



Ecological Consultancy

MUDDLE BARN FARM, SIBFORD GOWER, OX15 5RY

Extended Phase 1 Survey and Assessment & Bat Survey

**Report to
Yiangou LLP & clients Mr & Mrs Besterman**



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EXECUTIVE SUMMARY

In April 2014 an ecological survey and assessment was undertaken of the house, stables and other outbuildings and land at Muddle Barn Farm, Sibford Gower, in relation to potential impacts from development proposals on protected species and habitats.

The curtilage of the house was well-maintained garden and around the stables was hardstandings surrounded by horse paddocks. None of this habitat is a material consideration for the proposal.

There are old, species-rich hedgerows along some boundaries especially the northern boundary. Precautionary measures are recommended to ensure their protection during the proposed works.

The stables are large, open breeze block structures that were in active equestrian use (ceased by the time of the evening bat surveys) and had negligible potential for roosting bats. The house was a lived-in (empty at the time of the evening bat surveys) modern chalet style building - a few old bat droppings were found in the attic. Evening bat surveys were subsequently undertaken in June 2014. No extant bat roost was found – bats are currently not a material consideration but precautionary measures are recommended.

Swallows were nesting in the stables and a range of birds were seen. Standard precautions will need to be undertaken to avoid harming nesting birds.

No other fauna were found to be a material consideration. Standard precautions and a watching brief are given for badgers.

Further guidance on the recommended actions is given in Section 4.

This report is an independent assessment of the site. It is not a statement of support or otherwise to the development of the site.

Unless the client indicates to the contrary, information on the presence of species will be passed to the county Biological Records Centre in order to augment their records for the area.

1 INTRODUCTION

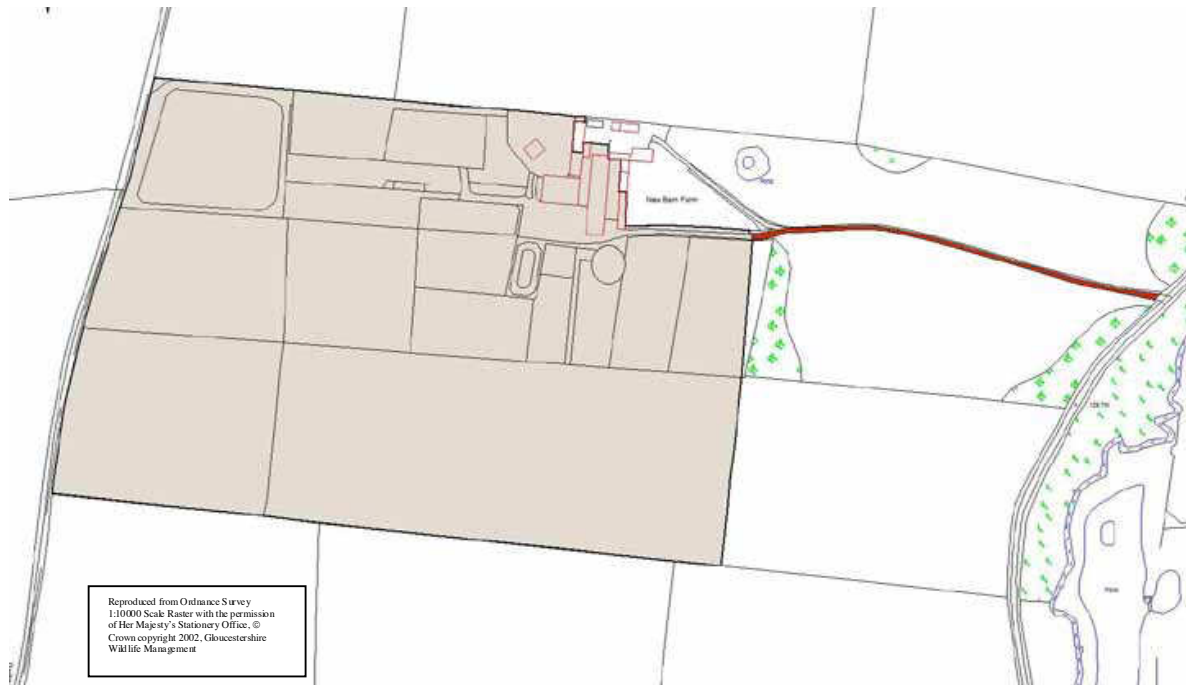
1.1 Commissioning Brief

In April 2014 Wild Service, the Gloucestershire Wildlife Trust consultancy, was commissioned to undertake an Extended Phase 1 Survey and Assessment of the buildings and land at Muddle Barn Farm.

1.2 Site Location

The 12.3ha site lies within open farmland at the end of a track leading west from the Hook Norton to Sibford Gower minor road at NGRRef SP342371.

Map 1 Site Location



1.3 Scope of the Survey

The survey and assessment focused on the following points:

- To identify habitats and species covered by UK and EU law
- To identify UK and local Priority habitats and species
- To identify other wildlife features that may be a material consideration

1.4 Survey Constraints

The comprehensiveness of any survey and assessment will be limited by the season in which the site visit was undertaken. To confirm the presence or absence of all species usually requires multiple visits at suitable times of the year. This report cannot therefore be considered to provide a comprehensive analysis of all the interest of the site. However, it does provide a 'snapshot' of the habitats and species present on the days of the visits.

Late April is a suitable time of year to survey for habitats and species that may be present. Evening bat surveys were carried out in June in suitable weather conditions.

2 METHODOLOGY

The initial survey was carried out on 29th April 2014 by Jeremy Doe (BSc (Hons), MCIEEM, CEnv) and Colin Menendez (BSc (Joint Hons), MCIEEM, CEnv), an associate ecologist with over 25 years professional ecological experience and whose Natural England survey licences include bats, nesting barn owls and great crested newts. The weather was part cloudy, dry, warm and 18°C.

A data search of records of designated sites and rare and protected species within 2km was obtained from the Thames Valley Environmental Records Centre (TVERC).

Habitats, plants and fauna species were recorded and evidence of or suitable habitat for protected species was looked for. Photographs of the site were taken. In addition the adjacent fields were visually inspected for any obvious wildlife features that could be a consideration.

Evening bat surveys were subsequently undertaken at the house.

2.1 Phase 1 Habitat Survey

Habitat assessment was made in accordance with the NCC Phase 1 Habitat Survey methodology (JNCC 1990).

2.2 Reptiles

The site was assessed for suitable habitats that may support reptiles, such as rough grassland and woodland edge.

2.3 Great Crested Newts

The overall site was checked for ponds. Maps were checked for other ponds. The footprint of the proposed work was assessed for its potential for this species.

2.4 Bats

The buildings and trees were searched for suitable places that may support roosting bats, and the overall suitability of the location for bats.

A visual inspection was undertaken of all accessible parts of the exterior and interior of the buildings – except for the lived-in part of the house and occupied horse stalls. This was a metre-by-metre search for bats or signs of them (bat droppings, urine drops, feeding remains, staining etc.). Adjacent trees were assessed from the ground for obvious potential roosting places.

Equipment used and at hand was a Clusion 1m candle power lamp with a red filter, binoculars, endoscope and a surveyor's ladder.

Once the survey had been conducted the potential for bat usage was calculated as follows:

Negligible to Low Potential

Buildings in this category fall into two main types: Generally well maintained without cracks and crevices, no gaps between bargeboard or soffit and wall or without an attic space. Or those which contain some or all of the above features, but are both draughty and thick in cobwebs or contain strong odours such as solvents, diesel etc.

It must be borne in mind that a building from this latter group can become suitable for bats due to refurbishment. This often happens to houses once the attic space has been cleaned and under-felted prior to timber treatment.

Trees with low bat interest are usually young trees without any deadwood or holes. Most conifers fall into this category as they are usually planted as a crop and then felled prior to becoming old, although once old age is attained as in a landscape tree, suitable bat roosts may develop.

Following the search survey there is no evidence of bats present in this category of buildings.

Medium Potential

The buildings in this category contain sites suitable for roosting bats although no obvious signs were recorded during the survey. In exposed conditions on large buildings the signs of bat usage such as droppings and urine marks can be obliterated by heavy rain. Occasionally a light scattering of droppings will be recorded in an attic or a semi derelict building, which is considered by the surveyor unsuitable for use as a bat roost. The medium potential of bat usage is based on the surveyor's experience.

Whilst normally no licence is required for development to a building classified as a medium, it is often best practice to conduct sensitive roof stripping or architectural salvaging to minimise any possible disturbance.

Trees in this category will have holes, cracks and crevices and loose bark suitable for roosting bats but there may be no obvious roost signs such as staining and droppings at entrances.

High Potential

This group includes buildings with known roosts or signs of bat occupancy such as droppings and staining at a roost entrance. The description of high probability buildings will also contain an indication as to the time of year when it will be occupied by bats i.e. summer- nursery roost, winter- hibernation.

Trees here will contain all the obvious roost features such as holes, cracks and crevices and loose bark but will also contain staining and droppings at the roost entrance or have been identified as a roost via a visual sighting of an exiting bat.

If the building or trees fall in to the high probability group then work carried out around the area of bat interest, will need to be done under the auspices of a Natural England licence.

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Constraints:

Most species of bat in Britain roost in crevices. Bats usually have several roosts and move between them at intervals. Sometimes bats leave few or no signs. Therefore, a lack of signs bats does not necessarily show that a building or tree is not used by bats. This constraint is reduced by the diligence and experienced judgment of the surveyor.

2.5 Badgers

The site was assessed for suitable habitats that may support badgers. Where relevant habitat occurs, incidental evidence pertaining to the presence of badgers including setts, latrines, tracks, snuffle holes, padding or guard hairs was recorded.

2.6 Birds

The habitat, including the buildings, was assessed and searched for evidence of nesting birds. This included a search for signs of barn owls using the buildings in the form of pellets, feathers, 'whitewash', nests and eggs.

2.7 Water Voles, Otters and White-clawed Crayfish

The site was searched for evidence of and suitable habitat for water vole, otter and crayfish.

2.8 Common Dormouse

The survey area was searched for habitat that may support dormice. This includes woodland, scrub and hedgerows. Where relevant habitat occurs, evidence in the form of nibbled hazel nuts and nests was searched for.

3 RESULTS

Muddle Barn Farm is a traditional pasture farm set in rolling countryside and at the time of the initial survey was used as a equestrian yard. The farm has a three bedroom detached house that was lived-in at the time of the initial survey.

3.1 Data Search

Sites: There are no protected or otherwise designated wildlife sites within 1km.

Species records are referenced in the relevant sections below.

3.2 Habitats and Flora

The site comprised the house and garden (lawn, shrubs and trees) and outbuildings (barns/stables), with parking and hard standing areas. Around this were several fenced horse paddocks and several ménage. Mixed hedges ran along the northern, western and southern boundaries and part of the eastern boundary. There were *Leylandii* hedges around some of the ménage and along the edge of part of the garden.

The site was surrounded by an adjacent house and garden, semi-improved and improved pasture and large arable fields. Several mature oak trees (in the grounds of the adjacent house) were present along the access track. Further afield the land was a mix of arable land and permanent pasture with hedgerows.

Garden: Well maintained garden comprised mown lawn with mature trees and a variety of other garden shrubs and a field-side hedgerow along the northern boundary.

Trees: A mature whitebeam, c30cm dbh, and two mature silver birch were present in the garden. A mature ash tree was in the northern boundary hedge.

Hedgerows: Native field boundary hedges bordered parts of the site. The northern boundary hedge is old and comprised ash (standard trees and several old laid coppice stools), hawthorn, midland hawthorn, elder, apple, dog-rose and one hazel coppice. Ground flora contained cow parsley, red campion, germander speedwell, ivy and, in the section running by the garden, bluebell. The western boundary was lined by a gappy hawthorn, elder, blackthorn and English elm hedge. The eastern boundary was a dense hedge of blackthorn, ash, hawthorn, elder and bramble over hedge woundwort, ivy, cow parsley, nettle and cleavers.

Dense *Leylandii* hedges surrounded or bordered parts of the several ménage and part of the garden.

Improved/semi-improved grassland: The site contained several improved and species-poor semi-improved grassland horse paddocks, divided by post and rail fencing. The majority had a species-poor sward comprising rye-grass, white clover, dandelion, creeping buttercup and daisy, with sticky mouse-ear, greater plantain, shepherd's-purse and annual meadow-grass in the many open bare ground areas. The north-western paddock was more diverse, with a herb-rich and moderately diverse semi-improved sward containing additional species including sweet vernal-grass, red fescue, meadow buttercup, bulbous buttercup, common mouse-ear, creeping thistle, spear thistle, hogweed, dove's-foot crane's-bill and ribwort plantain.

There are no statutory or non-statutory designated wildlife or geological sites on the site or adjacent land; the nearest Local Wildlife Site is over 500m to the south and nearest Site of Special Scientific Interest (SSSSI) over 1km to the south.

No notable plant species were recorded on the survey. The data search gave no records of notable plants from the site or adjacent land.

No Schedule 9 (invasive) plants were recorded on site. No other invasive plants were recorded.

Adjacent Land

The site is surrounded by large arable fields and pasture, with an adjacent house and large garden to the north-east.

Figure 1 Aerial view of the buildings and adjacent paddocks



3.3 Reptiles

The well-maintained short-cut garden, active stables and yards, ménages and horse-grazed paddocks did not support potential habitat for reptiles except for small grassy areas next to hedges and ménages. There

were piles of horse muck that reptiles potentially could use but on balance this is unlikely due to overall it being a well-maintained generally bare site and the habitat poor for reptiles.

The data search showed no records of reptiles.

3.4 Great Crested Newts (and other amphibians)

There are no ponds on the site. There is a large garden pond in the grounds of the adjacent house, as seen on the OS 1:25000 map and aerial photographs - this was not accessible for survey. There are two ponds shown on the OS map c500m south-west of the buildings complex.

Similar to the situation for reptiles, the buildings, yard complex and paddocks had limited cover for newts.

The data search showed no records of amphibians.

3.5 Bats

Search Survey

1 House


The house was lived in at the time of the search survey. It is a two-storey chalet style building with an attic. Refer to Appendix 1 (photographs).

Walls:	Red brick – in good condition. There were overhanging eaves around the wall tops. These comprised sawn timber planks with wide gaps between them and mesh on the underside. There were a few narrow gaps between the boards at the walls especially at the western end.
Roof/attic:	Twin pitched roof. Small, tight tiles on felt, which was tight on tongue-and-groove boards in the attic. The attic was about 1.5 m high and until recently was probably used for storage – there was a working electric light. There were two vents in the roof ridge. The felt was ripped around the western vent and daylight could be seen from inside the attic. There was a single boiler vent on the northern pitch and two dormer windows. A brick chimney with tight lead flashing and two dormer windows on the southern pitch.
Bat roosting opportunities:	At the wall tops where there is access for bats via gaps between the soffit boards and walls or ripped mesh on the underside. At the western ridge vent where the felt is ripped. In the roof structure around the base of the boiler vent.
Signs of bats:	A few old, small bat droppings in the attic at its western end (below the vent).
Comments:	A lot of mice droppings in the attic.



2 Barn/Stables 1

This was a large modern barn divided inside into horse stalls, a tack room at the northern end and a horse exercise circle at the southern end.

Walls:	Breeze block – good condition. There were open gaps about 25 cm high along the wall top in the horse stalls. Corrugated sheets at the top half of the end walls. Doorways on both sides – and a gated opening at the south western corner.
Roof:	Metal frame with a twin pitched single skin of corrugates roofing sheets. Clear roofing sheets acting as skylights
Bat roosting opportunities:	-
Signs of bats:	-
Comments:	Light and airy inside. Swallows nesting on the roof frame in the building.
	

3 Barn/Stables 2

This was a large modern barn in two parts: (1) a high barn used for storing hay and materials etc and (2) lower horse stalls at the northern end.

Walls:	Low breeze block – good condition. Corrugated sheets around the top half of the walls. Several doorways – gaps around them.
Roof:	Metal frame with a twin pitched single skin of corrugates roofing sheets. Clear roofing sheets acting as skylights
Bat roosting opportunities:	-
Signs of bats:	-
Comments:	Light and airy inside.



4 Barn/Stables 3

This was a high open-sided modern stable with horse stalls.

Walls:	Breeze block – good condition. Metal sheets around the top half of the walls. Gated and open to the front/western side into the yard.
Roof:	Frame with a single pitch and skin of corrugated roofing sheets.
Bat roosting opportunities:	-
Signs of bats:	-
Comments:	Light and airy inside.



5 Trees

None of the trees in the garden had an obvious potential for roosting bats.

The overall site and surrounding land is moderate habitat for bats due to being in farmland but the setting is quite open.

Data search

The data search showed a record for roosting lesser horseshoe bats c900m distant to the south-east, and further away records of common pipistrelle and Daubenton's bats.

Anecdotal information was that bats roost the adjacent homestead.

Bat Emergence surveys

Two evening survey was undertaken of the house. These were checks for bats emerging from the building around and after dusk for one and a half hours.

The surveys were:

11th June 2014 by Colin Menendez and Jeremy Doe

The ecologists were positioned at either corner (NW and SW) of the house with a complete view of the house. Equipment used was two bat detectors (BatBox Duets) and two automated static recorders (Anabat SDs) set on either side of the building. The conditions were dry, warm becoming cool (17 – 9 °C), cloudy becoming clear and calm (Beaufort strength 0).

21:26 Dusk

22:00 Common pipistrelle initially heard and then seen in northern part of the garden

22:07 to 22:35 a single common pipistrelle was feeding around the garden and house.

25th June 2014 by Jeremy Doe and assistant

The ecologist and assistant were positioned in the garden on the north side of the house specifically to cover the northern side of the house on which side of the garden a bat was initially present during the first evening survey. Equipment used was two bat detectors (BatBox Duet and BatBox IIID) and an automated static recorder (Anabat SD) set with the surveyors. The conditions were still dry, warm (14 – 12.6 °C) and clear and calm (Beaufort strength 0 - 1).

No bats were seen emerging from the house. Bat activity recorded:

21:29 Dusk

22:06 Common pipistrelle heard but not seen

22:07 to 22:28 a single common pipistrelle was feeding around the garden and house.

3.6 Badgers

No conclusive evidence of badgers was seen. There was plenty of evidence of rabbits, including an active warren in the hedgebank on the western site boundary and a football-sized hole (large enough for badgers) in the bank on the south side of the north-western manège. There were animal trails through the northern hedge and shallow scrapes in the north eastern corner of the garden – these were almost certainly rabbits'. The site and wider farmland does provide foraging habitat for badgers.

The data search showed no records for badgers.

3.7 Birds

The buildings, hedges and paddocks provide good potential nesting habitat for a variety of birds. No evidence of barn owls was found and all buildings were in use/disturbed. Swallows were seen collecting mud for nest building and nests were present in the Barn/Stables 1. There were also pigeon droppings in this building.

A good variety of birds were recorded: kestrel, woodpigeon, swift (overhead during the bat survey in June), skylark (overhead), pied wagtail, dunnoek, robin, blackbird, blue tit, great tit, jackdaw, starling, house sparrow, goldfinch and bullfinch.

The data search showed records of nesting swifts from the nearby Sibford Gower and Sibford Ferris and of many farmland, woodland and hedgerow birds. There were no records of barn owls.

3.8 Water Voles, Otters and White-clawed Crayfish

The site does not support suitable habitat for these riparian species.

3.9 Common Dormouse

The boundary hedges are potential habitat for dormice, but contained only a small amount of hazel, a restricted diversity of other woody species and are isolated from woodland.

The data search showed no records of dormice.

4 ASSESSMENT AND RECOMMENDATIONS

4.1 Habitats

Hedgerow is a **UK Priority Habitat**.

The site does not support any habitats likely to meet county Wildlife Site criteria.

Apart from a small section of hedgerow alongside the garden, all the Priority Habitat hedgerows are in the wider farmland around the horse paddocks and are unlikely to be affected by any work to the house and outbuildings. The hedgerows adhere to the definition of a Hedgerow that is a UK Priority Habitat, and will be covered by the Hedgerow Regulations Act 1997.

To minimise any loss/disturbance to the above habitats it is recommended that:

- *All hedges are retained and any new hedge planting, including 'gapping-up', comprises native berry and fruit bearing species.*
- *Standard tree protection measures are used to protect the northern boundary hedgerow during the works.*

NB: The conifers planted next to the hedgerow in the garden are not part of the old hedge and can be carefully removed if desired without breaching the Hedgerow Regulations.

4.2 Reptiles

The farm complex/garden and horse paddocks are not suitable habitat. Sections of grassy bank below the northern boundary hedge are potential habitat but these are small, isolated and unlikely to be affected. On balance, as the site is generally isolated from suitable habitat and the data search showed no records, there are no issues with reptiles.

4.3 Great Crested Newts and other Amphibians

The pond in the adjacent garden is potential habitat for breeding newts, although the pond was not inspected as it was in different ownership. Work on the buildings/yard complex would not directly affect the pond, the affected part of the site is largely hardstandings and short/bare habitat and there are no records of great crested newts within 1 km. On balance, great crested newts are not a consideration.

4.4 Bats

The old droppings found indicate that a bat has used the roof structure next to a vent in the attic of the house for a short time in past. No roosting bats from the house were seen during the evening surveys – the single common pipistrelle seen after dusk (later than this species emerging at other sites in the region) in the garden probably flew in from the north eastern side from the direction of the adjacent homestead as it extended its foraging activity as it became darker.

The other buildings had a negligible potential for roosting bats and no signs of them were found.

To the best of our knowledge, the house is no longer used as a bat roost but the garden is used in the evenings by a foraging bat from a nearby roost. Bats are not a material consideration for the proposal providing precautionary measures are undertaken to avoid any inadvertent harm to bats and breach in the legislation that protects them (refer to Appendix 2).

Precautionary measures for the proposed demolition of the house:

- *Resurvey the house in the summer (May – August) if it has not been demolished by summer 2016.*
- *Remove the roof and soffits by hand and hand tools.*
- *The removal of the roof and eaves to be overseen by a suitably experienced ecologist.*

To protect bat foraging areas and flight lines and the local population of bats:

- *Do not install outside lights over the hedgerows and trees.*
- *Minimise outside lights per se throughout the site to those that are essential for people's safety and design/fit them to only light the necessary areas.*

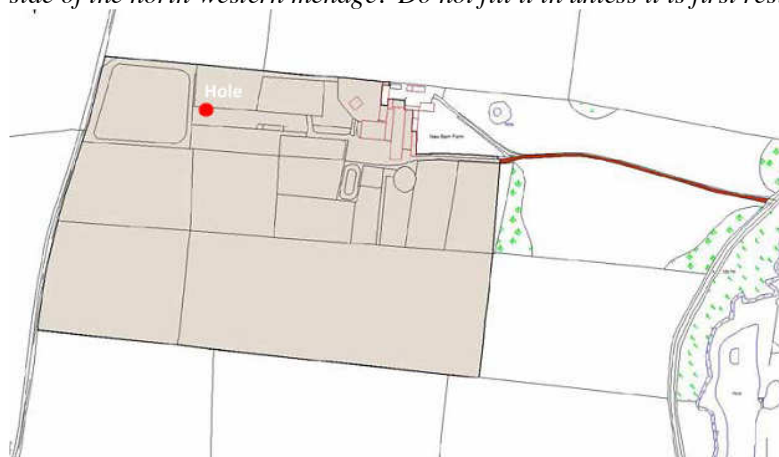
By way of compensation/enhancement:

- *Install permanent bat roosting places in the structure of the replacement building(s). Bat roosting tubes in warm, sheltered eaves next to trees/shrubs/hedges for example. The ecologist can give informal guidance.*

4.5 Badgers

No evidence of badger activity was found on site. The site does provide foraging habitat. As a precaution it is recommended that:

- *Standard measures to avoid trapping any badgers foraging on site or passing through the site should be taken during any construction works, such as not leaving open trenches at night or providing access out of any open trenches.*
- *A watching brief is maintained on the single large hole in the bank of the paddock on the western side of the north-western ménage. Do not fill it in unless it is first resurveyed for badgers.*



4.6 Birds

It is an offence under the Wildlife and Countryside Act 1981 (as amended) to damage or destroy the nests of breeding birds (with the exception of certain pest species). The bird-nesting season is generally defined as March – August inclusive, although birds sometimes nest outside of this period.

The buildings, garden and native and *Leylandii* hedgerows generally provides habitat for nesting birds. Swallows nest in Bulign1 (and potentially could nest in any of the buildings except the house).

Protection:

- *To avoid harm or disturbance to nesting birds any work to outbuildings, trees and shrubs should be carried out outside of the bird nesting season. If work needs to be done during this period a check should be made immediately prior to commencement of work to check for the presence of nesting birds. If nesting birds are present work should not commence until the young have fledged.*

Compensation;

- *If possible, nesting opportunities for swallows are incorporated into the design of any suitable new buildings. The ecologist can provide informal guidance.*

Enhancement:

- *Nesting opportunities for swifts are incorporated into the design of any suitable new buildings.*

Jeremy Doe, BSc (Hons), MCIEEM, CEnv.
Colin Menendez, BSc (Joint Hons), MCIEEM, CEnv

Appendix 1 Site Photographs - also refer to the pictures of the buildings in Section 3.5.

Photo 1 View of typical horse paddock



Photo 2 Northern boundary hedge showing old laid ash and grassy hedge bank



Photo 3 The house



Photo 4 Hedgerow on northern boundary of the garden



Photo 5 Hedgerow along the northern boundary next to a ménage.



Photo 6 Access track to house



Appendix 2 Legislation

Bats

All species of British bat are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (which consolidates the European Conservation (Natural Habitats etc.) Regulations 1994). As well as giving full protection from intentional and deliberate killing, injuring, disturbing and taking of bats, the cited legislation protects bat breeding and resting places (roosts) from damage, destruction and preventing access to such places. The legislation regarding roosts applies irrespective of whether bats are present or not at the time of the offence.

The Countryside and Rights of Way Act 2000 added the word “reckless” to existing protection against “intentional and deliberate” actions.

The law requires that reasonable effort be made to ensure that any actions, plans or projects do not detrimentally affect bats or their roosts without prior consultation with the statutory authorities, which, in the case of England, is Natural England. Therefore, if a bat roost of any kind is found or suspected Natural England must be consulted and advice sought before bats or their roosts are affected.

Proposed developments that affect bats or bat roosts may require a licence from Natural England.