Salopian Consultancy

Preliminary Ecological Appraisal

(Incorporating an baseline habitat survey utilising UK Habitat Classification system and Preliminary Roost Assessment and Habitat Suitability Index)

Project: Old School House, Bicton, SY3 8EQ

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On Behalf of: Mrs Quigley

Foreword

Salopian Consultancy Ltd is an Arboricultural/Ecological consultancy which provides inputs to guide developers and architects during the planning process.

Core services include BS5837:2012 tree surveys, condition assessments, mortgage applications and woodland management. In addition, Salopian Consultancy Ltd have in house ecological expertise enabling them to perform a range of ecological inputs.

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Executive summary

Brief of the study and context of development

This report has been prepared to identify the key ecological constraints to inform a planning application for the extension and alterations to the Old School House at Bicton. The focus of the study has been to highlight those ecological constraints to ensure that they have been given due consideration during the design and planning process, whilst identifying opportunities for biodiversity enhancements.

Survey methods

A desk study of historic ecological records, past ecological assessments and an baseline habitat survey were performed to assess the site's potential to support protected species. The main habitat types have been recorded in line with those classifications detailed in UK Habitat Classification (UKhabs). This study was extended to include a Habitat Suitability Index (HSI) of ponds within 250m of the site and a Preliminary Roost Assessment (PRA) of those trees and structure on site by a licensed Ecologist.

Findings and recommendations

The site comprises of g4 modified grassland, managed as shortly mown amenity lawn, bound by h2a native hedgerows. Within these primary habitats lies a matrix of broad-leaved and coniferous trees and tree groups. The central part of the site is formed by the driveway classified as ub1 sealed surfacing with the main house and outbuildings located to the east and south respectively.

No historic evidence of roosting bats were identified within the roof space of the main house during the PRA, nor were any obvious signs of ingress noted. Given the overall good condition of the brickwork, it's render and roof structure, the main house is not considered suitable for roosting bats. Those auxiliary outbuildings which comprise of wooden sheds and greenhouses are also not considered suitable by virtue of the lack of crevice features and the construction.

A single pond was identified within 250m of the site during the desk study. Upon closer inspection this waterbody was revealed to be a dry depression/ditch and therefore not deemed viable for breeding amphibians notably great crested newt (*Triturus cristatus*). An assessment of local biological records did not identify the presence of this species within 500km of the site.

The proposal will require the extension of the western elevation of the main house and amendments to the building, highway access and driveway.

Further surveys and ecological enhancements

No evidence of protected species or notable habitats were identified on site, further Phase 2 surveys to inform licensing or mitigation measures are not deemed necessary. The removal of trees/vegetation must be timed to fall between September and February outside of the bird nesting season to avoid contravening statutory legislation in connection with nesting birds or immediately after a pre-commencement check by suitably qualified personnel. The proposal has the opportunity to provide enhancements for protected species through the installation of both bird and bat boxes upon those trees adjacent to the boundaries of the site. Such provisions for wildlife could be secure by a suitably worded planning condition.

Section 1 Introduction

- 1.1 This report, it's plans and associated appendices have been prepared on behalf of Mrs Quigley to meet those requirements of a baseline habitat survey, and scoping exercise for protected species at 'The Old School House', hereafter referred to as 'The Site'. The Site is centred on approximate Ordnance Survey Grid Reference SJ44861457 illustrated in Plan 1.
- 1.2 The aim of the baseline habitat survey has been to record and map the main habitat types and dominant plant species present in accordance with those classifications detailed in UK Habitat Classification¹, (Version 2) with essential and additional secondary codes recorded.
- 1.3 The study was extended to include an assessment of the sites suitability for protected species including a Preliminary Roost Assessment (PRA) of trees and structures on and adjacent to the site. A review of historic Phase 2 great crested newt survey information of those ponds within 250m of the site available on the planning portal and magic.gov.uk was also undertaken.
- 1.4 The data obtained from this survey is presented in a Habitat Plan (Plan 2) illustrating habitats recorded with secondary codes used to highlight features of interest. Further details on the methodology adopted during the baseline habitat survey and desk study are included in Appendix 1.
- 1.5 The survey was performed on the 06th February 2024 by Douglas Williams, Salopian Consultancy Ltd.'s Principal Ecologist. Doug is an experienced Ecologist/Arboriculturist and has worked within these sectors for over a decade. He holds an MSc in Biological Recording, protected species licences for both bats and great crested newts, and memberships with the Royal Society of Biology, the Chartered Institute of Ecology and Environmental Management and the Arboricultural Association. Doug has received training by CIEEM in the use of UKhabs version 2 and version 4 of BNG metric, as well as botanical training with the Field Studies Council.

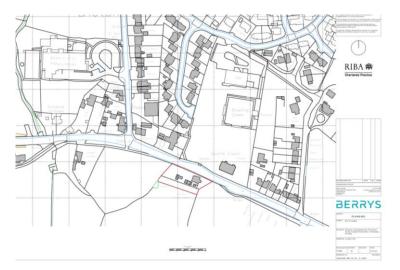
Site location and context of development

- 1.6 The site is located within the village of Bicton situated directly to the south of the B4380 and "The Evolution School". The application area forms the curtilage of the property referred to as the Old School and is bound to the east, south and west by land of an arable nature.
- 1.7 An initial assessment of the proposal identified that planning permission is sought for the demolition of a number of outbuildings, extension of the main house and amendments to the highway access point to achieve modern visibility splays.

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https://ukhab.org/

Figure 1: Site location plan



Scope of the study

- 1.8 The primary focus of the study is to;
 - Meet the validation requirements of Shropshire Council by presenting the findings of an baseline habitat survey in a clear and concise manner.
 - Include the content set by the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines², for ecological appraisals.
 - Classify and map those habitat types within the application area using the UK Habitat Classification system.
 - Identify both habitats and species constraints pertinent to the development proposal.
 - Detail European Protected Species Mitigation licensing (EPSML) requirements, Reasonable Avoidance Measures (RAMS) and mitigation measures where required.
 - Identify opportunities for the proposal to provide enhancements to the ecological resource on site.

Limitations

- 1.9 The survey was not considered to be limited by seasonal or climatic factors and was undertaken within a suitable time of the year given the habitats and species likely to be present.
- 1.10 The baseline habitat survey provides a snapshot of the potential of habitats to support protected species. It should be noted that the absence of field signs does not necessarily confirm the absence of a species due to the dynamic and seasonal nature of many protected species. The suitability of a site may also increase with succession over time or with changes in land management practices. Further advice should be sought from Salopian Consultancy Ltd In the event that a protected species or field signs of such species are discovered during works.

² Chartered Institute of Ecology and Environmental Management., (2015). Guidelines for Ecological Report Writing Appendix A.

Section 2 Planning policy & statutory controls

Statutory legislation

- 2.1 A range of EU and UK legislation offers statutory protection to species and habitats which Local Planning Authorities have a duty to consider whilst determining planning applications. The following EU directives are relevant to protected species, habitats, and designated sites;
 - The EC Habitats Directive (92/43/EEC)
 - The Birds Directive (79/409/EEC) and
 - EU Water Framework Directive (2000/60/EC)
- 2.2 Much of the EU legislation is transposed into domestic legislation with respect to protected species and habitats, including;
 - The Wildlife and Countryside Act (1981) (as amended)
 - The Protection of Badgers Act (1992)
 - The Natural Environment and Rural Communities Act (2006)
 - The Countryside and Rights of Way Act (2000)
- 2.3 The Association of Local Government Ecologist (ALGE) provides a summary of the criteria and thresholds³ to determine when an Ecological survey should be performed. Many Local Planning Authorities have adopted this guidance to ensure that the correct information is presented when considering the impacts upon biodiversity during the planning process.

National and local planning policy

- 2.4 Natural habitats and the species they support provide a range of ecosystem services that have considerable financial, cultural, and recreational benefits. The National Planning Policy Framework (2021) (NPPF) ⁴ highlights the importance of natural habitats, the species they support and the requirements of development to maintain, promote and enhance the natural environment. The requirements of new development to provide a net gain in biodiversity and establishing ecological networks are clearly set out in para 174, 179 and 180.
- 2.5 Section 40 of the Natural Environment and Rural Communities Act 2006, places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and decision making throughout the public sector.
- 2.6 Shropshire Council's Core Strategy CS6 and CS17 encourages development 'which conserves, enhances, connects, restores, or recreates natural assets'. These policies support proposals which contribute positively to the 'special character or local distinctiveness' where development affects biodiversity at a landscape scale.

³ Association of Local Government Ecologist., (2007). Template for Biodiversity and Geological Conservation.

⁴ Department for Communities and Local Government., (2021). National Planning Policy Framework. Para175 d.

Section 3: Survey findings

Desk study

- 3.1 The desk study summarised in Appendix 1 forms an important part of the ecological assessment. It provides contextual information, such as the sites proximity to designated sites and the location of historical protected species records. This information is used to support those recommendations and evaluate the information gathered during the baseline habitat survey when assessing the site's suitability for protected species.
- 3.2 A review of OS maps and online mapping resources and previous ecological studies was undertaken to identify designations of conservation concern within 1km of the site and waterbodies within 250m. Historic species records have been reviewed and those pertinent to the study highlighted. An assessment of the Shropshire Environmental Network (SEN) mapping system was also undertaken to identify any core areas or wildlife corridors illustrated in Figure 3 overleaf as red and green respectively.

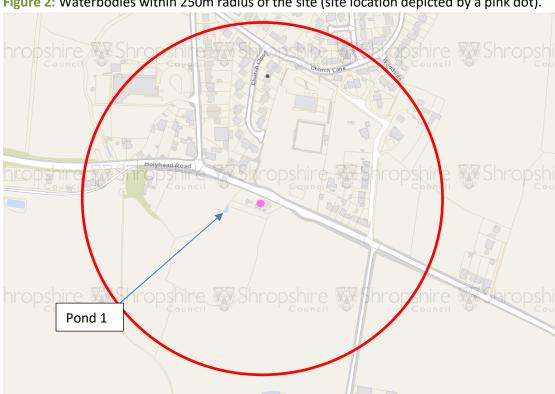


Figure 2: Waterbodies within 250m radius of the site (site location depicted by a pink dot).

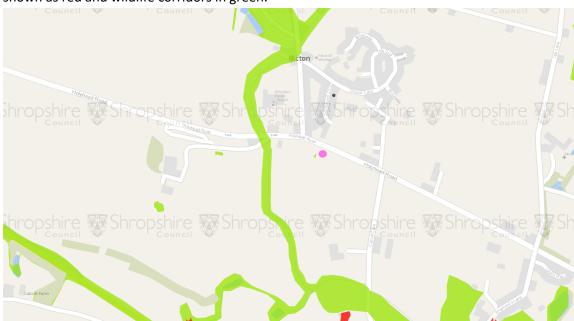


Figure 3: SEN components surrounding the site location (shown as a pink dot), core areas are shown as red and wildlife corridors in green.

Environmental Networks

3.3 SEN is defined into a hierarchy of components discussed in Shropshire Councils Guidance Note 11: Environmental Networks. These components form areas of high biodiversity value (core areas depicted in red) and areas that act as connective 'corridors and stepping stones' between them (illustrated as green) which includes non-statutory designations. The term connectivity refers to the movement of species between areas thereby aiding geneflow, recolonisation of habitats and bolstering of populations during fluctuations, which is a key aspect of meta population dynamics.

Statutory/ non-Statutory Designation within 1km

- 3.4 No local or National Nature Reserves were revealed during the desk study, nor were any Sites of Special Scientific Interest (SSSI), Special areas of Conservation (SAC), Special Protection Area (SPA) or Biospheres identified within the 1km search radius. A single static waterbody was identified within 250m of the application area.
- 3.5 Priority habitat woodlands were identified in excess of 400m to the north east and 500m to the east and west of the site. These woodlands are recognised as habitats of principal importance under the National Environment and Rural Communities Act (2006). No ancient or semi natural woodlands were identified within 1km of the site.

Species records

- 3.6 During the desk study, and assessment of those protected species data sets presented on magic.gov.uk were undertaken which includes;
 - Great crested newt class survey licence Return (England)
 - Great crested newt Pond Surveys 2017-2019
 - Granted European Protected Species Applications (England) amphibians, reptile, invertebrates, and bats
- 3.7 In addition a review of historic species records held for the area available within the public domain was also undertaken.
- 3.8 The nearest record of great crested newt was revealed within 600m south west of the site close to Lower Calcott/Walnut Farm, near the A5. No EPS license returns are held for the site itself or neighbouring land parcels. Records of smooth newt (*Lissotriton vulgaris*), common frog (*Rana temporaria*) and common toad (*Bufo bufo*) are also held for the local area.
- 3.9 Historic mammalian records of note include that of common pipistrelle and brown long eared bat (*Plecotus auratus*), as well as sighting of hedgehog (*Erinaceus europaeus*), badger (*Meles meles*) and otter (*Lutra lutra*) which is typical of the neighbouring agricultural land use considering the proximity to the River Severn.

Habitat Suitability Index

3.10 A desk-based assessment identified a single waterbody within 250m from the site illustrated in Figure 2. Following a detailed inspection during the site visit it was revealed that this feature is a dry depression/ditch which appears to hold water rarely. A formal HSI study could therefore not be undertaken, this feature is not deemed suitable for breeding amphibians.

Preliminary roost assessment – structures/trees

- 3.11 A ground-based assessment of those trees located within the site's boundaries did not identify any features capable of supporting roosting bats.
- 3.12 The building itself varies in its age, has been treated with a white render externally and is generally in good condition with tightly fitting soffits and bargeboards.
- 3.13 The internal roof space is shallow, approximately 60cm in height, formed by modern timber trusses with a breathable membrane and fiberglass insulation. No evidence of light ingress or historical evidence of bats were noted (i.e dropping, staining, feeding remains or corpses) externally the slate roof and ridge tiles are tightly fitted with no obvious crevice potential or opportunities of ingress into the loft void.

- 3.14 The timber panel sheds are in good condition with no obvious cracks or crevices between the timber panels deemed suitable for roosting bats. The greenhouses are not deemed suitable for roosting bats given the nature of the construction and illumination during daylight hours.
- 3.15 None of the buildings or trees on site are considered suitable for roosting bats.

Figure 4: Internal loft space



Figure 5: external of main building



Habitat classification

3.16 The habitats on site are restricted to u1b sealed surface (hard standing), and areas of g4 modified grassland managed as shortly mown amenity lawn. The grassland supports common flowering species including nettle (*Urtica dioica*), broad-leaved dock (*Rumex obtusifolius*), spear thistle (*Cirsium vulgare*), and herb Robert (*Geranium robertianum*) which are typical of domestic lawns.

- 3.17 Around the boundaries of the site are established field boundary hedgerows formed by predominantly hawthorn (*Crataegus monogyna*) with sections of holly (Ilex *aquifolium*) and privet (*Ligustrum ovalifolium*).
- 3.18 The tree stock comprises of a wide range of species and age classes largely within the semi mature to early mature age ranges. The majority of the trees recorded include tall etiolated stands of beech (*Fagus sylvatica*), Leyland cypress (*Cupressus × leylandii*) and western red cedar (*Thuja plicata*) which have begun to outgrow their setting.
- 3.19 Occasional smaller ornamental specimens of snake bark maple (*Acer davidii*), variegated holly (*Ilex x altaclerensis*) and corkscrew hazel (*Corylus avellana cortana*) were noted, as well as cohesive groups of *Prunus laurocerasus 'Camellifolia'*.

Section 4: Evaluation of ecological constraints and opportunities

Designations

- 4.1 The site does not fall within, or adjacent to any statutory or non-statutory sites of conservation concern
- 4.2 Provisions for new planting could maintain a degree of connectivity between sites and provide replacement opportunities in terms of foraging and refugia, notably for pollinating insects and nesting birds.

4.3

Habitats

4.4 Those habitats on site are restricted to u1b sealed surfacing (hard standing), g4 modified grassland managed as shortly mown amenity lawn, existing u1b5 buildings and a mixed of board leaved and coniferous trees, bound by established h2a hedgerows.

Protected species

- 4.5 As highlighted above those trees and hedgerows on site do provide nesting opportunities for a range of common passerine. All wild birds, their nests and eggs are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), this makes it an offence to:
 - Intentionally kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while it is in use or being built;
 - Take, damage or destroy the egg of any wild bird; or
 - To have in one's possession, or control, any wild bird (dead or alive) or egg or any part of a wild bird or egg.
- 4.6 Tree removal need to be timed to fall between September and February outside of the bird nesting season to avoid contravening the legislation above or immediately after a precommencement check by suitably qualified personnel.
- 4.7 The PRA confirmed that the site does not support suitable buildings or trees capable of supporting roosting bats.
- 4.8 One waterbody was identified during the desk study which was shown to be a dry depression rather than a static waterbody or permanent wet ditch. This feature is therefore not deemed suitable for breeding amphibians.
- 4.9 No evidence or fields signs of badger (such as setts or scraps) were identified within 30m of the site boundaries. Given the mobile and dynamic nature of badgers, if any excavation is discovered prior or during works an update survey should be completed by a competent ecologist to confirm the cause of the excavation before works continue.

4.10 No field signs or habitats considered suitable to support other protected species such as dormice (Muscardinus avellanarius) otter, or water vole (Arvicola amphibious) were identified on the site or highlighted during the desk study.

Artificial Lighting

- 4.11 All new Artificial lighting will need take into account those measures recommended in the 'Bat Conservation Trusts Guidance Note 08/18 Bats and artificial lighting in the Uk to ensure dark corridors remain for nocturnal commuting/foraging wildlife.
- 4.12 Lighting should be directed to where it is needed to avoid unnecessary light spillage. All proposed new lighting should be directed away from any vegetated boundary features to retain dark corridors for commuting bats across the site.
- 4.13 Artificial lighting should lack UV element the use of LEDs is advised due to their sharp cut-off, lower intensity, good colour rendition and dimming capability. Metal halide, fluorescent sources should not be used.
- 4.14 Lighting should adopt a warm white spectrum, ideally below 2700 kelvin with a peak wavelength higher than 550nm, thus avoiding emitting those wavelengths of light most disturbing to bats⁵ (Stone 2012). Security lighting should be activated by movement sensors to reduce the amount of time the lights are activated, set on a short timer (maximum of 1 minute), and orientated towards the ground. The use of accessories such as hoods/cowls or shields is advised to help direct light to the required area only.
- 4.15 New planting can be used to provide an effective barrier to light spillage off site, this would be well placed upon the southern boundaries of the site to block light off site.

Biodiversity enhancements

4.16

- It is anticipated that the new hedgerow and tree planting would complement the existing resources available providing a clear transition between the seasons and provide a feeding resource capable of supporting a range of taxonomic groups (including small mammals and birds) but predominantly insect pollinators.
- 4.17 It is recommended that enhancements to the site for bats are provided through the erection of two 2F Schwegler bat boxes upon selected larger trees situated upon the eastern boundary trees group at a minimum height of 3m in a southern orientation.
- 4.18 Enhancement of the site for nesting birds could be provided through the erection of two artificial nests for starlings with a 42mm hole and two 1B Schwegler Nest Boxes with a 32mm hole entrance within the southern boundary tree group where there is clear flight line away from artificial lighting at a minimum height of 3m.

⁵ Stone, E.L., Jones, G., Harris, S. (2012). Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats. Glob. Change Biol. 18, 2458–2465

4.19 All Tree and hedgerow planting should meet the requirements of BS8545: 2014 Trees: from nursery to independence in the landscape. Recommendations with specific reference to the procurement of new trees, species selection, aftercare and maintenance. This could be achieved via planning condition through a formal Tree Planting Scheme.

Section 5 Conclusion

- 5.1 The application area is formed by u1b sealed surfacing (hard standing) or g4 modified grassland managed as shortly mown amenity lawn with existing u1b5 buildings considered to be of little ecological merit. The broad-leaved and coniferous trees and established h2a hedgerows associated with the boundaries of the site do provide suitable opportunities for nesting birds. Tree removal to implement the design will need to be done outside of the bird nesting season or immediately before a pre commencement check.
- 5.2 No evidence of other protected species were identified during the course of the study, therefore the proposal is not considered to be limited by any other ecological constraints.
- 5.3 The proposal has the potential to provide significant enhancements to the site as an ecological asset through the incorporation of both bird and bat boxes into the built form and new hedgerow planting.
- 5.4 The site should be maintained in its current context to ensure it's suitability for protected species does not inadvertently increase prior to development.
- 5.5 Subject to the implementation of those recommendations set out within **Section 4** no significant impacts upon protected species are considered likely to arise. In the event of a protected species being encountered during works; all works will halt, and further advice shall be sought from Salopian Consultancy Ltd.
- 5.6 The findings of this report are valid for up to two years from its date. In the event the development proposals/application area alters significantly a re-assessment of the likely impacts by a suitably experienced Ecologist will be required.

Appendix 1 Survey methodology

Desk Study

The desk study is an integral role in the ecological assessment. This desk-based study provides contextual information, such as the sites' proximity to designated sites and known records of protected species. This information is used to supplement the findings of the baseline habitat survey, and used to inform the recommendations and conclusions in Section 2 & 3.

Shropshire Ecological Data Network via NBN network

Protected/UK BAP species records (1km)

MAGIC website⁶

- International statutory designations (1km)
- National statutory designations (1km)
- Waterbodies within 250m radius
- Protected species records

Shropshire Environmental Network (SEN) 7

• Review Core areas and wildlife corridors in immediate area

Habitat survey

The aim of the survey is to record and map the main habitat types and dominant plant species present in accordance with those classifications detailed in UK Habitat Classification⁸. As part of the study each habitats has been afforded a condition classification based on the guidance provided within Biodiversity Metric 4.0 Technical Annex 1 – Condition Assessment Sheet and Methodology.

The survey was extended to include an assessment of the suitability of those habitats for protected species undertaken by an experienced ecologist holding appropriate protected species licences, and membership with Chartered Institute of Ecology and Environmental Management and the Royal Society of Biology.

The survey does not aim to provide a complete floral and faunal inventory but seeks to identify field signs and/or habitats with the potential to support protected species. The need for further detailed Phase 2 Survey(s) were determined on this basis.

Bat Roosting Assessment: Trees

⁶ Multi-Agency Geographic Information for the Countryside website (<u>www.magic.gov.uk/</u>)

⁷ Shropshire Councils Guidance Note 11: Environmental Networks

⁸ https://ukhab.org/

An assessment of all suitable trees located on site was undertaken by a Natural England licensed bat worker to determine their potential to support roosting bats. This assessment was undertaken from ground level using binoculars and/or endoscopes.

All trees examined were categorised based on the number and types of features known to be suitable to support roosting bats, summarised in 6.2.4 of "Bat Surveys for Professional Ecologist: Good Practice Guidelines 9". These features include but are not limited to;

- Cracks and splits in limbs,
- Cavities,
- Woodpecker holes,
- Loose bark thick-stemmed ivy.

Preliminary Bat Roost Assessment: Buildings

A daytime external assessment of all structures on site was undertaken to determine their potential to support roosting bats, including but not limited to;

- Cracks and crevices in brick work, timber joist/purlins.
- Slipped or missing roof and ridge tiles.
- Gaps between soffits and barge boards.

An internal assessment of all accessible loft voids was undertaken by a Natural England licensed bat worker for evidence of roosting bats such as droppings, feeding remains and urine staining within accessible areas.

Potential suitability of the structures are assessed by assigning a rating of low to high based on the number and type of external features considered suitable for roosting bats. The need for Phase 2 Emergence Surveys is decided on this basis.

Reptiles

Terrestrial searches were undertaken during the baseline habitat survey for reptiles seeking refuge beneath debris, including log piles and brick/rubble where present.

Nesting Birds

An assessment from the ground of all trees and boundary vegetation located on or immediately adjacent to the site boundary was undertaken by an experienced ecologist, to determine the suitability of habitats for nesting birds.

Badgers

⁹ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologist: Good Practice Guidelines (3rd edn) The Bat Conservation Trust, London

An experienced ecologist undertook a thorough site walkover to identify any evidence/field signs of badgers including setts, scrapings produced during foraging behaviour, latrines, paths and prints.

Where present, an assessment of excavations was made taking into account the shape of the entrance, quantity of spoil and presence of badger hair/claw marks. A classification of sett type are made (Main Sett, Annex, Subsidiary, Outlier) based on the level of activity, number of entrances and proximity to other Setts in accordance with Harris et al (1989) ¹⁰.

¹⁰ Harris, S., Cresswell, P., and Jefferies, D. (1989). Surveying Badgers. Occasional publication of the Mammals Society.

Appendix 2 Secondary Codes

- **32- Scattered trees**
- 33 Line of trees
- 106 Mown
- 510 Bare ground
- 818 Residential building
- 827 Garden

Plans

Plan 1 Site Plan



