Brindle &Green

Ecological Impact Assessment

Land North of Gloucester Road, Weston-under-Penyard, Ross on Wye, Hereford

Report Reference: BG22.184.22 REV3

June 2024

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Revision Details

Revision	Approved	Revision Details
REV1	VH	Minor wording amendments to section 2 and section 6, regarding the application type and the appendix references.
REV2	VH	Updated layout and updated net gain assessment
REV3	KB	Minor wording amendments to section 6.5 and section 8

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1 Summary

1.1 EcIA Contents

1.1.1 The production of an Ecological Impact Assessment (EcIA) is considered the best practice methodology (by the Chartered Institute of Ecology and Environmental Management (CIEEM)) for documenting all ecological issues associated with proposed development and supersedes the more out of date method of preparing individual reports for differing species and habitats. The aim is to consider any impacts alongside each other, to provide a coordinated solution when considering mitigation, and to set out clear and well-defined enhancement prescriptions that work in line with the plans for development. Through assessing the scale of impact (Page 25) the aim is to result in a scheme that is assessed as making a positive contribution to biodiversity at a local level at the very least.

1.1.2 This EcIA draws on the results of the Preliminary Ecological Appraisal (PEA) undertaken and reported upon previously (BG22.184 REV1, April 2023) and adds the results of additional protected species surveys that have been completed since. In the case of this site, the PEA identified habitats suitable for supporting breeding birds, roosting bats, foraging and commuting bats, [redacted] reptiles, and amphibians, as well as considering the usual impacts associated with other species of principle importance listed under section 41 of The Natural Environment and Rural Communities (NERC) Act 2006.

1.1.3 Further protected species surveys undertaken during the active season of 2023 failed to identify the presence of badgers within the application boundary.

1.1.4 Breeding bird surveys
grassland dominating the site, as well as the woodland adjacent to boundaries, offered important foraging and nesting habitat for a range of locally frequent species.

1.1.5 Bat activity surveys identified moderate levels of foraging and commuting activity within, and adjacent, to the application boundary, with some species known to be rare in the county recorded within the application boundary, such as lesser horseshoe (*Rhinolophus hipposideros*) and greater horseshoe (*Rhinolophus ferrumequinum*) bats.

1.1.6 A low population of Great Crested Newt (*Triturus cristatus*), with a peak count of 1 individual, was identified within Pond 1 in the centre of the site. Mitigation is proposed through a trapping

and translocation exercise, with captured individuals relocated to a receptor site in the south-east corner of the site, associated with Pond 2 which will be retained by the scheme.

1.1.7 slow worm (*Anguis fragilis*), with a peak count of 5 individuals, was identified associated with the tussocky semi-improved grassland in the southern extent of the site, within the grassland adjacent to the scrub in the east of the site, as well as along the eastern boundary. Mitigation is proposed through the translocation of the reptile population into a designated receptor area in the north-east corner of the site.

1.1.8 This report was compiled following the revised Guidelines for EcIA in the UK and Ireland (CIEEM, 2018) and highlights and addresses the following ecological constraints as shown in Table 1 overleaf.

Table 1: Summary of ecological constraint assessment for land to the north of Gloucester Road, Weston under Penyard, and proposed mitigation

Ecological	Value	Effect	Significance prior to mitigation	Mitigation / precautionary measures	Significance of residual effect	Securing mitigation
Designated Sites	International	Two Special Areas of Conservation within 5km of the application site. Indirect effects of pollution discharge into waterways	Unlikely Negative (Significant)	Landscape and Ecological Management Plan (LEMP) and Construction and Environmental Management Plan (CEMP) required during and post-construction.	Neutral (Not Significant)	Mitigation secured through planning condition prescribing LEMP and CEMP document. Local Authority to consult Natural England to determine whether bespoke mitigation or financial compensation is required.
Habitat	Local	Loss of modified grassland habitat of low ecological value. Habitat creation and enhancement post-construction. Indirect effects of pollution onto retained grassland, ponds and boundary vegetation	Likely Positive (Not Significant)	Precautionary measures / Reasonable Avoidance Measures (RAMs) Biodiversity Net Gain secured through offsite measures	Neutral (Not Significant)	Mitigation secured through planning condition prescribing LEMP and CEMP document. Biodiversity Net Gain to be secured through s106 agreement with local authority.
Breeding Birds	Local	Disturbance / Injury to individuals Loss of breeding habitat	Likely Negative (Not Significant)	Pre works check Clearance of vegetation outside of breeding season	Neutral (Not Significant)	Mitigation / precautionary measures secured through planning condition

Ecological	Value	Effect	Significance prior to mitigation	Mitigation / precautionary measures	Significance of residual effect	Securing mitigation
				Scrub creation and grassland enhancement in the south of the site to provide nesting opportunities		
Roosting Bats	Site	Disturbance to individuals through increased artificial lighting post construction	Likely Negative (Not Significant)	Retention of important foraging areas (Pond 1, Pond 2, mature boundary features, T1) Sensitive lighting scheme	Neutral (Not Significant)	Mitigation/precautionary measures secured through planning condition
Foraging and Commuting Bats	Local	Disturbance / loss of foraging and commuting habitat	Likely Negative (Significant)	Retention of important foraging areas (Pond 1, Pond 2, mature boundary features, T1) Sensitive lighting scheme	Neutral (Not Significant)	Mitigation/precautionary measures secured through planning condition
[redacted]		commuting habitat				
Reptiles	Local	Disturbance / Injury / Death to individuals Habitat Loss	Certain Negative (Not Significant)	Trapping and Translocation exercise following the process outlined within the EPS licence for GCN	Neutral (Not Significant)	Methodology outlined in CEMP and Reptile Mitigation Strategy. Documents to be secured as a condition of planning
Amphibians	Local	Injury / Death to individuals	Certain Negative (Not Significant)		Neutral (Not Significant)	Methodology outlined in CEMP secured as a condition of planning

Ecological	Value	Effect	Significance prior to mitigation	Mitigation / precautionary measures	Significance of residual effect	Securing mitigation
(Great Crested Newt)		Disturbance to commuting routes Loss of suitable terrestrial and breeding habitat		EPS Development licence including exclusion and translocation		Granted Licence from Natural England secured prior to commencement, following Discharge of Conditions
Amphibians (Common Toad *Bufo bufo)*	Site	Disturbance to commuting routes / loss of suitable habitat for common toad	Likely Negative (Not Significant)	Maintenance to boundary / connective habitat Site Specific Method Statement	Neutral (Not Significant)	Mitigation secured through planning condition outlining requirements for Method Statement, CEMP and LEMP.
MSPI Hedgehog	Local	Disturbance / injury to individuals Loss of foraging and commuting habitat	Likely Negative (Not Significant)	RAMs within CEMP Maintenance of connective habitat through landscape planting and habitat retention and enhancement	Neutral (Not Significant)	Mitigation secured through planning condition

2 Introduction

2.1 Context

2.1.1 Brindle and Green Ltd were commissioned by Lagan Homes to provide an Ecological Impact Assessment (EcIA) at Land North of Gloucester Road, Weston under Penyard, Ross on Wye, Herefordshire (Figure 1). This EcIA report documents the constraints identified within the Preliminary Ecological Appraisal undertaken by Brindle and Green Ltd (BG22.184 April 2023) and adds the results of additional protected species and habitat surveys undertaken during 2023. The EcIA includes the following sections:

- Baseline Ecological Conditions
- Assessment of effects and mitigation measures
- Enhancement strategy
- Summary of residual effects

2.1.2 The application site is approximately 4.3ha in extent and comprised a species poor semi-improved grassland field, bound by species-poor native hedgerows and a mature treeline, with pockets of dense scrub and two ponds in the south-east of the site. The site is located to the north of the A40 Gloucester Road, to the east of the village of Weston-under-Penyard, Herefordshire.

2.1.3 The site is the subject of a full application for site clearance to facilitate the development of 44 new residential properties, with associated access, parking and landscaping. Design proposals are available and detailed within Appendix 6 of this document.

2.1.4 This report prescribes additional mitigation measures during construction and post-construction phases to avoid, reduce or reverse adverse impacts and prevent biodiversity loss.

2.1.5 Results presented within this report have been prepared by an experienced ecologist and are therefore the view of Brindle and Green Limited. The survey is based on information provided by our client, the development proposals, and the results of the desk study and our survey of the site.

3 Methodology

3.1 Desk Study

3.1.1 Table 2 below lists organisations and/or resources used as part of the desk study process. Data regarding any known statutory or non-statutory sites in addition to any records for protected species were requested from the following sources:

Table 2: Ecological Data Resources

Consultant	Requested Data	Search Radius	Date Requested
MAGIC Maps (*Multi-Agency Geographic Information for the Countryside*)	– National and International Site Designations – Granted EPS Development Licences	2km	13/03/2023
Local Environmental Records Centre *(Herefordshire Biological Records Centre)*	– Protected and notable species records – Local, National and International Site Designations	2km	20/03/2023

3.2 Extended Phase 1 Habitat Survey

3.2.1 A Phase 1 habitat survey was undertaken following survey guidance (JNCC 2007) to establish the presence and distribution of habitat types within the site and potential ecological constraints to development. A Phase 1 Habitat Map was produced (Appendix 1) and where additional details were required Target Notes have been provided (Appendix 2). A plant species list (Appendix 2) summarising all plants identified on site was produced during the survey and all scientific nomenclature was produced according to Stace (2010).

3.2.2 This survey was extended to note the potential for habitats on-site to support protected and/or notable species and for evidence of any such species. The habitats on site were assessed for their suitability to support protected species in relation to the habitat types found at the site. Any incidental sightings of field signs were noted at the time of survey. Where evidence of, or the confirmed presence of a protected species was identified, further, species specific surveys are recommended to ensure that the presence or otherwise of a legally protected species is fully considered prior to the determination of any planning approval or to guide an EPS development licence.

3.2.3 Hedgerows on site were assessed following the Hedgerow Survey Handbook (DEFRA 2007) and defined as species-rich if the structural species making up a surveyed 30m section of hedgerow included at least four native woody species. Results were compiled and assessed against qualifying criteria within the Hedgerow Regulations (1997) and also the UK Biodiversity Action Plan.

3.2.4 Legislation, guidance and methodology for species relevant to this site are presented in full within Appendix 3 of this report.

3.2.5 The survey was undertaken by Victoria Halford BSc (Hons), Consultant Ecologist Natural England Great Crested Newt Licence (2022-10210-CL08-GCN); and Sammy Harcourt BA (Hons), Graduate Ecologist. The survey was carried out on 23/02/2023 at 10:00am. The survey was overseen by Lucinda Sweet PhD, MCIEEM, Natural England Bat Licence Class 2 (2019-39122-CLS-CLS), Great Crested Newt licence (2016-22852-CLS-CLS), Technical Director.

3.3 Phase 2 Surveys

3.3.1 Within the Preliminary Ecological Appraisal (PEA), The following ecological phase 2 surveys have been recommended to allow a full impact assessment on the ecological value of the application site.

- Breeding Bird Survey
- Bat Activity Survey
- Badger Survey
- Reptile Survey
- Amphibian Survey

Breeding Bird Survey

3.3.2 Breeding Bird Surveys (BBS) were carried out in accordance with a modified version of Gilbert G, Gibbons DW, Evans J. (1998) Bird Monitoring Methods: Breeding Bird Survey (BBS) (pages 389-393).

3.3.3 Survey visits were timed to ensure the optimal recording of breeding bird species. All habitats on site, unless otherwise stated, were examined for breeding bird activity. All visits and counts also considered bird activity within habitat associated with the application site, focusing notably on the semi-improved neutral grassland dominating the application site as well as the dense scrub in the west of the site.

3.3.4 Surveys were undertaken by either a single, or two surveyors walking a transect route encompassing the site boundary and the habitats within the interior of the application site (Appendix 9A). The transect was walked at a slow pace with frequent pausing to record birds heard or observed.

3.3.5 Bird locations and behaviours were mapped onto A3 OS Detail Maps using British Trust for Ornithology (BTO) codes. The transect route was modified where a risk of undue disturbance to breeding birds was identified.

3.3.6 Observers assessed the number of proven, probable and possible breeding birds following the criteria set out below:

3.3.7 Breeding is proved if:

- a nest or used nest is found
- a nest with young is seen or heard
- recently fledged young are located
- adults are seen entering or leaving a nest-site, or an adult is seen incubating
- an adult is seen carrying a faecal sac or food for young

3.3.8 Breeding is probable if:

- a pair of birds is seen in suitable nesting habitat during the breeding season
- a male is heard singing at the same place on two or more occasions
- courtship and/or display are seen

- a bird is seen visiting a probable nest-site
- birds exhibit agitated behaviour or give alarm-calls
- nest-building is observed

3.3.9 Breeding is possible if:

- birds are seen in the breeding season
- birds are seen in possible nesting habitat during the breeding season
- a singing male is heard once during the breeding season

3.3.10 Three site visits (1st visit - Reconnaissance visit to set up and check transect route and early season count, 2nd visit – Mid season count (early April – mid May), 3rd visit – Late season count (mid-May – late June)) were undertaken on 06/04/2023, 17/05/2023 and 27/06/2023 between 05:30 and 08:00 BST under favourable weather conditions. Survey visits were timed to ensure the recording of both resident and migrant breeding birds. The surveys were carried out by Ellen Marshall BSc (Hons) MRes Natural England Bat Licence Class 1 (2017-28407-CLS-CLS), Great Crested Newt Licence (2016-23052-CLS-CLS), Barn Owl Licence (CL29/00362), CS38 NPTC Certified Tree Climber, Head of Ecology; and Laura Saunders MSci (Hons.), Assistant Ecologist.

3.3.11 Survey conditions, and associated figures can be found within Appendix 9A.

Bat Activity Survey

3.3.12 Bat activity surveys were carried out following the guidelines outlined within Natural England's Bat Mitigation Guidelines (Mitchell-Jones, 2004) and the Bat Conservation Trust Good Practice Guidelines (Colins, 2023). One survey was carried out per month (May – September) during the active season, with one transect route walked per survey.

3.3.13 Two surveyors walked a pre-planned route at a constant speed along the linear features of the application site, in order to collect bat activity data. Surveyors stopped at predetermined point count locations along the transect where activity was recorded for a 5-minute period. If a bat crossed during the transect, it was recorded, and the direction of activity recorded before continuing the transect. Surveyors were equipped an Echo Meter Touch detector connected to

an iPad. Where possible, species were identified using information from visual and audio cues, all sonograms were recorded on to the iPad and were analysed using Analook software to confirm species identification.

3.3.14 Two remote bat detectors (SM4ZS & SM-MINI) were positioned in two locations upon the transect route, in order to collect bat activity data while unattended, over a prolonged period of time. One detector was positioned in the willow scrub to the west of Pond 1 in the centre of the site, with the second detector deployed along the edge of the dense scrub in the north-western corner of the site (see Appendix 9B). The detectors were set to activate 15 minutes prior to sunset and de-activate 15 minutes following sunrise. An automated survey was carried out for a 5-day period per month May to September. The data aims to provide context to the transect surveys carried out each month. To this purpose, five consecutive nights worth of data each month from both detectors were collected and analysed, where possible including each of the nights on which transect surveys were undertaken.

3.3.15 The dusk transects surveys began at sunset and lasted for up to two hours following sunset. Five surveys were conducted on 24/05/2023, 19/06/2023, 18/07/2023, 21/08/2023, and 11/09/2023 by Ellen Marshall BSc (Hons) MRes Natural England Bat Licence Class 1 (2017-28407-CLS-CLS), Head of Ecology; Matthew Norris BSc (Hons.) MRSB, Consultant Ecologist; Joe Hall BSc (Hons), Assistant Ecologist; Laura Saunders MSci (Hons.), Assistant Ecologist; Holly Fowler BSc (Hons), Consultant Ecologist; Lloyd Wyatt BSc (Hons), Assistant Ecologist; and Tom Buckingham, Trained Seasonal Ecologist.

3.3.16 Survey conditions, and results can be found within Appendix 9B.

Badger Survey

3.3.17 The badger survey was carried out in accordance with guidelines approved by the Chartered Institute of Ecology and Environmental Management, including: Best Practice Guidance - Badger Surveys, Scottish Natural Heritage (2003), Inverness Badger Survey 2003. Commissioned Report No. 096. and Surveying Badgers, The Mammal Society, Harris S, Cresswell P and Jefferies D (1989).

3.3.18 Legislation relating to Badgers can be found in Appendix 5 of this report.

3.3.19 Evidence of badger activity, including faeces, paths, scratching, snuffle holes, hair or footprints, was searched for along all the boundary features, and within the scrub and grassland within the application site.

Identification of Setts

3.3.20 Any holes discovered were categorised into sett types using the following criteria, quoted from Natural England guidance (NE, 2007):

- Main Setts usually appear well-used, well established and have a large number of holes. Big spoil heaps, often with piles of old bedding are located outside. Main setts tend to have well-worn paths between the sett and foraging areas, and between sett holes. They are generally considered to be breeding setts and are often in use all year round. A social group of badgers will only have one main sett within their territory.

- Annexe Setts are always close to a main sett and are usually connected by one or more obvious well-worn paths. They consist of several holes but are not necessarily in use the whole time, even if the main sett is very active. Should a second litter of cubs be born within the social group, they are likely to be raised within an annexe sett.

- Subsidiary Setts often these setts have very few holes, are usually at least 50m from a main sett and do not have an obvious path connecting them with another sett. Subsidiary setts are not continuously active.

- Outlying Setts usually comprising one or two holes with very little spoil outside (thus indicating that the tunnel system underground is not extensive), outlying setts have no obvious path connecting them with another sett and are used only sporadically.

3.3.21 Indication of the Level of Activity at each Sett:

- Well used sett entrances contain no debris or vegetation, are obviously regularly used and often show signs of having been recently excavated.

- Partially used setts are those with entrances not in regular use and which may have debris (twigs, leaves, moss etc) around the entrance. However, they could potentially be used regularly in the future with minimal clearance necessary.

- Disused setts show signs of not having been in use for a considerable period of time and would not be used again without extensive clearance by a badger.

3.3.22 A single day-time walkover survey was undertaken on 26/04/2023 by Matthew Norris BSc (Hons.) MRSB, Consultant Ecologist; and Joe Hall BSc (Hons), Assistant Ecologist.

Reptile Survey

3.3.23 A seven-visit, presence or likely absence survey was undertaken during suitable conditions between April and May 2023. Reptiles are considered to be active between March and October with optimal survey conditions during April and May or September. Surveys were undertaken during suitable weather conditions when the air temperature was between 9 - 18°C (Froglife, 1999).

3.3.24 Reptile refugia (1m x 1m) constructed from roofing felt were used to observe basking and sheltering reptiles. Refugia were laid at a density of between 5 and 10 per hectare of suitable habitat (Froglife, 1999).

3.3.25 One hundred mats were laid on 11/04/2023 and were left to embed for a minimum period of two weeks, with a series of seven visits undertaken on: 26/04/2023, 27/04/2023, 03/05/2023, 11/05/2023, 16/05/2023, 23/05/2023, and 25/05/2023 by Joe Hall BSc (Hons), Assistant Ecologist, Matthew Norris BSC (Hons), MRSB, Consultant Ecologist; Jade Bateman MSc (Hons), QCIEEM, Assistant Ecologist; Lloyd Wyatt BSc (Hons), Assistant Ecologist; and Helen Staton BSc (Hons), ACIEEM, Senior Ecologist.

3.3.26 Survey conditions, and a refugia map can be found within Appendix 9C.

Great Crested Newt Survey

3.3.27 Suitable water bodies found within the project site or within 500m of the project site were subjected to a minimum of 4 presence/absence surveys which were undertaken in suitable conditions, at the optimal time of year (between mid-March and mid-June) as per Natural England guidelines; described in the Great Crested Newt Mitigation Guidelines, English Nature, (2001).

3.3.28 The water bodies were subjected to three of the following survey methodologies:

- **Bottle Trapping.** This method involves setting bottle traps around the water body margin and leaving the traps overnight. Some studies indicate that bottle trapping is the most reliable method for detecting the presence of great crested newts and other amphibians, particularly when surveying turbid waterbodies, or waterbodies with dense macrophyte cover.

- **Egg Search.** This method involves searching both live and dead submerged vegetation for amphibian eggs. This is often a very effective method for detecting great crested newt presence.

- **Netting.** A professional Hand Net with Wooden Handle (250mm Wide Frame) is used to search for great crested newt adults/immature adults and larvae within the margins of the pond.

- **Torch Survey.** A SM126 Smartlite torch with 1 million candle power and 1000m beam is used to illuminate the ponds and allow the surveyor to record any great crested newts observed after sunset.

- **Terrestrial Refuge Searching.** This method involves looking underneath objects such as rocks, logs, moss and discarded debris in the vicinity of a pond. Adult and juvenile great crested newts can be found underneath such objects, between March and October. Refuge searching is not a reliable method on its own and is only used as a supporting method to the other methods described.

3.3.29 Suitable, permissible ponds were surveyed on four occasions on 11/04/2023, 26/04/2023, 02/05/2023, and 24/05/2023 by Ellen Marshall BSc (Hons) MRes Natural England Great Crested Newt Licence (2016-23052-CLS-CLS), Head of Ecology; Matthew Norris BSc (Hons.) MRSB, Natural England Great Crested Newt Licence (2020-44812-CLS-CLS), Consultant Ecologist; Joe Hall BSc (Hons), Assistant Ecologist; Lloyd Wyatt BSc (Hons), Assistant Ecologist; and Jade Bateman MSc (Hons), QCIEEM, Natural England Great Crested Newt Licence (2022-10204-CL08-GCN), Assistant Ecologist. Survey conditions, pond descriptions and results can be found within Appendix 9D.

3.3.30 Pond 1 was subject to an additional two survey visits on 29/05/2023 and 16/06/2023, in order to classify the population size of GCN identified during the first four visits. Pond 2 was not found to

support a population of GCN and was therefore only subject to the four presence / absence surveys.

3.4 Limitations

3.4.1 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.

3.4.2 The Phase 1 habitat assessment (BG22.184 April 2023) was undertaken outside of the optimal survey period for Phase 1 survey, regarded as late March– October (JNCC, 2003). Certain habitat types such as improved grassland can be surveyed at any time of the year where the species that they comprise vary very little. Where habitats are more complex and support species with different growing seasons, they may be recommended for further, more detailed assessments at the appropriate time of the year. Further survey work has not been recommended at this site, because it is considered that the Phase 1 habitat survey has accurately captured the importance of the habitats within the application boundary.

3.4.3 Two statics detectors were deployed per month of the active season (May – September) to remotely gather data pertaining to bat activity within the application boundary. Both static detectors failed to record data during the May deployment, and the static located in the northwest of the application site, also failed during the June deployment. However, 35 nights of data has been analysed from June – September (Location 1) and July – September (Location 2). This, in combination with the manual walked surveys, is considered to form an accurate picture of the bat activity within the site, as well as enabling conclusions to be drawn regarding the significance of vegetative features and important flight paths within the site. It is considered that robust conclusions regarding the importance of the site to local bat populations have been made.

3.4.4 Access to waterbodies within the zone of influence was restricted during the GCN surveys. Ponds on site (P1, P2) were included within survey efforts, however access to ponds northeast of the site (ponds P3 – P7), as well as ponds northwest of the application site (P8 – P11) were not granted by the landowners. Access to Pond 7 was granted late, and only two survey visits were able to be completed on this pond. A low population of GCN was confirmed within P1 onsite. Therefore, the terrestrial and aquatic habitat on site is considered valuable to this protected species. The lack of access to the additional eight ponds within the zone of influence for the

development is not considered to form a constraint as appropriate and proportionate mitigation measures are proposed, in order to safeguard this species. Following the completion of such measures, it is considered that GCN will be safeguarded during and post development, with habitat enhancements proposed post-construction to increase opportunities for this species within the site.

3.5 Report Lifespan

3.5.1 Given the transient nature of the subject we would consider the survey results contained to be accurate for 1 year.

3.6 Evaluation Methodology

3.6.1 The site and protected and notable species within the zone of influence were classified into one of the following 6 groups (Table 3) following the Guidelines for Ecological Impact Assessment (CIEEM, 2016), depending on the size, rarity, diversity and fragility for a species population. The evaluation also considers County and nationally prepared documents such as LBAP and Red Data books.

Ecological Impact Assessment

3.6.2 The Ecological impacts of a development were assessed using data collected from historic records and current field surveys to and were categorised following EcIA guidelines (CIEEM, 2016) as follows:

- Highlight Protected or notable species which could be impacted as part of the development (Section 5).
- Determine the severity of the impact and effect without specific mitigation measures (Section 6).
- Outline a mitigation strategy highlighting areas of potential environmental improvement, which upon implementation aims to avoid or reduce negative impacts and effects (Section 6).
- Assess the feasibility and likelihood of success of the mitigation strategy (Section 7).

- Assess the residual impact of the development assessing that the mitigation has been successfully implemented and all prescriptions have been implemented (Section 7).

Classifying the extent of impacts and effects

3.6.3 The extent of impacts and effects need to be described in an unambiguous, consistent manner. The direction of change 'Positive' or 'Negative' should be assessed in relation to the overall biodiversity outcome, and should consider the duration, timing and reversibility of the constraint and be classified into one of the following five categories:

- **Positive (Significant)**

  Activity will create a beneficial effect over a long term, created a valued ecological feature

- **Positive (Not Significant)**

  Activity will create a beneficial effect without markedly improving the conservation status

- **Neutral (Not Significant)**

  Effects or neutral or no net change will occur

- **Negative (Not Significant)**

  Negative effect without causing long-term irreversible damage

- **Negative (Significant)**

  Significant Negative effect including loss or long-term irreversible damage to integrity or status of a valued ecological feature

Table 3: Definitions of each of the six evaluation brackets, indicating the importance of each habitat type and an example of their possible habitat status

Evaluation Value	Example of habitat or species
International	An internationally designated site or candidate site, including habitat or species included within Special Protection Areas (SPA) / Special Areas of Conservation (SAC), Ramsar Sites, listed under Annex 1 of the Habitats Directive.

Evaluation Value	Example of habitat or species
National	Sites designated at UK level, e.g. Sites of Special Scientific Interest (SSSI), supporting species considered nationally threatened or rare. A regularly occurring regionally or county significant population/number of any nationally important species A feature identified as of critical importance within Section 41 of the NERC Act (2006).
Regional	Key Habitat type included within BAP. A regularly occurring, locally significant number of a regionally important species.
County	Designated sites, such as Sites of Biological Importance (SBIs) or viable habitat / species populations of value at a county level (LBAP).
District	District level designated sites, such as Local Wildlife Sites (LWS) or habitats / species populations of value at a district (Which have features qualifying for LWS status). Sites/features that are scarce within the district or which appreciably enrich the district habitat resource.
Local / Site	Habitats or species populations of value in a local (i.e. within ~ 5km of the site) context. Habitats of poor to moderate biological diversity e.g. established conifer plantations, species poor hedgerows and un-intensively managed grassland which supports species which are common to the local area and whose loss can be easily mitigated.

4 Site Context

4.1 Site Description

4.1.1 The application site can be found at SO 63591 23266 and is positioned on the eastern fringe of the village of Weston-under-Penyard, Herefordshire. The site supports species poor semi-improved grassland, bramble scrub, mature tree lines, hedgerows and two ponds. Residential development bounds the site to the west, with the south of the site bound by the A40 Gloucester Road, beyond which lies a new residential development. The east of the site abuts Bury Hill Lane, beyond which lies extensive agricultural and pastoral land, supporting mature hedgerows and treelines. An area of wood pasture and parkland, BAP Priority Habitat, lies approximately 220m north of the site, with good terrestrial connectivity to the onsite habitats by an arable field, bound by mature trees and hedgerows. The River Wye lies approximately 4km west of the site, separated from the site by the town of Ross-on-Wye, and agricultural land.

4.2 Zone of Influence

4.2.1 The zone of influence is used to describe the geographic extent of potential impacts of a proposed development. This is determined by the type of development proposed in relation to individual species and described within each of the species assessments within section 5 of this report. Maps, aerial photographs, historic data records and field survey results were examined to assess the relationship of the location and its connection to the surrounding environment and habitats beyond the site boundaries.

Figure 1: OS map of the project site and surrounding area. Red line boundary depicts application site. Baseline Ecological Conditions

5 Baseline Ecological Conditions

5.1 Desk Study

Designated Sites

5.1.1 The site was subjected to a search for designated sites within a 2km radius of the site using data supplied by the Local Records Centre (*Herefordshire Biological Records Centre (HBRC)*) and the online desk-based resource MAGIC. No statutory designations were identified within 2km of the application site.

5.1.2 The data supplied by HBRC was received on the 13/04/2023 and is summarised within Table 3. The search revealed a single non-statutory designation within a 2km radius of the site.

5.1.3 A search of the online resource Magic Maps found three internationally designated sites within 5km of the application site, as detailed in Table 4.

Table 4: Summary of Designated Sites within a 5km radius of the application site

Site Name	Grid Ref	Status	Reason for Designation	Distance from site
Statutory Designations				
Wye Valley	SO 6088 2390	Area of Outstanding Natural Beauty (AONB)	Lowland river habitats	2.7km W
Wye Valley & Forest of Dean Bat Sites	SO 605 044*	Special Area of Conservation (SAC)	Lesser Horseshoe Bats, Greater Horseshoe Bats	3.4km SE
River Wye	SO 109 369 *	Special Area of Conservation	Annex I habitat, Annex II species (white clawed crayfish, lamprey, Atlantic salmon, Otter)	3.9km W
Non-Statutory Designations				
Lea Bailey Inclosure SWS	SO 63120 21394	Special Wildlife Site (SWS)	Ancient woodland, excellent habitat for birds	1.9km S

* Grid reference relates to a centroid point for the designation

Protected Species Assessment

5.1.4 Data supplied by HBRC included records of protected species. Full data sets are available upon request. A summary of the closest or most relevant records can be found in Table 5 below.

Table 5: Summary of relevant protected and priority species records

Species	Grid ref.	Date	Description
Bats			
Common pipistrelle *(Pipistrellus pipistrellus)*	SO 63230 23460	2016	43 records of foraging and commuting within 2km of the site, including 10 roosts, 1 of which was within 0.4km of the site.
Myotis sp.	SO 363 773	2016	18 records including foraging and commuting individuals, and 3 roosts, 1 of which is 0.4km from the site.
Brown Long-eared (*Plecotus auritus)*	SO 6323 2346	2016	3 records noted, including 1 roost within 0.4km from the site
Noctule *(Nyctalus noctula)*	SO 652 232	2008	2 records of commuting noted, the most recent being 1.6km from the site.
Greater Horseshoe *(Rhinolophus ferrumequinum)*	SO 6323 2346	2016	9 records of foraging, including 6 roosts, the closest being 0.4km from the site
Lesser Horseshoe *(Rhinolophus hipposideros)*	SO 6323 2346	2016	12 records of foraging and commuting, including 4 roosts, the closest being 0.4km from the site
Long-eared Bat *(Plecotus sp.)*	SO 6323 2346	2016	11 records of commuting, including 3 roosts, the most recent being 0.4km from the site
Natterer's *(Myotis nattereri)*	SO 6324 2348	2016	2 records, 1 commuting and 1 record of droppings noted, the closest being 0.4km from the site
Soprano Pipistrelle *(Pipistrellus pygmaeus)*	SO 6323 2346	2016	14 records of foraging noted, including 3 roosts, the closest and most recent being 0.4km from the site
Serotine *(Eptesicus serotinus)*	SO 63 23	2000	1 record of commuting, 0.6km from the site
Western Barbastelle *(Barbastella barbastellus)*	SO 6186 2256	2013	1 record of commuting, 1.8km from the site
Herpetofauna			
Common toad *(Bufo bufo)*	SO 63407 23432	2015	2 records noted, the closest and most recent being 0.2km from the site
Common frog *(Rana temporaria)*	SO 63407 23432	2015	8 records noted, the closest and most recent being 0.2km from the site

Great crested newt *(Triturus crsitatus)*	Confidential*	2015	18 records within the 2km search radius, the location of which are confidential.
Smooth newt *(Lissotriton vulgaris)*	Confidential*	2015	30 records within the 2km radius, the location of which is are confidential
Mammals			
Western European Hedgehog *(Erinaceaus europaeus)*	SO634235	2011	3 records, the most recent being 0.3km from the site
[redacted]			
Polecat *(Mustela putorius)*	SO628239	2015	1 record within the 2km radius, 1km from the site
Otter *(Lutra lutra)*	SO635232	2003	1 record within the 2km radius, 0.1km from the site
Birds			
Bullfinch *(Pyrrhula pyrrhula)*	SO6325	2013	10 records within the 2km radius, the most recent being 1.8km from the site
Skylark *(Alauda arvensis)*	SO6425	2013	25 records within the 2km radius, the most recent being 1.7km from the site
Wren *(Troglodytes troglodytes)*	SO63242348	2015	37 records within the 2km radius, the most recent being 0.4km from the site
Yellowhammer *(Emberiza citronella)*	SO6325	2013	17 records within the 2km radius, the most recent being 1.8km from the site

5.1.5 MAGIC Maps revealed five granted European Protected Species (EPS) Licences within 2km of the site, details of which can be found in Table 6 below.

Table 6: Granted EPS Licences within 2km of the site

Licence Start Date	Licence End Date	Species Listed on the Licence	Licensable Work	Approx. Distance from Site
November 2019	November 2024	Common Pipistrelle (*Pipistrellus pipistrellus*), Brown Long-eared (*Plecotus auritus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Natterer's (*Myotis nattereri*), Greater Horseshoe (*Rhinolophus ferrumequinum*), Lesser Horseshoe (*Rhinolophus hipposideros*)	Damage of a resting place, Destruction of a resting place	0.3km E
February 2013	February 2015	Brown Long-eared	Destruction of a resting place	0.25km SW
October 2010	October 2021	Brown Long-eared, Common Pipistrelle, Natterer's	Destruction of a breeding site, Destruction of a resting place	0.4km W
February 2010	January 2012	Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared, Whiskered (*Myotis mystacinus*), Brandts (*Myotis brandtii*)	Destruction of a resting place	0.8km SW
October 2017	April 2028	Common pipistrelle, Lesser horseshoe, Soprano pipistrelle	Destruction of a resting place	1.2km SE

Priority Habitats

5.1.6 No areas of priority habitat were identified within or immediately adjacent to the application site. The closest area of priority habitat was an area of wood pasture and parkland, located approximately 220m north of the site. Two areas of traditional orchard priority habitat lie approximately 240m west of the site, separated from the site by the A40 Gloucester Road.

Evaluation

5.1.7 Nearby designated sites within 5km of the application site, including two SACs, are considered to have 'international' value following evaluation (Table 3). Designated sites within 2km of the application are considered to have 'District' value following evaluation (Table 3).

5.1.8 The site lies within the Impact Risk Zones (IRZ) of two Special Areas of Conservation; Wye Valley & Forest of Dean Bat Sites SAC, located 3.4km southeast, and the River Wye SAC, located 3.9km west. Given the site's proximity to these international designations, Natural England must consult on the application to provide feedback on the requirement for a Habitat Regulation Assessment and nutrient neutrality measures.

5.1.9 The closest non-statutory site is Lea Bailey Inclosure, Special Wildlife Site (SWS) located approximately 1.9km south of the site. Given the distance from the site, it is considered that the development will have no adverse impacts on the integrity of this designation.

5.2 Extended Phase One Habitat Survey

5.2.1 A Phase 1 Habitat Survey Map is presented in Appendix 1 of this report. The habitat descriptions below should be read in conjunction with the Phase 1 plan and the Target Notes in Appendix 2.

5.2.2 A plant species list for those plants identified during the field survey is provided in the Target notes within Appendix 2.

5.2.3 Table 7 below provides a list of habitat types present on site along with their inclusion (or otherwise) as a National and / or Local Habitat of Principle Importance (HPI) (Previously referred to as Biodiversity Action Plan (BAP)).

Table 7: JNCC Habitat Types found on site and inclusion within UK BAP / HPI

Habitat Type	N HPI	L HPI	N/A
Poor Semi-improved Grassland			✓
Ponds	✓		
Dense Scrub			✓
Defunct, Native, Species Poor Hedgerows	✓		

Poor Semi-improved Grassland

5.2.4 The site was dominated by species poor semi-improved grassland, with a sward height of approximately 30cm (Figure 2). Grass species recorded were dominated by false oat grass (*Arrhenatherum elatius*), with abundant cock's foot (*Dactylis glomerata*) and occasional Yorkshire fog (*Holcus lanatus*). The grassland had historically been managed through grazing,

resulting in a tussocky sward structure. No evidence of recent management was recorded at the time of survey. Herbaceous species accounted for approximately 10% of the sward, with species including, but not limited to, lesser celandine (*Ranunculus ficaria*), dove's-foot crane's-bill (*Geranium mole*), ragwort (*Senecio jacobaea*), sorrel (*Rumex acetosa*), cow parsley (*Anthriscus sylvestris*) and hedge woundwort (*Stachys sylvatica*). The density of herb species decreased with distance to boundary features such as the hedgerows. A full species list can be found at Appendix 2.

Figure 2: Poor semi-improved grassland dominating the site

Ponds

5.2.5 Two ponds were identified within the application boundary. Pond 1 (Figure 2) was approx. 700m^2 in area. The pond lies at the centre of the site, in amongst a willow thicket. Adjacent vegetation was dominated by hard rush (*Juncus inflexus*), with frequent bramble (*Rubus fruticosus*), nettle (*Urtica dioica*), occasional hemlock water dropwort (*Oenanthe crocata*). Water quality was poor, with the surface of the pond covered by algal growth. The area was heavily shaded by *Salix sp.* growing around the perimeter of the pond.

Figure 3: Pond 1 located centrally within the site

5.2.6 Pond 2 (Figure 4) was present in the southeast of the site. The area was an old archaeological trench that had filled with water and been recolonised by willow herb (*Epilobium sp.*) and goat willow (*Salix caprea*) over several years. Given the estimated age of the saplings in the area, it is considered that the trench is at least 5 years old.

Figure 4: Pond 2 located in the south-east corner of the site

Dense Scrub

5.2.7 Areas of dense scrub were present throughout the site, largely associated with the site boundaries. The species composition of areas of scrub varied across the site. The scrub along the eastern boundary was dominated by dogwood (*Cornus sanguinea*), bramble, and hazel (*Corylus avellana*). However, the western boundary of the site was dominated by bramble scrub (Figure 5), with frequent hawthorn (*Crataegus monogyna*) and occasional elder (*Sambucus nigra*).

Figure 5: Area of unmanaged bramble scrub in the west of the application site

Defunct, Native, Species Poor Hedgerows

5.2.8 Two hedgerows and a single tree line are present within the site, denoting the southern and eastern boundaries (Figures 6, 7 and 8). The features of the hedgerows are discussed in Table 8 below.

Table 8: Hedgerow Descriptions

Hedgerow Number	Width	Height	Species*	Ground Flora	Comments (management / structure)	Type of Hedgerow	Likely to qualify*
H1	2m	1-2m	Hawthorn (*Crataegus monogyna*), Elder, Bramble	Nettle, Broad-leaved dock, lords-and-ladies (*Arum maculatum*), cow parsley, lesser	Evidence of historic management through flailing, no sign of recent management	Defunct, native, species poor	N

				celandine, cleavers (*Galium aparine*)			
H2	1-2m	4-6m	Elder, *Rosa sp.*, Ash, Holly (*Ilex aquifolium*), Sycamore (*Acer pseudoplatanus*),	Bare ground and leaf litter with occasional nettle, thistle, and snowdrop (*Galanthus nivalis*)	Unmanaged, denoted the southern site boundary. Standard trees associated with the hedgerow	Native, species poor	N
TL1	8-10m	1-2m	Elm (*Ulmus sp.*), Hazel, Hawthorn, Dogwood, holly, *Rosa sp.*	Bare ground and leaf litter with bramble, nettle	Standing deadwood present, lateral growth creating band of scrub in front of tree line, no evidence of recent management	Native, species poor	N

* Underlined species indicate woody species as outlined in Schedule 3 of the Hedgerow Regulations 1997

Likely to qualify as 'Important' under the Hedgerow Regulations

Figure 6: Hedgerow H1 in the southwest of the site

Figure 7: Hedgerow 2 in the southwest of the site

Figure 8: Treeline 1 denoting the eastern site boundary

Invasive Weeds Assessment

5.2.9 An assessment of the site was made to establish the presence of invasive weeds included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). No recordings of invasive weed species were found within, or adjacent to the application area.

Site Evaluation

5.2.10 The habitats on site have been evaluated as having local and county value in relation to the immediate surroundings and a regional context. The hedgerows on site provided value to terrestrial species and despite being considered species-poor, all native hedgerows are UK Biodiversity Action Plan (BAP) priority habitats and are Habitats of Principle Importance under the provisions of the NERC Act 2006. The hedgerows bounding the site, are proposed for retention, with the exception of an approximate 30m stretch along the southern boundary, which is marked for removal to facilitate new site access. This section of hedgerow removal is anticipated to be compensated for through the proposed landscape planting.

5.2.11 Additionally, the ponds within the site are also listed as HPI under the NERC Act 2006. Although these habitats are NHPI habitats, they are also locally abundant and marked for retention, with enhancements proposed for Pond 2 in the east of the site.

5.3 Protected and Notable Species

Notable Plants

5.3.1 The zone of Influence for botanical species was determined to include habitat parcels within or adjacent to the application boundary of the site. During the baseline assessment, species poor semi-improved grassland was recorded dominating the site, with no notable plants identified within the site boundary.

Evaluation

5.3.2 No notable plants were recorded within the application site, as such this ecological receptor is not considered further within this report.

Breeding Birds

5.3.3 The zone of influence for breeding birds pertains to the suitable habitats located within the application site and immediately adjacent to its boundary.

5.3.4 The extensive areas of poor semi-improved grassland, tree lines, scattered trees, hedgerows and dense and scattered scrub within the application boundary and adjacent to the site supported suitable nesting and foraging habitat for a wide range of bird species.

5.3.5 Over the course of the three counts, a total of 31 bird species were recorded within the application boundary (Table 9), although most were not actively nesting within the site. Of these, fourteen species were considered notable, owing to their BAP or BoCC status, including bullfinch (*Pyrrhula pyrrhula*), dunnock (*Prunella modularis*), greenfinch (*Chloris chloris*), house martin (*Delichon urbicum*), house sparrow (*Passer domesticus*), linnet (*Linaria cannabina*), mallard (*Anas platyrhynchos*), mistle thrush (*Turdus viscivorus*), rook (*Corvus frugilegus*), song thrush (*Turdus philomelos*), starling (*Sturnus vulgaris*) and common whitethroat (*Sylvia communis*).

Table 9: Bird Species recorded across the three breeding bird surveys

BTO Codes	Species	Scientific Name	Breeding Status	Red Listed	Amber Listed	Green Listed	Schedule 1	UK BAP	Regional BAP
B.	Blackbird	*Turdus merula*	Probable						
BC	Blackcap	*Sylvia atricapilla*	Possible						
BT	Blue Tit	*Cyanistes caeruleus*	Possible						
BF	Bullfinch	*Pyrrhula pyrrhula*	Possible					✓	
C.	Carrion Crow	*Corvus corone*	Possible						
CH	Chaffinch	*Fringilla coelebs*	Possible						
CC	Chiffchaff	*Phylloscopus collybita*	Probable						
CD	Collared Dove	*Streptopelia decaocto*	Possible						
D.	Dunnock	*Prunella modularis*	Probable					✓	
GW	Garden Warbler	*Sylvia borin*	Possible						
GO	Goldfinch	*Carduelis carduelis*	Possible						
GT	Great tit	*Parus major*	Possible						
GR	Greenfinch	*Carduelis chloris*	Possible						
HG	Herring gull	*Larus argentatus*	Not Breeding					✓	
HM	House Martin	*Delichon urbicum*	Possible						
HS	House Sparrow	*Passer domesticus*	Probable					✓	
JD	Jackdaw	*Corvus monedula*	Possible						
LI	Linnet	*Linaria cannabina*	Possible					✓	
LT	Long-tailed Tit	*Aegithalos caudatus*	Possible						
MG	Magpie	*Pica pica*	Possible						

BTO Codes	Species	Scientific Name	Breeding Status	Red Listed	Amber Listed	Green Listed	Schedule 1	UK BAP	Regional BAP
MA	Mallard	*Anas platyrhynchos*	Possible						
M.	Mistle Thrush	*Turdus viscivorus*	Possible						
MH	Moorhen	*Gallinula chloropus*	**Confirmed**						
PH	Pheasant	*Phasianus colchicus*	Possible						
R.	Robin	*Erithacus rubecula*	Possible						
RO	Rook	*Corvus frugilegus*	Possible						
ST	Song thrush	*Turdus philomelos*	Possible					✓	
SG	Starling	*Sturnus vulgaris*	Possible					✓	
WH	Whitethroat	*Sylvia communis*	Possible						
WP	Woodpigeon	*Columba palumbus*	Possible						
WR	Wren	*Troglodytes troglodytes*	Probable						

5.3.6 Moorhen (*Gallinula chloropus*) was the only confirmed breeding species on site, observed nesting within the onsite pond (P1). There were five probable breeding species, including blackbird (*Turdus merula*), chiffchaff (*Phylloscopus collybita*), dunnock, house sparrow and wren (*Troglodytes troglodytes*). All other species were considered possible breeders, with the exception of herring gull (*Larus argentatus*) which was only observed flying over the site and was not breeding or using the site.

5.3.7 Bird activity was primarily focused within the dense scrub, tree line and hedgerows along the site boundaries. Notably, the western boundary scrub supported higher levels of bird activity with species such as blackbird, blackcap (*Sylvia atricapilla*), bullfinch (*Pyrrhula pyrrhula*), chiffchaff, dunnock, garden warbler (*Sylvia borin*), great tit (*Parus major*), green finch (*Chloris chloris*), house sparrow, robin (*Erithacus rubecula*), song thrush (*Turdus philomelos*), common whitethroat (*Sylvia communis*) and wren all represented. Singing males representative of a range of species were recorded within this area of scrub throughout the surveys, however, only dunnock and wren were recorded singing on more than one occasion in the same location.

Bird activity was notably low surrounding the on-site pond; however, this did support breeding moorhen (*Gallinula chloropus*).

Evaluation

5.3.8 The site was considered to have 'Local Value' to breeding birds. While, not uncommon within the wider landscape, the areas of grassland, scrub, tree lines and hedgerows within the application boundary hold value for nesting birds and were found to support probable and possible breeding species.

Bats

5.3.9 Habitats within the application boundary were considered suitable for roosting, foraging and commuting bats. The zone of influence for bats is considered to be within the redline boundary and connective adjacent habitats. The data search highlighted 116 records of bats, including records of 31 roosts, within a 2km radius of the application site. The closest roost record pertained to records for brown long-eared, greater horseshoe, lesser horseshoe and soprano pipistrelle, located at grid reference SO 6323 2346, approximately 0.4km west from the application site.

5.3.10 Following BCT guidance (Appendix 5), the site was assessed as providing 'Moderate' suitability habitat for commuting and foraging bats with areas of grassland, mature scrub, scattered trees and the two ponds offering good connectivity with the wider landscape.

5.3.11 Furthermore, scattered trees were recorded both within the application site and along the boundaries. Visible trees were assessed and categorised based upon Bat Conservation Trust guidance (Appendix 5). A single oak tree (T1) within the site was considered to have 'Moderate' suitability to support roosting bats. As such, further survey work will be required if the tree is to be impacted as part of the development. Under the new guidance (Collins 2023), this tree supports features that would be categorised as PRF-M and will require further survey work if it is scheduled for removal.

Foraging and Commuting Bats

5.3.12 The data search highlighted records for common pipistrelle, *Myotis sp.,* brown long-eared, noctule, greater horseshoe, lesser horseshoe, natterer's bat, soprano pipistrelle, and western barbastelle within 2km of the site. The grassland and scrub across the site provide suitable

foraging and commuting habitats for bats, and the hedgerows bounding the site providing good connectivity the site to the wider landscape.

5.3.13 Five transect surveys were undertaken between May – September 2023. Activity across the suite of walked surveys was considered to be moderate, with a total of seven species recorded, and a maximum of two individuals seen at any one time. Activity was dominated by common and soprano pipistrelle commuting passes, concentrated in the southern extent of the site, associated with the hedgerow along the southern boundary, scrub and pond habitats in the south-east corner of the site, as well as the adjacent grassland. Foraging activity was dominant above the grassland and scrub adjacent to the treeline bounding the east of the site.

5.3.14 A single Daubenton's bat was seen foraging around T1 and Pond 2 in the south-east of the site during the June transect; the individual was seen making three passes before flying north, heading offsite. A single lesser horseshoe bat was identified during the May transect. The individual was heard commuting to the east of Pond 1, in the centre of the site.

5.3.15 Thirty-five nights of SMZC remote bat detector data were assessed in total, including the nights on which walked transect surveys were carried out. The remote detectors were positioned against two prominent vegetative features (see Table 10 below). Activity was variable between each night recorded by the remote detectors, but the following trends were observed and described below (Appendix 9B).

Table 10: Static Detector Locations (refer to map in Appendix 9B)

Static Location	1	2
Grid Reference	SO 63576 23245	SO 63493 23348
W3W	Exposes.blemishes.loaded	Overused.acclaim.expansion
Comments	On the western side of P1, located in the centre of the site	Located in the northwest corner of the site, associated with the scrub edge habitat

5.3.16 A higher level of activity was seen along the edge of the dense bramble scrub in the north-west of the site (static location 2, Appendix 9B) compared to the western fringe of the willow scrub surrounding P1 (static location 1, Appendix 9B), with a higher frequency of passes and species recorded, including brown long eared bats which were not recorded at static location 1. The activity recorded at both detector locations varied across the season; static location 1 recorded

the greatest number of calls in June, with 369 registrations, whilst static location 2 recorded peak activity in August, with 401 registrations recorded.

5.3.17 Static location 2 recorded greater species diversity, with ten species/genus recorded over the course of the season. At this survey location, there was a noticeable increase of common pipistrelle and brown long eared activity during the summer surveys.

5.3.18 Greater horseshoe bat calls were identified in August at static location 1, and at static location 2 in July. This species was not recorded during the walked activity transects.

5.3.19 *Pipistrellus sp.* social calls were identified by both static detectors during the course of the season, with peaks in June and August.

5.3.20 The remote detectors returned a moderate number of echolocation calls, whilst the dusk walked transects surveys revealed that a maximum number of two individuals seen at any one time, suggesting that the higher levels recorded on the statics relate to foraging activity, where individuals are circling, particularly along the boundary of the scrub in the northwest corner of the site (Appendix 9B). The data collected from the SMZC remote detectors supported the findings of the transect surveys, revealing the same moderate feeding levels by a low number of individuals from a diverse range of species, with some species of elevated significance.

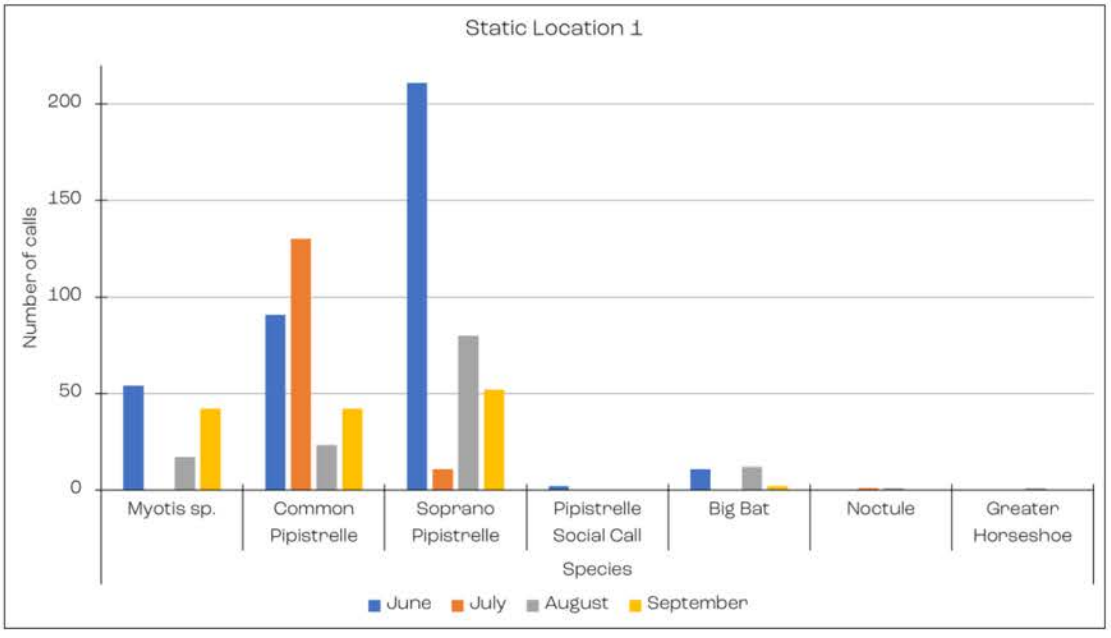


Figure 9: Bat passes recorded by SMZC Remote detector at Location 1, to the west of P1 in the centre of the site Big bat refers to noctule, serotine or Leisler's species.

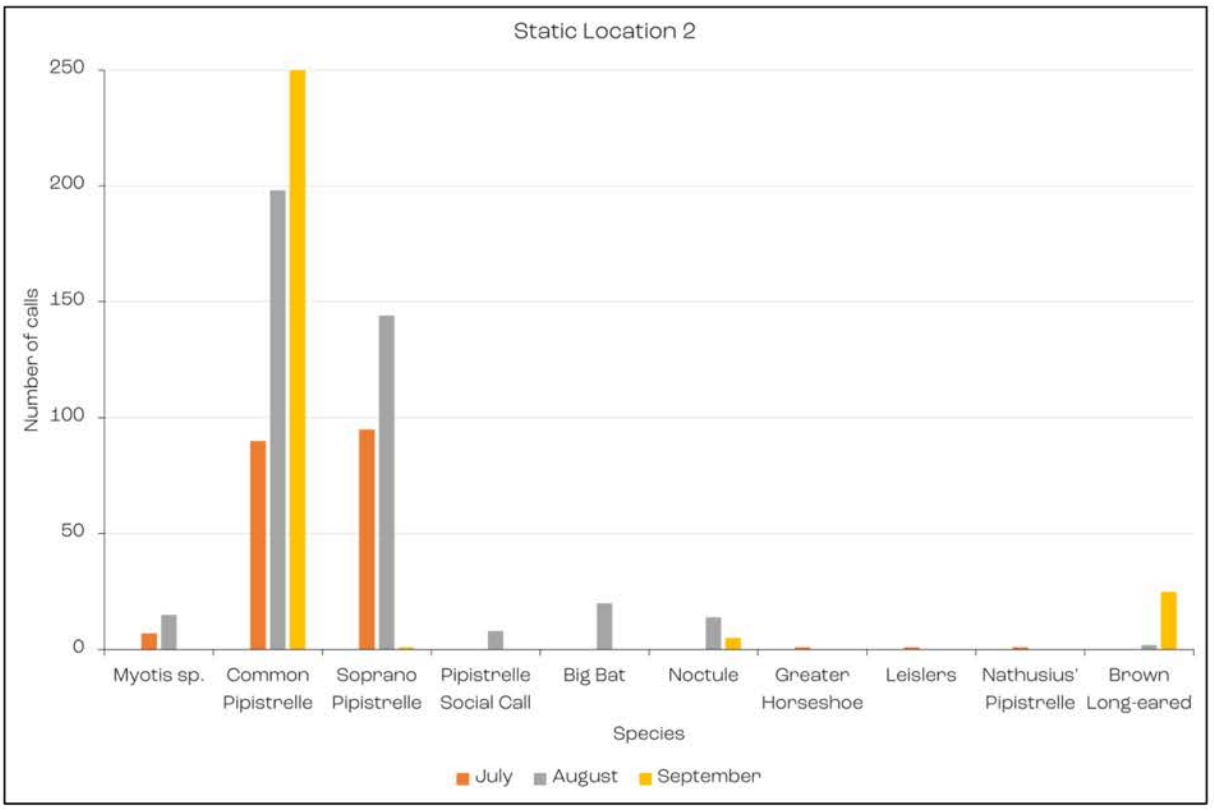


Figure 10: Bat passes recorded by SMZC Remote detector at Location 2 in the north-east corner of the site

Evaluation

5.3.21 The site has been assessed as being of 'Local Value' for roosting bats following assessment (Wray et al 2010).

5.3.22 The foraging and commuting habitat within the application site was assessed to be of 'County Value' following assessment (Wray et al 2010), scoring 23 for foraging areas and 24 for commuting routes.

[redacted]

[redacted]

Reptiles

5.3.25 The zone of influence for reptiles was considered to be within the site and 500 metres of connective habitat. The undulating topography of the grassland in the northern half of the site and the banks of the ponds provided ideal basking habitat, whilst the variable sward structure of the grassland, scattered trees, hedgerows and scrub provided shelter to support reptiles. In addition, the site was well connected to the surrounding landscape by hedgerows and ditches, particularly to the west and the north.

5.3.26 Although no evidence of reptiles was found onsite at the time of the PEA, the extensive and variable habitats onsite had the ability to support reptile populations, particularly grass snake (*Natrix natrix*) and slow-worm (*Anguis fragilis*). Therefore, the decision was made to carry out reptile surveys to determine the presence or likely absence of these species onsite.

5.3.27 The reptile survey identified a 'Low' population of slow worm within the site, with a peak count of 5 individuals recorded (Appendix 9C). The survey results are presented within Table 11 below:

Table 11: Results of the seven visits undertaken during April – May 2023

Survey Date / Time	Temp °C	Cloud Cover	Humidity %	Wind Speed	Findings
26/04/20203 5:00pm	11	8	67	1	4 common toad 1 common frog
27/04/2023 10:15am	9	8	79	1	4 common toad
03/05/2023 09:30am	10	3	70	1	1 Adult Male Slow Worm 1 Adult Female Slow Worm 1 common toad
11/05/2023 10:45am	15	6	70	1	13 common toad
16/05/2023 09:15am	11	1	70	2	4 common toad
23/05/2023 09:15am	14	2	69	2	2 Adult Male Slow Worm 3 Adult Female Slow Worm 5 common toad
25/05/2023 08:00am	13	1	62	2	3 Adult Male Slow Worm

Evaluation

5.3.28 Following seven survey visits, a small population of slow worm was identified within the site, confirming that the suitable habitat on site provides 'Local' value for this protected species group, following evaluation criteria (Table 3).

Amphibians

5.3.29 The zone of influence for great crested newts (*Triturus cristatus*) and other amphibians was determined following the desk study. A radius of 500 metres was searched for the presence of suitable waterbodies to support great crested newts using 4 different methods (OS Mapping via Pro Map, Google Earth Pro, Google Maps and an On-Site Walkover).

5.3.30 There were two ponds within the application boundary, and an additional nine ponds within 500 metres of the site not separated by significant barriers to dispersal (Appendix 9D). The desk study returned eighteen records of GCN within 2km of the application site. Two out of the eleven identified ponds were assessed and assigned a GCN Habitat Suitability Index (HSI) score (Oldham et al, 2000) displayed within Table 12.

5.3.31 Further survey work was undertaken at three of the eleven ponds identified (Ponds 1, 2, and 7). Access to survey Ponds 3, 4, 5, 6, 8, 9, 10 and 11 was not granted prior to the onset of surveys.

Table 12: Pond Locations and Suitability for Great Crested Newts.

Pond No.	Grid Ref.	Habitat Suitability Index Score (Appendix XX)	Distance from Site
1	SO 6358 2322	0.66 – Average	Within the site boundary
2	SO 6366 2312	0.55 – Below Average	Within the site boundary
3	SO 6378 2331	No access – situated on private land	40m NE
4	SO 6386 2337	No access – situated on private land	100m NE
5	SO 6393 2343	No access – situated on private land	195m NE
6	SO 6398 2350	No access – situated on private land	280m NE
7	SO 6416 2353	Access granted mid-way through survey season – only two surveys were carried out 0.6 - Average	475m NE

Pond No.	Grid Ref.	Habitat Suitability Index Score (Appendix XX)	Distance from Site
8	SO 6333 2376	No access – situated on private land	410m NW
9	SO 6338 2379	No access – situated on private land	425m NW
10	SO 6344 2386	No access – situated on private land	480m NW
11	SO 6326 2354	No access – situated on private land	290m NW

5.3.32 A small population of GCN (peak count 1) was found within Pond 1 in the centre of the application site. No GCN were found within Ponds 2 or 7, although smooth newts (*Lissotriton vulgaris*) were identified within Ponds 2 and 7.

5.3.33 For full results, weather conditions at the time of survey, pond descriptions and HSI calculations please consult Appendix 9D.

Evaluation

5.3.34 Habitats within the application boundary are suitable to support the terrestrial and breeding phases of the great crested newt lifecycle. The application site is considered to have 'Local' value for this species.

5.3.35 Although not a target species, incidental records of adult and immature common toad (*Bufo bufo*), a priority species under Section 41 of The Natural Environment and Rural Communities (NERC) Act 2006 were recorded during the suite of reptile surveys, with a peak count of 13 individuals recorded on 11/05/2023. Owing to the proximity of local terrestrial records, it is considered that the site holds 'Local' value for this species, which may be using the site as a migration pathway between areas of breeding habitat within the local area.

Mammal Species of Principle Importance

5.3.36 The NERC Act 2006, Section 41 highlights 17 species of principle importance within England. Although these species were not surveyed directly as a result of their distribution and habitat preferences, evidence for activity by these species was searched for during the Phase 1 habitat and Phase 2 protected species surveys.

5.3.37 The zone of influence was considered to be within ecological connective habitat along the boundaries of the site, within 30 metres of the boundary.

5.3.38 Common pipistrelle, soprano pipistrelle, common noctule and Daubentons bats, species of principal importance, were found to be commuting and foraging on site, predominately along the treelines defining the southern and eastern boundaries (Appendix 9B).

5.3.39 The site also offered habitat capable of supporting foraging and commuting Western European hedgehog, namely areas dense scrub, the hedgerows defining the boundaries as well as the mature treeline along the eastern boundary. However, no evidence of activity was found during the initial PEA or the subsequent phase two surveys.

5.3.40 The grassland within the site is considered suitable for brown hare. However, no evidence of activity was found during the initial PEA or the subsequent phase 2 survey work.

Evaluation

5.3.41 An evaluation of common pipistrelle, soprano pipistrelle, Daubenton's and noctule distribution on site can be found above. The habitats considered suitable for foraging Western European Hedgehog pertained to areas of scrub, hedgerows, and mature treeline, which were present around the site boundaries and within the semi-improved grassland. Overall, the habitats within the application boundary offered 'Local' value to this species group.

6 Assessment of effects and mitigation measures

6.1 The proposed development

6.1.1 The site is the subject of a full application seeking to facilitate the development of 44 new residential properties as well as associated access and gardens. It is understood that the proposals will involve significant ground clearance. Detailed design proposals are presented within Appendix 6 of this report. The indicative plan suggests that the hedgerows, scattered trees and the two existing ponds will remain intact and will be unaffected by the development. There are opportunities for habitat enhancement within the north-eastern corner of the site, where areas of open space have been proposed (Appendix 6).

6.2 Potential Impacts to habitats and notable species on site

6.2.1 Where evaluations within Section 5 have highlighted potential constraints to protected and notable species or habitats further assessment has been made to quantify the effect of the potential constraints. Plants, roosting bats, and badgers are not considered further within this section as they not considered to be a constraint to the application.

Designated sites

6.2.2 The site lies within the Impact Risk Zones (IRZ) of two Special Areas of Conservation; Wye Valley & Forest of Dean Bat Sites SAC, located 3.4km southeast, and the River Wye SAC, located 3.9km west. The closest non-statutory site is Lea Bailey Inclosure, located approximately 1.9km south of the site.

6.2.3 The application site will be subjected to clearance and construction works which could result in indirect effects to local waterways that feed into nearby designated sites, as a result of water pollution, silting and leaching. The development will see the construction of 44 new residential properties, which could lead to increased recreational pressures on local designations and areas of green space. Without mitigation, the development would present an Unlikely Negative (Significant) effect to the local non-statutory designated sites in close proximity to the application boundary.

Mitigation Measures

6.2.4 The LPA must consult Natural England on the application to determine whether bespoke mitigation or financial compensation is required to offset the negative impact of the development on local statutory designations, including Wye Valley & Forest of Dean Bat Site (SAC) and River Wye (SAC).

6.2.5 The provision of green space as part of the scheme will seek to reduce pressures on nearby non-statutory designations. The proposed SuDs and wildflower meadow in the east of the scheme will provide recreational opportunities for dog walkers, aimed to reduce the impact on local non-statutory designations. Selective fencing will be used to reduce impacts from pedestrians in certain areas of the green space, in order to preserve the conditions of the areas required for net gain. Information signs and display boards will be installed to inform residents about the habitats and the management required as part of the net gain assessment. The provision of litter bins will further aim to provide quality greenspace for residents.

6.2.6 Local waterways downstream of the application site will be protected from indirect impacts resulting from the development, through the implementation of a Construction and Environmental Management Plan (CEMP) to ensure best working practices are followed and the site is subject to pollution control, with the correct storage of chemicals and plant.

Habitats

6.2.7 The two ponds onsite are to be retained as part of the scheme, in addition to the treeline along the eastern site boundary, and the majority of the hedgerow bounding the south of the site, with the exception of approximately 30m to be removed to facilitate site access. However, significant ground clearance will be required within the application site to facilitate the new residential development which will result in the loss of species-poor semi-improved grassland dominating the site. Whilst the majority of habitats on site were considered to be of relatively low value, the overall matrix of habitats consisting of semi-improved grassland, dense scrub along the western and eastern boundaries, hedgerows, and two ponds, hold intrinsic value to local biodiversity. Given the scale of the proposed ground clearance within the application boundary, in the absence of mitigation, a Certain Negative (Significant) effect on habitat quality within the site is anticipated.

Mitigation Measures

6.2.8 The effect from site clearance is be expected to be short-term and reversible via the implementation of the landscape scheme supporting native planting within open spaces to support the targets for biodiversity net gain (see section 6.5). To mitigate for the loss of a significant area of species-poor semi-improved grassland in the centre and west of the site, the areas of open space within the north-east corner and south-east corner of the site will be retained, enhanced and managed to promote floristic diversity. These areas of open space will be managed following a strategy outlined in a supporting Landscape and Ecological Management Plan (LEMP) to prevent the encroachment of pernicious species and to benefit local wildlife. These actions will ensure that the residual effect on habitats as a result of ground clearance is resolved with Neutral (not significant) results.

Breeding Birds

6.2.9 The areas of semi-improved grassland, hedgerows, scattered trees, native scrub, and tall ruderal herbs, within the application boundary and adjacent to it have been identified as being suitable for use by breeding birds. Where vegetation has been proposed for removal, compensatory planting must be undertaken. A Likely Negative (Not significant) effect is anticipated as a result of the development through the loss of suitable nesting habitat across the site. This impact is considered to be short term and reversible with the following mitigation in place.

Mitigation Measures

6.2.10 Given their protection, development must be sympathetic to the value of this habitat and potential impacts on breeding birds, their eggs, nests and young. The breeding bird season is generally accepted as being between March and September, works should be avoided during this period where possible, and developers should consider and implement the options (below) appropriate to their scheme to reduce the effect to Neutral (Not significant):

- Undertake vegetation clearance between the months of October and February where possible (outside of the breeding season);
- Any vegetation proposed for removal between the months of March and September should be subjected to a search for active birds' nests 24 hours prior to commencement

of works. This should confirm whether all or some clearance is achievable. The pre-works check the clearance of vegetation between the months of March and September should be supervised by a suitably qualified ecologist;

- Should bird nesting activity occur within the application site during any works then activity in that area will cease until the bird(s) have vacated the site (a minimum of 4 weeks). Such measures should be adhered to so as to prevent unnecessary disturbance to breeding birds or their young.

6.2.11 The retained and enhanced grassland in the north of the site will be minimally managed to provide opportunities for ground nesting species. The hedgerows bounding the site, as well as the areas of retained scrub, will be managed in accordance with the LEMP and biodiversity net gain target (section 6.5), in order to provide opportunities for nesting and breeding birds.

Roosting Bats

6.2.12 Tree 1 in the southern extent of the site was identified as having 'Moderate' suitability to support roosting bats. The tree is marked for retention under the scheme, and incorporated into the landscaping scheme. However, the proposals indicate that residential plots 42 – 44 are proposed to the north of this tree. The behaviours of local roosting bats could be adversely affected by disturbance as a result of artificial lighting used during the construction phase as well as post construction lighting schemes. The potential indirect disturbance by light pollution is considered a Likely Negative (Not Significant) effect.

Mitigation Measures

6.2.13 It is currently understood that T1 with 'Moderate' suitability to support roosting bats is to be retained as part of the scheme. Nevertheless, should design proposals change and the tree be recommended for removal to facilitate the development, further survey work will be required in order to classify the importance of the features for roosting bats.

6.2.14 Post construction, artificial security lighting will adhere to a sensitive lighting strategy, which will minimise light pollution and overspill onto retained habitats. Lighting will not be installed on the elevations of the buildings in close proximity to T1, or retained boundaries, preventing long-term disturbance to any commuting lines associated with T1. If flood lighting is required, this will be

directed away from notable habitats for bats, including T1, and overspill into dark corridors will not exceed 1 lux.

Foraging and Commuting Bats

6.2.15 The bat activity on site during the transects was considered to be moderate, pertaining to a low number of common species, repeatedly using similar areas and features recorded on site. However, intermittent calls were identified from bat species know to be less frequent – rare in the county, such as Daubenton's (*Myotis daubentonii),* considered widespread and fairly rare in Herefordshire, as well as rare species such as Greater Horseshoe (*Rhinolophus ferrumequinum*) and Lesser Horseshoe (*Rhinolophus hipposideros*) (Herefordshire Mammal Group June 2016 v2).

6.2.16 While the detailed development plans suggest that the linear features located along the site boundaries are to be retained following the development, the expansive areas of grassland and scrub in the south and west of the site, will be lost. The clearance of these grassland and scrub habitats, along with the significant levels of disturbance likely to occur both during and post construction, constitute a Likely Negative (Not Significant) impact upon foraging and commuting bats. However, post construction landscape treatments can provide improved foraging habitat for locally frequent species, as well as those rarer in the county but known to be local to the site.

6.2.17 In the absence of appropriate mitigation, a net loss of suitable foraging habitat is anticipated. Furthermore, the behaviours of foraging and commuting bats could be adversely affected by disturbance as a result of artificial lighting used during the construction phase as well as post construction security lighting schemes. The potential indirect disturbance by light pollution is considered a Probable Negative (Not significant) effect. The retention of existing foraging sites and commuting pathways on site and within the local area would be desirable. Given the high mobility of bat species the impacts associated with the development are not considered to be long-term.

Mitigation Measures

6.2.18 To mitigate effects to commuting and foraging bats to Neutral (Not significant), the physical characteristics and current management of the boundary features should be maintained and where possible enhanced. Where vegetation has been proposed for removal, compensatory planting should be undertaken. The details of planting and enhancements should be secured

within a Landscape Ecological Management Plan (LEMP) which seeks retention and enhancement of locally prevalent features within areas of public open space and retain linear features.

6.2.19 The extent of disturbance to bat commuting lines should be reduced where possible by removing vegetation outside of the bat activity season and employing a sensitive lighting scheme during construction works. Post construction, artificial security lighting should not be installed on the elevations of buildings in close proximity to hedgerows and ponds, preventing long-term disturbance to commuting lines. If flood lighting is required, this must be directed away from notable habitat for bats and overspill into dark corridors and woodland must not exceed 0.2lux.

[redacted]

Reptiles

6.2.21 A low population of slow worm was recorded within the application boundary. In the absence of mitigation, direct harm or injury could be sustained to individuals during ground clearance, posing a Negative (Not Significant) impact. The loss of suitable habitat provides a Negative (Not Significant) effect on the reptile population, because the effect is considered to be short term and reversible on site, and there is an abundance of suitable habitat within the immediate landscape.

Mitigation Measures

6.2.22 The presence of a permanent population of slow worm on site necessitates the trapping and translocation of reptiles to mitigate the likelihood of impacts upon this species group, reducing the effect to Neutral (Not Significant). The steps for a trapping and translocation strategy will be outlined in a Reptile Method Statement, following the process outlined within an EPS licence for GCN, with additional refugia for finding reptiles. The trapping and translocation period will take place over a 30-day period, with an additional five days at the end of the 30-day period with no reptiles found.

Amphibians

6.2.23 The presence of a low population of great crested newts within Pond 1 onsite demonstrates that the aquatic and terrestrial habitat on site is being utilised by this species. The site clearance work

proposed to facilitate the development of the site will result in a Certain Negative (Not Significant) effect to local newt populations. Great crested newts, their eggs, breeding sites and resting places are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended), and ground clearance works during the development would result in direct (injury, or death of individual GCN) and indirect (loss of foraging and hibernation habitat) impacts to local newt populations and a breach of legislation is considered highly likely.

Mitigation Measures

6.2.24 A granted EPS Mitigation Licence and supporting method statement will be required prior to work commencing within the application boundary. Using the current site proposal plans (Appendix 6), it will be possible to compensate through on-site mitigation. The method statement will outline the translocation of GCNs away from the development area to a receptor site in the south of the site, which will include Pond 2 (see Appendix 8C). The key principles of the EPS Mitigation Licence and Method statement should include the following information to reduce the effect of the development to Neutral (Not significant):

- Prior to the commencement of works, an enhanced receptor site for great crested newts should be identified. The area around Pond 2 in the south of the site should be enhanced to provide optimal habitat for this species and see the addition of additional scrapes. The area will support two hibernacula which will provide terrestrial refuge for individuals found during clearance works.

- Vertical amphibian fencing will be installed along the application boundaries and internal drift fencing will be installed within the semi-improved grassland. Pitfall traps and carpet refuges will be placed on the internal face of the boundary fencing and alongside the drift fencing between April and October (dependent on weather conditions). Where spoil, and scrap are recorded on site, handsearching will be undertaken to clear a path for the fence line.

- After a period of 30 days trapping (including 5 clear days at the end with no great crested newts collected) the artificial refugia, and vegetative features proposed for removal will be hand searched and then systematically stripped under ecological supervision. The

sections of hedgerow along the site frontage to be removed shall be done under ecological supervision.

- Should the detection of great crested newts be made during development (post trapping and vegetation clearance), construction should cease immediately, and the advice of a suitably qualified ecologist obtained.

6.2.25 Appropriate habitat retention and enhancement should be made to improve the quality of remaining habitat parcels, to support great crested newts in the long-term, following construction. These features should be finalised during the production of an EPS Mitigation Licence, and integrated into landscape plans. Appendix 10 highlights areas where habitat could be retained and enhanced.

Mammal Species of Principle Importance

6.2.26 The application site is likely to support foraging Western European Hedgehog and brown hare particularly along the hedgerows and treeline defining the site boundaries, as well as within the scrub and tall ruderal herbs located within the areas of grassland. The ground clearance works necessary to prepare the site could result in injury or death of these species of principle importance, presenting a Negative (Not significant). The development proposals suggest that the hedgerows around the periphery of the site are to be retained following the development reducing the likelihood of a significant effect to this species, however further mitigation should be implemented to safeguard this species.

Mitigation Measures

6.2.27 Habitat considered suitable for supporting Western European hedgehogs should be retained around the periphery of the site (Appendix 10), and vegetative connectivity through the site should be maintained. If individuals are found during ground clearance works, works should cease until the individual has been moved into the open space within the south-eastern corner of the site (Appendix 10). Once removed, the area should be searched, and works can recommence.

6.2.28 Reasonable Avoidance Measures (RAMs) will be secured within a CEMP to minimise the risks to individuals that may be utilising the site. RAMs will include:

- Any temporary exposed open pipes to be capped to prevent hedgehogs gaining access
- Undertake works during daylight hours
- Search areas of deadwood, brash, and discarded items by hand before removing
- If burning any cleared vegetation, carry out immediately after piping to prevent hedgehog moving in prior to burning
- Any exposed excavations to be left overnight are to be covered at the end of each working day, or included a means of escape for any fallen animals (e.g. scaffolding plank).

6.2.29 Clearance of potential hedgehog hibernacula such as log piles and brash piles, will be avoided between the months of November – February where possible, to minimise risk of harm to this priority species. If clearance is required, it will be done by hand only. If individuals are found during ground clearance works, works will cease until the individual has been moved into the open space within the south-east of the site. Once removed, the area will be searched, and works can commence.

6.3 Residual effects of proposed development

6.3.1 The measures proposed within the above sections will mitigate all Negative effects to a level where the constraint is not considered significant or negative in terms of Ecological Impact Assessment. Upon completion there should be no adverse residual effects as a result of the development.

6.4 Cumulative effects

6.4.1 The mitigation and impact avoidance measures proposed for each ecological receptor should be secured through planning condition or obligation. At the time of writing there are no further consented developments within the local area according to Herefordshire Council, so a cumulative effect is not predicted, and upon successful implementation of these measures the site will increase the value of the site in terms of local biodiversity.

6.5 Biodiversity Impact Assessment to determine Net Gain

Baseline Assessment

6.5.1 The site is dominated by habitats ranging from very low – medium distinctiveness.

6.5.2 The site is dominated by semi-improved grassland, bramble scrub and willow scrub (Appendix 1). The overall matrix of habitats offers value to local biodiversity and holds 11.19 'Habitat Units', and 0.64 'Hedgerow Units'.

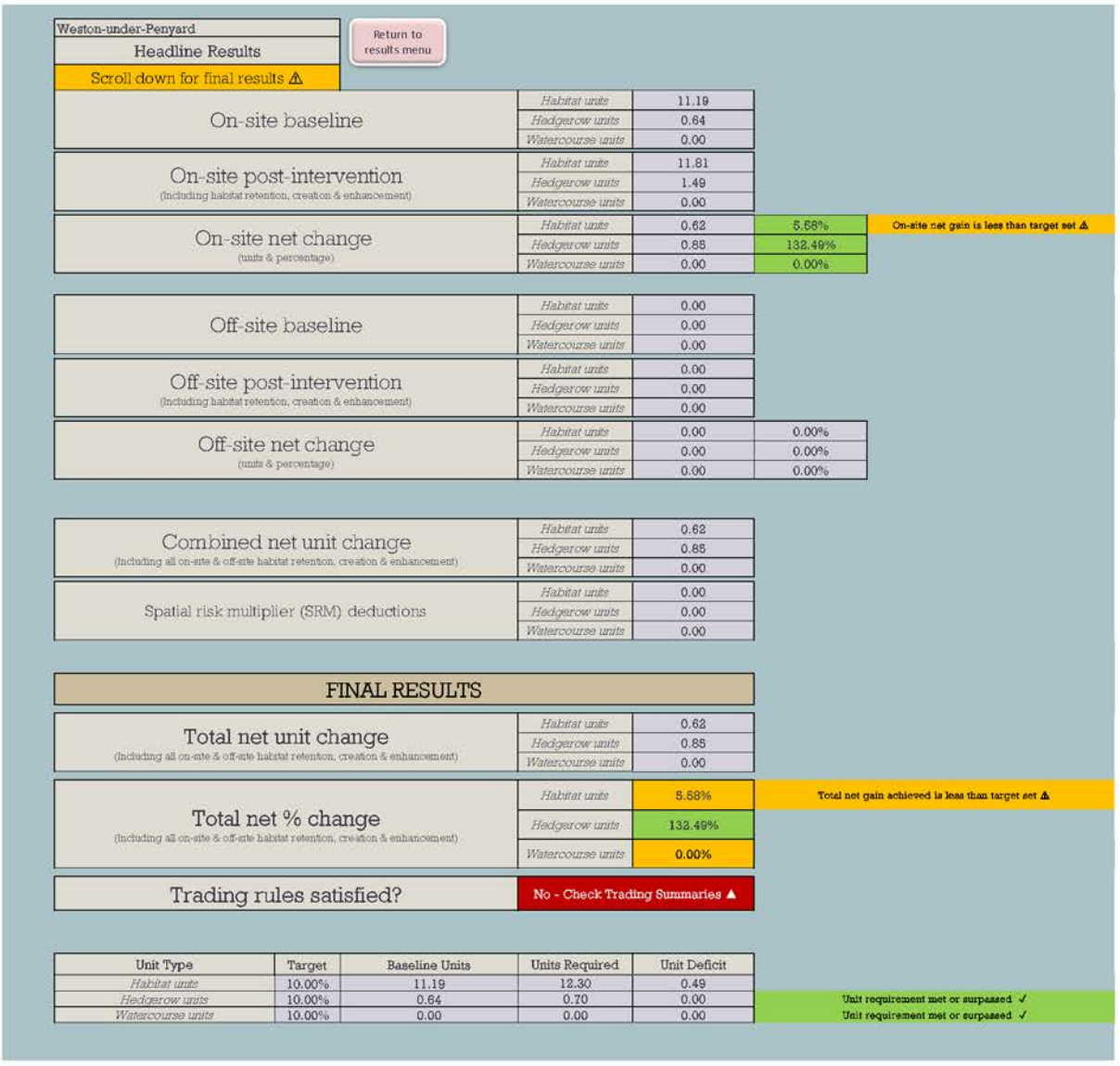
Table 13: Baseline Habitats

Habitat Type	Distinctiveness	Condition
Modified grassland	Low	Poor
Ponds (priority habitat)	Medium	Poor
Willow scrub	Medium	Moderate
Ponds (non-priority habitat)	Medium	Poor
Bramble scrub	Medium	Condition Assessment N/A
Mixed scrub	Medium	Poor
Modified grassland	Low	Moderate
Rural tree	Medium	Good

Design Proposals

6.5.3 The design proposals will result in 11.81 'Habitat Units', and 1.49 'Hedgerow Units', which is a net gain of +1.49 'Habitat Units' (+5.58%), and a gain of +0.85 'Hedgerow Units' (+132.49%).

Figure 11: Headline Results from DEFRA metric



Weston-under-Penyard

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Headline Results

Scroll down for final results ⚠

On-site baseline	*Habitat units*	11.19		
	Hedgerow units	0.64		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	11.81		
	Hedgerow units	1.49		
	Watercourse units	0.00		
On-site net change (units & percentage)	*Habitat units*	0.62	5.58%	On-site net gain is less than target set ⚠
	Hedgerow units	0.85	132.49%	
	Watercourse units	0.00	0.00%	
Off-site baseline	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	*Habitat units*	0.00	0.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.62		
	Hedgerow units	0.85		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.62	
	Hedgerow units	0.85	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	5.58%	Total net gain achieved is less than target set ⚠
	Hedgerow units	132.49%	
	Watercourse units	0.00%	
Trading rules satisfied?	No - Check Trading Summaries ▲		

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	11.19	12.30	0.49	
Hedgerow units	10.00%	0.64	0.70	0.00	Unit requirement met or surpassed ✓
Watercourse units	10.00%	0.00	0.00	0.00	Unit requirement met or surpassed ✓

6.5.4 Whilst the high value habitats, such as the two ponds and areas of dense scrub, will be retained and brought under long term management, 2.29ha of habitat will be lost to facilitate the development.

Compensation

6.5.5 Despite the proposed enhancements incorporated within the scheme, the proposals incur the loss of a significant area of modified grassland in the west of the site. The scheme stands at a net gain of +5.58%.

Enhancement

6.5.6 The area of 'Modified Grassland' in the north of the site is to be retained (Appendix 10). The grassland in the archaeological no-dig zone in the north of the site is proposed for enhancement to compensate for the loss of modified grassland incurred. The central and southern area of the archaeological no dig zone will be harrowed to a maximum depth of 10cm and over sown with a suitable meadow mix, such as EL1 Flowering Lawn Mixture (Emorsgate, or similar approved) in order to increase floristic diversity of the area. The chosen seed mix must include yellow rattle (*Rhinanthus minor*) which has a semi-parasitic life cycle by feeding off the nutrients in grass roots, and is a successful species used for meadow management to increase floristic diversity. The management and selective seeding of this area is considered to enhance this area of grassland from 'Modified Grassland' of low distinctiveness in 'Poor' condition to 'Modified Grassland' in 'Moderate' condition (Appendix 10). The area will be managed through a sensitively designed mowing regime and detailed within a Landscape and Ecological Management Plan (LEMP).

6.5.7 The area of grassland in the north and east of the archaeological no dig zone will be enhanced from low distinctiveness 'Modified Grassland' in 'Poor' condition to medium distinctiveness 'Other Neutral Grassland' in 'Poor' condition (Appendix 10). The area will be harrowed to a maximum depth of 10cm, and overseeded with a neutral grassland seed mix, such as Emorsgate EM3 (or similar approved). The area will be fenced off from the rest of the grassland area, using a timber post and rail fence. The bottom panel of the fence will support wire mesh to prevent access into the area by local residents and dogs. The mesh will not sever site wide connectivity for species such as hedgehog.

6.5.8 Mixed native scrub, and areas of bramble scrub, within the southern extent of the site, adjacent to the site boundaries, will be enhanced through selective thinning and gap filling with native species, to increase species diversity and structure. Planted specimens will vary in age class,

and must range from whips through to larger, more mature specimens. These enhancements will result in the increase of the conditions of this area from 'Poor' to 'Moderate'.

6.5.9 The existing site access from Gloucester Road will be infilled, thereby enhancing the hedgerow along the site frontage. The area will be infilled with native species and will be brought under long term management in order to create a continuous linear feature, thereby increasing site wide connectivity (Appendix 10).

6.5.10 The ponds on site are to be enhanced from 'Poor' to 'Moderate' condition, through the implementation and review of a regular management regime, aimed at increasing the aquatic and marginal species diversity, maintaining semi-natural habitat for at least 10m around the pond perimeter, and keeping the ponds free from artificial damming, pipework and invasive non-native species. The ponds must be managed under the prescriptions secured within the LEMP document.

6.5.11 Additional prescriptions proposed as part of the scheme include the enhancement of the onsite ponds, to improve condition and provide opportunities for protected species, as well as the scrub on site being gap filled with native species to increase species diversity.

Habitat Creation

6.5.12 The development will result in 2.39ha of habitat creation (inc. tree planting), comprising:

- 1.133ha of 'Developed land; sealed surface' pertaining to the new residential dwellings, garages, parking, access roads and pavements,
- 0.66ha of 'Vegetated Garden' pertaining to the residential gardens for the new dwellings. The metric auto-populates the anticipated condition of this habitat type to 'n/a' as these areas will remain outside of the domain of an external management company
- 0.21ha of 'Modified Grassland' in 'Poor' condition, pertaining to road verges within the scheme. These areas are anticipated to have high footfall and regularly managed, therefore anticipated to be unable to achieve a condition greater than 'Poor'. This area also includes the central green, pertaining to the area surrounding the Pond 1 in the centre of the site. The area is currently dominated by willow scrub, which will be cleared as part of the enhancements to the pond. The area of cleared scrub will be overseeded with EL1 seed

mix (or similar approved). It is anticipated that the area will be subject to high footfall and regular management. Therefore, a realistic condition of 'Poor' has been assigned.

- 0.06ha 'Sustainable Urban Drainage Feature' in 'Poor' condition,

- 0.1ha of 'Other Neutral Grassland' to be created around the SuDs basin in the south of the site. The area will be sown with a wet tolerant seed mix, such as EM8 (or similar approved) which is suitable for damp soil conditions. The area falls within the public open space for the scheme, therefore it is anticipated to be subject to regular use. However, the gradient of the bank surrounding the SuDs, on which this grassland will be created, will seek to deter frequent footfall. The area will be minimally managed to allow wildflowers and grasses to flower and set seed. The area will undergo an annual hay cut in late summer, with cuttings removed from site immediately prior.

- 0.2402ha 'Urban Tree' – 50 small trees and 1 medium sized tree will be planted across the scheme, associated with avenue planting and street scenes. The single medium tree proposed will be within the open space in the south of the site, the tree will achieve a diameter at breast height (DBH) between 30cm – 90cm. All other proposed trees will achieve an anticipated DBH <30cm. The trees will achieve 'Poor' condition, as they will be well managed, and be in close proximity to the new residential properties, therefore anthropogenic disturbance and damage is anticipated.

6.5.13 These areas of habitat creation, along with the areas marked for retention and enhancement (Appendix 10) must be managed following a strategy outlined in a supporting Landscape and Ecological Management Plan (LEMP) to prevent the encroachment of pernicious species and to benefit local wildlife. These actions will seek to reduce the residual effect on habitats as a result of the development, however, it is still anticipated that the scheme will result in a Likely Positive (Not Significant) impact.

Evaluation

6.5.14 Through the prescribed habitat creation and enhancement measures, the scheme will result in a +0.62 'Habitat Unit' gain (+5.58%). Additionally, there is a significant positive increase in the number of 'Hedgerow Units', with a +132.49% gain. This scheme fails to satisfy the trading rules for the DEFRA 4.0 metric.

7 Compensation, Enhancement and Monitoring

7.1 Compensation

7.1.1 Compensatory measures are required as a result of the net loss in biodiversity units recorded for the proposed scheme. No compensation is required for the other ecological receptors discussed within this report because no significant residual or cumulative effects are anticipated as a result of the development.

7.2 Enhancement

7.2.1 In light of the National Planning Policy Framework (NPPF) that seeks net biodiversity gain within developments and the Natural Environment and Rural Communities (NERC) act that stipulates an authority's duty to conserve and enhance biodiversity the following enhancements are suggested (All enhancements should be overseen by an appropriate experienced ecologist):

Habitats

7.2.2 The construction of a Landscape Ecological Management Plan (LEMP) for the site will secure enhancements and appropriate landscape treatments to enhance biodiversity within areas of open space. Landscape treatments carried out on site is to be undertaken using locally abundant, native species which can tolerate a range of climatic conditions. Open space should be managed to benefit local biodiversity following an appropriate management plan and seek to compensate for loss of habitats on site. Loss of vegetative features should be compensated for by planting native scrub, the reseeding of grassland and the planting of native trees within an appropriate landscape and enhancement zone identified within the site master plan. A management plan for the area of open space in the north-east of the site, as well as along the southern boundary, must be compiled and a long-term maintenance scheme will be secured through a Section 106 agreement.

Bats

7.2.3 Post construction landscape treatments should be sympathetic to bat species and seek to enhance open space for bat species. Mitigation should be secured within the above mentioned

LEMP, particularly within the west of the application site where removal of dense scrub habitat is anticipated.

7.2.4 New roosting provision should be provided within a minimum 10% of new residential dwellings (Appendix 10). During construction, 5 Vivara Pro Build-in Woodstone Bat Tubes (or similar approved) should be positioned on elevations facing a south – south easterly direction at a height of above 4 metres.

7.2.5 To provide additional roosting opportunities for common bat species and mammals of principle importance, 2 x Greenwood's Ecohabitats Crevice boxes will be installed on the large, retained tree in the south-east of the site (T1). The boxes will be placed together as a pair, facing in a southerly, easterly or westerly direction, above 5 metres in height. The specific location of bat mitigation will be secured within the LEMP.

Birds

7.2.6 During the construction phase two Woodstone Sparrow Nest boxes, two 45mm Starling nest boxes and two No. 17A Triple Cavity swift boxes should be integrated into the north or north-easterly elevations of the new residential units across the site (Appendix 10). The Bird boxes should be positioned at a height of between 4 and 5 metres with an unobstructed flight line to and from the boxes during the Autumn.

7.2.7 Five x 1B Schwegler bird boxes in the following sizes: 2 x 26mm Hole, 2 x 32mm Hole, 1 x Oval Hole should be positioned on suitable trees along the western and eastern boundaries, as well as one on T1 in the south-east corner of the site, with entrance holes directed towards the north and east to avoid strong sunlight and driving rain. The Bird boxes should be positioned at a height of between 2 and 4 metres during the autumn.

7.2.8 The LEMP should secure the inclusion of soft landscape treatments in the form of native trees, hedgerows and shrubs, planted across the site to offset any loss of vegetation and to provide supplementary habitat for overwintering and breeding birds within the area.

Reptiles

7.2.9 Construction of suitable hibernacula within the open space positioned within the south-eastern corner of the application site (Appendix 10). The hibernacula consist of an excavated hollow

infilled with materials such as building rubble and/or tree roots. Small drainage pipes are placed around the edges of the hollow that lead from the surface into voids and spaces within the building rubble and/or tree roots. This allows access for reptiles into the voids within the material used. The hollow is then covered over with loose turfs of soil and allowed to revegetate naturally.

7.3 Monitoring

7.3.1 As a result of the impact of the proposed development, post-construction monitoring is required on the retained grassland in the north-east of the site, as well as the areas of grassland creation and SuDs area in the south-east of the site. Monitoring will be undertaken annually until year 5, then every 5 years for 30years as part of the LEMP and safeguards of Biodiversity Net Gain.

7.3.2 If works do not commence within two years of the Phase 1 habitat survey, and 1 year of the phase 2 surveys the baseline conditions may need to be reassessed.

8 Conclusions

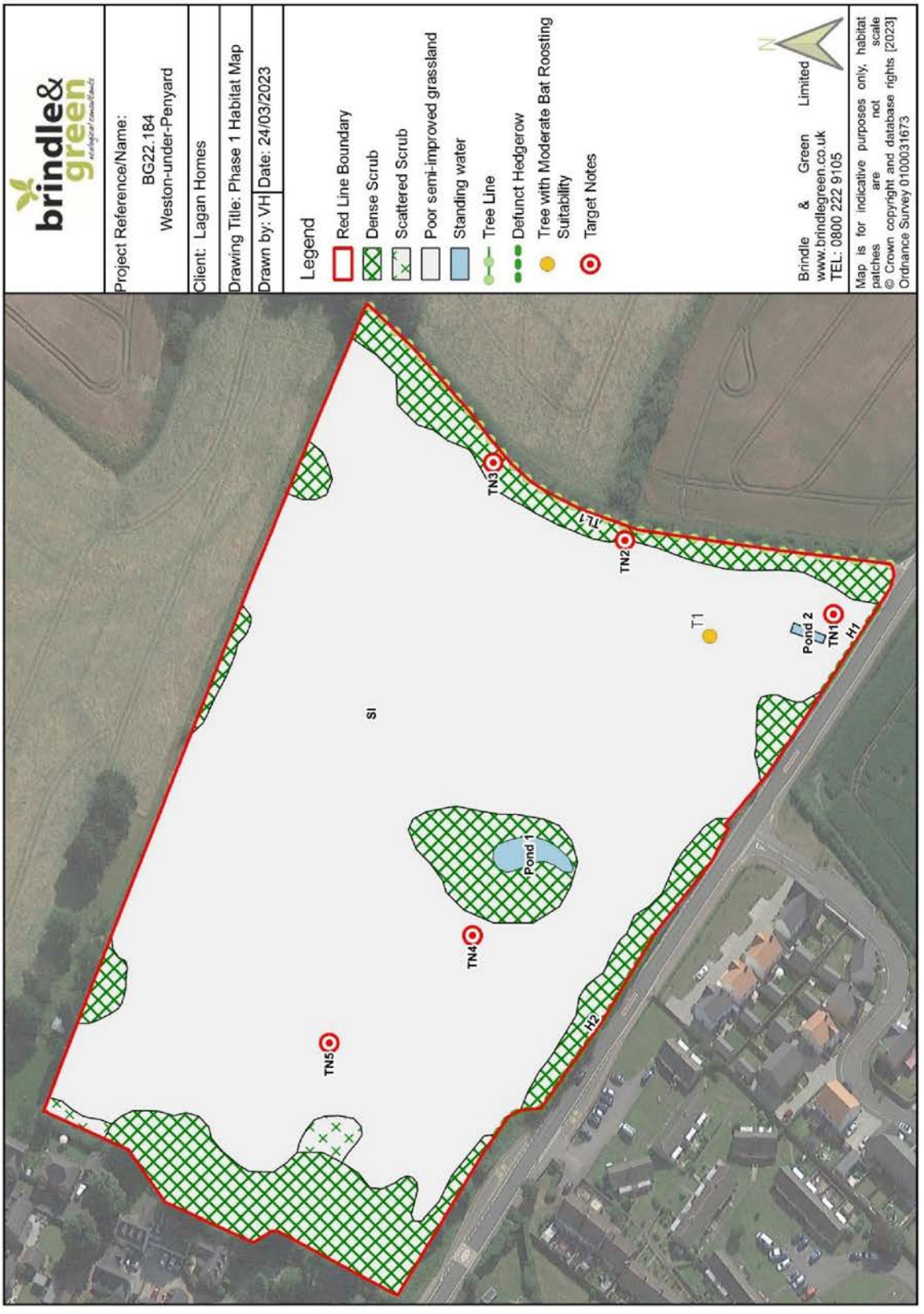
8.1.1 The application site on land to the north of Gloucester Road, Weston-under-Penyard has been the subject of a series of habitat and protected species surveys undertaken following best practice guidelines. The site was found to support habitats of 'Local' value at an ecological level (Table 3).

8.1.2 The Phase 1 habitat survey and Phase 2 surveys confirmed that breeding birds, bats, reptiles, [redacted] amphibians (including GCN), hedgehog and brown hare have the potential to be negatively affected by the proposed development and as such mitigation measures have been created to safeguard the status of these protected and notable species, reducing the effect to neutral or a positive effect.

8.1.3 The mitigation strategies outlined above should be secured through planning condition or obligation, to ensure that a negative effect for local wildlife populations and biodiversity is avoided and potentially enhanced through the landscape plan and prevent residual effects. The dominant poor semi-improved grassland and scrub habitats recorded during the baseline survey are considered to be locally frequent and of relatively low ecological value. As a result, the loss of these habitats is not considered to be significant. The retention and enhancement of grassland in the north east and south east of the site post construction, as well as retention and enhancement of the two on-site ponds, will improve the structural and botanical diversity on site, enhancing the application site for a number of local species populations.

8.1.4 The implementation of enhancements listed within Section 2 would secure positive gains to local biodiversity when compared to the baseline ecological conditions of the application site.

Appendix 1 – Phase 1 Habitat Plan



Appendix 2 - Phase 1 Target Notes

Table 14: Phase 1 Target Notes

Target note number	Description
TN1	Mole hills located in the southeast of the site
TN2	See Confidential Appendix 11
TN3	See Confidential Appendix 11
TN4	Log pile
TN5	Archaeological excavation

Scientific nomenclature follows Stace (2010) for vascular plant species and common names follow BSBI List of British & Irish Vascular Plants and Stoneworts.

Please note that this plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, LF = locally frequent

Table 15: Plant Species List with DAFOR Scale

Common Name	Scientific Name	Estimated Abundance (DAFOR)
Alder	*Alnus glutinosa*	A
Ash	*Fraxinus excelsior*	O
Bramble	*Rubus fruticosus*	A
Broad-leaved Dock	*Rumex obtusifolius*	F
Cleavers	*Galium aparine*	F
Cock's-foot	*Dactylis glomerata*	A
Common Ragwort	*Senecio jacobaea*	O
Common Sorrel	*Rumex acetosa*	O
Cow parsley	*Anthriscus sylvestris*	A
Dogwood	*Cornus sanguinea*	D
Dove's-foot Crane's-bill	*Geranium molle*	F
Elder	*Sambucus nigra*	O
Elm	*Ulmus sp.*	A
False Oat Grass	*Arrhenatherum elatius*	D
Hard Rush	*Juncus inflexus*	O
Hawthorn	*Crataegus monogyna*	D
Hazel	*Corylus avellana*	A
Hedge Woundwort	*Stachys sylvatica*	F
Hemlock Water Dropwort	*Oenanthe crocata*	R
Hogweed	*Heracleum sphondylium*	R
Holly	*Ilex aquifolium*	O

Common Name	Scientific Name	Estimated Abundance (DAFOR)
Lesser Celandine	*Ranunculus ficaria*	F
Lords-and-ladies	*Arum maculatum*	F
Nettle	*Urtica dioica*	A
Oak	*Quercus robur*	A
Rose	*Rosa sp.*	F
Snowdrop	*Galanthus nivalis*	O
Sycamore	*Acer pseudoplatanus*	O
Willow sp	*Salix sp.*	D
Willow, goat	*Salix caprea*	D
Willowherb	*Epilobium sp.*	O
Yorkshire Fog	*Holcus lanatus*	F

Appendix 3 – General References

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Appendix 4 – Legislation, Policy and Guidance

Articles of British wildlife and countryside legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Department for Communities and Local Government. National Planning Policy Framework. (2023)
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- The Protection of Badgers Act 1992
- The Natural Environment and Rural Communities Act 2006 (Including National and Local Biodiversity Action Plan (LBAP / HPI))
- Hedgerow Regulations 1997
- The Environment Act 2021

Appendix 5 – Legislation, Guidance and Methodology

Legislation, Guidance and Methodology

Breeding Birds

All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

The bird breeding season is typically accepted to start in February/March and continue through until September/October, however breeding birds can be found all year round depending on the given species and climatic conditions.

A sites habitat composition, locality, association to designated sites as well as current usage and management are all considered in the decision as to whether further bird related surveys are required. In addition, surveys may be recommended based on incidental bird records collected during a Preliminary Ecological Appraisal, species identified within an ecological data search or target species listed within a local biodiversity action plan.

Bird surveys are carried out in accordance with:

Gilbert G, Gibbons DW, Evans J. (1998) *Bird Monitoring Methods.* RSPB.

Bats

Roosting Bats

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Areas of concern; can be encountered in many types of structure and care should therefore be taken when undertaking maintenance or demolition of suitable structures and trees.

Site assessments of buildings, commuting and foraging habitat and trees are undertaken in accordance with: Collins, J (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, (3rd edition), Bat Conservation Trust, London. (Table 1 & 2 Below).

Preliminary Ecological Surveys look for evidence of bat presence such as feeding remains, bat droppings, roosting individuals and staining around potential access points. The suitability of site features are also assessed because absence of bat evidence, is not confirmation of a negative result.

Within trees, features searched for include; natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, hollows, and dense cover of ivy over the tree. If evidence is found, or a building supports features conducive to supporting roosting bats then further presence / absence bat surveys and/or roost characterisation surveys will be recommended.

Foraging and Commuting bats

Habitat features on site are assessed for their suitability to support foraging and commuting bat populations. This assessment is independent from the suitability of the site to support roosting bats, and provides information on the likeliness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration.

Table 1: Guideline for assessing the suitability of a structure to support roosting habitat (Buildings and Trees), amended from Collins, J (2016)

Category	Description of roosting habitat	Number of additional presence / absence surveys required
Negligible Suitability	Suitable cavities may exist, but these are less than ideal.	None
Low Suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. The feature and surrounding habitat do not provide enough shelter, conditions* space for larger roost types such as a maternity or hibernation roost. A tree of sufficient size and age to support roosting bats, but with no features observed from the ground, or the features only have a limited potential to support roosting bats.	One survey between May and August Trees – No further surveys required
Moderate Suitability	A structure or tree considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species conservation status, which is established after presence is confirmed).	Two surveys between May and September (with at least one survey undertaken between May and August) One Dusk emergence and One Dawn re-entry survey to ideally be undertaken at least two weeks apart.
High Suitability	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat.	Three surveys between May and September (with at least two surveys

Confirmed	This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.	undertaken between May and August) One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn, undertaken at least two weeks apart.

(* in this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc)

Table 2: Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins J (2016)

Category	Description of commuting and foraging habitat	Survey effort to establish the value of commuting and foraging habitat**
Negligible Suitability	Negligible habitat features on site likely to be used by commuting or foraging bats.	None
Low Suitability	Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment. Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.	Transect /spot count/ timed search survey: One survey visit per active season AND Static automated surveys:

		One location per transect, over a five-night period, per season.
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens. Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.	Transect /spot count/ timed search survey One survey visit per month At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys: Two locations per transect, over a five-night period, per month (April to October)
High Suitability	Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland.	Transect /spot count/ timed search survey Up to two survey visit per month (April to October) At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys:

	Site is close to and connected to known roosts.	Three locations per transect, over a five-night period, per month (April to October)

*(** This is only a guide for survey effort required, the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site by site basis).*

Badgers (*Meles meles*)

Badgers are protected under the Protection of Badgers Act 1992. It is illegal to wilfully kill, injure, disturb or take any badger, or attempt to do so and it is an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a badger sett.

Site assessments are undertaken in accordance with:

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

During the PEA, the site and the 30 metre zone of Influence considered for this species are searched for evidence of badger activity. The surveyor will identify evidence of activity, or habitat suitability for this protected species. Even If no evidence of badger activity is found, if local conditions suggest that the habitat may be suitable for badger, further surveys will be recommended.

Amphibians

The great crested newt and natterjack toad are fully protected under Schedule 5 of the wildlife and countryside Act 1981. The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond.

Great Crested Newt (*Triturus cristatus*)

The great crested newt, is fully protected under the Conservation of Habitat Regulations 2017 (as amended), making it an offence to intentionally or recklessly kill, injure, disturb or take great crested newts, intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection.

The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond. Sites should be considered suitable to support great crested newts if distribution and historical records suggest newts may be present, there is a pond within 500m of the development or the development site includes suitable terrestrial habitat refuges.

Great crested newt site assessments are undertaken in accordance with:

English Nature. (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough. and

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

Prior to a site visit, a desk study pond search is undertaken. When searching for ponds, Brindle & Green apply a total of 4 sources to establish their location. The following online sources are used:

OS MAPPING VIA PRO MAP, GOOGLE EARTH PRO, GOOGLE MAPS and MAGIC MAPS

Each identified pond (Access permitting) is subjected to a Habitat Suitability Index (HSI) assessment providing a score for each pond. This survey should be undertaken during the summer period to be fully accurate, however assumptions can be made out of season to guide survey recommendations.

Reptiles

Two species of reptile, the sand lizard and smooth snake, and their habitats are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. All other native British reptiles are protected against intentional killing and injury.

British reptiles are found in exposed, undisturbed areas, such as areas without cultivation with differing areas of grassland sward length. Suitable areas include abandoned sand quarries, fallow farmland land, heathland, post-industrial land, railway corridors etc. If these types of suitable features are found then further reptile surveys are recommended.

Edgar P, Foster J and Baker J (2010) *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

Gent T and Gibson S (2003) *Herpetofauna Workers Manual*. JNCC, Peterborough.

Invasive non-native weeds

Plant species such as Japanese knotweed (*Fallopia japonica),* Himalayan balsam *(Impatiens glandulifera)* and giant hogweed (***Heracleum mantegazzianum***) are examples of invasive non-native weeds classified under Part II of Schedule 9 of the Wildlife and Countryside act 1981. Any person who causes these species to grow or spread in the wild by dumping or other means is guilty of an offence. The plant and the soil these species are found growing in are classified as waste material and should be treated as such.

A simple walk over survey of the site to determine if these species are present was carried out during the PEA. A full list of Schedule 9 species can be found at Plantlife.org

Botanical Value

There are 60 plant species listed under Schedule 8 of the Wildlife and Countryside Act 1981 where it is an offence to intentionally pick or uproot or destroy any of these plant species.

During the PEA, a phase one habitat survey was undertaken following JNCC guidance. Further assessments are made to determine whether habitats comprise those identified as Habitats of principle Importance under S42 of NERC Act 2006.

Surveys can be undertaken year-round, however, if species or site conditions suggest higher botanical interest a full botanical survey will be recommended.

Ecological Enhancement

In March 2021 the Department for Communities and Local Government published the National Planning Policy Framework. This sets out planning policies on protection of biodiversity through the planning system. The document states - *opportunities to incorporate biodiversity in and around developments should be encouraged.*

For new buildings guidance such as in the following will be used:

Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build.* Riba Publishing.

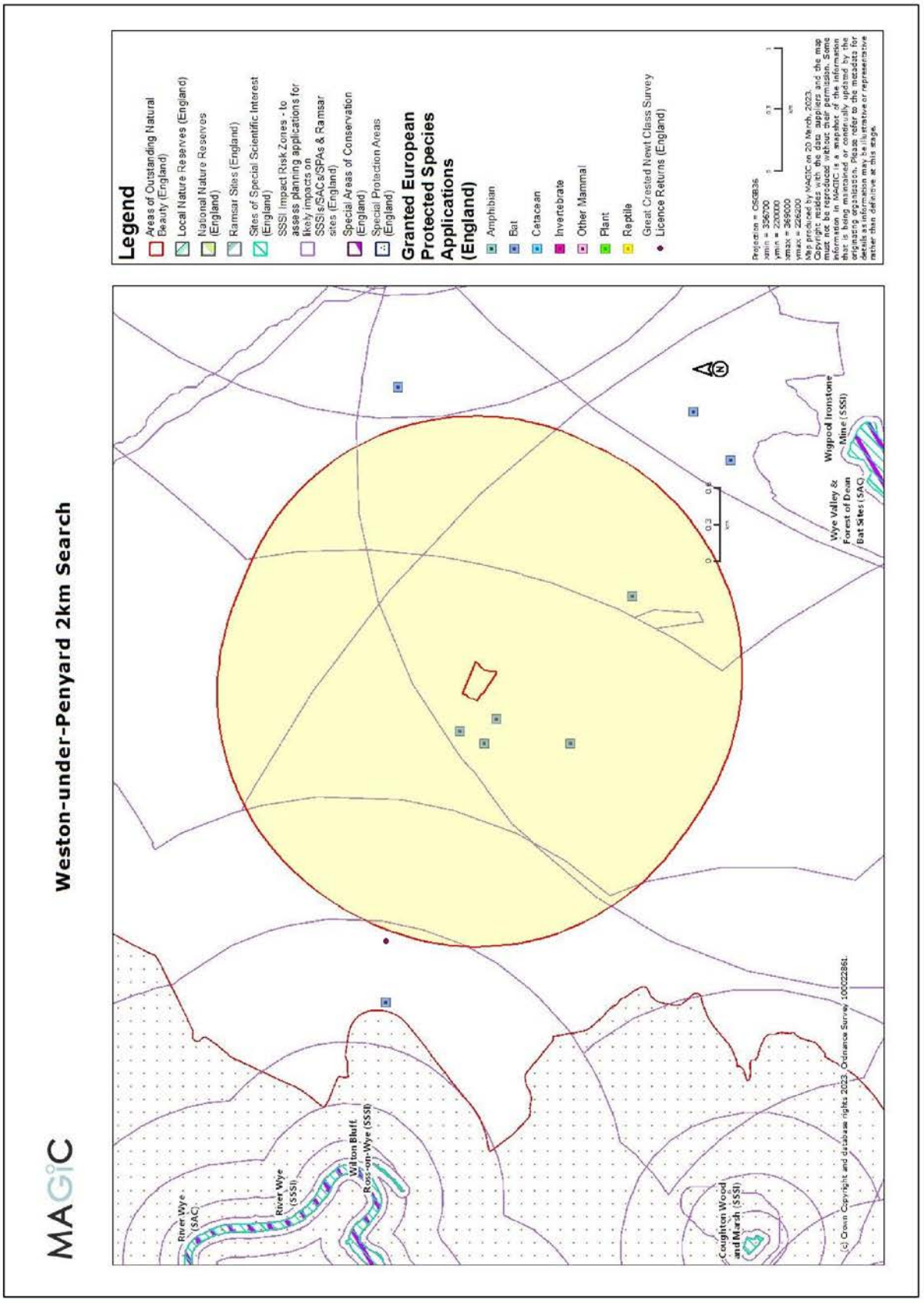
Designated Sites

Designated areas are Sites of Special Scientific Interest (SSSI) while others have been designated as having European protection status. Local authorities can also designate areas for nature conservation and in doing so may impose local authority byelaws to support local nature conservation objectives.

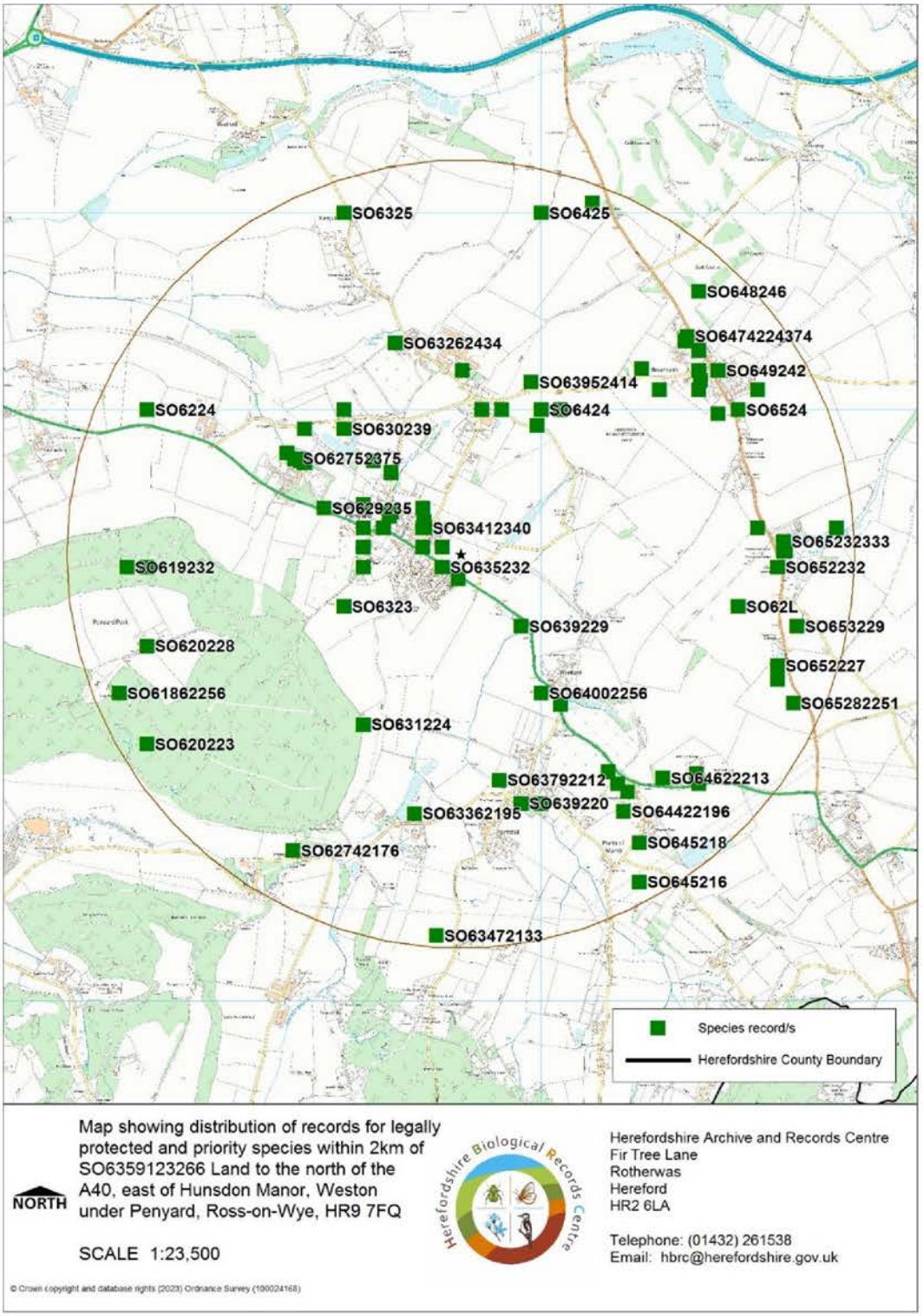
European designated status includes Special Protection Areas (SPAs) that preserve areas for birds and Special Areas of Conservation (SACs) which provides protection for habitats and the species which these habitats supports. Information of Designated Protected Areas is received through Ecological Data Searches and Magic Map searches.

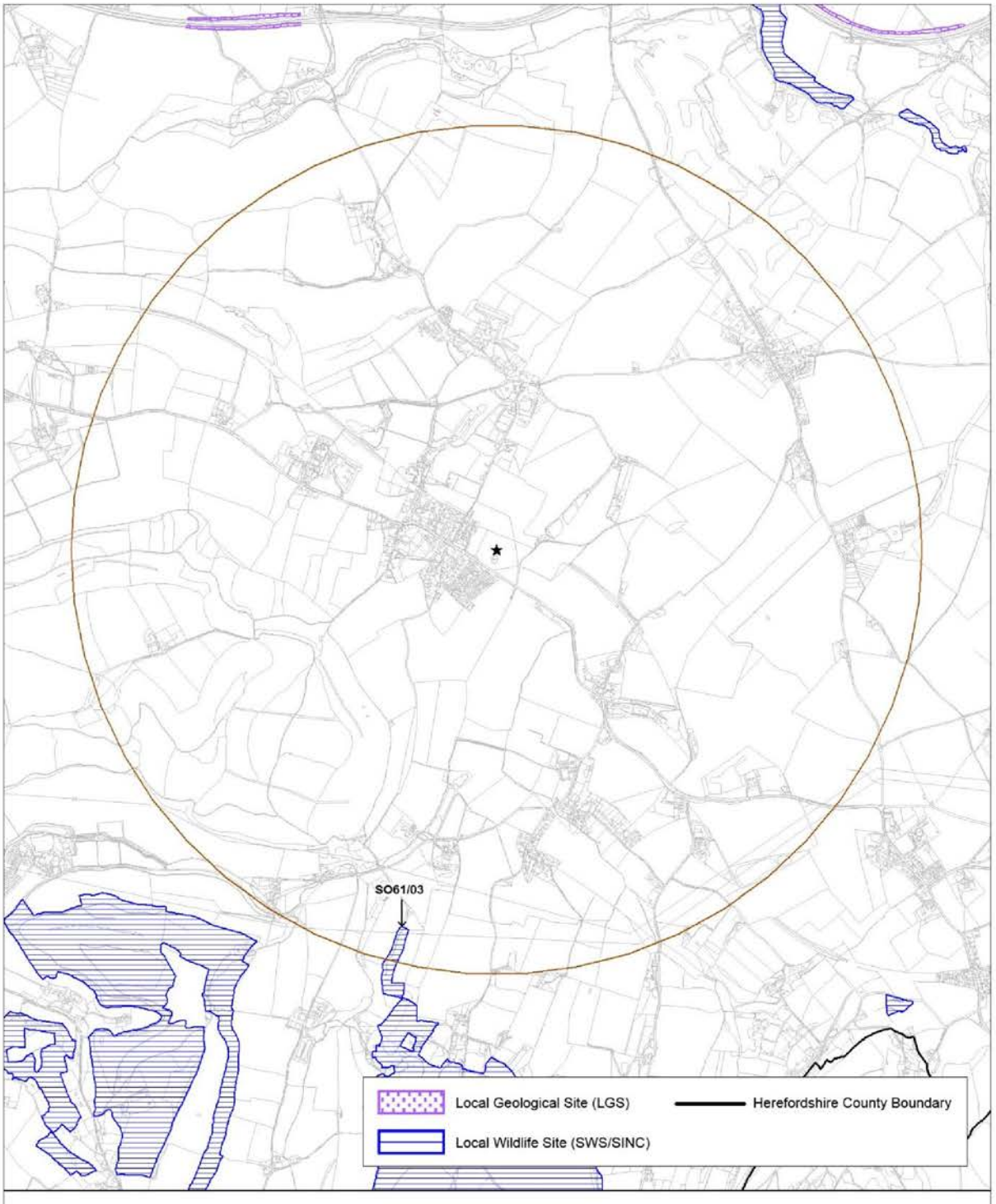
Appendix 6 – Proposed Plans

Appendix 7 – MAGIC data



Appendix 8 – Ecological Data Search Information





Map showing locally designated sites within 2km of SO6359123266 Land to the north of the A40, east of Hunsdon Manor, Weston under Penyard, Ross-on-Wye, HR9 7FQ

NORTH

SCALE 1:23,500

Herefordshire Biological Records Centre

Herefordshire Archive and Records Centre
Fir Tree Lane
Rotherwas
Hereford
HR2 6LA

Telephone: (01432) 261538
Email: hbrc@herefordshire.gov.uk

Appendix 9 – Protected Species Surveys

Appendix 9A – Breeding Bird Surveys

Survey Conditions

The surveys were undertaken in weather conditions considered conducive to bird activity. The weather conditions for the surveys are summarised within Table 16below.

Table 16: Survey dates and weather conditions for the breeding bird surveys

	Survey Visit		
	1	2	3
Date	06.04.2023	17.05.2023	27.06.2023
Temp (^{0}C)	9	7	15
Precipitation	0	0	0
Cloud	8	2/8	8/8
Wind	0	0	0
Start Time	07:25	06:30	05:30
End Time	08:00	07:26	06:30
Sunrise	06:35	05:14	04:45

Figure 12: Breeding Bird Survey Results 06/04/2023

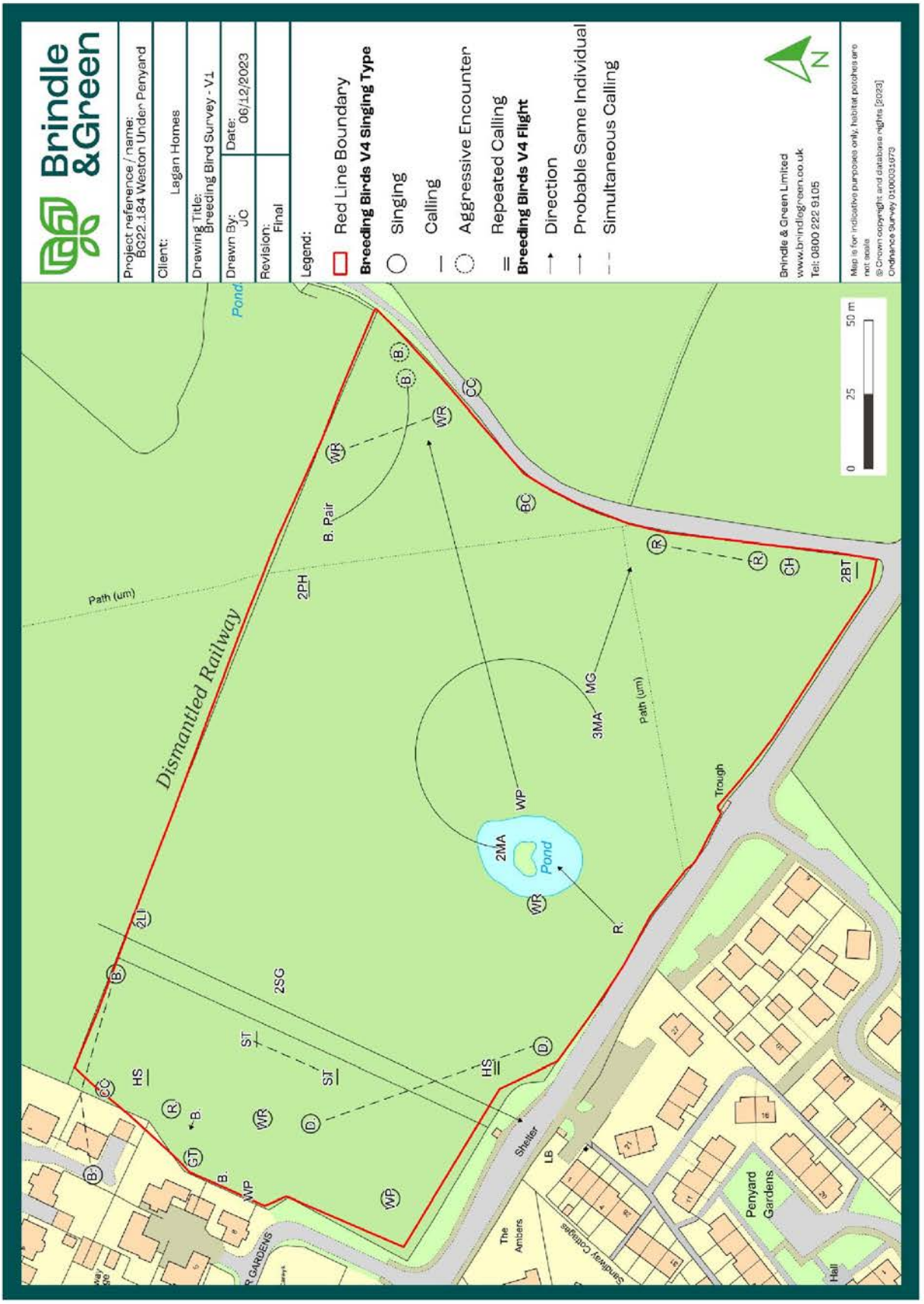


Figure 13: Breeding Bird Survey Results 17/05/2023

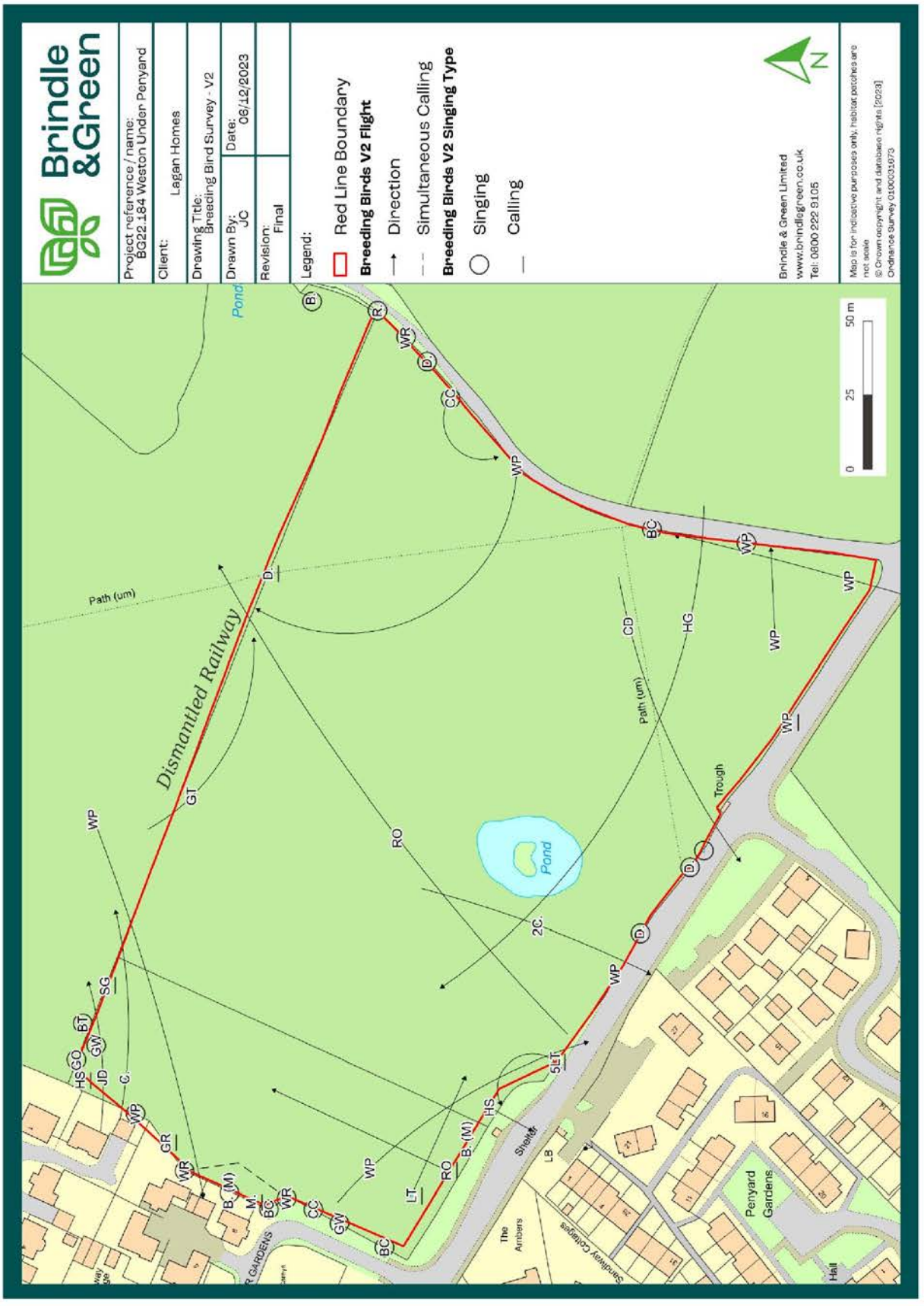
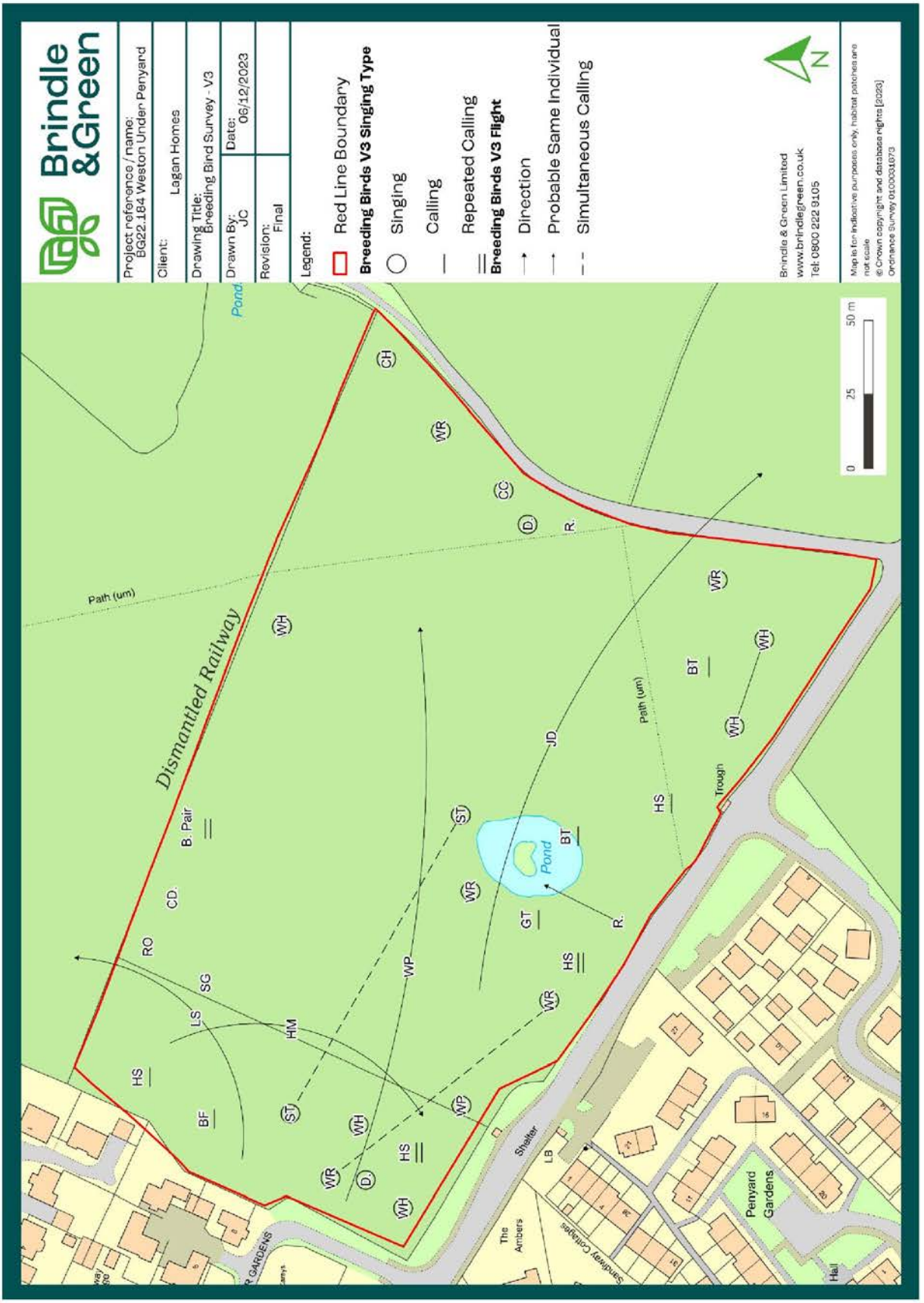


Figure 14: Breeding Bird Survey Results 27/06/2023



Appendix 9B – Bat Activity Surveys

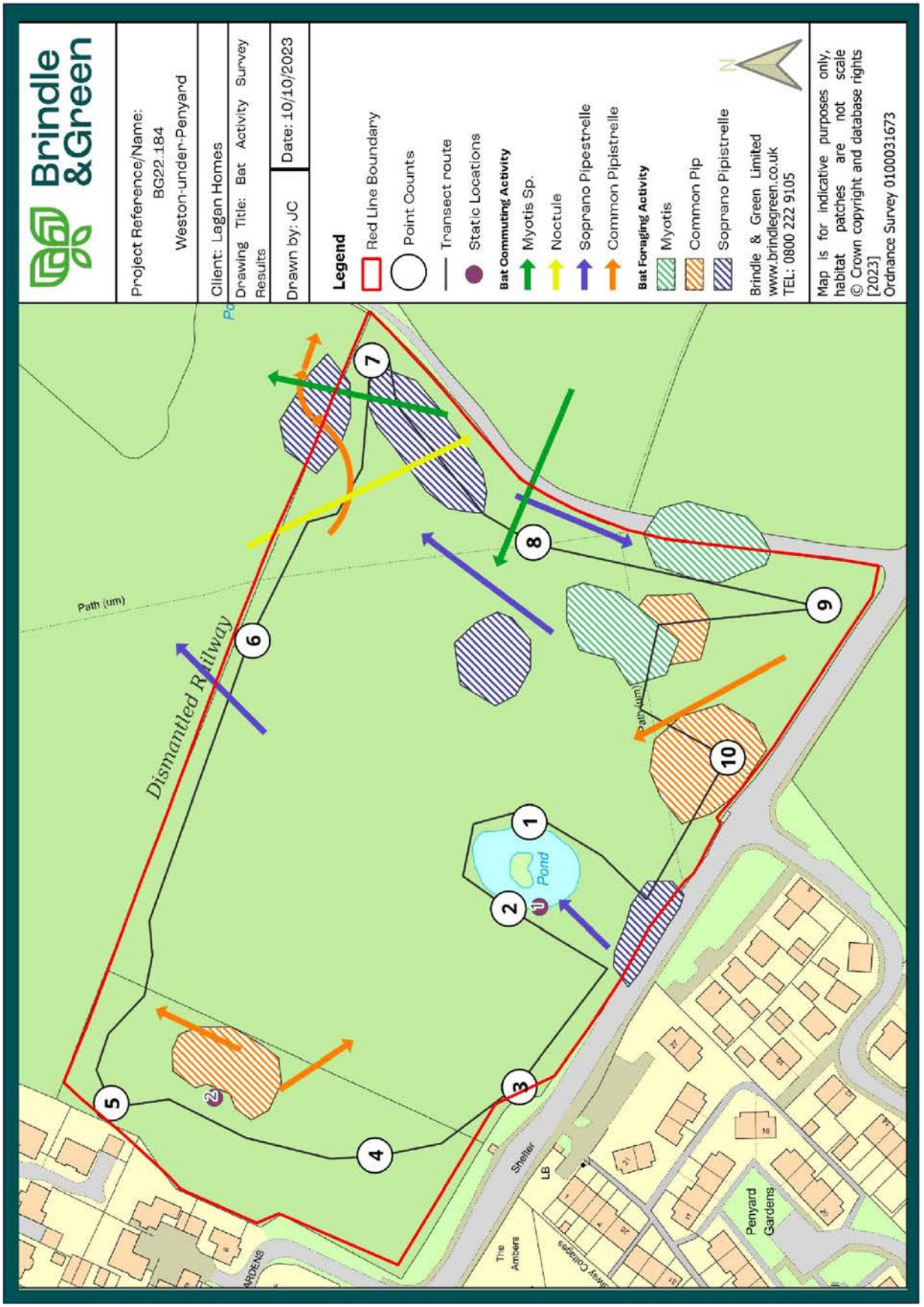
Survey Conditions

The surveys were undertaken in weather conditions considered conducive to bat activity. The weather conditions for the surveys are summarised below.

Table 17: Weather conditions during the bat activity surveys

Survey Date	Weather	Start Time	Finish Time	Sunrise/Sunset Time
24th May 2023	15°C, Precipitation 0/8, 1/8 Cloud cover, Wind Speed 2BF, Humidity 59%	21:09	23:37	21:09
19th June 2023	20°C dropping to 18°C, Precipitation 0/8, 3/8 Cloud cover, Wind Speed 1BF	21:33	23:08	21:33
18th July 2023	20°C, Precipitation 0/8, 5/8 Cloud cover, Wind Speed 0BF, Humidity 67%	21:20	22:50	21:20
21st August 2023	19°C dropping to 18°C, Precipitation 0/8, 7/8 Cloud cover, Wind speed 3BF, Humidity 79% to 83%	20:22	22:22	20:22
11th September 2023	17°C, Precipitation 0/8, 4/8 Cloud cover, Wind speed 2BF	19:35	21:35	19:35

Figure 15: Summary of Bat Activity Recorded between May – September 2023



Appendix 9C – Reptile Surveys

Figure 16: Reptile survey results and location of artificial refugia

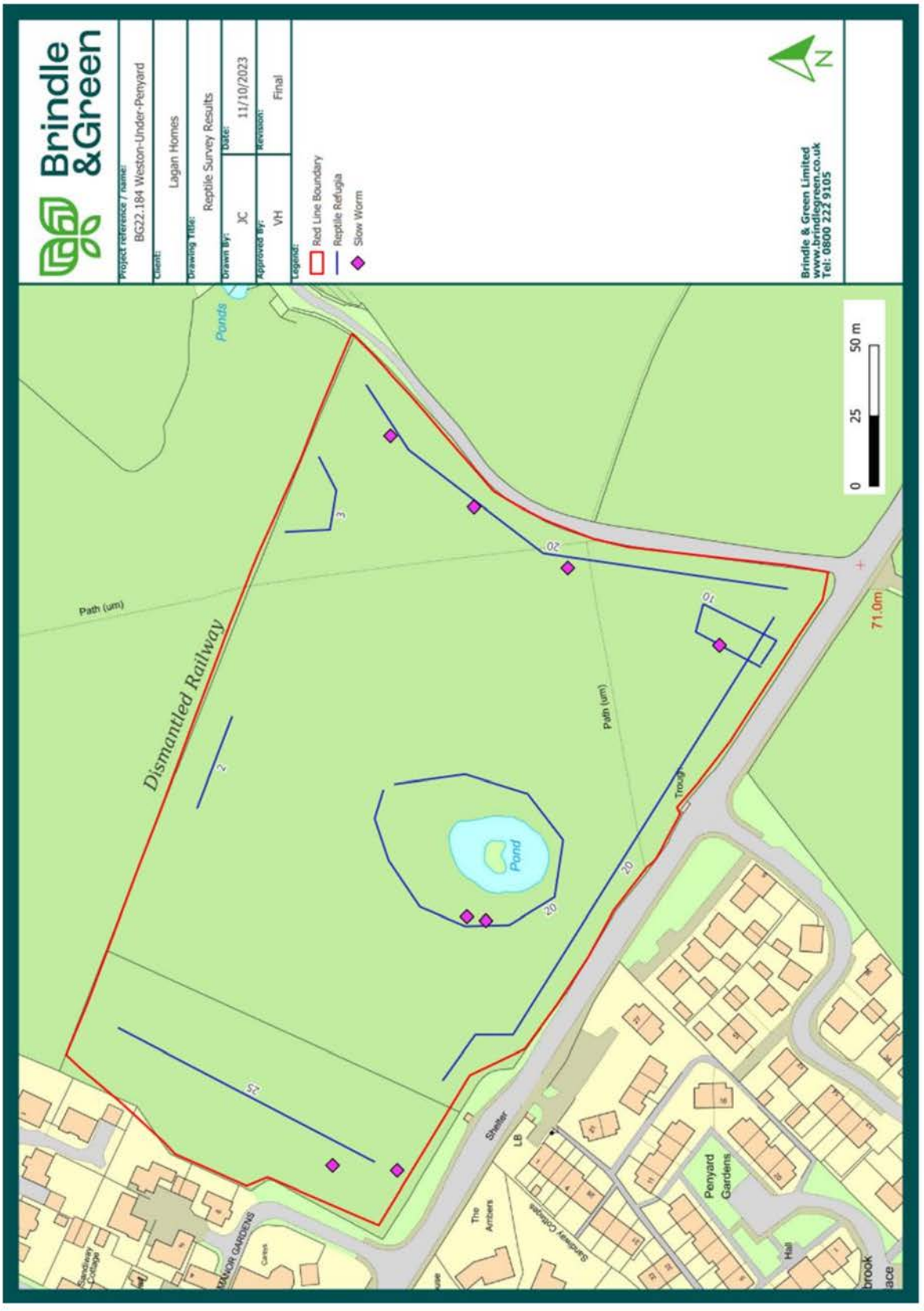
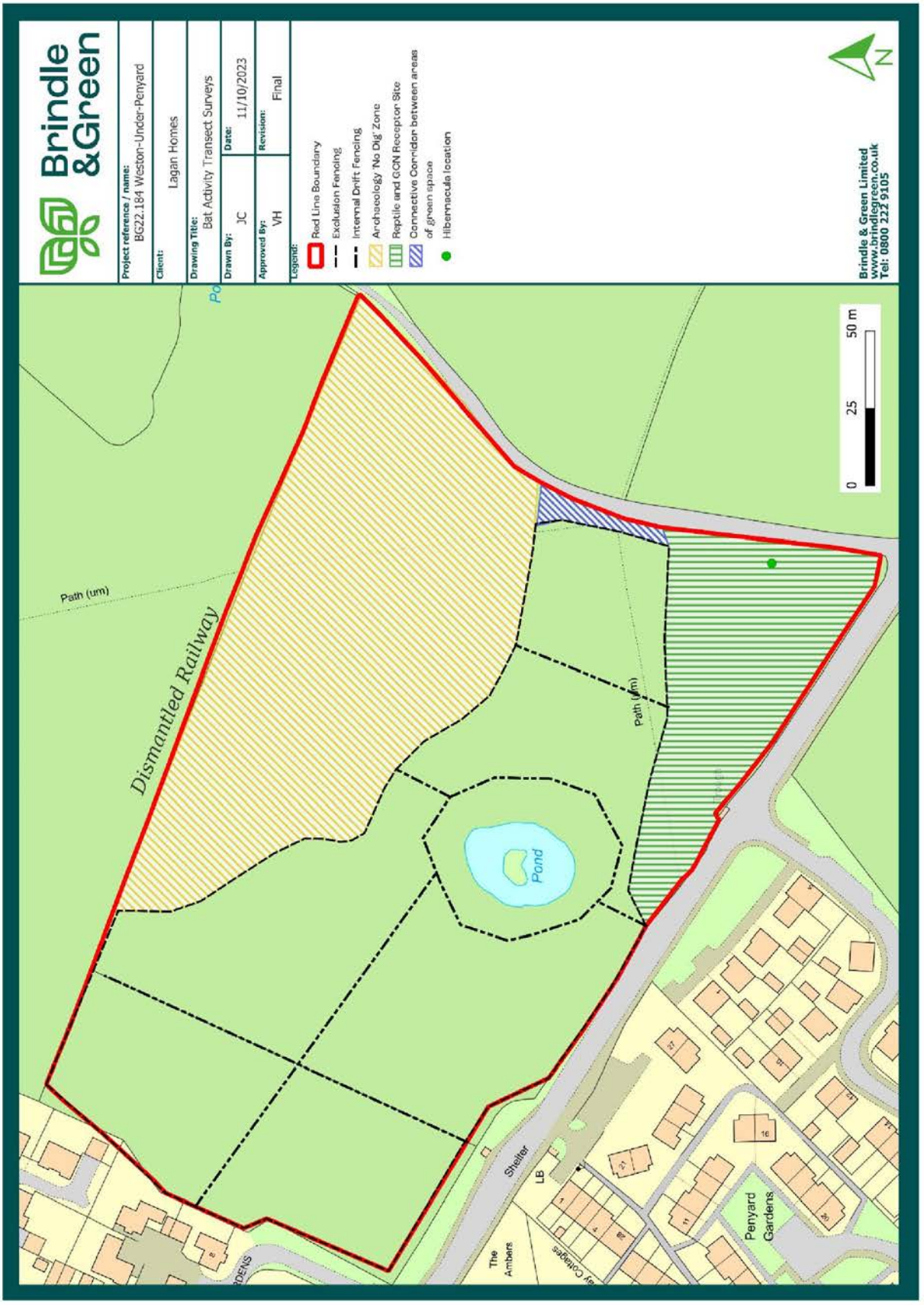


Figure 17: Proposed Fencing Plan, to be included within Method Statement and Licence



Appendix 9D – GCN Surveys

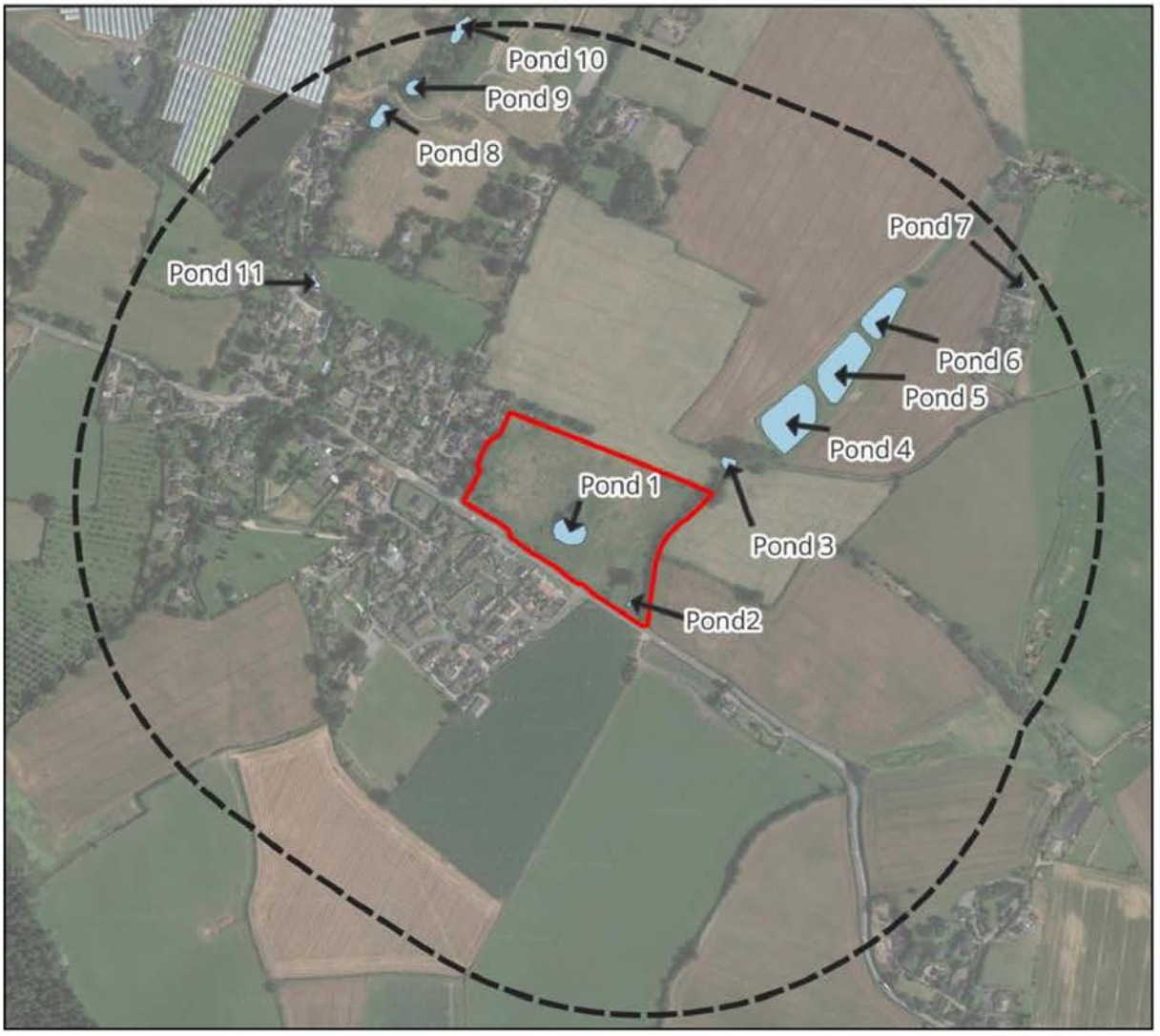


Figure 18: Waterbodies within 500m of the application site

Table 18: Waterbody Locations and Descriptions

Waterbody No.	Grid Ref.	Description	Distance from site
P1	SO 6358 2322	Approximately 700m^2 in area, poor water quality with surface area covered by algal growth. Pond is heavily shaded by *Salix sp.* growing around the perimeter of the pond.	Within site boundary
P2	SO 6366 2312	An old archaeological trench filled with water and recolonised by willow herb (*Epilobium sp.*) and goat willow (*Salix caprea*) over several years.	Within site boundary
P3	SO 6378 2331	No access – situated on private land	40m NE

P4	SO 6386 2337	No access – situated on private land	100m NE
P5	SO 6393 2343	No access – situated on private land	195m NE
P6	SO 6398 2350	No access – situated on private land	280m NE
P7	SO 6416 2353	No access – situated on private land	475m NE
P8	SO 6333 2376	No access – situated on private land	410m NW
P9	SO 6338 2379	No access – situated on private land	425m NW
P10	SO 6344 2386	No access – situated on private land	480m NW
P11	SO 6326 2354	No access – situated on private land	290m NW

Table 19: Habitat Suitability Index assessment for great crested newts

W	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	T
P1	1	1	0.5	0.33	0.2	0.67	1	1	1	0.7	0.66
P2	1	0.1	0.1	0.33	1	1	1	1	1	0.8	0.55
P3	No access – situated on private land										
P4	No access – situated on private land										
P5	No access – situated on private land										
P6	No access – situated on private land										
P7	1	0.2	0.9	0.33	0.9	0.67	0.33	1	0.67	0.8	0.6
P8	No access – situated on private land										
P9	No access – situated on private land										
P10	No access – situated on private land										
P11	No access – situated on private land										

Total HSI Score = $(S1 \times S2 \times S3 \times S4 \times S5 \times S6 \times S7 \times S8 \times S9 \times S10)^{1/10}$

Key:

W = Waterbody

S1 = Location

S2 = Pond Area

S3 = Pond Permanence

S4 = Water Quality

S5 = Shade

S6 = Waterfowl

S7 = Fish

S8 = Pond Numbers

S9 = Terrestrial Habitat Quality

S10 = Macrophyte Coverage

T = Total HSI Score

Appendix 10 – Enhancement Prescriptions

Brindle &Green
Project refenence / name:
BG22.184 Weston Under Penyard
Client:
Lagan Homes
Drawing Title:
Faunal Enhancements
Drawn By:
VH
Date:
21/06/2024
Revision:
Final
Legend:
Schwegler 1B Bird Boxes
1SP Sparrow Terrace
45mm Starling Nest
No.17A Triple Cavity Swift Box
Vivara Pro Build-in Woodstone Bat Tubes
2x Greenwood Ecohabitat Crevice Bat Boxes
Reptile Hibernacula
Hedgehog Dome
N
Brindle & Green Limited
www.brindlegreen.co.uk
Tel: 0800 222 9105
0
25
50 m
Maps is for indicative purposes only, habitat patches are not scale
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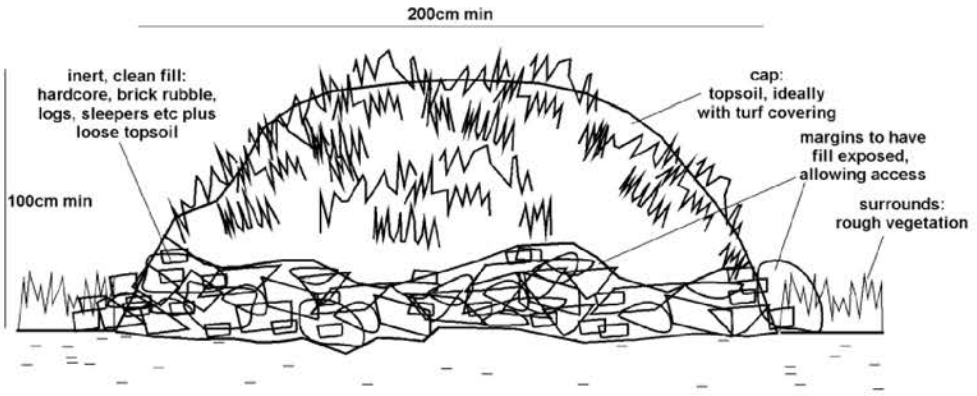
Bird Box	
Schwegler 1B Bird Boxes	
1SP Sparrow Terrace	
45mm Starling Nest	
No 17A Triple Cavity Swift Box	

Bat Box	
Greenwood Eco habitat Crevice box	
Vivara Pro Build-in Woodstone Bat Tube	

Reptile Hibernaculum	
Reptile Hibernacula constructed from inert rubble and untreated logs, overlaid with turf lifted during site clearance. Dimensions 2m long x 1m high minimum.	
Hedgehog Dome	
Schwegler Hedgehog Dome