



GREEN LEAF
TREES
CALNE
SN11 9TD

ECOLOGICAL
IMPACT
ASSESSMENT
(EcIA)



GREEN LEAF TREES
A Forestry Tree Grower

Written By:	M. Sellar
Checked By:	J. Constable
Date:	04.12.25
Document File Ref:	PRI24998 EcIA RevA
Revision:	
Date of last revision:	
Revised by:	

QUALITY ASSURANCE

This report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing (2nd Edition, December 2017).

The facts stated in this report are true to the best of our knowledge and belief, and any opinions expressed are held genuinely and in accordance with the accepted standards of the profession. ACD Environmental Ltd is a CIEEM Registered Practice.

Client:	Green Leaf Trees Ltd
Site/job:	Green Leaf Trees, Calne, SN11 9TD
Author:	Madison Sellar
Technical review:	John Constable

CONTENTS

1	EXECUTIVE SUMMARY	1
2	INTRODUCTION	3
3	PLANNING POLICY AND LEGISLATION	6
4	METHODOLOGY	12
5	BASELINE ECOLOGICAL CONDITIONS	18
6	SCHEME DESIGN	33
7	ASSESSMENT OF EFFECTS AND MITIGATION MEASURES	34
8	BIODIVERSITY NET GAIN	45
9	CONCLUSIONS	48
	APPENDIX 1: BASELINE UK HABITAT CLASSIFICATION PLAN	
	APPENDIX 2: PROPOSED UK HABITAT CLASSIFICATION PLAN	
	APPENDIX 3: PROPOSED SITE PLAN	
	APPENDIX 4: POND LOCATION PLAN	
	APPENDIX 5: SITE PHOTOGRAPHS	
	APPENDIX 6: FIELD SURVEY METHODOLOGY	
	APPENDIX 7: BIODIVERSITY METRIC METHODOLOGY	

1 EXECUTIVE SUMMARY

Purpose of report	To assess the ecological impacts of a proposed development at Green Leaf Trees, Calne, SN11 9TD clearly identifying any 'significant effects' on important ecological features (including designated sites or protected species) and detailing any mitigation and/or compensation measures required, and how these could be secured. The report also confirms how the proposed development could achieve Biodiversity Net Gain.
Description of proposed development	The Application Site was subject to two approved planning applications (19/08558/FUL and PL2021/04422), which were submitted to Wiltshire Council in 2019 and 2021 respectively. The planning applications have been approved for the erection of new fencing, construction of a new track layout and the installation of new buildings to include a polytunnel, office and stores, one office building and associated proposed works. The client intends to submit a planning application, which this report will accompany, for the construction of one polytunnel, two water storage tanks and two fruit cages. One of the fruit cages is already in place onsite and is therefore being included as part of a retrospective application.
Brief description of the Site	The proposed development site (hereafter referred to as the Application Site) is approximately 5ha and is comprised of grassland, ruderal vegetation, tree nurseries, an access road, native hedgerows, bare ground and buildings and structures to include a large polytunnel, a smaller disused polytunnel, a water tank and a large fruit cage (retrospectively modified grassland). The local landscape consists of residential dwellings, agricultural land, amenity grassland, hedgerows, woodland, scattered trees and waterbodies.
Designated nature conservation sites	No designated sites will be affected.
Key habitats	The most valuable habitats present within the Application Site are the native hedgerows, which are both being retained.
Key species	The Application Site offers some foraging and sheltering opportunities for amphibians, badgers, nesting birds, reptiles and other wildlife (e.g. hedgehogs). The Application Site also offers foraging, commuting and roosting opportunities for bats.

Key impacts	The proposed development will result in the loss of grassland, horticulture and one building. The majority of the grassland within the Application Site is suboptimal at best for various species including amphibians, reptiles, birds and bats due to having a short and uniform sward height. However, the area of grassland with ruderal/ephemeral vegetation will be removed to facilitate the new development, resulting in the loss of suitable habitat for these species.
Mitigation	Good practice measures will be adhered to during constructions phases of the development to safeguard any wildlife that may be present. All habitat and building clearance will be undertaken outside of the nesting bird season (February – August inclusive) or following a nesting bird check by a suitably experienced ecologist. A sensitive lighting scheme will be designed and implemented to retain dark corridors for bats and other wildlife during the operational phases of the development.
Compensation	Bird and bat boxes will be mounted on to mature trees within the retained hedgerow surrounding the Application Site and a hibernacula/log pile will be created for reptiles and amphibians.
Enhancements	To achieve Biodiversity Net Gain, some of the modified grassland will be enhanced to other neutral grassland. The species-poor hedgerow (comprising entirely of sycamore) will be enhanced to a species-rich hedgerow and new additional species-rich hedgerow will also be created. 11 rural scattered trees will also be planted to help achieve a BNG.
Conclusions	The proposed development will comply with Paragraph 187-195 of the NPPF, and Core Policy 50 of the Wiltshire Core Strategy.

2 INTRODUCTION

- 2.1. This report provides an assessment of the ecological effects of the proposed development of an area of land known as Green Leaf Trees, Calne, SN11 9TD, hereafter referred to as the Application Site (see **Image 1**). The principal author of this report is Madison Sellar. The client is Green Leaf trees Ltd.

Background

- 2.2. The address of the Application Site is Land West of A3102, Opposite to Honeysuckle close entrance off A3102, Calne SN11 9TD. The Ordnance Survey Grid Reference for the approximate centre of the Application Site is ST 98702 71825.
- 2.3. The Application Site is approximately 5ha and is comprised of grassland, ruderal vegetation, tree nurseries, an access road, native hedgerows, bare ground and buildings and structures to include a large polytunnel, a smaller disused polytunnel, a water tank and a large fruit cage (retrospectively modified grassland). The local landscape consists of residential dwellings, agricultural land, amenity grassland, hedgerows, woodland, scattered trees and waterbodies.
- 2.4. The Application Site was subject to two approved planning applications (19/08558/FUL and PL2021/04422), which were submitted to Wiltshire Council in 2019 and 2021 respectively. The planning applications have been approved for the erection of new fencing, construction of a new track layout and the installation of new buildings to include a polytunnel, office and stores and associated proposed works.
- 2.5. The client intends to submit a planning application, which this report will accompany, for the construction of one polytunnel, two water storage tanks and two fruit cages. One of the fruit cages is already in place on site and is therefore being included as part of a retrospective application.

Competence

- 2.6. This report has been written by Madison Sellar, Ecologist with ACD Environmental Ltd. Madison has approximately three years' experience in ecological consultancy and has undertaken various surveys, ranging from Extended Phase 1 Habitat Surveys to Phase 2 surveys for protected species, including bats, hazel dormice, badgers, reptiles, water voles and great crested newts. Madison has written various reports, Ecological Impact Assessments (EciAs), Landscape and Ecological Management Plans (LEMPs), Construction Environmental Management Plans (CEMPs) and Biodiversity Net Gain (BNG) reports. Madison is a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

- 2.7. A Technical Review of this report has been undertaken in line with ACD Environmental Ltd's Quality Assurance procedures. The Technical Review was undertaken by John Constable, managing director at ACD Environmental Ltd.

Purpose of the report

- 2.8. The purpose of this Ecological Impact Assessment (EclA) is as follows:
- To identify and describe all potentially significant ecological effects associated with the proposed development
 - To set out the mitigation measures required to ensure compliance with nature conservation legislation and relevant planning policy, and to address any potentially significant ecological effects
 - To identify how mitigation measures will/could be secured
 - To identify any significant residual ecological effects and set out any compensation measures proposed to address these
 - To identify appropriate enhancement measures in order to achieve Biodiversity Net Gain
 - To set out the requirements for post-construction monitoring



Image 1: Approximate Application Site location and red line boundary.¹

¹ Map data, QGIS 2025

3 PLANNING POLICY AND LEGISLATION

Legislation

3.1. The following pieces of legislation are of specific relevance to this assessment:

- The Environment Act 2021². This piece of legislation is of relevance because all planning permissions granted in England are mandated to deliver at least 10% Biodiversity Net Gain from 12th February 2024 (unless exemptions apply and small sites were mandated on 2nd April 2024, neither of which are applicable to the Application Site).
- Wildlife and Countryside Act 1981³ (as amended, including by the Countryside and Rights of Way Act 2000). This piece of legislation is relevant because the Application Site is within the zone of influence of a Site of Special Scientific Interest (SSSI), which is protected in England under this Act.

3.2. The following pieces of legislation have been considered, but are not considered to be of specific relevance in this case:

- Protection of Badgers Act 1992 (no badger setts are present within the Application Site or sufficiently close to be affected).
- Natural Environment and Rural Communities (NERC) Act 2006⁴. Section 41 includes lists of habitats and species recognised as of 'principal importance' for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their function. This is commonly referred to as the 'biodiversity duty'. This piece of legislation is not relevant because the Application Site does not support species of principal importance.
- Water Framework Directive 2000. This piece of legislation is not relevant because there are no waterbodies onsite.
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations

² Great Britain. Environmental Act 2021 [online]. Available from: <https://www.legislation.gov.uk/ukpga/2021/30/contents>

³ Great Britain. *Wildlife and Countryside Act 1981* [online]. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

⁴ Great Britain. *Natural Environment and Rural Communities Act 2006* [online]. Available from: <http://www.legislation.gov.uk/ukpga/2006/16/contents>

2019⁵. This piece of legislation is of no relevance because the Application Site does not support any European Protected Species (EPS).

- Hedgerows Regulations 1997 (the Regulations do not apply to the hedgerows in this context) as the hedgerows are being retained.

Environment Act 2021

- 3.3. In accordance with the Environment Act 2021, mandatory Biodiversity Net Gain (BNG) will apply from January 2024 for developments in the Town and Country Planning Act 1990, unless exempt. It will apply to small sites from April 2024.
- 3.4. Schedule 7A of the Act makes provision for grants of planning permission in England to be subject to a condition, to secure that the 'biodiversity gain objective' is met.
- 3.5. The 'biodiversity gain objective' is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the onsite habitat by at least the relevant percentage.
- 3.6. The biodiversity value attributable to the development is the total of—
- (a) the post-development biodiversity value of the onsite habitat,
 - (b) the biodiversity value, in relation to the development, of any registered offsite biodiversity gain allocated to the development, and
 - (c) the biodiversity value of any biodiversity credits purchased for the development.
- 3.7. The relevant percentage is 10%, but the Secretary of State may by regulations amend this paragraph so as to change the relevant percentage.
- 3.8. The biodiversity value of any habitat or habitat enhancement are to its value as calculated in accordance with the 'Biodiversity Metric'.
- 3.9. Every planning permission granted for the development of land in England shall be deemed to have been granted subject to the condition in sub-paragraph (2), which states that the development may not be begun unless:
- (a) a biodiversity gain plan has been submitted to the planning authority

⁵ Great Britain. *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019* No.579 [online]. Available from: <https://www.legislation.gov.uk/ukdsi/2019/9780111179512/contents>

(b) the planning authority has approved the plan.

- 3.10. Local Planning Authorities (LPAs) will have to approve a biodiversity net gain plan for development work before it can start.

Planning policy

National Planning Policy Framework 2024⁶

- 3.11. Paragraphs 187-191 of the NPPF relate to 'Conserving and enhancing the natural environment' and Paragraphs 192-195 relate to 'Habitats and Biodiversity'.
- 3.12. Paragraph 187 of the NPPF states the following:

"Planning policies 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;

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;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

⁶ HM Government. National Planning Policy Framework December 2024. Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”

3.13. Paragraph 193 of the NPPF states the following:

“When determining planning applications, 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 reasons 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.”

Wiltshire Core Strategy (2015)⁷

3.14. The Wiltshire Core Strategy (2015) provides a guide to development in the county until 2026.

3.15. Core Policy 50: Biodiversity and Geodiversity includes the following:

“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,

⁷ Wiltshire Council (2015). *Wiltshire Core Strategy*. Adopted 20th January 2015. Available at: <https://www.wiltshire.gov.uk/planning-policy-core-strategy>

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

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 obligations or agreements

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

4 METHODOLOGY

Scope of assessment

- 4.1. The EcIA focuses on 'important ecological features', i.e. those which are considered to be of relevance to the decision-making process and could be affected by the proposed development. Important ecological features include protected species, habitats/species of 'principal importance' for biodiversity conservation (i.e. Section 41 habitats/species⁸), birds of conservation concern⁹, invasive non-native plant species¹⁰, and habitats and species identified as priorities for conservation in the Wiltshire Core Strategy.

Zone of influence

- 4.2. The 'zone of influence' (ZOI) is the area over which important ecological features (on-site or off-site) may be affected as a result of the proposed development and associated activities. The ZOI can vary for different ecological features, depending on their sensitivity to environmental change.
- 4.3. The ZOI for statutory designated sites has been informed by Natural England's Sites of Special Scientific Interest (SSSIs) Impact Risk Zones¹¹ (IRZs). IRZs define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. This has been determined as part of the desk study, as discussed below. In this case it is clear that the Application Site is within the IRZ of the Bencroft Hills Meadows SSSI and Spy Park SSSI.
- 4.4. Although the Application Site lies within IRZ, the proposed development type does not meet the descriptions detailed within the IRZ for these SSSI designations, and only relates to aviation infrastructure, quarries and air pollution. Therefore, there is no need to consult Natural England on the likely impacts of development on terrestrial SSSIs and SACs, SPAs or Ramsar sites that they underpin.

⁸ Section 41 (41) of the Natural Environment and Rural Communities (NERC) Act, which came into force on 1st October 2006, requires the Secretary of State to publish a list of habitats and species which are of principle importance for the conservation of biodiversity in England.

⁹ Red list species are those that are globally threatened, whose population or range has declined rapidly in recent years (i.e. by more than 50% in 25 years), or which have declined historically and not recovered. Amber list species are those whose population or range has declined moderately in recent years (by more than 25% but less than 50% in 25 years), those whose population has declined historically but recovered recently, rare species (<300 breeding pairs or <900 wintering individuals), those with internationally important populations in the UK, those with localised populations, and those with an unfavourable conservation status in Europe. Species that meet none of these criteria are Green-listed.

¹⁰ Invasive non-native plants (Section 14) on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended).

¹¹ Natural England (June 2019). Natural England's Impact Risk Zones for Sites of Special Scientific Interest (For use by Local Planning Authorities to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites and determine when to consult Natural England).

Desk Study

- 4.5. The following information was requested from Wiltshire and Swindon Biological Records Centre (WSBRC) for a search area of 2km around the central grid reference of the Application Site:
- Notable and protected species records; and
 - Notified sites.
- 4.6. The data was requested on 4th November 2025 and received on 12th November 2025.
- 4.7. A desk study was also carried out using the MAGIC website¹².
- 4.8. The MAGIC website was used to carry out a data search of 5km for the following:
- Statutory designated sites designated for nature conservation interest, namely SSSIs, Special Protection Areas (SPAs), Special Areas for Conservation (SACs) and Ramsar Sites; as well as National Nature Reserves (NNRs) and Local Nature Reserves (LNRs).
- 4.9. The MAGIC website was also used to carry out a data search of 2km for the following:
- Granted EPS licences including bats, great crested newt *Triturus cristatus* and hazel dormouse *Muscardinus avellanarius*;
 - Class Survey Licence Returns - presence only records from class licence surveys;
 - Pond Surveys 2017 - 2019 - data from ponds surveyed for District Level Licensing; and
 - Priority habitats.
- 4.10. Please note that the desk study was limited to ecological records from the last ten years. Older records were not included, as they are considered less likely to reflect current site conditions and species distributions.

Field surveys

- 4.11. A summary of ecological field surveys is provided in **Table 1**. Descriptions of full survey methods are provided in **Appendix 6**.

Table 1: Field surveys

¹² Multi Agency Geographic Information for the Countryside [online]. Available at: <https://magic.defra.gov.uk/>

Survey	Surveyor/s	Survey date/s	Study Area	Relevant guidelines
Extended Phase 1 Habitat Survey	The Landmark Practice	12 th September 2019	Red line boundary	JNCC (2010)
Updated Ecology site walkover and UK Habitat Classification Survey	Madison Sellar	29 th October 2025	Red line boundary	UKHab Ltd (2023) ¹³
Bat visual assessment - tree scoping assessment	Madison Sellar	29 th October 2025	All trees within the red line boundary	Collins (2023) Andrews (2013)
Bat visual assessment - buildings (internal where access allowed and external)	Madison Sellar	29 th October 2025	All buildings within the red line boundary	Collins (2023)
Badger visual survey	Madison Sellar	29 th October 2025	Red line boundary	Scottish Natural Heritage (1989) Harris <i>et al</i> (1989)

¹³ UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at <http://www.ukhab.org>)

Limitations

- 4.12. The most recent UK Habitat Classification Survey was undertaken during October, a sub-optimal month for vegetation surveys. However, the habitats present were readily apparent/easily distinguished and there was limited potential for incorrect habitat classification.
- 4.13. The protected species surveys were carried out at optimal times of the year and weather conditions. There are therefore no limitations in this regard.

Assessment methodology

- 4.14. The habitats and species evaluations and likely effects are made with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment¹⁴.
- 4.15. The importance of ecological features has been assessed by carrying out a suite of specialist surveys (**Table 1**) to determine whether protected species/habitats, and/or species/habitats of conservation concern are present in the Application Site or its ZOI, then comparing their status at the international/national/county/regional/local scale, through the use of available contextual information, to establish the importance of those features in a geographical context.
- 4.16. The overall effect of the proposed development on a given feature has been predicted, considering the baseline data collected through desk study and field survey, and the various impacts expected to occur. An assessment has then been made as to whether the effect on each important ecological feature is likely to be significant or not.
- 4.17. Significance is the weight that should be attached to effects when decisions are made. For the purpose of EclA, a likely significant effect is an effect that either supports or undermines biodiversity conservation objectives for important ecological features (which could be species populations/groups of species, habitats, or a designated site), or for biodiversity in general. Effects have been considered significant at a wide range of scales, from national to local.

¹⁴ CIEEM (2019). Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal, Version 1.3. updated September 2024. Chartered Institute of Ecology and Environmental Management, Winchester.

- 4.18. A sequential process has been adopted to avoid/mitigate, and if required, compensate for significant negative ecological effects. This is referred to as the 'Mitigation Hierarchy'. Avoidance includes measures to change the design of the proposed development to avoid an impact occurring. Mitigation includes measures to avoid or reduce the negative impacts of the proposed development. Compensation addresses significant negative residual effects (those likely to occur after avoidance and mitigation have been considered). It is this objective of compensation, and not its location, that distinguishes compensation from 'mitigation'.
- 4.19. In EclA, it is only essential to assess and report significant residual effects that remain after mitigation measures have been taken into account. However, the potential significant effects without mitigation as well as the residual significant effects following mitigation have been presented where the mitigation proposed is experimental, unproven or controversial and/or to demonstrate the importance of securing the measures proposed through planning conditions or obligations.

Valuation

- 4.20. The value of important ecological features (sites, habitats and species) is assigned according to their scale of importance using the following terms:
- International importance – ecological features of international importance such as SPAs and SACs, and/or sites that support internationally-important populations of species.
 - National importance – ecological features of national importance such as SSSIs, features which meet the criteria for designation as a SSSI, and/or sites that support nationally-important populations of certain species.
 - Regional importance – ecological features of regional importance, such as a species population that is of importance at a scale greater than the County, but does not meet the criteria for National Importance
 - County importance – ecological features of county-scale importance, including features that have been designated as local wildlife sites, or meet the criteria for designation as a local wildlife site, and/or county-important populations of species
 - Local importance – ecological features of local importance, including habitats or species populations listed as being of nature conservation importance (e.g. S41, local BAP, or listed in local planning policy) which are not considered to

be of County importance by virtue of the quality, size/number, rarity, the extent to which they are threatened throughout their range, or to their rate of decline.

Precautionary principle

- 4.21. The evaluation of significant effects is based on the results of the ecological surveys carried out in the Application Site and other available evidence. In cases of reasonable doubt, where it is not possible to robustly justify a conclusion of no significant effect, a significant effect is assumed. Where uncertainty exists, it has been duly acknowledged.

5 BASELINE ECOLOGICAL CONDITIONS

Context

- 5.1. The Application Site is approximately 5ha and is comprised of grassland, ruderal vegetation, tree nurseries, an access road, native hedgerows, bare ground and buildings and structures to include a large polytunnel, a smaller disused polytunnel, a water tank and a large fruit cage (retrospectively modified grassland).
- 5.2. The local landscape consists of residential dwellings, agricultural land, amenity grassland, hedgerows, woodland, scattered trees and waterbodies.
- 5.3. The landscape within which the Application Site (red line) is shown in **Image 2**, which shows the features mentioned above.



Image 2: Landscape within which the Application Site is located.¹⁵

Designated Sites

- 5.4. Statutory designated sites are the most significant ecological receptors and include SPAs and Ramsar sites of **International Value** and SSSIs and NNRs of **National Value**.
- 5.5. LNRs are notified under Section 21 of the National Parks and Access to the Countryside Act 1949 (as amended) by local authorities and are of Local Value. They are places with wildlife or geological features and are intended for public appreciation, enjoyment and education. The LNR designation does not afford special protection; however, LNRs are protected under

¹⁵ Map data, MAGIC 2025

legislation and planning policy.

- 5.6. SSSIs, SACs and SPAs with IRZs within the boundary of Application Site are shown in **Table 2**.

Table 2: Statutory designated sites within 5km of the Application Site.

Name of statutory designated sites	Approximate distance and direction from the Application Site	Reason for designation
Bencroft Hills Meadows Site of Special Scientific Interest (SSSI)	2.5km north-west	The unimproved sward supports a wide variety of grasses and sedges including abundant sweet vernal-grass <i>Anthoxanthum odoratum</i>, crested dog's-tail <i>Cynosurus cristatus</i>, quaking-grass <i>Briza media</i> and red fescue <i>Festuca rubra</i>. Also occurring frequently are meadow foxtail <i>Alopecurus pratensis</i>, meadow fescue <i>Festuca pratensis</i>, rough meadow-grass <i>Poa trivialis</i>, and the locally uncommon heath-grass <i>Danthonia decumbens</i>. A light grazing regime has allowed a diversity of herbs to flourish, with large populations of devil's-bit scabious <i>Succisa pratensis</i>, cowslip <i>Primula veris</i>, pignut <i>Conopodium majus</i>, common spotted-orchid <i>Dactylorhiza fuchsii</i>, lady's bedstraw <i>Galium verum</i> and oxeye daisy <i>Leucanthemum vulgare</i>. Slightly less frequent are meadow vetchling <i>Lathyrus pratensis</i>, tufted vetch <i>Vicia cracca</i>, common knapweed <i>Centaurea nigra</i>, common bird's-foot-trefoil <i>Lotus corniculatus</i> and tormentil <i>Potentilla erecta</i>. Species indicative of a long period of uninterrupted grassland management without the use of chemicals or artificial fertilisers are widespread and include adder's-tongue <i>Ophioglossum vulgatum</i>, dyer's greenweed <i>Genista tinctoria</i>, betony <i>Stachys officinalis</i>, saw-wort <i>Serratula tinctoria</i>, pepper-saxifrage <i>Silene silaus</i> and the locally rare hairy lady's-mantle <i>Alchemilla filicaulis</i>. On the lower slopes of the meadow the heavy clay soils have given rise to wet flushes which support plant communities characteristic of damp and marshy ground. Marsh horse-tail <i>Equisetum palustre</i>, jointed rush <i>Juncus articulatus</i>, water mint <i>Mentha aquatica</i> and marsh marigold <i>Caltha palustris</i> occur along with ragged robin <i>Lychnis flos-cuculi</i>, creeping-Jenny <i>Lysimachia nummularia</i>, common fleabane <i>Pulicaria dysenterica</i> and greater bird's-foot-trefoil <i>Lotus uliginosus</i>. The meadow is bounded in places by overgrown species-rich hedges. These are comprised of shrubs such as hawthorn, field maple, blackthorn, hazel, field rose and dog rose, with occasional mature specimens of oak and ash. A variety of typical grassland butterflies have been recorded including small copper, small heath and common blue.
Spye Park SSSI	5.0km south-west	The park is an extensive habitat mosaic comprising large expanses of some of the finest undisturbed alderwoods in the county, along with oakwoods, parkland and an area of dry acidic grassland containing several locally uncommon plants. Rich communities of lichens, bryophytes and vascular plants flourish in the wet soil conditions prevailing over much of the park. Much of the site is characterised by extensive stands of springline and

		plateau alderwood, (<i>Alnus glutinosa</i>), including some very large multi-stemmed specimens. These occur on perennially saturated ground with occasional ash <i>Fraxinus excelsior</i>, downy birch <i>Betula pubescens</i> and oak <i>Quercus robur</i>. Mature oak and ash occur frequently on slightly drier soils within the acid pedunculate oak-ash-woodland type. In places there is regrowth of wych elm <i>Ulmus glabra</i> and English elm <i>U.procera</i> following attacks of Dutch elm disease. Scattered silver birch <i>Betula pendula</i>, field maple <i>Acer campestre</i>, wild cherry <i>Prunus avium</i> and rowan <i>Sorbus aucuparia</i> also occur. The shrub layer includes neglected coppice of hazel <i>Corylus avellana</i> with hawthorn <i>Crataegus monogyna</i>, privet <i>Ligustrum vulgare</i>, elder <i>Sambucus nigra</i> and occasionally holly <i>Ilex aquifolium</i>. The generally open canopy and waterlogged soils give rise to a diverse ground flora where greater tussock-sedge <i>Carex paniculata</i> is prominent. Other widespread species are pendulous sedge <i>C.pendula</i>, great horsetail <i>Equisetum telmateia</i>, lady fern <i>Athyrium filix-femina</i> and opposite-leaved golden-saxifrage <i>Chrysosplenium oppositifolium</i>. Several species uncommon in Wiltshire are present such as marsh violet <i>Viola palustris</i>, smoothstalked sedge <i>Carex laevigata</i>, thin-spiked wood-sedge <i>C.strigosa</i> and scaly male-fern <i>Dryopteris affinis</i>. Both bluebell <i>Hyacinth-oides non-scripta</i> and dog's mercury <i>Mercurialis perennis</i> occur commonly in drier areas, often under a more closed canopy. Spye Park is one of the richest sites for epiphytic lichens in Wiltshire. Many species characteristic of ancient forest relics are present such as <i>Arthonia vinosa</i>, <i>Arthopyrenia ranunculospora</i>, <i>Catillaria sphaeroides</i>, <i>Pyrenula chlorospila</i>, <i>Pachyphiale cornea</i>, <i>Peltigera horizontalis</i> and <i>Thelotrema lepadinum</i>. Long lived oaks carry <i>Lecanactis premnea</i> and <i>Opegrapha lyncea</i>. Parkland trees are also important, holding examples of the <i>Xanthorion</i> community. Uncommon epiphytic bryophytes include the mosses <i>Orthotrichum lyeUii</i> and <i>Leucodon sciuroides</i> and the leafy liverwort <i>Frullania tamarisci</i>. Spye Park is an important site for breeding woodland birds including buzzard <i>Buteo buteo</i>, redstart <i>Phoenicurus phoenicurus</i>, nightingale <i>Luscinia megarhynchos</i> and tree pipit <i>Anthus trivialis</i>. The wetness of the site along with its varied woodland structure and abundance of dead wood favours a diverse insect community.
--	--	---

- 5.7. Kellaways-West Tytherton, River Avon SSSI is also within 5km of the Application Site, however, is not relevant in this instance as it is notified for Geological Conservation and does not pertain to ecology.
- 5.8. There are ten non-statutory designated sites within 2km (and beyond) of the Application Site as shown in **Table 3**.

Table 3: Non-statutory designated sites within 2km (and beyond) of the Application Site.

Name of non-statutory designated sites	Approximate distance and direction from the Application Site	Reason for designation
Swerves Farm Meadow Local Wildlife Site (LWS)	370m west	A small pasture in a low, sandy valley supporting neutral grassland scrub and woodland on either side of a meandering stream.

Lower Whitley Farm Meadows LWS	740m north-west	Two adjoining fields with moderately rich neutral grassland.
Whitley Farm Meadows LWS	1.3km north-east	A small site with neutral and calcareous grassland and scrub on a moderate south-facing slope.
Hazeland Wood LWS	1.3km west	Secluded wet woodland with a series of wet flushes and springs, streams and drier banks and marshy ground situated north of the old canal and river Marden.
Bowood Lake LWS	1.5km south-west	An ornamental lake within the landscaped grounds of a heritage property.
Bremhill Marsh Meadows LWS	1.7km north-west	Sedge fen and other wetland habitats and an area of grassland and scrub in a small valley on clay soils.
Great Bodnage Copse LWS	1.90km west	An ancient woodland site on clay and greensand, largely replanted with conifer and broadleaves.
Crab Tree Copse and Searcher's Wood LWS	1.20km south-west	An ancient woodland site extensively managed & replanted, but still mainly broadleaved. Situated on greensand and very wet in parts.
Bencroft Ash Bed LWS	2.0km north-west	Ash, hazel, alder woodland on a springline, on a hilltop, cut in two by felling and pond creation.
Stanley Abbey Farm Meadows LWS	2.4km west	A large complex of unimproved and semi-improved neutral pasture and meadow with diverse geology and topography supporting a range of plant communities.

5.9. Workhouse quarry LWS is also within 2km of the Application Site, however, is not relevant in this instance as it a Local Geological Site and does not pertain to ecology.

5.10. No impacts to statutory and non-statutory designated sites are anticipated due to the proposed development's size and distance from such sites.

Local Habitats

5.11. There are four priority habitats within 2km of the Application Site, which include:

- Deciduous woodland ~ 250m south
- Traditional orchards ~ 350m south-west
- Lowland meadows ~ 480m north-west
- Ancient woodland ~ 650m west
- Parkland BAP Priority habitat ~ 1.1km south-west
- Coastal and floodplain grazing marsh ~ 1.5km north-west

5.12. The existing habitats are shown in the Baseline UK Habitat Classification plan at **Appendix 1** and **Photographs 1-10** at **Appendix 5**.

Onsite Habitats

Modified grassland g4

- 5.13. The majority of the Application Site is composed of modified grassland dominated by perennial ryegrass *Lolium perenne* with a short, uniform sward height. Other species include hogweed *Heracleum sphondylium*, birdeye speedwell *Veronica persica*, ground ivy *Glechoma hederacea*, wild teasel *Dipsacus sylvestris*, cock's foot *Dactylus glomerata*, spiny sowthistle *Sonchus asper*, oxeye daisy *Leucanthemum vulgare*, ragwort *Jacobaea vulgaris*, square-stalked willowherb *Epilobium tetragonum*, a chestnut sapling *Castanea sativa*, an oak sapling *Quercus robur*, a geranium species *Geranium sp.*, tufted hairgrass *Deschampsia cespitosa*, hairy willowherb *Epilobium hirsutum*, cow parsley *Anthriscus sylvestris*, spear thistle *Cirsium vulgare*, bracken *Pteridium aquilinum*, smaller cat's-tail *Phleum bertolonii*, broad-leaved dock *Rumex obtusifolius*, white clover *Trifolium repens*, bramble *Rubus fruticosus*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, a hazel sapling *Corylus avellana*, purple dead-nettle *Lamium purpureum* and curly dock *Rumex crispus*. This habitat is of '**poor**' condition as it fails to meet the first condition criteria by having <6 species per square metre.

- 5.14. Modified grassland is considered to be of **Site Value**.

Modified grassland g4 with ruderal/ephemeral vegetation 81

- 5.15. A section of the Application Site (including retrospectively the area with the existing fruit cage structure) is comprised of modified grassland dominated by ruderal/ephemeral vegetation. No single species dominates, however there is abundant amounts of spear thistle *Cirsium vulgare* and birdeye speedwell *Veronica speedwell*. Other species include Bristly oxtongue *Helminthotheca echioides*, yellow foxtail *Setaria helvola*, broad-leaved dock *Rumex obtusifolius*, annual meadow grass *Poa annua*, common fumitory *Fumaria officinalis*, lemon balm *Melissa officinalis*, purple dead-nettle *Lamium purpureum*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, common dandelion *Taraxacum officinale*, yellow mignonette *Reseda lutea*, woody nightshade *Solanum dulcamara*, lady's purse *Capsella bursa-pastoris*, lady's thumb *Persicaria maculosa*, sun spurge *Euphorbia helioscopia*, black nightshade *Solanum nigrum*, ragwort *Jacobaea vulgaris*, an oak sapling *Quercus robur*, common mallow *Malva sylvestris*, cow parsley *Anthriscus sylvestris*, a black poplar sapling *Populus nigra* and a sycamore sapling *Acer pseudoplatanus*. This habitat is of '**moderate**' condition according to UKHabs condition assessment criteria.

- 5.16. This habitat is considered to be of **Site Value**.

Horticulture c1f

5.17. There are three areas within the Application Site that are plant nurseries. These areas contain raised beds and trays holding tree saplings. The ground surface in these sections is largely covered with tarpaulin, with perennial rye grass growing over the tarp in many places.

5.18. The habitat is of **negligible** intrinsic ecological value.

Native hedgerow h2a with trees 11

5.19. A native hedgerow runs along the northern, western, southern and a small section of the eastern boundary of the Application Site. The hedgerow has succeeded to tree lines in some places and has fencing throughout. Species present include blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*, ash *Fraxinus excelsior*, oak *Quercus robur*, dogwood *Cornus sanguinea*, field maple *Acer campestre* and silver birch *Betula pendula*. This habitat is of 'good' condition according to UKHabs condition assessment criteria.

5.20. This habitat is considered to be of **Site Value**.

Species poor native hedgerow h2a with young trees – planted 201

5.21. Towards the north of the Application Site, there is a newly planted hedgerow that functions as a wind barrier. The hedgerow is composed entirely of sycamore *Acer pseudoplatanus*. This habitat is of 'moderate' condition according to UKHabs condition assessment criteria.

5.22. This habitat is considered to be of **Site Value**.

Artificial unvegetated, unsealed surface u1c

5.23. There is an access track leading from the site entrance to the polytunnel structure with an associated area for parking. The access track is composed of compacted dirt and gravel.

5.24. The habitat is of **negligible** intrinsic ecological value.

Buildings u1b5

5.25. There are three buildings (B) within the Application Site.

5.26. B1 is a large polytunnel in active use for growing broadleaf trees, conifer and hedgerow species from seed, primarily native UK species. The interior consists of bare ground with beds/trays for seedlings.

5.27. B2 is a cylindrical, corrugated metal water storage tank situated next to and connected to the polytunnel (B1) via a pipe system.

- 5.28. B3 is a disused/semi-derelict polytunnel structure. The ground inside supports unmanaged vegetation dominated by coarse grasses (suggesting it has not been cultivated recently).
- 5.29. The buildings are of **negligible** intrinsic ecological value.

Flora

- 5.30. No invasive plant species were noted during any survey visits.
- 5.31. The WSBRC data search returned several notable plant species records within 2km of the Application Site. These are shown in **Table 4** below.

Table 4: Notable plant records within 2km of the Application Site.

Common name	Taxon name	Status
Bluebell	<i>Hyacinthoides non-scripta</i>	Schedule 8
Butcher's-broom	<i>Ruscus aculeatus</i>	Annex 5
Nodding bur-marigold	<i>Bidens cernua</i>	County notable
Cornflower	<i>Centaurea cyanus</i>	Sect.41 UKBAP
Corn marigold	<i>Glebionis segetum</i>	Vulnerable
Box	<i>Glebionis segetum</i>	Nationally rare Data deficient
Corn spurrey	<i>Spergula arvensis</i>	Vulnerable
Keeled-fruited cornsalad	<i>Valerianella carinata</i>	County notable
Spotted medick	<i>Medicago arabica</i>	County notable
Buck's-horn plantain	<i>Plantago coronopus</i>	County notable
Pink water-speedwell	<i>Veronica catenata</i>	County notable
Tutsan	<i>Hypericum androsaemum</i>	County notable
River water-crowfoot	<i>Ranunculus fluitans</i>	County notable
Harsh downy-rose	<i>Rosa tomentosa</i>	County notable

Fauna

Invertebrates

- 5.32. The data search from WSBRC returned records of 36 species of invertebrates within 2km of the Application Site. These are shown in **Table 5** below.

Table 5: Notable invertebrate records within 2km of the Application Site.

Common name	Taxon name	Status
Alder leaf beetle	<i>Agelastica alni</i>	Data deficient
Tawny longhorn beetle	<i>Paracorymbia fulva</i>	County notable
Umbellifer longhorn beetle	<i>Phytoecia cylindrica</i>	Nationally notable
Small heath	<i>Coenonympha pamphilus</i>	Near threatened Sect.41 UKBAP

Common name	Taxon name	Status
Wall	<i>Lasiommata megera</i>	Near threatened Sect.41 UKBAP
Common Darter	<i>Sympetrum striolatum</i>	Data deficient
Knot grass	<i>Acronicta rumicis</i>	Sect.41 UKBAP
Beaded chestnut	<i>Agrochola lychnidis</i>	Sect.41 UKBAP
Green-brindled crescent	<i>Allophyes oxyacanthae</i>	Sect.41 UKBAP
Mouse moth	<i>Amphipyra tragopoginis</i>	Sect.41 UKBAP
Dusky brocade	<i>Apamea remissa</i>	Sect.41 UKBAP
Deep-brown dart	<i>Aporophyla lueneburgensis</i>	Sect.41 UKBAP
Sprawler	<i>Asteroscopus sphinx</i>	Sect.41 UKBAP
Centre-barred sallow	<i>Atethmia centrargo</i>	Sect.41 UKBAP
Dark-spotted moss-moth	<i>Bryotropha basaltinella</i>	Nationally notable
Mottled rustic	<i>Caradrina morpheus</i>	Sect.41 UKBAP
Small square-spot	<i>Diarsia rubi</i>	Sect.41 UKBAP
September thorn	<i>Ennomos erosaria</i>	Sect.41 UKBAP
Dusky thorn	<i>Ennomos fuscantaria</i>	Sect.41 UKBAP
Galium carpet	<i>Epirrhoe galiata</i>	Sect.41 UKBAP
Jersey tiger	<i>Euplagia quadripunctaria</i>	Annex II - priority species
Small emerald	<i>Hemistola chrysoprasaria</i>	Sect.41 UKBAP
Rosy rustic	<i>Hydraecia micacea</i>	Sect.41 UKBAP
Shoulder-striped wainscot	<i>Leucania comma</i>	Sect.41 UKBAP
Brindled beauty	<i>Lycia hirtaria</i>	Sect.41 UKBAP
Lackey	<i>Malacosoma neustria</i>	Sect.41 UKBAP
Dot moth	<i>Melanchra persicariae</i>	Sect.41 UKBAP
Powdered quaker	<i>Orthosia gracilis</i>	Sect.41 UKBAP
Large wainscot	<i>Rhizedra lutosa</i>	Sect.41 UKBAP
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	Sect.41 UKBAP
White ermine	<i>Spilosoma lubricipeda</i>	Sect.41 UKBAP
Buff ermine	<i>Spilosoma lutea</i>	Sect.41

Common name	Taxon name	Status
		UKBAP
Hedge rustic	<i>Tholera cespitis</i>	Sect.41 UKBAP
Feathered gothic	<i>Tholera decimalis</i>	Sect.41 UKBAP
Blood-vein	<i>Timandra comae</i>	Sect.41 UKBAP
Cinnabar	<i>Tyria jacobaeae</i>	Sect.41 UKBAP

5.33. The habitats within the Application Site are likely to support a variety of insects including pollinators, however, it is considered unlikely that these habitats would support an important assemblage of notable invertebrates. As such, it is considered that the invertebrates present on-site are likely to be of **site level importance** only.

Amphibians

- 5.34. The majority of the grassland on site is considered sub-optimal, as it is maintained at a short and uniform sward height. However, there remains some potential for amphibians within the areas of ruderal/ephemeral vegetation, along the grassland margins, and within the hedgerows.
- 5.35. Amphibians also require suitable aquatic habitats in which to breed and fulfil their lifecycle. The dispersal distance of great crested newt *Triturus cristatus* from breeding ponds depends upon habitat quality and availability; however, 'Core' terrestrial habitat is considered to be within 50m, whilst 'Intermediate' terrestrial habitat is considered to be between 50m-250m, and 'Distant' terrestrial habitat is considered to be to be within 500m.^{16 17}
- 5.36. There are no ponds (P) within the Application Site. There is one known pond within 500m of the Application Site and one known pond within 250m, when consulting MAGIC, including 245m south (P1) and 362m north (P2). Neither pond is visible on aerial photography suggesting both are entirely shaded by surrounding vegetation and both are situated on private land meaning a survey was not possible during site walkover. A pond location plan is provided in **Appendix 4**.
- 5.37. According to MAGIC maps there are no great crested newt European Protected Species Licenses (EPSLs), Class Survey License Returns and Pond Survey within 2km of the Application Site.

¹⁶ HM Government (26/07/20222). Guidance Great crested newts: advice for making planning decisions. Available at: <https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects>

¹⁷ Langton, T., Beckett, C. and Foster, J. (2001). Great Crested Newt Conservation Handbook. Froglife, Halesworth.

- 5.38. The data search with WSBRC returned five records of amphibians within 2km of the Application Site, including four records of common toad *Bufo bufo* and one record of common frog *Rana temporaria*.
- 5.39. The proposed development comprises no 'Core' terrestrial habitat for great crested newts, and therefore this species is likely considered to be absent from the Application Site.
- 5.40. No amphibians have been found onsite; however, there is the potential for presence unseen.
- 5.41. The value of the Application Site for amphibians is considered to be of **Site Value**.

Reptiles

- 5.42. Similarly for amphibians, the majority of the grassland on site is considered to be sub-optimal. However, there remains some potential for reptiles within the areas of ruderal/ephemeral vegetation, along the grassland margins, and within the hedgerow.
- 5.43. The data search with WSBRC returned two records of grass snake *Natrix Helvetica* and six records of slow-worm *Anguis fragilis*.
- 5.44. No reptiles have been found onsite; however, there is the potential for presence unseen.
- 5.45. The value of the Application Site for reptiles is considered to be of **Site Value**.

Birds

- 5.46. WSBRC returned records of various bird species within 2km of the Application Site. These species have been grouped by their UK conservation status according to the RSPB, where birds are split into conservation priority from red (most critical group), amber (next most critical group) to green (least critical group) as well grey (least concern).¹⁸ These are colour-coded accordingly and shown in **Table 6** and **Table 7** below.

Table 6: Notable bird records within 2km of the Application Site.

Common name	Taxon name
Pochard	<i>Aythya ferina</i>
Goldeneye	<i>Bucephala clangula</i>
Common scoter	<i>Melanitta nigra</i>
Swift	<i>Apus apus</i>
Herring gull	<i>Larus argentatus</i>
Lapwing	<i>Vanellus vanellus</i>
Cuckoo	<i>Cuculus canorus</i>

¹⁸ Information on RSPB listings here: <https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/uk-conservation-status-explained/>

Common name	Taxon name
Lesser redpoll	<i>Acanthis cabaret</i>
Skylark	<i>Alauda arvensis</i>
Greenfinch	<i>Chloris chloris</i>
Hawfinch	<i>Coccothraustes coccothraustes</i>
House martin	<i>Delichon urbicum</i>
Yellowhammer	<i>Emberiza citrinella</i>
Linnet	<i>Linaria cannabina</i>
Spotted flycatcher	<i>Muscicapa striata</i>
House sparrow	<i>Passer domesticus</i>
Marsh tit	<i>Poecile palustris</i>
Starling	<i>Sturnus vulgaris</i>
Fieldfare	<i>Turdus pilaris</i>
Ring ouzel	<i>Turdus torquatus</i>
Mistle thrush	<i>Turdus viscivorus</i>
Pintail	<i>Anas acuta</i>
Teal	<i>Anas crecca</i>
Mallard	<i>Anas platyrhynchos</i>
Greylag goose	<i>Anser anser</i>
Pink-footed goose	<i>Anser brachyrhynchus</i>
Wigeon	<i>Mareca penelope</i>
Shoveler	<i>Spatula clypeata</i>
Shelduck	<i>Tadorna tadorna</i>
Common sandpiper	<i>Actitis hypoleucos</i>
Blach-headed gull	<i>Chroicocephalus ridibundus</i>
Snipe	<i>Gallinago gallinago</i>
Lesser black-backed gull	<i>Larus fuscus</i>
Common tern	<i>Sterna hirundo</i>
Green sandpiper	<i>Tringa ochropus</i>
Great white egret	<i>Ardea alba</i>
Stock dove	<i>Columba oenas</i>
Woodpigeon	<i>Columba palumbus</i>
Moorhen	<i>Gallinula chloropus</i>
Crane	<i>Grus grus</i>
Sedge warbler	<i>Acrocephalus schoenobaenus</i>
Meadow pipit	<i>Anthus pratensis</i>
Dipper	<i>Cinclus cinclus</i>
Rook	<i>Corvus frugilegus</i>
Whitethroat	<i>Curruca communis</i>
Reed bunting	<i>Emberiza schoeniclus</i>
Pied flycatcher	<i>Ficedula hypoleuca</i>
Grey wagtail	<i>Motacilla cinerea</i>
Wheatear	<i>Oenanthe oenanthe</i>
Black redstart	<i>Phoenicurus ochruros</i>
Willow warbler	<i>Phylloscopus trochilus</i>
Snow bunting	<i>Plectrophenax nivalis</i>
Dunnock	<i>Prunella modularis</i>
Bullfinch	<i>Pyrrhula pyrrhula</i>
Wren	<i>Troglodytes troglodytes</i>
Redwing	<i>Turdus iliacus</i>
Song thrush	<i>Turdus philomelos</i>
Short-eared owl	<i>Asio flammeus</i>
Tawny owl	<i>Strix aluco</i>

Common name	Taxon name
Grey heron	<i>Ardea cinerea</i>
Little egret	<i>Egretta garzetta</i>
Collared dove	<i>Streptopelia decaocto</i>
Kingfisher	<i>Alcedo atthis</i>
Coot	<i>Fulica atra</i>
Cetti's warbler	<i>Cettia cetti</i>
Brambling	<i>Fringilla montifringilla</i>
Common crossbill	<i>Loxia curvirostra</i>
Firecrest	<i>Regulus ignicapilla</i>
Cormorant	<i>Phalacrocorax carbo</i>
Great crested grebe	<i>Podiceps cristatus</i>
Barn owl	<i>Tyto alba</i>
White stork	<i>Ciconia ciconia</i>

5.47. Raptors are considered separately due to the mix of habitats within the Application Site with potential prey opportunities including small birds and mammals.

Table 7: Notable raptors within 2km of the Application Site.

Common name	Taxon name
Merlin	<i>Falco columbarius</i>
Sparrowhawk	<i>Accipiter nisus</i>
Kestrel	<i>Falco tinnunculus</i>
Red kite	<i>Milvus milvus</i>
Peregrine	<i>Falco peregrinus</i>
Hobby	<i>Falco subbuteo</i>

5.48. The hedgerows on site offer suitable habitat for breeding birds and the grassland offers foraging opportunities.

5.49. No barn owl or evidence of barn owl was found during any of the surveys.

5.50. Surveys can be reasonably scoped-out given that the hedgerows will continue to be available for use by nesting birds and that precautions will be implemented during the proposed works.

5.51. The potential value of the Application Site for nesting birds is considered to be of **Site Value**.

Bats

Data search

5.52. According to MAGIC, there is one bat EPSL within 2km of the Application Site, which is shown in **Table 8**.

Table 8: Bat EPSLs within 2km of the Application Site.

EPSL reference	Bat species affected	Approximate distance and direction from the Application Site	Impacts allowed
2020-50391-EPS-MIT	Common pipistrelle Soprano pipistrelle Lesser horseshoe	1.1km south-east	Damage of a resting place Destruction of a resting place

- 5.53. The data search with WSBRC returned several records of various bat species within 2km of the Application Site, to include three records of barbastelle *Barbastella barbastellus*, 26 records of serotine *Eptesicus serotinus*, 13 records of a myotis species *Myotis sp.*, six records of daubenton's bat *Myotis daubentonii*, two records of whiskered bat *Myotis mystacinus*, two records of unconfirmed whiskered/brandt's bat *Myotis mystacinus/brandtii*, 12 records of noctule *Nyctalus noctule*, two records of a *Nyctalus/Eptesicus sp.*, three records of a pipistrelle species *Pipistrellus sp.*, 40 records of common pipistrelle *Pipistrellus pipistrellus*, 35 records of soprano pipistrelle *Pipistrellus pygmaeus*, five records of a long-eared bat species *Plecotus sp.*, three records of brown long-eared bat *Plecotus auritus*, four records of greater horseshoe *Rhinolophus ferrumequinum* and nine records of lesser horseshoe *Rhinolophus hipposideros*.

Visual assessments

- 5.54. All trees within the Application were subject to a Ground Level Tree Assessment (GLTA) to assess the likely bat potential from the ground. Some trees located within the boundary hedgerows were identified as having moderate bat roost, with potential roosting features (PRFs) such as woodpecker holes and deadwood. As the hedgerows are to be retained in full as part of the proposed development, no further assessment of these trees is required at this stage.
- 5.55. If any of the trees are proposed for removal in the future, then they will require further consideration. In such cases, a climbing inspection undertaken by a suitably licensed ecologist may be necessary to investigate these PRFs.
- 5.56. The buildings onsite were subject to a Preliminary Ecological Appraisal (PRA) to assess the suitability of the buildings as roosting place for bats.
- 5.57. All buildings onsite have **negligible potential** for roosting bats.

Commuting and foraging

- 5.58. The Application Site provides limited foraging and commuting opportunities for bats, in the form of grassland and hedgerows. The boundary hedgerows, in particular, function as corridors for commuting bats and provide connectivity to further habitat in the local landscape. Given the Application Site's geographic context and the presence of more extensive and higher-quality foraging habitats in the surrounding area, such as several nearby areas of woodland, the Application Site is considered to offer, at best, suboptimal habitats for bats.
- 5.59. Therefore, the overall potential value of the Application Site for bats is considered to be of **Local Value**.

Hazel dormouse

- 5.60. According to MAGIC, there are no granted hazel dormouse *Muscardinus avellanarius* EPSLs within 2km of the Application Site. The WSBRC data search also did not return any dormouse records. Although, the Application Site lies within the species' range and dormice are classed as present in Wiltshire¹⁹, the habitats onsite are not representative of high-quality dormouse habitat. The boundary hedgerows do, however, provide functional connectivity to more optimal habitat in the wider landscape. Given the limited suitable habitat within the Application Site and minimal impacts proposed (hedgerows are being retained), dormouse are not considered a constraint to the development. It is likely that only a small number of individuals could be supported for opportunistic foraging and dispersal.
- 5.61. The potential value of the Application Site for dormouse is considered to be of **Local Value**.

Badger

- 5.62. The BRERC data search returned 12 records of badger *Meles meles*.
- 5.63. No badger setts or other signs of badger activity (i.e. sett-making activity, latrines or feeding activity) were found onsite. However, albeit low, badgers are a highly mobile species and setts can appear at any time where suitable habitat has been identified.
- 5.64. The grassland onsite offers some foraging potential, but badgers are likely to be discouraged from regular use the Application Site due to the fencing along the northern, western and southern boundaries, and a busy road along the eastern boundary.
- 5.65. No direct impacts on badgers are anticipated as a result of the proposed development. However, albeit low badgers could still commute through the Application Site and get stuck in any excavations (if any) during the construction phase.

¹⁹ People's Trust for Endangered Species. *Hazel dormice range and distribution in the UK*. Available at: <https://ptes.org/campaigns/dormice/about-hazel-dormice/hazel-dormice-range-and-distribution-in-the-uk/>

5.66. A badger inspection on and within 30m of the site will be conducted by an ecologist c. six weeks before clearance / construction begins. This will allow time for any mitigation/avoidance measures to be designed, and preparation of a Natural England badger Development Licence application if required.

5.67. The potential value of the Application Site for badger is considered to be of **Site Value**.

Otter and water vole

5.68. The WSBRC data search returned one records of otter *Lutra lutra* and five records of water vole *Arvicola amphibius*. There are no suitable habitats present in the Application Site for either of these species. Therefore, both are considered absent from the Application Site and have been scoped out of further assessment.

Other mammals

5.69. The WSBRC data search returned 248 records of hedgehog *Erinaceus europaeus*, ten records of brown hare *Lepus europaeus* and 11 records of rabbit *Orytolagus cinuculus*. Hedgehogs are a JNCC priority species and a species of Principal Importance under the NERC Act 2006. The hedgerows onsite are suitable for commuting and hibernating hedgehogs, and the grassland is favourable for foraging behaviour.

5.70. The Application site also holds favourable habitat for other mammals such as hare and rabbit. However, the client has advised that the fencing surrounding the Application has been installed to exclude these species and protect the tree nurseries.

5.71. The WSBRC data search also returned four records of beavers *Castor fiber* in the River Marden in Calne. Beavers are classed as endangered and are a European protected species protected under Conservation of Habitats and Species Regulations 2017. Beavers were hunted to extinction in the UK in the 16th century and were first officially reintroduced in 2009. Beavers are ecosystem engineers and create diverse and dynamic wetlands.

5.72. Although these mammals and others are not subject to legal protections in terms of conservation status, they are subject to protection from cruelty under the Wild Mammals Protection Act 1996 and the Animal Welfare Act 2006 (hedgehog is also protected under this legislation). The works may therefore proceed with caution whereby care must be taken during clearance/groundworks to ensure any rabbit or other small mammals that may be present are not harmed.

5.73. The potential value of the Application Site for other mammals is considered to be of **Site Value**.

6 SCHEME DESIGN

- 6.1. There is inherent mitigation within the layout through the retention of the higher valuable habitats, which is in accordance with the mitigation hierarchy whereby avoidance of impacts on higher value habitats has been avoided in the first instance. This includes the retention of hedgerow and the enhancement of some hedgerow.
- 6.2. An area of modified grassland will also be enhanced to other neutral grassland. In order to achieve this, the designated area will be sown with basic general meadow mixture.
- 6.3. 11 rural scattered trees will also be planted.
- 6.4. A proposed site plan has been produced by Concept Drawing & Design Architects Ltd (2433.03.08 Rev D Proposed Site Plan), which is shown in **Appendix 3**.
- 6.5. Habitats and species-specific impacts and relevant compensation and mitigation for any impacts are detailed in **Section 7**.

7 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

- 7.1. In accordance with CIEEM guidelines, the following important ecological features have been identified with the potential to be affected by the proposed development and carried forward for further assessment:

Table 9: Important ecological features brought forward for impact assessment

Statutory sites	n/a
Local Wildlife sites	n/a
Habitats	Modified grassland
Species and species groups	Amphibians (including great crested newts) Reptiles Birds Bats Hazel dormouse Badger Other mammals (including hedgehogs)

- 7.2. The following ecological features have been scoped out of the ecological impact assessment, owing to the conclusion that no significant effects are predicted:

Table 10: Ecological features scoped out of the impact assessment

Statutory sites	Bencroft Hills Meadow SSSI Spye Park SSI
Non-statutory sites	Swerves Farm Meadow LWS Lower Whitley Farm Meadows LWS Whitley Farm Meadows LWS Hazeland Wood LWS Bowood Lake LWS Bremhill Marsh Meadows LWS Great Bodnage Copse LWS Crab Tree Copse and Searcher's Wood LWS Bencroft Ash Bed LWS Stanley Abbey Farm Medows LWS
Habitats	Horticulture Native hedgerows Artificial unvegetated, unsealed surface Buildings
Species and species groups	Otter Water vole

Amphibians

Construction Impacts

- 7.3. Without proper mitigation, the removal of grassland onsite is likely to kill, injure and/or disturb amphibian (including great crested newts) and will result in the loss of terrestrial habitat.
- 7.4. The impact is likely to be significant negative within the Zone of Influence

Operational Impacts

- 7.5. Inappropriate management of the retained habitats onsite could impact any amphibians that re-colonise the Application Site following completion of the construction phase.

Mitigation

- 7.6. Prior to the commencement of site clearance, a precautionary working method will be implemented, to include the following measures:
- A two-stage cut is required in areas with longer vegetation. These areas should be cleared in a phased approach during March – October (the active newt/ season), only when temperatures exceed 10°C. Vegetation removal will be phased and cut down initially to 10-15cm in a directional manner, starting at the centre of the field and moving outwards. The area should then be left for 24 hours to allow any individuals that may be present to move out of the area into surrounding habitats. No less than 24 hours should elapse before the second stage of removal. Vegetation can then be cut down to ground level, again using directional cutting. Following the cut to ground level a soil strip can take place as necessary. If hand tools are not used, appropriate machinery must be capable of being adjusted to the desired heights, to enable the first cut to be high.
 - Throughout the construction phase, any grassland or overgrown ruderal vegetation present within the construction zone, will be maintained at a short height to prevent wildlife moving into the Approved Development Site.
 - If any piles of rubble or debris are present within the construction footprint, that could act as hibernacula and/or refuge to amphibians or reptiles, will be checked and dismantled by hand, by an ecologist, prior to construction, where safe to do so.
 - If any common amphibians are found, they will be moved only by the ecologist to a suitable offsite area.

- In the unlikely event any great crested newts are found, works must cease immediately and an EPS license secured.

Residual effect

- 7.7. With the inclusion of the mitigation measures above, the overall residual effect will be non-significant negative within the Zone of Influence.

Reptiles

Construction Impacts

- 7.8. Without proper mitigation, the removal of grassland onsite is likely to kill, injure and/or disturb reptiles.
- 7.9. The impact is likely to be significant negative within the Zone of Influence.

Operational Impacts

- 7.10. Inappropriate management of the retained habitats onsite could impact any reptiles that re-colonise the Application Site following completion of the construction phase.

Mitigation

- 7.11. Prevention measures for reptiles are covered within the amphibians' measures outline above.
- 7.12. In the unlikely event that any reptiles are found, works must cease immediately and a suitably qualified ecologist should be contacted in the first instance.
- 7.13. General measures will be adopted during the proposed works to safeguard any reptiles (and other wildlife) that may be present.
- Heras fencing will be installed around the site boundaries and to protect RPZs (root protection zones). The RPZs will be maintained throughout the construction phase and will be subject to weekly checks by the contractors to ensure this is still in place and is not damaged or compromised.
 - There will be appropriate fencing and signage to delineate clear boundaries of movement for vehicles/people and working/storage zones.

- Any excavations (e.g. trenches/pits) would be covered when works are not taking place to ensure that they do not fill with water and prevent the potential for reptiles (and other wildlife) to become trapped.
- Any excavations that must be left open overnight will be provided with a means of escape should reptiles (and other wildlife) enter. This would simply be in the form of a roughened plank of wood placed in the excavation as a ramp to the surface. This is particularly important if the excavation fills with water.
- Any excavations would be inspected each morning to ensure no reptiles (or other wildlife) have become trapped overnight.
- All temporarily exposed pipes must be capped overnight to prevent reptiles (and other wildlife) gaining access and later becoming trapped.
- Mounds and piles of materials (e.g. bark mulch) would be kept to a minimum and any essential piles kept off the ground and subject to daily inspections.
- Machinery and building tools/materials must not be stored within or in close proximity to the site boundaries. Where possible, machinery and building tools/materials should be stored in containers.
- The storage of any chemicals within the construction site will be contained in such a way that they cannot be consumed or knocked over by any wildlife.
- The construction site must be left clean and tidy at the end of each working day and food and litter must not be left out overnight.

Residual effect

- 7.14. With the inclusion of the mitigation measures above, the overall residual effect will be non-significant negative within the Zone of Influence.

Birds

Construction Impacts

- 7.15. Without proper mitigation, the removal of grassland and building (the disused polytunnel) onsite is likely to kill, injure and/or disturb nesting birds.

Operational Impacts

- 7.16. Inappropriate management of the retained habitats onsite has the potential to negatively impact nesting birds.

Mitigation

- 7.17. Without mitigation, increased disturbance as a result of construction noise, dust and vibration is likely to affect the ability of birds nesting within retained and off-site habitats to hold territory and breed successfully, if construction takes place in the breeding season. Ambient noise level increases would be variable, but at times there could be considerable increases in noise levels. This would lead to a temporary negative impact on nesting birds, which would be significant within the Zone of Influence
- 7.18. To protect nesting birds, removal of vegetation and demolition of the buildings (the disused polytunnel) should ideally take place outside of the nesting bird season. If works must be undertaken during the nesting bird season (February to August inclusive) then these will be preceded by a check for active birds' nests undertaken by an ecologist. If no birds' nests are found then works can proceed within 48 hours; however, if an active birds nest is found then works must stop and an appropriate buffer installed around the nest (usually 5m). The buffer must remain in place until the ecologist confirms the young have fledged.
- 7.19. The retained habitats will be managed long-term to enhance their suitability for wildlife, including nesting birds. Management will be carried out sensitively to create a diverse habitat, that has areas of dense and bushy vegetation suitable for nesting birds.

Residual effect

- 7.20. With the inclusion of the mitigation measures above, the overall residual effect will be non-significant negative within the Zone of Influence.

Bats

Construction Impacts

- 7.21. Without mitigation, increased disturbance as a result of construction noise, dust and vibration and additional lighting is likely to disturb foraging bats.
- 7.22. The impact is likely to be significant negative within the Zone of Influence.

Operational Impacts

- 7.23. Any additional lighting within the Application Site has the potential to impact bats.

Mitigation

7.24. To minimise the impact of the proposed development on commuting and foraging bats, the lighting scheme will be sensitively designed. During the construction phase, the following mitigation will be followed:

- All works will be undertaken during normal working daylight hours. Any artificial lighting (required) should not illuminate boundary vegetation.
- Where security lighting is required, it is recommended that these are motion-activated with hooded luminaires.
- Any lighting must be directed within the construction site to minimise light spill on adjacent habitats.

Residual effect

7.25. With the inclusion of the mitigation measures above, the overall residual effect will be non-significant negative within the Zone of Influence.

Hazel dormouse

Construction Impacts

7.26. Dormouse are unlikely to be affected by construction activities.

7.27. However, if they are present then the impact is likely to be significant negative within the Zone of Influence.

Operational Impacts

7.28. Inappropriate management of the retained habitats onsite could impact any dormouse that re-colonise the Application Site following completion of the construction phase.

Mitigation

7.29. Prior to the commencement of works, contractors will be made aware of the potential presence of hazel dormouse (and other protected species) and advised that if a hazel dormouse (or a nest) is found when an ecologist is not in attendance they must not be handled, works must stop and advice sought from a suitably licenced ecologist.

Residual effect

- 7.30. With the inclusion of the mitigation measures above, the overall residual effect will be non-significant negative within the Zone of Influence.

Badger and other mammals

- 7.31. The following good practice measures will be adhered to protect badgers and other mammals throughout the construction phase:

- Any excavations (e.g. trenches/pits) would be covered when works are not taking place to ensure that they do not fill with water and prevent the potential for wildlife to become trapped (especially badger).
- Any temporary exposed pipes must be capped to prevent badgers gaining access during the night.
- If any excavations are left open, then they must be provided with a means of escape should a badger enter. This could simply be in the form of a roughened plank of wood placed in the excavation as a ramp to the surface. This is particularly important if the excavation fills with water.
- Any excavations would be inspected each morning to ensure no badgers have become trapped overnight. If a badger becomes trapped, then it is likely to attempt to dig itself into the side of the excavation and form a temporary sett. If trapped badger is encountered, the advice of an ecologist must be sought.
- The storage of topsoil or other 'soft' building materials within the construction site would be given careful consideration. Badgers could readily adopt such mounds as setts. To avoid the adoption of any mounds by badgers, mounds would be kept to a minimum and any essential mounds subject to daily inspections.
- The storage of any chemicals within the construction site would be contained in such a way that they cannot be accessed or knocked over by any roaming badgers.
- The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to habitats which badgers could use.

- 7.32. A pre-commencement check for new badger activity is to be undertaken by a suitably qualified ecologist no more than one month, or as close to the construction period as possible, to account for any changes which may have occurred since the previous surveys. If a new badger sett is identified, it is possible that a Natural England Licence may be required for the Approved Development to proceed lawfully.

- 7.33. If a large D-shaped hole is identified at any point during the course of the development, a suitably qualified ecologist is to be contacted for advice in the first instance, and a 30m buffer created around the hole in question.
- 7.34. Subject to the results of the pre-commencement check, badger exclusion fencing may be needed to exclude badgers from the development area.
- 7.35. Provided the above mitigation measure are implemented, this would have no significant impacts on badgers at a Site level.

Table 11: Impact summary table

Feature	Scale of importance	Impact (before mitigation)	Type of impact (construction or operational)	Effect (without mitigation)	Mitigation	Residual effect
Amphibians	Site	Direct harm	Construction	significant negative	Sensitive timing of works Measures to discourage amphibians from entering the construction site and minimise harm should they do so.	No negative effects
		Reduced habitat opportunities onsite and landscape connectivity	Operational		Suitable planting strategy Long-term habitat management Hibernacula/log piles	
Reptiles	Site	Direct harm	Construction	significant negative	Sensitive timing of works Measures to discourage amphibians from entering the construction site and minimise harm should they do so.	No negative effects
		Reduced habitat opportunities onsite and landscape connectivity	Operational		Suitable planting strategy Long-term habitat management Hibernacula/log piles	
Birds	Site	Direct harm	Construction	Significant negative	Sensitive timing of works	No negative effect
		Reduced habitat opportunities onsite and landscape connectivity	Operational		New nesting provision – bird nest boxes Suitable planting strategy	
Foraging bats	Local	Artificial lighting	Construction	Significant negative	Sensitive timing of works	No negative effect
		Reduced habitat opportunities onsite Artificial lighting	Operational		New roosting provision - bat tubes/boxes Suitable planting strategy	

Badger	Site	Direct harm	Construction	Significant negative	Good practice measures	No significant effect
Other mammals	Site	Direct	Construction	Significant negative	Good practice measures	No significant effect

8 BIODIVERSITY NET GAIN

Biodiversity metric

- 8.1. The Statutory Biodiversity Metric has been completed for the Application Site. This has been calculated using baseline habitat and species information collected during the UK Habitat Classification Survey and using the proposed site plan produced by Concept Drawing & Design Architects Ltd. A full methodology is provided in **Appendix 7**. A completed version of the Metric has been submitted in full as a separate Excel document.

Table 12: A summary of the results of the Statutory Biodiversity Metric.

On-site baseline	Habitat units	10.03
	Hedgerow units	8.56
On-site post-intervention	Habitat units	11.05
	Hedgerow units	9.42
Total net unit change	Habitat units	1.02
	Hedgerow units	0.86
Total net % change	Habitat units	10.16%
	Hedgerow units	10.02%

- 8.2. The results of the Statutory Biodiversity Metric indicate that development of the Application Site will lead to a 10.16% net gain in habitat units and a 10.02% net gain in hedgerow units. This is predominantly due to the enhancement of an area of modified grassland to other neutral grassland, the enhancement of the sycamore hedgerow to a species-rich hedgerow, the creation of additional species-rich hedgerow and the planting of 11 scattered native trees.
- 8.3. There are no trading rules to be met and there is no need for offsetting. This net gain will be possible if the enhancements detailed in this report are followed.
- 8.4. It is important to note that the Metric does not explicitly deal with fauna. Instead, it uses habitat types as a proxy for the biodiversity 'value' of the species communities that make up those different habitats and its results must be considered in conjunction with other measures. To this end, a suite of artificial enhancements, which provide opportunities for fauna, should be incorporated into the scheme.
- 8.5. The following habitat and hedgerow enhancement and creation measures are included within the Statutory Biodiversity Metric calculations. For details on locations of these habitats please refer to the habitat creation plan which is presented within **Appendix 2**.
- Inclusion of EL1 and EM1 basic general purpose meadow mixture by Emorsgate to enhance an area of 'modified grassland' to 'other neutral grassland'.
 - EL1 species are as follows (20% wild flowers and 80% grasses):

- 1.00% kidney vetch *Anthyllis vulneraria*, 1.00% betony *Betonica officinalis*, 1.60% common knapweed *Centurea nigra*, 1.00% hedge bedstraw *Galium album*, 1.60% lady's bedstraw *Galium verum*, 1.40% oxeye daisy *Leucanthemum vulgare*, 0.20% birds'-foot trefoil *Lotus corniculatus*, 0.60% black medick *Medicago lupulina*, 2.40% ribwort plantain *Plantago lanceolata*, 1.00% cowslip *primula veris*, 1.20% selfheal *Prunella vulgaris*, 1.60% meadow buttercup *Ranunculus acris*, 1.00% bladder campion *Silene vulgaris*, 0.40% dandelion *Taraxacum officinale*, 4.00% white clover (ag) *Trifolium repens*, Grasses; 8.00% common bent *Agrostis capillaris*, 28.00% crested dogstail *Cynosurus cristatus*, 24.00% red fescue *Festuca rubra*, 4.00% smaller cat's-tail *Phleum bertolonii*, 16.00% smooth-stalked meadow-grass *Poa pratensis*.
- EM1 species are as follows (20% wild flowers and 80% grasses):
 - 1.50% common knapweed *Centaurea nigra*, 1.00% wild carrot *Daucus carota*, 0.30% lady's bedstraw *Galium verum*, 1.00% oxeye daisy *Leucanthemum vulgare*, 0.60% musk mallow *Malva moschata*, 1.60% ribwort plantain *Plantago lanceolata*, 1.50% salad burnet *Poterium sanguisorba ssp sanguisorba*, 1.00% selfheal *Prunella vulgaris*, 1.00% meadow buttercup *Ranunculus acris*, 0.20% yellow rattle *Rhinanthus minor*, 0.50% red campion *Silene dioica*, 9.00% common bent *Agrostis capillaris*, 31.50% crested dogstail *Cynosurus cristatus*, 27.00% red fescue *Festuca rubra*, 4.50% smaller cat's-tail *Phleum bertolonii* and 18.00% smooth-stalked meadow-grass *Poa pratensis*.
- The infilling of the sycamore 'species-poor' hedgerow with native infill mix to be enhanced to a 'species-rich' hedgerow; to include species such as common hazel *Corylus avellana*, common hawthorn *Crataegus monogyna*, European spindle *Euonymus europaeus*, blackthorn *Prunus spinosa*, field rose *Rosa arvensis*, Guelder rose *Viburnum opulus*, wild cherry *Prunus avium*, English oak *Quercus robur*, field maple *Acer campestre* and bird cherry *Prunus padus*.
- The creation of additional species-rich hedgerow along the currently present sycamore hedgerow.
- Inclusion of 11 new scattered trees within the Application Site within the Application Site; to include native species.

- 8.6. In addition to these measures, habitats within the Application Site will be managed by a management company during the operational phase of the development. Management prescriptions will be included within a LEMP and will be designed to ensure long-term maintenance and enhancement of ecologically valuable habitats within the development.

Additional enhancements

- 8.7. In addition to the habitat and hedgerow enhancements outlined above which have contributed to the Application Site's Statutory Biodiversity Metric score, the following enhancements will be included to provide new opportunities for wildlife:

- Bird boxes – to be erected on retained trees within the hedgerow surrounding the Application Site.
 - 1x Vivara Pro Seville 32mm WoodStone Nest Box.
 - 1x Vivara Pro Seville 28mm WoodStone Nest Box.
 - 1x Sparrow Terrace Nest Box.
- Bat boxes – to be erected on retained trees within the hedgerow surrounding the Application Site.
 - 2x 2F Schwegler Bat Boxes.
 - 2x 2F Schwegler Bat Box with Double Front Panel Boxes.
- There will also be at least 1x hibernacula or log pile which will be of benefit to amphibians and reptiles

- 8.8. The above measures are considered to be a significant contribution to the overall biodiversity value of the Application Site.

9 CONCLUSIONS

- 9.1. The Application Site is comprised of grassland, ruderal vegetation, tree nurseries, an access road, native hedgerows, bare ground and buildings and structures to include a large polytunnel, a smaller disused polytunnel, a water tank and a large fruit cage (retrospectively modified grassland).
- 9.2. The most valuable habitat onsite is the native hedgerows. The Application Site offers some foraging and sheltering opportunities for amphibians, badgers, nesting birds, reptiles and other wildlife (e.g. hedgehogs). The Application Site also offers foraging, commuting and roosting opportunities for bats.
- 9.3. Mitigation comprises precautionary measures during the construction phase of the proposed development as well the inclusions of a low-level lighting scheme for foraging/roosting bats.
- 9.4. To help achieve Biodiversity Net Gain, there will be enhancement of an area of modified grassland to other neutral grassland, enhancement of the sycamore hedgerow to a species-rich hedgerow, creation of additional species-rich hedgerow and planting of 11 native scattered trees.
- 9.5. Additional enhancements will also be included to provide new opportunities for wildlife.
- 9.6. The proposed development is capable of complying and delivering enhancements in accordance with paragraphs 187-195 of the NPPF, and Core Policy 50 of the Wiltshire Core Strategy.

APPENDIX 1: BASELINE UK HABITAT CLASSIFICATION PLAN



APPENDIX 2: PROPOSED UK HABITAT CLASSIFICATION PLAN



APPENDIX 4: POND LOCATION PLAN



APPENDIX 5: SITE PHOTOGRAPHS



Photograph 1: Looking north at the ruderal/ephemeral vegetation and the existing fruit cage.



Photograph 2: Looking north-west as the ruderal/ephemeral vegetation, the fruit cage and the polytunnel.



Photograph 3: Looking south-west at the sycamore hedgerow.



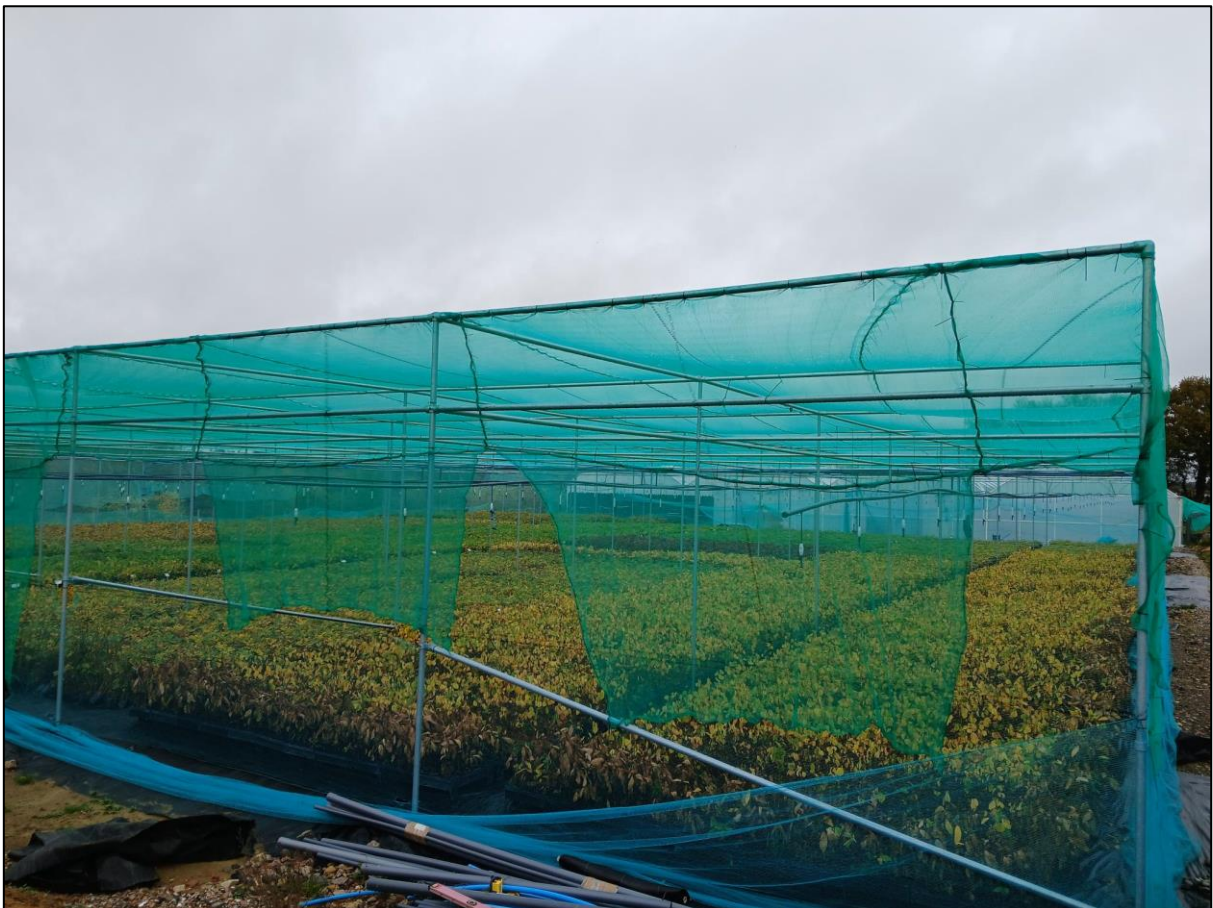
Photograph 4: Looking east at the access track.



Photograph 5: Looking north at the modified grassland.



Photograph 6: Looking south-west at modified grassland, the outdoor plant nursey and the disused polytunnel.



Photograph 7: Looking at the retrospectively constructed fruit cage.



Photograph 8: Looking north at an outdoor plan nursery, the water storage tank and the polytunnel.



Photograph 9: Looking at the native hedgerow surrounding the Application Site.



Photograph 10: Looking north-west at the outdoor plant nursery.

APPENDIX 6: FIELD SURVEY METHODOLOGY

Extended Phase 1 Habitat Survey

The Phase 1 Habitat Map is shown in **Appendix 1**.

The Phase 1 Habitat Survey methodology²⁰ was used to classify the Application Site into habitat types, as listed in the Phase 1 Manual. Where appropriate, dominant species codes within habitat types were recorded. Descriptive target notes were used for particular areas of interest.

Incidental records of fauna were made during the Phase 1 Habitat survey and the habitats identified were evaluated for their potential to support legally protected species and species of Principal Importance.

Limitations

The most recent UK Habitat Classification Survey was undertaken during October, a sub-optimal month for vegetation surveys. However, the habitats present were readily apparent/easily distinguished and there was limited potential for incorrect habitat classification.

Badger field signs survey

A badger field signs survey was carried out on 29th October 2025 in conjunction with the Extended Phase 1 Habitat survey by ACD Environmental Ltd.

Badger field signs surveys comprised walking the perimeter and interior boundaries of the Site, searching for evidence of badgers, in accordance with Harris et al²¹ (1989) and Scottish Natural Heritage²² (2018).

Where badger setts were found, they were described using the following criteria:

- Number of well-used holes - one or more of the features: well-worn entrance; freshly excavated soil; bedding material
- Number of partially-used holes - leaves or twigs in entrance and/or mosses and other plants growing in or around entrance)
- Number of disused holes - partially or completely blocked, with considerable amount of excavation required for reoccupation

Where feasible, badger setts were classified into the following:

²⁰ JNCC, (2010), *Handbook for Phase 1 habitat survey - a technique for environmental audit*. JNCC, Peterborough.

²¹ Harris, S., Cresswell, P., and Jefferies, D. (1989). *Surveying Badgers*. Mammal Society.

²² Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

- Main sett - continuously used, breeding and over-wintering sett for a social group of badgers. Only one main sett will exist in each social groups territory, and will be relatively centrally located within the group's range
- Annexe sett - annexe of the main sett, linked by well-used paths to the main sett (but not connected underground). Not continuously used
- Subsidiary sett - distant from the main sett. Several entrances, but with no well-used paths connecting to the main sett, and only used seasonally
- Outlier sett - distant from the main sett. Small, with only one of two entrances only. Used for short periods sporadically, with no obvious, well-used paths connecting to other setts

Limitations

There were no limitations associated with the badger field signs survey.

Preliminary Bat Roost Assessment

A Preliminary Roost Assessment (PRA) was carried out²³. This is an external and internal inspection survey, the purpose of which is to search for bats/evidence of bats and assess the likelihood of bats being present and the need for further survey and/or mitigation.

A systematic search was made of the building and the ground, especially below potential access points where present. Such features include windows sills, window panes, walls, tiles, weather boarding, lead flashing, eaves, behind surfacing materials and under tiles, and other cracks and crevices that provide protection from the elements. Such features are known to be used by roosting bats.

The internal inspection included searching for the following evidence of roosting bats:

- Roosting bats within crevices or free-hanging
- Bat corpses e.g. on the floor, in uncovered water (header) tanks or other containers in roof voids
- Bat droppings beneath roosting features
- Feeding remains e.g. moth/butterfly *Lepidoptera* spp. wings and beetle *Coleoptera* spp. wing casings
- Scratch marks and characteristic staining from urine and/or fur oil beneath roosting features e.g. on roofing timbers and walls within roof voids

²³ Collins J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.

- 'Clean' gaps associated with bat roosts
- Bat-fly *Nycteribiid* spp. pupal cases
- Droppings, corpses, feeding remains and/or bat-fly pupal cases beneath roof insulation, which indicates use by bats before the insulation was installed
- Clean swept floors, which may indicate evidence has been removed

The internal inspection included searching for the following features:

- Gaps within the structure of the roof e.g. mortise joints and junctions between roof timbers and between timbers and walls, and between the roof lining and roof covering
- Gaps within the structure of walls and potential access points to cavity or rubble-filled walls
- Gaps around the structure chimneys or within disused chimneys
- Suitable locations for free-hanging bats and/or night/feeding perches e.g. timber beams
- Gaps between lintels above windows or doors
- Light gaps in the roof indicating access points to the outside
- Cool areas suitable for torpor or hibernation e.g. cellars.

In addition to the buildings, the trees were also searched for bats/evidence of bats and assessed for their potential to support roosting bats. The evidence of roosting bats searched for is detailed above with regard to buildings (e.g. bat droppings and feeding remains). The features of bats were searched for on the trees with reference to the three broad categories of Potential Roost Features (PRFs) and sub-categories of PRFs from the Bat Tree Habitat Key²⁴. These are as follows:

- Disease and decay PRFs:
 - Woodpecker and squirrel holes;
 - Knot holes;
 - Pruning-cuts;
 - Tear outs;

²⁴ Bat Tree Habitat Key 2018. *Bat Roosts in Trees – A Guide to Identification and Assessment for Tree-care and Ecology professionals*. Exeter: Pelagic Publishing.

- Compression forks;
- Wounds;
- Cankers; and
- Butt rots.
- Association PRFs:
 - Fluting; and
 - Ivy.
- Damage PRFs:
 - Hazard beams;
 - Frost cracks;
 - Subsidence/shearing and helical splits;
 - Lightning strikes;
 - Desiccation fissures;
 - Transverse snaps;
 - Welds; and
 - Lifting bark.

Limitations

There were no limitations to the Preliminary Roost Assessment.

Bird nesting

Evidence of nesting birds recorded during the PRA and any incidental bird observations/birds heard were noted.

The assessment included searching for the following with regard to barn owl:

- Birds present - roosting or nesting within buildings/trees;
- Birds present - corpses;

- Pellets - undigested feeding remains;
- Nests - formed on layers of degraded pellets;
- Droppings or 'liming' - often present on/below roosts such as roof timbers;
- Eggs - intact/broken or within nest/below nest; and
- Feathers - adult or natal down.

The internal inspection of the buildings included searching for the following features with regard to barn owl:

- Suitable access points (e.g. open doorways);
- Suitable ledges for nesting; and
- Suitable timbers for roosting.

Limitations

There were no limitations.

APPENDIX 7: BIODIVERSITY METRIC METHODOLOGY

Assessment Framework

For the purposes of this assessment, the Statutory Biodiversity Metric has been utilised. The Statutory Biodiversity Metric is accompanied by a 'Calculation Tool'. This was used to calculate the biodiversity units for the Application Site before and after development. The assessment was conducted using the criteria set out within the Natural England guidance document.

Habitat Measurements

- Baseline habitat measurements were carried out in line with the results of the UKHab survey. Measurements were calculated using QGIS mapping software.
- Proposed habitat measurements were calculated from the soft landscape plans prepared.
- Measurements were entered to the nearest 0.001ha in area.

Habitats - Linear Features

- Linear features (hedgerows) have been measured in metres and the height and condition of the habitats were recorded during the habitat survey.
- Measurements were entered to the nearest 0.001km in length.

Distinction Assessments

Habitats are assigned to distinctiveness bands automatically within the Metric. These are based on an assessment of the distinguishing features of a habitat or linear feature, including the consideration of species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats.

The distinctiveness band of each habitat is preassigned in the Statutory Biodiversity Metric. The bands are based upon the UK habitat classification system. A combination of simple rules and professional judgement have been used to assign each habitat type to the appropriate distinctiveness band. The distinctiveness categories used are tailored to habitat type.

Distinctiveness Assessments are assigned according to **Table 13**.

Table 13: Distinctiveness Assessment

Category	Scores	Multiplier
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens
Medium	4	Semi-natural habitats not classed as a Priority Habitat
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub
Very Low	0	Little or no biodiversity value e.g. hard standing or sealed surface

Condition Assessments

Condition assessments for existing habitats can be found in a separate excel document.

Strategic significance

The spatial location of a habitat is treated as a component of the quality of a habitat parcel in the same way as distinctiveness or condition. Strategic significance is used to determine whether the habitat is of increased importance due to its location.

Risk Factors

As part of any proposed habitat creation and restoration, risk factors must be taken into account to correct for disparity, delay or risk. These values are preassigned within the Statutory Biodiversity Metric and take into consideration the following factors:

- Temporal risk; and
- Difficulty of creation and restoration.

Advance/delay in habitat creation takes into account any significant time difference in the creation of a habitat type. This time is measured in full years and is entered by the assessor.

Habitat creation in advance is rewarded by reducing the difficulty and temporal risk multipliers applied. This reflects the lower delivery risk - there is less risk of failure when a habitat is already making progress towards its target condition.

Any significant delay in the creation of a habitat type relative to loss of on-site habitats (e.g. due to phased developments and developments that temporarily require parts of the development site for construction purposes) is added to the pre-populated time to target condition and increases the effect of the risk multiplier accordingly.

Limitations

Although the Statutory Biodiversity Metric is a valuable tool underpinned by ecological evidence, there are certain limitations that must be considered when applying the metric. The key principles and rules for the use of the Statutory Biodiversity Metric have been followed at all times, in line with these limitations. Further detail is available within the Statutory Biodiversity Metric User Guide.

A large, stylized leaf graphic in a lighter shade of green, positioned on the left side of the dark green background. The leaf is elongated and tapers to a point, with a central vein and several smaller veins branching off. It is oriented diagonally, from the bottom left towards the top right.

**Arboriculture
Archaeology
Ecology
Landscape Architecture**

www.acdenvironmental.co.uk

