DRAKELEY AND BROOK FARM, MARDEN

Ecological Impact Assessment (EcIA)

Client:

S&A Group Ltd

Report Reference:

RSE_5771_R1_V1_ECIA

Issue Date:

April 2022

[redacted]

RammSanderson

ECOLOGY
FLOOD RISK
ARBORICULTURE
HABITATS
TRAINING

CIEEM
REGISTERED PRACTICE 2021-2022

PROJECT	
Client:	S &A Group Ltd
Project:	Land at Drakeley and Brook Farm, Marden
Reference	RSE_5771_R1_V1_ECIA
Report Title	Ecological Impact Assessment

DOCUMENT CONTROL

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Revisions:

East Midlands: West Midlands: Yorkshire: Northern Ireland

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1 EXECUTIVE SUMMARY

1.1 Background

i RammSanderson Ecology were commissioned by Aspbury Planning Ltd on behalf of S&A Group Ltd. to assess the potential for protected species and habitats to be present on the site of a proposed polytunnel development on land at Drakeley and Brook Farm, Marden, Herefordshire.

ii The proposed development is to erect up to 13.5 hectares of fixed (i.e., 'non-rotating') 'Spanish' Polytunnels over arable (soft fruit) crops grown on 'table-tops'; excavations and ground profiling to form a new Winter Storage Reservoir (0.6 hectares/8060 m3 capacity); and the erection of a 648 m2 profiled-steel-clad portal frame general purpose agricultural building and 6 no. 14.7 metre diameter 600 m3 capacity water storage tanks.

iii The site comprised a range of existing arable fields, divided by intact hedgerows. Areas of scrub, woodland and a number of waterbodies were also present within the site.

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Statutory Designated Sites	County or above	Possible impacts to River Wye SAC	Pollution prevention guidelines to be adhered to. Hydrological impacts to be assessed. Shadow Habitat Regulation Assessment (sHRA) to be undertaken in relation to River Wye SAC.	Site design and CEMP.	TBC following sHRA
Non-statutory designated sites	County	LGS adjacent boundary, listed building/heritage site beyond remit of ecological assessment. Nearest LWS is circa 2km from site and no impacts are envisaged due to ongoing arable/agricultural nature of proposals.	Pollution prevention guidelines and dust suppression techniques during construction phase to limit impacts on adjacent LGS.	CEMP	Not significant
Habitats including invasive and Priority flora	Local	Loss primarily of habitats of low diversity and possible indirect effects as a result of construction. Creation of new species rich grasslands, new waterbodies and new tree and shrub planting.	Retention of hedgerow and trees in accordance with root protection areas. Pollution prevention guidelines to be adhered to in relation to works near waterbodies/watercourses.	Planning Condition – details within a CEMP Site design	Not significant

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Reptiles	Local	Retention of majority of high value habitats and replacement/new habitat also being created. Potential for killing/injury of individual animals during vegetation removal and construction.	Precautionary In relation to legislative protection of animals	Planning Condition – detail within a PMW	Not significant
Bats – Roosting	Local	Further GLTAs to be undertaken. Trees with bat roosting potential to be retained or further surveys undertaken.	TBC following GLTA	Surveys TBC	TBC following survey
Bats – Foraging/Commuting	Local	Unlikely to be impacted by proposals as low quality habitat (arable) predominately present on site and linear features being retained. Higher value foraging habitat such as waterbodies being retained, and some losses of scrub and woodland, being replaced with further planting of value for foraging bats.	Replacement of vegetation with native tree, shrub species and new grassland creation. Maintenance of connective features such as hedgerows and tree lines by adhering to root protection zones. Implementation of sensitive bat lighting scheme.	Planning Condition – details within CEMP and LEMP	Not significant
Great crested newts	Local	GCN present on site and works proposed in core habitat zone. Majority of works (poly tunnel installation) are on habitat of negligible value (arable) however woodland and scrub removal is proposed in close proximity to the waterbodies.	TBC following surveys	TBC following surveys. Likely hybrid EPSL and PMW in lower value habitat	TBC following surveys
WWC	N/A	None	No	N/A	N/A
Water vole	Local	Ponds onsite may have suitability, however there are no records locally and no direct impacts to waterbodies are proposed..	N/A	N/A	N/A

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Breeding birds	Local	Damage or destruction of nests in season. Creation of new scrub and tree habitats.	Precaution in relation to legislative protection of animals	Planning Condition - details within a CEMP	Not significant
Otter	N/A	None	No	N/A	N/A
Biodiversity	Local	Ongoing arable/agricultural land use. Some removal of scrub and woodland, however extensive creation of grassland, new waterbodies and	TBC in BIA and landscaping plans	BIA to be undertaken	TBC following BIA

Ecological Impact Assessment of land at Drakeley Farm

CONTENTS

FIGURES

[redacted]

TABLES

2 INTRODUCTION AND BACKGROUND

2.1 Purpose and Scope of this Report

i RammSanderson Ecology Ltd was commissioned by Aspbury Planning Ltd on behalf of S&A Group Ltd. to assess the potential for protected species and habitats to be present on the site of a proposed polytunnel development on land at Drakeley and Brook Farm, Marden, Herefordshire.

ii The proposed development is to erect up to 13.5 hectares of fixed (i.e., 'non-rotating') 'Spanish' Polytunnels over arable (soft fruit) crops grown on 'table-tops'; excavations and ground profiling to form a new Winter Storage Reservoir (0.6 hectares/8060 m3 capacity); and the erection of a 648 m2 profiled-steel-clad portal frame general purpose agricultural building and 6 no. 14.7 metre diameter 600 m3 capacity water storage tanks.

iii To complete an EcIA of the proposals, a desk-based assessment, Extended Phase 1 Habitat Survey and protected species assessments were carried out based upon the findings of the Preliminary Ecological Appraisal (PEA). This report is a stand-alone EcIA which has been prepared following current guidance (CIEEM, 2018) and can be used to lawfully determine a planning application in line with current planning policy[1]. This report does not form part of a wider discipline Environmental Impact Assessment (EIA) of Environmental Statement (ES), nor does it confer the need for any such documentation.

iv A previous assessment of the site in relation to great crested newts (GCN) was undertaken in 2021 by Central Ecology.[2]

v The study area was defined depending on the proposals, desk study and applicable legislation (Appendix 1) as shown in the enclosed Site Location Plan (Figure 3) and Phase 1 Habitat plan (Appendix 2) plus a buffer zone extended to include the Zone of Influence (see section below) of the proposals (hereafter referred to as the "Site").

vi This ecological impact assessment is based on a review of the development proposals provided by the Client in Drawing: 02971-00 - A - SA Produce (UK) Ltd - Drakeley Farm - DV15-01 (Appendix 3), desk study data (third party information) and surveys of the Site. The aims of this report are to:

- Classify the habitat types at the site based on standard Phase 1 Habitat survey methodology;
- Evaluate any potential for protected species to be present;
- Identify any ecological constraints that may affect the scheme design;
- Provide recommendations for any further actions that might be required [redacted]
- Identify likely significant effects on ecological receptors;
- Assess if the proposals are compliant with legislation and policy relating to biodiversity; and
- Identify opportunities for ecological enhancement to provide net biodiversity gain in line with the National Planning Policy Framework (NPPF, 2021) and the Environment Act 2021.

vii This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RammSanderson Ecology Ltd.

[1] Office of the Deputy Prime Minister Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System

[2] Central Ecology, 2021. Great crested newt (Triturus cristatus) eDNA assessment of ponds on Drakeley Farm, Marden, Herefordshire, HR1 3ES.

viii The surveys and desk-based assessments undertaken as part of this review and subsequent report including the Ecological Constraints and Opportunities Plan are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013) and follow current guidance (CIEEM, 2018).

2.2 Zone of Influence

i The Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone is determined by the development proposals in relation to individual species ecological requirements indicated in best practice guidelines.

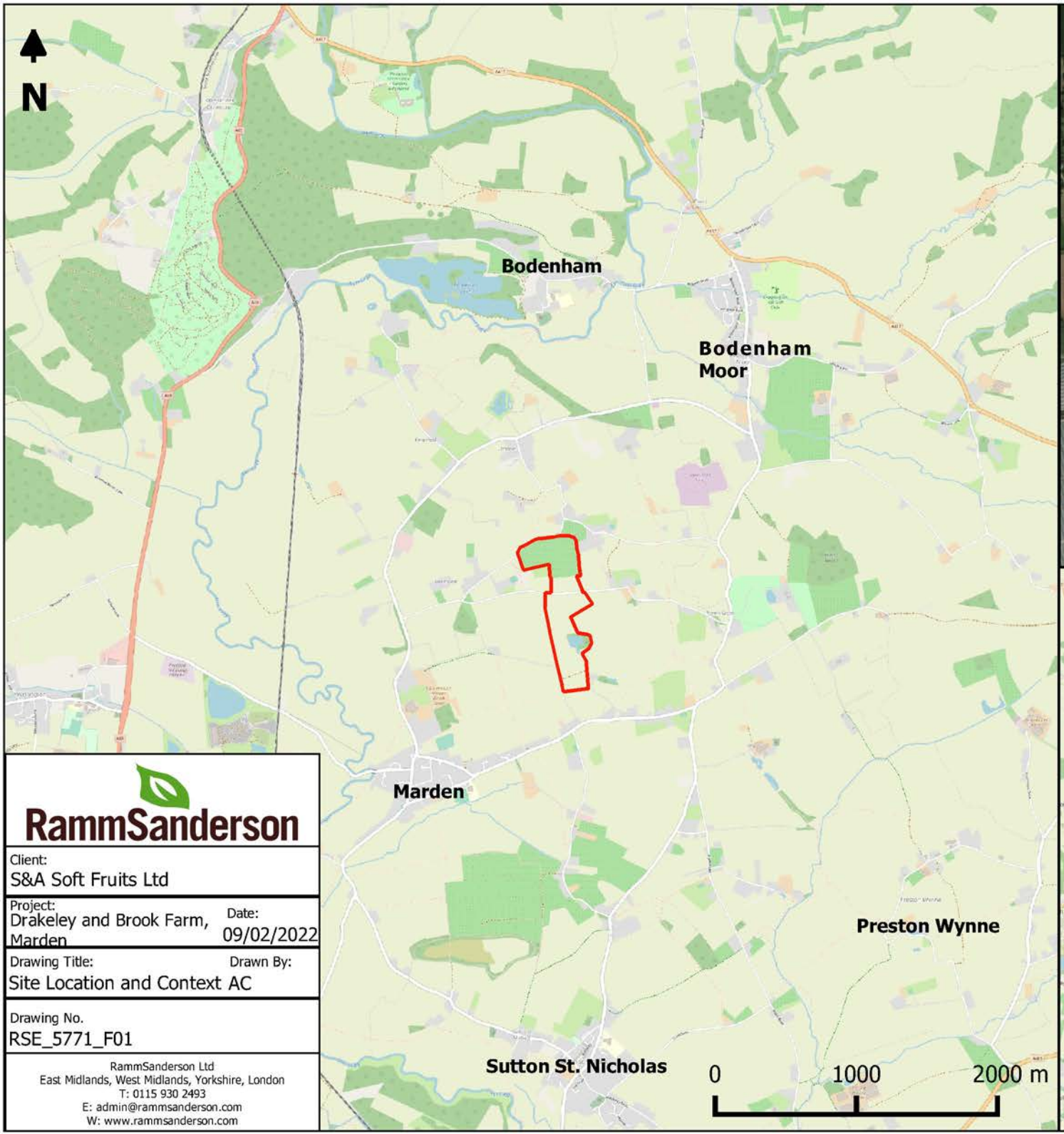
ii In relation to great crested newts (GCN), the zone of influence is considered to be up to 500m from the site boundaries, as this is the distance that Natural England would require to be considered in relation to GCN licensing.

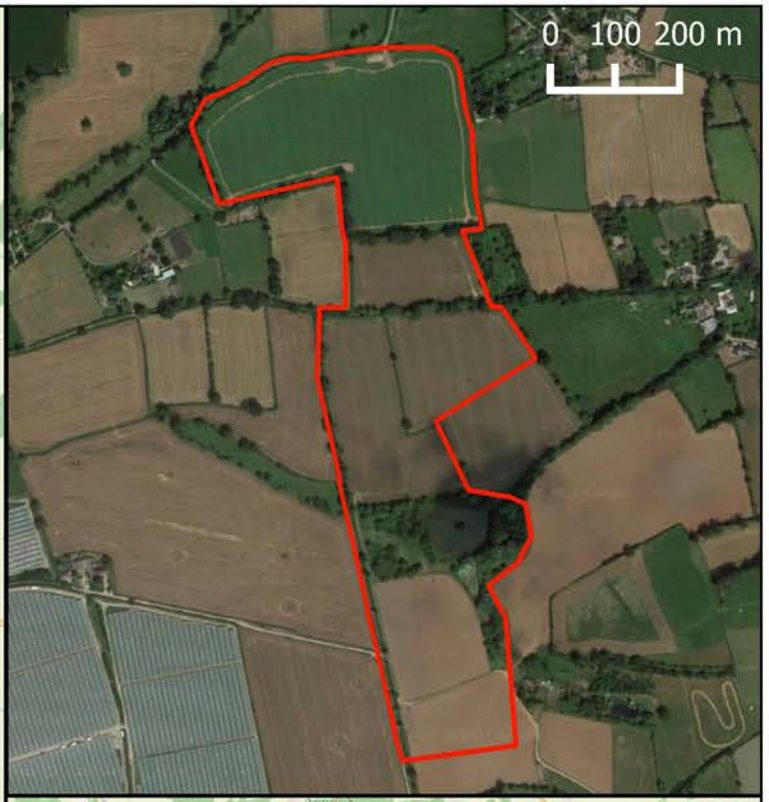
iii [redacted]

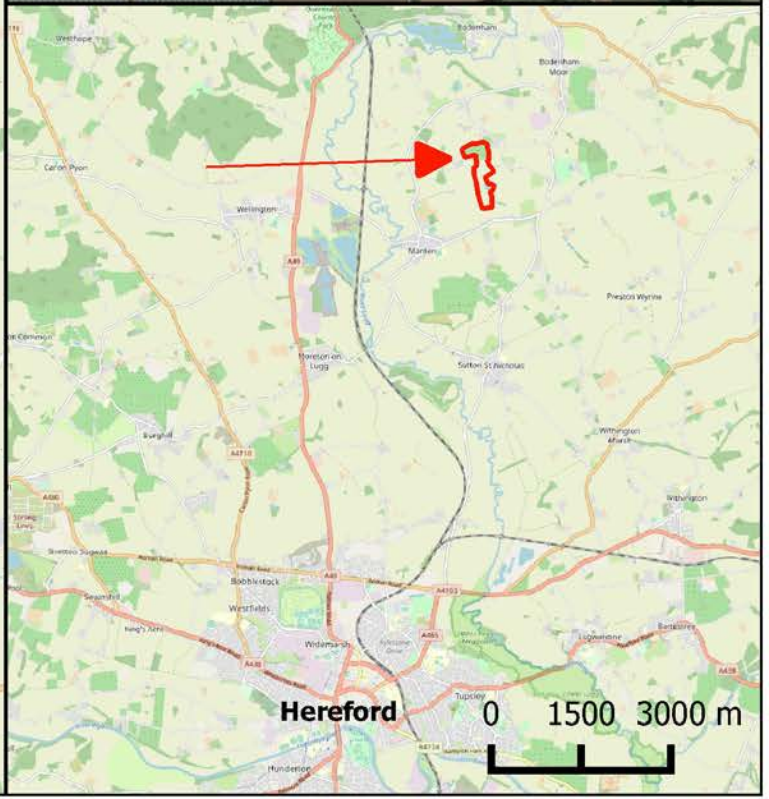
iv For designated sites, the Zone of Influence can be up to 10km from the site and this is termed the Impact Risk Zone (IRZ). Where sites occur within an IRZ the requirement for a Habitat's Regulations Assessment or Environmental Impact Assessment may be triggered.

2.3 Site Context and Location

i The site formed part of an existing arable and soft fruits farm, (central grid reference SO 53198 48703) located to the north east of the village of Marden, Herefordshire. The site is set within a rural context, with open countryside being present on all aspects, largely dominated by arable land and hedgerows, with some small pockets of woodland within the wider landscape.







RammSanderson

Client:
S&A Soft Fruits Ltd

Project:
Drakeley and Brook Farm, Marden

Date:
09/02/2022

Drawing Title:
Site Location and Context

Drawn By:
AC

Drawing No.
RSE_5771_F01

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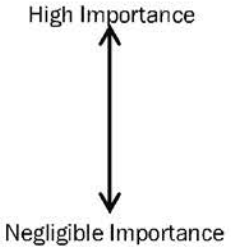
3 METHODOLOGY

3.1 Ecological Impact Assessment

i The ecological impact assessment is based on the standard best practice methodology provided by the Guidelines for Ecological Impact Assessment (CIEEM, 2018). The assessment identifies important sites, habitats, species and other ecological features that are of conservation value based on factors such as legal protection, statutory or local site designations such as Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) or inclusion on Red Data Book Lists or Local Biodiversity Action Plans.

ii The importance of an ecological feature is considered within a defined geographical context. The following frame of reference is used, or adapted to suit local circumstances:

- International and European
- National
- Regional
- Metropolitan, County, vice-county or other local authority-wide area
- River Basin District
- Estuarine system/Coastal cell
- Local
- Below Local level e.g. on site only



iii Consideration of impacts at all scales is important, and essential if objectives for no net loss of biodiversity and maintenance of healthy ecosystems are to be achieved.

iv In identifying impacts, the review considers the Client's Site proposals and any subsequent recommendations made are proportionate / appropriate to the site and have considered the Mitigation Hierarchy as identified below:

- **Avoid:** Provide advice on how the development may proceed by avoiding impacts to any species or sites by either consideration of site design or identification of an alternative option.
- **Mitigate:** Where avoidance cannot be implemented mitigation proposals are put forward to minimise impacts to species or sites as a result of the proposals. Mitigation put forward is proportionate to the site.
- **Compensate:** Where avoidance cannot be achieved any mitigation strategy will consider the requirements for site compensatory measures.
- **Enhance:** The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the site and identify appropriate and proportionate ecological enhancement in line with both national and local policy.

v For the purpose of this EcIA, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' (explained in 3.1.i.) or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects are considered significant at the range of scales from international to local. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the ecological consequences of the project are understood. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).

vi Note: The following definitions are used for the terms 'impact' and 'effect' throughout this report:

- **Impact** – Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.

- **Effect** – Outcome to an ecological feature from an impact. For example, the effects on a dormouse population from loss of a hedgerow.

3.2 Desk Based Assessment

i Data regarding statutory and non-statutory designated sites, plus any records of protected or Priority species and habitats was requested from the local ecological records centre and online resources, details of which are provided in Table 1 below.

Table 1: Consulted resources

Consultee/Resource	Data Sought	Search Radius from Boundary
Herefordshire Bioloogical Records Centre	Non-Statutory Site Designations, protected/Priority species records	2km
www.magic.gov.uk[3] [4]	Statutory Site Designations	20km
	NERC Act (2006) Habitats	1km

NB: Desk study data is third party controlled data, purchased or consulted for the purposes of this report only. RammSanderson Ecology Ltd cannot vouch for its accuracy and cannot be held liable for any error(s) in these data.

3.3 Phase 1 Habitat Survey

i An extended Phase 1 Habitat Survey of the site was completed to identify habitats present within the site. All habitats within and adjacent to the site boundary were described and mapped following standard Phase 1 Habitat Survey methodology (JNCC, 2016), which categorises habitat type through the identification of individual plant species.

ii Nomenclature follows Stace (Stace, 2019) for vascular plant species and the DAFOR scale for relative abundance was used in the field to determine dominant plants within habitats and communities (D = dominant, A = abundant, F = frequent, O = occasional and R = rare).

3.4 Protected / Priority Species Scoping Assessment

i The habitats on site were assessed for their suitability for supporting any legally protected or Priority species that would be affected by the proposed development. This includes invasive non-native plant species such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*).

ii The full scope of species assessments and survey methods are detailed in Appendix 3. Any incidental sightings of individual species or field signs such as footprints, [redacted] or feeding remains discovered during the survey were noted.

[3] Multi Agency Geographic Information for the Countryside Interactive GIS Map.

[4] MAGIC resource was reviewed on the 24th February 2022.

3.5 Biodiversity Impact Assessment

3.5.1 Outline Procedure

i Biodiversity Impact Assessment of proposals was carried out in accordance with guidelines published by DEFRA and via the DEFRA Metric Calculation Tool 3.0. The existing value of individual habitats on site is initially calculated by accurately mapping the proposed development site from information collected during a Biodiversity Scoping Assessment/Phase 1 Habitat Survey and by dividing the land into individual habitat parcels. This part of the study is informed by JNCC Phase 1 habitat and UK habitats classification systems. The distinctiveness, condition, connectivity and strategic significance of these parcels is then assessed and together with the area of each habitat, a value is assigned. A summary of how habitat distinctiveness, condition assessment, connectivity and strategic significance is determined is detailed within DEFRA best practice literature

3.5.2 Calculation

ii Once the habitat types have been input into the Biodiversity Impact Assessment calculator, along with their area, distinctiveness, condition, connectivity and strategic significance an overall score in biodiversity units is calculated.

3.5.3 Compensation

iii Once the biodiversity value of existing on-site habitats has been quantified, the value of indicatively proposed habitats to achieve a net gain as part of development must be calculated. This is calculated using the methodology applied above, taking into account the area/length of indicatively proposed habitats, their distinctiveness, condition, connectivity and strategic significance once this is established. A further two parameters are also taken into consideration at this stage. These are the time it will take to reach this target condition and the difficulty of creating/restoring each habitat type proposed. By using these parameters, the calculation takes into account that the time it takes for a habitat to establish may result in a loss of biodiversity for a period of time and also the risk of failure associated with any habitat creation/restoration

3.6 Limitations

i It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

ii Phase 1 surveys during the period of October to April are generally less efficient than during the spring or summer, and it is possible that some plant species have been missed by the field survey. However, in view of the ecological character of the habitats recorded it is considered that the survey is adequate to make a robust assessment of habitats present and the sites likely nature conservation significance.

3.7 Accurate lifespan of ecological data

i The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for approximately 2 years, notwithstanding any considerable changes to the site conditions.

4 BASELINE CONDITIONS

4.1 Surveyor Competency

i The ecological site walkover, was undertaken by Amy Spilsbury and Andy Beale who are both senior ecologists within RammSanderson and have six and seven years' professional experience respectively. Both surveyors hold class 1 GCN Licences (Amy: (2018-33017-CLS-CLS) and Andy: GCN Level 1 (2019-40730-CLS-CLS

ii Andy also holds a survey licence for white clawed crayfish WCC (2018-38002-CLS-CLS).

4.2 Designated Sites

4.2.1 Statutory Designated Sites and Non-Statutory Designated Sites

i The nearest statutorily designated sites are the River Wye SAC and River Lugg SSSI both of which are sensitive to changes in water quality and quantity. Whilst the site is currently in arable production, the change to soft fruit production within polytunnels, A full shadow Habitats Regulation Assessment (sHRA) will be undertaken to fully assess potential impact pathways such as hydrological changes

ii The nearest non-statutorily designated site is a local geological site adjacent to the site boundary. The assessment of geological/heritage impacts is considered beyond the remit of this assessment. The nearest local wildlife site is situated over 2km from the site. Due to the ongoing agricultural nature of the development proposals, and the distance from this designated site, there is not considered to be any impacts.

4.3 Habitats[5]

i The site formed part of a large arable farmstead, and as such the habitats present were predominately cropped arable fields. These were generally of negligible value due to their intensive, agricultural management resulting in frequent disturbance by machinery, monoculture of crops and application of artificial fertilisers, pesticides etc as part of standard agricultural management.

ii Field compartments were generally divided by intact, species poor hedgerows, dominated primarily by hawthorn. A number of hedgerows also had ditches and standard trees associated with them.

iii A number of ponds were present in the centre of the site, of varying sizes and habitat composition. The larger waterbodies had areas of fringing reed and marginal vegetation, and provided scope for a variety of protected species, and greater species diversity than other habitats within the site.

iv Areas of woodland, primarily dominated by oak, alder and willow were present within the site. Patches of semi improved and improved grassland were also present, these tended to be low in species diversity, and dominated by agricultural grasses with limited herbaceous species although it is noted that the survey was undertaken at a suboptimal time.

v Overall, the majority of habitats on site were generally of limited botanical interest and poor species diversity. The value of habitats such as the scattered broad-leaved trees, scrub and tall ruderal were largely noted in their potential to support a range of protected / Priority faunal species rather than for their botanical value. The scattered trees and hedgerows offered some value as ecological corridors for the dispersal of fauna and flora into the wider countryside. A detailed hedgerow assessment was not undertaken as all hedgerows are to be retained within the proposals. It is noted however that all hedgerows are a habitat of principal

[5] Full Phase 1 survey results are displayed in Appendix 5.

importance under the NERC Act (2006). The current proposals plans include retention of these hedgerows, where possible these could be enhanced with the planting of native species. This will improve their quality as an ecological corridor within the surrounding environment. The broadleaved woodland on Site is also an HPI under Section 41 of the NERC Act (2006) and a LBAP. As such it is a material consideration during planning. Additional native planting, particularly along the north-western and south-western boundaries to improve the defunct hedgerow and area of scattered trees, is also recommended to enhance connectivity between the site and the wider environment.

vi No protected or Priority plant species were observed and all plant species encountered were common, widespread and characteristic of the common habitat types they represent. The table below summarises the habitat types identified on site and the potential impacts as a result of the proposals and their ecological significance.

Table 2: Phase 1 habitat types and their ecological importance

Habitat	Description	JNCC Code	Area (m^2)	Proportion of Site Area	Ecological Importance & Outcome of Proposal	Photo
Scrub (Dense and Scattered)	Areas of dense and scattered scrub were present throughout the site, often at field margins and corners, where hedgerows had grown out, or bramble encroached into open habitat areas. Species composition was generally dominated by hawthorn, bramble and willow.	A2.2	55	<1%	Limited botanical value, of value for protected species. To be cleared to facilitate the proposals.	
Broad Leaved Woodland	Young woodland comprised of alder and ash, with sparse understorey and improved grassland margins. Requires botanical assessment in season.	A3.1	379	2%	Inherently important & support wide range of species, including nesting birds & possible GCN. To be removed within proposals.	

Habitat	Description	JNCC Code	Area (m^2)	Proportion of Site Area	Ecological Importance & Outcome of Proposal	Photo
Poor Semi Improved Grassland	Grassland margins comprising species poor, semi improved grassland were recorded at the arable margins. This was generally dominated by course grasses including cocksfoot and perennial rye, and herbaceous species were limited. The margin was narrow, averaging around 0.5m throughout.	B6	958	4%	Not inherently important majority to be cleared to facilitate the proposals, with some areas retained and enhanced. Some areas enhanced as meadow planting adjacent to new polytunnels.	
Tall Ruderal	Areas of tall ruderal, generally comprised of nettle, broad leaved dock, hogweed and cow parsley were interspersed at field margins and hedgerow understoreys.	C3.1	558	2%	Limited botanical value. Habitats do have some value to faunal species for nesting, foraging, refuge and commuting. Areas lost to facilitate proposals, benefits of new planting and SUDS will outweigh this if planted sympathetically.	
Arable	The majority of the site was dominated by arable land, generally cropped for cereals. This was in current, intensive management.	J1.1	21733	89%	Limited ecological value, will be entirely lost within proposals.	

Habitat	Description	JNCC Code	Area (m^2)	Proportion of Site Area	Ecological Importance & Outcome of Proposal	Photo
Standing Water	A number of ponds were present in the centre of the site. These all contained areas of open water, with the large waterbody having a central island. Marginal vegetation of reedmace, common reed and willowherb was recorded at the margins.				High ecological value, GCN recorded. To be retained within proposals.	
Bare Ground	Areas of bare ground were present throughout the site resulting from agricultural vehicle movements and excavations				Negligible value. To be removed.	
Intact Species Poor Hedgerow	A number of hedgerows were present along the field boundaries, however a full HEGS and REGS assessment was beyond the scope of the survey. Hedgerows were generally species poor, heavily managed and had an average height of 1.5m and width of 0.25m. Hawthorn and	J2.1.2	203	1%	May support a range of protected species, primarily nesting birds. To be retained and enhanced within the development. Additional native woody species to increase botanical diversity is recommended.	

Habitat	Description	JNCC Code	Area (m^2)	Proportion of Site Area	Ecological Importance & Outcome of Proposal	Photo
	blackthorn were dominant across the site, and a tall ruderal understorey was present.					

4.4 Protected / Priority Species/Species Groups[6]

i The presence/likely absence of protected species to be present on site and impacted by the proposals is discussed under the headings below.

4.4.2 Great Crested Newt (GCN)

ii A total of four waterbodies were located within the site boundary, with a 19 ponds located within 500m. Whilst a number of these were located beyond small roads these were only considered to form partial barriers to dispersal and there was good habitat connection between waterbodies in the form of the local hedgerow network

iii The majority of the site was dominated by intensively managed arable land, which was of negligible value for terrestrial phase amphibians such as GCN due to its regular management/disturbance and monoculture of vegetation. The hedgerows offered better habitat and would provide scope for foraging, refugia as well as commuting corridors with some additional provision from the grassland margins. Areas of scrub and woodland within the site, particularly in immediate vicinity of the ponds provided higher value terrestrial habitat, with extensive foraging, refugia and hibernacula provision within these habitats

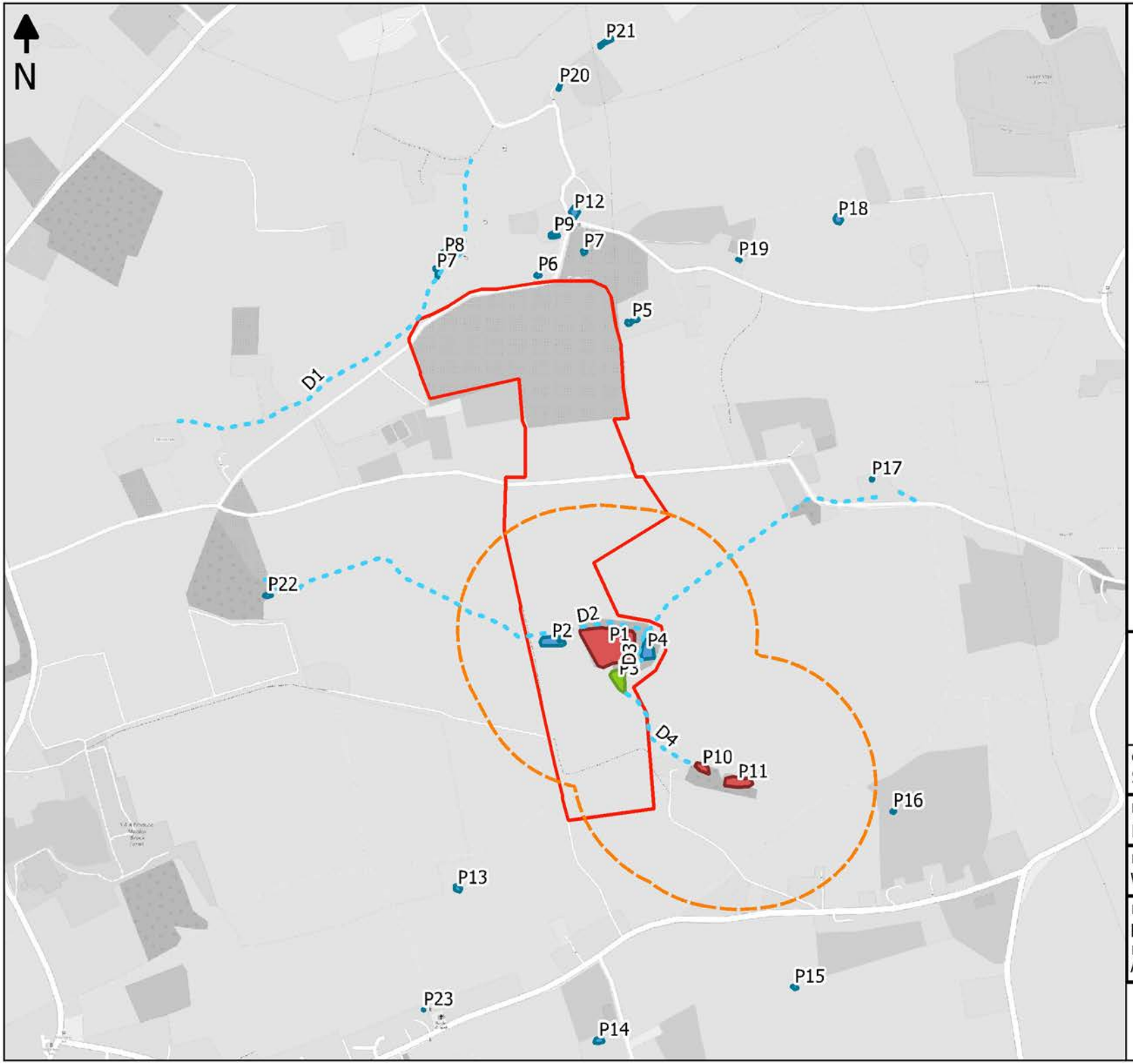
4.4.3 Great Crested Newt Habitat Suitability Index (HSI) Assessment and Presence/Likely Absence Survey

i It was only possible to access Pond 1, 3, 4 and 10 for initial habitat assessment. These waterbodies were assessed for their suitability to support GCN populations and was subject to HSI assessment. Dense vegetation or private ownership restricted access to other waterbodies.

Table 3:HSI Assessment

Pond	Location	Area (m2)	Drying	Water quality	% shade	Waterfowl	Fish	Ponds within 1km	Terrestrial Habitat	Macrophyte cover (%)	HSI category
1	A	4801 - 5200	Rarely dries	Poor	0-60	Absent	Absent	7	Good	15% (Winter)	Good (0.79)
3	A	401 - 800	Rarely dries	Poor	0-60	Absent	Absent	7	Good	20% (Winter)	Good (0.78)
4	A	801-1200	Rarely dries	Poor	0-60	Minor	Absent	7	Good	10% (Winter)	Good (0.71)
10	A	401-800	Rarely dries	Poor	0-60	Minor	Absent	6	Good	30% (Winter)	Good (0.76)

ii eDNA assessment of five waterbodies within the zone of influence was undertaken by Central Ecology in 2021. These surveys indicated GCN presence within Ponds 1,2, 10 and 11, with GCN considered likely absent from Pond 3.



Key

- Site Boundary

Watercourses

- Ditches/drains

Pond Locations

- Absent
- Present
- Unknown (P2 dry in recent survey)
- 250m Buffer from Present Ponds

RammSanderson

Client:
S&A Soft Fruits Ltd

Project:
Drakeley and Brook Farm, Marden

Drawing Title:
Waterbody Plan

Drawing No.		Rev:
RSE_5771_F02		V1
Drawn By:	Scale @A4:	Date:
AMC	1:10,500	13/04/2022

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4.4.4 Bats

Trees

iii A full assessment of the trees within the site was beyond the scope of the initial survey however, incidental sightings of suitable trees were recorded where possible, assessed in accordance with Bat Conservation Trust Guidelines. Three trees with bat roosting potential, an oak with low roosting potential, a crack willow with moderate roosting potential and an ash with low roosting potential.

iv Full results of tree assessments are shown in Appendices

Foraging Habitat

v The vast majority of the site was of limited foraging potential due to the predominance of intensively managed arable land which does not offer a suitably diverse habitat to attract extensive prey species for bats. The hedgerows however provided greater scope for foraging as well as providing connectivity with the wider environment. The highest quality foraging habitat was provided by the onsite waterbodies and the pockets of woodland and scrub surrounding them

Buildings

vi There were no buildings within the site boundary

4.4.5 Birds

vii The hedgerows and trees located on site are suitable habitat for bird nesting sites and are likely to support a range of common garden and farmland bird species. The arable land also provides some, albeit limited value to foraging birds and some limited provision for ground nesting bird species. It is noted however, that a breeding bird survey is beyond the remit of this survey.

4.4.6 Reptiles

viii No records for reptiles were identified within the desk study. The terrestrial habitats on site were, for the most part, considered sub-optimal for reptiles, mainly comprising of arable land subject to frequent disturbance. The peripheral vegetation including hedgerows, scrub, poor semi-improved grassland, woodland and tall ruderal vegetation provided some, albeit limited opportunities for foraging, refuge and commuting for reptiles. The hedgerows also provided connectivity with the wider countryside. The waterbodies within the site provide higher value foraging habitat for grass snakes, there were occasional log and brash piles within the site providing further refugia and hibernacula suitability.

4.4.7 Water Vole, Otter and White Clawed Crayfish

ix No records of water vole or crayfish were returned and there is a single record for otter identified within 1km of the site. There were no substantial watercourses identified offering suitable habitat for these species, however whilst the onsite ponds provide some scope for water vole foraging and burrowing the lack of records locally and isolation of these waterbodies from further habitat means that water vole presence is unlikely.

[redacted]

4.4.9 Other Priority Fauna Species

xi The habitats on site were suitable for hedgehogs *Erinaceus europaeus* and brown hare *Lepus europaeus* and common toad *Bufo bufo*. No records were identified for these species; however they are considered likely present within the agricultural landscape. Additionally, hedgehog and brown hare are both LBAP Priority Biodiversity Species for Herefordshire.

4.4.10 Biodiversity

xii A detailed Biodiversity Impact Assessment (DEFRA Metric 3.0) is to be undertaken, results TBC.

5 IMPACTS AND MITIGATION (CUMULATIVE AND/OR IN ISOLATION)

5.1 Planning Application Search

i A search was conducted of planning applications within the vicinity of the proposed development using the Council Planning Enquiry System and the National Planning Application Map Viewer. The search was limited to the five year period preceding the date of issue of this report (due to the typical five-year lifetime of planning permission). Excluding retention applications (i.e. typically local-scale residential or commercial developments where an impact has already occurred) there were no comparable applications identified within the search areas having potential to act in combination with the proposals.

5.2 Habitats

i The scheme generally proposes conversion of cereal/non cereal arable cropped field for conversion to soft fruit production on raised polytunnels, as such the general use and nature of the habitats will not change drastically, with intensive arable production still ongoing.

ii Field margins are to be retained and seeded with a species rich mixture (*Emorsgate EM 2 General Purpose Meadow Mix* or similar) which will be a significant enhancement, given suitable management, as existing field margins are narrow and species poor offering limited ecological value. Additional areas of species rich grassland will be created using Emorsgate EM8 Grassland mixture for wetlands in areas of suitable topography and ground conditions. A suitable management plant should be implemented to maintain ecological value of these habitats.

iii It is also noted that areas of dense, screening scrub and trees vegetation is proposed at field margins, which, provided a suitably diverse mix of native species is implemented, and management undertaken sympathetically, could enhance the diversity and coverage of habitats within the site, providing both botanical diversity as well as provision for native fauna through use of flowering and seed/nut bearing species such as holly, viburnum species, elder and maple species.

iv The hedgerow and broadleaved woodland on site are the only habitats of value as they are HPI (NERC Act, 2006). All hedgerows are to be retained within the scheme, and should be enhanced with native planting where possible. Areas of scrub and woodland are to be impacted within the works and so an updated summer habitat assessment is to be carried out during botanical growing season (April-September).

v The waterbodies are to be retained within the scheme, with further pond and reservoir creation undertaken. Suitable pollution prevention guidelines should be followed to avoid impacts to water habitats both onsite and locally. Where waterbodies are proposed these should be sympathetically designed with ecologically value planting at the margins.

vi All scattered trees on site are also to be retained within proposals. Therefore, impacts in isolation or combination with other developments are negligible. To mitigate potential impacts upon these habitats during construction:

- Retained habitats/trees to be protected through fencing; and
- Implementation of a robust pollution prevention strategy.

5.3 Statutorily and Non-Statutorily Designated Sites

i A sHRA is to be undertaken to review potential impacts to nearby designated sites (River Wye SAC and the functionally linked River Lugg SSSI).

ii To avoid impacts to nearby LGS a full adherence to pollution prevention guidelines and dust suppression techniques should be undertaken during construction phase. However it is noted that it is beyond the remit of this assessment to consider geological/heritage impacts.

5.4 Fauna

5.4.1 Great Crested Newts

i GCN have been previously recorded within the site. Whilst the majority of the proposals are not considered to impact terrestrial phase amphibians (due to the arable land being of negligible value for this species) works are proposed in the woodland and scrub habitat immediately adjacent the onsite waterbodies. This habitat is of high value for GCN, and whilst extensive replacement scrub planting is proposed within the scheme, a licence is likely required to legitimise works in this area. As such further GCN surveys are required, and to be undertaken in Spring/Summer 2022. Full details on a scheme of mitigation and enhancement, as required, will be provided in an updated version of this report, upon completion of these surveys.

5.4.2 Bats

Bat Tree Roosts

ii During the Phase 1 survey, incidental ground level tree inspections were carried out, however a full scheme of assessment was beyond the scope of the survey. As such, due to works within areas of woodland and scattered trees, a full ground level tree assessment survey is to be undertaken, in Spring 2022 and an updated version of this report will reflect those findings.

iii Of the trees already identified as having bat roosting potential, these are to be retained within the development. If the scheme changes, the crack willow with moderate roosting potential will require further nocturnal surveys to ascertain its stats as a bat roost. Low potential trees can be removed using soft fell methods.

Bat Foraging Habitat

iv The hedgerows, small areas of woodland, scattered scrub, poor semi-improved grassland, and within the site provide suitable foraging and commuting resources for bats. The arable fields, which dominated the site, were generally of limited value to foraging and commuting bats. Whilst the site is connected to the surrounding environment, this is largely agricultural land, with residential areas adjacent to the northeast. Furthermore, the hedgerows and ponds, which are the main areas of suitable habitat are, for the most part, being retained as part of the development, along with the addition of scrub and tree planting and pond and reservoir creation, as well as increased diversity in grassland areas.

v With these areas being retained and enhanced, foraging opportunities for bats could be enhanced as well as maintaining habitat connectivity through the site and beyond.

vi In assessing the site against criteria in best practice guidelines (Collins J., eds, 2016) the site was considered to offer moderate quality foraging and commuting habitat for bats. On this basis, a development would be of low risk to bat species foraging and commuting. Given the retention and creation of habitats, and the arable use of the site not changing, it was considered disproportionate to undertake further bat activity surveys as impacts to bat foraging will be negligible post-development if mitigation measures from artificial lighting during operation are adhered to.

vii Artificial lighting can affect the way that bats use habitats in a number of ways, depending on the species and proximity to a roost. Direct bright lighting of a roost can cause bats to delay emergence from a roost and could even cause them to desert the roost or become entombed within it (BCT and ILP, 2018). The prey items

for British bats are flying insects, and many flying insects are attracted to certain types of artificial light sources, especially those that emit light with an ultraviolet component or have a high blue spectral component (BCT and ILP, 2018). Some species of bat recorded are known to be attracted to insects gathered around light sources (such as pipistrelle, noctule, Leisler's and serotine), whereas other species actively avoid lit areas (such as long-eared bats, Myotis species, barbastelle and greater and lesser horseshoe bats). Lighting within the Site could therefore be expected to affect the ways that the bats in the area are able to use the Site. As a result, it is recommended that construction works are to be undertaken in daylight hours only with no night hours work permitted.

viii Sensitive lighting on site should follow the guidance set out in Bats and Lighting in the UK (BCT and ILP, 2018). Therefore, associated site lighting proposals must consider the following:

- Avoid lighting where possible;
- Install lamps and the lowest permissible density;
- Lamps should be positioned to direct light to avoid upward spill onto any green corridors that could be used by commuting bats or features with bat roost potential;
- LED lighting – with no/low UV component is recommended;
- Lights with a warm colour temperature – 3000K or 2700K have significantly less impact on bats;
- Light sources that peak higher than 550nm also reduce impacts to bats; and
- The use of timers and dimmers to avoid lighting areas of the site all night is recommended.

5.4.3 Birds

ix The scattered trees and hedgerow and woodland habitats within the site provide suitable habitat for nesting birds. The site is considered likely to support a range of garden and farmland bird species. As the predominant site use (arable production) is not changing, and new tree and scrub planting is proposed, further breeding bird surveys were considered disproportionate. Furthermore, the majority of habitats of value to breeding bird (hedgerows and trees) are to be retained within proposals. As such impacts are deemed unlikely to extend beyond the local level.

x Any tree management works or vegetation clearance, to allow for site access, should take place outside the bird nesting season to ensure compliance with the general protection afforded to wild birds under the Wildlife and Countryside Act 1981 (as amended). If this is unavoidable, the trees and hedgerows should be carefully checked, by a suitably qualified ecologist, prior to removal. Where active nests are found, working restrictions would be put in place until follow up survey can demonstrate that all chicks have fledged. The will reduce impacts to negligible.

5.4.4 Reptiles

xi The overall habitat quality of the site limits its suitability for reptiles, being largely dominated by an arable field, however small populations and transient individuals are likely to use the higher value habitats onsite. Further surveys were considered disproportionate due to the proposals primarily impacting low value arable land, and increased scrub planting being undertaken.

xii However, as there remains the residual risk for reptile to pass through the site, utilising features such as the hedgerow boundaries, a careful works procedure with regard to reptiles is recommended for site vegetation clearance.

xiii Where this is required works, such as vegetation removal near to waterbodies etc, this should be conducted in temperatures above 11°C, ideally in the late morning to afternoon, when reptiles are most active. The habitats should first be cut to a height of 15-20cm by a tractor progressing at walking pace only. The area should be left for 24-48hrs and then cut to 5cm using the same method, working in the same direction as the previous cut. This will allow any reptiles present to disperse into the wider environment unharmed. In the

extremely unlikely event a reptile is seen during these works, they should be allowed to escape unharmed at their own pace. Only a trained ecologist should attempt to move reptiles by hand. If multiple reptiles are encountered, works should cease, and the methodology be re-evaluated. Following this precautionary methodology reduces the likely impacts upon reptile to negligible.

5.4.5 Water Vole, Otter and White-Clawed Crayfish

xiv A further assessment of the site in regard to water vole habitat provision by the onsite waterbodies is to be undertaken.

6 SUMMARY OF POTENTIAL IMPACTS

Table 4: Table Summary of Impacts

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Statutory Designated Sites	County or above	Possible impacts to River Wye SAC	Pollution prevention guidelines to be adhered to. Hydrological impacts to be assessed. Shadow Habitat Regulation Assessment (sHRA) to be undertaken in relation to River Wye SAC.	Site design and CEMP.	TBC following sHRA
Non-statutory designated sites	County	LGS adjacent boundary, listed building/heritage site beyond remit of ecological assessment. Nearest LWS is circa 2km from site and no impacts are envisaged due to ongoing arable/agricultural nature of proposals.	Pollution prevention guidelines and dust suppression techniques during construction phase to limit impacts on adjacent LGS.	CEMP	Not significant
Habitats including invasive and Priority flora	Local	Loss primarily of habitats of low diversity and possible indirect effects as a result of construction. Creation of new species rich grasslands, new waterbodies and new tree and shrub planting.	Retention of hedgerow and trees in accordance with root protection areas. Pollution prevention guidelines to be adhered to in relation to works near waterbodies/watercourses.	Planning Condition – details within a CEMP Site design	Not significant
Reptiles	Local	Retention of majority of high value habitats and replacement/new habitat also being created. Potential for killing/injury of individual animals during vegetation removal and construction.	Precautionary In relation to legislative protection of animals	Planning Condition – detail within a PMW	Not significant
Bats – Roosting	Local	Further GLTAs to be undertaken. Trees with bat roosting potential to be retained or further surveys undertaken.	TBC following GLTA	Surveys TBC	TBC following survey

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Bats – Foraging/Commuting	Local	Unlikely to be impacted by proposals as low quality habitat (arable) predominately present on site and linear features being retained. Higher value foraging habitat such as waterbodies being retained, and some losses of scrub and woodland, being replaced with further planting of value for foraging bats.	Replacement of vegetation with native tree, shrub species and new grassland creation. Maintenance of connective features such as hedgerows and tree lines by adhering to root protection zones. Implementation of sensitive bat lighting scheme.	Planning Condition – details within CEMP and LEMP	Not significant
Great crested newts	Local	GCN present on site and works proposed in core habitat zone (woodland and scrub adjacent ponds) however the main proposals on the arable land are of negligible impact.	TBC following surveys	TBC following surveys. Likely hybrid EPSL and PMW in lower value habitat	TBC following surveys
WWC	N/A	None	No	N/A	N/A
Water vole	Local	Ponds onsite may have suitability however isolated from other habitat and no records locally. No direct impacts to ponds envisaged.	N/A	N/A	N/A
[redacted]					
Breeding birds	Local	Damage or destruction of nests in season. Creation of new scrub and tree habitats.	Precaution in relation to legislative protection of animals	Planning Condition - details within a CEMP	Not significant
Otter	N/A	None	No	N/A	N/A

Ecological Feature	Importance (Geographic Frame of Reference)	Potential Effect	Mitigation Proposed	Proposed Mechanism to Secure	Residual Impact
Biodiversity	Local	Ongoing arable/agricultural land use. Some removal of scrub and woodland, however extensive creation of grassland, new waterbodies and	TBC in BIA and landscaping plans	BIA to be undertaken	TBC following BIA

7 COMPENSATION & ENHANCEMENT RECOMMENDATIONS

7.1 Habitats

i The Environment Act (2021), National Planning Policy Framework and local development plan requires ecological enhancement of sites subject to development proposals to the extent that they provide a net biodiversity gain. Landscaping plans indicate creation of areas of species rich grassland, native scrub and tree planting, as well as waterbody creation. Consideration should also be given to enhancement of existing hedgerows where suitable. Ash and elm should currently be avoided due to the prevalence of 'Ash die-back' and 'Dutch elm disease', as stocks of these species cannot be guaranteed to be free from these afflictions. The use of native species in tree planting is also encouraged as these can harbour a high diversity of invertebrates. For example, English oak trees have over 400 associated invertebrate species (Kennedy & Southwood, 1984). Other suggested planting of benefit to invertebrates includes:

- Willow (*Salix sp.*);
- Hawthorn (*Crataegus monogyna*);
- Blackthorn (*Prunus spinosa*);
- Hazel (*Corylus avellana*); and
- Birch (*Betual sp.*).

7.1.2 Hedgerows

ii A minimum of 6 species should be planted, which may include blackthorn (*Prunus spinosa*), field maple (*Acer campestre*), alder (*Alnus glutinosa*), common dogwood (*Cornus sanguinea*), hazel (*Corylus avellane*) and guelder rose (*Viburnum opulus*), Standard trees such as English oak (*Quercus robur*) and wild cherry (*Prunus avium*) can also be planted at 50m intervals.

iii Planting should be undertaken during early winter, providing the ground is not frozen. Planting up gaps can be done in conjunction with coppicing existing plants, to give new plants minimum competition. To further reduce competition and aid establishment of the planted-up sections, the bases of the plants would be kept weed free through spot treatment of herbicide for the first three years.

7.1.3 Species rich grassland

iv The provision of new species rich grasslands within the wider landscape would provide a valuable foraging, commuting and refuge resource for terrestrial phase herpetofauna, including great crested newts, as well as a variety of invertebrates and small mammals. It is recommended that Emorsgate EM2 and EM8 meadow mixtures are utilised, as indicated in landscaping plans. This seed mixture, once established, would form diverse grassland, interspersed with wildflowers that can tolerate competition from the more competitive tussock forming grass species within this mixture. Ongoing management should be carefully undertaken to ensure ecological value is maintained.

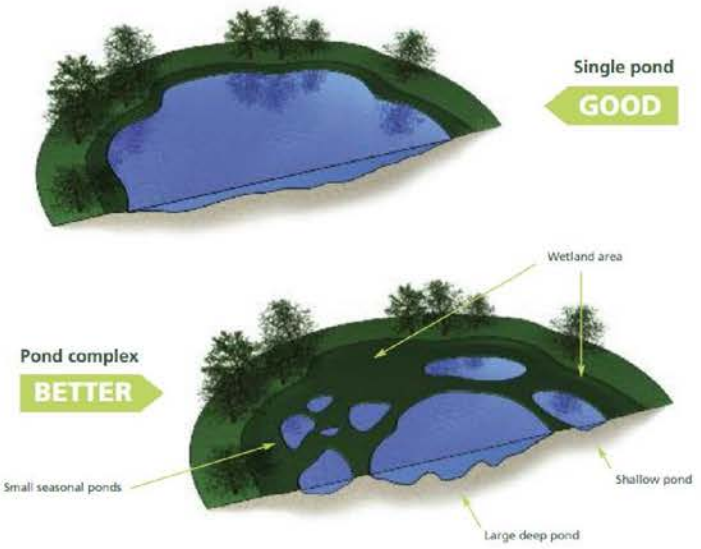
7.1.4 Ponds

v If planted sympathetically, these could provide significant ecological enhancement to the site. Areas of permanent wet waterbodies and associated vegetation can provide an important invertebrate habitat area and increasing the foraging capacity of the site for fauna. The value of these ponds for wildlife can be maximised by utilising the following principles, recommended from the Freshwater Habitats Trust:

- Creating complexes of ponds rather than single waterbodies
- Include both permanent and seasonal ponds
- Almost all pond slopes are at least 12° in gradient
- Create broad, undulating wetland areas around and between ponds

- Create underwater bars and shoals to benefit aquatic plant

Figure 5: Pond Complex Example



© Freshwater Habitats Trust 2021

vi Where the ponds are designed to hold some degree of permanent standing water, they could be planted with native marginal plug plant species and with marginal vegetation, such as Naturescapes N8 Water's Edge Meadow Mixture is recommended. This comprises 24 wildflower species and 9 grass species. The species in this mix will tolerate flooding once established, and many would grow in the ponds themselves.

7.1.5 Scrub

vii Where areas of scrub is proposed to be planted, this should utilise a mixture of native species such as hazel, blackthorn, hawthorn, willow, box, dogwood, and buckthorn. These areas of scrub should also be managed sensitively for wildlife, with sections cleared on a rotational basis to produce clearings within this habitat. In addition, areas of scrub should be planted around the new ponds to provide suitable refugia for any herpetofauna (amphibians and reptiles) that may utilise these habitats. The provision of this scrub would also provide suitable habitat for a variety of nesting bird species, [redacted]

7.2 Protected/Principal Species

i Additional enhancements that could easily be met within the development scope include the incorporation of bat and bird nest boxes. Boxes could be placed on retained trees within the Site boundaries. The tree mounted bat boxes should face south (for additional warmth), and be positioned at least 4 metres from the ground, with the entrances being free of overhanging branches. It is also recommended that bird nest boxes be placed 1.5m below each bat box, to ensure that the birds have somewhere to nest and do not inhabit the bat boxes. Use of boxes such as the Vivara woodstone box provide a long-term nest box solution requiring limited replacement unlike wooden boxes which need regular replacement as a result of weathering. Suitable bat box dimensions are 430mm high X 270mm wide X 140mm deep. The boxes are designed to mimic natural roost sites and to provide a stable environment.

Figure 6: Bat Box Example

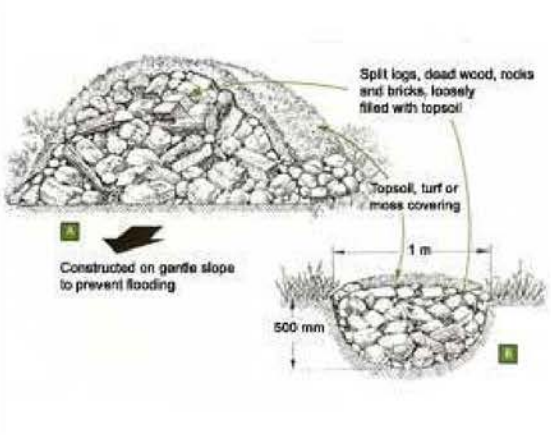
© NHBS

Figure 7: Bird Box Example

© NHBS

ii Log piles, rocks and dead wood under dense ground cover could also be created across the Site for herpetofauna hibernacula. These will provide important places for herpetofauna to rest during the day or during cold or dry weather. Hibernacula should be c. 2m2 long, a minimum of 0.5m wide and c.1m in height and comprise log or debris piles with a cap composed of topsoil and a turf covering.

Figure 8: Hibernacula Example



© Froglife 2001

iii Additional enhancements for invertebrates could also be easily met within the development scope by including insect houses on any retained trees on site. These nest boxes will help to provide a variety of niches for a diverse spectrum of invertebrates to inhabit, and therefore help to increase the terrestrial invertebrate species diversity on site.

8 MONITORING

i No monitoring is required for this project to be compliant with legislation and policy.

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10 LEGISLATION AND PLANNING POLICY

10.1 General & Regionally Specific Policies

i Articles of British legislation, policy guidance and both Local Biodiversity Action Plans (BAPs) and the NERC Act, 2006 are referred to throughout this report. Their context and application is explained in the relevant sections of this report. The relevant articles of legislation are:

- The Environment Act 2021
- The National Planning Policy Framework (2021)
- ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2021)
- Local planning policies LD2, LD3 & SD4 (Herefordshire County Council)
- The Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC;
- National Parks and Access to the Countryside Act 1949;
- The Protection of Badgers Act 1992;
- The Countryside and Rights of Way Act 2000;
- The Hedgerow Regulations 1997;
- The Natural Environment and Rural Communities (NERC) Act 2006;
- Local Biodiversity Action Plan for Herefordshire

ii Specifically, LD2 of the Local Plan states:

Development proposals should conserve, restore and enhance the biodiversity and geodiversity assets of Herefordshire, through the: 1. retention and protection of nature conservation sites and habitats, and important species in accordance with their status as follows : a) Development that is likely to harm sites and species of European Importance will not be permitted; b) Development that would be liable to harm Sites of Special Scientific Interest or nationally protected species will only be permitted if the conservation status of their habitat or important physical features can be protected by conditions or other material considerations are sufficient to outweigh nature conservation considerations; c) Development that would be liable to harm the nature conservation value of a site or species of local nature conservation interest will only be permitted if the importance of the development outweighs the local value of the site, habitat or physical feature that supports important species. d) Development that will potentially reduce the coherence and effectiveness of the ecological network of sites will only be permitted where adequate compensatory measures are brought forward. 2. restoration and enhancement of existing biodiversity and geodiversity features on site and connectivity to wider ecological networks; and 3. creation of new biodiversity features and wildlife habitats.

iii LD3 States:

Development proposals should protect, manage and plan for the preservation of existing and delivery of new green infrastructure, and should achieve the following objectives: 1. identification and retention of existing green infrastructure corridors and linkages; including the protection of valued landscapes, trees, hedgerows, woodlands, water courses and adjoining flood plain; 2. provision of on-site green infrastructure;in particular proposals will be supported where this enhances the network and 3. integration with, and connection to, the surrounding green infrastructure network

iv SD4 states:

Development should not undermine the achievement of water quality targets for rivers within the county, in particular through the treatment of wastewater. In the first

instance developments should seek to connect to the existing mains wastewater infrastructure network. Where this option would result in nutrient levels exceeding conservation objectives targets, in particular additional phosphate loading within a SAC designated river, then proposals will need to fully mitigate the adverse effects of wastewater discharges into rivers caused by the development. This may involve: • incorporating measures to achieve water efficiency and/or a reduction in surface water discharge to the mains sewer network, minimising the capacity required to accommodate the proposal, in accordance with policy SD3; • phasing or delaying development until further capacity is available; • the use of developer contributions/community infrastructure levy funds to contribute to improvements to waste water treatment works or other appropriate measures to release capacity to accommodate new development; • in the case of development which might lead to nutrient levels exceeding the limits for the target conservation objectives within a SAC river, planning permission will only be granted where it can be demonstrated that there will be no adverse effect on the integrity of the SAC in view of the site's conservation objectives; and • where the nutrient levels set for conservation objectives are already exceeded, new development should not compromise the ability to reduce levels to those which are defined as favourable for the site. Where evidence is submitted to the local planning authority to indicate connection to the wastewater infrastructure network is not practical, alternative foul drainage options should be considered in the following order: • provision of or connection to a package sewage treatment works (discharging to watercourse or soakaway); • septic tank (discharging to soakaway). With either of these non-mains alternatives, proposals should be accompanied by the following: • information to demonstrate there will be no likely significant effect on the water quality, in particular of designated national and European sites, especially the River Wye SAC and the River Clun SAC; or • where there will be a likely significant effect upon a SAC river, information to enable the council, in its role as a competent authority, to ascertain that the development will have no adverse effect on the integrity of the SAC; • in relation to water courses with national or European nature conservation designations, the inclusion of measures achieving the highest standard of water quality discharge to the natural drainage system including provision for monitoring. The use of cesspools will only be considered in exceptional circumstances and where it can be demonstrated that sufficient precautionary measures will ensure no adverse effect upon natural drainage water quality objectives.

10.2 Bats and Great Crested Newts

i Great crested newt and species of British bats are fully protected within UK Law under *Wildlife and Countryside Act 1981* (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from:

- Intentional or reckless killing, injury, taking;
- Damage to or destruction of or, obstruction of access to any place of shelter, breeding or rest;
- Disturbance of an animal occupying a structure or place;
- Possession or control (live or dead animals);
- Selling, bartering or exchange of these species, or parts of.

ii This law is reinforced by the UK's transposition of the EU Habitats Regulations under *The Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019 (as amended)*. These Regulations also prohibit:

- the deliberate killing, injuring or taking of great crested newt or bats;
- the deliberate disturbance of any great crested newt or bat species in such a way as to be significantly likely to affect:
- their ability to survive, hibernate, migrate, breed, or rear or nurture their young; or
- the local distribution or abundance of that species.

- damage or destruction of a breeding site or resting place;
- the possession or transport of great crested newt or bats or any other part of.

iii Under certain circumstances a licence may be granted by Natural England to permit activities that would otherwise constitute an offence. In relation to development, a scheme must have full planning permission before a licence application can be made.

iv In addition, seven British bat species are listed as Species of Principal Importance (SPI) under the Natural Environment and Rural Communities (NERC) Act, 2006. These are barbastelle (*Barbastellus barbastellus)*, Bechstein's (*Myotis bechsteinii)*, noctule (*Nyctalus noctula)*, soprano pipistrelle (*Pipistrellus pygmaeus)*, brown long-eared (*Plecotus auritus)*, greater horseshoe (*Rhinolophus ferrumequinum)* and lesser horseshoe (*Rhinolophus hipposideros)*.

v Under the National Planning Policy Framework 2019 the presence of any protected species is a material planning consideration. The Framework states that impacts arising from development proposals must be avoided where possible or adequately mitigated/compensated for and that opportunities for ecological enhancement should be sought.

10.3 Birds

i The Wildlife and Countryside Act 1981 (as amended) is the Priority legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take or destroy the egg of any wild bird.

ii For birds listed on Schedule 1 of the Act, it is an offence to disturb any bird while it is building a nest, is at or near a nest with young; or disturb the dependant young of such a bird.

iii Species listed in Annex 1 of the EU Birds Directive 1994 (e.g. barn owl) are required to have special conservation measures taken to preserve their habitats and sites to be classified as Special Protection Areas (SPAs) where appropriate.

10.4 Reptiles

i All reptile species are partially protected under Schedule 5 (Sections 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:

- Reckless or intentional killing and injury;
- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species.

ii In addition to the above legislation, UK rare reptiles; sand lizards (*Lacerta agilis*) and smooth snakes (*Coronella austriaca*), are listed under The Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019 (as amended). This makes it an offence to;

- Capture, kill, injure and disturb;
- Take or destroying eggs;
- Damage or destroy breeding/resting places;
- Obstruct access to resting places; and
- Possess, advertise for sale, sell or transport for sale, live or dead (part or derivative).

iii Where these animals are confirmed as present on land that is to be affected by development guidance recommends that:

- The animals should be protected from injury or killing during construction operations;
- Mitigation should be provided to maintain the conservation status of the species locally;
- Under the National Planning Policy Framework 2019 the presence of any protected species is a material planning consideration. The Framework states that impacts arising from development proposals must be avoided where possible or adequately mitigated/compensated for and that opportunities for ecological enhancement should be sought.

10.5 Water Vole

i Water voles (*Arvicola amphibius*) are protected under Schedule 5 Section 9 of the Wildlife & Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or capture a water vole, to intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or to disturb water voles while they are using such a place.

10.6 Badgers

i Badgers (*Meles meles*) and their setts are protected by the Protection of Badgers Act 1992. This makes it an offence to:

- intentionally capture, kill or injure a badger;
- damage, destroy or block access to their setts;
- disturb badgers in setts;
- treat a badger cruelly;
- deliberately send or intentionally allow a dog into a sett; and
- bait or dig for badgers.

ii Case law for this species contains example prosecutions of imprisonment for six months and heavy fines.

10.7 Hedgehogs and Common Toads

i Under the NERC Act 2006, the hedgehog (*Erinaceus europaeus*), hare and common toad (*Bufo bufo*) are categorised as a 'Species of Principal Importance' for biodiversity. Furthermore, hedgehog and hare are local biodiversity action plan species (LBAP) for Herefordshire. Listing as SPI reflects concerns that populations have suffered a rapid and sustained decline in the UK. As such, they are a material consideration during planning.

10.8 Hedgerows

i All native hedgerows (including species-poor ones) are listed under Section 41 of the NERC Act (2006) and are a Local Biodiversity Action Plan (LBAP) habitat. All native hedgerows are considered to be of high conservation value.

ii The Hedgerow Regulations (1997) classifies a hedgerow as 'important' if it:

- Satisfies at least 1 of the criteria listed in Part II of Schedule 1
- Has existed for 30 years or more

iii Any person wishing to remove a hedgerow is required to submit a hedgerow removal notice to the LPA

iv Items of Legislation that are pertinent regarding hedgerows include:

- Hedgerow Regulations 1997
- The countryside Rights of Way Act 2000
- Natural Environment and Rural Communities Act (NERC) 2006
- Planning Policy Statement (PPS) 9: Biodiversity and Geological Conservation
- The UK Biodiversity Action Plan (UK BAP)
- The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended)

11 APPENDIX 1: SURVEY CONDITIONS

Table 5: Survey Conditions

Survey type	Date completed	Temperatures (°C)	Times	Wind speed (Beaufort Scale)	Cloud cover (Oktas Scale)	Precipitation
PEA and GCN H.S.I	10.02.22	5	09:00-17:00	1	3	0

12 APPENDIX 2: SPECIES SPECIFIC SURVEY METHODOLOGY

12.1 Great Crested Newt (GCN) Habitat Suitability Assessment (H.S.I)

i Waterbodies within 500m of the survey area were evaluated against the GCN HSI criteria (Oldham *et al*, 2000). The HSI provides a measure of the suitability of a water body to support GCN by assigning an overall score of between 0 and 1, which is based on ten key criteria as follows:

- SI1 Geographic location
- SI2 Pond area
- SI3 Pond drying
- SI4 Water quality
- SI5 Shade
- SI6 Presence of water-fowl
- SI7 Presence of fish
- SI8 Number of local ponds
- SI9 Terrestrial habitat quality
- SI10 Plant coverage

ii In general, ponds with a higher score are more likely to support GCN than those with lower score. Suitability for GCN is determined in accordance with the scale outlined in Table 2 below.

Table 6: HSI Scoring Criteria

HSI Score	Pond Suitability
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

12.2 Bats

i The overall value of the site and its connectivity to the wider countryside was assessed in relation to bats. The likelihood of bats roosting at the site or moving through the site between local roost sites and foraging/mating/hibernation habitats was considered.

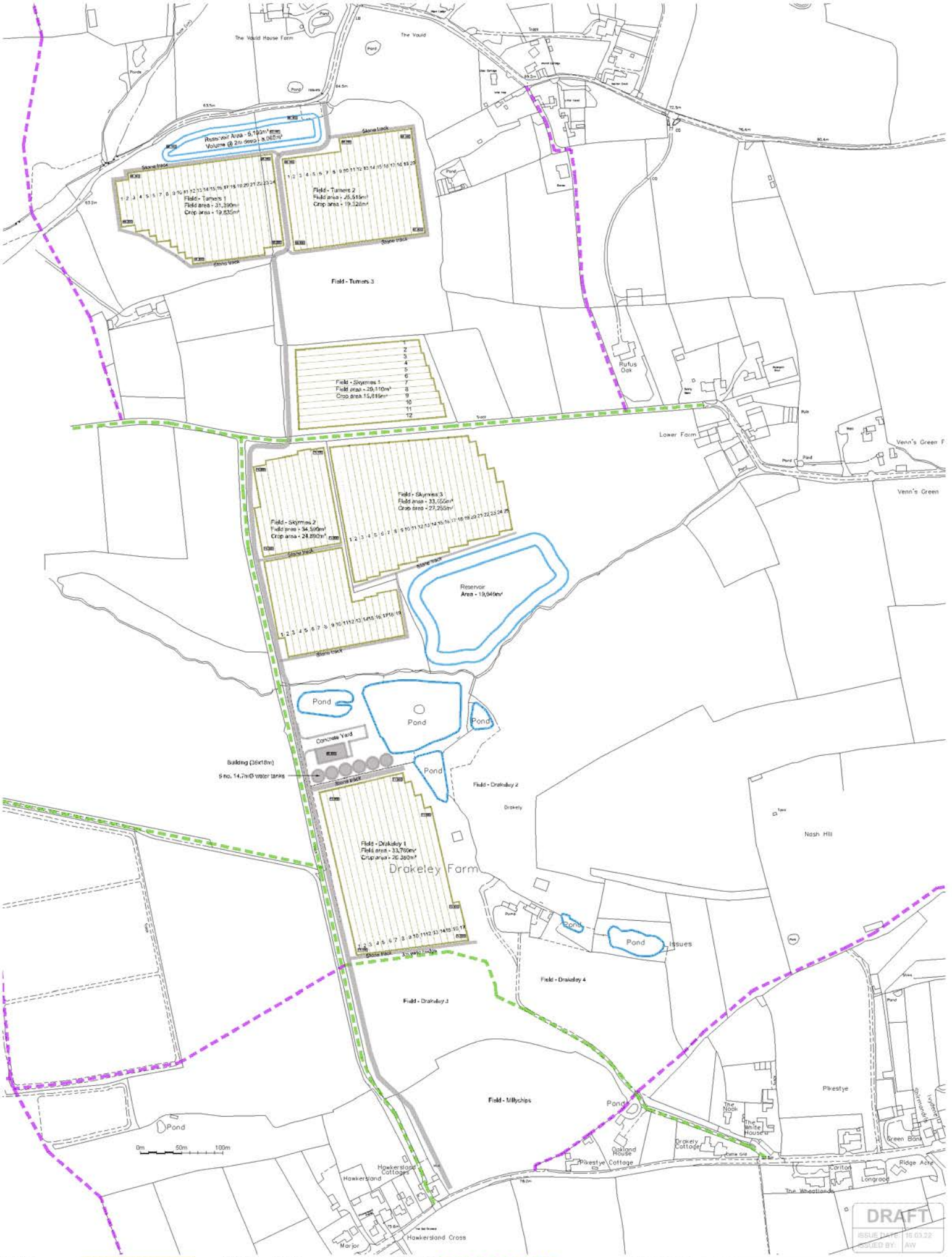
ii The site, including the trees and boundary trees, were assessed by an ecologist and graded as to their suitability for supporting roosting bats using the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Survey Guidelines* (Collins, J. Eds. 2016), an extract of which is provided interpreted in Table 7.

Table 7: Criteria for bat roost potential assessment of buildings and trees

Roost Potential	Description	Surveys Required (Buildings)	Surveys Required (Trees)
Confirmed roost	Evidence of roosting bats found during initial daytime inspection.	3 – including 1 dawn as a minimum	3 – including 1 dawn as a minimum

Roost Potential	Description	Surveys Required (Buildings)	Surveys Required (Trees)
High *	Structures with one or more features suitable for bat roosting, with obvious suitability for larger numbers of bats.	3 – including 1 dawn as a minimum	3 – including 1 dawn as a minimum
Moderate	Structure with one or more potential roost sites that could be used due to size, shelter and protection but unlikely to support a roost of high conservation status.	2– including 1 dawn as a minimum	2– including 1 dawn as a minimum
Low	Structure with one or more potential roosting sites used by individual bats opportunistically. Insufficient space, shelter or protection to be used by large numbers of bats.	1 Survey	Precautionary Mitigation Approach, some instances may require further survey
Negligible	No or negligible features identified that are likely to be used by roosting bats	None	None

** Unless it is a confirmed roost, additional surveys are required of buildings to assess presence / likely absence of a roost. The number of surveys are indicative to give confidence in a negative result, i.e. where no bats are found, confidence in a result can be taken.*



Strawberries (8m perimeter access buffer)

Stone Road

For Landscape Details refer to Influence Landscape Planning & Design Limited - Landscape and Biodiversity Mitigation/Enhancement Plans.

Strawberries 133,503m²

Stone Road 9,534m² (1,589km @ 6m wide)

Stone Road 3,568m² (0,892km @ 4m wide)

Stone Road 1,644m² (0,547km @ 3m wide)

Public Footpath

Public Bridleway

Data obtained from Hereford Highways public rights of way map (not geo referenced)

Rev No	Revision Note	Date	Drawn	Checked

NUMBER - REV - CLIENT - PROJECT
02971-00 - A - S&A Produce (UK) Ltd - Drakeley Farm - DV15

TITLE
Overall Polytunnel Layout Plan

DATE	SHEET	SCALE
16.03.22	01	1:2000
DRN BY: AW	CHK BY: AW	PAPER SIZE: A1

BOURNE VALLEY ASSOCIATES
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14 APPENDIX 4: DESK STUDY RESULTS

i 18 statutorily designated sites were recorded within the search radius, the details of which are summarised in the table below. The site was not within the IRZ of either site.

Table 8: Statutorily Designated sites within 5km of Site Boundary

Site Name	Designation	Location	Brief Description
River Wye	SAC	1.3km N & W	Water courses of plain to montane levels with R. fluitantis. The best site known in Wales for white-clawed crayfish *Austropotamobius pallipes*. The river provides exceptionally good quality habitat for brook lamprey *Lampetra planeri* and river lamprey *Lampetra fluviatilis* supporting a healthy population of both species. Twaite shad Alosa fallax have long been abundant often spawning and then migrating over 100 km upstream. The Wye is the most famous and productive river in Wales for Atlantic salmon *Salmo salar*, providing high-quality spawning grounds and juvenile habitat. The Wye represents bullhead Cottus gobio, and the densest and most well-established otter Lutra lutra population in Wales.
Dinmore Hill Woods - Howe Wood, Church Coppice and Westfield Wood (004)	SSSI	2.4km NW	An extensive area of mixed native broadleaved woodlands overlying rocks of the Old Red Sandstone. It forms one of the largest continuous blocks of deciduous woodland in this part of the county. A diverse ground flora including bluebell *Hyacinthoides non-scripta*, great butterfly orchid *Platanthera chlorantha* and common spotted-orchid *Dactylorhiza fuchsii*, stinking iris *Iris foetidissima* and spurge laurel *Daphne laureola.* The woods have a rich fauna which includes fallow deer Dama dama. They provide an excellent habitat for birds that breed in woodland such as buzzard *Buteo buteo*, great spotted woodpecker *Dendrocopos major* and tree creeper *Certhia familiaris*
Queenswood Country Park	LNR	2.5km NW	Deciduous woodland and arboretum. Rich ground flora includes bluebells. Other species include wood warbler, silver washed fritillary butterfly and dormouse.
Dinmore Hill Woods - Southern Part of Queenswood LNR (006)	SSSI	2.6km NW	An extensive area of mixed native broadleaved woodlands overlying rocks of the Old Red Sandstone. It forms one of the largest continuous blocks of deciduous woodland in this part of the county. A diverse ground flora including bluebell *Hyacinthoides non-scripta*, great butterfly orchid *Platanthera chlorantha* and common spotted-orchid *Dactylorhiza fuchsii*, stinking iris *Iris foetidissima* and spurge laurel *Daphne laureola.* The woods have a rich fauna which includes fallow deer Dama dama. They provide an excellent habitat for birds that breed in woodland such as buzzard *Buteo buteo*, great spotted woodpecker *Dendrocopos major* and tree creeper *Certhia familiaris*
Dinmore Hill Woods - Burghope Wood (003)	SSSI	2.9km NW	An extensive area of mixed native broadleaved woodlands overlying rocks of the Old Red Sandstone. It forms one of the largest continuous blocks of The woods have a rich fauna which includes fallow deer

Site Name	Designation	Location	Brief Description
			Dama dama. They provide an excellent habitat for birds that breed in woodland such as buzzard *Buteo buteo,* great spotted woodpecker *Dendrocopos major* and tree creeper *Certhia familiaris*
River Lugg - (Wye SAC) (001)	SSSI	2.9km SW	A good example of transitional river type, with both upland and lowland river morphologies represented. Considered to be one of the best British mainland examples of both a clay river and a river displaying a transition from nutrient-poor to naturally nutrient-rich water chemistry. Habitats support characteristic species including Atlantic salmon, bullhead, otter and lamprey. The Lugg is also designated for riparian woodland and fluvial geomorphology.
Wellington Wood - Chancehill Wood, East (004)	SSSI	2.9km WNW	A large block of ancient semi-natural woodland. Selected as an example of a sessile oak Quercus petraea wood with silver birch Betula pendula and hazel Corylus avellana associated with a number of other types of woodland. The varied woodland composition is reflected in the ground flora. More than 130 species of vascular plants have been recorded
Wellington Wood - Chancehill Wood, West (003)	SSSI	3km W	A large block of ancient semi-natural woodland. A large block of ancient semi-natural woodland. Selected as an example of a sessile oak Quercus petraea wood with silver birch Betula pendula and hazel Corylus avellana associated with a number of other types of woodland. The varied woodland composition is reflected in the ground flora. More than 130 species of vascular plants have been recorded
Dinmore Hill Woods - North part of Queenswood LNR (002)	SSSI	3.2km NW	An extensive area of mixed native broadleaved woodlands overlying rocks of the Old Red Sandstone. It forms one of the largest continuous blocks of deciduous woodland in this part of the county. A diverse ground flora including bluebell *Hyacinthoides non-scripta*, great butterfly orchid *Platanthera chlorantha* and common spotted-orchid *Dactylorhiza fuchsii*, stinking iris *Iris foetidissima* and spurge laurel *Daphne laureola.* The woods have a rich fauna which includes fallow deer Dama dama. They provide an excellent habitat for birds that breed in woodland such as buzzard *Buteo buteo,* great spotted woodpecker *Dendrocopos major* and tree creeper *Certhia familiaris*
River Lugg - Bodenham Weir to Leominster (002)	SSSI	3.4m NNW	River Lugg is considered to be one of the best British mainland examples of both a clay river and a river displaying a transition from nutrient-poor to naturally nutrient-rich water chemistry. A largely unpolluted natural river and supports river plant communities and otter populations of special interest
The Bury Farm - Bury Pasture (002)	SSSI	3.8km NW	The Bury Farm SSSI is nationally important for its complex of species-rich, unimproved neutral and calcareous grasslands, and an assemblage of saproxylic (dead wood) invertebrates chiefly associated with veteran orchard trees
The Bury Farm - Sheep Bank (001)	SSSI	3.9km NNW	The Bury Farm SSSI is nationally important for its complex of species-rich, unimproved neutral and calcareous grasslands, and an assemblage of

Site Name	Designation	Location	Brief Description
			saproxylic (dead wood) invertebrates chiefly associated with veteran orchard trees
Wellington Wood - Wellington Wood (002)	SSSI	3.9km WNW	A large block of ancient semi-natural woodland. Selected as an example of a sessile oak Quercus petraea wood with silver birch Betula pendula and hazel Corylus avellana associated with a number of other types of woodland. The varied woodland composition is reflected in the ground flora. More than 130 species of vascular plants have been recorded
The Bury Farm - Plock End Meadows (003)	SSSI	4km NW	The Bury Farm SSSI is nationally important for its complex of species-rich, unimproved neutral and calcareous grasslands, and an assemblage of saproxylic (dead wood) invertebrates chiefly associated with veteran orchard trees
The Bury Farm SSSI - Bury Orchards (004)	SSSI	4.1km NW	The Bury Farm SSSI is nationally important for its complex of species-rich, unimproved neutral and calcareous grasslands, and an assemblage of saproxylic (dead wood) invertebrates chiefly associated with veteran orchard trees
Hill Hole Dingle - Lower Dingle (003)	SSSI	4.2km N	An area of ancient natural woodland with associated grassland and scrub occupying a steep secluded section of the Humber Brook valley to the south east of Leominster. Selected as an example of a rich, mixed deciduous woodland of a type which is characteristic of this part of the Welsh Borderlands
Hill Hole Dingle - Upper Dingle, East (001)	SSSI	4.8km NNE	An area of ancient natural woodland with associated grassland and scrub occupying a steep secluded section of the Humber Brook valley to the southeast of Leominster. Selected as an example of a rich, mixed deciduous woodland of a type which is characteristic of this part of the Welsh Borderlands
Wellington Wood SSSI - Derndale Hill (001)	SSSI	4.8km W	A large block of ancient semi-natural woodland. Selected as an example of a sessile oak Quercus petraea wood with silver birch Betula pendula and hazel Corylus avellana associated with a number of other types of woodland. A particular feature of the wood is the presence of some very fine ancient pollarded large-leaved lime Tilia platyphyllos, one of our rarest native trees. The varied woodland composition is reflected in the ground flora. More than 130 species of vascular plants have been recorded

ii The Site lies within 5km of Queenswood Country Park LNR, River Wye SAC, and River Lugg SSSI. The proposals are of a type that is included within the Impact Risk Zones for these European and National designated sites.

- Infrastructure: Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals
- Minerals, Oil, Gas: Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
- Rural non-residential: Large non-residential developments outside existing settlements/urban areas where footprint exceeds 1ha
- Rural residential: Any residential development of 10 or more houses outside existing settlements/urban areas
- Residential: Residential development of 50 units or more.

- Air Pollution: Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores)
- Combustion: All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion
- Waste: Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.
- Composting: Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
- Discharges: Any discharge of water or liquid waste including to mains sewer.
- Water supply: Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply

iii Four non-statutorily designated sites were also identified within the search radius, details of which are provided in the table below.

Table 9: Non-statutory designated sites within 2km of Site Boundary

Site Name	Designation	Location	Brief Description
The Vauld, Marden Local Geological Site	LGS	Adjacent N/NE boundary	F A Grade II Listed Building. Farmhouse. Probably C16
Kingsfield, Marden Local Geological Site	LGS	1.5km NW	No site information
Venn's Wood SWS	LWS	2.3km ENE	An ancient semi-natural woodland, with mostly, oak and birch
River Lugg SWS	LWS	14.2km NW	Marginal plants include arrowhead, flowering rush and purple-loosestrife. The site forms an excellent habitat for birds, mammals and invertebrates; kingfisher, heron, sand martin, cormorant, otter and crayfish being amongst those species recorded

iv There are 72 compartments of Habitats of Principal Importance under Section 41 of the NERC Act, 2006 located within a 1km radius of the site. These are shown in a table below, with the distance and direction of the closest habitats in regard to the site referenced. The closest is a traditional orchard 120m to the northeast of the site.

Table 10: Habitats of Principal Importance within 1km

Habitat	Quantity	Closest Habitat - Distance to Site	Closest Habitat - Direction to Site
Traditional orchard	40	120m	Northeast
Deciduous Woodland	16	485m	West Southwest
Woodland, mixed mainly conifer	1	0.5km	Northwest
Ancient and semi natural woodland	1	0.5km	West southwest

Habitat	Quantity	Closest Habitat - Distance to Site	Closest Habitat - Direction to Site
Ancient, replanted woodland	1	0.5km	Northwest
Semi-improved grassland	3	0.7km	Northeast
Broad leaved woodland	6	0.8km	North northeast
Woodland, mixed mainly broadleaved woodland	2	0.8km	West Southwest
Wood pasture and parkland	1	0.9km	East
Woodland- Young Trees	1	1km	West

v Records of previous European Protected Species Licences (EPSL) were discovered within a 5km search area around the site. This included:

- 10 records of bat licences for Common pipistrelle (Pipistrellus pipistrellus), Soprano pipistrelle (Pipistrellus pygmaeus), brown long-eared bat (Plecotus auritus), Brandt's bat (Myotis brandtii), whiskered bat (Myotis mystacinus) and Natterer's bat (Myotis nattereri) the closest record (2014-1000-EPS-MIT-1) is 2.6km NW of the site. Issued in 2014, it allowed for the destruction of a resting place
- 2 records of Great Crested Newt licences. The closest record (2018-37088-EPS-MIT) is 0.8km SW of the site. Issued in 2018, it allowed for the damage and destruction of a resting place

vi Protected species records were received from Hereford Biological Records Centre. A summary of the records considered most relevant to the site and/or proposed development are provided in the table below. Full species records are available to view upon request.

vii Protected species records were received from Herefordshire Biological Record Centre. A summary of the records considered most relevant to the site and/or proposed development are provided in the table below.

Table 11: Summary of protected and Priority species records

Common Name	Scientific Name	Records	Conservation Status
Amphibians			
Smooth newt	*Lissotriton vulgaris*	63 records; closest record 85m SSE	Partial protection under WCA[7]
Great crested newts	*Triturus cristatus*	42 records; closest record 280m SSW	EPS[8], NERC[9], WCA (5)[10]

[7] WCA – Wildlife & Countryside Act (1981) Section 5 protecting against trade or sale of species.
[8] EPS – European Protected Species - protected by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[9] NERC – Species of Principle Importance under Section 41 of the Natural Environment Rural Communities Act (2006) Species of Principal Conservation Importance; UKBAP & LBAP
[10] WCA (5) – Schedule 5 protected species - Wildlife & Countryside Act (1981)

Common Name	Scientific Name	Records	Conservation Status
Palmate newt	*Lissotriton helveticus*	7 records; closest record 0.6km W	Partial protection under WCA
Common toad	*Bufo bufo*	5 records; closest record 0.7km N	NERC, Partial Protection under WCA
Common frog	*Rana temporaria*	8 records; closest record 0.7km N	Partial protection under WCA
Mammal			
Pipistrelle sp.	*Pipistrellus sp.*	6 records; closest record 235m NE	EPS, WCA
Common pipistrelle	*Pipistrellus pipistrellus*	11 records; closest record 250m E	EPS, WCA
Daubenton's	*Myotis daubentonii*	1 records; closest record 250m E	EPS, WCA
Soprano pipistrelle	*Pipistrellus pygmaeus*	9 records; closest record 250m E	EPS, WCA, NERC
Common pipistrelle roost	*Pipistrellus pipistrellus*	4 records; closest record 330m N	EPS, WCA
Bats, unknown	*Chiroptera*	14 records; closest record 335m N	EPS, WCA
Noctule	*Nyctalus noctula*	7 records; closest record 345m N	EPS, WCA, NERC
Long-eared bat species	*Plecotus sp.*	6 records; closest record 440m E	EPS, WCA
Long-eared bat species roost	*Plecotus sp.*	2 records; closest record 0.6km S	EPS, WCA
Natterer's bat	*Myotis nattereri*	1 record; closest record 0.8km SSW	EPS, WCA
Daubenton's bat roost	*Myotis daubentonii*	1 records; closest record 0.9km SW	EPS, WCA
Soprano pipistrelle roost	*Pipistrellus pygmaeus*	2 records; closest record 0.9km SW	EPS, WCA, NERC
Noctule roost	*Nyctalus noctula*	1 record; closest record 0.9km SW	EPS, WCA
European otter	*Lutra lutra*	1 record; closest record 1km NW	EPS, WCA, NERC
Pipistrelle sp. roost	*Pipistrellus sp.*	1 record; closest record 1.1km SW	EPS, WCA
Polecat	*Mustela putorius*	1 record; closest record 1.6km E	NERC

Common Name	Scientific Name	Records	Conservation Status
Birds			
Blue tit	*Cyanistes caeruleus*	6 records; closest record 60m NNW	BoCCGreen, WCA
Bullfinch	*Pyrrhula pyrrhula*	3 records; closest record 60m NNW	BoCCAmber, NERC
Dunnock	*Prunella modularis*	3 records; closest record 60m NNW	BoCCAmber
Fieldfare	*Turdus pilaris*	6 records; closest record 60m NW	BoCCRed, WCA (1)
Goldcrest	*Regulus regulus*	1 records; closest record 60m NNW	BoCCGreen, WCA
Goldfinch	*Carduelis carduelis*	6 records; closest record 60m NNW	BoCCGreen, WCA
Great spotted woodpecker	*Dendrocopos major*	10 records; closest record 60m NNW	BoCCGreen, WCA
Great tit	*Parus major*	4 records; closest record 60m NNW	BoCCGreen, WCA
House sparrow	*Passer domesticus*	15 records; closest record 60m NNW	BoCCRed, NERC
Kestrel	*Falco tinnunculus*	3 records; closest record 60m NNW	BoCCAmber
Moorhen	*Gallinula chloropus*	6 records; closest record 60m NNW	BoCCAmber, WCA (1)
Nuthatch	*Sitta europaea*	2 records; closest record 60m NW	BoCCGreen, WCA (1)
Pied wagtail	*Motacilla alba*	3 records; closest record 60m NNW	BoCCGreen, WCA (1)
Redwing	*Turdus iliacus*	3 records; closest record 60m NNW	BoCCRed, WCA (1)
Robin	*Erithacus rubecula*	10 records; closest record 60m NNW	BoCCGreen, WCA (1)
Siskin	*Carduelis spinus*	6 records; closest record 60m NNW	BoCCGreen, WCA (1)

Common Name	Scientific Name	Records	Conservation Status
Song thrush	*Turdus philomelos*	3 records; closest record 60m NNW	BoCCRed, NERC
Wren	*Troglodytes troglodytes*	5 records; closest record 60m NNW	BoCCAmber, WCA (1)
Canada Goose	*Branta canadensis*	3 records; closest record 345m N	WCA
Greenfinch	*Chloris chloris*	1 records; closest record 345m N	BoCCRed, WCA
Little owl	*Athene noctua*	5 records; closest record 345m N	WCA
Stock dove	*Columba oenas*	4 records; closest record 345m N	BoCCAmber
Tawny owl	*Strix aluco*	6 records; closest record 345m N	BoCCAmber
Feral pigeon/Rock dove	*Columba livia domestica*	2 record; closest record 0.5km SW	BoCCGreen, WCA
Barn owl	*Tyto alba*	3 records; closest record 0.5km NNW	BoCCGreen, WCA (1)
Mallard	*Anas platyrhynchos*	6 records; closest record 0.5km SW	BoCCAmber
Goosander	*Mergus mrganser*	3 records; closest record 0.6km N	BoCCGreen, WCA
House martin	*Delichon urbicum*	1 record; closest record 0.6km N	BoCCAmber
Kingfisher	*Alcedo atthis*	1 record; closest record 0.6km N	BoCCAmber, WCA (1)
Lesser redpoll	*Acanthis cabaret*	3 records; closest record 0.6km N	BoCCRed, NERC
Linnet	*Linaria cannabina*	1 record; closest record 0.6km N	BoCCRed, NERC
Mistle thrush	*Turdus viscivorus*	2 records; closest record 0.6km N	BoCCRed
Spotted flycatcher	*Muscicapa striata*	1 record; closest record 0.6km N	BoCCRed, NERC
Swallow	*Hirundo rustica*	3 records; closest record 0.6km N	BoCCGreen
Woodcock	*Scolopax rusticola*	1 record; closest record 0.6km NW	BoCCRed
Buzzard	*Buteo buteo*	5 records; closest record 0.8km SSW	BoCCGreen, WCA
Little grebe	*Tachybaptus ruficollis*	6 records; closest record 0.8km NNW	BoCCGreen
Mute swan	*Cygnus olor*	9 records; closest record 0.8km NNW	BoCCGreen, WCA (1)

Common Name	Scientific Name	Records	Conservation Status
Skylark	*Alauda arvensis*	2 records; closest record 0.8km NE	BoCCRed, NERC
Starling	*Sturnus vulgaris*	2 records; closest record 0.8km SSW	BoCCRed, NERC
Willow warbler	*Phylloscopus trochilus*	1 record; closest record 0.8km NNW	BoCCAmber
Brambling	*Fringilla montifringilla*	3 records; closest record 1km NE	BoCCGreen, WCA (1)
Lapwing	*Vanellus vanellus*	2 records; closest record 1km NE	BoCCRed, NERC
Reed bunting	*Emberiza schoeniclus*	2 records; closest record 1km NE	BoCCAmber, NERC
Tufted duck	*Aythya fuligula*	3 records; closest record 1km NNW	BoCCGreen
Lesser black-backed gull	*Larus fuscus*	1 record; closest record 1.1km NW	BoCCAmber
Golden eye	*Bucephala clangula*	1 records; closest record 1.1km NNW	BoCCAmber
Treecreeper	*Certhia familiaris*	1 record; closest record 1.1km NW	BoCCGreen, WCA (1)
Green sandpiper	*Tringa ochropus*	1 records; closest record 1.4km SSW	BoCCAmber, WCA (1)
Little egret	*Egretta garzetta*	2 records; closest record 1.3km NE	BoCCGreen
Merlin	*Falco columbarius*	1 record; closest record 1.3km WNW	BoCCRed, WCA (1)
Sparrowhawk	*Accipiter nisus*	1 record; closest record 1.3km S	BoCCAmber, WCA (1)
Yellowhammer	*Emberiza citrinella*	1 record; closest record 1.3km S	BoCCRed, NERC
Green woodpecker	*Picus viridis*	3 records; closest record 1.4km ESE	BoCCGreen
Grey wagtail	*Motacilla cinerea*	2 records; closest record 1.4km SW	BoCCRed
Hawfinch	*Coccothraustes coccothraustes*	1 record; closest record 1.4km SW	BoCCRed, NERC
Snipe	*Gallinago gallinago*	1 record; closest record 1.4km SW	BoCCAmber
Fish			

Common Name	Scientific Name	Records	Conservation Status
European eel	*Anguilla anguilla*	2 records; closest record 1.5km SW	Eel Regs[12], NERC
Brown sea trout	*Salmo trutta*	2 records; closest record 1.5km SW	UK BAP Priority species, NERC
Bullhead	*Ameiurus melas*	4 records; closest record 345m N	
Grayling	*Thymallus thymallus*	2 records; closest record 1.6km SW	UK BAP Priority species
Atlantic salmon	*Salmo salar*	2 records; closest record 1.5km SW	UK BAP Priority species, NERC

viii Full species records are available to view upon request.

[12] Eel (England and Wales) Regulations 2009

16 APPENDIX 6: PROTECTED/PRINCIPAL SPECIES SURVEY RESULTS

16.1 Great Crested Newts

TBC

16.2 Bats

Table 12: Ground Level Tree Assessment Results

Tree Ref.	Tree species	Potential bat roost features	Classifcation	Location	Photograph
1	Oak	Deadwood and lifted bark	Low	SO 53279 48937	
2	Crack willow	Woodpecker holes (multiple)	Moderate	SO 53274 48968	
3	Ash	Callus rolls, upwards facing/water ingress	Low	SO 53136 49040