Newtown Road Cemetery, Newbury

Phase 1 Habitat, Protected Species Scoping and Bat Survey Report

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1. INTRODUCTION

1.1 Background to the study

The Wildlife Survey Unit were commissioned by Newbury Town Council in September 2009 to undertake a Phase 1 Habitat, Protected Species Scoping and Bat Survey of the Newtown Road Cemetery, Newbury.

This survey is in relation to the proposed re-opening of the cemetery to the public and the proposed alteration of the current management regime to promote biodiversity.

This survey provides a baseline assessment of the ecological interest of the site, and as such will define the extent and type of any change to the current management proposed in any future management plan.

1.2 Aims and scope of report

The aims of the surveys were to:

- Collate existing ecological records from the site and immediate surrounding area from the Thames Valley Environmental Records Centre.

- Undertake a Phase 1 Habitat and Protected Species Scoping Survey of the site

- Undertake an internal and external bat inspection survey to identify whether bats are, or have been, present within the Newtown Road Cemetery Chapel and, if so, which species.

- Undertake two bat emergence surveys and one dawn re-entry survey of the Newtown Road Cemetery Chapel, to record what bats, if any, emerge from or enter the exterior.

1.3 Site description

The Newtown Road Cemetery is situated to the south of Newbury Town Centre and centred on Ordnance Survey Grid Reference SU470661. It is bound to the East by Newtown Road, to the West by Old Newtown Road and to the North and South by residential housing.

The cemetery is currently owned and maintained by Newbury Town Council. The site is approximately 270 metres by 70 metres at its greatest extent.

1.4 Proposed Development

It is proposed to open Newtown Road Cemetery to the public allowing access to the site. It is also proposed that the cemetery will be actively managed for biodiversity gain. The chapel which is currently used irregularly is proposed to be renovated so that it is suitable for use as a venue for group and community events, this follows previous works to make the roof water and weather proof.

2. METHODS

2.1 Desk Records

A review was undertaken of existing ecological data held by:

- The Thames Valley Environmental Records Centre

Records were received, all information received on habitats and species within 2km of the site boundary was reviewed and summarised below.

A review of existing statutory sites of nature conservation interest, such as Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Area of Conservation (SACs) and National Nature Reserves (NNRs), and non-statutory sites, such as Sites of Importance for Nature Conservation (SINCs) was undertaken to indicate any existing nature conservation interest within 2km of the proposed development site. The review was undertaken using the government website - www.magic.gov.uk/.

2.2 Phase 1 Habitat Survey

Phase 1 Habitat Surveys provide a standardised system of classifying habitats in the UK, this methodology was designed in the 1970s by the Nature Conservancy Council (Now the Joint Nature Conservation Committee) to provide a rapid assessment of large areas of the British countryside.

An extended Phase 1 Habitat Survey was undertaken on 9th September 2009 by Peter Stronach of The Wildlife Survey Unit Limited, the standard survey methodology was followed as detailed in the JNCC's 2003 publication *"Handbook for Phase 1 Habitat Survey: A technique for environmental audit".* A full plant list was recorded and a note made of the following habitats or species:

- EC Habitats Directive Annex 1 habitats and Annex 2 plant species
- Plant species protected under Schedule 8 of The Wildlife and Countryside Act
- UK Biodiversity Action Plan plant species and habitats
- Local Biodiversity Action Plan plant species and habitats
- Vascular Plant Red Data List species

- Alien invasive plant species listed under Part II of Schedule 9 of The Wildlife and Countryside Act

The plant species nomenclature follows that of Stace (1997).

A Phase 1 Habitat Map or Fair Map was produced on ArcView GIS detailing the extent of the habitat areas and target notes within them.

2.3 Protected Species Scoping Survey

A Protected Species Scoping Survey is an initial ecological appraisal of a site identifying the presence of protected species.

A Protected Species Scoping Survey was undertaken by Peter Stronach of The Wildlife Survey Unit on the 9th September 2009. The presence or potential presence of the following was noted:

- Species protected as 'European Protected Species' under Schedule 2 of the Habitats Regulations
- Nesting birds protected under Section 1 of the Wildlife and Countryside Act
- Bird species protected under Schedule 1 of the Wildlife and Countryside Act
- Species protected under Schedule 5 of the Wildlife and Countryside Act
- Badgers protected under the Protection of Badgers Act

2.4 Bat Inspection Survey

The inspection survey of the chapel was undertaken by Peter Stronach and Andrew Seth of The Wildlife Survey Unit on the 9th September 2009.

Peter has six years experience of undertaking bat inspection, emergence surveys and activity surveys in England, Scotland and Wales. Peter is licensed to disturb and handle bats in roosts and to disturb bats at hibernation sites in all counties of England (Natural England Licence no. 20093272). Andrew has one year's experience of undertaking bat emergence and activity surveys.

An external and internal inspection survey was undertaken of the Newtown Road Cemetery Chapel guided by the Bat Conservation Trust's publication *Bat Surveys – Good Practice Guidelines* (BCT 2007) and the Joint Nature Conservation Committee's publication *Bat Worker's Manual* (JNCC 2004). The presence and absence of the following evidence of bats was recorded:

- Bat droppings;
- Corpses of young or adult bats;
- Scratch marks;
- Urine staining;
- Grease marks;
- Clean/cobweb free gaps around potential roost locations; and
- Sound of bats in a roost.

The following equipment was used during the surveys:

- Clulite CB1 high-powered torch.
- Headtorch.
- Video Endoscope.
- Binoculars
- 3.8m Telescopic Ladder.
- Digital Camera.

Photographs were taken of the Chapel including features of interest identified. Information was recorded using an adapted Natural England Roost Visitor Recording Form.

2.5 Bat Emergence Survey

Two bat emergence surveys were undertaken on the evening of the 9th September 2009 and two dawn re-entry surveys were undertaken on the 10th and 11th September by Peter Stronach and Andrew Seth of The Wildlife Survey Unit.

The evening of the 9th September was a dry, warm evening, with force 1-2 north northwesterly wind, 0/8 cloud cover, with a temperature of 18c at the start of the survey. The Moon was halfway between full and new. The morning of the 10th September was breezy with a force 1-2 northeasterly, dry but with ground dew, there was 0/8 cloud cover and the temperature at the start of the survey was 8c. The Moon state was the same. The morning of the 11th

September was breezy with a north northeasterly force 1-2, dry with ground dew, 0/8 cloud cover and the temperature was 8c at the start of the survey.

The chapel at Newtown Road Cemetery was surrounded during the surveys such that all likely entrance/exit points were covered. One surveyor was positioned at the entrance to the chapel and another at the opposite end during the first dusk and dawn survey, during the second dawn surveyors were positioned either side of the chapel covering the sloping roof.

The structure was watched from quarter of an hour before sunset to 1.5 hours after sunset for the dusk surveys, then from 1.5 hours before sunrise to sunrise during the dawn surveys.

All bats were recorded, along with their flight path, their species and the time of flight.

Calls were analysed later using the Batsound and Analook software programmes. Call parameters used for identification were taken from Jon Russ's publication *British Bats: A guide to identification using sound analysis* (Russ 2009).

2.6 Survey limitations

The Phase 1 Habitat Survey was undertaken in September, at the end of the main growing season. Any given survey will only record those species in leaf or flower at that time, early flowering species may have been under-recorded.

The Bat Inspection Survey was limited to those areas that could be accessed, the only area that was inaccessible was the immediate area of the roof underneath the ridgetile, due to its height above the ground.

The Bat Emergence Surveys were undertaken in September, towards the end of the bat active season. A survey will only give a snapshot of bat activity at that particular time, therefore any conclusions drawn are subject to this caveat. Any large roosts from earlier in the year would leave signs of their presence, sufficient for them to be observed at a later date.

3. RESULTS

3.1 Desk Records

There are no statutory designated sites for nature conservation within or directly adjacent to the site, there is one within 2 km of the study area, which is shown below in Table 1.

Table 1: Statutory sites within 2km of the study area.

Site name	Type	Interest features	Distance (km)
Greenham and Crookham Common	SSSI	Heathland, acid grassland, scrub and broad-leaved woodland	1.5 to the southeast

There are no non-statutory sites for nature conservation within 2km of the boundary of the site.

3.2 Phase 1 Habitat Survey

No desk records were held by the Thames Valley Environmental Records Centre for notable plant species within the site or within 2km of it.

The Phase 1 Habitat Map is shown as Figure 1 in the Appendix, the map has target note locations, which are detailed in the text below.

A3.1 Scattered Broad-leaved tree

There are a large number of planted and self sown broad-leaved trees and shrubs within the cemetery. The large planted trees have been previously surveyed and these are detailed in the Arboricultural Survey Report (Sylva Consultancy 2009). Broad-leaved tree species found within the site include Lime *Tilia x europaea*, Hawthorn *Crataegus monogyna*, Horse Chestnut *Aesculus hippocastaneum*, Pedunculate Oak *Quercus robur*, Ash *Fraxinus excelsior* and Holly *Ilex aquifolium*. Broad-leaved shrubs also found within the main body of the cemetery include Garden Privet *Ligustrum ovalifolium*, Butterfly Bush *Buddleia davidii*, Elderberry *Zambucus nigra*, Bramble *Rubus fructicosus agg.*, and Dogwood *Cornus sanguinea*.

Target Note 1, shows the location of a large avenue of Lime trees which are an important landscape feature within the cemetery and dominate the character of the western half of the cemetery.

A3.2 Scattered coniferous tree

There are several coniferous tree species that have been planted within the cemetery including cultivated varieties of Yew *Taxus baccata ssp.* and Lebanese cedar *Cedrus libani ssp.* and also a single Monkey Puzzle *Araucaria araucana*

B2.1 Unimproved Neutral grassland

The majority of the cemeteries area is covered by grassland, which is neutral in nature, dominated by grasses such as Cock's Foot *Dactylis glomerata*, False Oat Grass *Arrhenatherum elatius* and Yorkshire Fog *Holcus lanatus*, with smaller amounts of Creeping Bent *Agrostis stolonifera* and Common Bent *Agrostis capilaris*. This grassland has developed because of the lack of fertiliser being applied to it; therefore it has maintained the character of the underlying soil. Large areas are homogenous due to the current cutting regime, with very few herbs within the sward in these areas. The area to the northeast of Target Note 2 being an example.

Photograph 1: Fox and Cubs Pilosella aurantiaca present within the neutral grassland sward.

There is however a surprisingly large variety of herbs found, albeit in small amounts, the plantains are well represented with Lanceolate Plantain *Plantago lanceolata,* Hoary Plantain *Plantago media* and Greater Plantain *Plantago major*. Other herbs found within the sward include Yarrow *Achillea millefolium*, Red Clover *Trifolium pratense*, Cow Parsley *Anthus sylvestris*, Broad-leaved Dock *Rumex obtusifolia*, Oxeye Daisy *Leucanthemum vulgare*,

Dandelion *Taraxacum officinale*, Scentless Mayweed *Tripleurospremum inodorum*, Sorrel *Rumex acetosa*, Hogweed *Heracleum sphondylium*, Daisy *Bellis perennis*, Creeping Buttercup *Ranunculus repens*, Creeping Cinquefoil *Potentilla reptans*, Autumn Hawkbit *Leontodon autumnalis*, Smooth Hawk's Beard *Crepis capillaris*.

Introduced species are also found in the sward with Sowbread *Cyclamen sp.*, Violet sp. *Viola sp.*, Primrose *Primula vulgaris* and Wheat *Triticum spp* in small amounts.

Where the grassland meets shadier areas, or patches of bare ground, other plants are found, with a community more reminiscent of bare ground communities of urban areas with Changing Forget-me-not *Myosostis discolor*, Common Chickweed *Stellaria media*, Trailing St.John's Wort *Hypericum humifusum*, Barren Strawberry *Potentilla sterilis*, Herb Robert *Geranium robertianum*, Ivy *Hedera helix*, Barren Brome *Bromus sterilis*, Small-flowered Cranesbill *Geranium pusillum*, Vetch sp. *Vicia sp.*, Ground Ivy *Glechoma hederacea*, Thyme-leaved Sandwort *Arenaria serpyllifolia*, Prickly Lettuce *Lactuca serriola*, Common Orache *Atriplex patula*, Upright Yellow Sorrel *Oxalis europaea*, Purple Toadflax *Linaria purpurea*, Canadian Fleabane *Conyza Canadensis*, Green Alkanet *Pentaglottis viridis*, Scarlet Pimpernel *Anagallis arvensis*, White Stonecrop *Sedum album*, Common Figwort *Scrophularia nodosa*, Greater Bird's Foot Trefoil *Lotus corniculatus*, Hedge Bindweed *Calystegia sepium*, Bittersweet *Solanum dulcamara*, Reflexed Stonecrop *Sedum rupestre*, Dogrose *Rosa canina*, Harebell *Campanula rotundifolia*, Toadrush *Juncus bufonius*, Foxglove *Digitalis purpurea*, White Bryony *Bryonia alba*, Cleavers *Galium aparine*, White Deadnettle *Lamium album*, Prickly Sow Thistle *Sonchus asper*, Groundsel *Senecio vulgaris*, Lesser Trefoil *Trifolium dubium*, Wood Avens *Geum urbanum*, Petty Spurge *Euphorbia peblus*, Selfheal *Prunella vulgaris*, Square-stalked Willowherb *Epilobium tetragonum*, Cat's Ear *Hypochaeris radicata*, Fox and Cubs *Pilosella aurantiaca*, Nettle *Urtica dioca* and Germander Speedwell *Veronica chamaedrys*.

J3.6 Building

There is only one building within the site and this is the cemeteries chapel. The chapel building supports several individuals of Hart's Tongue Fern *Phyllitis scolopendrium* where a drainpipe leaks onto a wall.

J5 Hard surface

There is a small area between the entrance gates of the cemetery which is classed as bare ground. This area has plant species found within the grassland adjacent but which are more suited to the shallow soils and propensity for drought that this area has.

J2.3.2 Species-poor hedge and trees

There is a species-poor hedge and trees surrounding the private residence in the centre of the cemetery on the eastern side. This is largely made up of introduced shrubs including Oregon Grape *Mahonia aquifolium*, Barberry *Berberis sp*. and Cherry Laurel *Prunus laurocerasus*. Other species include Ivy, Buddleia, Hawthorn and Ash.

J2.4 Fence

There is a large cast iron fence running along the eastern length of the cemetery.

J2.5 Wall

Target Note 3 is located on the wall that runs around the entire perimeter of the cemetery with the exception of the eastern fenced section. This wall supports a variety of plant species including Parsley Fern *Cryptogramma crispa*, Ivy-leaved Toadflax, Butterfly Bush and Purple Toadflax *Linaria purpurea.*

3.2 Protected Species Scoping Survey

Amphibians

A single desk record of Common Frog from Fifth Road, Newbury in 2001, 1km to the West of the site was held by TVERC. There are no waterbodies present within the site boundary, and the foraging is limited and obviously surrounded by a large wall which prevents movement between the site and surrounding areas.

Bats

The following desk records for bats were received from the Thames Valley Environmental records Centre from the surrounding area;

- Pipistrelle species *Pipistrellus sp.* - a roost present from 1994 to 2000, 1km to the west of the site
- Serotine *Eptesicus serotinus* – an individual in 2000, 100m to the northwest of the site.
- Whiskered Bat *Myotis mystacinus* – an individual in 1994, 1km to the southeast of the site.
- Brown Long-eared *Plecotus auritus* – an individual in1993, 1km to the southwest of the site.

In terms of foraging habitat the cemetery offers a limited amount, the large avenue of lime trees offering sheltered feeding areas for species such as Common and Soprano Pipistrelle

and Brown Long-eared. Any species intolerant of heavy lighting such as the Myotis bats are unlikely to use the cemetery as it is a dark island in the middle of a well-lit residential area.

In terms of roosting habitat, it is limited to the larger mature trees and the chapel.

The chapel, is a stonebuilt structure with a natural slate roof set on wooden rafters, the walls are stone and mortar with a flint covering. The roof is plaster on wooden strips, supported on a timber a-frame, with the slate tiles on top. Windows are stained glass and reinforced shatterproof glass. The chapel is in a bad state of disrepair, with plaster falling off, damp, and ivy growth coming through wall. Approximate dimensions of the perimeter of the building are 15m by 8m. There is plenty of access into the structure for bats with holes in the windows above the entrance and gaps between the wall and the roof running the length of the chapel. The roof itself offers roosting opportunities for crevice dwelling species, where there is gaps between the tiles these would lead to areas between the roof and the ceiling.

A thorough inspection of the interior and exterior of the building was undertaken; limited evidence of bats was recorded. Single droppings were discovered in several of the window sills inside the chapel, with three on the sill below the stained glass window, from the size and shape of these it is likely they belong to Brown Long-eared bats. The droppings are not recent and there is no other evidence of the presence of bats within the structure. There are also droppings on the exterior of the building on the double doors at the eastern end, with three droppings on the door itself and one on the window above door on the outside. The building is mainly unlit and unoccupied but is occasional used for stage production for plays.
During the dusk emergence survey and two dawn re-entry surveys at the chapel at Newtown Road Cemetery, no bats were recorded emerging from the exterior or interior of the building. A roost of two Common Pipistrelles was discovered in the Cedar of Lebanon directly adjacent to the chapel. Common Pipistrelle, Soprano Pipistrelle and Brown Long-eared were recorded flying past the buildings or feeding in the immediate area. The tables below detail the results of the survey.

Table 2: Summary of Bat Emergence Survey and Dawn Re-entry Survey on 9-10th September 2009

Time	Species	Notes
19.17	survey start	
19:32	sunset	
19:47	2CP	Emerged from Cedar of Lebanon adjacent to Chapel
19.51	2CP	Feeding adjacent to chapel
19.55	CP	Feeding adjacent to chapel
19.58	CP	Feeding adjacent to chapel
20.02	CP	Flying past chapel
20.06	CP	Feeding adjacent to chapel
20.07	SP	Flying past front of chapel
20.15	CP	Flying past chapel

20.21	CP	Flying past chapel
20.45	2CP	Feeding near chapel
20.55	CP	Flying past and social calling
05.10	Start of dawn survey	
05.42	CP	Flying past
05.45	CP	Distant recording
05.47	CP	Flying past
05.50	BLE	Flew past front of chapel
06.33	sunrise	

Table 3: Summary of Bat Dawn Re-entry Survey on 11th September 2009

Time	Species	Notes
05.04	survey start	
05.07	CP	Feeding next to the Cedar of Lebanon
05.39	CP	Distant calls
05.46	CP	Faint calls
05.52	CP	Flying past chapel
06.08	CP	Distant calls
06.34	sunrise	

Birds

The desk record search only highlighted records of a single bird species, Song Thrush *Turdus philomelos*, with records from 2000 and 2001, widespread in the area surrounding the site.

Species recorded within the site boundary during the course of the survey included Woodpigeon *Columba palumbus,* Carrion Crow *Corvus corone,* Chiffchaff *Phylloscopus collybita,* Goldcrest *Regulus regulus,* Blue Tit *Parus cyaneus,* Great Tit *Parus major,* Chaffinch *Fringilla coelebs,* Long-tailed Tit *Aegithalos caudatus,* Song Thrush *Turdus philomelos,* Green Woodpecker *Picus viridis,* Robin *Erithacus rubecula,* Jay *Garrulus garrulous,* Blackbird *Turdus merula,* Magpie *Pica pica,* Greenfinch *Carduelis chloris,* Dunnock *Prunella vulgaris,* Meadow Pipit *Anthus pratensis,* Sparrowhawk *Accipiter nisus* and Collared Dove *Streptopelia decaocto*. Most of these species are likely to breed within the cemetery with the exception of Meadow Pipit, which is likely to be a migrant.

There are areas of suitable nesting habitat for birds, included the lengths of hedgerow and the large mature trees.

Badgers

The desk record search highlighted no records from the surrounding area. Although suitable foraging exists within the confines of the cemetery, there is unlikely to be enough to support a clan.

No evidence of badgers was recorded during the course of the survey, all areas were checked. The large area of grassland on the site is extremely suitable foraging habitat, but no signs of foraging or paths leading onto the site were found, there are several diggings within the site produced by Rabbits *Oryctolagus cuniculus* and Foxes *Vulpes vulpes*, a single Fox was seen during the nocturnal bat surveys.

Water Vole

There are no desk records relating to Water Vole from the surrounding area.

The site has no waterbodies or ditches that are suitable for supporting Water Vole populations.

Reptiles

There were no desk records of reptiles from the site or surrounding area.

The habitat on site is too well managed for it to support reptiles, with no areas of rank grassland to support Common Lizard, no rubble covered areas for Slow Worm and no waterbodies and areas of decomposing vegetation for Grass Snakes.

Invertebrates

During the Phase 1 habitat Survey the following butterflies were recorded; Speckled Wood *Parage aegeria*, Peacock *Inachis io,* Large White *Pieris brassicae*, Brimstone *Gonepteryx rhamni* and Green-veined White *Pieris napi*. A single Silver Y *Autographa gamma* moth was recorded also an Emperor Dragonfly *Anax imperator* was recording hawking close to the chapel.

The mature grassland also supports several anthills between the grave areas; this shows a long and continuous undisturbed grassland cover for these to be present.

4 DISCUSSION AND CONCLUSION

The Phase 1 Habitat Survey of Newtown Road Cemetery identified the following habitat of conservation importance present within the site:

- **Neutral Grassland –** A Berkshire Local Biodiversity Action Plan broad habitat

This grassland forms the majority of the site, it's species diversity, 67 species present, is the product of the continuous length of time it has been grassland and the lack of fertiliser applied. The current cutting regime however is limiting the diversity that is present, promoting the grasses, which are tolerant of heavy grazing at the expense of others, which can't set their seed before being cut. The area of the grassland is approximately 1.75ha.

The Protected Species Scoping Survey and Bat Survey identified the following species of conservation importance present on the site:

- **Common Pipistrelle** - protected as a 'European Protected Species' under Schedule 2 of the Habitats Regulations.
- **Soprano Pipistrelle** - protected as a 'European Protected Species' under Schedule 2 of the Habitats Regulations and a UK Biodiversity Action Plan (UKBAP) priority species.
- **Brown Long-eared** - protected as a 'European Protected Species' under Schedule 2 of the Habitats Regulations and a UKBAP priority species.
- **Song Thrush** – A UKBAP priority species.

The three bat species were recorded during the nocturnal bat surveys, one of the species, Common Pipistrelle, was recorded roosting on the site in the Cedar of Lebanon directly adjacent to the chapel. The two other species were recorded commuting or foraging on the site. The amount of roosting habitat on the site is limited as the trees that are on site are well maintained and any dead wood or rot is removed as part of the management of the site. The dark vegetated areas of the site provide foraging potential, however the edges of the site suffer from light pollution from adjacent residential areas.

The Song Thrush was recorded during the Protected Species Scoping Survey, although this actual individual may have been a migrant, it is thought likely that Song Thrush would breed on the site. Potential nesting habitat would include the evergreen trees on the site, such as Yew, and the hedge with trees in the central section of the cemetery. All of the nesting birds on the site are protected under Section 1 of the Wildlife and Countryside Act.

The valuation of the biodiversity on the site has not taken into account it's location within an urban area, this means that it is potentially of more value than an equal site in a rural context.

The surveys provide a baseline ecological assessment of what is present on the site and as such can be used, in conjunction with monitoring, to detail whether any proposed changes to management actually have the desired effect of increasing the biodiversity present on the site. Monitoring would detail any improvements in the quality of habitats of conservation importance and detail any increase in the number of species of conservation importance present.

5 REFERENCES

Bat Conservation Trust (2007) *Bat Surveys: Good Practice Guidelines*. Bat Conservation Trust, London.

Russ, J (2009) *British Bats: A guide to identification using sound analysis*. Alana Books, Shropshire.

6 APPENDIX