	0	0

SE242040	Penistone Grammar School	21/09/2012	flowering	Cow Parsley		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	False Oat-Grass		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	False Oat-Grass		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Common Orache		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Daisy		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Silver Birch		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Silver Birch		0	0	0
SE2304	Scout Dyke Reservoir LWS	25/08/2009	flowering plant	Trifid Bur-Marigold	abundant on S shore of reservoir, low water level	0	0	0
SE2304	Scout Dyke Reservoir LWS	10/08/2010	flowering	Trifid Bur-Marigold	in flower	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Butterfly-Bush		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Heather		0	0	0
SE2304	Scout Dyke Reservoir LWS	25/08/2009	flowering	Harebell		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Harebell		0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Sedge		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Sedge		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Oval Sedge		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Mouse-		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Mouse-		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Rosebay		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Rosebay		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Creeping Thistle		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Creeping Thistle		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Marsh Thistle		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Spear Thistle		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Hazel		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Hazel		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	New Zealand		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Hawthorn		0	0	0

SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Hawthorn		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Hawthorn		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Smooth Hawk's-		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Crested Dog's-Tail		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Crested Dog's-Tail		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Broom		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Broom		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Cock's-Foot		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Cock's-Foot		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tufted Hair-Grass		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tufted Hair-Grass		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Wavy Hair-Grass		0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Wavy Hair-Grass		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Foxglove		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Spike-		0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Spike-		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	American		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Marsh		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Beech		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering plant	Copper Beech		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Sheep's Fescue		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Red Fescue		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Red Fescue		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Red Fescue		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Red Fescue		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Ash		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Ash		0	0	0
SE246033	Penistone	28/02/2013	flowering plant	Snowdrop	Locally abundant amongst graves.	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Marsh-		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Marsh-		0	0	0

SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Heath Wood-		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Ragged Robin		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Apple		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Water Mint		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Corn Mint		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Water Forget-Me-		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Mat-Grass		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Mat-Grass		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Wild Marjoram		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Common Poppy		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Water-Pepper		0	0	0
SE2304	Scout Dyke Reservoir LWS	25/08/2009	flowering plant	Water-Pepper	abundant around edges of reservoir	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Redshank		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Redshank		0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Reed Canary-		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Ribwort Plantain		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Ribwort Plantain		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Ribwort Plantain		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Ribwort Plantain		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Greater Plantain		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Smooth Meadow-		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Rough Meadow-		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Knotgrass agg.		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tormentil		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tormentil		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Selfheal		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Pedunculate Oak		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Buttercup		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Meadow		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Meadow		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Meadow		0	0	0

SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Lesser Spearwort	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Lesser Spearwort	0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Lesser Spearwort	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Creeping	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Marsh Yellow-	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Creeping Yellow-	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Bramble	0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Bramble	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Bramble	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Bramble	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Sorrel	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Common Sorrel	0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Sheep's Sorrel	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Curled Dock	0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Broad-Leaved	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Broad-Leaved	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Goat Willow	0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Elder	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Elder	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Elder	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Common Ragwort	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Groundsel	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Groundsel	0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Red Campion	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	White Campion	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Perennial Saw-	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Prickly Saw-	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Smooth Saw-	0	0	0

SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Heath Wood-		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Ragged Robin		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Apple		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Water Mint		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Corn Mint		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Water Forget-Me-		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Mat-Grass		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Mat-Grass		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Wild Marjoram		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Common Poppy		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Water-Pepper		0	0	0
SE2304	Scout Dyke Reservoir LWS	25/08/2009	flowering plant	Water-Pepper	abundant around edges of reservoir	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Redshank		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Redshank		0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Reed Canary-		0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Ribwort Plantain		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Ribwort Plantain		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Ribwort Plantain		0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Ribwort Plantain		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Greater Plantain		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Smooth Meadow-		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Rough Meadow-		0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Knotgrass agg.		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tormentil		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tormentil		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Selfheal		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Pedunculate Oak		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Buttercup		0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Meadow		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Meadow		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Meadow		0	0	0

SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Lesser Spearwort	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Lesser Spearwort	0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Lesser Spearwort	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Creeping	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Creeping	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Marsh Yellow-	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Creeping Yellow-	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Bramble	0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Bramble	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Bramble	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Bramble	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Sorrel	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Common Sorrel	0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Sheep's Sorrel	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Curled Dock	0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Broad-Leaved	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Broad-Leaved	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Goat Willow	0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Elder	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Elder	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Elder	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Common Ragwort	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Groundsel	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Groundsel	0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Red Campion	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	White Campion	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Perennial Saw-	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Prickly Saw-	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Smooth Saw-	0	0	0

SE242040	Penistone Grammar School	21/09/2012	flowering	Rowan	0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Branched Bur-	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Branched Bur-	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Chickweed	0	0	0
SE235046	Scout Dyke Reservoir LWS	21/09/2012	flowering	Devil's-Bit	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Dandelion	0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	Dandelion	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Dandelion	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Wood Sage	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Wood Sage	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Tilia x vulgaris	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Goat's-Beard	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Zigzag Clover	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Red Clover	0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	flowering	White Clover	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	White Clover	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering plant	Scentless Mayweed agg.	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Gorse	0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	flowering	Gorse	0	0	0
SE236047	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Nettle	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Common Nettle	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Common Nettle	0	0	0
SE242040	Penistone Grammar School	21/09/2012	flowering	Mullein	0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Speedwell	0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	flowering	Speedwell	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Green Field-	0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	flowering	Brooklime	0	0	0
SE2304	'BARNSLEY MBC'	25/02/2006	flowering	Marsh Speedwell	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tufted Vetch	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Tufted Vetch	0	0	0
SE235046	Scout Dyke Reservoir LWS	01/09/2010	flowering	Bush Vetch	0	0	0

SE2304	Scout Dyke Reservoir LWS	25/08/2009	flowering	Wild Pansy	one plant in flower	0	0	0
SE235048	Scout Dyke Reservoir LWS	01/09/2010	horsetail	Field Horsetail		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	horsetail	Field Horsetail		0	0	0
SE233045	Scout Dyke Reservoir LWS	01/09/2010	horsetail	Water Horsetail		0	0	0
SE233043	Scout Dyke Reservoir LWS	01/09/2010	horsetail	Wood Horsetail		0	0	0
SE239044	'BARNSLEY MBC'	19/05/2000	insect - beetle	Brychius elevatus		0	0	0
SE239044	'BARNSLEY MBC'	24/09/2003	insect - beetle	Brychius elevatus		0	0	0
SE2304	Scout Dyke Reservoir LWS	14/06/2012	insect -	Cantharis nigra		0	0	0
SE246038	'BARNSLEY MBC'	29/05/1998	insect - beetle	Elmis aenea		0	0	0
SE246038	'BARNSLEY MBC'	14/10/1999	insect - beetle	Elmis aenea		0	0	0
SE246038	'BARNSLEY MBC'	14/10/1999	insect - beetle	Elmis aenea		0	0	0
SE239044	'BARNSLEY MBC'	19/05/2000	insect - beetle	Elmis aenea		0	0	0
SE239044	'BARNSLEY MBC'	03/10/2001	insect - beetle	Elmis aenea		0	0	0
SE239044	'BARNSLEY MBC'	16/05/2003	insect - beetle	Elmis aenea		0	0	0
SE239044	'BARNSLEY MBC'	24/09/2003	insect - beetle	Elmis aenea		0	0	0
SE246038	'BARNSLEY MBC'	29/05/1998	insect - beetle	Hydraena gracilis		0	0	0
SE247037	'BARNSLEY MBC'	14/10/1999	insect - beetle	Limnius volckmari		0	0	0
SE246038	'BARNSLEY MBC'	14/10/1999	insect - beetle	Limnius volckmari		0	0	0
SE246038	'BARNSLEY MBC'	14/10/1999	beetle	Limnius volckmari		0	0	0

SE239044	'BARNSLEY MBC'	16/05/2003	beetle	Limnius volckmari		0	0	0
SE239044	'BARNSLEY MBC'	24/09/2003	insect - beetle	Limnius volckmari		0	0	0
SE239044	'BARNSLEY MBC'	19/05/2000	insect - beetle	Nebrioporus depressus subsp.		0	0	0
SE239044	'BARNSLEY MBC'	19/05/2000	insect - beetle	Oreodytes sanmarki		0	0	0
SE239044	'BARNSLEY MBC'	03/10/2001	insect - beetle	Oreodytes sanmarki		0	0	0
SE239044	'BARNSLEY MBC'	16/05/2003	insect - beetle	Oreodytes sanmarki		0	0	0
SE242040	Penistone Grammar School	21/09/2012	insect -	Cereal Leaf Beetle		0	0	0
SE246038	'BARNSLEY MBC'	14/10/1999	insect - beetle	Oulimnius tuberculatus		0	0	0
SE2404	'BARNSLEY MBC'	14/07/2011	insect -	Small	1 adult	0	0	0
SE2304	Scout Dyke Reservoir LWS	14/06/2012	insect -	Small Copper		0	0	0
SE2404	'BARNSLEY MBC'	14/07/2011	insect -	Meadow Brown	1 adult	0	0	0
SE2403	'BARNSLEY MBC'	09/08/2011	insect -	Meadow Brown	3 adults	0	0	0
SE2304	Scout Dyke Reservoir LWS	14/06/2012	insect -	Large White		0	0	0
SE2403	'BARNSLEY MBC'	09/08/2011	insect -	Green-Veined	1 adult	0	0	0
SE2304	Scout Dyke Reservoir LWS	14/06/2012	insect -	Green-Veined		0	0	0
SE2403	'BARNSLEY MBC'	04/07/2011	insect -	Small White	4 adults	0	0	0
SE2404	'BARNSLEY MBC'	14/07/2011	insect -	Small White	1 adult	0	0	0
SE2403	'BARNSLEY MBC'	09/08/2011	insect -	Small White	2 adults	0	0	0
SE2403	'BARNSLEY MBC'	09/08/2011	insect -	Hedge Brown	7 adults	0	0	0
SE2404	'BARNSLEY MBC'	14/07/2011	insect -	Red Admiral	1 adult	0	0	0
SE2403	River Don Penistone area	22/09/2012	insect - caddis fly	Potamophylax latipennis		0	0	0
SE2403	River Don Penistone area	22/09/2012	insect - caddis fly	Rhyacophila dorsalis		0	0	0

			insect -	Large red Tailed			
SE2304	Scout Dyke Reservoir LWS	14/06/2012	hymenoptera	Bumble Bee	0	0	0
SE242040	Penistone Grammar School	21/09/2012	insect -	Small Black Ant	0	0	0
SE2403	River Don Penistone area	22/09/2012	insect - mayfly	Baetis rhodani	0	0	0
SE2404	'BARNSLEY MBC'	09/08/2011	insect - moth	Large Yellow	0	0	0
SE2403	River Don Penistone area	22/09/2012	insect - stonefly	Leuctra geniculata	0	0	0
SE242040	Penistone Grammar School	21/09/2012	insect - true bug	Indet. Aphid	0	0	0
SE2304	Scout Dyke Reservoir LWS	14/06/2012	insect - true bug	Cercopis vulnerata	0	0	0
SE242040	Penistone Grammar School	21/09/2012	insect - true bug	Corixa	0	0	0
SE239039	'BARNSLEY MBC'	11/09/2008	insect - true bug	Deraeocoris lutescens	0	0	0
SE239039	'BARNSLEY MBC'	11/09/2008	insect - true bug	Dicyphus annulatus	0	0	0
SE242040	Penistone Grammar School	21/09/2012	insect - true bug	Pondskater	0	0	0
SE239039	'BARNSLEY MBC'	11/09/2008	insect - true bug	European Tarnished Plant	0	0	0
SE239039	'BARNSLEY MBC'	11/09/2008	insect - true bug	Marsh Damselbug	0	0	0
SE2403	'BARNSLEY MBC'	11/09/2008	insect - true bug	Green Shieldbug	0	0	0
SE239039	'BARNSLEY MBC'	11/09/2008	insect - true bug	Plagiognathus arbustorum	0	0	0
SE239039	'BARNSLEY MBC'	11/09/2008	insect - true bug	Plagiognathus chrysanthemi	0	0	0
SE236047	Scout Dyke Reservoir LWS	08/06/2012	insect - true	Episyrphus	0	0	0
SE236047	Scout Dyke Reservoir LWS	08/06/2012	insect - true	Eristalis tenax	0	0	0

SE2304	Scout Dyke Reservoir LWS	24/08/2011	insect - true	Pseudocaenosia	1 male	0	0	0
SE236047	Scout Dyke Reservoir LWS	08/06/2012	insect - true	Scathophaga		0	0	0
SE2303	Thurlstone	23/04/2007	liverwort	Common		0	0	0
SE2303	Thurlstone	23/04/2007	liverwort	Two-horned		0	0	0
SE2303	Thurlstone	23/04/2007	liverwort	White Earwort		0	0	0
SE2303	Thurlstone	23/04/2007	liverwort	Bifid Crestwort		0	0	0
SE2303	Thurlstone	23/04/2007	liverwort	Variable-leaved		0	0	0
SE2303	Thurlstone	23/04/2007	liverwort	Overleaf Pellia		0	0	0
SE242040	Penistone Grammar School	21/09/2012	mollusc	Common Garden		0	0	0
SE242040	Penistone Grammar School	21/09/2012	mollusc	Tree Slug		0	0	0
SE235047	Scout Dyke Reservoir LWS	21/09/2012	mollusc	Great Grey Slug	common	0	0	0
SE242040	Penistone Grammar School	21/09/2012	mollusc	Garlic Snail		0	0	0
SE2403	Penistone	15/03/2007	moss	Common		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Common Lesser Bird's-claw		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Beard-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Cylindric Beard-		0	0	0
SE2404	Penistone	30/03/2007	moss	Whitish Feather-		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Rough-stalked Feather-moss		0	0	0
SE242040	Penistone Grammar School	21/09/2012	moss	Rough-stalked Feather-moss		0	0	0
SE2304	Scout Bridge	30/04/2007	moss	Silver-moss		0	0	0
SE2403	Penistone	15/03/2007	moss	Capillary Thread-		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Pointed Spear-		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Heath Star Moss		0	0	0
SE2403	Penistone	15/03/2007	moss	Redshank		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Redshank		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Silky Forklet-moss		0	0	0
SE2403	Penistone	15/03/2007	moss	Common		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Common		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Common Feather-		0	0	0

SE2303	Thurlstone	23/04/2007	moss	Grey-cushioned		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Heath Plait-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Elegant Silk-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Swan's-neck		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Wood Bristle-		0	0	0
SE2403	Penistone	15/03/2007	moss	White-tipped		0	0	0
SE2303	Thurlstone	23/04/2007	moss	White-tipped		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Waved Silk-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Nodding Thread-		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Pale Glaucous		0	0	0
SE233044	Scout Dyke Reservoir LWS	01/09/2010	moss	Polytrichum		0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	moss	Polytrichum		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Bank Haircap		0	0	0
SE2403	Penistone	15/03/2007	moss	Clustered Feather-		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Clustered Feather-		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Little Shaggy-		0	0	0
SE2403	Penistone	15/03/2007	moss	Springy Turf-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Springy Turf-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Schistidium		0	0	0
SE234044	Scout Dyke Reservoir LWS	01/09/2010	moss	Sphagnum		0	0	0
SE2403	Penistone	15/03/2007	moss	Wall Screw-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Wall Screw-moss		0	0	0
SE2303	Thurlstone	23/04/2007	moss	Bruch's		0	0	0
SE242040	Penistone Grammar School	21/09/2012	spider	Pirata		0	0	0
SE235048	Scout Dyke Reservoir LWS	14/06/2012	terrestrial	Mole	hills	0	0	0
SE247034	Penistone	18/01/2012	terrestrial	Fox		0	0	0
SE2304	Scout Dike Reservoir	17/04/2009	bird	Black-Headed Gull	Between: 09:00-11:19.			
SE2304	Scout Dike Reservoir	28/11/2009	bird	Black-Headed Gull	Between: 15:20-15:50.			
SE235047	Scout Dyke Reservoir LWS	21/09/2012	bird	Black-Headed Gull				
SE2304	Scout Dyke Reservoir LWS	14/06/2012	centipede	Lithobius				
SE239036	'BARNSLEY MBC'	26/04/2012	flowering plant	Yellow Archangel	yellow archangel subsp. non native			

			flowering		yellow archangel subsp.
SE239036	'BARNSLEY MBC'	26/04/2012	plant	Yellow Archangel	Unid
SE235048	Scout Dyke Reservoir LWS	01/09/2010	flowering	Willow	
SE2304	Scout Dyke Reservoir LWS	28/09/2011	insect - true	Adia cinerella	
SE2304	Scout Dyke Reservoir LWS	24/08/2011	insect - true	Delia lamelliseta	
SE2304	Scout Dyke Reservoir LWS	24/08/2011	insect - true	Drymeia vicana	
SE2304	Scout Dyke Reservoir LWS	24/08/2011	insect - true	Helina quadrum	
SE2304	Scout Dyke Reservoir LWS	24/08/2011	insect - true	Helina trivittata	
SE2304	Scout Dyke Reservoir LWS	01/10/2011	insect - true	Macquartia grisea	1 m
SE2304	Scout Dyke Reservoir LWS	28/09/2011	insect - true	Polietes	
SE2304	Scout Dyke Reservoir LWS	28/09/2011	insect - true	Sturmia bella	
SE2403	Penistone	15/03/2007	mass	Hypnum cupressiforme	
SE2303	Thurlstone	23/04/2007	mass	Hypnum cupressiforme	

APPENDIX V. HABITAT SUITABILITY INDEX INFORMATION.

Amphibian and Reptile Groups of the United Kingdom
ARG UK Advice Note 5 www.arguk.org

Great Crested Newt Habitat Suitability Index

May 2010

Background

The Habitat Suitability Index (HSI) for the great crested newt was developed by Oldham *et al.* (2000). HSI scoring systems were originally developed by the US Fish and Wildlife Service as a means of evaluating habitat quality and quantity. An HSI is a numerical index, between 0 and 1. Values close to 0 indicate unsuitable habitat, 1 represents optimal habitat. The HSI for the great crested newt incorporates ten suitability indices, all of which are factors known to affect this species. These ten suitability indices are retained in this current Advice Note.

In the HSI system proposed by Oldham *et al.* (2000) one of the suitability indices (SI_9, terrestrial) involves more lengthy measurement and calculation than the others. In using the HSI system with volunteer surveyors in Kent, Lee Brady has substituted a simpler evaluation of terrestrial habitat quality (a four-point scale), for ease of use.

Several other, local, surveys have utilised the HSI, but incorporating their own variations on the original system. In 2007 a workshop was held at the Herpetofauna Workers' Meeting to evaluate the use of the HSI for the great crested newt, with the aims of:

- Identifying components of the system that may need clarification or refinement
- Agreeing on a standard that can readily be used by volunteers and professionals alike.

The outputs of the workshop and subsequent consultation have been used to formulate the current Advice Note. As far as possible a conservative approach has been adopted in modifying the use of the original HSI suitability indices. However, a major departure is the adoption of Lee Brady's four-point evaluation of terrestrial habitat. This differs from the original HSI in that it has been developed with respect to newt presence/absence at a pond, rather than estimating population size.

Use and limitations of the HSI

The HSI for great crested newts is a measure of habitat suitability. **It is not a substitute for newt surveys**. In general, ponds with high HSI scores are more likely to support great crested newts than those with low scores. However, the system is not sufficiently precise to conclude that any particular pond with a high score will support newts, or that any pond with a low score will not do so.

There is a positive correlation between HSI scores and the numbers of great crested newts observed. In general, high HSI scores are likely to be associated with greater numbers of great crested newts. The relationship is not sufficiently strong, however, to allow estimations of the numbers of newts in any particular pond.

HSI scoring can be useful in:

- Evaluating the general suitability of a pond, or ponds, for great crested newts
- Comparing general suitability of ponds across different areas
- Evaluating the suitability of receptor ponds in a proposed mitigation scheme
- Identifying habitat management priorities.

How to collect data and calculate the HSI

The HSI is a geometric mean of ten suitability indices:

$$HSI = (SI_1 \times SI_2 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/10}$$

- Ten factors are scored for a pond, in the field and from map work (field scores).
- The ten field scores are converted to SI scores, on a scale from 0.01 to 1 (0.01 is used as the lower end of the scale in stead of 0, because multiplying by 0 reduces all other SI scores to 0).
- The ten SI scores are multiplied together.
- The tenth root of this number is calculated $(x)^{1/10}$ i.e. x to the power of 0.1.

The calculated HSI for a pond should score between 1 and close to 0 (the calculations above do not allow the HSI to be exactly 0).

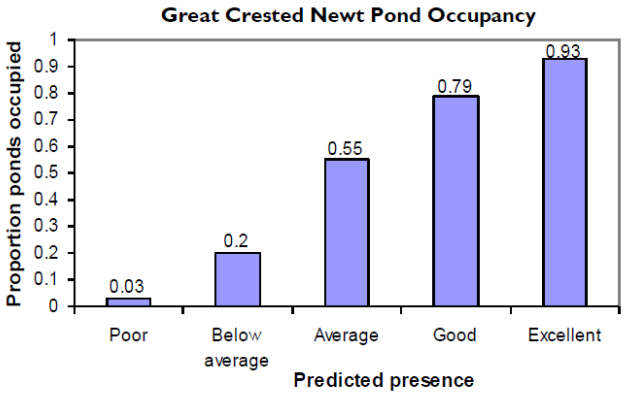
Some of the field scores are categorical, some are numerical. The numerical field scores are converted to SI scores by reading off the values from graphs produced by Oldham *et al.* (2000) reproduced in this Advice Note.

Full details of the scoring system, including descriptions of the criteria used in the categorical scores are given in *Details of suitability indices and definitions of categories* (below). Scores for two of the factors (SI_1 and SI_8) can be gained as desktop/map exercises and so do not have to be completed in the field. The remaining factors should be recorded as field scores, and later converted to suitability indices, in some cases reading SI scores from the graphs provided. A summary of data to collect is given in the appendix *Summary of scoring system*.

Categorisation of HSI scores

Lee Brady has developed a system for using HSI scores to define pond suitability for great crested newts on a categorical scale:

HSI		Pond suitability
< 0.5	=	poor
0.5-0.59	=	below average
0.6-0.69	=	average
0.7-0.79	=	good
> 0.8	=	excellent



The graph shows occupancy of ponds by great crested newts in south-east England. 248 ponds were surveyed on three to six occasions, using egg-searching, torching and bottle-trapping. As pond suitability increases from 'poor' to 'excellent', so does the proportion of ponds occupied by great crested newts.

Details of suitability indices and definitions of categories

Factor 1. Geographic location (SI_1)

Sites should be scored according to the zone in which they occur. This scoring can be carried out either in the field, or as part of a desktop exercise.

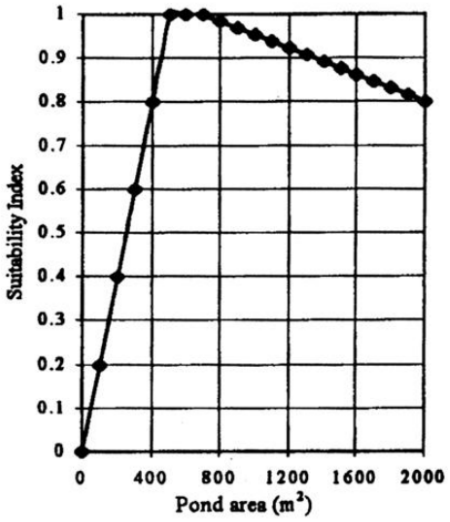
Zone A, location is optimal, SI = 1
Zone B, location is marginal, SI = 0.5
Zone C, location is unsuitable, SI = 0.01.

Some sites will fall on boundary lines between zones. In such cases, select medium-value scores i.e. Zone B.



Factor 2. Pond area

Pond area is the surface area of the pond when water is at its highest level (excluding flooding events). This is usually in the spring. If the pond is being measured at another time of year, the spring time area should still be evident from vegetation types and evidence of a draw down zone around the pond.



Pond area should be measured as accurately as possible. There are several ways of doing this, for example by measuring axes of regularly shaped ponds, either by pacing out in the field, or taking measurements from a map. Irregularly shaped ponds may have to be treated as a series of geometric shapes, calculating the area for each and adding together.

Since it can be difficult reading off SI scores from the graph, pond area should be rounded to the nearest 50 m^2.

It can be particularly difficult to read off SI scores for very small ponds. For ponds smaller than 50 m^2 use a score of 0.05.

For ponds larger than 2000 m^2 omit this factor from the HSI calculation (as there are no data for such large ponds). i.e. $HSI = (SI_1 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/9}$.

Factor 3. Permanence

Pond permanence should be deduced from local knowledge and personal judgement. A landowner may know how often a pond dries. However, if not, the surveyor should make a judgement based on water level at the time of the survey, and taking seasonality into consideration. For example, a pond that is already dry by late spring is likely to dry out every year, etc.

Category	SI	Criteria
Never dries	0.9	Never dries.
Rarely dries	1.0	Dries no more than two years in ten or only in drought.
Sometimes dries	0.5	Dries between three years in ten to most years.
Dries annually	0.1	Dries annually.

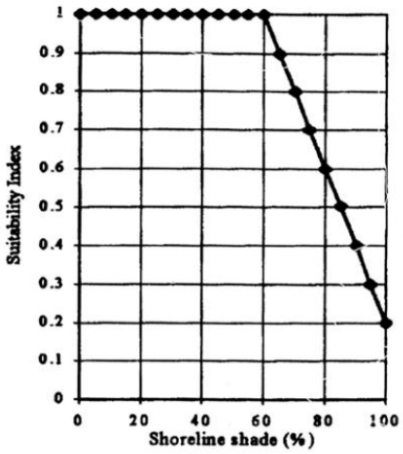
Factor 4. Water quality

The assessment of water quality is subjective and should be based on invertebrate diversity, the presence of submerged water plants and knowledge of the water sources feeding the pond. Water quality should not be confused with water clarity. Sometimes clear water can be devoid of invertebrates, and turbid ponds can support a wealth of invertebrates. There is no quick and simple invertebrate index of water quality. However, some species are indicators of water quality.

Category	SI	Criteria
Good	1.0	Water supports an abundant and diverse invertebrate community. Netting reveals handfuls of diverse invertebrates, including groups such as mayfly larvae and water shrimps.
Moderate	0.67	Moderate invertebrate diversity
Poor	0.33	Low invertebrate diversity (e.g. species such as midge and mosquito larvae). Few submerged plants.
Bad	0.01	Clearly polluted, only pollution-tolerant invertebrates (such as rat-tailed maggots), no submerged plants.

Other cues may also provide information about water quality. For example, ponds subject to agricultural inputs are likely to have poor water quality.

Factor 5. Shade



Estimate percentage pond perimeter shaded, to at least 1m from the shore. Shading is usually from trees, but can include buildings. Shading should not include emergent pond vegetation. The estimate should be made during the period from May to the end of September.

Factor 6. Waterfowl

This factor is concerned with the impact of waterfowl upon the pond and newts. At high densities, as created when waterfowl are encouraged to use a pond by provision of food, the birds can remove all aquatic vegetation, pollute water and persistently stir sediments. Some waterfowl may also actively hunt adult newts and their larvae. Score as one of three categories.

Category	SI	Criteria
Absent	1	No evidence of waterfowl impact (moorhens may be present).
Minor	0.67	Waterfowl present, but little indication of impact on pond vegetation. Pond still supports submerged plants and banks are not denuded of vegetation.
Major	0.01	Severe impact of waterfowl. Little or no evidence of submerged plants, water turbid, pond banks showing patches where vegetation removed, evidence of provisioning waterfowl.

'Waterfowl' includes most water birds, such as ducks, geese and swans. Moorhens should be excluded because almost every pond has at least one or two.

Factor 7. Fish

Information on fish should be gleaned from local knowledge and the surveyor's own observations. Pond owners will usually be aware of stocking with fish for commercial or aesthetic reasons. However, stickleback (which can be significant predators of great crested newt larvae, when present in large numbers) are unlikely to be deliberately introduced to a pond, but may arrive through other means. Netting is useful in detecting smaller fish, such as sticklebacks, or the fry of larger species.

Category	SI	Criteria
Absent	1	No records of fish stocking and no fish revealed by netting or observed by torchlight.
Possible	0.67	No evidence of fish, but local conditions suggest that they may be present.
Minor	0.33	Small numbers of crucian carp, goldfish or stickleback known to be present.
Major	0.01	Dense populations of fish known to be present.

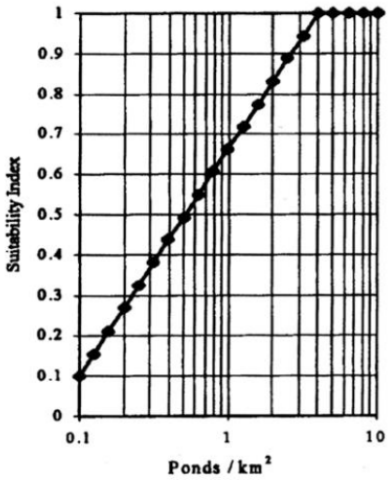
Factor 8. Pond count

This is the number of ponds occurring within 1 km of survey pond. Do not count the survey pond itself. Ponds on the far side of major barriers, such as main roads, should not be counted. Use 1:25,000 scale O.S. data, such as Explorer maps, GIS or web-based mapping sources, such as:

Getamap	www.ordnancesurvey.co.uk/oswebsite/getamap/
Magic	www.magic.gov.uk/site_map.html
Digimap	edina.ac.uk/digimap/

Pond counts can be carried out a by a survey coordinator and so do not necessarily have to be performed by surveyors.

Divide the number of ponds by π (3.14) to calculate the density of ponds per km^2 and read off the SI value from graph.

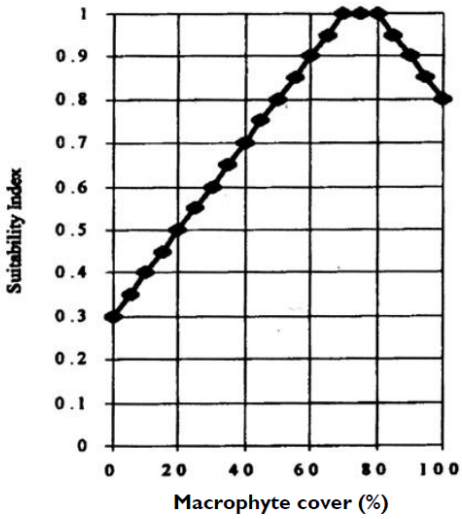


Factor 9. Terrestrial habitat

Scoring terrestrial habitat depends on the surveyor's understanding of newt habitat quality. Good terrestrial habitat offers cover and foraging opportunities and includes meadow, rough grassland with tall sward height, scrub, woodland or mature gardens. Terrestrial habitat should be considered within approximately 250 m from the pond, but only on the near side of any major barriers to dispersal (e.g. main roads or large expanses of bare habitat).

Category	SI	Criteria
Good	1	Habitat that offers good opportunities for foraging and shelter (e.g. most semi-natural environments, such as rough grassland, scrub or woodland, also brownfield sites and low intensity farmland) covers more than 75% of available area.
Moderate	0.67	Habitat offers opportunities for foraging and shelter but may not be extensive (25-75%) of available area.
Poor	0.33	Habitat with poor structure (e.g. amenity grassland, improved pasture and arable) that offers limited opportunities (less than 25% of available area) for foraging and shelter.
None	0.01	No suitable habitat around pond (e.g. centre of arable field or large expanse of bare habitat).

Great crested newts do not have specific terrestrial habitat requirements. However, good quality terrestrial habitat has structure. The presence of hedges, ditches, stone walls, old farm buildings, piles of loose stone or rock, rabbit burrows and small mammal holes all contribute towards 'good' terrestrial habitat. Note that it is rare to encounter a pond falling within the terrestrial habitat category of 'none'.

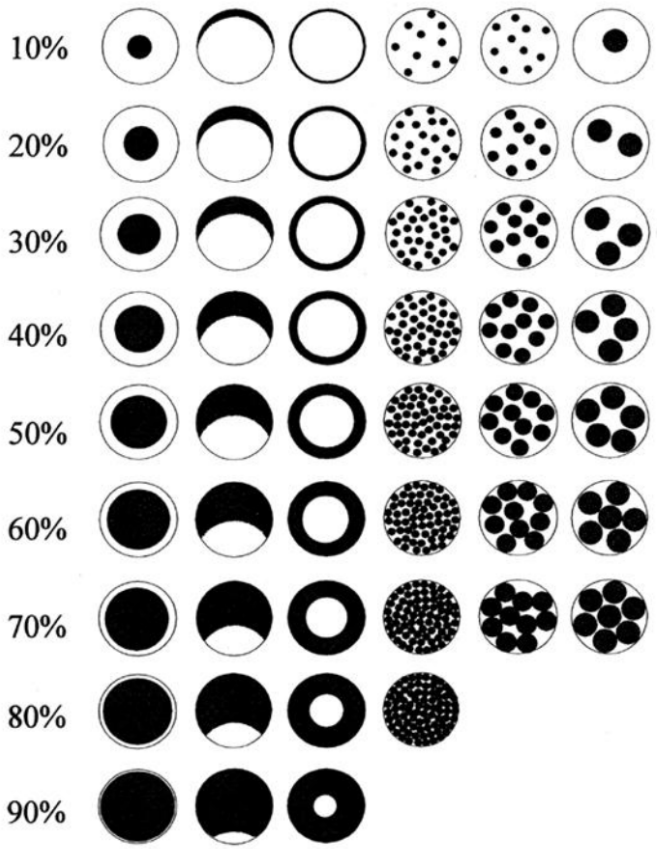


Factor 10. Macrophytes

Estimate the percentage of the pond surface area occupied by macrophyte cover. This includes emergents, floating plants (excluding duckweed) and submerged plants reaching the surface. Make an estimate between March and the end of September. Read off the SI value from graph.

Guide for assessment of macrophyte cover in a pond

The areas of dark shading simulate a variety of vegetation dispersion patterns.



Reference

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155.

This Advice Note is an output from a workshop held at the Herpetofauna Workers' Meeting in January 2007. ARG UK is grateful to Lee Brady, Rob Oldham, David Sewell and John Baker for leading the workshop and/or contributing to this note, and workshop participants for providing useful suggestions. ARG UK is also grateful to the British Herpetological Society for permission to use graphics from the original paper on HSI, published in the *Herpetological Journal*.

This Advice Note can be downloaded from the ARG UK website www.arguk.org and should be cited as: ARG UK (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Amphibian and Reptile Groups of the United Kingdom.

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ARG UK is the network of volunteer conservation groups concerned with the native amphibians and reptiles of the UK.

ARG UK Amphibian and Reptile Groups of the United Kingdom

amphibian and reptile conservation

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Summary of scoring system

SI_1 Location

Field score	SI
A (optimal)	1
B (marginal)	0.5
C (unsuitable)	0.01

SI_2 Pond area

Field score	SI
Measure pond surface area (m^2) and round to nearest 50 m^2	Read off graph.

SI_3 Pond drying

Field score	SI	Criteria
Never	0.9	Never dries
Rarely	1.0	Dries no more than two years in ten or only in drought.
Sometimes	0.5	Dries between three years in ten to most years
Annually	0.1	Dries annually

SI_4 Water quality

Field score	SI	Criteria
Good	1.0	Abundant and diverse invertebrate community.
Moderate	0.67	Moderate invertebrate diversity
Poor	0.33	Low invertebrate diversity, few submerged plants
Bad	0.01	Clearly polluted, only pollution-tolerant invertebrates, no submerged plants.

SI_5 Shade

Field score	SI
Estimate percentage perimeter shaded to a least 1 m from shore.	Read off graph.

SI_6 Fowl

Field score	SI	Criteria
Absent	1	No evidence of water fowl (although moorhen may be present)
Minor	0.67	Waterfowl present, but little sign of impacts
Major	0.01	Severe impact of waterfowl

SI_7 Fish

Category	SI	Criteria
Absent	1	No records of fish stocking and no fish revealed during survey.
Possible	0.67	No evidence of fish, but local conditions suggest that they may be present.
Minor	0.33	Small numbers of crucian carp, goldfish or stickleback known to be present.
Major	0.01	Dense populations of fish known to be present.

SI_8 Pond count

Field score	SI
Count the number of ponds within 1 km of the survey pond (not separated by major barriers) and divide by 3.14. This can be done from maps rather than in the field.	Read off graph.

SI_9 Terrestrial habitat

Category	SI
Good	1
Moderate	0.67
Poor	0.33
None	0.01

SI_{10} Macrophytes

Field score	SI
Estimate the percentage of the pond surface area occupied by macrophyte cover (between May and the end of September)	Read off graph.

Appendix XIV. DEVELOPMENT