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Hackness Church of England Primary School, Hackness

Ecological Scoping Report

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Contents

1 Executive Summary

An ecological scoping survey of the proposed Hackness Church of England Primary School site was undertaken on the 23rd July 2009. During this survey all the habitats in the study area were mapped and the potential for these habitats to support protected species was noted.

The habitats recorded within the study area were of severely limited botanical value. Additional features, such as the existing school buildings, were identified as having high suitability to support bat roosts and breeding birds.

As such it is recommended that a further bat survey be carried out prior to works commencing. In addition, it is recommended that a watching brief be carried out should removal of or intrusion into any parts of the roof take place during refurbishment/reconstruction of the school building.

2 Introduction

2.1 Background

Jacobs UK Ltd was commissioned by North Yorkshire County Council to carry out an ecological scoping survey of the Hackness Church of England Primary School site, in Hackness, near Scarborough. The existing primary school is subject to proposed re-development that will involve an extension to the existing structure.

The centre of the study area is situated at grid reference SE 968 905.

The purpose of the scoping survey was to determine the presence, or likelihood, of protected species or habitats that may pose constraints upon development of the site. Advice and recommendations will be given regarding further survey requirements to quantify these identified constraints, and to advise, where possible, on how to mitigate for any negative effects in relation to the development.

For the purposes of this report protected species are defined as those protected via statute or listed as "Priority Species" on the UK Biodiversity Action Plan. A summary of legislation for key receptors is included in Appendix D.

The survey was carried out by a Jacobs' ecologists on 23rd July 2009 during which areas and species of note were recorded.

3 Methodology

3.1 Preliminary Desk Study and Consultation

A desk study was undertaken to obtain ecological information about the study area and surrounding landscape. This study was designed to identify any statutory and non-statutory sites of nature conservation interest, to identify records of protected species/habitats and any other ecological information held by third parties, which may be of relevance.

The following consultees and web resources were used:

- North & East Yorkshire Ecological Data Centre (NEYEDC);
- The Multi-Agency Geographical Information for the Countryside website; (www.magic.gov.uk);
- Natural England 'Nature on the Map' (www.natureonthemap.org.uk/), and;
- National Biodiversity Network Gateway (www.nbn.org.uk).

3.2 Scoping Survey Methodology

The site was surveyed on foot and all habitats were mapped according to the Handbook of Phase 1 Survey (JNCC, 1998). Specific points of interest are identified on the plan as numbered "Target Notes" (TN).

Any direct signs or observations of protected species, or the potential presence of protected species based on habitat suitability was also recorded.

Assessment of the buildings for bat potential was carried out with regard to the guidelines outlined by the *"Bat Conservation Trust Bat surveys: good practice guidelines (2007)"*. All features suitable for use by bats, were examined from ladders using torches and from ground level, using binoculars, and assessed for their potential to support roosts.

Each potential roost site was given a value on a scale of 'high', 'medium' or 'low', according to the features present. These terms are defined in Table 1 below.

Table 1 Potential Roost Site Assessment

Main Category	Sub Category	Category Description	Indicators
1 (Roost)	A	Direct evidence of current use by bats.	• Sighting/hearing of bats (including emergence). OR • Presence of fresh droppings/staining.
	B	Evidence of recent use by bats.	• Small numbers of old droppings/old staining, smoothing and/or scratch marks and lack of cobwebs. OR • Anecdotal record of bat roost e.g. from land owner.

Main Category	Sub Category	Category Description	Indicators
2 (Potential Roost)	A	High potential to support bat roost(s)	• Trees: Presence of cracks, splits, knot holes, loose bark, woodpecker holes, snag ends and other hollows etc. • Buildings: Presence of gaps, cracks, loose tiles, holes in roof, loose boards and potential access points. • Un-obstructed flyways. • Low disturbance levels. • Situated within or near to woodland, parkland or next to water bodies, buildings (i.e. potential foraging and roosting habitat). • Well connected to wider landscape through presence of continuous linear features such as hedgerows, watercourses, farm-tracks etc.
	B	Moderate potential to support bat roost(s)	Some of the above features but considered to be less suitable on account of age, location and disturbance levels.
3 (No/Low Roost Potential)	n/a	No or low potential to support bat roost(s)	• Limited suitable roosting features: • Exposed roosting features e.g. open to wind/rain. • High levels of regular disturbance e.g. from lighting. • Isolated from suitable foraging habitat & commuting features

It should be noted that site conditions can change over time with the inward and outward movement of species. Therefore, this report and its recommendations are a reflection of the site conditions on 23rd July 2009.

4 Results

4.1 Internet Search

Online resources revealed that there are 3 nationally designated areas within a 2km radius of the study area. These sites are:

- Hackness Rock Pit Site of Special Scientific Interest (SSSI), which is approximately 280m west of the site;
- Hackness Head Quarry SSSI, which is approximately 250m south-west of the site; and,
- Cockrah Wood SSSI, which is approximately 2km south of the site.

There were no Sites of Importance for Nature Conservation (SINCs) and no Yorkshire Wildlife Trust Reserves within the 2km search boundary.

4.2 Consultation

The information provided in Table.2 summarises the most recent protected species data within the 2km search area received from the NEYEDC.

Table 2. Consultation Data.

Location	Grid Ref.	Species	Common Name	Year
Hilla Green	SE99R	*Alcedo atthis*	Kingfisher	2003
North Yorkshire	SE99	*Falco columbarius*	Merlin	1965
Wykeham Forest	SE99R	*Fringilla montifringilla*	Brambling	1990
Wykeham Forest	SE99R	*Loxia curvirostra*	Crossbill	1990
North Yorkshire	SE99	*Plectrophenax nivalis*	Snow Bunting	1967
Nr Hackness (d/s tributary)	SE9660 8980	*Austropotamobius pallipes*	White-Clawed Crayfish	2001
Hackness	SE9590	*Anguis fragilis*	Slow-Worm	1974
Wykeham Forest	SE99R	*Lacerta vivipara*	Vivaparous Lizard	
Wykeham Forest	SE99R	*Vipera berus*	Adder	1990
Wrench Green	SE967892	*Arvicola terrestris*	Water Vole	1999
Hilla Green	SE948901	*Lutra lutra*	Otter	2004
Hollgate Plantation	SE95059122	*Meles meles*	Badger	2002
No site name	SE955890	*Nyctalus noctula*	Noctule Bat	1980
Yorkshire	SE98	*Pipistrellus pipistrellus*	Pipistrelle Bat	1979
Yorkshire	SE99	*Pipistrellus pygmaeus*	Soprano Pipistrelle Bat	2002
No site name	No grid ref	*Plecotus auritus*	Brown Long-Eared Bat	2002
No site name	No grid ref	*Vespertilionidae*	Vesper's Bat	2002

4.3 Site Description

The site is approximately 0.05ha in size and comprises the existing school buildings, playgrounds and recreation areas. There is a grassed area used for soft-play on the other side of the road which is distinctly separate from the site where development is proposed.

The school (Picture 1) comprises former Victorian school buildings and an adjoining toilet block to the rear. The original school is single storey U-shaped building with pitched roofs. The eastern, multi-purpose wing of the school and the Key Stage 1 & 2 classes have particularly high vaulted ceilings which are obscured internally by suspended ceilings and above these, earlier cladding (Picture 2). The modern toilet block to the rear of the main school comprises a flat roof fitted with skylights. The western wing of the school comprises a twin pitched roof covering the kitchen, entrance hallway and staffroom.

The school buildings are surrounded by hard standing. Floral species present were limited to plants such as ivy-leaved toadflax *Cymbalaria muralis*, hart's-tongue fern *Asplenium scolopendrium* and Buckler fern *Dryopteris sp.* that are commonly found growing on walls. Some immature self-set ash *Fraxinus excelsior* and sycamore *Acer pseudoplatanus* were noted next to the heating oil tank to the rear of the school along with occasional broad-leaved willowherb *Epilobium montanum*, hawkweed *Hieracium agg* and greater plantain *Plantago major*. Some boxes have been planted up at the east side of the school which contained common cultivars including pansy *viola sp.*, primrose *Primula vulgaris*, columbine *Aquilegia vulgaris* and lavender *Lavandula sp.*, in addition to garden vegetable, salad and herbs such as broad bean *Vicia faba*, 'Tumbling Tom' tomato and mint *Mentha sp.*

4.4 Protected Species Potential

Legislation details for each species can be found in Appendix D.

4.4.1 Badgers

No field signs indicative of badger activity were found with in the study area. The study area is wholly unsuitable as foraging or sett building habitat being comprised completely of hard surfaces.

4.4.2 Bats

The entire school building was assessed externally and internally for its potential to support bat roosts. The pitched roofs were in good condition with only small gaps noted to the mortar used to bed the ridge tiles on the west facing roof pitch (Target Note 1). Louvres (Picture 3) covering the ventilation slots at the gable ends of the Key stage 1 & 2 building provide possible entry points for bats with gaps in mortar above the western facing louvre (Target Note 10). These features offer medium potential to support bats particularly as they lie in close proximity to other features offering high potential. Several features were noted to the top of the wall opposite the main entrance to the school (Target Notes 3, 4 & 5, Picture 4) where gaps were present between the top of the wall and the roofing felt and under the roof timbers that support the wooden guttering. The north-west corner of the eastern wing has a gap at the top of the wall under which were found bat droppings, believed to be Pipistrelle, sticking to the wall as well as several droppings caught in cobwebs just below the top of the wall. The eastern side of this wing of the school also contained gaps below where roof timbers rest on the wall. Using the criteria set out in Table 1,

the eastern wing of the school was assessed as having high bat roosting potential. Although the internal inspection of the wing revealed cladding it is believed that there is a space between this and the roof tiles above. A small gap was also noted at the top of the wall to the rear of the school near the boiler house but this was heavily cobwebbed and felt to be a feature of low potential. The flat roofed toilet block presented no suitable features and was of sound construction. The internal inspection of the roof voids above the suspended ceilings throughout the school revealed no features suggestive of or suitable for, bats.
The Head Teacher Mrs Wilkinson reports that bats were seen in the area of the eastern wing as recently as three years ago including the finding of a juvenile. Field signs noted during the survey would seem to confirm that bats may still be present within the roof.

Foraging opportunities for bats exist nearby in the form of extensive woodlands such as Hackness Head Wood to the west, Greengate Wood to the east and Bellheads Wood to the north. The adjacent church may also offer suitable roosting habitat.

4.4.3 Birds

During the walkover survey crow (*Corvus corone corone*), magpie (*Pica pica*), green woodpecker *Picus viridis* and wood pigeon (*Columba palumbus*) were recorded.

No nesting opportunities for birds were noted within the study area other than the small gaps discussed previously in relation to bats which are felt to be insufficiently large enough to offer suitable nesting sites. Other evidence of birds such as nesting material or droppings below any openings was also not in evidence.

4.4.4 Amphibians

There is no potential for amphibians to be present within the study area, due to the absence of terrestrial habitat or artificial features such as ornamental ponds that could potentially be used by breeding amphibians. Therefore, no further amphibian surveys are required.

4.4.5 Reptiles

No signs of any reptile species were observed during the site walkover and the site holds no suitable habitat for reptiles. For these reasons, no further surveys are required.

5 Recommendations

In light of the survey and desktop search, and following best practice guidelines (Bat Conservation Trust, 2007) the following recommendations are made. The occurrence of potentially suitable features for bats was high and the presence of bats is felt likely. Further bat surveys are therefore recommended to establish whether bats are currently roosting with the school building.

Planning Policy Guidance 9 on Nature Conservation states **"the presence of a protected species is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in harm to the species or habitat. Local authorities should consult Natural England before granting planning permission. The local planning authority should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the protection of the species.**

It is important to note that best practice guidance from DEFRA and Natural England recommends that detailed protected species surveys (including bats) should be carried out before the submission of a planning application given that they are a material consideration.

It is recognized that due to planning constraints a planning application will be submitted prior to full bat surveys being completed. Therefore this Scoping Report includes a mitigation section based on the assumption that a bat roost is present in one or more of the school buildings, as indicated by positive results for presence of bats discovered during external and internal inspections of the buildings. The mitigation measures proposed are thorough and should adequately compensate for the loss of any roost sites that are found during the follow-up bat activity and emergence/dawn swarming surveys. Specific mitigation measures may need to be adjusted to reflect the results of these surveys, in particular on the basis of the species found or the importance of the roost.

Natural England if consulted may ask that determination of the planning application does not take place until more definitive bat surveys have been undertaken. This would have the effect of delaying the submission of the planning application until end-July 2010, which is the earliest period the three follow-up bat surveys would be completed.

If the mitigation measures suggested in this report are fully implemented then it is considered that any bat populations on the site are likely to be maintained at a favourable conservation status. This is one of the key tests for Natural England granting a licence to disturb bats or destroy a bat roost – such a licence would be required if bats are subsequently found to be using the buildings on the site. Natural England are not obliged to issue a licence to disturb a bat roost, even if planning permission is given, and will only do so if they think the mitigation measures are robust enough to ensure the long term survival of the bat colony.

5.1 Bat Surveys

As bats and their roosts are protected via domestic and European legislation it is essential that further information is gathered on the use of the study area by bats to

determine its importance for this group of species. In general terms bat flight lines across the site should also be determined to assess the potential for the development to interrupt established flight lines to the wider landscape. Should a bat roost be found then this information would be used to inform a Natural England licence application and include details of mitigation proposals for the site.

Bat surveys for the site should involve three surveys of the buildings with at least one of the surveys comprising a combined dusk emergence and dawn re-entry survey. The survey should be conducted with a minimum of four surveyors to ensure complete coverage of all the potential access points.

Ideally, bat surveys should be carried out at the appropriate time of year, which is May to September (optimum period June to August inclusive) according to Bat Conservation Trust (BCT) best practice guidelines. Therefore, if possible, emergence surveys should be carried out within this period to best establish the use of this building by bats.

5.1.1 Bat Mitigation Proposals

To mitigate for the loss of any potential roost then the following mitigation measures will be implemented:

- Bat emergence/entry points to roosting sites in existing roof spaces will be recorded during further bat surveys. Where these features will be altered in order to renovate the roofs of existing school buildings new features will be included in the new roof design to replicate as closely as possible the previous bat roost emergence/entry points;

- Bat boxes of the Schwegler 1FF type will be fitted to suitable locations on existing school buildings site to provide additional roosting opportunities. Approximately 2-4 of each will be used and mounted to existing buildings a minimum of 3m from the ground and with clear flightlines to and from them;

- No additional lighting of the site will be installed this would maintain existing suitable conditions for roosting bats on site. This is especially important around potential roost entrances and bat boxes to ensure that bat are not deterred from using them.

- The bat boxes will be checked once a year to determine whether bats are using them and bat activity over the site will be monitored twice a year, for 3 years after completion.

5.1.2 Impact on Project Programme (Licensing)

Should bats be found to be occupying eaves within the school, an appropriate mitigation strategy will be required. Details will be included in an application to Natural England for a European Protected Species (EPS) Licence under the Conservation (Natural Habitats &C) Regulations, 1994 (as amended). The licence application will need to include a copy of the planning permission for the works and will take approximately 6 weeks to be determined. Therefore, sufficient time for obtaining the licence should be included into the project programme once planning permission has been granted. Mitigation proposals suggested in 5.1.1 should be reviewed prior to the submission of the licence application to ensure they remain appropriate to the level of bat activity recorded during the bat surveys suggested.

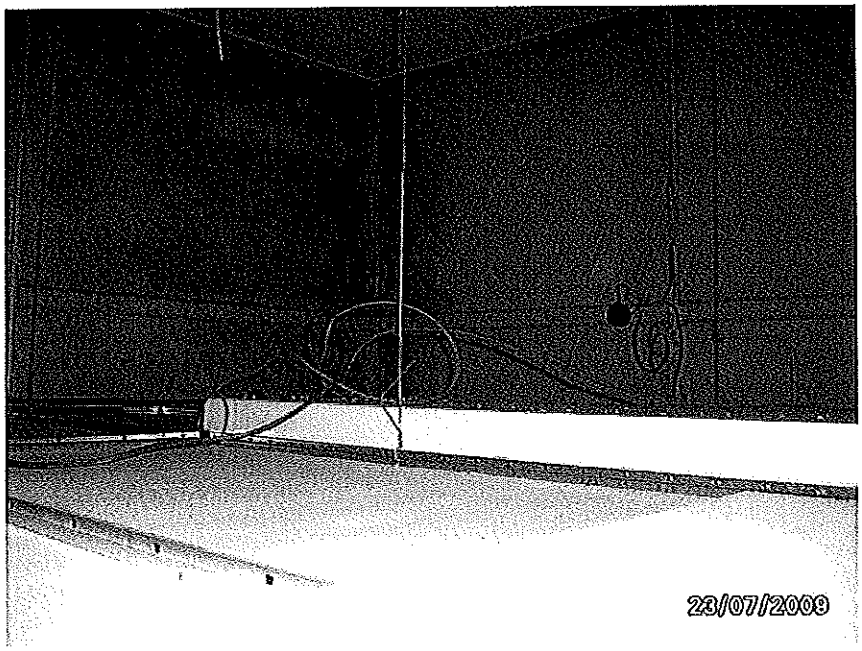
5.1.3 Breeding Birds

No further surveys are required, but eventual demolition of the existing school and vegetation removal must consider the potential for nesting birds. It is an offence to disturb a breeding bird (see Appendix D). Therefore works should avoid the bird breeding season which runs from March to August inclusive. If building work during the bird' nesting season cannot be avoided, precautionary bird surveys of the buildings will be required. This would involve ecologists monitoring the buildings to determine whether they are used by nesting birds. If nesting birds are discovered in any of the buildings, demolition of that building will have to be postponed until all the young have fledged or the nest is abandoned. An exclusion zone would need to be set up around any active nest to limit disturbance, i.e. it would not be acceptable to carry out works to a building immediately adjacent to an active nest.

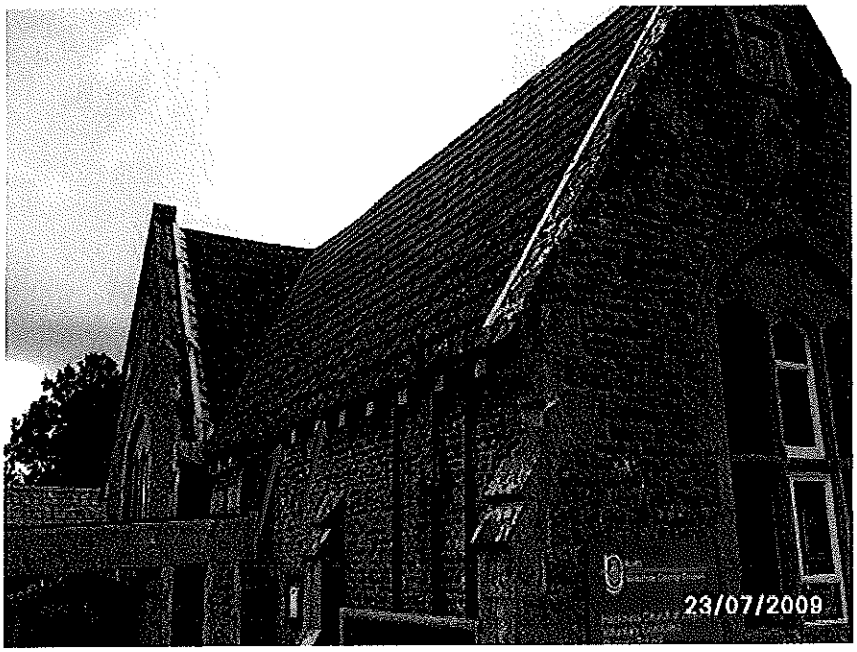
Appendix A - Photographs

Photograph 1: External view of the school from the north.

Photograph 2: A picture showing the internal roof cladding above the suspended ceiling.



Photograph 3: Picture indicating position of louvre in gable end and gaps at top of wall in foreground offering bat roosting potential.



Photograph 4: Picture showing location of some potential bat roost features.

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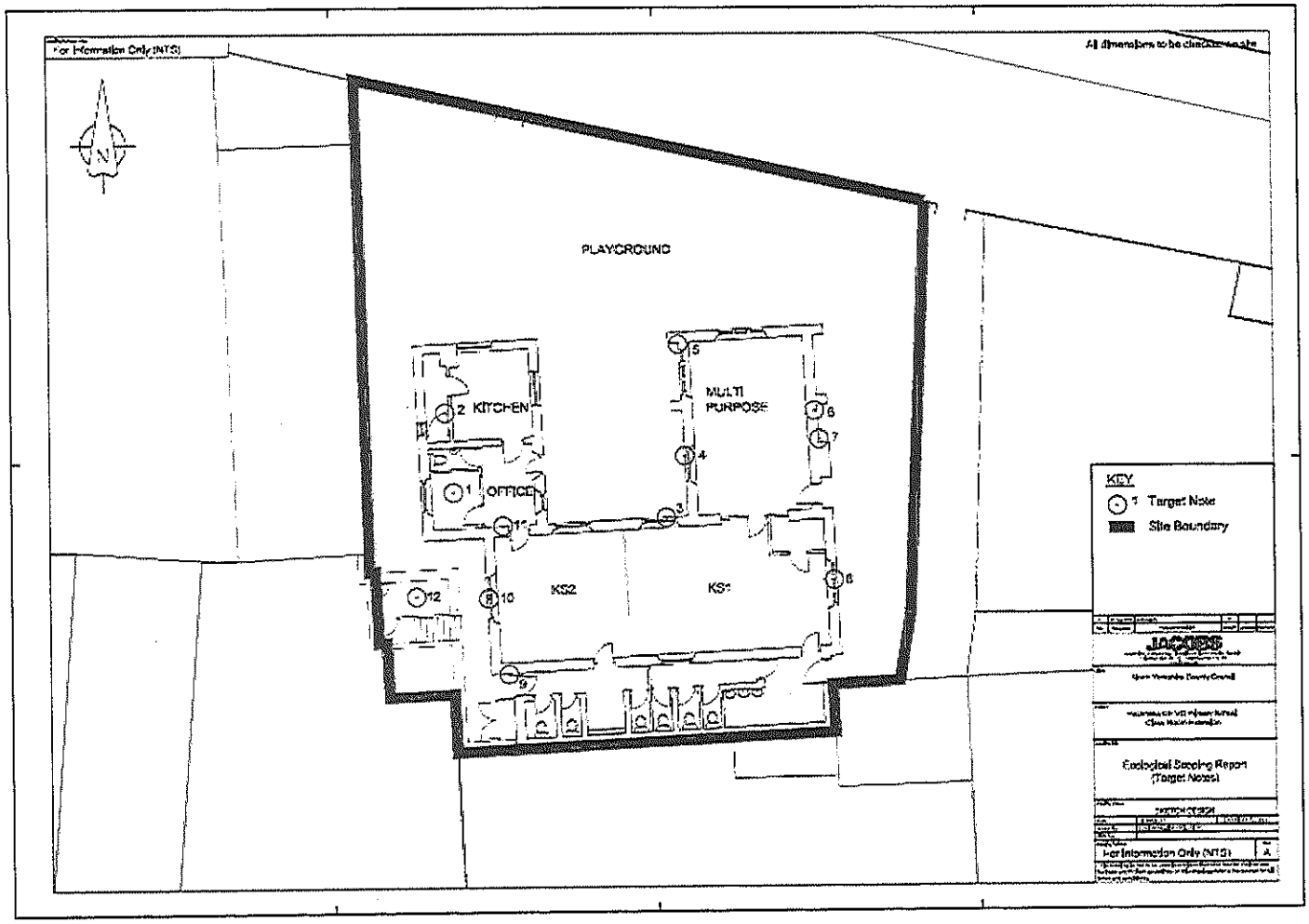
Appendix B - Site Map



Appendix C - Phase 1 Target Notes

Target Note	Description
1	Very small gaps in roof tiles. Wasps seen leaving and entering gap in ridge presumably from a nest.
2	Roof tiles have 'natural' curve so small gaps under every tile but not thought to offer bat roosting potential due to exposure and more suitable habitat nearby.
3	Gap under roofing timbers that support wooden guttering. Gap also between top of wall and internal roofing membrane.
4	Gaps under a number of roof timbers supporting wooden guttering as in Target Note 3.
5	Gap in corner at top of stone wall. Droppings (3) attached to wall. Numerous droppings caught in cobwebs approximately 1.5m below roof edge.
6	Gaps under roof timbers at top of wall.
7	Small gap at top of buttress in corner.
8	Louvre covering air vent approximately 1.5m from top of roof pitch.
9	Tiny gap at top of wall.
10	Louvre approximately 1.5m from top of roof pitch with gaps in mortar to the left.
11	Tiny gap at top of wall.
12	Boiler house inspected for bats – not suitable and no field signs in evidence.

Appendix D - Legislation

(a) Bats

All species of bat and their roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). All UK species are listed on Annexe IV of the European Habitats Directive 92/43/EEC implemented in the UK through the Conservation (Natural Habitats, & c.) Regulations 1994, as amended. Taken together, the above legislation makes it an offence to:

- intentionally kill, injure or capture (take) bats;
- recklessly disturb bats (whether in a roost or not); and/or
- Damage, destroy or obstruct access to bats roosts
- Deliberately disturb an animal in such a way to affect its ability to survive, breed, or reproduce or rear its young, or affect its local distribution.

A bat roost is considered to be any structure that a bat uses for protection or shelter. As bats frequently return to roosting sites year after year, a roost is legally protected whether bats are present or not (Mitchell-Jones 2004).

(b) Birds

All breeding birds, their nests and eggs are protected under the Wildlife and Countryside Act and thus it is an offence to:

- intentionally kill, injure or take any wild bird
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built
- intentionally take or destroy the egg of any wild bird
- use traps or similar items to kill, injure or take wild birds
- intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.
-