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Inspection & Assessment in Relation to Bats & Breeding Birds

October 2022

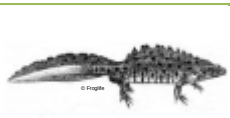
Barn at Middle Sontley Farm

Sontley

Wrexham

LL13 0YP

National Grid Ref: SJ32284679



Barn at Middle Sontley Farm, Sontley, Wrexham, LL13 0YP
Inspection & Assessment in Relation to Bats & Breeding Birds

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This report aims to provide general advice on ecological constraints associated with any development of the site and includes recommendations for further survey; it is not intended that this report should be submitted with a planning application for development of the site, unless supported by the results of further surveys and a detailed assessment of the effects of the proposed development

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Executive Summary

As part of a proposed planning application at the barn at Middle Sontley Farm in Sontley, Wrexham, Tyrer Ecological Consultants Ltd carried out a daytime preliminary roost assessment (PRA) in relation to bats with an inclusive assessment for breeding birds in August 2022. The survey was commissioned by Blueprint Architectural Service; proposals are understood to entail the conversion of the existing barn for residential use including creation of a new amenity garden and parking area. Detailed methods, findings, conclusions and recommendations are presented throughout the report; however, the reader should be aware of the following Key points:

Bats: Based upon the findings of the survey, covered through sections 6.0 – 7.0 of the report and supported by Appendix I, the Barn at Middle Sontley Farm is determined to offer '**Moderate**' bat roost potential in accordance with Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016).

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).		
Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^b

It is recommended that two dusk and/or dawn emergence/re-entry surveys are conducted at the site during the active season of bats (May - August, extending into September), in order to establish if/how the building is being used by bats, and if so, identify the species present, abundance, roost locations and flight lines around the site following emergence/re-entry. Two surveyors would be required to monitor the potential roost features described at the building.

Breeding Birds: No impacts are currently applicable in relation to any Sch.1 (WCA) specially protected bird species such as Barn Owl; however, the barn and surrounding agricultural land provides favourable habitat for this species. *It is therefore recommended that a pre-works check is undertaken by a suitably ecologist to ensure no nesting or roosting is occurring prior to commencement. Following the pre-works check the attending ecologist will provide, if required, further recommendations.*

In relation to common birds, the barn was observed to contain an active Swallow (*Hirundo rustica*) nest, and further evidence of use by common birds was identified in the form of frequent House Sparrow (*Passer domesticus*) activity and abundant droppings. *In the interests of potential impact avoidance it is recommended that proposed works within the site boundary should be undertaken outside of the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March – August). For works within the breeding bird season, any areas that can support nesting birds should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing. If birds are found nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.*

Biodiversity Benefit: A series of recommendations have been given within section 8.0 and Appendix III which provide opportunities for net biodiversity benefit at the development site and within the wider area. Enhancement opportunities include recommendations relative to the provision of favourable planting and landscaping, with wildlife boxes, whilst Swallow nesting cups are also recommended to mitigate for the loss of nesting habitat during the conversion.

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1.0 Introduction & Reasons for Survey

- 1.1 As part of a proposed planning application at the barn at Middle Sontley Farm in Sontley (see Figure 1.1), Wrexham, Tyrer Ecological Consultants Ltd carried out a daytime preliminary roost assessment (PRA) in relation to bats with an inclusive assessment for breeding birds in August 2022. The survey was commissioned by Blueprint Architectural Service; proposals are understood to entail the conversion of the existing barn for residential use including creation of a new amenity garden and parking area.

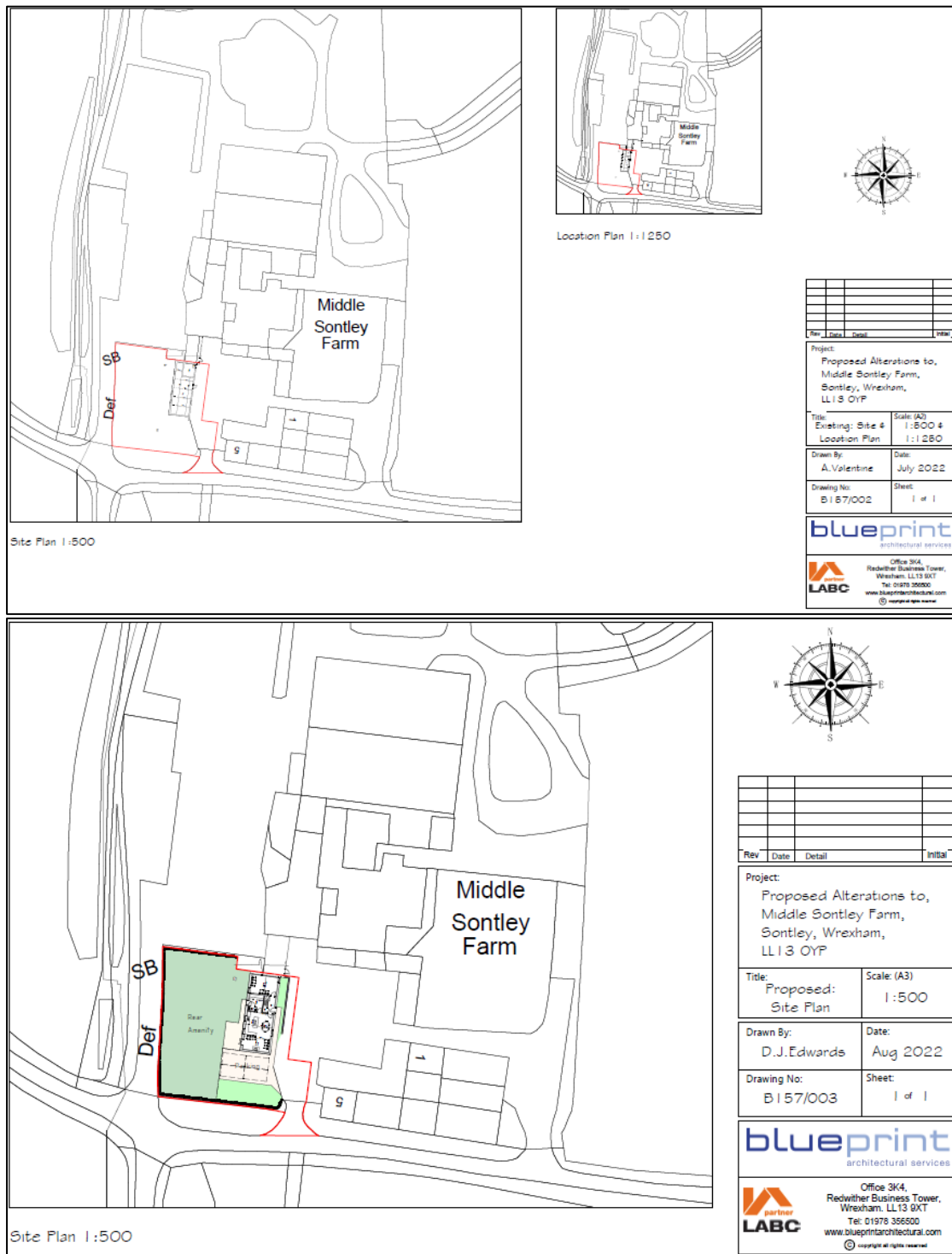


Figure 1.1 – Existing (top) and proposed (bottom) building layouts (©architect-direct.com)

- 1.2 The aim of the inspection was to ascertain if the building is of value to bats whilst an assessment for birds was also carried out; if found to be suitable for bats, or signs of use were observed, then more detailed surveys would be recommended i.e. dusk/dawn emergence/re-entry surveys during the main active season of bats which is May – August. If it is determined that bat(s) or their roost/place of rest/shelter will be subsequently affected by the works then a European Protected Species Mitigation Licence (EPSML) would be legally required to proceed with the development. If evidence indicated breeding birds may be impacted by proposals, then recommendations would be made accordingly, species pending.
- 1.3 If additional surveys are required following the initial site visit this report will outline the details of those further requirements.
- 1.4 As part of the local authority's planning policies and obligations to the Planning Framework, ecological surveys are generally required prior to planning permission being granted where protected/priority habitats and species are, or may be, present, that could be affected by the proposals for which the application seeks consent. Where more detailed surveys are recommended by the ecologist following an initial daytime investigation, then Local Planning Authorities (LPA) may not, on the advice of their ecological advisors, grant permission until such time that all relevant information is gathered.
- 1.5 In accordance with *Biodiversity Net Gain: Good practice principles for development* (CIEEM *et al*, 2019) the site visit also aims to identify enhancement opportunities for biodiversity in line with national and local planning policy.

2.0 Protected Species & Their Requirements

Bats

- 2.1 All British bats and their **roosts are afforded full protection under the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of the Conservation of Habitats and Species Regulations (2019) (EU Exit). When dealing with cases where a European Protected Species (EPS) (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the Regulations, that has a statutory duty as the local authority to have due regard to the provisions of the Regulations in the exercise of its functions.
- 2.2 The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained.
- 2.3 Use of Buildings by Bats

- a) Summer breeding roost (May-August)
- b) Hibernation roost (October-March)
- c) Transitional or temporary roost (other months)

Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance; climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

** The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats and Species Regulations (2019) (EU Exit) (Regulation 43 (d) the term roost is not used but refers to “a *breeding site or resting place* of

such an animal” and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used, is legally protected whether or not bats are in occupation.

Birds

- 2.4 All wild birds, no matter how common, their eggs, young and nests, whilst being built or occupied, are protected under both the Wildlife and Countryside Act (WCA, 1981) and Natural Environment and Rural Communities Act (NERC Act, 2006). Birds listed on Schedule 1 of the WCA 1981, for example Barn Owl (*Tyto alba*), are afforded a greater level of protection protected also from disturbance.
- 2.5 Any work that would damage an occupied nest, eggs or young of breeding birds must be avoided; any damage to nests that may occur as a result of the development should be outside of the main breeding bird season (March-August). On occasions nests can become unoccupied during the breeding season but the status of the nest(s) should be determined by a suitably experienced ecologist before any damage takes place.

Policy

- 2.6 The Environment (Wales) Act 2016 (“the Act”) - requires local planning authorities to have regard to area statements in the development of Local Development Plans. The Act introduced an enhanced biodiversity and resilience of ecosystems duty (Section 6 Duty). This duty applies to public authorities in the exercise of their functions in relation to Wales and will help maximise contributions to achieving the well-being goals. The Nature Recovery Action Plan supports this legislative requirement to reverse the decline in biodiversity, address the underlying causes of biodiversity loss by putting nature at the heart of decision-making and increasing the resilience of ecosystems by taking specific action focused around objectives for habitats and species.

Part 1 of the Act promotes sustainable management of natural resources, and in Part 1 section 6 states:

“A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.”

- 2.7 Planning Policy Wales (PPW) 11th Edition (2021) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, Minerals TANs and policy clarification letters comprise national planning policy.
- 2.8 PPW and the National Development Framework (published as Future Wales – the National Plan 2040) set out how the planning system at a national, regional and local level can assist in delivering these requirements through Strategic Development Plans (SDPs) and Local Development Plans (LDPs).

PPW (2021) states:

“The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained. Planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site, and potentially the surrounding area, concerned. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the

development on a protected species may be required in order to inform the development management process. It is considered best practice that screening to determine the presence of protected species should be carried out by a competent ecologist on the basis of data provided by the relevant Local Environmental Record Centre.”

- 2.9 This is further supported by PPW (2021) which requires developments to achieve a Net Benefit for Biodiversity (NBB):

*“Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a **net benefit for biodiversity**. In doing so planning authorities must also take account of and promote the resilience of ecosystems, in particular the follow aspects:*

- *diversity between and within ecosystems;*
- *the connections between and within ecosystems;*
- *the scale of ecosystems;*
- *the condition of ecosystems including their structure and functioning; and*
- *the adaptability of ecosystems.”*

- 2.10 There are several plans, strategies and national, sub-regional and local policy statements which provide a framework for development in the Plan area. The Planning and Compulsory Purchase Act (2004) makes it a requirement for local planning authorities in Wales to prepare a Local Development Plan (LDP) for their areas.

3.0 Protected Species in North Wales

- 3.1 Up to eleven bat species have been regularly recorded within North Wales, most of which use built structures, notably occupied residential properties, for roosting. All bats feature on the local Biodiversity Action Plan for the area; the most frequently encountered bat species is the Soprano Pipistrelle (*Pipistrellus pygmaeus*) and its abundant status throughout North Wales is reflected throughout the UK.

- 3.2 All wild birds (with only minor exceptions) and their nests, whilst being built or containing eggs or dependant young, are protected under the Wildlife & Countryside Act 1981 (as amended). Some species are, however, subject to a greater level of protection, for example Barn Owl (*Tyto alba*), which are a distinctive, widespread species of protected bird listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); they are distributed throughout the UK and will use tussock-forming grasslands, rough field margins, ditches and roadside edges for hunting purposes, whilst they typically use barns/abandoned buildings and tree hollows for nesting or roosting use. In rare instances occupied dwellings can support owls. Additional to protection from nest destruction, Schedule 1 listed species are also protected from disturbance.

4.0 Survey Methodology

- 4.1 As part of the Inspection & Assessment for Bats & Breeding Birds report, a desk-top and field-based study is conducted. Methods for both components of the appraisal are given below.

Desktop Study

- 4.2 Before a site visit a desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations within 2.0km of the site boundary. To do so, the ‘Multi Agency Geographic Information for the Countryside (MAGIC – provided by Defra)’ along with ‘Lle a Geo-Portal for Wales’ and DataMapWales were accessed to gather such information; this interactive

mapping service was also used to locate any European Protected Species Mitigation Licenses (EPSML) and species records to further inform conclusions concerning protected species in the context of the study site and its proposed development.

- 4.3 Satellite imagery was reviewed using sources such as Google Earth (© 2021/22) to determine the nature of adjoining and extending habitats; such information aids in the understanding of how the site might interact with its surroundings ecologically and its value in that context, and how the development may impact at a wider scale.
- 4.4 A commercial data request to the Local Environment Records Centre serving the area has not been sourced and is justified through application of the following recent guidance:

1) The Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK (CIEEM, 2020) states:

“It is generally expected that a desk study, including a data search, will be a key part of the ecological surveys or reports produced to inform a planning application. Freely available web-based sources of data and contextual information should always be used; in some cases, it may be acceptable to not undertake a data search with the LERC or other relevant NSS or local interest groups, for example:

ii) Situations where the data search would be extremely unlikely to provide information needed to inform the assessment, due to the scale and location of the proposed development. The appropriateness of excluding a data search will need to be judged on a case-by-case basis as, in most situations, it will be essential to carry out such a search even if the development is very small or is likely to have a low impact. It can be very difficult to demonstrate that a data search would not have provided relevant information without obtaining and reviewing those data.

*iii) In some cases for Preliminary Roost Assessments of buildings in **low impact / small-scale scenarios**, such as an **extension to a residential property, loft conversions** (full or partial), installation of Velux/dormer windows, single modern agricultural or similar building conversion or demolition; however, it should not be assumed that data searches are never required for such scenarios and this must be judged on a case by case basis and justified accordingly.*

2) The Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) also states:

*“Very occasionally it might be possible to carry out a robust PEA without obtaining LERC/NBDC/CEDaR data; this will usually only apply to **low impact** or **small-scale projects** (e.g. by virtue of size, extent, duration of works, magnitude and locality), and should be determined on a case-by-case basis.”*

- 4.5 As exemptions as made **bold** above can be applied at the application site, in good practice, it is considered unnecessary to conduct a commercial data request following the desk study effort and daytime assessment at this time which offers a proportionate level of survey effort, however, if a data search is considered to be necessary by the Local Authority to inform the ecological impact assessment following any further surveys recommended in this report, a proportionate data search should be commissioned with results interpreted into the conclusions and recommendations of a re-issued/updated report.

Field Survey

- 4.6 In context with the above a diurnal inspection and assessment of the property in relation to bats and breeding birds was conducted on the 24th August 2022 in dry conditions (18°C), wind 2/12 (Beaufort scale), 95% cloud, by Mr. J. Pescod Qualifying CIEEM, Consultant Ecologist

with five years' professional experience & training and accredited agent on the (Class 2) Natural Resources Wales bat licence of Mrs. K. Wilding (S090606-1).

- 4.7 Bat Conservation Trust (BCT) - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) states:

"The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. Where examples are used in the guidelines, they are descriptive rather than prescriptive."

- 4.8 The bat and breeding bird survey was conducted in tandem; the building was inspected for potential places that may be of value to bats or breeding birds, and to determine if evidence of use by either group was present; any loft spaces where possible were assessed with the aid of a high powered torch for evidence of bat use, which mainly includes bat droppings and/or prey items, or the incidental presence of live or dead animals, and investigated for evidence of breeding birds which broadly involves a search for nesting materials, presence of pellets or accumulated faeces and/or dead juveniles/hatchlings.
- 4.9 External elevations were investigated with the aid of high-powered torch and close focus binoculars (where necessary) for places that can be used as a roost by bats or as a means of ingress for bats and birds leading to areas of roosting/nesting potential. These features are typically referred to as potential roost features (PRF) concerning bats. All external features were able to be surveyed without constraint.
- 4.10 The surrounding habitat was also considered in terms of general suitability for bat and bird species associated with the local habitat types.
- 4.11 The trees around the property were surveyed in relation to bats and breeding birds.
- 4.12 Criteria for roost assessment are based upon the determinants given in the Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016): (see Figure 4.1).
- 4.13 An assessment of the building was conducted when birds are outside their breeding season (this is typically March-August inclusive). Elevations were inspected for evidence of birds that show a high dependency upon built structures, many of which are in a state of decline. These might include the following species for example:
- Starling (*Sturnus vulgaris*): Birds of Conservation Concern (BoCC) red status
 - House Sparrow (*Passer domesticus*): BoCC red status
 - House Martin (*Delichon urbica*): BoCC amber status
 - Swift (*Apus apus*): BoCC amber status
 - Swallow (*Hirundo rustica*): BoCC green status

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.		
Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation ^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

^a For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Figure 4.1 - BCT guidelines extract

- 4.14 Additional to the site's capacity to support common species of bird, the area was subject to an assessment for capacity to support specially protected species such as Barn Owl, a species protected under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended).
- 4.15 The results, conclusions and recommendations are based on several factors i.e.
- Practical experience of surveyor,
 - Knowledge of bat/bird species relevant to the site location and geographical range,
 - Nature of immediate/surrounding habitat in relation to foraging/commuting,
 - Condition of the building,
 - Presence/absence of roost potential,
 - Value of roost potential – if present.
- 4.16 All aspects of the field survey were undertaken in line with government and CIEEM (2020) standing guidance during the COVID-19 pandemic.
- 4.17 The results, conclusions and recommendations of this report have been assessed by Mrs. K. Wilding, the Director of Tyrer Ecological Consultants Ltd, and her assessment is consistent with that of Mr Pescod.

5.0 Limitations

- 5.1 The survey was conducted in August at a time when bats are within their active season, with evidence of bats most apparent in this time period where they are roosting. Survey timing is therefore not considered a constraint in this instance.
- 5.2 The survey took place within the breeding bird season (typically March – September inclusive) at a time when evidence of breeding birds is most apparent. Survey timing is again not considered a constraint in this instant.
- 5.3 Having considered possible survey constraints, no significant limitations were experienced that might adversely influence the results, conclusions, and recommendations of this report.

6.0 Desk Study Results

- 6.1 The Barn at Middle Sontley Farm (referred to in part as “the site”) is situated off an unnamed road in Sontley, approximately 4.0km south-west of Wrexham city centre (see Figure 6.1).

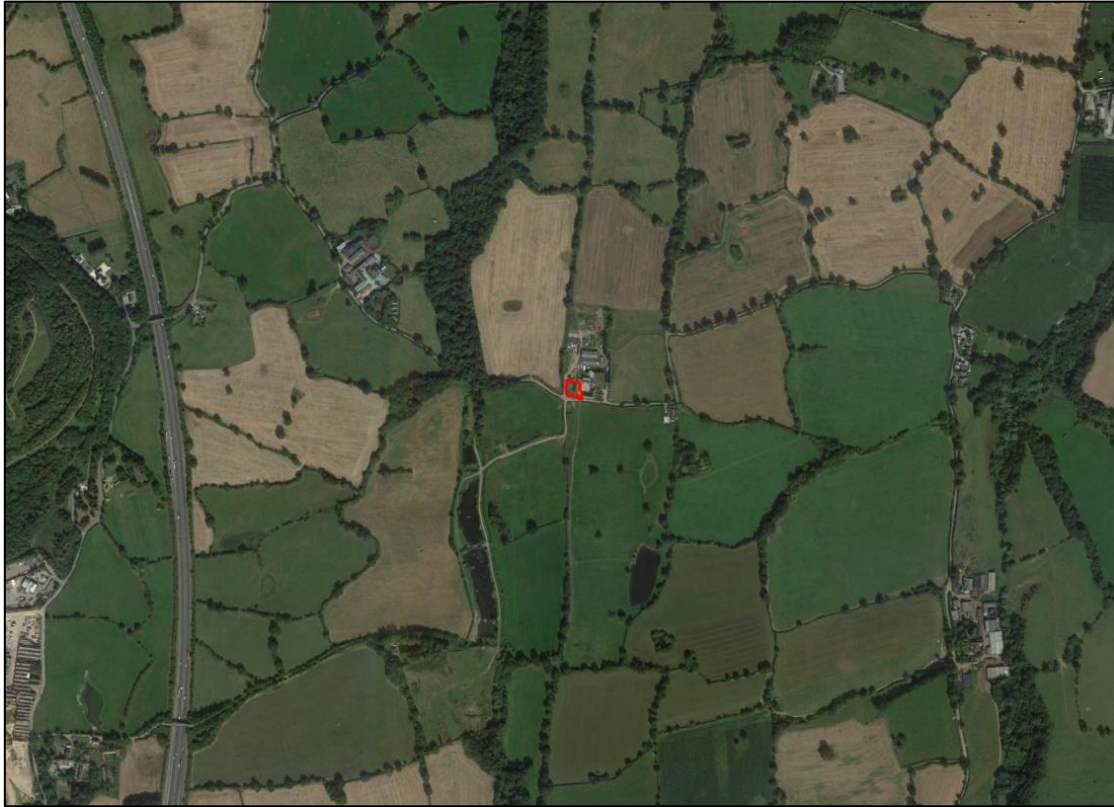


Figure 6.1 - Location of the application site (red line boundary) (Source: Google Earth Pro, 2021)

- 6.2 The immediate habitat consists of the wider Middle Sontley Farm complex extending to the north and east, whilst to the west is an arable field bordered by a stand of broadleaved woodland lining the banks of the Black Brook, and to the south are further agricultural grasslands interspersed with ponds and scattered trees.
- 6.3 The extending environment continues in similarity to the immediate with a patchwork of arable and pasture grassland intersected by hedgerows, minor lanes and brooks. Further areas of woodland are present throughout the landscape, notably including at Erddig Hall Country Park to the north.
- 6.4 Collectively, the immediate and extending aforementioned ecological features should be considered favourable for the species for which the survey was undertaken, with reasonably well-connected ecological networks for bats and birds and connectivity between the application site and semi-rural areas of woodland, grassland and agricultural land surrounding the site. These corridors of connectivity provide areas for commuting and foraging for bats, with the protected species most typically associated with the habitats described being the Soprano Pipistrelle (*Pipistrellus pygmaeus*), frequently associated with using buildings in sub-urban areas, and Brown Long-eared bats (*Plecotus auritus*), which are commonly associated with woodland and more semi-natural environs.

NB: *Where quality habitat is present close to buildings then the percentage use of those buildings, by bats, increases given that roost opportunities are available and vice versa.*

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- 6.5 Three statutory designated sites are located within 2.0 kilometres of the application site, namely the Sontley Marsh and Stryt Las a'r Hafod Sites of Special Scientific Interest (SSSIs) located approximately 1.6km to the north-east and 0.9km to the west respectively, and the Johnstown Newt Sites Special Area of Conservation (SAC) located approximately 0.9km to the west. Based on the small-scale nature of the proposals which are limited to conversion of an existing building and landscaping of a small area adjacent to this barn, the proposed works are unlikely to have an effect upon any of these designated sites or the features for which they are designated. Furthermore, the application site falls outside of the Johnstown Newt Sites buffer zone, and mitigation in relation to this site is therefore not required.
- 6.6 A search of extensive bat records held by Tyrer Ecological Consultants and dating from 2014-present revealed a number of notable records within the considered radius; these have been submitted to the appropriate LERC for the area and are summarised below:
- A Soprano Pipistrelle (*Pipistrellus pygmaeus*) day roost within a tree in Erddig Hall Country Park, dating to 2019,
 - Nine species recorded during activity surveys at Erddig Hall Country Park during 2019: Brandt's (*Myotis brandtii*), Daubenton's (*Myotis daubentonii*), Whiskered (*Myotis mystacinus*), Natterer's (*Myotis nattereri*), Noctule (*Nyctalus noctula*), Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared and Lesser Horseshoe (*Rhinolophus hipposideros*).

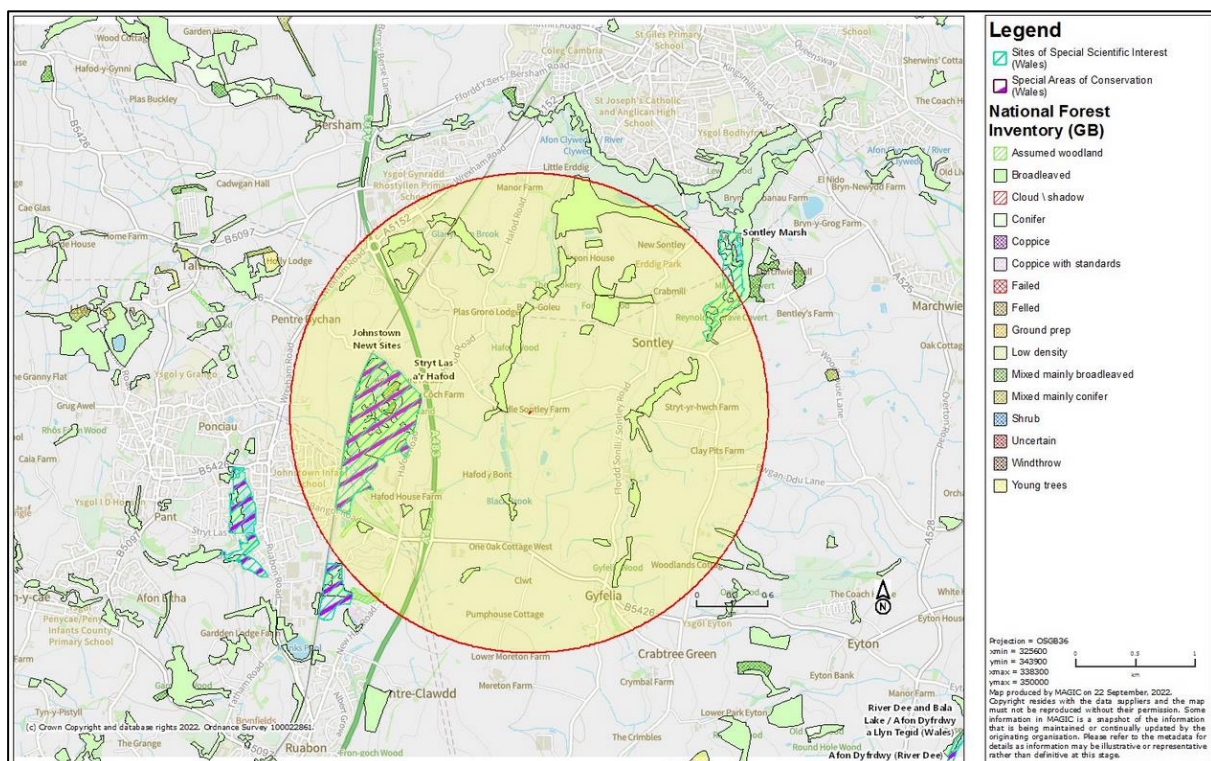


Figure 6.2 – Designated site data for the area within 2.0 kilometres of the application site (Source: MAGiC Maps 2022)

7.0 Field Study Results

Bats

- 7.1 The building is situated at the south-western corner of Middle Sontley Farm and consists of a two-storey, breezeblock and brick-built barn with a slate pitched roof, to the approximate dimensions of 17 x 6 x 5 metres (Length x Width x Height). The dwelling features wooden barn windows, ventilation bricks and an empty window frame at the northern elevation; whilst the surveyor is not qualified to assess the structural integrity of buildings, the barn was adjudged to be in an extremely poor aesthetic condition with abundant damage to brickwork and slates.
- 7.2 Internally the barn is split into a ground floor and loft room; the upper storey is disused whilst the ground floor acts as approximately nine individual kennels, in regular use and subject to electric lighting. The upper floor/loft room is a single, open space, dimly illuminated and draughty due to open windows and numerous gaps in the walls and roof; the loft was cold, and the roofing timbers generally absent of cobwebbing which can sometimes indicate the presence of loft-dwelling bats which free-fly in such spaces and therefore disturb cobwebs.
- 7.3 Taking into account the draughtiness, cool internal temperature, and daylight illumination, and despite the presence of good quality foraging and commuting habitat in the surrounding area the loft is considered unsuitable for the breeding requirements of loft-dwelling bats such as the Brown Long-eared; this is a bat which prefers dark, warm loft spaces which allow free flight. This does not necessarily exclude use of the loft for purposes other than breeding by such species; however, no evidence of loft-dwelling bats was identified within the building despite a meticulous search of the space.
- 7.4 No underlining is present beneath the roofing materials; where present a traditional bitumen 1F underfelt or other such lining can improve a buildings' value to bats, whereby they roost between linings and the roof cover material provided. However, a number of crevices were noted within the larger roofing beams that might be suitable for use by bats in low/singular numbers. No evidence of crevice-dwelling bats was identified, though this can often be the case even when such bats are present due to their crevice inhabiting nature.

***NB:** The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.*

- 7.5 Externally the building was found to contain abundant ingress points and PRFs to all elevations, including but not limited to; large openings at windows and damaged brickwork providing access to internal crevices, lifted/missing slates, and gaps at wall-plate beneath fascia and at roof verge at crumbled mortar. Taking into account the identified PRFs on the building and the favourability of the surrounding habitats, the barn is duly categorised as offering **'Moderate'** bat roost potential; however, due to the cool internal temperatures is considered broadly unsuitable as a breeding roost.
- 7.6 No mature trees are present within the application boundary, though a number of low shrubs are likely to provide some foraging opportunities for local bat populations.

Breeding Birds

- 7.7 In relation to WCA Schedule 1 specially protected bird species, such as Barn owl, no evidence to indicate use of the site by such species was identified including pellets, feathers, or nesting materials, though the loft space would provide suitable nesting habitat and the wider agricultural environment contains abundant hunting opportunities.

- 7.8 In relation to common bird species abundant droppings were identified throughout the loft space, and an active Swallow (*Hirundo rustica*) was observed. In addition, frequent House Sparrow (*Passer domesticus*) activity was noted around the cracked brickwork and roof, though no categorical evidence of nesting was recorded. The building provides a number of nesting platforms suitable for use by a range of common birds associated with rural and garden environs, and taking into account the presence of an active Swallow nest, presence of nesting birds during the breeding season is considered confirmed.

8.0 Conclusions & Recommendations

- 8.1 Based upon the findings of the survey, covered through sections 6.0 – 7.0 of the report and supported by Appendix I, the Barn at Middle Sontley Farm is determined to offer ‘**Moderate**’ bat roost potential in accordance with Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016). It is recommended that two dusk and/or dawn emergence/re-entry surveys are conducted at the site during the active season of bats (May - August, extending into September), in order to establish if/how the building is being used by bats, and if so, identify the species present, abundance, roost locations and flight lines around the site following emergence/re-entry. Two surveyors would be required to monitor the potential roost features described at the building.

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).		
Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^b

Figure 8.1 – BCT extract on Moderate roost potential requirements

- 8.2 No mature trees are present within the site boundary and no vegetation offers and roosting potential for bats; however, the low shrubs that form the current garden to the south-west of the barn should be considered of foraging value to local populations of bats, providing loci around which small insects congregate.
- 8.3 In the event that the presence of roosting bats at the building is initially established then an additional survey may be required and the granting of a European Protected Species Development Licence (EPSDL) from Natural Resources Wales will be required for the development to legally proceed where bat roosts will be destroyed, altered, obstructed or damaged or if bats will be disturbed or capture/exclusion is required prior to demolition. However, it should be noted that if a breeding roost is discovered then work that will result in any of the above actions cannot take place until after the breeding season, which is broadly May- end of August inclusive.
- 8.4 Natural Resources Wales provide online information and guidance concerning the requirement for EPSDL's and the following extract is included in that guidance:

When would works require a licence?

“A licence is required for anything that would be an offence under the Regulations (covered in section 2.9 of this report). For example, this could include works which would disturb (as defined in the legislation) bats, damage a bat roost, or damage or destroy a breeding site.

NRW can only grant a licence if the following three tests are met:

1) The purpose of the work is for preserving public health or public safety or other imperative reasons of over-riding public interest (IROPI) including those of a social or economic nature and beneficial consequences of primary importance for the environment,

2) There is no satisfactory alternative,

3) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range; this last test might require that the work is modified to avoid or minimise adverse effects (mitigation), or that an alternative breeding site/resting place or habitat is provided instead to safeguard the FCS (compensation). Either way, you will need the advice of an ecological consultant. Along with filling in the licence application form, the ecological consultant will need to write a method statement (within the EPSML) explaining how the work will be done to minimise any detrimental effects.

If the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence being committed then no licence is required. However, in these circumstances Natural Resources Wales would urge that reasonable precautions be taken to minimise the effect on European protected species should they be found during the course of the activity. If protected species are found, cease the work until you have assessed whether you can proceed without committing an offence.

When might I work without a licence?

There might be situations in which you could continue without a licence. If the work can be organised in such a way that there would be no offences committed (i.e. no damage or destruction of a breeding site/resting place, no capturing, killing or injuring of individuals) then there is no need for a licence. This is a difficult area legally and your ecological consultant will be able to advise you further.

Developers should be aware that if work is held up or modified and there is a possibility that animals will be disturbed, or a breeding site / resting place will be unavailable to them (even if only temporarily), they should apply for a licence in good time.

Example: If a building with a bat roost requires re-roofing or repair work, you would not need a licence if:

- the existing materials are replaced like-for-like (i.e. similar type of roofing slates, similar felt or membrane),
- the same access points are retained and there are no structural changes made to the roost,
- the work is done whilst bats are absent and is completed before they would normally return to the roost.

NB: Where more detailed bat surveys are recommended, following an initial investigation, then Local Authorities on the advice of their ecological advisors, may not determine the application until such time that all relevant information is gathered, i.e. by conducting dusk/dawn surveys. The advice that is provided by the ecological advisors is also in accordance with the obligations placed upon Local Authorities by way of its duties under the Conservation of Habitats & Species Regulations 2017. Therefore it would be prudent to make enquiries to the relevant departmental Planning Officer before submitting a Planning Application that includes an ecological survey report that recommends more detailed surveys.

- 8.5 Installation of overly harsh artificial lighting as part of any development that exceeds current levels may have a negative impact upon foraging/commuting bats in the landscape, particularly if increased light spillage occurs in areas of that are currently free from illumination.

A bat-sensitive lighting plan is therefore recommended in order to avoid potential impacts to bats that may use the surrounding treelines. Several options to consider have been listed below, though the reader is referred to the Bat Conservation Lighting Guidelines for further information.

Appropriate luminaire specifications: Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires.

All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used. LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability. Lighting should be directed to where it is needed, and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only. Planting can also be used as a barrier or manmade features that are required within the build can be positioned so as to form a barrier.

Predicting where the light cone and light spill will occur: There are lighting design computer programs that are widely in use which produce an image of the site in question, showing how the area will be affected by light spill when all the factors of the lighting components listed above are taken into consideration. This should be a useful tool to inform the mitigation process.

Light levels: The light should be as low as guidelines permit. If lighting is not needed in any particular area, do not light. Numerous software programmes are currently available which can be used inform lighting plans, demonstrating how lighting decisions will illuminate a site.

Please refer to the 'Landscape and urban design for bats and biodiversity' (*Gunnell et. al.*, 2012, Bat Conservation Trust) Guidance Note 8 'Bats and Artificial Lighting' 2018, Bat Conservation Trust for further information.

Breeding Birds

- 8.6 No current evidence of roosting or nesting by Barn Owl was located at the application site and no impacts are foreseen in relation to any Sch.1 (WCA) specially protected bird species currently; however, taking into account the suitability of the barn as a roost or nest, and the high value of the surrounding agricultural land for hunting, it is recommended that a pre-works check is undertaken to ensure no Barn Owls have taken up residence since completion of this survey. The breeding season for Barn Owls extends throughout the entire year, and as such no temporal measures can be undertaken to avoid the season. Should any evidence of use by Barn Owl be identified during this pre-works check, further recommendations will need to be applied; depending on the evidence identified this might range from provision of an alternative roosting location to delaying the works until all individuals have left the nest.
- 8.7 Current evidence of nesting birds was identified within the barn in the form of a single active Swallow cup, whilst abundant droppings were also noted throughout the loft space and House Sparrows were observed using the building, though breeding could not be confirmed.
- 8.8 In the interests of potential impact avoidance it is recommended that any proposed works which may impact these areas of nesting potential should be undertaken outside of the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). For works within the breeding bird season, any areas that can support nesting birds should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing. If birds are found

nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

NB: *All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected from destruction, damage and disturbance under the Wildlife & Countryside Act 1981 (as amended). It is a punishable offence to interfere in any way with an active nest.*

- 8.9 To mitigate for the loss of Swallow nesting opportunities, it is recommended that two artificial Swallow nesting cups are erected at the application site or within the wider ownership boundary within Middle Sontley Farm, as close to the barn as possible. Further information regarding artificial Swallow cups is provided within Appendix II.
- 8.10 As a means of enhancement and aiding the design of the scheme in keeping with local and national planning policy considering NBB principles, the proposals may consider incorporating wildlife friendly provisions in addition to those described. Further recommendations, regarding birds, native species and invertebrates are provided within Appendix II.

9.0 Bibliography

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Appendix I: Site Photographs



Plate 1 – The Barn at Middle Sontley Farm, as viewed from the south-east



Plate 2 – Southern elevation of the barn



Plate 3 – Western elevation of the barn



Plate 4 – Character of the loft of the barn, showing roofing timbers and empty window frame at the northern gable



Plate 5 – Abundant bird droppings within the loft



Plate 6 – Northern gable of the barn

Appendix II: Biodiversity Enhancement Strategy

Birds

Breeding Birds - Swallows

Although Swallows are currently placed on the Green list for Birds of Conservation Concern (BoCC), meaning that they are under the least protection, numbers of this species can fluctuate heavily based on environmental and ecological factors, with high regional variation observed.



Swallows will readily adopt these nest cups which are based on the size and shape of natural swallow nests. The nest cup is ideal for placing in a garage, shed, stable, barn or even beneath an archway and should be placed beneath the roof with free access. It provides somewhere secure for swallows to nest and means that they will expend less energy in producing their own nest. It also means that they do not need to find suitable nest building mud which can be in short supply in a dry spring. This WoodStone® Swallow Bowl is made from durable WoodStone®, a mixture of concrete and wood fibres, that is guaranteed to last for years and is mounted on an exterior grade plywood board.

Specifications

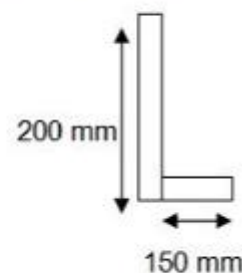
- * Height: 120mm
- * Width: 200mm
- * Depth: 110mm
- * Weight: 600g

The Swallow Shelter illustrated below can be utilised as an outbuilding in the form of a shed, wood store or a bin cover, but there should be enough room for the birds to access their nests, which should be placed at a distance of at least 6cm between the top of the nest and the roof of the building. You should ensure there is always access for the birds through an open window or sky-light. Swallows are sociable birds but multiple nests should not be placed at less than 1m intervals. Cleaning of the bowl is recommended, although not absolutely necessary.



A typical shelter for Swallows (maximum capacity two pairs)

Rough sawn beam (below) fixed to rear wall with a 200 mm clearance from the underside of the roof



Breeding Birds - House Sparrow

The Sparrow Terrace has been designed to help redress the balance of falling House Sparrow numbers. The current UK population is now half of what it previously was in 1980 and this is widely attributed to habitat destruction and lack of suitable nesting spaces. House Sparrows are social birds and like to nest in company, therefore, this terrace provides ideal nesting opportunities for three families. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of buildings.



Breeding Birds - Other

This traditional design has proved to be highly effective in attracting Robins, as well as other small species such as Black Redstart, Spotted Flycatcher and Wren. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.

This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box. Alternatively hide the box in Ivy, Honeysuckle or other climbing plants.



Invertebrates

Invertebrates - Bee bricks

The Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees. Alternatively, it can be used as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.



Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back. Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used.

Available in a choice of four colours: white grey, dark grey, yellow and red.

Specification

- * Material: Concrete
- * Origin: Cornwall, UK
- * Dimensions: W 215mm x D 105mm x H 65mm
- * Weight: 2.9kg
- * Colours: White grey, yellow, dark grey and red

Native Planting and/or Landscaping

New feature landscaping should incorporate native woody plants as opposed to non-native species that are of significantly less benefit to biodiversity. Species such as Blackthorn (*Prunus spinosa*), Honeysuckle (*Lonicera periclymenum*), Rowan (*Sorbus aucuparia*), Guelder-rose (*Viburnum opulus*) and Hawthorn (*Crataegus monogyna*) are native and will provide a valuable resource for a myriad of wildlife as opposed to non-native, exotic species which are generally much less effective, particularly to pollinator groups including bees, butterflies and moths.

Trees	Woody Shrubs
English Oak (<i>Quercus robur</i>)	Hawthorn (<i>Crataegus monogyna</i>)
Rowan (<i>Sorbus aucuparia</i>)	Honeysuckle (<i>Lonicera periclymenum</i>)
Wild Service Tree (<i>Sorbus torminalis</i>)	Guelder Rose (<i>Viburnum opulus</i>)
Silver Birch (<i>Betula pendula</i>)	Elder (<i>Sambucus nigra</i>)
Ash (<i>Fraxinus excelsior</i>)	Wild Privet (<i>Ligustrum vulgare</i>)
Goat Willow (<i>Salix caprea</i>)	Blackthorn (<i>Prunus spinosa</i>)
Beech (<i>Fagus sylvatica</i>)	
Wild Cherry (<i>Prunus avium</i>)	