

Ecological Impact Assessment



**The Old Rectory, Wingfield,
Trowbridge
29th October 2025**



**Tyler
Grange**

TG Report No. 18010_R01_LB

Project No:	Report No.	Date	Revision
18010	R01	29 th October 2025	-
Admin QA	Author	Checked	Approved
XX	Lucy Billingham BSc (Hons)	Vicky King-Cline BSc MSc (Hons)	Laura Hembrow CEcol BSc (Hons) MCIEMM

Disclosure:

This report, all plans, illustrations, and other associated material remains the property of Tyler Grange Group Ltd until paid for in full. Copyright and intellectual property rights remain with Tyler Grange Group Ltd.

The contents of this report are valid at the time of writing. Tyler Grange shall not be liable for any use of this report other than for the purposes for which it was produced. Owing to the dynamic nature of ecological, landscape, and arboricultural resources, if more than twelve months have elapsed since the date of this report, further advice must be taken before you rely on the contents of this report. Notwithstanding any provision of the Tyler Grange Group Ltd Terms & Conditions, Tyler Grange Group Ltd shall not be liable for any losses (howsoever incurred) arising as a result of reliance by the client or any third party on this report more than 12 months after the date of this report.



Contents:

Summary	
Section 1: Introduction and Context	2
Section 2: Ecological Features and Evaluation	5
Section 3: Ecological Impacts, Mitigation, and Enhancement	14
Section 4: Conclusions	18

Appendices:

- Appendix 1: Legislation and Planning Policy
- Appendix 2: Methodology and Results
- Appendix 3: Bat Legislation Methodology Results

Plans:

Plan 1: Ecological Features Plan **18010/P01**



Summary

- S.1. This report has been prepared by Tyler Grange Group Ltd on behalf of Ian Gatt. It sets out the findings of an Ecological Impact Assessment at The Old Rectory, Wingfield, Wiltshire hereinafter referred to as 'the site'. The report has been undertaken to inform a Listed Building Consent application for structural repairs to the roof and loft spaces within the building.
- S.2. An 'extended' Phase 1/UK Habitat Classification (UK Habs) survey and Preliminary Roost Assessment were undertaken on 19th July 2025. A summary of the results are as follows:
- The site is comprised of developed land, namely a building, which is of no inherent ecological importance; and
 - The site contains habitats confirmed to support bats and that could support common and widespread nesting and foraging birds.
- S.3. The development will only affect habitats of no inherent ecological importance. As such no specific mitigation for habitats is needed.
- S.4. As the building had confirmed bat presence due to the droppings identified during the PRA it was classified as having high potential to support roosting bats. In line with best practice guidance, three emergence surveys were conducted during the active bat season May - September 2025.
- S.5. The building supports multiple day bat roosts of common pipistrelle *Pipistrellus pipistrellus* and a maternity bat roost of unidentified *Myotis* species. The roosts found can remain *in-situ* post-development, however the works will result in the disturbance of these roosts whilst repairs are undertaken. Consequently, mitigation and licensing is proposed to ensure bats are not harmed during construction and that suitable roost sites and conditions are maintained after the works are complete.
- S.6. A European Protected Species (EPS) licence from Natural England will be required to enable work to be completed legally. The works to the roof and lofts can only be undertaken under the licence and under the supervision of a Suitably Qualified Ecologist (SQE) with a Class Level 2 bat licence.
- S.7. A pre-works check will be undertaken by an Ecological Clerk of Works (ECoW) to determine whether active birds' nests are present within the loft void and roof. If nest(s) are present, no nests, eggs or young should be destroyed and an appropriate buffer must be instated until the chicks have been confirmed as fledged by an ECoW.
- S.8. It is concluded that, by adhering to the strategies described in this report, the proposed development of the site would be in accordance with relevant national and local planning and legal requirements that seek to protect and enhance biodiversity and important ecological features.



Section 1: Introduction and Context

Introduction

- 1.1. This report has been prepared by Tyler Grange Group Ltd on behalf of Ian Gatt. It sets out the findings of an Ecological Impact Assessment (EclA) at The Old Rectory, Wingfield, BA14 9LW near Trowbridge in Wiltshire (OS Grid Reference ST 82530 56750), hereafter referred to as 'the site'. See **Figure 1.1** for the indicative red line boundary.



Figure 1.1: Indicative red line boundary (© Google Aerial Imagery 2025)

- 1.2. This assessment has been undertaken to inform a Listed Building Consent application for structural repairs to the roof and loft spaces within the building.

Site Context

- 1.3. The site is limited to the building footprint and therefore consists of building habitat of no inherent ecological importance. The site lies on the eastern edge of Wingfield village, with a residential property to the north-east, Wingfield to the west and arable land the north-west and south. Further afield, Lambrook stream lies to the south and Trowbridge lies to the east.

Purpose

- 1.4. This report:
- Uses available background data and results of the field surveys to describe and evaluate the ecological features present within the likely “Zone of Influence”^{1 2} (Zol) of the proposed development;
 - Describes the actual or potential ecological issues and opportunities that might arise as a result of the site’s development.
 - Where appropriate, makes commitments for mitigation measures for adverse effects on ecological features as well as ecological enhancements, to ensure conformity with policy and legislation listed in **Appendix 1**; and
 - Can be used to inform a planning application and/or listed building consent application for the site’s development.
- 1.5. This assessment and the terminology used are consistent with published guidance^{3 4}. A full methodology is set out in **Appendix 3**.

Methodology

- 1.6. The data search was based on records purchased from Wiltshire & Swindon Biological Records Centre (WSBRC), as well as data from the Multi-Agency Geographic Information for the Countryside (MAGIC)⁵.
- 1.7. The methodologies for the data search and UK Habs survey are detailed in **Appendix 2** and those for protected species surveys are set out in **Appendix 3**.

Quality Control

- 1.8. All ecologists at Tyler Grange Group Limited are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) or are working towards membership, and act under the direction of members and abide by the Institute’s Code of Professional Conduct⁶.

¹ CIEEM (2024) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

² Defined as the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries.

³ CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

⁴ CIEEM (2024) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

⁵ <https://magic.defra.gov.uk/magicmap.aspx> [Accessed 09/07/2025]

⁶ CIEEM (2025) *Code of Professional Conduct*. CIEEM, Winchester.



Limitations

- 1.9. Due to the age of the building, structural issues and know deterioration of the supports within the loft, a full visual inspection of the loft spaces could not be undertaken. An inspection of each loft space was conducted from loft hatches. No bats were observed during the internal inspection, however there may have been bats present in areas not visible/accessible. This was not deemed a significant limitation as droppings were collected from the loft voids and three emergence surveys were conducted in line with guidance, which provided sufficient information to characterise the roosts within the building.
- 1.10. *Myotis* bats were observed emerging from PRF 5 on the northern aspect during survey visits one and two. *Myotis* are a cryptic species with their calls being similar and as such they cannot be reliably identified down to species level without DNA or being captured and inspected. This is not deemed to be a significant limitation as sufficient information was gathered to characterise the roost, and inform mitigation and licencing works.



Section 2: Ecological Features and Evaluation

Designated Sites

- 2.1. The data search returned three European statutory sites within 10 km of the site, one national statutory and six non-statutory designated sites within 2 km of the site. These are detailed in **Table 2.1** below.



Table 2.1. Designated Sites

Designated site	Distance and direction from site	Citation	Ecological Importance
Bath & Bradford on Avon Bats Special Areas of Conservation (SAC)	5.0 km northwest	Primarily designated for Annex II species, greater horseshoe <i>Rhinolophus ferrumequinum</i> , and Bechstein’s bat <i>Myotis bechsteinii</i> . Contains hibernation sites associated with 15% of the UK greater horseshoe bat population.	International
Salisbury Plain SAC	9.1 km southeast	Primarily designated for the Annex I habitats: <i>Juniperus communis</i> formations on heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>); and the Annex II species Marsh Fritillary <i>Euphydryas aurinia</i> .	International
Salisbury Plain Special Protection Area (SPA)	9.1 km southeast	Regularly supports nationally important populations of two Annex I species; stone curlew <i>Burhinus oediconemus</i> , and hen harrier <i>Circus cyaneus</i> .	International
Southwick Country Park Local Nature Reserve (LNR)	0.8 km east	Southwick Country Park Nature Reserve is 150 acres of old farmland predominantly composed of grassland containing species-rich hay meadows, newly-established coppices, and old ponds.	Local
Birch Wood Local Wildlife Site (LWS)	0.7 km west	A small ancient woodland on flat clay land with semi-natural broadleaved woodland and conifer plantation.	County
Sleight Wood LWS	0.9 km southwest	A large ancient woodland site with stands of semi-natural broadleaved woodland and a few small conifer plantations on almost flat land on clay soil.	County
Vagg’s Hill Bush LWS	1.4 km southwest	A small ancient woodland site sloping gently to the south, with semi-natural broadleaved woodland and areas of conifer plantation.	County
Rough Field LWS	1.4 km west	Dense scrub and fragments of unimproved calcareous grassland on a north-west facing limestone slope.	County
Pomeroy Wood LWS	1.7 km west	Ancient semi-natural broadleaved woodland on north-west and south-west-facing slopes on limestone above the River Frome.	County
Tipney Wood LWS	1.7 km southwest	Ancient semi-natural broadleaved woodland on a steep west-facing limestone slope above the River Frome.	County

- 2.2. The site falls into the Site of Special Scientific Interest (SSSI) Impact Risk Zone for Iford Manor SSSI. However, the development does not fall into any of the criteria set out by Natural England requiring further assessment, such as oil and gas exploration/extraction. As such consultation with Natural England is not considered necessary, and this is **not discussed further within this report**.

Habitats and Flora

- 2.3. The habitats present on site are summarised below in **Table 2.2**, along with an assessment of their ecological importance.



Table 2.2. Habitats and Flora

Habitat	Description and Species	Ecological Importance	Photograph
<u>Primary code:</u> Built-up areas and gardens u1 Developed land; sealed surface u1b Buildings u1b5 <u>Secondary code(s):</u> Residential building 818	The site consists of a residential house which is a period stone property, with stone walls and slate roofing. The building is well maintained and in good condition. All loft areas are insulated and the roof has been lined however, due to the age of the roof, the lining has deteriorated leading to areas with tears and missing lining. The building is located within a large garden adjacent to open grass fields bordered by hedgerows and a mix of tree species. As the works are limited to the building and will not impact the surroundings, a detailed survey of these habitats was not undertaken within the scope of works required for this EcIA.	This habitat has is a built environment and as such has no inherent ecological importance. The potential for the building to support protected species is discussed below in Section 2.	

Protected and Notable Species

- 2.4. The below section sets out the identification or and potential for protected species on site, namely bats and birds.

Bats

- 2.5. The data search returned 2009 records for 15 bat species within 4 km of the site. Species included:

- Common pipistrelle *Pipistrellus pipistrellus*;
- Nathusius' pipistrelle *Pipistrellus nathusii*;
- Soprano pipistrelle *Pipistrellus pygmaeus*;
- Noctule *Nyctalus noctula*;
- Leisler's bat *Nyctalus leisleri*;
- Bechstein's bat *Myotis bechsteinii*;
- Brandt's bat *Myotis brandtii*;
- Daubenton's bat *Myotis daubentonii*;
- Natterer's bat *Myotis nattereri*;
- Whiskered bat *Myotis mystacinus*;
- Brown long-eared *Plecotus auritus*;
- Greater horseshoe *Rhinolophus ferrumequinum*;
- Lesser horseshoe *Rhinolophus hipposideros*;
- Barbastelle *Barbastella barbastellus*; and
- Serotine *Eptesicus serotinus*.

- 2.6. The nearest of these was a record of a lesser horseshoe bat approximately 0.9 km southwest of the site in 2015. In addition, six granted EPS licences for bats were returned within a 4 km radius of the site. The closest licence was located approximately 3.2 km east of the site (case reference: 2015-15090-EPS-MIT) and was granted for the destruction of a resting place of lesser horseshoe and common pipistrelle bats.

Bat Activity

- 2.7. The site lies on the edge of a village, with low levels of light pollution within and adjacent to site. The habitats present on site, namely the building, do not provide opportunities for commuting and foraging bats.



- 2.8. The habitats surrounding the site and in the wider landscape, such as trees and native hedgerows, provide commuting and foraging opportunities for bats. These habitats also have good connectivity to the wider landscape, particularly areas of woodland present to the south-west of the site.
- 2.9. Overall, the assemblage of bats utilising the habitats on site for foraging and commuting is considered to be of **negligible ecological importance**.

Preliminary Roost Assessment

- 2.10. A Preliminary Roost Assessment (PRA) was conducted alongside the 'extended' Phase 1 Habitat survey. This assessment was carried out on the buildings on site, which may be impacted by the development. See **Appendix 3** for methodology and **Table 2.3** below for results.
- 2.11. The building was not identified to have hibernation potential for roosting bats, due to the likelihood of thermal variation and low humidity levels.

Internal PRA Results

- 2.12. Three loft voids were present in the building, identified as western, eastern and northern loft voids. These consist of a wooden joisting structure, with insulation throughout. All loft areas are insulated, and the roof is lined however due to age of the roof most of the lining has deteriorated. The loft Due to instability of the ceilings, safe access to the loft voids was not possible, so all assessments were made from loft hatches.
- 2.13. No bats or bat droppings were identified in the western loft void. No bats were identified in the eastern and northern loft voids, however large amounts of bat droppings were identified in both voids. A sample of the droppings was collected for environmental DNA (eDNA) analysis.



Table 2.3. External PRA Results

Aspect	Potential Roost Feature (PRF)	Photograph
Eastern Aspect High suitability	PRF 1 - Slipped tiles and a small piece of pointing missing on chimney base which could allow ingress. PRF 2 - A small gap identified where main roof meets face of dormer. Both PRFs may lead to the loft void and therefore would be suitable for both void and crevice-dwelling bat species.	
Northern Aspect High suitability	PRF 3 - Lead flashing underneath guttering has lifted. This PRF is small and does not appear to lead to a larger void, therefore would only be suitable for crevice-dwelling species. PRF 4 - Stone roof tiles have lifted slightly allowing possible ingress points. PRF 5 - Alongside the dormer roof, where the tiles change angle, a small gap is evident. Both PRFs 4 and 5 may lead into the loft void and therefore would be suitable for both void and crevice-dwelling bat species.	

Aspect	Potential Roost Feature (PRF)	Photograph
Southern Aspect Low suitability	PRF 6 - Pointing missing on stonework. PRF 7 - Cracked and lifted tiles showing possible entry point underneath PRF 8 - Underneath both dormer windows the flashing has lifted providing access for crevice dwelling species. Both PRFs 6 and 7 may lead to the loft void and therefore would be suitable for both void and crevice-dwelling bat species.	
Western Aspect	PRF 9 - Lifting tiles across the roof allow possible access into loft voids. PRF 10 - Small gap above guttering leading to underside of the roof tiles. Both PRFs may lead to a larger void, and therefore would be suitable for both void and crevice-dwelling bat species	

Bat Emergence/Re-entry Surveys

- 2.14. As the building had confirmed bat presence due to the droppings identified during the PRA it was classified as having high potential to support roosting bats. In line with best practice guidance, three emergence surveys were conducted during the active bat season May - September 2025.
- 2.15. Full details of survey methodology and metadata can be found in **Appendix 3**, with survey results detailed in **Table 2.4** below. The locations of the roosts can be seen on the Ecological Features Plan (**ref: 18010/P01**).

Table 2.4. Bat Emergence Survey Results

Visit Number	Aspect	Results
Visit 1	Northern	14 emergences from PRF 5 and lead flashing surrounding the dormer window. <i>Myotis</i> bat calls identified at time of emergence.
	Eastern	No emergence identified.
	Southern	
	Western	
Visit 2	Northern	Three emergences from PRF 5 identified under guttering. <i>Myotis</i> bat calls identified at time of emergence.
	Eastern	No emergence identified.
	Southern	
	Western	
Visit 3	Northern	No emergence identified.
	Eastern	
	Southern	Three common pipistrelle emergences, two emergences from PRF 6 and a single emergence from PRF 8.
	Western	No emergence identified.

Birds

- 2.16. The data search returned a number of records of protected and notable birds species within 2 km of the site. Of these, some species of relevance to the site include swift *Apus apus*, house sparrow *Passer domesticus*, barn owl *Tyto alba*, and starling *Sturnus vulgaris*.
- 2.17. Habitats on site, such as the building, have the potential to support common and widespread nesting birds, such as swift, starling and house sparrow as identified above.
- 2.18. It is considered the assemblage of birds that may use the site for foraging and breeding is of **negligible ecological importance**, nevertheless consideration for nesting birds to avoid a breach of legislation is discussed in **Section 3** of this report.



Section 3: Ecological Impacts, Mitigation, and Enhancement

Proposed Development

- 3.1. This assessment has been undertaken to inform a Listed Building Consent application for structural repairs to loft spaces within the building, due to active beetle and timber decay. The potential ecological impacts as a result of the proposed development are set out below, with reference to relevant legislation and planning policy.

Designated Sites

Statutory Sites

Bath and Bradford-on-Avon Bat SAC

- 3.2. The site falls within the SAC consultation zone⁷ for Bechstein's, barbastelle, greater and lesser horseshoe bats. None of these species were recorded emerging from the building during surveys undertaken in July to September 2025. A myotis roost was identified within the building, however as per Table 3.2 in the Bat Survey Guidelines⁸ Bechstein's would not be expected to roost within a building. Low numbers of incidental recordings of horseshoe bats foraging in the nearby area were identified during the emergence surveys, however none were identified emerging from the building.
- 3.3. As the site extent is limited to the building footprint, it is not anticipated that any of these species will use the site itself for foraging and commuting and therefore impacts on the qualifying features of the SAC are considered highly unlikely.
- 3.4. The habitats surrounding the building, namely hedgerows, trees and grassland, which may be used by species linked to the SAC, are all being retained and there will be no change in lighting levels post-development, therefore this habitat will not be affected by the proposals.
- 3.5. The development proposals are not anticipated to have a detrimental impact upon the favourable conservation status of any bat population associated with the SAC, therefore there is no likely significant effect on this designated site.

Other Statutory Designated Sites

- 3.6. Given the nature of the site proposals and the distances involved between the site and all other statutory designated sites, no adverse direct or indirect effects are anticipated, and no specific mitigation is required.

⁷ <https://www.wiltshire.gov.uk/media/992/Bat-S-A-C-developers-guidance-inc-Bath-Bradford-on-Avon-Chilmark-and-Mottisfont-/pdf/Bath-and-bradford-on-avon-september-2015-bat-sac-guidance.pdf?m=637298262862270000>

⁸ <https://cdn.bats.org.uk/uploads/pdf/Resources/For-professionals/Bat-Survey-Guidelines-4th-edition-AMENDED-27.03.24.pdf>



Non-statutory Sites

- 3.7. Given the limited nature of the site proposals and the distances involved between the site and all non-statutory designated sites, no adverse direct or indirect effects are anticipated, and no specific mitigation is required.

Habitats and Flora

- 3.8. All of the habitats onsite to be impacted by the proposals are of no inherent ecological importance, namely buildings, and as such no specific mitigation is required.

Protected and Notable Species

Bats

- 3.9. In England and Wales, bats and their roosts are protected under the Conservation of Habitats and Species Regulations (2017) and the Wildlife and Countryside Act (WCA) (1981) (as amended). Some bat species are also priority species; see **Appendix 3** for full details with regard to the protection of bats.
- 3.10. Impacts on the Bath and Bradford-On-Avon Bat SAC are discussed in **Sections 3.2 – 3.5** above.

Roost Classification

- 3.11. The results of the emergence surveys indicate roosts of common pipistrelle and Myotis. The DNA analysis of droppings collected within the building did not provide further information, as these were identified as Eurasian pygmy shrew *Sorex minutus*. With reference to the species and numbers recorded, the roosts were assessed against **Table 3.2** in the UK Bat Mitigation Guidelines⁹ and were classified and assigned ecological importance as follows.

Common Pipistrelle

- 3.12. Common pipistrelles were found roosting in crevices under the dormer windows and missing stonework on the southern aspect. No emergences were observed of this species on any other aspect.
- 3.13. Common pipistrelles are known crevice dwelling species preferring features such as raised tiles and crevices under lead flashing to roost¹⁰.
- 3.14. Given the number of bats observed, time of year and PRFs they were observed using it is assumed that the roosts found are likely **day roosts** of individual or small numbers of bats, that are of **site importance**.

⁹ Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield

¹⁰ Davidson-Watts, I., Walls, S. and Jones, G. (2006) *Differential habitat selection by Pipistrellus pipistrellus and Pipistrellus pygmaeus identifies distinct conservation needs for cryptic species of echolocating bats*. Biological Conservation 133: 118–127.



Myotis

- 3.15. *Myotis* bats were observed emerging from PRF 5 on the northern aspect during survey visits one and two. The peak count of individual bats observed was 14, recorded on the first survey visit. *Myotis* are a cryptic species with their calls being similar and as such they cannot be reliably identified down to species level without DNA or being captured and inspected.
- 3.16. Given the number of bats observed and time of year, it is assumed that the roost found is likely **a maternity roost of site importance**.
- 3.17. **Table 5.1** within the UK Bat Mitigation Guidelines⁸ provides information on proposed compensation based on the assigned value of the roosts. For day and maternity roosts of site importance the mitigation guidelines state mitigation is "Flexible (type; do not leave bats without a roost)".
- 3.18. Development that would trigger the Conservation of Habitats and Species Regulations 2017 (as amended) can only proceed under the relevant licence, such as a European Protected Species (EPS) licence, Earned Recognition mitigation licence, or a Bat Mitigation Class Licence (BMCL). In this case, due to the species registered, number of roosts and roost characterisation, the site is only applicable for an EPS licence, to be issued by Natural England. Such licences will only be issued once Listed Building Consent has been granted, it has been demonstrated that measures are in place to ensure the conservation status of the bats would not be adversely affected and that a need for the development has been proven.
- 3.19. The majority of PRFs will be retained in-situ post-development, however to ensure bats are not negatively impacted the following mitigation measures are recommended. In order to mitigate for any access impacts which may occur bat access roof tiles, such as the Bat Access Tiles by Tudor Roof Tile or similar, should be incorporated post-development. A bat access tile should be installed on each roof slope that will be affected by the works, expected to be three, to ensure access to the roof is maintained post-development.
- 3.20. To mitigate for any impacts to internal conditions within the roost, a breathable roofing membrane (BRM) must not be installed into a roof used by bats, therefore bitumen felt or TLX Batsafe membrane or similar, will be required. The loft voids will also be required to be insulated post-development, to ensure thermal stability is maintained within the loft voids post-development.
- 3.21. It also recommended the site is enhanced for roosting bats via provision of two general purpose bat boxes, such as 1FF Schwegler Bat Box, to be installed on the southern aspect of retained trees within the wider landholding.
- 3.22. In order to mitigate for impacts caused through construction, a detailed method statement and works schedules should be adopted as part of the licence application to Natural England. This should provide details on the following precautions:
- Timings of works - the works should ideally be undertaken during the winter when bats are not be anticipated to be present (as site not suitable for hibernation roosts) and completed prior to the maternity season in May;



- Prior to works commencing, a tool-box talk must be provided to all construction staff by a licensed bat worker;
- Bat boxes to be installed prior to works commencing. The bat boxes should be suitable for crevice dwelling bats; and
- Prior to works commencing a licensed ecologist will carry out an inspection of the roost features and, once declared free from bats as far as possible, the feature will be removed the same day. This should be conducted under the supervision of the licensed ecologist, through soft demolition. Should any bats be found, they will be moved with a gloved hand by the ecologist, and re-located into the pre-erected bat boxes.

3.23. No lighting during construction is proposed. It is anticipated that lighting levels post-construction will be the same as current levels.

Birds

- 3.24. All birds, their nests and eggs, are protected by law and as such it is an offence to intentionally kill, injure, or take any wild bird; intentionally take, damage, or destroy the nest of any wild bird while it is in use or being built; and intentionally take or destroy the egg of any wild bird.
- 3.25. To avoid triggering the legislation protecting nesting birds, clearance of suitable habitat (the building) should be timed outside the nesting bird season (generally taken as March to September inclusive, though this is not defined in law and birds may nest outside of this time). If any clearance works to nesting habitats are required during the nesting season, then pre-removal checks for nesting birds must be carried out by a suitably experienced Ecological Clerk of Works (ECoW), no more than 48 hours prior to the works commencing. If any nesting birds are found to be present, an appropriate buffer zone will be implemented, within which works are excluded for the duration of the breeding attempt. Any active nests will need to be left *in situ* until a suitably experienced ecologist confirms that the chicks have fledged and the nest is no longer active.



Section 4: Conclusions

- 4.1. Four statutory designated sites and six non-statutory sites were assessed. No impacts are anticipated due to the nature of the proposals.
- 4.2. The development will only affect habitats of no inherent ecological importance. As such no specific mitigation for habitats is needed.
- 4.3. The building supports multiple day roosts of common pipistrelle and a maternity roost of *Myotis* species. The roosts found can remain *in-situ*, however the works will result in the disturbance of these roosts whilst repairs are undertaken. Consequently, mitigation and licensing is proposed to ensure bats are not harmed and that suitable roost sites and conditions are maintained after works.
- 4.4. An EPS licence from Natural England will be required to enable work to be completed legally. The works to the roof and lofts should be undertaken under the licence and under the supervision of a Suitably Qualified Ecologist (SQE) with a Class Level 2 bat licence.
- 4.5. A pre-works check will be undertaken by an ECoW to determine whether active birds' nests are present within the loft void and roof. If nest(s) are present, no nests, eggs or young should be destroyed and an appropriate buffer must be instated until the chicks have been confirmed as fledged by an ECoW.
- 4.6. As such, it is concluded that, by adhering to the strategies described in this report, the proposed development of the site would be in accordance with relevant national and local planning and legal requirements that seek to protect and enhance biodiversity and important ecological features.



Appendix 1: Legislation and Planning Policy

Legislation

- A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:
- The Environment Act 2021;
 - The Wildlife and Countryside Act (WCA) 1981 (as amended);
 - The Conservation of Habitats and Species Regulations 2017 (as amended);
 - The Countryside and Rights of Way (CROW) Act 2000;
 - The Natural Environment and Rural Communities Act (NERC) 2006;
 - The Hedgerows Regulations 1997; and
 - The Protection of Badgers Act 1992.
- A1.2. The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation of Habitats and Species Regulations 2017 (as amended).
- A1.3. In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.
- A1.4. The CROW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

Environment Act 2021: Town and Country Planning Act

- A1.5. The Environment Act gained Royal Assent in November 2022. Whilst the premise of Biodiversity Net Gain (BNG) has been around prior to this, the Assent of the Act sets the Framework for future legislation to be changed. This is in the form of the Town and Country Planning Act (TaCPA), specifically Schedule 14 of the TaCPA, which makes Biodiversity Net Gain a condition of planning (not a planning condition). The target 'gain' is currently set at 10% but the Secretary of State has the ability to change this.



- A1.6. The changes to the wording of the TaCPA are legally mandated and enforceable since February 2024.

National Planning Policy

National Planning Policy Framework (NPPF), December 2024

- A1.7. The NPPF was published in December 2024 and sets out the Government's planning policies for England and how these should be applied. It replaces the previous NPPF originally published in March 2012 and most recently in December 2023.
- A1.8. Paragraph 11 states that:
- "Plans and decisions should apply a presumption in favour of sustainable development."*
- A1.9. Section 11 of the NPPF, paragraph 125, sub-section a) states that planning policies and decisions should:
- a) *"encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains - such as developments that would enable new habitat creation or improve public access to the countryside;*
 - b) *recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production"*
- A1.10. Section 13 refers to development in the Green Belt and introduces 'Golden Rules' that, at paragraph 159, state how such development should *"support nature's recovery"* and *"where land has been identified as having particular potential for habitat creation or nature recovery within Local Nature Recovery Strategies, proposals should contribute towards these outcomes"*.
- A1.11. Section 15 of the NPPF (paragraphs 187 to 195) considers the conservation and enhancement of the natural environment.
- A1.12. Paragraph 187 states that planning and decisions should contribute to and enhance the natural and local environment by:
- a) *"protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
 - b) *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
 - c) *maintaining the character of the undeveloped coast, while improving public access to it where appropriate; and*
 - d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and*



incorporating features which support priority or threatened species such as swifts, bats and hedgehogs”

- A1.13. Paragraph 188 states that plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
- A1.14. Paragraph 192 states that in order to protect and enhance biodiversity and geodiversity, plans should:
- a) *“Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity¹¹; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation¹²; and*
 - b) *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*
- A1.15. When determining planning applications, Paragraph 193 states that local planning authorities should apply the following principles:
- a) *“if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
 - b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
 - c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons¹³ and a suitable compensation strategy exists; and*
 - d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”*

¹¹ Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

¹² Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

¹³ For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.



A1.16. As stated in paragraph 194 the following should be given the same protection as habitats sites:

- a) *“potential Special Protection Areas and possible Special Areas of Conservation;*
- b) *listed or proposed Ramsar sites¹⁴; and*
- c) *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”*

A1.17. Paragraph 195 states that

“The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site”.

Local Planning Policy

Wiltshire Core Strategy (adopted 2015)¹⁵

A1.18. Core Policy 50: Biodiversity and geodiversity

“Protection

Development proposals must demonstrate how they protect features of nature conservation and geological value as part of the design rationale. There is an expectation that such features shall be retained, buffered, and managed favourably in order to maintain their ecological value, connectivity and functionality in the long-term. Where it has been demonstrated that such features cannot be retained, removal or damage shall only be acceptable in circumstances where the anticipated ecological impacts have been mitigated as far as possible and appropriate compensatory measures can be secured to ensure no net loss of the local biodiversity resource, and secure the integrity of local ecological networks and provision of ecosystem services.

All development proposals shall incorporate appropriate measures to avoid and reduce disturbance of sensitive wildlife species and habitats throughout the lifetime of the development.

Any development potentially affecting a Natura 2000 site must provide avoidance measures in accordance with the strategic plans or guidance set out in paragraphs 6.75-6.77 above where possible, otherwise bespoke measures must be provided to demonstrate that the proposals would have no adverse effect upon the Natura 2000 network. Any development that would have an adverse effect on the integrity of a European nature conservation site will not be in accordance with the Core Strategy.

Biodiversity enhancement

¹⁴ Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.

¹⁵ <https://www.wiltshire.gov.uk/planning-policy-core-strategy>



All development should seek opportunities to enhance biodiversity. Major development in particular must include measures to deliver biodiversity gains through opportunities to restore, enhance and create valuable habitats, ecological networks and ecosystem services. Such enhancement measures will contribute to the objectives and targets of the Biodiversity Action Plan (BAP) or River Basin/Catchment Management Plan, particularly through landscape scale projects, and be relevant to the local landscape character.

Local sites

Sustainable development will avoid direct and indirect impacts upon local sites through sensitive site location and layout, and by maintaining sufficient buffers and ecological connectivity with the wider environment. Damage or disturbance to local sites will generally be unacceptable, other than in exceptional circumstances where it has been demonstrated that such impacts:

- i. cannot reasonably be avoided*
- ii. are reduced as far as possible*
- iii. are outweighed by other planning considerations in the public interest*
- iv. where appropriate compensation measures can be secured through planning*
- v. obligations or agreements.*

Development proposals affecting local sites must make a reasonable contribution to their favourable management in the long-term."



Appendix 2: Methodology and Results

Data Search

- A2.1. A desk-based study was conducted whereby records of designated sites and records of protected and priority species were purchased and interrogated for the site and the surrounding landscape. The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.
- A2.2. The following resources were consulted/contacted:
- Multi-Agency Geographic Information for the countryside (MAGIC) website¹⁶;
 - Wiltshire & Swindon Biological Records Centre (WSBRC)¹⁷; (Data ordered on 18th June 2025 and received on 30th June 2025);
 - Wiltshire Council website¹⁸;
 - Joint Nature Conservation Committee (JNCC) website¹⁹;
 - Natural England (NE) designated sites website²⁰;
 - Ordnance Survey mapping; and
 - Google Maps, including aerial photography.
- A2.3. The following areas of search around the boundary of the site boundary were applied:
- 4 km for bat records
 - 2 km for protected and priority species, national statutory designated and non-statutory sites; and
 - 10 km for European statutory sites.

Evaluation

- A2.4. The evaluation of habitats and species is defined in accordance with published guidance²¹. The scale of importance of each ecological feature is assigned within a defined geographical context, namely international and European, national, regional, county, and local. Below these are features considered to be of no inherent or negligible importance.

¹⁶ <https://magic.defra.gov.uk/> [Accessed 09/07/2025]

¹⁷ <https://www.wsbr.org/> [Accessed: 09/07/2025]

¹⁸ <https://www.wiltshire.gov.uk/> <https://www.wiltshire.gov.uk/planning-policy-core-strategy> Accessed 30/07/2025]

¹⁹ <http://jncc.defra.gov.uk/ProtectedSites/> [Accessed 09/07/2025]

²⁰ <https://designatedsites.naturalengland.org.uk/> [Accessed 09/07/2025]

²¹ CIEEM (2024) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.



- A2.5. Consideration will also be given to legally protected or controlled species which are 'important features' in the context of this assessment, for which mitigation measures are required to ensure legal compliance, regardless of their geographic scale of importance. Thus, it is possible for a feature of negligible ecological importance to be legally protected and hence require mitigation.
- A2.6. Evaluation is based on various characteristics that can be used to identify ecological features likely to be important in terms of biodiversity. These include site designations (such as Sites of Species Scientific Interest (SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological feature. In terms of the latter, quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

Impact Assessment

- A2.7. The assessment of impacts identifies impacts and their effects as a result of the proposed development on important ecological features. This includes consideration of impacts at all relevant stages of the development, including construction and operation/occupation [include decommissioning and restoration, if relevant – it won't be for most projects]. The assessment includes reference to legislation and policy, and supplementary planning guidance where relevant.

Application of Mitigation Hierarchy

- A2.8. Application of the mitigation hierarchy is fundamental to the ecological impact assessment process. This requires consideration of the following measures, in order of priority, for all potential impacts, to determine the most appropriate mitigation, compensation and enhancement strategy for the project. This is taken into account within **Section 3** of this report and set out below:
- Avoidance – measures to avoid harm to ecological features (set out in **Section 3**);
 - Mitigation – measures to avoid or minimise potential impacts as part of the design or guaranteed by planning controls;
 - Compensation – measures required to offset significant residual negative effects following avoidance and mitigation; and
 - Enhancement – measures over and above requirements for avoidance, mitigation and compensation.



Appendix 3: Bat Legislation Methodology Results

Legislation and Conservation Status

- A3.1. All UK bat species are listed on Appendix II of the Bern Convention and on Annexes II and IV of the EU Natural Habitats Directive. In England and Wales bats are protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence, with certain exceptions, to:
- Intentionally or deliberately capture, kill, or injure a bat;
 - Intentionally or recklessly damage, destroy, and disturb bats in a place used for shelter or protection, or obstruct access to such areas;
 - Damage or destroy a bat breeding site or resting place;
 - Possess a bat, or any part of it, unless acquired lawfully; and
 - Sell, barter, exchange, transport, or offer for sale a bat or parts of them.
- A3.2. Actions that are prohibited can be made lawful by a licence issued by the appropriate Statutory Nature Conservation Organisation.
- A3.3. Several species of bats *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros*, noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus* are listed as Priority Species under the 'UK Post-2010 Biodiversity Framework which provides a statutory list of priority species in England, Scotland, Wales and Northern Ireland, as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (England), Section 7 of the Environment (Wales) Act 2016, Section 2(4) of the Nature Conservation (Scotland) Act 2004, and Section 3(1) of the Wildlife and Natural Environment Act (Northern Ireland) 2011. Decision-makers such as Local Planning Authorities must have regard for Priority species in all their activities, including when making decisions on planning applications.

Survey Methodologies

- A3.4. The surveys followed standard methodologies set out in the Bat Mitigation Guidelines²², the Bat Workers Manual²³ and Bat Surveys for Professional Ecologists- Good Practice Guidelines 4th Edition²⁴ and comprised:
- Preliminary Roost Assessment (PRA) – External and internal building inspection survey to assess potential of buildings on site to support roosting bats;
 - Emergence presence / absence surveys - to determine presence or likely absence or roosting bats within roof and the loft space;

²² Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

²³ Mitchell-Jones, A.J. & McLeish, A.P. (eds). (2004) 3rd Edition Bat Workers' Manual., JNCC, Peterborough, ISBN 1 86107 558 8

²⁴ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6



Preliminary Roost Assessment (PRA)

- A3.5. A PRA was undertaken on all buildings within the site boundary. The assessment was undertaken on 19th July 2025 by Jonathon Allen (licence ref: 2022-10470-CL17-BAT) and a safety second. All surveys were daytime inspections and the conditions for all surveys were considered optimal.
- A3.6. All buildings were inspected from the ground using binoculars, high powered torch, and digital camera. In relation to buildings, such signs may include bat droppings, urine splashes, staining and features suitable for allowing bats access to roost (e.g. gaps behind soffits / hanging tiles / ridge tiles, lifted slates / flashing). The internal inspection of the buildings comprised a thorough search for evidence of roosting bats in accessible loft spaces (i.e. droppings, urine stains) and an assessment of the presence of potential roosting features internally.
- A3.7. The potential of the buildings to support roosting bats was assessed using the criteria shown in **Table A3.1** below.

Table A3.1 Building / Structure Assessment Criteria

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting 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 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). A tree of sufficient size and age to contain Potential Roost Features (PRFs) but with none seen from the ground or features seen with only very limited potential.
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 and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
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.

- A3.8. Consideration of the structures suitability to be utilised as a hibernation roost was also considered in line with published guidance ²⁵ ²⁶.

Limitations

- 4.7. Due to the age of the building, structural issues and know deterioration of the supports within the loft, a full visual inspection of the loft spaces could not be undertaken. An inspection of each loft space was conducted from loft hatches.

²⁵ Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)*. The Bat Conservation Trust, London.

²⁶ Middleton, N. (2019) Assessing Sites for Hibernation Potential. A Practical Approach, including a Proposed Method & Supporting Notes. Author: Neil Middleton (BatAbility Courses & Tuition) Version: Draft/V2.2019 Dated: 08.10.2019 [Assessing-Sites-for-Hibernation-Potential-BatAbility-10.2019.pdf](#)



Emergence Surveys

- A3.9. All bat surveys undertaken by Tyler Grange were completed with reference to published guidance^{27 28 29 30}.
- A3.10. The emergence surveys were undertaken in accordance with best practice survey guidance, starting 15 minutes before sunset and finishing an hour and a half after sunset.
- A3.11. During the visits, four surveyors were positioned so as to best observe any bats emerging from or flying in close proximity to the building, as detailed on the Ecological Features Plan **ref: 18010/P01**.
- A3.12. Batlogger M2 bat detectors were used to identify bats during the surveys, and BatExplorer software was used to analyse bat calls for species identification. Analysts of the sound files had all completed BatAbility's Certificate of Bat Acoustic Analysis (COBAA)³¹ assessment course.
- A3.13. Nightfox Whisker infra-red cameras were used as Nocturnal Visual Aids (NVAs) to aid surveyor effort in low light conditions.
- A3.14. The surveys were completed during optimum weather conditions and these are detailed in below **Tables A3.2 – A3.4** along with the date and sunset time.

Table A3.2. Dusk Emergence Survey Meta Data

Date: 28/07/2025	Start Time: 20:57	End Time: 22:32
Sunset: 21:02	Weather at Start:	Weather at End:
Cloud Cover (%):	0	0
Wind (Beaufort):	3	3
Temperature (°C):	17	16
Precipitation:	Dry	Dry

Table A3.3. Dusk Emergence Survey Meta Data

Date: 20/08/2025	Start Time: 20:05	End Time: 22:10
Sunset: 20:20	Weather at Start:	Weather at End:
Cloud Cover (%):	10	0
Wind (Beaufort):	1	1
Temperature (°C):	14	12
Precipitation:	Dry	Dry

²⁷ Collins, J. (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th edition. Bat Conservation Trust, London.

²⁸ Natural England (2022) Bats: advice for making planning decisions, Available at: <https://www.gov.uk/guidance/bats-advice-for-making-planning-decisions>

²⁹ Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1*. Chartered Institute of Ecology and Environmental Management, Ampfield.

³⁰ Mitchell-Jones, A.J. & McLeish, A.P. (eds). (2004) 3rd Edition Bat Workers' Manual., JNCC, Peterborough, ISBN 1 86107 558 8

³¹ <https://batability.co.uk/cobaa/>



Table A3.4. Dusk Emergence Survey Meta Data

Date: 16/09/2025	Start Time: 19:05	End Time: 20:50
Sunset: 19:20	Weather at Start:	Weather at End:
Cloud Cover (%):	100	0
Wind (Beaufort):	2	2
Temperature (°C):	15	13
Precipitation:	Dry	Dry



Plans:

Plan 1: Ecological Features Plan **18010/P01**





Legend

- Boundaries
- Redline boundary
- Bats
- Confirmed roosts
- Surveyor locations
- Sight lines



Project	The Old Rectory
Drawing Title	Ecological Features Plan
Scale	1:163
Drawing No.	[18010/P01]
Date	October 2025
Checked	LB/LH



The background is a dark blue-grey color. In the center is a large, irregular yellow shape. Surrounding this shape are various abstract elements: a light blue pentagon at the top left, a purple arrow pointing down at the top right, a purple asterisk on the left, a black hand icon with three lines above it at the top center, a black and white striped fan-like shape at the bottom right, and several other geometric shapes in blue, black, and white.

Step into our world

www.tylergrange.co.uk



**Tyler
Grange**

Landscape | **Ecology** | **Arboriculture**