Preliminary Roost Assessment

Moss Barn

Macclesfield Road
Rushton Spencer
Cheshire
SK11 0SE



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Date of publication: 30th October 2019

Haslam Ecology
Wolverhampton

Project

Preliminary Roost Assessment
Moss Barn, Macclesfield Road, Rushton Spencer.
Report No: HE 911019

Date: 30th October 2019

Description:
Preliminary Roost Assessment to consider potential impacts to bats and protected species in relation to development proposal

Client Details

Mr & Mrs Hollies

Author

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Disclosure

The information which I have prepared and provided is true, and has been prepared and given in accordance with the guidance of my professional institution's Code of Professional Conduct, and I confirm that the opinions expressed are my true and professional opinions.

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Non-Technical Summary

- On the 8th October 2019, Haslam Ecology. conducted a Preliminary Roost Assessment (PRA) of Moss Barn, Rushton Spencer which is proposed for residential development.
- **Survey limitations:** The building and surrounding land was fully accessible (Section 2).
- **How protected/BAP species or habitats occur onsite:** There was no evidence of bat species within the building. There was no recent evidence of nesting birds within the building (Section 3).
- **How are these likely to be impacted:** There will be no impact on the local populations of protected species from the proposal. **Although bats are likely to be absent from the barn, it is advisable to take Reasonable Avoidance Measures (RAMs) whilst any work is carried out on the roof.** (Sections 4 and 5).
- Table S1 below provides a brief summary of mitigation onsite subject to the mitigation hierarchy and whether further detailed survey is required. Table S2 provides a summary of net losses/gains with respect to bats and birds.

Table S1: Mitigation Hierarchy (only site-relevant categories)

Ecological Receptor	Avoid	Mitigate	Compensate	Further survey needed	Mitigation measures Summary (**See section 5**)
Bats	X		X	No	Although bats are likely to be absent it is recommended that Reasonable Avoidance Measures (RAMs) are taken.
Birds	X		X	No	Old swallow nest within barn, mitigate to encourage swallow nesting within the locality.

Table S2: Net Loss/Gain

Ecological Receptor	Predicted net loss without compensation	Legal Implications	Designing for net gain/enhancement i.e. net gain
Bats	None	None, if Reasonable Avoidance Measures are used, see Sections 4 and 5.	Install 3 bat boxes on the western side of the barn (Section 5 and Appendix C).
Birds (Swallow)	None	N/A	Install 6 swallow cups on south eastern side of barn (Section 5 and Appendix C).

1 Introduction

1.1 Terms of Reference

Haslam Ecology has been commissioned by the owners of Moss Barn to undertake a Preliminary Roost Assessment (PRA) in support of a application for the redevelopment of the barn for residential use (hereafter referred to as the 'site').

This PRA report presents ecological information from the desk study, preliminary roost assessment and preliminary protected species surveys on 8th October 2019. The purpose of this report is to provide ecological information to support the planning proposal and thus survey objectives include: identifying ecological features onsite; subjecting them to evaluation and impact assessment; providing advice on the potential for contravention of legislation/policy; and providing recommendations on any further actions needed (licensing, mitigation, enhancement, etc.). A summary of main statutory provisions for biodiversity conservation relevant to this site is provided in Table 1.1 below.

Table 1.1: Main legislation relevant to the site

Biodiversity Legislation	Ecological Feature
Wildlife and Countryside Act 1981 (as amended)	Bats, Nesting Birds, Schedule 1 Birds
Conservation of Habitats and Species Regulations 2010	Bats
Conservation of Habitats and Species (Amendment) Regulations 2012	Wild Birds

1.2 The Site

Site Name: Moss Barn
Address: Macclesfield Road, Rushton Spencer, Cheshire. SK11 0SE
OS Grid Ref: SJ 93406277
Location Plan: see Figure A.1; Wider Landscape Aerial Photo Figure A.2; Aerial Photo Figure A.3 (Appendix A).
Brief Description of Site: Located on the south western side of the A523; Macclesfield Road at the northern end of the village of Rushton Spencer. This is a small barn on two levels with the upper floor (former hay loft) being level with the adjacent main road and the lower level (former shippon) on a level below the main road. The barn is brick built with a pitched clay tiled roof with a wooden and corrugated sheet metal lean-to attached to the southern side. On the eastern side is an area of hard standing used for vehicle parking by the cottages opposite the barn. The western side of the barn is adjacent to a commercial garage which is dominated by hard standing.
Brief Description of Surroundings:
The barn is located approximately 400m to the north west of the centre of Rushton Spencer opposite a row of terraced cottages and within an area of scattered residential and commercial properties. The wider landscape is dominated by agriculture comprising of improved and semi-improved grassland, species rich hedgerows, drystone walls, small woodlands and plantations. There are a series of brook courses (wooded) to the south and west with Rudyard Lake located 2Km to the south east of the site.

1.3 Proposed Works

The client intends to redevelop the barn for residential use.

2 Methodology

2.1 Surveyor Information

Table 2.1: Surveyor information

Ecologist	Relevant Experience (years)
Dave Haslam MSc MCIEEM	35 including over 10 years of bat ecology

2.2 Survey Methods & Design Criteria

The focus of the surveys was bats and breeding birds although evidence of other protected species and their habitats would also be noted, if applicable. A summary of the survey methodology is provided in Table 2.2 below. The following criteria were used to determine the type and extent of the surveys carried out:

- Habitats present both on and immediately around the site,
- Semi-natural habitat connectivity between the site and the wider area (e.g. hedgerows, water courses, shelter belts etc.)
- The proximity and nature of local protected / notable species records and designated sites compiled in the pre-survey desk study
- The nature and extent of works.

2.2.1 Preliminary Ecological Appraisal

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Table 2.2: PEA Survey Methodology

Survey details	Appropriateness of Methods	Geographical extent
8/10/19 Preliminary Roost Assessment (PRA) – Bats	Timing: **Suitable** (Anytime)In accordance with established guidance [(BCT, 2012),(Mitchell-Jones et al, 2004)]	Buildings, trees or other structures onsite; habitat assessment of site & surrounding habitat
	Methods: Internal/external daytime inspection of any structures for bat sign, and tree assessment, where applicable	
PEA – Breeding birds	Timing (Habitat): **Suitable** (Anytime)/ Timing (Field sign): **Optimal** (Mar-Aug)	Site & adjacent habitats
	Methods: Habitat suitability assessment and/or casual check for nests	
Average weather conditions (PEA): 100% Cloud Cover, 12^0C, no wind, heavy showers.		

2.3 Survey Limitations

The survey methodologies used were deemed to be the most effective possible for this site at this time of year. The building and surrounding land were fully accessible.

2.4 Evaluation Criteria

In accordance with *Guidelines for Ecological Impact Assessment in the United Kingdom* (IEEM, 2006), the following geographical frame of reference is used when ascribing a value or potential value to an ecological resource:

- **International importance –** e.g. Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites
- **National importance –** e.g. Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR)
- **Regional importance –** e.g. Environment Agency regional biodiversity indicators, important features in Natural England Natural Areas
- **County importance –** e.g. Local Nature Reserves (LNR), Site of Biological Interest (SBI), Site of Importance for Nature Conservation (SINC)
- **Local or parish importance –** e.g. Biodiversity Alert Site (BAS), Site of Local Importance for Nature Conservation (SLINC), ecological features or resources such as hedge rows, woodlands, ponds
- **Within the zone of influence -** e.g. Locally or regionally common habitats that provide ecological resources within the site and / or immediately surrounding area e.g. scrub, tall herbaceous vegetation
- **Secondary value –** e.g. Features that are of little ecological interest in themselves but perform an ecological function such as areas of scrub that that may buffer more sensitive habitats from the effects of development or intensive farming.
- **Negligible importance –** e.g. urban areas, hard standing, intensely farmed agricultural fields.

2.5 Impact Assessment Criteria

Negative and positive impacts on nature conservation features have been characterised based on predicted changes as a result of the proposed activities. In order to characterise the impacts on each feature, the following parameters are taken account of where appropriate:

- The magnitude of the impact
- The spatial extent over which the impact would occur
- The temporal duration of the impact
- Whether the impact is reversible and over what timeframe
- The timing and frequency of the impact.

3 Results

3.1 Protected Species Scoping Survey Results

The potential for bat presence is discussed in the Preliminary Roost Assessment in Section 3.4 below.

There were no large mammal paths or evidence of activity around the site.

In the hay loft there was a single degraded swallow nest that has not been occupied within the current season (2019). There was no evidence of swift or house martin use.

3.2 Preliminary Roost Assessment

3.2.1 Bat Habitat Description

The wider landscape of connected hedgerowed fields, woodland and wooded water courses are ideal habitats for a number of bat species to use for foraging, commuting and potential roosting.

Around the barn there is limited foraging and commuting areas, with the commercial garage adjacent to the site (hard standing with security lighting) being sub-optimal for bat activity but the gardens, properties and field to the north, east and south of the barn does provide areas for foraging and commuting due to the low levels of artificial lighting and mosaics of connected habitats within this area.

In summary, the wider landscape is optimal for bat foraging, roosting and commuting whilst the area around the barn is of lesser quality for bat activity, but will still provide areas for foraging and commuting and potentially roosting within the mature garden areas 200m to the south east and some of the surrounding buildings.

3.2.2 Preliminary Roost Survey

Table 3.1 (below) describes the buildings in relation to its suitability to support roosting bats.

Photographs of the building can be found in Appendix B.

Table 3.3: Results of PRA

Preliminary Roost Assessment
Moss Barn (See Photographs: Appendix C).
Description: The barn is double skinned brick built with a pitched clay tiled roof which is lined on the underside. There are two levels with the upper level adjacent to the main road and a lower level below the main road. At the rear of the barn (southern aspect) is a lean-to constructed from wood with a flat corrugated sheet metal roof. The barn is well maintained with all brickwork sealed and the roof intact with no missing tiles and the roof lining intact. The ventilation holes for the hay loft are sealed on the interior allowing no access to the interior. There are extensive cobwebs around beam slots, wall plates, and windows, suggesting that these areas are undisturbed by bats.

The western side of the barn (adjacent to garage hard standing) has a small area of ivy growing up the wall to roof level. This ivy is not of sufficient growth (thin stems, brickwork visible) to support roosting bats.
Potential Access Points: Gaps around the hay loft doors. Gaps between the roof and walls of the lean-to especially around the door.
Potential Bat Roost Features: None. No internal or external access to wall crevices or where joists are resting on bearing walls. All brickwork sealed. Roof including ridge tiles is well maintained with no gaps.
Evidence of bats found: None.
Evidence of birds found: Single degenerated swallow nest by hay loft doors, not occupied during the 2019 season.
Potential for roosting bats: Negligible (precautionary approach recommended if works are scheduled for the roof).

4 Evaluation and Impacts

The following section provides an indication of the ecological value of features present, outlines nature conservation legislation relevant to the features and assesses the level of impact from the proposal on the features. The valuation is based on the Guidelines for Ecological Impact Assessment (IEEM, 2006) – see sections 2.4 and 2.5. Impacts relate to both construction and operational phases of the development unless stated otherwise.

Table 4.1: Evaluation and Impacts

Ecological Feature	Relevant legislation	Evaluation	Mitigation Hierarchy	Impact Level
Barn (with respect to bat roosts)	HR, WCA	County	A, C	Negligible
	Impacts: No evidence of bat presence within the barn. Construction: None predicted as long as Reasonable Avoidance Measures (RAM) are followed if works are carried out on the roof (Section 5.0) Operational: None expected			
Bats (foraging & commuting)	HR, WCA	County	A, C	Negligible
	Impacts: Surrounding land not to be altered, therefore existing foraging and commuting routes will be maintained. Construction: None as long as work lighting is not used between dusk and dawn (Section 5.0). Operational: None as long as sensitive lighting scheme implemented (Section 5.0).			
Nesting Birds	WCA	National	A.C	Low
	Impacts: No birds nesting within barn (2019) but evidence of previous nesting by swallows. Construction: No impact (Section 5.0) Operational: No impact (Section 5.0).			
Key to Legislation & Mitigation Hierarchy (& links to legislation) HR – Conservation of Habitats & Species Regulations 2010 http://www.legislation.gov.uk/uksi/2010/490/contents/made WCA – Wildlife & Countryside Act 1981 (as amended) http://www.legislation.gov.uk/ukpga/1981/69 BA - Protection of Badgers Act 1992 http://www.legislation.gov.uk/ukpga/1992/51/contents NERC - Natural Environment and Rural Communities Act 2006 (NERC) http://www.legislation.gov.uk/ukpga/2006/16/section/40 **A – Avoid, M – Mitigate, C - Compensate**				

5 Recommendations & Mitigation

It should be noted that all recommendations are provided as information only and specialist legal advice may be required. The conclusions of this report are based on current information. Reassessment is likely to be required if:

- **Works are delayed for more than one year**
- **Proposal plans are amended subsequent to the publication of this report. HASLAM ECOLOGY MUST be contacted if changes are made.**

Table 5.1: Further Survey & Licensing

Further Survey and Licensing
Further Survey Required
No
Licence required
No. As a precaution it is recommended that a suitably qualified ecologist is present during any works to the roof.

Table 5.2: Mitigation Hierarchy: Further Actions

Avoidance (A), Mitigation (M), Compensation (C) & Enhancement	
General	
All staff and workers on site, including sub-contractors, should be made aware of species and habitat protection issues at site induction talks**. Work must stop immediately bats are found onsite.** Haslam Ecology can be contacted on 07729 186361 for further advice.	
Protected & NERC Species	
Bats (A, C)	Although bats are likely absent from the barn, the implementation of Reasonable Avoidance Measures (RAM) (see below) are advised to reduce the chance of committing an offence with respect to bats. It is recommended that a suitably qualified ecologist is present when works to the roof are intended and to ensure that the following guidelines are carried out. **Reasonable Avoidance Measures** to be implemented include: – Ensuring all workers are familiar with bat (and protected species) legislation at site induction and agree to work in accordance with and fully follow these best practice measures. – Careful check of any cracks/crevices/cavities in the building prior to demolition. Typical signs of usage by bats are droppings, urine stains, colouration of access points by grease from their fur, slight polishing of brick / stone / wood work around entrance and lack of cobwebs when other adjacent holes have plenty. – Individual bats may be present under cladding, between corrugated sheeting and sometimes just clinging to beams around joins as well as

	other areas. When any of these are removed, please do so carefully, lifting outwardly, and checking for bats continually. • In the unlikely event that a bat is found, please adhere to the following: – At no point should the worker handle bats. Untrained handling may cause the bat unnecessary stress and injury and, if bitten, may expose the worker to rabies-related European Bat Lyssavirus. – Where possible replace the covering without damaging the bat before contacting Haslam Ecology for advice. Any grounded bats should be covered with a cardboard box and left alone until a licensed bat worker arrives to assess the situation. – If the bat attempts to fly at any point allow it to do so. Preventing it will cause unnecessary stress and may cause injury to the bat. Halt works and report the escaped bat to Haslam Ecology.
Bats (M)	When planning the locations and directions for **lighting**, avoid an increase in lighting levels or focusing lighting toward potential bat roosts, hedgerows, treelines and other possible foraging lines such as walls, fences and other linear features. This can be achieved through use of cowls, hoods, etc. to direct the light, avoiding tall lighting columns, using motion-sensor security lighting, and timing the lighting to avoid the 1hr after dusk and 1hr before dawn when bats are most active
Habitat Enhancement	Install 3 bat boxes suitable for crevice dwelling species on the western gable end (adjacent to foraging habitat (Appendix C). Install 6 swallow cups under eaves on the south eastern side of the barn (Appendix C).

6 Bibliography

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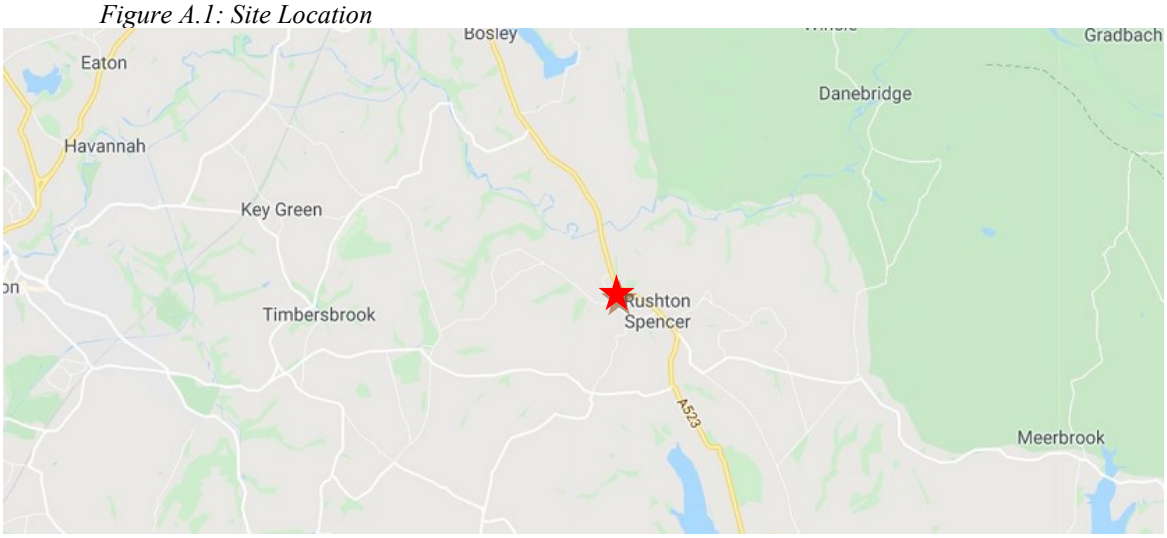
Appendix A: Site Plan

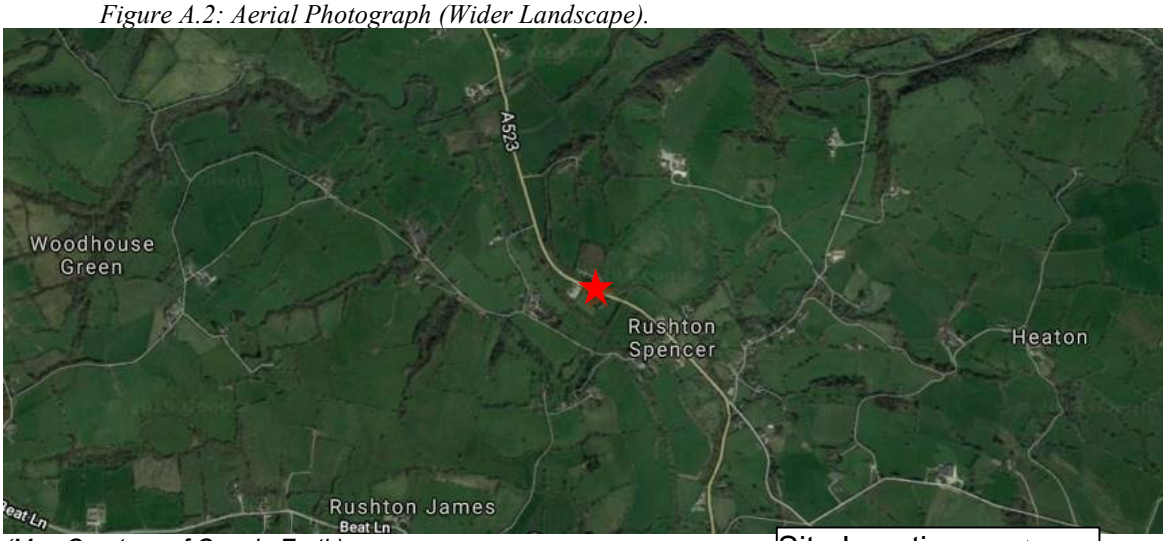
Figure A.1: Site Location



(Map:Google Street View)

:Site Location

Figure A.2: Aerial Photograph (Wider Landscape).



(Map Courtesy of Google Earth)

Site Location

Figure A.3: Aerial Photograph (site detail).



Site Boundary.

(Map Courtesy of Google Earth)

Appendix B: Photographs.

Plate B.1 Barn – External.

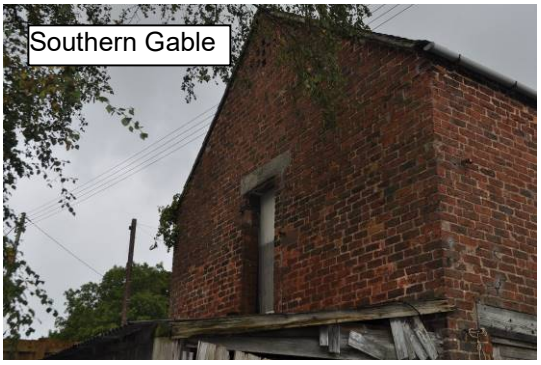






Plate B.2 Barn – Internal.



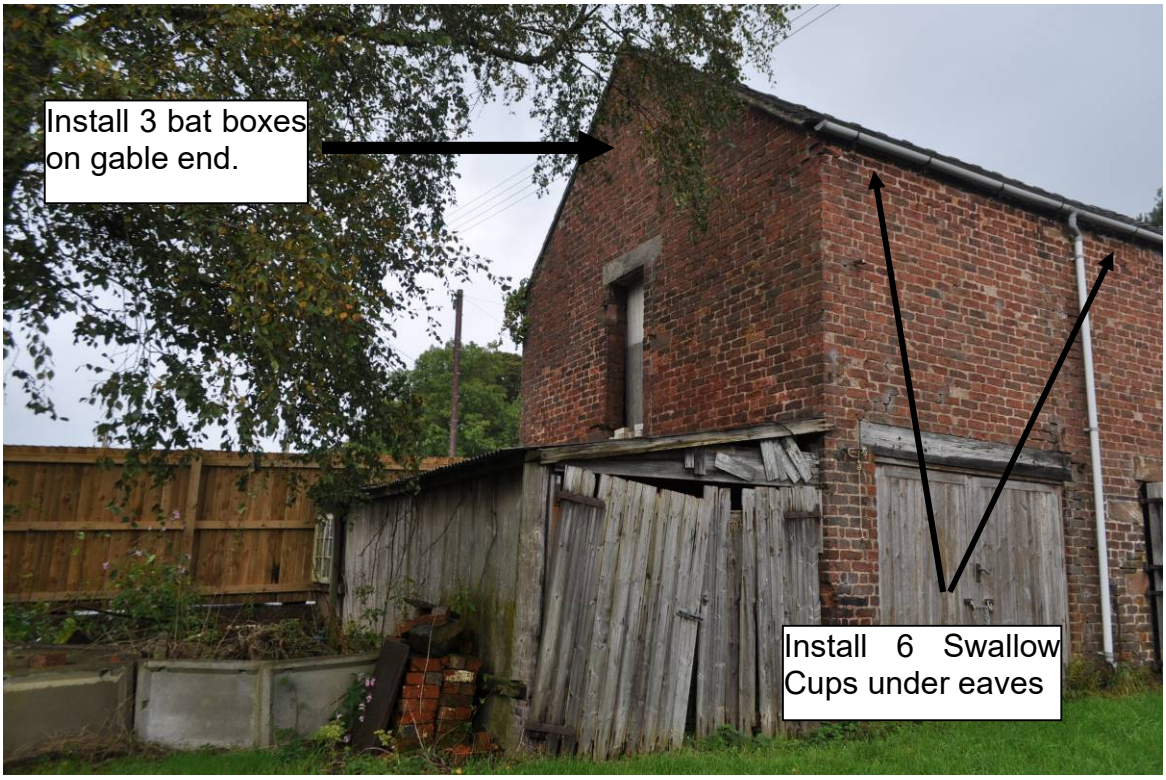






Appendix C: Biodiversity Enhancements.

Figure C.1: Bat Box and Swallow Cup Locations



Bat Box Specifications (Number Required: 3).

Description



Designed specifically for bats which would naturally roost in crevices. This box boasts two crevices, ceramic heat sinks, and black external colourations allowing it to warm up faster as well as maintain a more stable temperature than other bat boxes. Its close fitting panels and insulation above the crevices ensure there is reduced draughts whilst improving the heat retention. The overhanging roof that protects against the rain is removable for access, secured with one screw.

This box also has an easy access 17mm entrance slot at the base of the box and is easily mounted on trees or walls and is especially suitable for both the Common Pipistrelles and Soprano Pipistrelles.

Manufacturered in exterior grade FSC Certified European birch plywood.

Dimensions: 33 x 16 x 10 cm.

Swallow Cup Specification (Number Required: 6).



Swallow Cups (No. 10 Schwegler)
The Swallow Nest No. 10 consists of a woodcrete nesting bowl which is attached to a wooden panel of formaldehyde-free chipboard. The nest should be placed at least 1m intervals leaving a distance of at least 6cm between the top of the nest and the ceiling. Cleaning of the bowl is recommended, although not absolutely necessary.

These Woodcrete nest boxes are famous for their durability - lasting for at least 20-25 years. Woodcrete is a blend of wood, concrete and clay which will not rot, leak, crack or warp. They are backed by leading ornithologists, nature conservation organisations, government agencies and forestry experts. Schwegler boxes have the highest occupation rates of all nest boxes and are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting.