Preliminary Ecological Appraisal (PEA)



Park House

Clench Common

Marlborough

Wiltshire

SN8 4DU

GR: SU 16637 65100

March 2023

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1. Contract Details

Preliminary Ecological Appraisal: Extended Phase 1 Ecology Survey	
Grid Reference:	SU 16637 65100
Client:	Nick Herridge
Architect/Planning Consultant:	
Date of Survey:	14/02/2023
Date of Report:	12/03/2023
Report Reference:	PEA_Park House_Herridge_March 2023
Associated Reports Reference:	ARB2023029
Workflow Number	PEA2023029
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Declaration of Compliance
BS 42020:2013
This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of practice for planning and development, unless specifically stated otherwise.

Code of Professional Conduct
The information which we have prepared is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Validity of Survey Data and Report
The findings of this report are valid for 12 months from the date of survey, unless the site has been maintained in exactly the same condition, in which case the report can be considered valid for 24 months. Please be aware that some Local Planning Authorities (LPAs) require an update once 12 months has elapsed. If work has not commenced within this period, an updated survey by a suitably qualified ecologist may be required.

Legal and Moral Constraints and Responsibilities Summary

An overview of relevant legislation and responsibility is given within the Appendices: Planning Policy and Legislation. Constraints exist for development where specific habitats or species are, or are potentially, within or adjoining a site proposed for development. Therefore, avoidance, mitigation, compensation and enhancement for a site will apply.

In all instances where Mitigation is given, also refer to:

- Any further survey work for protected species (Phase 2 Surveys) recommended, or their results.
- General Good Practice during Construction Stage.
- Law and Legislation pertaining to specific species (plants and animals)
- Prevention of the spread of native and non-native invasive plants and animals.
- Avoidance of Wildlife Crime http://www.nwcu.police.uk/

Further advice if species are found onsite during development may be sought from Ecological Surveys Ltd (Tel: 01503 240846 or 07736 458609) or Natural England.

What is a Preliminary Ecological Appraisal (PEA)?

Preliminary Ecological Appraisal (PEA) is the term used to describe a rapid assessment of the ecological features present, or potentially present, within a site and its surrounding area (the zone(s) of influence in relation to a specific project (usually a proposed development)). A PEA normally comprises a desk study and a walkover survey. It should be considered to be a simplified form of an ecological survey and assessment.

The key objectives of a PEA are to:

- identify the likely ecological constraints associated with a project;
- identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy'
- identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA) should one be required; and
- identify the opportunities offered by a project to deliver ecological enhancement.

[CIEEM, 2017a]

The primary audience for a PEA is the client or developer and relevant members of the project team, such as the architect, planning consultant and landscape architect. It is normally produced to inform a developer (or other client), and their design team, about the key ecological constraints and opportunities associated with a project, possible mitigation requirements and any detailed further surveys required to inform an Ecological Impact Assessment (EcIA).

Many PEAs are written in a form which might not be accepted by the LPA as it might lack sufficient detail. Our report is written in a manner to support smaller scale

developments, or developments taking place in locations which are not of high biodiversity value, without upgrading to a full EcIA.

Please Note: if the PEA reveals the presence of protected / priority species and / or habitats or the potential for the proposal to impact upon protected sites, it may be necessary to upgrade the PEA into an EcIA to ensure its acceptance by the LPA.

2. Non-technical Summary

Proposed development:	The construction of a driveway and outline planning for one residential property.
Purpose of the report:	To present the results of the Extended Phase 1 Habitat Survey undertaken at Park House, Clench Common, Marlborough in Wiltshire, SN8 4DU, hereafter referred to as 'the Site'; assess the impacts of the proposed development on the important ecological features identified; and detail applicable compensation, mitigation measures and biodiversity enhancements as appropriate.
Is this PEA report considered sufficient on its own to submit with a planning application, or does it require upgrading to an Ecological Impact Assessment (EcIA)?	This report is considered sufficient for the size and scale of predicted impacts as a result of the proposal.

Further Survey Work	- **None required, providing a 20m buffer extending from the badger sett entrance is maintained, and the ash tree with bat roost potential is not worked upon.**
Further Assessment or Mitigation Method Statements	- Mitigation Method Statement for common dormouse regarding the removal of section of defunct native species-poor hedge with trees **(included within this report)**
Habitat Regulation Assessment (HRA) likely?	- It is considered unlikely that an HRA will be requested by the Local Planning Authority (LPA) – albeit that this is not our decision to make.
Important Ecological Features (IEFs) **IEF Designated sites** **IEF Habitats**	The presence of an IEF on site, or in a location which could potentially be impacted by the development or post development activities will need to be mitigated for. **Onsite:** - None **Offsite:** - None **Onsite:** - Amenity grassland potential for foraging European badger - Poor semi-improved grassland: potential for foraging European badger

IEF Species	- Defunct native species-poor hedge with trees: Habitat of Principal Importance - Free-standing trees: potential for nesting birds - Line of trees: potential for bats and nesting birds; badger sett beneath trees along southern site boundary **Offsite:** - Bare ground with scattered trees: potential for bats and nesting birds - Line of trees: potential for bats and nesting birds **Onsite:** - European badger (*Meles meles*): sett on southern site boundary - Foraging, commuting and roosting bats: potentially onsite - Common dormouse (*Muscardinus avellanarius*): potentially onsite - Nesting birds: potentially onsite **Offsite:** - None
Invasive Non-native Species (Schedule 9 species) If present, you have a legal obligation to avoid spreading these plants into the wider environment	- **On site**: None. - **In the immediate vicinity**: Unknown.
Avoidance Measures	You must avoid impacts to the following habitats: - Defunct native species-poor hedge with trees (apart from 3m section being removed) - Ash tree within defunct native species-poor hedge with trees (potential for bat roosting) - Line of trees and badger sett entrance - Bare ground with scattered trees offsite (which provides potential habitat for nesting birds and foraging bats)

Mitigation Measures	- Mitigation Method Statement for common dormouse regarding the removal of section of defunct native species-poor hedge with trees - Re-survey for badger activity immediately prior to groundworks commencing - Habitats retained: line of trees, free-standing trees (majority), defunct native species-poor hedge with trees (majority) and bare ground with scattered trees (offsite) - Construction Exclusion Zones to protect the badger sett, line of trees, bare ground with scattered trees, one of the free-standing trees, and the majority of the defunct native species-poor hedge with trees - Permanent buffers to protect the badger sett and line of trees - Artificial Lighting Strategy - Covered trenching and capped pipework - Appropriate timing of woody species removal, including tree and hedge removal and the relocation of the fruit trees and cotoneaster elsewhere onsite. - Gapping-up of the defunct native species-poor hedge with trees - General good practice during construction phase
Enhancement Measures The LPA have an obligation to ensure that all developments result in a 'net biodiversity gain'. Consequently, even if there are no perceived negative biodiversity impacts, you will still have to provide some form of biodiversity enhancement.	- The inclusion of one built-in bird box, one bat tube and one bee brick into the structure of the new dwelling - Landscaping to benefit wildlife
Landscape and Ecological Management Plan (LEMP) A LEMP clarifies the timings and process which must be followed to ensure the biodiversity protection and enhancement of the site, during and post-development, as well as landscape considerations.	- Not recommended for this site.
Important Advisory	Ensure all onsite contractors/personnel are familiar with this report (and any Phase 2 reports associated with this site) and able to act upon the law and legislation governing

	protection of species and habitats onsite and mitigation specifically pertaining to this site. Should protected species be discovered on site, all works in the vicinity must cease immediately and ecological advice sought urgently.
Other relevant information / advice	- The LPA should ensure that any mitigation and compensation measures identified in this report, together with enhancement recommendations are either 'conditioned' where appropriate, or that full permission is withheld pending the agreement of mitigation, compensation (where necessary) and enhancement measures.

Any works which negatively impact the biodiversity of this site, post the results of this ecological survey being received verbally, or in writing, could constitute a Wildlife Crime (Appendix F. Wildlife Crime; http://www.nwcu.police.uk/).

3. Introduction

Ecological Surveys Ltd were commissioned to undertake a Preliminary Ecological Appraisal (PEA) to include the potential for legally protected and notable species of the Site, and to assess the potential impact of the development on the biodiversity of the Site and its immediate environs. Ecological Surveys Ltd has not been informed of any previous surveys undertaken on this site that need to inform this report.

Only habitats which are present on site or adjoining the site are included and no discussion is entered into regarding habitats which are not present.

3.1 Survey Aims

The survey and this report identify features of conservation importance that could constitute a constraint to the proposals for this Site. Where appropriate, recommendations for impact avoidance, mitigation and post-development enhancement are made to ensure compliance with wildlife legislation and relevant planning policy.

This survey has been prepared in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017a).

3.2 Site Location and Size

The Site comprises part of a field used to graze horses and part of a residential garden bounded by lines of trees and a hedgerow, and is situated in Clench Common, a semi-rural location 4km south-west of Marlborough in north-east Wiltshire. The Site location is given in Figure 3.1.

The area surveyed is approximately 0.15ha in extent.

3.3 Proposed Development

The proposed development comprises the construction of a driveway and outline planning for a residential property.

Detailed development plans are not currently known.

Figure 3.1 Location of Proposed Development



Location of the site



Wider landscape location to put site in context

4. Methodology

This Preliminary Ecological Appraisal encompasses the establishment of the ecological baseline by undertaking a desktop survey, drawing on existing information and data, and a field survey; initial evaluation of the impacts of the proposed development on the designated sites, habitats and species found both on the Site and in the immediate vicinity of the Site and the identification of measures to mitigate the impacts; and the identification of ways to enhance the biodiversity of the area.

4.1 Desktop Survey

A desk-top survey was undertaken, collating existing data for the following relating to both the Site itself and the area within a two-kilometre radius:

- Statutory and non-statutory wildlife and earth science sites
- BAP Priority Inventory Habitats
- Legally protected and nationally notable species

Websites were consulted (refer to References).

In light of the habitats present within the Site, a biological records search was not commissioned as it was not considered appropriate for the scale and probable impact of the proposed development.

4.2 Field Survey

A field survey was undertaken by Paul Diamond RHS Cert (Hort), BSc (Hons), MSc, MCIEEM, MArborA Licentiate Member of the Landscape Institute on February 14th 2023 and the weather was clear and dry.

The field survey included carrying out an Extended Phase 1 Habitat Survey, consisting of a walkover assessment of the Site using Phase 1 Habitat Survey methodology (JNCC, 2010, as amended by the Institute of Environmental Assessment (IEA, 1995)). This is a standard technique for classifying and mapping British habitats. All areas within the Site were surveyed, the main plant species recorded, and habitat type mapped. Indicators of ecological value were also noted, including the presence or signs of any legally protected or rare species.

Plant species were identified according to Stace (2019).

A search was also made to identify the presence of any invasive non-native species (particularly those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)), including Japanese knotweed (*Reynoutria japonica*) and Himalyan balsam (*Impatiens glandulifera*).

Any buildings onsite were assessed for their potential to support roosting bats (using the criteria set out in Appendix D). Buildings were examined both externally and internally to consider the potential and actual use by bats, as well as by nesting birds.

4.3 Survey Constraints

All areas of the Site were readily accessible, and the time spent on site was considered appropriate to obtain all the details required for each habitat and species to enable an assessment to be made. Although some plant species would not have been visible during

the survey period, the botanical diversity was considered sufficient to be able to classify and assess the habitats present, as well as their potential for supporting legally protected and notable species.

It should be noted that habitats, and the species they may support, change over time due to natural processes and because of human influence. In line with current guidelines, the survey on which this report is based is only valid for two years, after which time it will need updating. It being accepted that some LPAs now expect a survey to be updated after 12 months.

4.4 Assessment

All ecological data and information gained through both the desktop survey and the survey work were evaluated. The important ecological features were then identified and evaluated against the potential impacts/effects that the proposed development may have on the ecology of the Site and surrounding area.

The biodiversity importance of each designated site, habitat and species is evaluated on a geographic scale: international, national, county and local.

Evaluation of designated sites considers their designation; their ecological and landscape relationship with the proposed site; and the species and/or habitat types for which the site was designated.

Evaluation of habitats considers their designation; their area, quality and viability; diversity and connectivity to the wider landscape; and structural diversity and species-richness.

Evaluation of species considers their designation, including legal protection and rarity.

When assessing the impact of the development and changes to the baseline conditions on site, predictions will be made which focus solely on the zone of influence whilst taking into consideration the lifespan of the development and the significant impacts as identified from the proposed work operations throughout the lifespan of the development.

The proposed development aims to firstly avoid and then mitigate against any potential effects/impacts on the local ecology/biodiversity, ensuring compliance with nature conservation legislation. It aims to achieve this by applying the mitigation hierarchy (as mentioned in Paragraph 175 of the National Planning Policy Framework and detailed in Paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance) as follows:

Avoidance – Significant harm to wildlife species and habitats should be avoided through design.

Mitigation – where significant harm cannot be wholly or partially avoided, it should be minimised by design, or by the use of effective mitigation measures that can be secured by, for example, conditions or planning obligations.

Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, this should be properly compensated for by measures to provide for an equivalent value of biodiversity.

Appropriate measures to avoid and/or minimise the significant negative effects on the important ecological features have been identified. These mitigation measures aim firstly to avoid the overall effect/impact, or for those that cannot be avoided, reduce their overall effect value. It is not always possible to fully mitigate an adverse effect to neutral levels.

Under the National Planning Policy Framework, NPPF, (HM Government, 2021a) local planning policies and decisions should 'contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

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

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

[Taken from NPPF 2021, Section 15. Conserving and enhancing the natural environment, paragraph 174]

Thus, the mitigation hierarchy should be applied when considering the impacts of developments and local planning decisions on the natural environment, with the protection of important wildlife sites, habitats, species and ecosystem services; the avoidance of impacts, mitigating these impacts where appropriate, and then achieving biodiversity net gain through enhancements.

Section 15 of the NPPF 2021 goes on to state that 'when determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the

features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'

[Taken from NPPF 2021, Section 15. Conserving and enhancing the natural environment, paragraph 180]

The aim of development should be to deliver biodiversity net gain on site as well as limiting damage to important ecological features. Using the information gained during the desktop survey and the Extended Phase 1 Habitat Survey, and the ecological requirements of habitats, species and local environmental conditions, biodiversity enhancements for the Site have been considered, providing opportunities to increase the diversity of habitats and species on site.

4.5 Biodiversity Impact Assessment: Biodiversity Losses and Gains

The biodiversity impact assessment calculations, to determine the biodiversity losses and gains associated with the proposed development can be undertaken using the Department for Environment, Food and Rural Affairs (Defra)/Natural England Biodiversity Metric 3.1 and are set out in section 7. This metric uses habitat to describe biodiversity, which is converted into measurable 'biodiversity units' according to the area of each type of habitat. The metric scores different habitat types (e.g. woodland, grassland) according to their relative biodiversity value and adjusts this according to the condition and location of the habitat. Where new habitat is created or existing habitat is enhanced then the associated risks of doing so are factored into the metric.

The metric can be used as an auditing tool to quantity the biodiversity value of habitats on a patch of land and it can be used to calculate the losses and gains in biodiversity from actions such as development or from positive conservation management.

It should be noted that the metric for biodiversity offsetting only considers habitats, both those currently present on site and those proposed as mitigation and biodiversity enhancements for the proposed development. The metric does not take account of species onsite, or enhancements proposed to delivery biodiversity gain for species (except where they equate to gain in semi-natural habitats).

5. Results/Baseline Ecological Conditions

This section presents the findings from the site survey and desktop study. The information is presented in three distinct sections:

- Designated sites
- Habitats
- Species

5.1 Designated Sites

Designated sites of international, national and local importance are listed below, along with their approximate distance from the proposed development.

Designation	Name (if applicable)	Distance
Statutory Sites		
Special Area of Conservation (SAC):	None within 2km	n/a
Special Protection Area (SPA):	None within 2km	n/a
RAMSAR:	None within 2km	n/a
World Heritage Site:	None within 2km	n/a
Site of Special Scientific Interest (SSSI):	Pewsey Downs	1.6km to the south-west
Areas of Outstanding Natural Beauty (AONB):	North Wessex Downs	Site lies within this designated site
National Nature Reserve (NNR):	None within 2km	n/a
Local Nature Reserve (LNR):	None within 2km	n/a
Non-statutory Sites		
County Wildlife Site (CWS):	Unknown	-
County Geology Site (CGS):	Unknown	-

The Site lies within a SSSI Impact Risk Zone, but the type of development (rural-residential) does not require Natural England to be consulted.

The closest European sites are the River Avon Special Area of Conservation (SAC) approximately 3.5km to the south of the Site and Pewsey Downs SAC some 4.6km to the south-west. The proposed development site lies outside of the Hampshire River Avon Catchment and therefore nutrient neutrality does not apply. There will be no likely significant effect of either of these SACs resulting from the proposed development at the Site. Therefore, a Habitats Regulations Assessment (HRA) is unlikely to be required on this site. Refer to Appendix G. Habitats Regulation Assessment (HRA) for details.

Designated sites considered Important Ecological Features with respect to the proposed development:	- None

5.2 Habitats

This section details the habitats present on the Site and recorded during the Extended Phase 1 Habitat Survey, along with important habitats within the vicinity of the site. Figure 5.1 maps the Phase 1 habitats recorded onsite during the field survey and Table 5.1 summarises the area of each of these habitats.

Table 5.1. Phase 1 habitats associated with the site, their extent and value in a geographical context.

Phase 1 habitat type	Area (ha) or length (km)
Amenity grassland	0.123ha
Poor semi-improved grassland	0.022ha
Free-standing trees	0.006ha (canopy area)
Defunct species-poor hedge with trees	0.051km
Line of trees	0.034km

Figure 5.1 Extended Phase 1 Habitat Survey Map



Bare Ground with Scattered Trees

	
Bare ground with scattered trees within the chicken run onsite	**Group of trees within the chicken run behind wooden shed**

Onsite	This habitat is adjacent offsite.
Area of bare ground with scattered trees on site	n/a
Offsite	The fenced chicken run adjacent to the southern end of the western boundary of the site contains a mixed group of trees upon bare ground. Species comprise beech (*Fagus sylvatica*), Scot's pine (*Pinus sylvestris*) and ash (*Fraxinus excelsior*). The ash has ash dieback disease (*Hymenoscyphus fraxineus*)**.** The trees offer potential habitat for nesting birds and foraging bats. Trees are a feature of the surrounding landscape, and a number of woodlands designated as Habitats of Principal Importance under the NERC Act 2006 lie with a 2km radius of the site. Several of these are ancient woodlands and lowland mixed deciduous woodlands; the closest of both of these being some 0.3km to the north-west of the site. Woodpasture and parkland lies 1km to the south of the site, and traditional orchards lie 1.3km to the south of the site**.**
Legal Constraints	The trees offsite offer habitat for protected species.
Important Ecological Feature (IEF)	Yes – for protected species
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	The trees within this habitat must be retained and mitigation measures put in place to avoid damage (see below).

Mitigation Measures	Required as follows: 1. Construction Exclusion Zones (CEZs) of a minimum width of 5m extending from the trees 2. Artificial Lighting Strategy Further mitigation may be required – see associated Arboricultural Report
Biodiversity Enhancement Measures	Not required.
Habitat loss/gain	N/a

Line of Trees



Line of trees upon a bank forming the southern boundary of the site

Onsite	Leyland cypress (*Cupressus × leylandii*) trees upon a low bank form the southern boundary of the site. A badger sett entrance was recorded within the bank at the base of these trees during the Extended Phase 1 Habitat Survey. The line of trees upon a bank offer habitat for European badger (*Meles meles*) and potential habitat for further protected species such as nesting birds and foraging and commuting bats.
Length of line of trees on site	0.034km
Offsite	Lines of trees run adjacent to the majority of the western boundary of the site, within the residential garden adjacent offsite. These offer potential habitat for nesting birds and foraging and commuting bats.

Legal Constraints	The lines of trees offer habitat for protected species
Important Ecological Feature (IEF)	Yes – for protected species
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	The lines of trees must be retained and mitigation measures put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Construction Exclusion Zone (CEZ) and permanent buffer, of a minimum width of 20m extending from the badger sett entrance on the southern boundary of the site 2. Construction Exclusion Zones (CEZs) of a minimum width of 5m extending from the edge of the lines of trees adjacent offsite 3. Artificial Lighting Strategy Further mitigation may be required – see associated Arboricultural Report
Biodiversity Enhancement Measures	Not required.
Habitat loss/gain	No loss or gain.

Trees (Free-standing)

	
Small group of Lawson cypress (T1) to be removed	**Photo taken facing the south-eastern corner of the site: fruit trees (T3) on the left and Lawson cypress (T4) to the right**

Onsite	A group of closely planted Lawson cypress (*Chamaecyparis lawsoniana*) trees are situated adjacent to the northern end of the

	defunct hedge on site. This will be lost to development due to construction of the drive. Three young fruit trees, a young cotoneaster (*Cotoneaster* sp.) and a Lawson cypress are located within roughly the centre of the lawn area on site (amenity grassland). The fruit trees and cotoneaster are small therefore relocation of these trees is unlikely to cause damage to them. The Lawson cypress trees offer potential habitat for nesting birds.
Area of individual tree cover within this habitat	0.006ha
Offsite	Trees are a feature of the surrounding landscape.
Legal Constraints	The Lawson cypress trees offer habitat for protected species (nesting birds).
Important Ecological Feature (IEF)	Yes – for protected species
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	Mitigation measures must be put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Appropriate timing of woody species removal, including the relocation of the fruit trees and cotoneaster elsewhere onsite. 2. Construction Exclusion Zone (CEZ) of a minimum width of 4m extending from the trunk of the Lawson cypress (T4) Further mitigation may be required – see associated Arboricultural Report
Biodiversity Enhancement Measures	Not required.
Habitat loss/gain	Loss of 0.002

Poor Semi-improved Grassland



Field of semi-improved grassland (photo taken facing east)

Onsite	The field to the east of the site, the north-western corner of which is on site, is owned by the client and used to graze horses. The field is poor semi-improved grassland of a short sward. The section of field on site will be lost to development due to construction of the drive. This poor semi-improved grassland is of limited importance for animal species due to regular grazing but may support invertebrates and foraging mammals such as European badger.
Area of poor semi-improved grassland on site	0.022ha
Offsite	Several grasslands designated as Habitats of Principal Importance under the NERC Act 2006 lie with a 2km radius of the site; lowland calcareous grassland, the closest being 0.9km to the south of the site, and lowland meadow, the nearest 1.1km to the south-west.
Legal Constraints	The poor semi-improved grassland offers habitat for protected species.
Important Ecological Feature (IEF)	Yes – for protected species
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	Mitigation measures must be put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Covered trenching and capped pipework at night
Biodiversity Enhancement Measures	Not required.

Habitat loss/gain	Loss of 0.022

Amenity Grassland



Amenity grassland on site (photo taken facing the eastern boundary of the garden area on site)



Badger snuffle hole within the amenity grassland on site

Onsite	The amenity grassland forms the dominant habitat on site, forming the lawn area within the existing garden. The grass is mown to a short length, with very few herbaceous species present. Common daisy (*Bellis perennis*), creeping buttercup (*Ranunculus repens*) and sphagnum moss (*Sphagnum* spp.) were recorded during the field survey. The short sward length impeded identification of further species. Signs of foraging badger were recorded within the lawn area during the field survey.
Area of amenity grassland on site	0.123ha
Offsite	The offsite section of the garden comprises amenity grassland.
Legal Constraints	The amenity grassland offers habitat for protected species.
Important Ecological Feature (IEF)	Yes – for protected species
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	None required.
Mitigation Measures	Required as follows: 1. Construction Exclusion Zone (CEZ) and permanent buffer of a minimum width of 20m extending from the edge of the badger sett entrance on the southern boundary of the site

	2. Covered trenching and capped pipework at night
Biodiversity Enhancement Measures	Not required.
Habitat loss/gain	Loss unknown.

Hedgerows

	
Ash trees within the defunct native species-poor hedge with trees onsite	**Defunct native species-poor hedge with trees**
Onsite	A defunct native species-poor hedge with trees forms much of the eastern boundary of the site. Species comprise ash, rowan (*Sorbus aucuparia*), crack willow (*Salix* x *fragilis*), holly (*Ilex aquifolium*) and bramble (*Rubus fruticosus* agg.). One of the ash trees within this hedge with trees offers potential habitat for roosting bats [see section *5.3 Species* below, in the *Bats* section]. A short section of the defunct native species-poor hedge (approximately 3m) is to be removed to accommodate the new drive. This will involve the removal of bramble, rowan, and potentially one of the ash trees. The hedge onsite is important for several animal species and provides habitat for potential protected species such as nesting birds, common dormouse (*Muscardinus avellanarius*) and foraging, commuting and roosting bats. It is an important biodiversity feature providing an area of semi-natural habitat for a range of species, and corridors through the landscape for the dispersal of small animals.
Length of hedgerows on site	Defunct native species-poor hedge: 0.051km

Offsite	Hedgerows are a feature of the surrounding landscape and connect the site to habitats within the wider landscape.
Legal Constraints	The hedge onsite is considered to be a Habitat of Principal Importance under the NERC Act 2006 but is not considered 'Important' under The Hedgerow Regulations (1997). The hedge offers habitat for protected species.
Important Ecological Feature (IEF)	Yes
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	Mitigation measures must be put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Construction Exclusion Zones (CEZs) of a minimum width of 5m extending from the edge of the defunct native species-poor hedge 2. Mitigation Method Statement for dormouse 3. Artificial Lighting Strategy 4. Appropriate timing of woody species removal 5. Gapping-up of the defunct native species-poor hedge with trees
Biodiversity Enhancement Measures	Not required.
Habitat loss/gain	Loss of 0.003km

Buildings





Sheds in front of the chicken run offsite

Onsite	n/a
Area of habitat formed by the building on site	n/a
Offsite	Two small wooden sheds are situated offsite, adjacent to the southern end of the western boundary of the site. There is no potential for nesting birds or roosting bats upon or within these structures.
Legal Constraints	None
Important Ecological Feature (IEF)	No
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	None
Mitigation Measures	Not required
Biodiversity Enhancement Measures	Not required.
Habitat loss/gain	One residential dwelling to be built; footprint unknown at this time

5.3 Species

This section includes details concerning the species recorded on site during the Extended Phase 1 Habitat Survey, as well as legally protected and/or notable species recorded within a 2km radius of the development site. The potential for the presence of legally protected and/or notable species on site has also been included, based on the habitats recorded on site and adjacent land.

Where there is no potential for a species or species group to be present within the site, they have been scoped out at this stage.

Bats

	
Ash tree with bat roosting potential within the defunct native species-poor hedge with trees	**Inside of the ash tree with bat roosting potential**

Onsite	[The use of any buildings/structures on site by bats has been included in section *5.2 Habitats* above, in the *Buildings* section.] One of the ash trees within the defunct native species-poor hedge with trees offers potential habitat for roosting bats. This tree must not be worked upon as it offers high potential to host a bat roost within the hollow trunk. Prior to any intended remedial or removal works, this tree must be carefully surveyed by an experienced ecologist. The line of trees, scattered trees, native species-poor hedge and defunct native species-poor hedge with trees offer potential for foraging and commuting bats, with connectivity out into the wider landscape via hedgerows to semi-natural habitat, including farmland and woodland. No bat species were recorded during the Extended Phase 1 Habitat Survey.
Offsite	The area immediately surrounding the site is bisected with hedgerows, providing commuting routes for bats across the landscape. There are also numerous woodlands connected by the hedgerow network, making the surrounding area suitable for commuting, foraging and roosting bats.
Legal Constraints	The habitat has been assessed as capable of supporting protected bat species: - legal constraints apply: legal protection under The Conservation of Habitats and Species Regulations 2010, the Wildlife and Countryside Act 1981 (as amended) and the NERC Act 2006.

Important Ecological Feature (IEF)	Yes
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	All habitat on site that supports / with the potential to support legally protected and/or notable bat species must be retained, **with no work to affect the ash tree within the species-poor hedgerow that has bat roosting potential.** Mitigation measures put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Construction Exclusion Zones (CEZs) of a minimum width of 5m extending from the edge of the line of trees, defunct native species-poor hedge with trees, and bare ground with scattered trees onsite 2. Artificial Lighting Strategy 3. Gapping-up of the defunct native species-poor hedge with trees along the eastern boundary of the site
Biodiversity Enhancement Measures	Required as follows: 1. One bat tube built within the structure of the new property

European Badger (*Meles meles*)



Badger sett entrance within the bank below the line of trees along the southern boundary of the site



Badger snuffle holes within the lawn area on site

Onsite	Signs of European badger (*Meles meles*) were recorded on site during the field survey. A badger sett entrance is situated within the bank at the south of the site under the tree roots. This is likely

	to be an outlier sett as a larger sett is located further south, within the field boundary hedgerow offsite. The amenity grassland within the garden shows evidence of foraging badger.
Offsite	European badger has been recorded within a 2km radius of the site since the year 2000 (Mammal Mapping App Sighting Records, obtained via https://records.nbnatlas.org [accessed 27/02/2023]).
Legal Constraints	The legally protected European badger is present on site: legal protection under the Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act 1992.
Important Ecological Feature (IEF)	Yes
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	All habitat on site that supports / with the potential to support European badger must be retained and mitigation measures put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Construction Exclusion Zones (CEZs) of a minimum width of 20m extending from the badger sett entrance at the southern boundary of the site 2. Permanent buffer of a minimum width of 20m extending from the badger sett entrance at the southern boundary of the site 3. Artificial Lighting Strategy 4. Re-survey for badger activity immediately prior to groundworks commencing 5. Covered trenching and capped pipework at night
Biodiversity Enhancement Measures	Not required.

Common Dormouse (*Muscardinus avellanarius*)



Defunct native species-poor hedge with trees along the eastern boundary of the site	
Onsite	Dormice are arboreal and are found within species-rich hedgerows and fruiting woody shrubs. The defunct native species-poor hedge with trees along the eastern boundary of the site supports woody species including bramble, with linkage out to the wider countryside. There is potential for dormice to be present in the defunct species-poor hedge with trees.
Offsite	There are mature hedgerows and woodland within the vicinity of the site with the potential to support common dormouse.
Legal Constraints	The habitat has been assessed as capable of supporting common dormouse: - legal constraints apply: legal protection under The Conservation of Habitats and Species Regulations 2010, the Wildlife and Countryside Act 1981 (as amended) and the NERC Act 2006.
Important Ecological Feature (IEF)	Yes
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	Mitigation measures must be put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Construction Exclusion Zone (CEZ) of a minimum width of 5m extending from the edge of the defunct native species-poor hedge with trees, where it is being retained 2. Mitigation Method Statement for the removal of a short (3m) section of defunct species-poor hedge with trees 3. Covered trenching and capped pipework at night 4. Artificial Lighting Strategy

	5. Gapping-up of the defunct native species-poor hedge with trees
Biodiversity Enhancement Measures	Not required.

Other Mammals

Onsite	No legally protected and/or notable mammal species (other than those mentioned in the preceding sections) were recorded on site during the Extended Phase 1 Habitat Survey.
Offsite	The following legally protected and/or notable mammal species (other than those mentioned in the preceding sections) have been recorded within a 2km radius of the Site since 2000: brown hare (*Lepus europaeus*) (Mammal Mapping App Sighting Records, obtained via https://records.nbnatlas.org [accessed 27/02/2023]).
Legal Constraints	None
Important Ecological Feature (IEF)	No
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	None required.
Mitigation Measures	None required.
Biodiversity Enhancement Measures	Not required.

Birds

Onsite	Habitats at this site are likely to support common and widespread birds. No birds were recorded on site during the Extended Phase 1 Habitat Survey. There are unlikely to be any legally protected and/or notable birds present as the habitats are common, have been agriculturally/horticulturally improved and are therefore unlikely to support such bird species. However, all bird species are protected whilst nesting, breeding and rearing young. The trees and hedge onsite are likely to support nesting birds.

Offsite	The lines of trees adjacent offsite are likely to support nesting birds.
Legal Constraints	The habitat has been assessed as capable of supporting protected bird species: - legal constraints apply: legal protection under the Wildlife and Countryside Act 1981 (as amended) and the NERC Act 2006.
Important Ecological Feature (IEF)	Yes – nesting birds
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	All habitat on site that supports / with the potential to support legally protected and/or notable bird must be retained and mitigation measures put in place to avoid damage (see below).
Mitigation Measures	Required as follows: 1. Construction Exclusion Zones (CEZs) of a minimum width of 5m extending from the edge of the line of trees upon a bank, defunct native species-poor hedge with trees, and bare ground with scattered trees, and of a minimum width of 4m extending from the trunk of the Lawson cypress (T4) 2. Appropriate timing for woody species removal 3. Gapping-up of defunct native species-poor hedge with trees
Biodiversity Enhancement Measures	Required as follows: 1. Provision of one bird brick built within the structure of the new dwelling

Invertebrates

Onsite	Habitats at this site are likely to support common and widespread invertebrates. No invertebrates were recorded on site during the Extended Phase 1 Habitat Survey, and legally protected and/or notable are unlikely to be present as the habitats are common, have been agriculturally improved and are therefore unlikely to support such invertebrate species.
Offsite	Unknown.
Legal Constraints	None
Important Ecological Feature (IEF)	No

Further Survey Work	Phase 2 survey not required.
Avoidance Measures	None required.
Mitigation Measures	Not required.
Biodiversity Enhancement Measures	Not required. 1. Provision of one bee brick built within the structure of the new property

Vascular Plants

Onsite	The site has a low floral diversity, focused within species-poor hedges and scattered trees. A list of plants recorded on site during the Extended Phase 1 Habitat Survey is set out in Appendix A. No legally protected and/or notable vascular plant species were recorded on site during the Extended Phase 1 Habitat Survey and there are unlikely to be any present as the habitats present are common, have been agriculturally improved and therefore are unlikely to support such plant species.
Offsite	Unknown.
Legal Constraints	None
Important Ecological Feature (IEF)	No
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	None required.
Mitigation Measures	Not required.
Biodiversity Enhancement Measures	Not required.

Invasive Non-native Species

Onsite	No invasive non-native species were recorded on site during the Extended Phase 1 Habitat Survey.
Offsite	Unknown.
Legal Constraints	None
Important Ecological Feature (IEF)	No

Further Survey Work	Phase 2 survey not required.
Avoidance Measures	n/a
Mitigation Measures	n/a
Biodiversity Enhancement Measures	n/a

6. Biodiversity Mitigation and Enhancement Details

The ecological mitigation measures and biodiversity enhancements required for the residential development at Park House have been listed in Section 5 above, against the particular habitat, species and species group for which they are required. This section provides the specific details for each of the mitigation measures and enhancements mentioned. These are mapped in the Ecological Constraints and Opportunities Plan (ECOP) set out in Appendix H at the end of this report.

Enhancement (measures that improve the biodiversity/ecological condition) of all sites post development is a planning requirement. The law, central government planning policy and local planning policy point towards the enhancement of a site's biodiversity as part of the development process.

Ecological enhancement measures must be over and above any avoidance, mitigation and compensation measures required to neutralise the impacts of the development on wildlife. An increased need for effective Enhancement has been reinforced by recent research conducted by a United Nations-backed panel called the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) stating up to million plant and animal species face extinction. Whilst we in the UK are not directly responsible for all of this loss, we can try to protect the threatened species within the UK.

Consequently, enhancement requirements within this report should be seen as the minimum expectations and we would urge all clients to carefully consider how they are able to make positive contributions to protecting and enhancing our natural environment within their planning submissions.

The implementation of the mitigation and biodiversity enhancement measures should be overseen by an Ecological Clerk of Works or a suitably experienced ecologist.

Further mitigation and enhancement measures relating to the trees onsite are to be found within the Arboricultural Report.

Re-survey of Badger Activity

A re-survey of badger activity will be undertaken on the site immediately prior to development work commencing (no more than 28 days before commencement). This is primarily to identifying any new setts or areas of badger activity within the site, due to a badger sett being recorded along the southern site boundary during the Extended Phase 1 Habitat Survey.

Construction Exclusion Zones

Areas that are being retained should be protected from damage during the groundworks and construction phase of the development by erecting Heras (or similar) fencing around these features. Construction Exclusion Zones (CEZs) should therefore be set up along the bare ground with trees and defunct native species-poor hedge with trees, at a minimum distance of 5m from the edge of the habitat. A CEZ should be set up around the Lawson cypress at a minimum distance of 4m.

A Construction Exclusion Zone at a distance of a minimum of 20 metres is required around

the badger sett located on the southern boundary of the site. Any development work being undertaken within 10 metres of a badger sett normally requires a licence from Natural England and work can usually only be carried out from 1st July to 30th November in order to protect pregnant females and young cubs. This CEZ will encompass the line of trees along the southern site boundary.

Temporary fencing (Heras or similar) with appropriate signage will be erected at the appropriate distance(s) (as mentioned above). The only exception to this is at existing access points. Heras fencing is not intended to restrict the access of species to other areas of the site, therefore, mindful procedure by site workers and visitors to the site is always necessary.

No development work should be undertaken within the CEZs and no materials, machinery, chemicals etc. should be stored within these zones. No development or any associated works should be located within these Construction Exclusion Zones. Appropriate signs should be placed at regular intervals along the fencing to ensure everyone on site is aware of the CEZ and understands its relevance (for example CONSTRUCTION EXCLUSION ZONE – NO ACCESS).

Any areas proposed for planting post-development should also be fenced off where possible to prevent compaction of the soil through vehicle movements.

Permanent Buffers

A permanent buffer of a minimum width of 20m will be maintained extending from the badger sett entrance, on the southern boundary of the site.

Mitigation Method Statement regarding removal of section of hedgerow with dormouse potential

Mitigation Process and Time-line	
Stage 1. Initial vegetation removal. **Time constraint:** November – May inclusive	• Removal of tops of vegetation (north hedgerow proposed point of access only – 3m length) are to be carried out by hand during the winter months. • Remove height of vegetation to 30cm. • One week later remove growth to ground level. • Roots must be left untouched for at least 2 weeks following this period.
Stage 2. Removal of roots. **Time constraint:** May.	• After the two-week period, (and not before May) the roots can be removed subject to a fingertip search by a licenced ecologist with no evidence of dormice found.

Removal of woody species/sections of hedgerow

Removal of any woody species/trees within hedgerows or individual trees should be done outside of the bird nesting season of March – September (inclusive). If removal is not possible

during this period, careful checks of the hedgerows to ensure no bird nesting is taking place must be conducted by a suitably experienced ecologist prior to works commencing. If breeding birds are found or suspected, clearance work will not be permitted until an ecologist is satisfied that breeding is complete, which may be as late as August or September.

This applies specifically to the removal of a section of the defunct native species-poor hedge with trees along the eastern boundary. The relocation of the fruit trees and cotoneaster should also take place during this dormant period.

Covered Trenching and Capped Pipework

Trenches or large excavations should be covered overnight to prevent wildlife such as badgers or hedgehogs falling in and failing to escape. If this is not possible then a strategically placed plank may provide a means of escape.

Any large bore pipes should be capped at the end of the day to reduce the potential for badgers and other wildlife entering and becoming trapped.

Artificial Lighting Strategy

No external artificial lighting will be introduced to the site during the groundworks and construction phases of the development. External artificial lighting during the operational phase will comprise lights above external doors.

LED and/or low-pressure sodium lamps with glass glazing should be utilised instead of mercury or metal halide lamps. This type of lighting can be utilised more directionally and will reduce the range of light wavelengths emitted thus significantly reducing the levels of UV light which may attract increased levels of invertebrate bat prey items. Avoid artificial lights shining on known or potential bat roosts, their access points and their flight paths.

- Light ONLY when and where it is needed for health and safety.
- Prevent light-spill and spread: eliminate bare bulbs, upward pointing lights, keep light near to or below the horizontal. E.g. flat cut-off lanterns. Such light should be positioned to only illuminate the required areas, limiting light spill, both horizontally and vertically. Additionally, hoods, cowls, louvers and/or shields may be utilised to further direct any lighting.
- Decrease light intensity, avoid the UV spectrum: attracting insects is NOT an aim.
- When external lighting is needed for safety reasons, dynamic lighting schemes that are switched on only when needed should be considered. Dynamic lighting schemes are usually triggered via motion sensors by a pedestrian, bicyclist or cars.
- Timer switch on any proposed outdoor lighting to facilitate dark periods.
- Where planting to block lighting, use temporary fencing to shield light spill until vegetation has matured.

It is becoming increasingly common for LPAs to request an independent site lighting strategy and expect it to be submitted as early as the reserved matter stage. Consideration should be given to this prior to submission particularly on larger sites or those with important bat / dormouse habitat / corridors, rather than wait to be compelled to do so.

Gapping Up of the Hedgerow and Subsequent Management

Gaps in the defunct native species-poor hedgerow with trees should be infilled with native species, ideally of local provenance. Species could include hawthorn (*Crataegus monogyna*), pedunculate oak (*Quercus robur*), field maple (*Acer campestre*), dogwood (*Cornus sanguinea*), hazel (*Corylus avellana*), spindle (*Euonymus europaeus*), holly (*Ilex aquifolium*) and wild privet (*Ligustrum vulgare*). Honeysuckle (*Lonicera periclymenum*) should also be planted.

Hedgerows should be trimmed only every three years (or less frequently if possible) and maintained at a height of at least 3m and preferably 4m. It is important not to cut all hedgerows in an area at the same time, so that some heavily fruiting hedgerows are always present. As a guide, it is suggested that cutting only 10 to 30 per cent in any one year is advisable. Hedgerow management for dormice is given below.

Hedgerow Management Good Practice, for the Benefit of Dormice and Hedgerow Biodiversity Ref: *The Dormouse Conservation Handbook Second Edition*.	
1	Except where road safety or access, preclude it, hedgerows should be trimmed only every three years (or less frequently if possible) and maintained at a height of at least three, and preferably four metres.
2	Ideally, about one third of hedgerows should be left to grow for 7 to 10 years.
3	It is important not to cut all hedgerows in an area at once, so that some heavily fruiting hedgerows are always present. As a guide, we suggest cutting only 10 to 30 per cent in any one year.
4	In some places, it may be feasible to cut only one side of the hedge, cutting the other a year or two later, thus not removing all the food sources at once and allowing some regrowth before further cutting takes place. If possible, flails should not be used to manage hedgerows.
5	Coppicing or, even better, laying should be used to manage hedgerows that become gappy or lack dense branches at their base. Fencing may be needed to prevent stock from causing damage before new growth has become established.
6	If hedgerow size needs to be reduced, it is better to avoid cutting the top and to cut one side only.
7	When creating new hedgerows, or plugging gaps in existing ones, at least five and preferably seven different shrub/tree species should be planted. The best species to plant are hawthorn (for its flowers and berries) and hazel (nuts and insects); with a diversity of other species to offer flowers insects and fruits at different times Bramble would make a valuable addition but may arrive naturally.
8	Where new roads or other developments cut across hedges, the 'loose ends' should be linked up by suitable plantings. Mixtures of hawthorn and hazel are the preferred species where early results are needed.

Bat Roosting Provision

One bat tube/brick should be built into the structure of the new property.

Bat tubes/boxes erected on properties offer potential bat roosts and augment the natural roosting opportunities. These tubes/boxes should be erected not less than 3m high and ideally 4m plus.

- Bat tubes must be built into the fabric of the building, ideally on the southern and western aspects, and not bolted on to the outside and are therefore only suited to structures, not trees. A choice of styles is sometimes available, and the most suitable style can be agreed with the LPA.
- Where bat-tubes are unsuited owing to the type of construction of the proposed structures, other bat boxes or specifically designed bat habitation of an equally durable condition may be substituted for bat-tubes (subject to LPA approval.)
- Where enhancement recommends bat tubes or bat boxes on structures, aspects of the Artificial Lighting Strategy must be followed to ensure artificial lighting does not shine on the access points /boxes or flight paths.

		
Bat Tube	**Enclosed Bat Box suited to Pipistrelles**	**Weather Board**

Bird Nesting Provision

One bird brick should be built into the structure of the new property.

In-built bird bricks provide a long-lasting solution. Fixing to trees or external wall mountings will only last as long as the nail / screw or branch lasts. Often this is less than ten years. Built in features are likely to last as long as the structure they are built into which might be hundreds of years. Obviously, there may be occasions where built in solutions are not applicable. LPA approval of external mounted boxes is generally required.

- Only boxes of robust or permanent construction are suitable. Some account must be taken of the potential need to maintain and replace boxes after a number of years in use.
- Boxes/bricks should be positioned with orientation preferably between north and east with external positions of not less than 3m high to avoid cat predation and vandalism.

- Site nest boxes in locations that are accessible for maintenance, but away from bird feeders. Ideally boxes should be a discrete distance away from other nest boxes, except for house sparrows, as they like to nest in colonies.

	
Swift	**Bird brick 24,25,26 to suit varying bird sizes:**

Solitary Bee Provision

One solitary bee brick should be built into the new property. Solitary bee bricks can be built into buildings, walls and other structures. Each bee brick provides multiple cavities for solitary bees to lay their eggs. The bricks should ideally be built into south-facing, sunny walls, at between one and two metres above ground level and with nectar sources nearby.



Solitary bee bricks

General Good Practice for Construction Sites

All activities on site should bear in mind the potential for wildlife or the environment being harmed through the process of development from inception to end, with a proactive approach occurring for lawful protection of wildlife and the environment regarding use of materials, machines, chemicals, and human activity on site.

- ✓ Contractors must ensure that no harm can come to wildlife by maintaining the site efficiently, clearing away any material such as wire in which animals can become entangled and preventing access to toxic substances.

- ✓ Any large bore pipes should be capped at the end of the day to reduce the potential for badgers and other wildlife entering and becoming trapped.
- ✓ If there is a substantial delay before development commences, the site should be maintained in a way that would prevent wildlife colonising it and causing constraints in the future. Such management should include mowing grassland at least twice a year and preventing scrub encroachment.
- ✓ Piles of brush wood and or log piles should be carefully inspected for signs of wildlife prior to their removal. This is especially crucial during the period March – September (inclusive) as some species of bird choose such sites to construct their nests. Ideally removal of such features should be done outside of the nesting season. If this is not possible, it is recommended that these features are covered in such a way as to exclude / prevent birds and / or reptiles taking up residence. If nesting birds or reptiles are discovered, work must cease immediately, and ecological advice sought.
- ✓ Erection of signage to inform of any Health and Safety considerations during development and post development for the benefit of residents.
- ✓ If any species is discovered during any stage of the works, any vegetation, materials etc. should be replaced to re-establish a level of cover allowing the animal to move away of its own accord. If required, further advice should be sought from Ecological Surveys Ltd (Tel: 01503 240846 or 07736 458609) or Natural England.

Landscaping for the Benefit of Wildlife

Landscaping in sympathy with the needs of native wildlife is relevant to all important wildlife species. It helps to support birds by providing plant species which carry seeds, fruits, nuts, and/or support insects (nectar and pollen) upon which birds feed and supports bats by attracting insects to the garden.

The list below is not exhaustive, neither is it prescriptive, and recommendations in italics can be applied with discretion. The implementation of a combination of recommendations here fulfils the obligation of the client/agent to leave the site in an enhanced state.

- ✓ The landscape architect/or appointed person should plant a variety of flowering plants, biased towards native and near-native species. Exotics are not required; however, a selection of exotics to extend the flowering season and potentially provide resources for specialist groups now and in the future, is becoming increasingly important owing to climatic changes, and should be given serious consideration by any with a view to protecting and sustaining present and future biodiversity. Plant holistically for biodiversity value: nectar rich plants/shrubs which yield fruits /nuts of benefit to a multitude of species.
- ✓ Where grass is planted, use a grass mix other than low amenity lawn grass. Plant mixes with diverse grass species support a wealth of insects when allowed to seed and flower before being cut back.
- ✓ Provide green corridors (hedges/trees/water features/lawns or mixed diversity species and beds) with attention to other neighbouring green spaces. The garden itself, when taken as one of many within the neighbourhood, will become part of a wider green corridor.

- ✓ Select a variety of plants that will produce foods in different seasons. For winter residents as well as migrants that return early in spring, plants that hold their fruits throughout the winter ("winter-persistent" plants) are a vital food source.
- ✓ Leaving rough areas of vegetation, native trees and shrubs around the vicinity of any replacement buildings will also maintain nesting opportunities.
- ✓ Avoid pesticide and insecticide use.
- ✓ For garden areas: improve the area of green habitat within the garden wherever feasible and where paved spaces and balconies must be used also consider:
  - Planters and raised beds
  - Courtyard trees, low level shrubs, hedges
  - Planting climbers and creepers.
- Include features such as bird tables and feeders raised up or protected at the base from squirrel or cat ascent.
- Provide shelter using low shrubs, thickets or hedges where birds can nest, perch, and escape from predators.
- Leave tree stumps, dead wood (where safe to do so) tree limbs, leaf piles and compost to encourage insects and worms for birds to feed on.
- Keep a lid on any water butts.
- Appropriate aftercare and management should ensure that these areas are maintained to give optimum benefit to wildlife.

7. Biodiversity Impact Assessment: Losses and Gains

The proposed development is classed as a minor development and therefore, at the present time, there is no requirement for the Department for Environment, Food and Rural Affairs (Defra)/Natural England Biodiversity Metric 3.1 to be used to calculate the biodiversity losses and gains associated with the development – a 10% biodiversity net gain (BNG) is not required. However, in line with the *National Planning Policy Framework 2021*, which requires that all development must provide BNG throughout the development process, Table 7.1 shows the losses and gains for the habitats on site if the proposed development goes ahead.

Table 7.1. Habitat losses and gains for the proposed development at this site

Habitat	Area (ha) / length (km) lost	Area (ha) / length (km) gained	Overall biodiversity gain
Amenity grassland (lawn)	Unknown	Unknown	Unknown
Building	n/a	Unknown	Gain of one residential property (footprint unknown at this time)
Defunct native species-poor hedge with trees	0.003km	-	Loss of 0.003km, but gapping-up of the remaining hedgerow will increase the quality of the hedgerow for wildlife
Hardstanding	n/a	Unknown	Gain unknown
Line of trees	0	0	0
Poor semi-improved grassland	0.022ha	0	Loss of 0.022ha
Trees (free-standing)	0.002ha (canopy area)	0	Loss of 0.002ha (canopy area)

The Mitigation Hierarchy has been followed, seeking to firstly avoid, minimise, restore and enhance existing habitats onsite, and then compensate for those habitats lost. There are no irreplaceable habitats onsite or adjacent to the site and therefore there is no loss or impact on any such habitats. The greatest extent of habitat of site is amenity grassland, with a defunct native species-poor hedge, free-standing trees and poor semi-improved grassland.

Measures to avoid and minimise biodiversity loss and to rehabilitate/restore biodiversity affected by the project are presented in section 6 above. A 20m permanent buffer will extend from the badger sett entrance at the south of the site, retaining the line of trees and some of the amenity grassland. The majority of the trees onsite are to be retained. A small section of defunct native species-poor hedge with trees is to be removed; however, the remaining hedge will be infilled with native species to create a native species-rich hedge with trees, to the benefit of wildlife.

8. Conclusions

The proposed residential development site is considered to be of low/moderate ecological value due to the habitats present.

The Extended Phase 1 Habitat Survey that was undertaken on 14/02/2023, along with the desktop survey, are considered to have collected enough information about the ecological condition of the site to have been able to adequately assess the impact of the proposed development. Further survey work is therefore not required.

Mitigation measures have been set out to avoid and reduce the effects/impacts of the development on the important ecological features and the local environment as a whole. These include Construction Exclusion Zones, permanent buffer around badger sett, Artificial Lighting Strategy, appropriate timing of woody species removal, Mitigation Method Statement for dormouse, re-survey of badger activity immediately prior to groundworks commencing, gapping-up of the defunct species-poor hedge with trees, and covered trenching and capped pipework at night, and all measures should be included as a planning condition for the proposed development. Further mitigation may be required, dependent on the results of the Arboricultural Survey – see associated report.

Enhancement measures for biodiversity have also been set out, including the provision of one bat tube/brick, one bird brick and one bee brick built within the structure of the new property.

Providing the recommendations within this report are adhered to, with the mitigation measures and enhancements agreed, there would appear to be no ecological constraints to prevent this development. The local planning authority (LPA) should ensure that the mitigation measures, together with enhancement recommendations, are either 'conditioned' where appropriate, or that full permission is withheld pending the agreement of mitigation, compensation (where necessary) and enhancement measures.

An Ecological Clerk of Works or a suitably experienced ecologist should oversee the implementation of the ecological mitigation measures and the enhancements for biodiversity.

It is the responsibility of all those involved with the proposed development works at Park House to ensure that wildlife protection and nature conservation legislation is complied with throughout the lifespan of the development, at every stage. Care must be taken during all stages of the development and if any protected species are discovered they must not be handled; works must stop immediately, and advice sought from a licensed ecologist.

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- www.nonnativespecies.org
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- Wiltshire Wildlife Trust: - www.wiltshirewildlife.org/

10. Appendices

Appendix A. Flora Species Recorded Onsite During Extended Phase 1 Habitat Survey

Common Name	Scientific Name
Ash	*Fraxinus excelsior*
Bramble	*Rubus fruticosus* agg.
Common daisy	*Bellis perennis*
Cotoneaster	*Cotoneaster* sp.
Crack willow	*Salix x fragilis*
Creeping buttercup	*Ranunculus repens*
Holly	*Ilex aquifolium*
Lawson cypress	*Chamaecyparis lawsoniana*
Leyland cypress	*Cupressus x leylandii*
Rowan	*Sorbus aucuparia*
Sphagnum moss	*Sphagnum* spp.

Appendix B. Summary of the Legislation and Policy relating to Habitats and Species

The Wildlife and Countryside Act (WCA) 1981 (as amended)

This Act is the primary legislation that protects animals, plants and certain habitats in the UK. It is the means by which the Bern Convention and the Birds Directive and Habitats Directive are implemented in Britain. Protected birds, animals and plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act.

Schedule 1 Part 1 – Birds which are protected by special penalties at all times from being intentionally killed, injured, or taken and whose eggs, nests or dependent young are also protected from being disturbed.

Schedule 5 Section 9 Part 1 (killing/injuring) – Animals which are protected from being intentionally killed or injured.

Schedule 5 Section 9 Part 1 (taking) – Animals which are protected from being taken.

Schedule 5 Section 9 Part 4a – Animals which are protected from intentional damage to, destruction of, or obstruction of access to any structure or place used for shelter or protection.

Schedule 5 Section 9 Part 4b – Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.

Schedule 5 Section 9 Part 4c – Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.

Schedule 6 - Animals which are protected from being killed or taken by certain methods under Section 11(1). The methods listed are: self-locking snares, bows, crossbows, explosives (other than ammunition for a firearm), or live decoys.

Schedule 8 – Plants and fungi which, subject to exceptions, are protected from: intentional picking, uprooting or destruction; selling, offering for sale, possessing or transporting for the purpose of sale; advertising for buying or selling.

Schedule 9 – Plant and animal species that are prohibited from introducing into the wild as they may cause ecological or environmental harm or where they pose a threat to the native habitats and species. Under Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) it is a criminal offence to cause any of 48 non-native plant species (6/4/2010) and (non-native animals) to spread into the wild where they cause damage to the environment/ economy/health/lifestyle.

The site owner has a responsibility to:

- Prevent invasive, non-native plants on their land spreading into the wild and causing a nuisance.
- Prevent harmful weeds on their land spreading onto a neighbour's property

The owner of the site must not plant in the wild or cause certain invasive and non-native plants to grow in the wild. This can include moving contaminated soil or plant cuttings. If this occurs there is a fine or prison term for up to 2 years. The site owner is not legally obliged to remove these plants or to control them on site. However, at the point of change**: development, mulching, earth moving operations**: it is important that they are identified, and their spread controlled in the most appropriate way.

Environmental Protection Act 1990

Environmental Protection Act 1990 allows for the potential classification of soil and other waste containing viable propagules of invasive non-native plant species as controlled waste. This has been applied to Japanese Knotweed with the result that waste containing this species

must be disposed of in accordance with the duty of care set out in section 34 of the Act. The Environment Agency have issued guidance which will be of use in complying with the duty of care.
In addition:

- Any Schedule 9 plant material, or soil containing root or rhizome fragments, may be classified as 'controlled waste' under the Environmental Protection Act 1990 (EPA).
- In addition to a criminal prosecution under the Wildlife & Countryside Act, infringement of the EPA can result in an *unlimited fine*.
- The owner may also be held liable for costs incurred from the spread into adjacent properties and for disposal of contaminated soil off site during development, which later leads to the spread on another site.

Protection of Badgers Act 1992
Both badgers and their setts are protected, making it illegal to kill, injure or take, possess or cruelly ill-treat badgers or to interfere with a badger sett (including blocking tunnels or damaging the sett in any way).

The Hedgerow Regulations 1997
Any hedgerows classified as 'important' under the 1997 Hedgerows Regulations cannot be removed without a Hedgerow Removal Notice issued by the relevant Local Authority unless previously approved as part of a planning permission. The UK Biodiversity Action Plan (BAP) now classifies any native hedge over 20m in length as a priority habitat feature. Priority hedgerows should be those comprising 80% or more cover of any native tree/shrub species. The Local Authority is the arbiter as to classification of hedgerows.

The Countryside and Rights of Way (CRoW) Act 2000
This Act increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation.

Natural Environment and Rural Communities Act 2006
The Act made amendments to the both the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way (CROW) Act 2000. For example, it extended the CROW biodiversity duty to public bodies and statutory undertakers. The Act also makes provisions in respect of pesticides harmful to wildlife, the protection of birds, and in respect of invasive non-native species, and also alters enforcement powers in connection with wildlife protection, and extends time limits for prosecuting certain wildlife offences.
Section 41 of the Act requires that the Secretary of State publishes a list of species of flora and fauna considered to be of principal importance for the purpose of conserving biodiversity in England. The list is intended to be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.
The UK BAP list of 1149 species, published in 2007, was used to draw up a list of 938 species, also known as the 'England Biodiversity List', comprising those species found in England which have been identified as requiring action under the UK BAP. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

The list of species of principal importance was first published in 2002 by DEFRA under Section 74 of the Countryside and Rights of Way (CRoW) Act 2000, and was identical to the UK BAP list at that time. The CRoW Act Section 74 list has now been replaced by the Section 41 list.

Sixty-five (65) habitats are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under section 41 (England) of the NERC Act (2006) there is a need for these habitats to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. These habitats are the subject of National and Local Biodiversity Action Plans.

The Anti-social Behaviour, Crime and Policing Act 2014

Anti-social Behaviour, Crime and Policing Act 2014 enables community protection notices to be served by local authorities or the Police against individuals who are acting unreasonably and who persistently or continually act in a way that has a detrimental effect on the quality of life of those in the locality. These powers are designed to be flexible and could be used to address specific problems caused by widespread species such as Japanese knotweed.

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (and as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019)) originally transposed the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") and elements of Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive") in England, Wales, and to limited extent, Scotland and Northern Ireland. The objective of the Regulations is to protect biodiversity through the conservation of natural habitats and species of wild fauna and flora. The Regulations set out the rules for the protection, management and exploitation of such habitats and species. They place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species. These sites are known generally as 'European sites' and in the UK form the national sites network (known in Europe as Natura 2000 sites). They include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Environment Act 2021

The Environment Act 2021 received Royal Assent on 9 November 2021. It only applies to England. Key elements of the Act include:

- All new developments to deliver 10% increase in biodiversity (biodiversity net gains), to be managed for at least 30 years (reviewable by the Secretary of State), with a Biodiversity Gain Site Register to be implemented and maintained for at least 30 years after the site scheme has completed.
- Introduction of Local Nature Recovery Strategies (LNRSs) – new spatial strategies led by a "responsible authority" in each area. Statutory guidance to be given to Local Planning Authorities (LPAs) explaining how they should take account of the LNRSs.
- Introduction of a new Species Conservation Strategy which places a duty on LPAs to cooperate with Natural England and other LPAs etc. to safeguard the future of 'at risk' species.

- LPAs to produce Biodiversity Reports every five years, describing action taken and the impact it has had on local biodiversity.
- Establishment of the Office for Environmental Protection (OEP), a green 'watchdog' to ensure the enforcement of the environmental legislation in England and Northern Ireland.
- Introduction of the five Principles to which organisations must have regard:
    (i) Integration (environmental protection should be integrated into the making of policies);
    (ii) Prevention (preventative action should be taken to avert environmental damage);
    (iii) Precautionary (a precautionary approach should be taken to the possibility of environmental harm);
    (iv) Rectification At Source (where possible any environmental harm should be rectified at source);
    (v) Polluter Pays (the person(s) who causes the harm must suffer the financial penalty both in terms of mitigation and compensation)
- Long-term (at least 15 years, starting in 2022) legally binding targets on air quality, biodiversity, water, resource efficiency and waste reduction.

Circular 06/2005 Biodiversity and geological conservation – statutory obligations and their impact within the planning system

This circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the national planning policy in the National Planning Policy Framework and the Planning Practice Guidance.

National Planning Policy Framework, 2021

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied. It contains a number of policies relating to ecology including "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures". Under NPPF, local planning authorities have an obligation to promote the preservation, restoration and recreation of priority habitats, ecological networks and the protection and recovery of priority species as identified under the Natural Environment and Rural Communities Act (2006). Local Planning Authorities will seek to produce a net gain in biodiversity, by requiring developers to design wildlife into their plans and to ensure that any unavoidable impacts are appropriately mitigated for. The NPPF 2021 version replaces the first NPPF published in March 2012 and includes minor clarifications to the revised versions published in 2018 and 2019.

The natural choice: securing the value of nature (2011) (Natural Environment White Paper)

This White Paper outlines the Governments vision for the future of landscape and ecosystem services.

UK Post-2010 Biodiversity Framework, 2012

The 'UK Post-2010 Biodiversity Framework', published in July 2012, succeeds the UK BAP and 'Conserving Biodiversity – the UK Approach', and is the result of a change in strategic thinking.

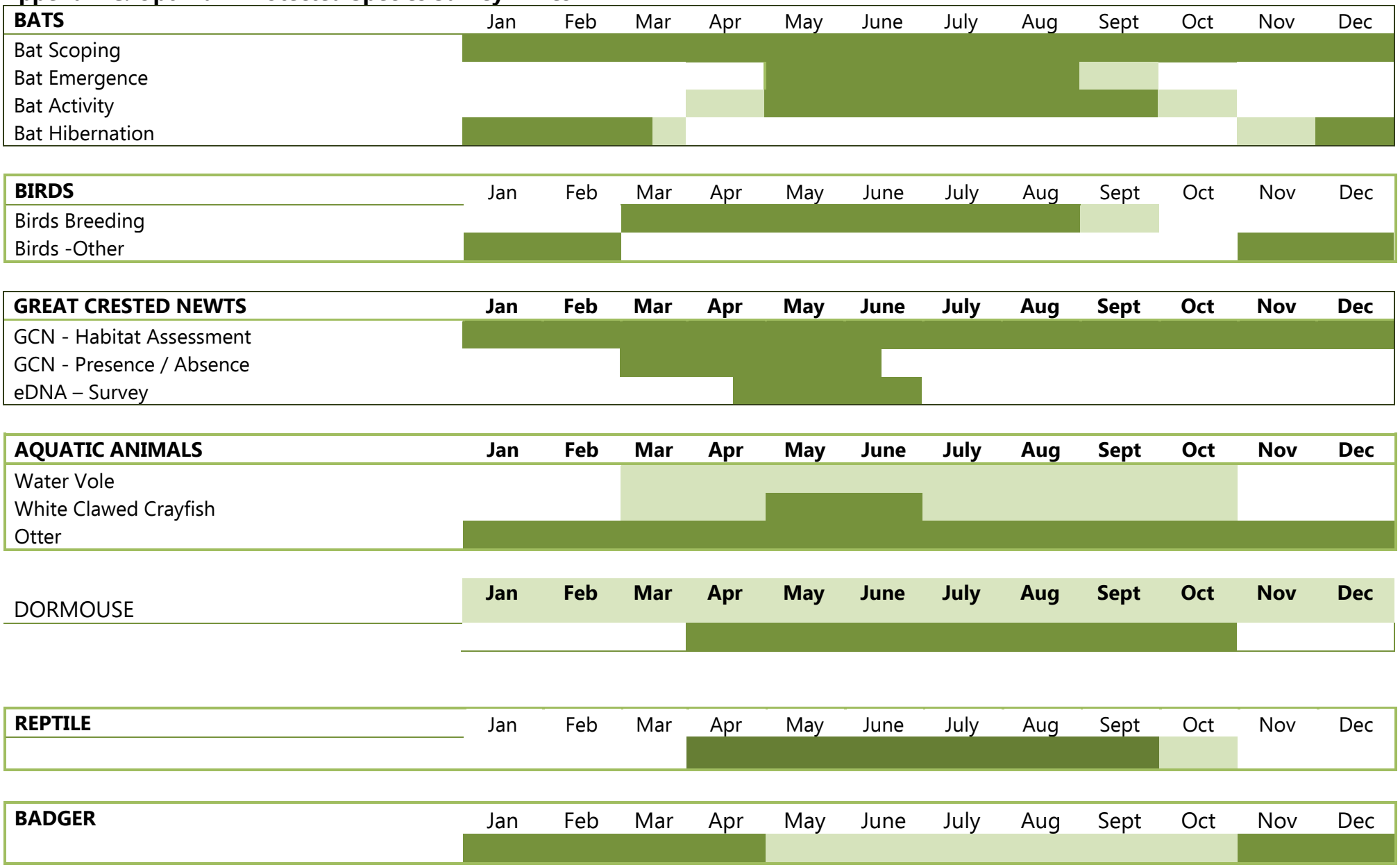
Biodiversity 2020

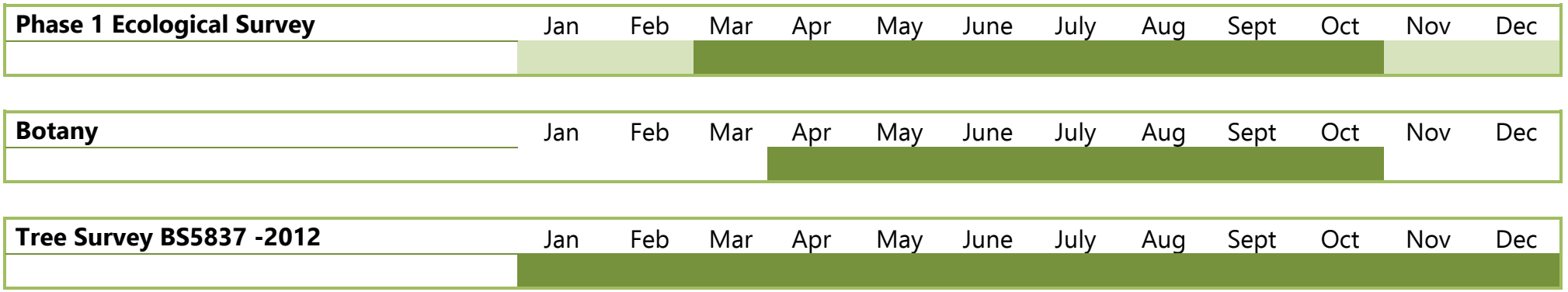
This is a national strategy for England's wildlife and ecosystem services based on the White Paper.

European Red Data lists (IUCN, 2000)

International Union for Conservation of Nature (IUCN and the European Commission have been working together on an initiative to assess around 6,000 European species according to IUCN regional Red Listing Guidelines. Through this process they have produced a European Red List identifying those species which are threatened with extinction at the European level so that appropriate conservation action can be taken to improve their status.

Appendix C. Optimum Protected Species Survey Times





Dark Green = Approximate Optimal Survey Period Light Green = Approximate Sub-Optimal Survey Period.
Owing to the vagaries of the English climate and the seasonal variation between different parts of the Country, the optimal Survey period might vary by several weeks from this calendar. This should be borne in mind when determining Planning Applications

Appendix D. Assessing the Potential Value for Buildings for Roosting Bats
Survey Method of Buildings.

Where appropriate, the building exteriors and interiors are searched visually, using binoculars, for field evidence of bats, with particular attention being paid to sheltered areas such as window ledges and pipes where bat droppings might lie undisturbed from the weather, insect prey remains, urine stains, oil stains from bats repeatedly moving over a small area and polishing the surface, and the potential presence of bats either dead or alive.

Classification Criteria

It should be noted that the grading system below only reports on the situation at the time of survey; should bat activity levels change after the initial survey, or should the buildings be modified (for example if roof tiles are removed or facia boards develop cracks), the category may need revision.

Category (Potential value)	Description
Please note: Intermediate categories (e.g. Low – Moderate value) may apply.	
No/Negligible value	Buildings with no or very few features capable of supporting roosting bats. Often buildings are of 'sound' well- sealed structure or have a single skin and no roof void. They tend to have high interior light-levels, and little or no insulation. Buildings without any roofs may also fall into this category.
Low value	Buildings of largely unsuitable construction, but with a few features of potential value to bats (e.g. gaps above windows, apparently shallow crevices). No supporting evidence (e.g. droppings / staining) found. Buildings may be surrounded by poor or sub-optimal bat foraging habitat, as is often the case in urban-centre locations.
Moderate value	Buildings usually of brick or stone construction with a number of features of obvious potential value to roosting bats e.g. loose roof / ridge tiles, gaps in brickwork, gaps under fascia boards, and/or warm sealed roof-spaces with under-felt.
High value	Buildings with a large number of features of obvious potential value to bats (as above). Bats may be suspected to roost within the building (at least at certain times of year), but no supporting evidence found.

Confirmed roost	Bats discovered roosting within the building or recorded emerging from / entering the building at dusk and / or dawn. Building found to contain conclusive evidence of occupation by bats, such as bat droppings. A confirmed record (as supplied by an established source such as the local bat group) would also apply to this category.

Appendix E. Bat Activity and Bat Emergence Survey Information

Survey Method of Buildings.

Where appropriate, the building exteriors and interiors are searched visually, using binoculars, for field evidence of bats, with particular attention being paid to sheltered areas such as window ledges and pipes where bat droppings might lie undisturbed from the weather, insect prey remains, urine stains, oil stains from bats repeatedly moving over a small area and polishing the surface, and the potential presence of bats either dead or alive.

BCT Tree Categories 2016

- **1*** - Tree with multiple, highly suitable features capable of supporting larger roosts.
- **1** - Tree with definite potential, supporting fewer suitable features than Category 1* trees or capable of supporting roosts for single/low numbers of bats.
- **2** - Tree with no obvious potential for roosting bats although due to its size and maturity the tree may support some features with limited potential to support bats.
- **3** - Tree with no roosting potential.

Development and Planning Trigger for Bat Surveys

Bat Emergence

The Emergence Surveys are required to confirm the species, extent of use (in terms of numbers of bats), type of bat use (in terms of seasonality and functionality of use) and bat access points. These details are required to ascertain the requirement for a Natural England EPSL and to provide the information **required by Natural England should** an application prove necessary.

It is dependent upon the results of Emergence Surveys as to whether Natural England (NE) European Protected Species Licences (EPSL) will be required prior to any construction work commencing. Protected Species surveys, such as bat emergence surveys, cannot be conditioned by the LPA and must be completed prior to Planning Applications being determined. Bat Conservation Trust (BCT) guidelines recommend the level of Bat Emergence Surveys required for each circumstance.

Development and planning trigger list for bat surveys, which can be adapted to local circumstances, taken from the Association for Local Government Ecologists (ALGE) template for biodiversity and geological conservation validation checklists 2007, available from **http://alge.org.uk/publications/index.php**

(1) **Conversion, modification, demolition or removal of buildings (including hotels, schools, hospitals, churches, commercial premises and derelict buildings) which are:**

- Agricultural buildings (e.g. farmhouses, barns and outbuildings) of traditional brick or stone construction and/or with exposed wooden beams;
- Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
- Pre-1960 detached buildings and structures within 200m of woodland and/or water;
- Pre-1914 buildings within 400m of woodland and/or water;
- Pre-1914 buildings with gable ends or slate roofs, regardless of location;

- Located within, or immediately adjacent to woodland and/or immediately adjacent to water;
- Dutch barns or livestock buildings with a single skin roof and board-and-gap or Yorkshire boarding if, following a preliminary roost assessment, the site appears to be particularly suited to bats.

(2) **Development affecting built structures:**

- Tunnels, mines, kilns, ice-houses, adits, military fortifications, air-raid shelters, cellars and similar underground ducts and structures; unused industrial chimneys that are unlined and brick/stone construction;
- Bridge structures, aqueducts and viaducts (especially over water and wet ground).

(3) **Floodlighting of**

- Churches and list buildings, green space (e.g. sports pitches) within 50m of woodland, water, field hedgerows or lines of trees with connectivity to woodland or water;
- Any building meeting the criteria listed in (1) above.

(4) **Felling, removal or lopping of:**

- Woodland;
- Field hedgerows and/or lines of trees with connectivity to woodland or water bodies;
- Old and veteran trees that are more than 100 years old;
- Mature trees with obvious holes, cracks or cavities, or that are covered with mature ivy (including large dead trees).

(5) **Proposals affecting water bodies:**

- In or within 200m of rivers, streams, canals, lakes, reed beds or other aquatic habitats.

(6) **Proposal located in or immediately adjacent to:**

- Quarries or gravel pits;
- Natural cliff faces and rock outcrops with crevices or caves and swallets.

(7) **Proposals for wind farm developments**

- of multiple wind turbines and single wind turbines (depending on the size and location) (NE TIN 051 – undergoing updates at the time of writing)

(8) **All proposals in sites where bats are known to be present[1]**

- This may include proposed development affecting any type of buildings, structures, features or location.

Notes:

1. Where sites are of international importance to bats, they may be designated as SACs. Developers of large sites 5-10km away from such SACs may be required to undertake a HRA.

BCT Emergence and Activity Guidelines

Bat Emergence Survey Requirements Extracted from - Table 7.3 & 7.1 BCT Recommended Minimum Survey **Effort**		
Low Roost Suitability	**Moderate Roost Suitability**	**High / Confirmed roost Suitability**

One Survey visit – One dusk or dawn re-entry survey	Two separate survey visits – One dusk and one dawn re-entry survey	Three separate survey visits – at least one must be a dawn re-entry and one a dusk emergence, the other can be either.
Structures that have been categorized as low potential can be problematic and the number of surveys required should be judged on a case by case basis. If there is a possibility that quiet calling, late emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category. Multiple survey visits should be spread out to sample as much of the recommended survey period as possible, it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.		
EMERGENCE – RE-ENTRY Survey Dates		
May to August (structures) No further survey required (trees)	May to September with at least one between May and August	May to September with at least two, between May and August
September surveys are both weather and location dependent. Conditions may become unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. Multiple survey visits should be spread out as much as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example a more accurate count of a maternity colony is required but it is likely that the colony will soon disperse) if there is potential for a maternity colony then consideration must be given to detectability. A survey on 31st august followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime.		

Bat Activity Survey Requirements Extracted from - Table 8.3. BCT Recommended Minimum Survey Effort.		
Transect/spot count/timed search surveys		
Low Habitat Value	**Moderate Habitat Value**	**High / Confirmed Habitat Value**
One Survey visit per season (Spring- April/May, summer- June/July/August, autumn- September/October) in appropriate weather conditions for bats. Further surveys may be required if these survey visits reveal higher levels of bat activity than predicted by habitat alone.	One survey visit per month (April to October) in appropriate weather conditions for bats. At least one of the surveys should comprise dusk and pre-dawn (or dusk to dawn) within one 24 hr period.	Up to two survey visits per month (April to October) in appropriate weather conditions for bats. At least one of the surveys should comprise dusk and pre-dawn (or dusk to dawn) within one 24hr period.
Automatic / static bat detector surveys		

One location per transect, data to be collected on five consecutive nights per season (spring- April/May; summer- June/July/August; autumn- September/ October) in appropriate weather conditions for bats.	Two locations per transect, data to be collected on five consecutive nights per month (April to October) in appropriate weather conditions for bats.	Three locations per transect; data to be collected on five consecutive nights per month (April to October) in appropriate weather conditions for bats)
Refer to BCT guidelines document Table 8.3 for further details and dependent conditions where the survey effort is not straightforward.		

Appendix F. Wildlife Crime

http://www.nwcu.police.uk/what-is-wildlife-crime/

In general, wildlife crime is any action which contravenes current legislation governing the protection of the UK's wild animals and plants.

A wildlife crime may also be reported and recorded where advice has been given regarding the potential or actual presence of a protected species within a habitat with that habitat then removed/impacted causing actual disturbance/harm/death to that species. Examples in relation to this report may be seasonally pertinent but could include cutting back or removal of a hedgerow where birds and dormice are nesting; removing or doing works to trees where bats roost; cutting grass where reptiles such as slow-worms are inhabiting; filling in or blocking access to badger setts. Specific legislation should be referred to regarding the protection of any animal species or habitat.

Appendix G. Habitats Regulation Assessment (HRA)

Appropriate assessment (or 'Habitats Regulation Assessment', HRA) is one of the most powerful tools currently available to control the environmental impacts of development. Whereas sustainability appraisal is a decision-informing tool, appropriate assessment is often described as a decision-making tool because has the potential to stop development.

Appropriate assessment tests whether a plan or a project is likely to have a significant negative impact on any:

- Special Protection Area (SPA) – a European designation which protects birds
- Special Area of Conservation (SAC) – a European designation which protects habitats
- RAMSAR site – a European designation which protects wetlands.

Jointly, these are called 'European sites'. Appropriate assessment does not apply to other designations, like Sites of Special Scientific Interest (SSSI) or Areas of Outstanding Natural Beauty (AONB).

If the proposed development has the potential to impact up on any of the European sites, the LPA can request an HRA be conducted. The responsibility for conducting such an HRA lies with the LPA, but they can insist that all relevant information is provided to them by the developer.

Proximity to a site is not the defining factor, potential 'impact' is, and for large projects this could be up to 15km from the site. The closer to a protected site, the more likely it is that an HRA will be required, even for a very small site.

Appendix H. Ecological Constraints and Opportunities Plan

