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Date: 6th December 2012

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Dear Colin,

ECOLOGY WALK-OVER SURVEY OF LAND AT WESTGATE SCHOOL, WINCHESTER

RPS was commissioned by Hampshire County Council (HCC) to undertake an ecology walk-over survey of Rotherly House and surrounding land at Westgate School, Winchester. Rotherly House is currently in use as a boarding school and day-care nursery.

The site is located to the north of the main Westgate School campus separated from it by Green Lane. Links Road occurs to the north along with Rotherly Cottage (a further day-care nursery) and associated gardens. St Anns is adjacent to the western boundary with residential properties to the east. The wider area is sub-urban in nature, dominated by residential properties and associated gardens. The Royal Winchester Golf Course Site of Interest for Nature Conservation (SINC), designated for its chalk grassland, lies 300 m to the west of the site.

Proposals for development include the siting of a new primary school within the area with associated playground and infrastructure.

Survey Methodology

The site was surveyed on the 6th September 2012, a suitable time of year for this type of survey. It involved a suitably qualified ecologist walking the site and its environs looking for evidence of protected species or habitat that may support them. Habitat was classified according to the standard JNCC Phase 1 methodology (JNCC 2003) and assessed for conservation value.

Results and Recommendations

The site

The site of the proposed new primary school is Rotherly House and the surrounding land at Westgate School, Winchester. The main habitat within the development footprint was close-mown amenity grass dominated by Perennial Rye-grass *Lolium perenne* with frequent White Clover *Trifolium repens* Ribwort Plantain *Plantago lanceolata*, Daisy *Bellis perennis* and Dandelion *Taraxacum officinale* agg.

At the edge of the grassland to the north of Rotherly House, the grass was longer and with other grass species more frequent including False Oat-grass *Arrhenatherum elatius*, Yorkshire Fog *Holcus lanatus* and Timothy *Phleum pratense*.

A large number of mature trees occurred across the site including a line of Lime *Tilia* spp. along the frontage of Green Lane and scattered individual examples of the species. Several large Yew *Taxus baccata* also occurred within the rough grassland to the north of the site. A small area of woodland dominated by mature Scot's pine *Pinus sylvestris* occurred in the south west corner of the site. A further tree line dominated by mature conifer trees occurred to the north of the site.



A single species-rich hedgerow (approximately 50 m long) occurred towards the east of the site linking the area of Scot's pine to the northern fence line adjacent to Rotherly Cottage. This comprised Hawthorn *Crataegus monogyna*, Dogwood *Cornus sanguinea*, Holly *Ilex aquifolium*, Privet *Ligustrum vulgare*, Yew and Hazel *Corylus avellana* all of which occurred along the majority of its length.

A small area of ephemeral/short perennial and tall ruderal habitat occurred adjacent to the northern boundary beyond the conifer tree line. Species present included Common teasel *Dipsacus sylvestris*, Creeping bent *Agrostis stolonifera* and Common nettle *Urtica dioica*.

Also included within the redline development boundary on the south side of Green Lane, a small area of coppiced plantation woodland occurred comprising Hazel and Cherry *Prunus avium*.

A detailed examination of the exterior and interior of Rotherly House identified numerous potential bat access points including missing bricks at the apex of the northern elevation and a range of other features. A brief inspection of the roof void behind these missing bricks identified the presence of bat droppings (around 1,000 in two distinct piles). As the ecologist undertaking the survey does not hold a suitable licence to enter roosts, the loft space was immediately vacated and the staff of the school informed regarding the implications of a roost in terms of avoiding non-emergency access.

Ecological constraints

The survey and background information supplied by HCC suggests that there are five potential ecological constraints to the development on site:

- Reptiles;
- Bats;
- White helleborines;
- Breeding birds; and
- Hedgerow.

Although relatively isolated in the wider landscape, the longer grass along the edge of the site has very limited potential to support reptile species such as Slow-worm and Common lizard *Zootoca vivipara*.

None of the trees on site had features, such as rot holes/cracks etc, that could support roosting bats. However, the initial inspection of Rotherly House identified the presence of a roost in the loft space facing the northern elevation. Given the location of the potential access point and the shape of the droppings identified, it is thought the roost may be used by Serotine bat *Eptesicus serotinus*.

Background information supplied by HCC identified the presence of White helleborine *Cephalanthera damasonium* in grassland within the main Westgate School to the south of Rotherly House, possibly originating from the Royal Winchester Golf Course SINC where a known population exists. This species is usually restricted to calcareous habitats, especially within Beech *Fagus sylvatica* woodlands. However, it may occur in any shady area on the correct soil type. Therefore, it is possible this species may occur under tree canopies in the grassland on site, particularly that in the east.

The hedgerows, woodland and scattered trees may support breeding birds, although is unlikely to support an assemblage of any importance, given the relatively small size potentially impacted by the development.

The species-rich hedgerow is covered by the UK and Hampshire Biodiversity Action Plans (BAP) for Hedgerows and is therefore of potential conservation significance in itself. However, the grass to either side of the hedgerow is close-mown with the hedgerow itself relatively isolated within the

landscape, only being linked to a significant linear feature at one end (the Scot's Pine woodland adjacent to Green Lane). Also, although species rich, it does not qualify as "Important" under the Hedgerow Regulations 1997 as it lacks sufficient associated features (ditches, banks, other hedgerows within 15 m etc).

Recommendations

All UK reptiles are protected by law. Therefore, although it is considered unlikely that reptiles would be present due to the isolated nature of the site, as a precaution to avoid killing or injuring to any animals during site preparation works, areas of long grass should be trimmed in two stages – once to 15 cm and then, after 24hrs, to the ground level, strimming towards the fence. This will allow any animals present to move away from the intended development site. Ideally, this would be undertaken when the air temperature was above 12°C to ensure reptiles were active enough to move.

Given the identification of a bat roost within Rotherly House, suitable surveys are recommended to determine the use of the site by bats. This would include a detailed internal inspection of the building by a suitably-licensed bat ecologist and follow-up emergence surveys. At least three such emergence surveys should be completed between May and September with two between May and August. Each survey requires ecologists with bat detection equipment to watch possible exit points on the building from around half an hour before dusk until at least 90 minutes after to identify the number and species of bat present.

White helleborine are visible from around mid May, flowering between May and July. Therefore, the potential presence on site of this species should be assessed by an experienced botanist during this period prior to site clearance, possibly at the same time as the bat emergence surveys are undertaken. If any flowering spikes are identified in habitats to be lost, a mitigation plan should be put in place to ensure the species is not lost from the site. This is likely to comprise marking the location of the plants and lifting the soil containing the White helleborine rhizome once the plants have finished flowering. Soil would then be transferred to a new, permanent location within a suitably-shaded area of new soft landscaping. As a calcicole, the soil in such an area should be chalk/limestone based.

The hedgerows and trees on site had the potential to support breeding birds. All birds and their nests are protected by law. Therefore, any vegetation clearance should be undertaken outside of the breeding bird season (generally March – September). Where this is not possible areas to be cleared should be checked by an experienced ornithologist before removal and if breeding birds are identified, the area would be left until breeding has ceased.

The species-rich hedgerow comes under the UK and Hampshire BAP habitat for hedgerows, recognising the importance of these features as part of the landscape green infrastructure. Although species-rich, the hedgerow is relatively short and does not provide a significant link within the landscape, being somewhat isolated and effectively stopping against the fence surrounding Rotherly Cottage to the north of the site. It is therefore not considered to be of particular ecological value. Notwithstanding this, due to their status as UK and Hampshire BAP habitats, it should still be retained within the final development and potentially enhanced, if possible. Such enhancement would comprise the retention of a buffer of around 1 m of longer grassland on either side of the hedgerow. If the removal of the hedgerow is unavoidable, at least an equivalent length of species-rich hedgerow should be planted within the final scheme in an appropriate location, preferably reinforcing the site boundaries.

It is suggested that the following further enhancements are included within the final development:

- The inclusion of a range of bird and bat boxes within the final development to increase nesting/roosting opportunities on site;
- Retention of long-grass margins to any amenity grassland to increase feeding/foraging opportunities for invertebrates and hence reptiles/birds/bats;



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- Provision of log piles, created from any tree clearance on site, within such long grass to provide habitat for a range of invertebrates and reptiles; and
- The use of native plant species or those with known wildlife benefit within any soft landscaping.

Conclusions

Overall, the habitats on site are considered to be of limited ecological value of themselves. However, the presence of a bat roost within Rotherly House is potentially locally significant as such sites are rare within an urban setting. Therefore, suitable surveys are recommended to fully assess the use of the site by bats.

A number of other ecological constraints were identified on site including breeding bird habitat, a species-rich hedgerow and the potential for White helleborine within shaded grassland. Recommendations are made to address these. Although unlikely to be present on site, recommendations are also made to ensure no reptiles are killed/injured during site clearance.

A range of ecological enhancements are suggested to increase the biodiversity value of the site post-development.

I hope the above is clear. Please do not hesitate to contact me if you have any questions/queries,

Yours sincerely
For RPS

DR NICHOLAS BETSON
Principal Ecologist





**WESTGATE SCHOOL,
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WINCHESTER, HAMPSHIRE**

BAT SURVEY REPORT

December 2012

Our Ref: JSL2055_872a

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EXECUTIVE SUMMARY

- RPS was commissioned by Hampshire County Council to undertake a detailed bat assessment of Rotherly House, part of Westgate School, Winchester, in order to help assess any potential impact on such species in relation to the re-development of the site. Proposals for the development of the site include extensive renovation and alterations of Rotherly House and the construction of a new primary school adjacent.
- A previous daytime bat assessment, carried out by RPS in September 2012, found evidence of roosting bats, as bat droppings were identified inside one of the main roof voids of Rotherly House. A follow-up detailed bat assessment was carried out by a licensed bat ecologist and emergence surveys were also undertaken in order to fully ascertain what species are present, the number of individuals roosting and the type of roost. The detailed internal and external inspection of the buildings found that only one roof void, the eastern most roof void of Rotherly House, had roosting potential. The two storey flat roof extension to the west of the building and the cottage (used as a children's nursery) have no bat roost potential. The western roof void of Rotherly house was close boarded throughout, well lit through dormer windows and unlikely to afford bat roosting potential.
- A detailed internal inspection of the eastern loft void of Rotherly House identified approximately 1,000 Serotine *Eptesicus serotinus* bat droppings present. These were identified in two specific areas with the roof void, a collection of approximately 300-400 droppings (predominately old) on a floorboard underneath the apex and a collection of approximately 500-600 droppings (predominately old, occasional fresh) present at the northern elevation of the chimney breast. A hole in the brickwork was noted at the eastern elevation and this was identified as the likely entrance/exit based on the fact there was urine staining and a couple of bat droppings stuck to the wall beside the hole. The roost was indicative of either a long-term solitary roost or a roost for a small number of Serotine bats.
- The follow-up bat surveys in September identified no bats emerging from the building. Common Pipistrelles *Pipistrellus pipistrellus* were recorded in the surrounding area and occasional distant passes of Soprano Pipistrelle and Serotine bat were recorded.
- Based on the results of the internal and external surveys and the emergence surveys, the building is likely to be used, or have been used in the past, by a low number of Serotine bats as a summer roosting site. There is potential for the building to be used intermittently in the autumn prior to hibernation or in the spring as a transient roosting site. An Anabat (SD2) was placed inside the roof void in order to remotely record bat activity. The Anabat was left *in situ* to record ultrasound between 8th October 2012 and the 20th November 2012 and no bat activity was recorded. The internal temperatures of the building in the winter (as a consequence of the schools central heating) would not favour suitable bat hibernation conditions.
- Therefore, it should be considered that the building is a bat roost and works to the building may require an EPS licence from Natural England. However, if the proposed renovation / alteration works to the building are timed to avoid impacts to the roost when bats are present (i.e. take place during late autumn/winter) such a licence is unlikely to be necessary.

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- The construction of a new school building provides opportunity for bat enhancements measures, which are discussed further in Section 5 of this report.

1 INTRODUCTION

Background to the Study

- 1.1 RPS was commissioned by Hampshire County Council (HCC) to undertake a detailed bat assessment of Rotherly House and associated buildings, within the grounds of Westgate School, Winchester, in order to help assess any potential impact on such species in relation to the re-development of the site.
- 1.2 Proposals for the development of the site include the demolition of the two storey flat roof extension to the west of Rotherly House, demolition of the cottage (currently used as a nursery) and the removal of some trees and vegetation. A new primary school will then be constructed in its place with associated landscaping, retaining Rotherly House as a component building within the new school. Rotherly House is currently used as a boarding house for the existing school.
- 1.3 A previous daytime bat assessment, carried out by RPS on 6th September 2012, found evidence of roosting bats. It was recommended to HCC by RPS that a detailed bat assessment was carried out by a licensed bat ecologist and emergence surveys were carried in order to fully ascertain what species are present, the number of individuals roosting and the type of roost present.

Study area

- 1.4 The site is situated within the grounds of Westgate School, Cheriton Road, Winchester, Hampshire, OS Grid Reference SU 468 301. Rotherly House is a large, two storey brick building with a pitched tiled roof and has had a number of extensions added since it was first built. It is surrounded by short-mown amenity grassland, hedges and mature trees. The surrounding area comprises residential houses and gardens, with Royal Winchester Golf Club further to the west.

Aims and objectives

- 1.5 The aims of the bat surveys were to carry out a detailed bat assessment. The study aimed to determine the potential impacts (if any) of the development by establishing:
- The number of buildings and trees within the development footprint used by roosting bats;
 - the general level of bat activity on the site,
 - the range of species using the site; and,
 - the best course of action to minimise the impacts of the development on the local bat population.

Legislation

- 1.6 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. All bat species are also included on Schedule 2 of the Conservation of Species and Habitats Regulations 2010. Taken together, these pieces of legislation make it an offence to:

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- Intentionally or recklessly kill, injure or capture bats;
 - Deliberately or recklessly disturb bats (whether in a roost or not); and
 - Damage, destroy or obstruct access to bat roosts.

1.7 A roost is defined as 'any structure or place which [a bat] uses for shelter or protection'. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of survey.

1.8 Barbastelle Bats *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteinii*, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum* and Lesser Horseshoe Bat *Rhinolophus hipposideros* are also listed as being species of principle importance to the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities Act 2006.

2 METHODS

Internal inspection

- 2.1 A daytime inspection of Rotherly House was initially carried out on 6th September 2012 by a suitably-qualified ecologist, Dr Nicholas Betson MIEEM CEnv.
- 2.2 Following the identification of bat droppings within the loft space a further inspection was carried out by a licensed bat ecologist, Dr Stephanie Murphy (NE Licence number 20121691) on the 17th September 2012, a suitable time of year for this type of survey. Full access was available to the entire building. In addition 'the cottage' and all trees within the site boundary were subject to a detailed inspection for bat roost potential by Dr Stephanie Murphy on the 8th October 2012.
- 2.3 The interior of the loft space was surveyed using a high-powered torch to illuminate all areas thought to be suitable for roosting bats. All surfaces within the loft space were also surveyed for signs of bat presence.
- 2.4 An external search around the perimeter of the buildings was also conducted and any possible access points (i.e. gaps and crevices) were noted and surveyed with the high powered torch.
- 2.5 Features of potential value to bats were surveyed not only for the presence of bats but also for signs that could indicate use by bats, such as:
 - bat droppings that are dry and do not putrefy, but can crumble away to dust;
 - staining of access points used by bats to enter the structure; and
 - feeding remains such as moth and butterfly wings.
- 2.6 The trees within the site boundary were assessed as having the potential to support bats roosts if they had obvious holes, cavities or splits, particularly if there was dark staining on the tree below the hole caused by the natural oils in the bats' fur, scratch marks around the hole or droppings below.
- 2.7 The individual surveyor's experience was used to assess potential roost sites that were within reach – for example holes which were full of water were unlikely to be used by roosting bats, as were holes positioned low down on the trunk or holes that were exposed to the elements.
- 2.8 Binoculars (Swarovski SLC) and a powerful torch (Cluson CB2) were used to examine the trees from the ground, to search for potential roosting places for bats. An endoscope (ProVision 2200) was available to examine accessible cavities, where applicable.
- 2.9 Trees that were assessed as having the potential to support bat roosts were recorded and assessed into one of four categories for roosting potential; high, medium or low potential to support bats
 - High - trees with definite signs of roosting bats such as droppings, scratch marks and/or staining.

- Medium - trees with holes, cracks or crevices that appear to provide potential roosting sites but no evidence located.
- Low - trees with small cracks, peeling bark, or holes but which are considered unlikely to provide roost habitat, often because the tree is too small.
- No – trees with smooth bark and no cracks, crevices or peeling bark that would afford bat roost potential.

2.10 Further survey requirements for each tree was assessed; i.e. whether any suitable crevices or holes in those suitable trees needed specialist climbing equipment or, alternatively, could be checked by using a tall ladder.

Emergence surveys

2.11 Two dusk emergence surveys were carried out on the 12th and 17th September 2012 in appropriate weather conditions following standard guidelines (Hundt 2012) and when bats are likely to be active.

2.12 Observations were made outside the building from where it was considered bats might emerge (see Figures 3.1 – 3.2). The dusk survey commenced approximately 15 minutes before sunset, and lasted for approximately 90 minutes, the optimum time for bats to emerge from a roost, in order to record any bats that may emerge from the building.

2.13 A combination of time-expansion bat detectors (Pettersson D 240x) and frequency division detectors (Batbox Duet) were used to record bat echolocation calls of any emerging bats and identify species where possible.

2.14 All bat passes were noted, and all bats were identified to species level, when possible, on site. Echolocation calls were also recorded onto MP3 (Edirol RH-09) and subsequently analysed using computer software BatSound, that facilitates species identification. Where possible additional notes on size, flight height, type of flight (such as commuting, foraging, fast or slow) and direction of flight were also recorded.

2.15 Two bat surveyors carried out the survey on the 12th September 2012 and three bat surveyors carried out the survey on the 17th September 2012.

Automated Ultrasound Recording

2.16 An Anabat (SD2) was placed inside the eastern roof void to remotely record bat activity in order to ascertain where the building may be used intermittently as a transient roost prior to hibernation. The Anabat was placed beside the chimney breast on the 8th October and was removed on the 20th November 2012, once night temperatures had reached freezing and bats would have likely commenced hibernation.

Constraints

2.17 Bats are difficult to locate in large structures, with so many potential roosting areas, finding the exact roosting site can be difficult, especially male/single bat roosting sites.

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- 2.18 Bats can have seasonal use of buildings and being so mobile may arrive and start using a site after it has been surveyed, or roost somewhere else during the period it was surveyed.
- 2.19 The BCT bat survey guidelines (Hundt 2012) indicates that three bat emergence surveys should be carried out in order to identify important roosting sites for bats and that at least one of these surveys should be conducted between mid-May and August, As the roost was not found until September, only two emergence surveys have been carried out. As no bats were found to have emerged after two visits in September (see results below), it was considered likely that either the bats no longer use the building or they don't use the building late in the summer.

3 RESULTS

Internal survey

- 3.1 The western most section of the building consists of a flat roof with no internal loft space. The eastern section of the building has a pitched tiled roof constructed in a 'U' shape. The loft of this eastern section has partially been converted into storage rooms with windows, with two separate areas left as open loft space. The two separate loft spaces were inspected.
- 3.2 The western most loft space was partially boarded on the floor and had wooden boarding across the roof. No evidence of bat activity was identified in this section.
- 3.3 The eastern most section had roofing felt under the roof tiles, but no wooden boarding was present. There was no loft insulation on the floor but scattered vermiculite was present throughout. A detailed internal inspection of the eastern loft void of Rotherly House identified approximately 1,000 Serotine *Eptesicus serotinus* bat droppings present. These were identified in two specific areas with the roof void, a collection of approximately 300-400 droppings (predominately old) on a floorboard underneath the apex (Plate 1) and a collection of approximately 500-600 droppings (predominately old occasional fresh) present at the northern elevation of the chimney breast (Plate 2). A hole in the brickwork was noted at the eastern elevation and this was identified as the likely entrance/exit based on the fact there was urine staining and a couple of bat droppings stuck to the wall beside the hole (Plate 3). There was also evidence of bird excrement at this location.

Plate 1: Collection of bat droppings underneath apex (indicated by red arrow)



Plate 2: Collection of bat droppings adjacent to the chimney breast (indicated by red arrow).



Plate 3: Potential roost exit / entrance location on eastern gable wall.



3.4 The roost was indicative of either a long-term solitary roost or a roost for a small number of Serotine bats. It is unlikely that a large maternity roost was present otherwise a greater number of droppings would have been present and distributed at additional locations, as opposed to the two concentrated areas of droppings

3.5 The interior of the cottage building was inspected via a loft ladder. The loft space measured approximately 0.5 metre to the apex so it was no possible to physically access the roof void. The cottage roof void is heavily insulated with fibreglass insulation and no evidence of bat droppings or potential bat access points were noted internally.

External Survey

3.6 The western section of Rotherly House consisted of a two storey brick building with a flat felt roof. No gaps or features were present which were considered suitable for use by roosting bats.

- 3.7 To the south of the main building was a single storey brick extension. This had a pitched tiled roof. No gaps or features were present which were considered suitable for roosting bats.
- 3.8 To the north of the main building was a second single storey brick extension with a flat felted roof. No suitable features for roosting bats were identified.
- 3.9 The eastern section of the main building was two storeys in height, brick built with a multiple pitched tiled roof. On the eastern side of this section was a gable wall with a hole at the apex and evidence of staining on the wall (corresponding to the potential entry/exit point identified during the internal survey). Further along the eastern wall, a hole was noted under the soffits. A bird's nest was observed inside the hole. On the northern aspect of this section of the building some lead flashing had lifted next to a window. In the south-west corner gaps were seen by the soffits and mortar was missing between some bricks. Most of the gaps had cobwebs over them, although some were clear. At the south-eastern corner of the building a gap was noted between the soffit and wall at the apex of the roof.
- 3.10 No potential access points were noted externally on the cottage. The brick work was intact and the soffits and roof tiles were all in a good state of repair,

Tree Assessment

- 3.11 All trees on site were classified as having no bat roost potential.

Emergence surveys

- 3.12 Two emergence surveys were carried out on Rotherly House. Details of weather conditions during the surveys are presented in Table 3.1.

Table 3.1: Weather conditions during emergence surveys.

Date	Sunset	Start/finish	Weather conditions
12.09.12	19:26	19:15/20:52	90% cloud, light breeze, dry, 13°C
17.09.12	19:15	19:10/20:58	100% cloud, light wind, dry 18°C

Bat emergence survey 12th September 2012

- 3.13 Two surveyors (positions shown in Figure 3.1) surveyed opposite elevations of the building. Surveyor 1 covered the western side of the main building and southern elevations and Surveyor 2 covered the eastern side of the building.
- 3.14 No bats were seen to have emerged by either surveyor from the building during the emergence survey.
- 3.15 Overall there was a moderate level of bat activity in and around the site.
- 3.16 Between 19:43 and 20:49 a total of nineteen Common Pipistrelle *Pipistrellus pipistrellus* bat passes were recorded. The majority of these were heard but not seen by either surveyor. Four bats were seen to fly along the tree line to the south of the building and in and around where Surveyor 1 was positioned, and two flew around the trees to the north-east of the building.

3.17 No further bat activity was recorded and the survey was terminated at 20:52 due to the start of heavy rain.

Bat emergence survey 17th September 2012

3.18 Three surveyors (positions shown in Figure 3.2) surveyed the north, south and eastern elevations of the building. The western elevation was not surveyed as the flat roof extension was deemed unsuitable for roosting bats in the daytime assessment.

3.19 Surveyor 1 covered the western side of the main building and southern elevations, Surveyor 2 covered the eastern side of the building and Surveyor 3 covered the northern side of the building.

3.20 No bats were seen to have emerged by any of the surveyors from the building during the emergence survey.

3.21 Surveyor 1 recorded a Common Pipistrelle bat flying along the long the southern site boundary from the east of the site at 19:30. Between 19:52 and 20:42 intermittent Common Pipistrelle foraging activity was recorded in the garden to the west of the site. Surveyor 1 recorded a distant Serotine bat at 20:48

3.22 Between 19:47 and 20:51 a total of 13 Common Pipistrelle bat passes were recorded by surveyor 2. These were all heard but not seen.

3.23 Surveyor 3 recorded a Common Pipistrelle that flew from the west of the site foraging alongside the northern site boundary. Distant Common Pipistrelle and Soprano Pipistrelle bats were recorded between 19:22 and 19:52. Between 19:52 and 19:59 a Common Pipistrelle bat was recorded foraging alongside the northern hedgerow of the site. Feeding buzzes were recorded.

3.24 Two distant Serotine bat passes were recorded at 20:04 and 20:09 respectively.

3.25 At 20:29 two Common Pipistrelle bats were recorded flying in unison alongside the northern site boundary.

3.26 No further bat activity was recorded and the survey was terminated at 20:58.

Automated Ultrasound Recording

3.27 An automated ultrasound recording device, Anabat SD2, left *in situ* to remotely record bat activity within the loft between the 8th October 2012 and the 20th November 2012 did not record any bat activity.

4 EVALUATION

- 4.1 The surveys were conducted at a time of year when bats are active and the weather conditions suitable, and any bats, if present, should be identifiable. However, the surveys were undertaken quite late in the active bat season and any bats using the building as a summer roosting site may have already left the building to move to an alternative transient roost prior to hibernation.
- 4.2 Evidence within the loft void indicated that it is used or has been used in the past either by a solitary single male Serotine bat or a low number of female Serotine bats. If a large maternity roost was present a greater number of droppings would have been present distributed throughout the roof void.
- 4.3 One species of bat, Common Pipistrelle, was recorded foraging and commuting across the site and distant calls of Soprano Pipistrelle and Serotine bat was recorded during the emergence surveys.
- 4.4 There is potential for the building to be used intermittently in the autumn prior to hibernation or in the spring as a transient roosting site. However, an Anabat (SD2) was placed inside the roof void in order to remotely record bat activity did not record any such evidence during autumn/early winter.
- 4.5 Also, the internal temperatures of the building in the winter (as a consequence of the schools central heating) would not favour suitable bat hibernation conditions. Therefore, it is considered the site is highly unlikely to be used as a hibernation roost.
- 4.6 The proposed works to Rotherly House may impact on the roost of Serotine bats. The proposed school renovation / alteration and adjacent building works will not result in the loss of the roosting site but may disturb roosting bats. Section 5 of this report outlines some preliminary recommendations to avoid such disturbance.
- 4.7 Moderate levels of Common Pipistrelle activity were recorded on both surveys but were not observed emerging from the house. This species is unlikely to be affected by the development proposals as the new school will still support features likely to be of value to foraging bats such as long grass margins, tree lines and hedgerows.

5 CONCLUSIONS AND RECOMMENDATIONS

- 5.1 Based on the results of the internal and external surveys and the emergence surveys, the building is likely to be used, or have been used in the past, by a low number of Serotine bats as a summer roosting site.
- 5.2 Therefore, it should be considered that the building is a bat roost and proposed works to the building may require a European Protected Species (EPS) licence from Natural England.
- 5.3 Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010, (which make it illegal to intentionally kill, injure or otherwise disturb bats, or to damage, destroy or obstruct access to a bat roost, whether bats are present or not).
- 5.4 However, if the work can be timed or controlled to ensure there is no negative impact on bats then a licence may not be required.
- 5.5 As the Rotherly House building is to be retained within the new school, there will be no direct loss of the roost identified here.
- 5.6 Providing that the works to incorporate Rotherly House into the new primary school are carried out at a sensitive time to avoid disturbance to bats (i.e., late autumn and winter when survey data has shown the building to not be in current use), and the existing roof void is maintained in its current form as a roosting site throughout the spring and summer (including all access points and flight lines approaching the access), then it is anticipated that a Natural England EPS licence will not be required.
- 5.7 The following recommendations are made to help further ensure the development does not adversely impact bats:
- As a condition of planning, a Method Statement should be produced and agreed with the planning authority ecologist, which details the timing of the works, habitat enhancement measures and timetable for works to the building, to ensure that no bats are injured or harmed during the proposed development of the site.
 - Remote automated ultrasound monitoring should be re-commenced in the spring (beginning of March through to May) in order to ascertain whether Serotine bats use the building intermittently at this time. This information will assist in producing a detailed Method Statement which provides information on the likely times of year that the building is used and when works can or cannot proceed and whether a Natural England licence will be required for works during that time.
 - A further three summer emergence surveys should be carried out between mid-May and August 2013 to ascertain if the building is still used as a summer roosting site.
 - Regardless of the outcomes of any additional survey works to refine timing, a pre-construction survey of the loft area supporting the roost should be carried out, prior to carrying out any of the proposed works to provide a baseline against which post-construction monitoring can be undertaken.

-
- The installation of at least three bat boxes (Schwegler 2FF and Schwegler 2FN woodcrete boxes) on retained trees along the northern and southern site boundary (furthest away from noise and disturbance) will provide alternative roosting habitat during the works for any bats, in the unlikely event that they are encountered. It is also recommended that at least three bat bricks are incorporated into the new school building to provide additional roosting enhancements for the Common Pipistrelle bats present on site. This mitigation and enhancement measures for the site should be set out within the Method Statement.
 - Before commencing any work on site, builders and contractors should be inducted by a licensed bat ecologist to make them aware of the possible presence of bats, their legal protection and of working practices to avoid harming bats. A copy of the Method Statement should remain available on site at all times and a summary sheet of guidance given to each builder and contractors working on the structures.
 - Post-construction monitoring comprising a repeat of the internal inspection of the roost should be undertaken followed by at least one suitable emergence survey. All data should be provided to the Hampshire Bat Group.

6 REFERENCES

Hundt L. (2012) *Bat surveys: Good practice guidelines 2nd Edition*. Bat Conservation Trust.

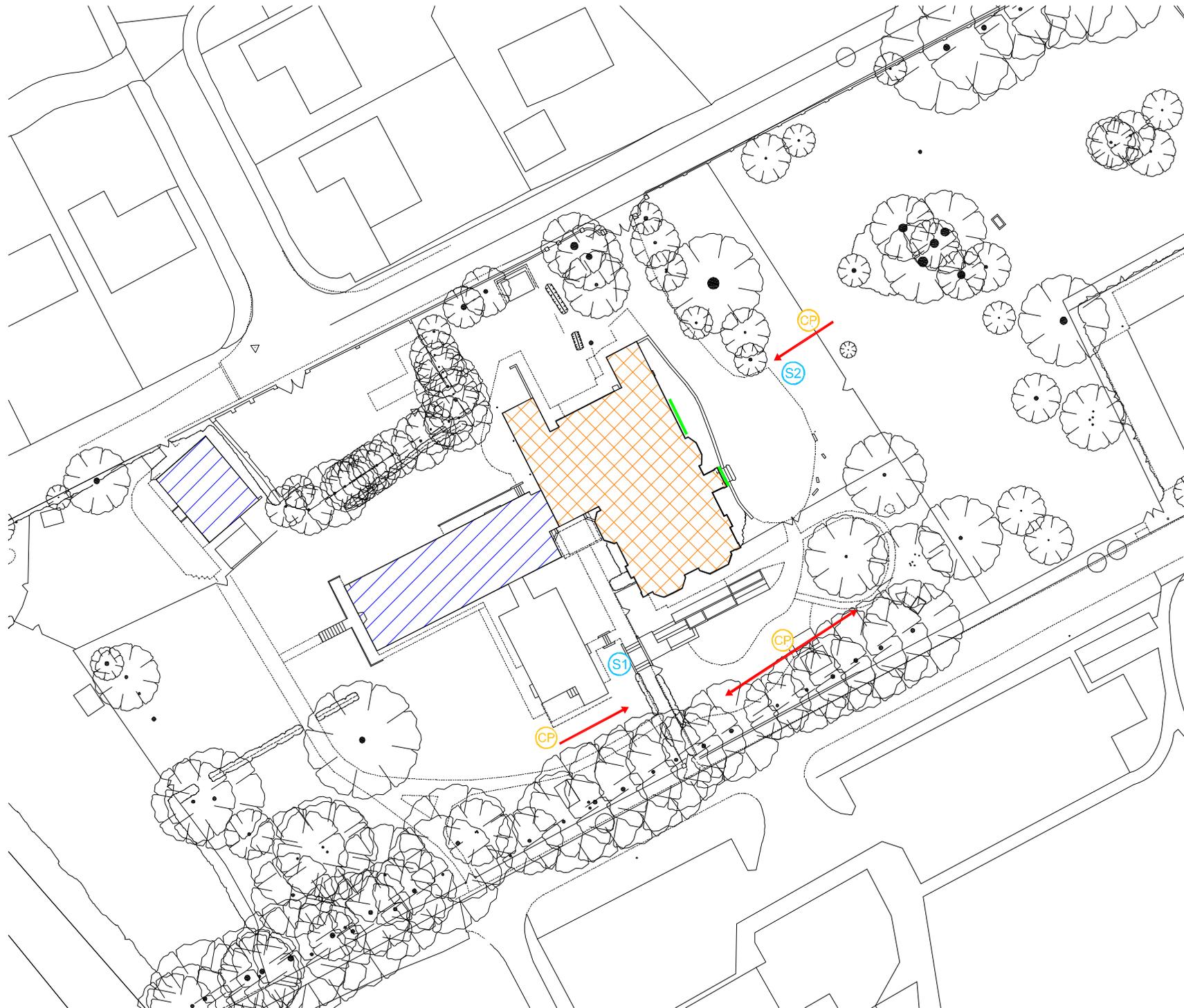
FIGURE 3.1

Notes

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KEY

-  Surveyor location
-  Direction of flight
-  Common Pipistrelle
-  Confirmed roost building
-  No bat roost potential
-  Potential roost exit/entrance



Rev	Description	Date	Initial	Checked



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Title Bat Emergence Survey Results
12th September 2012

Status	Drawn By	PM/Checked by
Information	SH	NP
Job Ref	Scale @ A4	Date Created
JSL2055	NTS	11/2012

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FIGURE 3.2

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KEY

-  Surveyor location
-  Direction of flight
-  Common Pipistrelle
-  2 No. bats observed
-  Feeding Buzz
-  Confirmed roost building
-  No bat roost potential
-  Potential roost exit/entrance



Rev	Description	Date	Initial	Checked



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17th September 2012**

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Information	SH	NP
Job Ref	Scale @ A4	Date Created
JSL2055	NTS	11/2012

Figure Number	Rev
3.2	-