Devizes Road, Trowbridge

Ecological Appraisal Report

On Behalf of

McDonald's Restaurants Ltd

Version 4 | June 2023



Overview of the Site including the Grassland to the North and the Dividing Hedgerow

Document Control

Version	Date	Produced by	Reviewed by	Notes
Version 1	3rd October 2022	Ana Pino-Blanco MSc Ecologist, Qualifying: CIEEM	Cyrise Weaire BSc (Hons) Director, M:CIEEM Alex Jessop MSc Ecologist	
Version 2	1st March 2023	Ana Pino-Blanco MSc Ecologist, Qualifying: CIEEM	Alex Jessop MSc Ecologist	Updates to survey effort and reptile survey results resulting in change of document to Ecological Appraisal
Version 3	14th April 2023	Ana Pino-Blanco MSc Ecologist, Qualifying: CIEEM		Updates to survey effort for bats and confidential appendix.
Version 4	19th June 2023	Ana Pino-Blanco MSc Ecologist, Qualifying: CIEEM	Cyrise Weaire BSc (Hons) Director, M:CIEEM	Updates to Site boundary and description of additional habitats, confidential appendix, habitat section as BNG report to be produced separately & survey effort for bats.

Practical Ecology Ltd
The Roost
Bungay Road
Scole
South Norfolk
IP21 4DT

Tel: 01379 740098 Email: info@practical-ecology.co.uk Web: www.practical-ecology.co.uk

This report does not purport to provide legal advice. This report provides baseline ecological conditions for the aforementioned site and is considered relevant for a period of no more than 12 months from the date of the Site Visit.

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Ecological Risk Assessment

The following Ecological Risk Assessment provides an infographic summary of the Preliminary Ecological Appraisal of a parcel of land off Devizes Road, Trowbridge. This includes the requirements, including further surveys or mitigation, necessary to comply with relevant legislation and policy. Enhancement measures are also provided in line with the National Planning Policy Framework[1]. An assessment of potential impacts has been made based on the proposals for the Site, which include the development of a new McDonalds restaurant and drive-thru with associated parking and soft landscaping. See Appendix 1 for proposal plans (Drawing number: 8297-SA-8017—DK22B).

This Eco RA is not intended as a substitute for reading the full report as set out in the proceeding pages.

Risk Code Key		
	**High Risk**	Ecological issue(s) requiring further survey work and/or mitigation prior to planning application
	**Moderate Risk**	Ecological issue(s) requiring mitigation without requiring further survey
	**Low Risk**	No significant ecological issues identified. No further action required.

Risk Code	Factor	Comments and Actions Required	Timings
	Habitats	Habitats on Site include two neutral grassland fields, hedgerows, scattered trees, and scattered and dense scrub. The majority of the habitats to be removed are common and ubiquitous, or have no ecological value in their own right, with the exception of Hedgerow 2, a priority habitat, and the dense scrub on both sides of it that will see a gap created to allowed for the new access road to be included. **Requirements:** The production of a Habitat Management Plan to include details on the new planting and enhancement areas listed within the Biodiversity Net Gain assessment report & Protect all retained trees and hedgerows with root protection measures in line with BS 5837:2012. **Enhancements:** See separate Biodiversity Net Gain assessment report.	Design stage Pre- and during construction

Risk Code	Factor	Comments and Actions Required	Timings
	Statutory and Non-Statutory Designated Sites	Bradford-on-Avon Bat SAC has a network of woodlands associated with the main SAC. A Bat Consultation Zone area surrounds a network of significant roosts for rare species of bats (Bechstein's bat, greater horseshoe bat, lesser horseshoe bat and barbastelle). The most southern tip of the Site is included within the 'Bat Consultation Zone'/ Red High Risk Bat Sensitive Zone as a key roost for Bechstein's bats is found in woodlands 1.5 km south of the Site's boundary. This 'consultation zone' covers a small area within the Site boundary current development plans show the development pushed to the northern boundary and the provision of a biodiversity enhancement area to the south, where the 'Consultation Zone' overlaps, therefore negative impacts anticipated are greatly reduced. This is further discussed within the Bat section as it is relevant to bats. **Requirements:** Please refer to Bat section of Eco RA for all further information as it is all relevant to bats. A financial contribution towards the bat mitigation strategy of £23.310 per hectare.	As part of S106 agreement
	Bats	An ash tree (T1) was noted to have low suitability for roosting bats. This tree is located within hedgerow 2. This tree is marked for retention in current Site plans. Habitats on Site have moderate suitability for foraging and commuting bats as a whole. Habitats located to the south of the dividing hedgerow are connected to the wider landscape. Within the wider landscape, the best habitats are also mainly located to southern of the Site. The northern section of the Site is bordered on two sides by a major road with higher levels of illumination, and a residential development further west lowering its suitability for commuting and foraging bats. Outside the 'Consultation Zone'/ Red High Risk Bat Sensitive Zone (see Eco RA section above) potential impacts identified relate to the loss of the northern grass field identified as having low suitability for foraging bats. **Requirements**: A letter of intent is being produced with this regard including best practice guidelines, and advance survey techniques: Bat activity transects to include one survey visit per month. At least one of the surveys should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. Static detector surveys array to record for five nights per month; Additional endoscope inspection of the PRF in T1 in the central hedgerow; Additional advance survey techniques to differentiate myotis species: (a) Trapping to determine the relative frequency of Bechstein's bats using the proposed Site during the period of movement linked to the swarming season (mid-August to end of October) (b) Determine the relative importance of the proposed Site in respect of other possible offsite transit routes. (continued overleaf)	Pre-submission April to October April to October Mid-August to end of October

Risk Code	Factor	Comments and Actions Required	Timings
	Bats (cont.)	The loss of foraging habitat in the northern portion of the Site should be compensated for by the inclusion of the new species-rich grassland, scrub and trees, along with hedgerows to provide dark corridors and maintain and improve the Site's connectivity within the wider landscape.	Design stage
		The existing proposals demonstrate that effort has been made to reduce impacts on bats. A lighting assessment has been produced with details to reduce light spill onto sensitive features, namely boundary hedgerows. Lighting colour will be 'warm white' and not exceed 2700K. There will be controlled optics and back light louvres on the perimeter luminaires and use of infra-red movement sensors to reduce light levels by 70% when there is no vehicle or pedestrian activity.	Design stage
		Enhancements: Landscape proposals should incorporate night scented plants or those species beneficial to bats;	Design stage
		The creation of a wildlife pond (as included within the BNG assessment report) will benefit bats by providing an additional foraging area; &	Design stage
		Artificial roost provision through inclusion of a bat rocket in the southern section of the Site, near the enhancement area.	Design stage
	Birds	The hedgerows, scattered scrub, dense scrub, and scattered trees on the Site had suitability for a wide range of common small passerine birds. Two bird nests were observed on Site.	
		The development will result in the loss of nesting habitat in the form of a section of hedgerow 2 and could see the damage or destruction of active nests if clearance is undertaken during the nesting season.	
		Requirements: Clearance of sections of the scrub and hedgerow 2 to be undertaken outside of the nesting bird season (1) to avoid impacts to active nests; or, during the nesting season (2) to be undertaken at most 48 hours after a nesting bird check performed by an ecologist; &	Pre-construction, (1) Oct – Feb; or (2) Mar – Sept
		The loss of nesting habitat should be compensated for by including the native hedgerow planting suggested within the habitat section.	Design stage
		Enhancements: A kestrel or barn owl box, pole mounted at least 4 m high in the south area of the Site.	Design stage

Risk Code	Factor	Comments and Actions Required	Timings
	Hazel Dormouse	The Site includes areas of scattered bramble, and dense blackthorn scrub as well as two hedgerows. Although presence is unlikely, habitats onsite provide low suitability for foraging, nesting, and hibernation potential for hazel dormouse. A small section of hedgerow, and blackthorn dense scrub will need to be removed to facilitate the development and a new access road for the development. Although unlikely, could result in the disturbance of individual dormice and will result in the loss of a small area of low suitability habitat. **Requirements:** A Non-Licenced Method Statement to be produced to mitigate any residual risk due to disturbance impacts. This will specify timings of works and supervision by an Ecological Cleck of Works (EcCoW)& The lighting measures proposed for bats will also reduce negative impacts dormice. **Enhancements:** Provision of two dormice nest boxes within the southeastern section of Hedgerow 1, near the wildlife enhancement (as included within the BNG assessment report) dedicated area with the new pond and hedgerow and scrub planting.	Prior to construction Design stage Design stage
	Badgers	See Confidential Appendix 4	
	Priority Species (Fauna and Flora)	Hedgehogs may utilise the site for foraging and commuting. **Requirements:** Any small mammal disturbed during construction should be allowed to flee of their own volition or moved to the Site boundary. **Enhancements:** Three solitary bee hotels or posts to be incorporated in the development	Pre- and during construction Design stage
	Reptiles	The Site has suitable habitat and could be used by reptiles such as common lizard or slow-worm, with dense and scattered scrub, hedgerow and grassland providing foraging habitat and the hedgerow and scrub also providing refuge. If a population of reptiles is present onsite or if reptiles transiently use the site, clearance and development of the Site could cause individual reptiles to be harmed or killed, and local extinction of any population present. **Requirements:** No further action required; Reptile surveys have been undertaken to assess the presence/absence of reptiles on site during September-October 2022. No reptiles were recorded on the Site during the survey and as such, reptiles are considered to be likely absent from the Site.	
	Great Crested Newts	Discussed but no further action required.	

Risk Code	Factor	Comments and Actions Required	Timings
	Invasive Species Otter Water Vole White-clawed Crayfish	Considered but screened out due to a lack of suitable, connecting, or linked habitat combined with a lack of evidence onsite. No action required	

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1 Introduction

1.1 Background

Practical Ecology Ltd were commissioned by McDonalds Restaurants Ltd to undertake a Preliminary Ecological Appraisal (PEA) of a parcel of land off Devizes Road, Trowbridge, herein referred to as the 'Site'. From Version 4 this document includes updates such as the results of further surveys, and henceforth it is considered an Ecological Appraisal.

This report presents ecological information gathered during a desk study and an ecological walkover survey of the Site undertaken on 31st July 2022. An additional walkover survey was conducted on 19th of April 2023 to record additional ecological information corresponding to the thin strip of land included in the red line change.

The purpose of this report is to provide baseline ecological information pertaining to the Site, alongside the rationale for required further surveys and mitigation as deemed appropriate to ensure compliance with legislation and policy and recommend enhancement measures to achieve biodiversity net-gain in line with the NPPF.

Ecological baseline information for the Site is crucial to ensure potential effects of the development upon flora and fauna can be suitably managed. Furthermore, any constraints upon the proposed development of the Site, imposed by site ecology, can be assessed. Enhancement measures are presented which allow site biodiversity to be improved, whilst considering the legal requirements and best practice regarding protected species and/or habitats.

1.2 The Site

The Site is approximately 1.6 ha (central OS grid reference ST 88222 59165, postcode BA14 7UU) and is located in Hilperton, c.3 km to the northeast of Trowbridge, Wiltshire, and c.15 km east of Bath. The Site comprises two grass fields with a dividing hedgerow, scattered trees and scrub, with some dense scrub areas. Adjacent to the Site is a small woodland to the south, and a major road (A361) to the north and west. The wider landscape includes further grazed pasture and arable fields, hedgerows, scattered trees, and the village of Hilperton to the west. A Site boundary (red line) is provided in Figure 1 below.

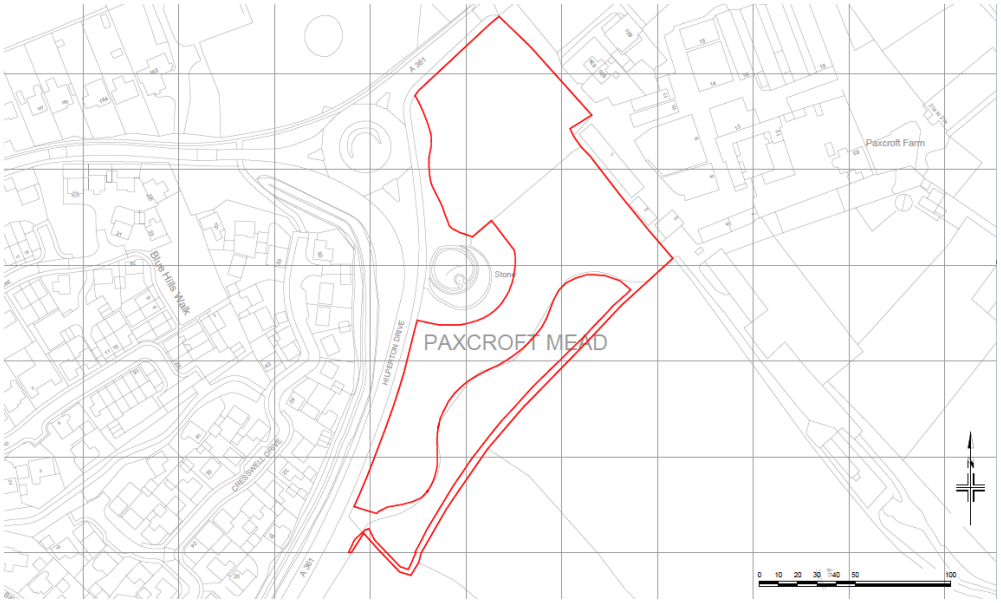

Figure 1: Site Boundary

1.3 Proposed Development

The proposals include clearance of sections of the Site to allowed for the development of a new McDonalds restaurant and drive-thru with associated parking and soft landscaping. A proposal plan has been included in Appendix 1 (Drawing number: 8297-SA-8017—DK22B).

2 Methods of Assessment

2.1 Desk Study

A search for Statutory Sites of Nature Conservation Importance and Priority Habitats[2] within 1 km of the Site was undertaken using the Multi Agency Geographical Information for the Countryside (MAGIC)[3].

Ordnance Survey maps and satellite imagery from online sources were consulted to identify the presence of any water bodies within 500m of the Site. Historic OS maps and satellite imagery was also used to assess any changes to the onsite habitats.

Records of protected species, notable species, invasive species, and non-statutory sites from within 1 km of the Site were procured from Wiltshire and Swindon Biological Records Centre[4] as part of this desk-based study and are presented in this report. Records provided by the record centre that are more than ten years old are only reported on if they are deemed to still be relevant.

The relevant Local Biodiversity Action Plan, Wiltshire BAP[5], was consulted to determine whether species and habitats identified (by both the desk study and the field survey) on and around the Site are subject to specific action plans. The list of UK Biodiversity Action Plan (UK BAP) species[6] was also consulted as this remains an important reference source, despite being succeeded by the UK Post-2010 Biodiversity Framework[7].

2.2 Preliminary Ecological Appraisal Site Survey

A Preliminary Ecological Appraisal survey of the Site was undertaken on 31st July 2022 by ecologist Ana Pino-Blanco BSc (Hons) MSc with over three years' experience (Natural England Bats Level 2: 2022-10568-CL18-BAT, and great crested newts Level 1 licence 2020-46807-CLS-CLS.

This survey assessed the value of onsite and adjacent habitats and their potential to support protected or notable species and habitats following the Guidelines for Preliminary Ecological Appraisal[8] published by the Chartered Institute for Ecological and Environmental Management (CIEEM).

Habitats

Habitats were classified as per the criteria set out in the Handbook for The UK Habitat Classification[9] with the prescribed habitat primary and relevant secondary habitat codes included. Habitats were checked against the definitions for Priority Habitats. Priority Habitats are those which are identified as a Habitat of Principal Importance in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006[2].

European Protected Species

Following the UK exit from the European Union (EU), species formerly protected under the Habitat Regulations are now considered to be protected under. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[10] and will continue to be referred to as European Protected Species (EPS). Further legislative details regarding protected species are included in Appendix 3.

Great Crested Newt (Triturus cristatus)

Great crested newts use both terrestrial and aquatic habitat within their lifecycle, with all habitat used being legally protected. The terrestrial and, if present, aquatic habitats onsite were assessed for their value and suitability for great crested newts. The proximity of ponds within 500 m and any habitat linking such ponds to the Site was also assessed as an important factor determining the likelihood of the species being present onsite. Any ponds present onsite or accessible during the survey were assessed using the Habitat Suitability Index (HSI) Assessment[11] where appropriate.

Bats

Any trees or buildings present onsite were assessed for their suitability for roosting bats using the protocol set out in Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed)[12]. Where necessary this included the use of binoculars to allow for a ground level assessment to search for signs such as staining and/or droppings sometimes found around roost entrances. Internal inspections of buildings or loft voids were undertaken where possible, using ladders and crawling boards if appropriate. It is noted that a lack of evidence of roosting bats, such as presence of bats, droppings, or staining, does not correlate to a lack or presence or a lack of suitability.

Habitats were assessed for their suitability for foraging and commuting bats, as set out in Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed)[12].

Hazel Dormice (Muscardinus avellanarius)

The Dormouse Conservation Handbook (2nd Ed.)[13] provides a level of guidance on assessing a site where the status of hazel dormice is unknown. This assessment is made based upon historical records as well as the habitat and plant species present on and adjacent to the Site. As hazel dormice have a large range, a lack of evidence does not correlate to a lack of presence.

Otter (Lutra lutra) | *White Clawed Crayfish (Austropotamobius pallipes)*

Suitable waterbodies (if present) on or adjacent to the Site were assessed for their suitability to support these species, where access was possible. Any incidental evidence of the presence of these species on site (e.g. holts, spraints, foraging signs) was also recorded.

Other Species

Protected under the Wildlife and Countryside Act 1981[14] or further specific legislation, further detailed within Appendix 3.

Birds

Habitats on site were assessed for their potential to support nesting birds as well as important numbers of breeding and wintering birds.

Reptiles

Terrestrial habitats on site were assessed for their potential to support common reptile species, based on factors including vegetation structure and composition, and the availability of shelter and foraging resources. All UK reptiles are protected, with rare species (smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) also given EPS status.

Water Vole (Arvicola amphibius)

Suitable waterbodies (if present) on or adjacent to the Site were assessed for their suitability to support these species, where access was possible. Any incidental evidence of the presence of these species on site (e.g. burrows, latrines, foraging signs) was also recorded.

Badger (Meles meles)

Habitats on site were assessed for their suitability for badger foraging and sett building. Any incidental evidence of the presence of badgers on site (e.g. setts, paths, prints, foraging signs, and latrines) was recorded.

Priority Species

Habitats on site were assessed for their suitability for Priority Species. Priority Species are those listed as of Principal Importance in England under Section 41 of the NERC Act 2006[15], those listed as Local Priority Species, or those that feature on the relevant Local Biodiversity Action Plan. Any incidental evidence of the presence of these species on site was also recorded. The presence of rare or notable plant species, such as red data list species[16], was also noted.

Invasive Species

A search was made for evidence of the presence of invasive plant species listed in Schedule 9 of the Wildlife and Countryside Act 1981 as they are subject to strict legal control.

2.3 Enhancements for Biodiversity Net Gain

In accordance with policy set out in the National Planning Policy Framework (NPPF)[1] all new developments are required to deliver a net gain in biodiversity. Specifically, NPPF notes an environmental objective to protect and enhance the natural environment and to improve biodiversity (*S2. p. 8c*) and that all development should be '…providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures' (*S15. p.174d*).

This report therefore seeks to provide suitable Site-specific habitat and species enhancements which will provide the biodiversity net gain required as part of the NPPF.

In addition to this, the Environment Act 2021[17] requires use of the DEFRA Biodiversity Metric to calculate the change in biodiversity units for all development sites that will result in the loss or degradation of habitat as well as a measurable 10% increase in biodiversity value post development. We are still in the 2 year implementation period for this aspect of the Act, with the statutory instruments making it mandatory by Winter 2023, this is still a requirement where detailed in local planning policy. As such a separate Biodiversity Net Gain Assessment will be undertaken for this scheme.

2.4 Limitations to Survey

Due to the seasonal behaviour of animals and the seasonal growth patterns of plants, ecological surveys may be limited by the time of year in which they are undertaken. Many animals in the UK have variable detectability throughout the year due to seasonal behaviour, including hibernation and migration. Therefore, this survey may not provide a complete list of the plants and animals present, or which may utilise the Site throughout the year. The field survey was undertaken during a prolonged period of drought, severely limiting plant growth onsite, most notably within the grassland. As such, the plants recorded could at times only be identified to family level and some plants may have not emerged due to prevailing weather conditions.

As part of standard practice, a data search has been undertaken from the local biological record centre. This is not considered to be a complete list of species present and is better considered to be a list of species recorded, with many species known to be under recorded.

However, these limitations are not considered to have affected the accuracy of the assessment or the recommendations provided in this report and, where considered necessary, recommendations for further survey have been made to overcome these limitations.

This report presents conditions and recommendations for the Site based on the state of the Site during the survey visit. Any changes to the Site prior to development, including changes in the management of the Site habitats will therefore potentially invalidate this report and its recommendations.

3 Existing Conditions and Assessment of Effects

3.1 Summary

The following sites, species or ecological features have the potential to be affected by the development, or their presence has been detected during the desk study or data search. As such, they are discussed further in this report and action points, mitigation and compensation measures are recommended as necessary:

- Habitats
- Statutory and Non-statutory Sites of Nature Conservation Value
- Great Crested Newts
- Bats
- Birds
- Reptiles
- Badgers
- Hazel Dormice
- Priority & Notable Species (Fauna and Flora)

The following species are very unlikely to occur on the Site, in adjacent habitats either due to a lack of suitable habitat or as they have localised distributions in the UK. As such, the proposed development does not pose a threat to the following species and they are not discussed further as no further survey or mitigation is considered necessary:

- White-Clawed Crayfish
- Water Vole
- Otter
- Invasive Species

Site photos are included in Appendix 2. Refer to Appendix 3 for details of the legislation and guidance relevant to each protected species.

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3.2 Site Description and Habitats

Desk Study

The desk study returned the following records of parcels of notable habitats within 1 km of the Site:

Table 1: Notable Habitats within 1 km of the Site

Habitat	Areas	Parcels	Closest to Site
Deciduous Woodland (Priority Habitat Inventory)	3	5	75 m
Traditional Orchard	4	4	250 m

3.2.1

The habitats listed in Table 1 bare no similarity to those occurring within the Site, detailed below, although there is deciduous woodland that meets the criteria for UK BAP priority habitat is immediately adjacent to the southern Site boundary.

Field Survey

3.2.2 Habitats noted on the Site were assessed using the Handbook for The UK Habitat Classification[18] and included neutral grassland, tall herb, hedgerow, and blackthorn scrub. Primary and secondary habitat codes are included for ease of reference.

Onsite Habitats

Arrhenatherum neutral grassland, Scattered scrub, Scattered trees, Tall herb, (g3c5, 10, 11, 16)

The Site consist predominately of two grass fields (north and south) separated by a middle hedgerow. The grass field on the north section of the Site is dominated by false oat grass (*Arrhenatherum elatius*). Further species noted include cocksfoot (*Dactylis glomerata*), perennial rye grass (*Lolium perenne*), meadow foxtail (*Alopecurus pratensis*) and fescue (*Festuca sp.*). Forbs include common ragwort (*Jacobaea vulgaris*), yarrow (*Achillea millefolium*), field bindweed (*Convolvulus arvensis*), ribwort plantain (*Plantago lanceolate*), field thistle (*Cirsium arvense*), spear thistle (*Cirsium vulgare*), cleavers (*Galium aparine*), and cow parsley (*Anthriscus sylvestris*). Some small sections of tall herb are present, and include common nettle (*Urtica dioica*), common teasel (*Dipsacus fullonum*), and hogweed (*Heracleum sphondylium*). Scattered scrub in the form of bramble (*Rubus fruiticosa*) is present towards the northwest boundary.

The grass field to the south has a similar composition of species, dominated by false oat grass. In addition to the species above, creeping cinquefoil (*Potentilla reptans*) is present, and the areas of tall herb extend over larger sections, particularly to the west of the Site. Additional species include willowherb (*Epilobium* sp.). Four scattered semi-mature horse chestnut trees are present along the east boundary, surrounding a mound with a stone plaque (that is off Site). Areas of scattered scrub are present alongside the west boundary. Species noted include bramble, dogwood (*Cornus sanguinea*), wayfaring tree (*Viburnum lantana*), and blackthorn (*Prunus spinosa.*). The grassland is considered to have low ecological value, while the scattered scrub and scattered trees are considered to have moderate ecological value on their own right.

Hedgerows (Priority Habitat) (h2h)

<u>*Hedgerow 1*</u>: Present on the eastern boundary of the Site. This hedgerow is dominated by blackthorn, with occasional hawthorn (*Crataegus monogyna*), and elm (*Ulmus sp.*). Bramble and ivy (*Hedera helix*) were also

noted. Towards the northwestern corner of the Site, is a young, flailed hedgerows while towards the southwestern corner of the Site, the hedgerow comprises mainly semi-mature trees, including a common walnut (*Juglans regia*), and ash (*Fraxinus excelsior*).

Hedgerow 2: This hedgerow goes across the Site, east to west, and divides it in two sections. This hedgerow is dominated by blackthorn on the northeast end but also includes a mature ash, hawthorn, and elder (*Sambucus nigra*). In the central area of the hedgerow, some trees are dead, likely common elm (*Ulmus minor*). Two small gaps of c. 4-6 m are present within the hedgerow, one to the east side, where a bridleway crosses it, and the other before the western end, to allow for power line access.

Hedgerow 3: This hedgerow is located occupying the thin strip of land on the south boundary of the Site. It includes species such as common elm, elder, dogwood, hawthorn, blackthorn with bramble, ivy and dog rose (*Rosa canina*). Forb species include cleaves (*Galium aparine*), lords-and-ladies (*Arum maculatum*), ground ivy (*Glechoma hederacea*), hemlock (*Conium maculatum*), common nettle, and thistle (*Cirsum sp.*).

All three hedgerows meet the criteria for a UK BAP Priority Hedgerow and have potential to be important under Hedgerow Regulations (1997)[19], provide landscape connectivity and are considered to be of high ecological value.

Other blackthorn scrub (h3a6)

Several areas, including one on each side of Hedgerow 2 and an area along the southeast boundary of the Site, are occupied by dense blackthorn scrub. This is considered to have moderate value as a habitat in its own right.

Surrounding Habitats

Surrounding the Site were:

- *Other Lowland mixed deciduous woodland (w1f7)* located to the south of the Site, between the dense scrub and the additional thin strip of land occupied by Hedgerow 3.
- *Sealed Surface (u1b)* in the form of roads to the west and to the northwest, and buildings to the northeast.
- *Hedgerows (Priority Habitat) (h2h)* dominated by large-leaved lime bordering the western boundary of the northern section of the Site.

3.2.3

- *Arrhenatherum neutral grassland, Scattered scrub, Tall herb, (g3c5, 10, 16)as an extension*of the habitat onsite covering the raised mound

Assessment of Effects

The grassland in the north-western section of the Site will need to be cleared to make space for the new building and car park. In addition, a small section of the blackthorn scrub, on each side of Hedgerow 2 and next to the bridleway, a section of Hedgerow 2, as well as part of the area of grassland on the southern portion of the site will need to be removed to allowed for the access road.

The majority of the habitats to be removed are common and ubiquitous, or have no ecological value in their own right, with the exception of Hedgerow 2, and the blackthorn scrub. Hedgerow 2 constitutes a Priority

Habitat and is therefore compensation should be made for the loss of these habitats. This is discussed further in the following species-specific sections of this report.

Requirements

Design Stage

- The production of a Habitat Management Plan to include details on the new planting and enhancement areas listed within the Biodiversity Net Gain assessment report;

3.2.1 **Pre-Construction/ Construction Stage**

- Root and tree/hedgerow protection measures (in line with the British Standard for trees in relation to construction BS 5837:2012) must be installed in the pre-construction phase and maintained throughout the construction phase.

Enhancements for Biodiversity Net Gain

See separate Biodiversity Net Gain assessment report.

3.2.1

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3.3 Statutory and Non-Statutory Sites of Nature Conservation Value

Desk Study

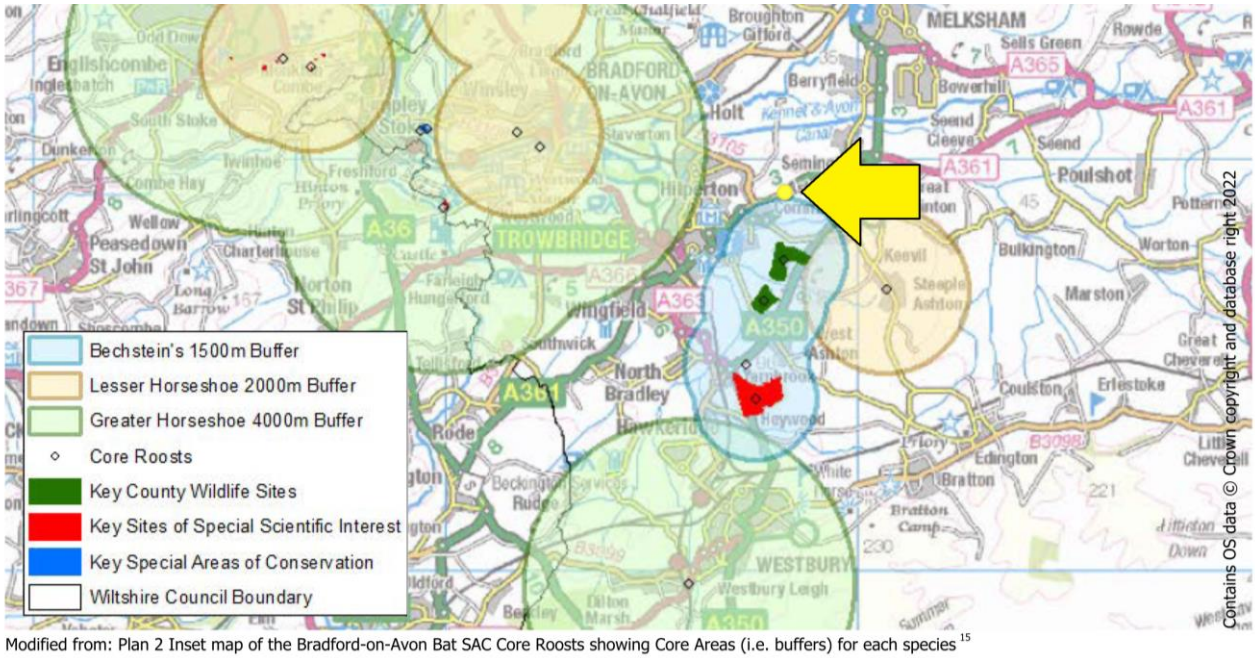
The desk study returned no records for statutory or non-statutory sites within 1 km of the Site. The Site lies in an Impact Risk Zone (IRZ), which are used by local authorities to assess whether developments are likely to impact statutory sites, including internationally designated sites[20] as well as Sites of Special Scientific Interest (SSSIs). Information regarding the relevant Statutory Site, is noted in Table 2.

3.3.1

Table 2: Statutory and Non-statutory Site Descriptions

Name	Designation	Distance	Direction	Notable Features
Statutory Sites				
Green Lane Wood	Local Natural Reserve (LNR)	1.2 km	S	It is an ancient woodland of predominately oak with coppicing. There is also a wildflower meadow. Particularly good for bird and butterfly habitats. The rare Bechstein's bat makes the wood its home.
IRZ – Statutory Sites				
Picket and Clanger Wood	Site of Special Scientific Interest (SSSI)	4.3 km	S	A floristically-rich ancient woodland supporting an outstanding range of butterfly species. The combined butterfly and moth faunas include several scarce species with limited national distributions, among them two which are rare and vulnerable in Great Britain. The site also accommodates a diversity of birds characteristic of ancient woodland in southern and western England.
Bratton Downs	SSSI	7.3 km	S	It provides an exceptional range of landform features associated with periglacial conditions. Biologically the site is diverse, comprising species-rich calcareous grassland and ancient broadleaved woodland.
Salisbury Plain	Special Protection Area (SPA), Special Area of Conservation (SAC) and SSSI	8.3 km	S	Salisbury Plain supports the largest known expanse of unimproved chalk downland in north west Europe, and represents 41% of Britain's remaining area of this rich wildlife habitat.
Bradford-on-Avon Bat SAC (including Box Mine, Winsley Mines, Combe Down and Bathampton Down Mines, and Brown's Folly)	SAC SSSI	8.1 km (closest)	NW	A network of significant underground sites, including four nationally important Sites of Species Scientific Interest used by bats for hibernation, breeding, mating and as a staging post prior to dispersal. The grassland, watercourses, scrub and woodland surrounding them are used by bats for feeding and commuting. Although these habitats are not included in the SAC designation, they are vital to support the bats which are features of the SAC.

To be noted is that Bradford-on-Avon Bat SAC has a network of woodlands associated with the main SAC. A Bat Consultation Zone area surrounds a network of significant roosts for rare species of bats (Bechstein's bat, greater horseshoe bat, lesser horseshoe bat and barbastelle). This network is identified within Bat Special Areas of Conservation (SAC) Planning Guidance for Wiltshire document[21] (see Figure 2 below) and includes sites without a statutory designation such as the breeding colonies of Bechstein's bats at Biss Wood and Green Lane Wood, to the east of Trowbridge.



Modified from: Plan 2 Inset map of the Bradford-on-Avon Bat SAC Core Roosts showing Core Areas (i.e. buffers) for each species [15]

Figure 2: Core Roosts with Core Areas. Site Marked in Yellow

Two further guidance documents in relation to the Bradford-on-Avon Bat SAC are available and include a detailed Bat Mitigation Strategy for Trowbridge[22] [23]. These documents include a Yellow Medium Risk Bat Sensitive Zone (a buffer zone of 1.5 km surrounding the 'Core Roost' for Bechstein's breeding population in the Trowbridge area, and key commuting corridors which link the above-mentioned Core Areas with the SAC) that is relevant to development at new greenfield sites.

3.3.2

Assessment of Effects

The habitats on Site do not have any similarities to most of the Statutory and Non-Statutory sites mentioned in Table 2, however, the southern tip of the Site falls within the 'consultation zone[21]' or Red Area[22] [23] as Green Lane Wood (a Wildlife County Site) is c.1.5 km south of the Site's boundary and contains a key roost site for Bechstein's bats. Current development plans (Appendix 1 (Drawing number: 8297-SA-8017—SK24F)) show the development red line including a wider area than is what is being developed. The main footprint of the proposed development sits in the northern portion of the overall Site, that falls within the Yellow Medium Risk Bat Sensitive Zone, with the access road located through the southern compartment and the rest of the southern portion of the Site set aside as a habitat enhancement area. Further to this, is noted that the one of the main points highlighted as potential impacts on the Red High Risk Zone is the increase of recreational pressure linked to residential areas. Significant increments in recreational pressure to the core roost woodland is not expected as this is a non-residential development.

The Site lies within impact risk zones (IRZs). Information available from MAGIC Maps suggest that *all planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures* meet the criteria for the LPA to consult with Natural England.

Requirements

Requirements regarding the Bat Consultation Zone, particularly the Yellow Medium Risk Bat Sensitive Zone, and further implications for development include a list of requirements that are further commented in the corresponding section for bats on this report (section 3.5.). An additional requirement is a financial
3.3.3. contribution made towards funding the strategic bat mitigation via Section 106 agreement. For all other (non-residential) developments, this contribution is set to be £23,310 per hectare.

Further consultation is required between the local planning authority and Natural England which could result in further requirements to mitigate impacts upon the statutory sites of nature conservation value.

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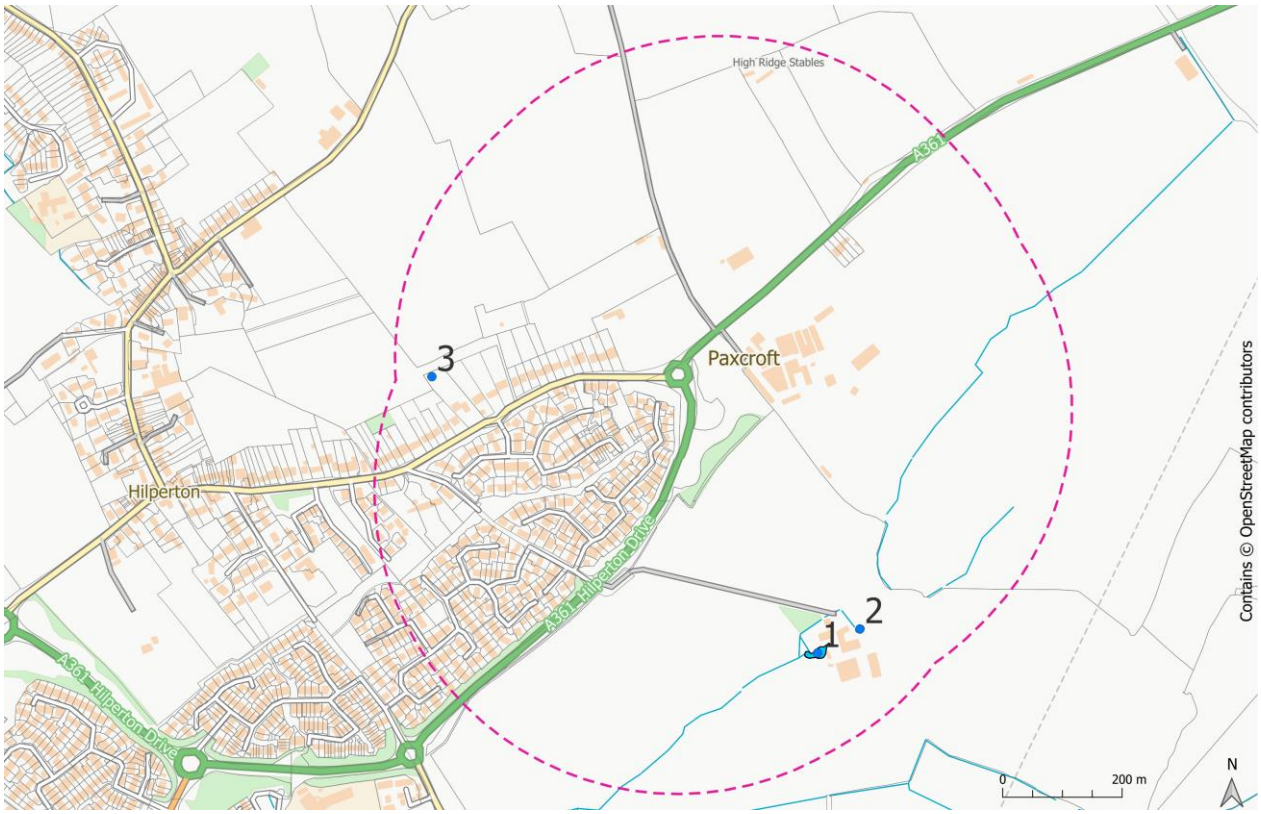
3.4 Great Crested Newts

Desk Study

The desk study returned one record of great crested newts within 1 km of the Site. This is an old record dated in 2006 and it's located 400 m west of the Site to the other side of the A361 and potentially linked to Pond 3.

A total of three ponds were identified within 500 m of the proposed development. Figure 3 shows the pond locations in relation to the Site, with the 500 m search area highlighted by a pink dotted line and the ponds numbered by distance from the Site. Details of each pond are provided in Table 3, overleaf.

3.4.1



3.4.2

Figure 3: Ponds within 500 m of the Proposed Development

Field Survey

No suitable breeding habitat is present onsite. The habitats on Site offer some suitability for foraging great crested newts and the hedgerows, scattered and dense scrub provide potential for foraging, shelter and dispersal.

It's noted that the Site is isolated from ponds by a notable distance and the existence of other barriers such as the agricultural fields to the south and a major road (A361) to the west.

Table 3: Pond Details

Pond #	Distance	Direction	Visited	HSI Score	Dispersal Barriers to the Site
1	350 m	SE	No	-	Agricultural fields, distance is a barrier
2	370 m	SE	No	-	Agricultural field, distance is a barrier
3	440 m	W	no	-	Major road, the A361 is a barrier

Assessment of Effects

Research from English Nature (now Natural England) has shown great crested newts to primarily remain within 100 m of breeding ponds and are rarely present outside 250 m from a breeding pond without suitable connecting habitat and reduced habitat within 250 m of a pond[24].

It is therefore concluded that great crested newts are unlikely to be present on the Site and will not be
3.4.3 impacted by the development.

Requirements

No further recommendations are made with regards to this species.

3.5 Bats

3.4.4

Desk Study

The following species of bat were noted within the 1 km data search occurring within last 10 years:

3.5.1
- Serotine (*Eptesicus serotinus*)
- Myotis species (*Myostis sp*.)
- Bechstein's bat (*Myotis bechsteinii*)
- Noctule (*Nyctalus noctule*)
- Pipistrelle species (*Pipistrellus sp*.)
- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Brown long-eared (*Plecotus auritus*)

The closest non roost record corresponded to a common pipistrelle c.80 m north of the Site boundary.

The records above include records of roosts for noctule, serotine, pipistrelle sp. and Bechstein's ranging from 1994 (2 records) to 2017 (11 records). The exact locations for the roosts have been withheld from the data search as sensitive information. The records pertaining to Bechstein's are not up to date (most recent dated 2017), as these more likely correspond to the breeding colonies recorded at the significant roost present at Green Lane Wood. Roosts in this Local Natural Reserve (LNR) are actively monitored within a research project and presence confirmed as recently as July 2022 (personal communication). This colony is known to hibernate at Box Mine SSSI and uses the intervening landscape to commute between these sites.

The search conducted with MAGIC revealed the presence of one European Protected Species Mitigation License for bats within 1 km of the Site:

- EPSM2012-5169: for the destruction of a common pipistrelle non-breeding roost (c. 160 m W).

Roosting Habitat

Tree – Low Suitability

Potential roost features were identified on one tree onsite, within Hedgerow 2. This is an ash tree with a large wound at ground level that extended as a hollow into the middle limb and a butt-rot cavity. Although no bats were present at the time of the survey this tree was assessed as having *low suitability*[12] for roosting bats. No other trees with potential roost features were identified onsite.



Figure 4: Location of the Ash Tree with Bat Suitability within Hedgerow 2

Foraging and Commuting

Habitats on Site are assessed as having moderate-high suitability for foraging and commuting bats as a whole. Within the Site, habitats located to the south of the dividing hedgerow are better in this regard (moderate suitability) as they are connected on three sides to the wider landscape, by hedgerows and the woodland block adjacent to the south boundary. Good foraging habitats within the wider landscape are also mainly located to south of the Site in the form of hedgerows, grazing field, ponds, and Paxcroft Brook. The northern section of the Site is bordered on two sides by the A361, a major road with high levels of illumination, and a residential development further west beyond this, both of which reduce its suitability (to moderate-low suitability) for commuting and foraging bats.

3.5.2

Assessment of Effects

A small section of the South of the Site falls within the 'consultation zone' as included within the Planning Guidance for Wiltshire document[21], also referred to as Red High Risk Zone[22] [23]. It is noted that the one of the main points highlighted as potential impacts on the Red High Risk Zone is the increase of recreational pressure linked to residential areas. Significant increments in recreational pressure to the core roost woodland is not expected as this is a non-residential development.

The main section of the Site falls within the Yellow Medium Risk Zone[22] [23] (mode detail is included in section 3.3.1 of this report). Following available guidance in relation to the Trowbridge Bat Mitigation Strategy (TBMS), this zone is identified as 1.5 km buffer around 'Core Roosts' for Bechstein's breeding population in the Trowbridge area and include key commuting corridors which link the Core Areas with the SAC that lies beyond the Trowbridge area.

'Sensitive features' for bats identified within this Yellow Zone buffer include roosts, foraging areas and commuting corridors. Potential impacts affecting this are included below:

- Roosts: A potential rooting feature was identified on an ash tree within hedgerow 2, however, current proposal plans show this tree as being retained;
- Foraging areas: The Site has been identified as moderate suitability for foraging bats, but with the southern section presenting particularly more suitability (moderate) than the northern section (low

suitability). The development of the Site will see the loss of the grassland within the northern section, and the loss of small areas of blackthorn scrub, scattered bramble scrub, grassland and Hedgerow 2 on the southern section to allowed for the inclusion of the access road.

- Commuting corridor: The Site falls 1.2 km to the north of Green Wood Lane and connects to it through hedgerows along agricultural and grazing fields. The development of the Site will see an increase in lighting levels around the new building, parking (northern section) and access road (southern section). A potential reduction of Hedgerow 2 was address at the designed stage to re-route the access road to the west of the Site (where a gap for power lines already exists).

Requirements

Prior To Submission

3.5.3 Guidance documents[21,22,23] highlight the need for bat surveys to be carried out for applications that fall within the Yellow Medium Risk Zone. This can cover baseline lighting surveys, surveys aimed at horseshoe bats (including but not limited to extensive static detector surveys), and surveys aimed at Bechstein's bats (including but not limited to tree surveys for potential roost features). Rare species such as horseshoes and Bechstein's bats usually require advance survey techniques (i.e. trapping surveys using mist nets and harp traps with acoustic lures) which are typically not without risk for the animals and therefor, further survey requirements, were carefully considered after consultation with Wiltshire Council Ecologist (CE), and further advice sought from the bat mitigation project officer at Wiltshire Council.

The exact format of the surveys is yet to be confirmed by the CE. A letter of intent[25] is being produced with this regard, including best practice guidelines:

- Re-inspections with an endoscope of the feature with low suitability for roosting bats in a tree within the central hedgerow that bisects the Site will be undertaken prior to every 'activity' survey (described below).
- Bat activity transects to include 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-hour period.
- Static detector surveys array to record for five nights per month (April to October) in suitable weather conditions for bats.

Although the habitats onsite were assessed as having *Moderate Suitability* for bats the proposed survey effort meets the standard required for *High Suitability* habitats on a small site, with use of four detector locations to give a better picture of bat movement around the Site and surveys that will cover all habitat types recorded within the Site.

These surveys should provide data on the potential range of bat species utilising the Site as well as the relative activity levels, from the number of passes, for each species/species group. The transects will provide some corroboratory information on bat behaviour observed, i.e. foraging or commuting, in addition to the data from static detectors. These surveys will provide data on use of the site by horseshoe bats but, as the calls of Bechstein's bats are notoriously difficult to differentiate from other myotis bat species, additional survey effort for this species is also proposed (below)

The proposal Site is by the A361 where the particular routes followed by the bats, linking between areas of activity to the north and south, are not known. To inform an impact assessment for the species we need to understand the commuting and foraging behaviour of Bechstein's bats at the Site in relation with other potential transit routes to the east and how this relates to movement between their known breeding colonies to the east of Trowbridge and their swarming sites to the north. And to thus determine the importance of the site for this species the trapping surveys under license are recommended to ascertain the following:

(a) Relative frequency of Bechstein's bats using the proposed Site during the period when their movements are linked to the swarming season (mid-August to end of October); &

(b) Determine the relative importance of the proposed Site in respect of other possible transit routes to the east.

Design Stage

Future surveys should further inform the compensation measures included below, that are outline here as a minimum requirement. It is important to note that the Site footprint is larger than the area that is being developed and that most of the southern section will be reserved for biodiversity enhancements. Mitigation measures to include:

- Native species-rich hedgerow planting along the bridleway (as included in the separate Biodiversity Net Gain assessment report). In the northern section of the Site, this will provide a buffer between the building, parking and drive-thru lane to create a dark corridor along the bridleway and the eastern boundary of the site, improving the suitability of the commuting route on that boundary. It will also benefit foraging bats;
- Native broadleaved tree and fruit tree planting: areas of native and wildlife friendly shrub/scrub planting and the open areas seeded with a flower-rich grassland mix; will provide further improved foraging for bats (see separate BNG assessment report); &

The artificial lighting scheme to be installed post-construction has been designed to prevent unnecessary light spill onto the hedgerows, the eastern boundary corroder, any bat boxes installed as part of the development, and the new habitat areas created in the south portion of the Site. The following guidance[26,27] has been adhered to:

- Light spill minimised by eliminating any bare bulbs and upward pointing light fixtures. The spread of light to be kept near to or below the horizontal plane, by using as steep a downward angle as possible and/or shield hood. Flat, cut-off lanterns are best.
- Luminaires to feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats[28].
- A warm white spectrum (ideally <2700 Kelvin) adopted to reduce blue light component.
- All luminaires lack UV elements when manufactured. Metal halide, fluorescent sources will not be used.
- Limiting the height of lighting columns to eight metres and increase the spacing of lighting columns[29] to reduce the spill of light into unwanted areas such as the aforementioned habitats.
- Artificial lighting proposals must not directly illuminate hedgerows, or bat box locations.

The existing proposals demonstrate that effort has been made to reduce impacts on bats. A lighting assessment has been produced[30] with details to reduce light spill onto sensitive features, namely boundary hedgerows. In

addition to the measures set out above there will be controlled optics and back light louvres on the perimeter luminaires and use of infra-red movement sensors to reduce light levels by 70% when there is no vehicle or pedestrian activity.

With these lighting measures implemented, it is considered that any potential adverse effects from lighting upon bats will be minimised.

Enhancements for Biodiversity Net Gain

The following are considered to be suitable enhancements for bats:

- Landscape proposals should incorporate night scented plants or those species beneficial to bats.

3.5.4

- A bat rocket to be included in the southern section of the Site, near the enhancement area.
- The inclusion of a pond as indicated in the separate BNG assessment report will increase the suitability of the southern portion of the Site for foraging bats, providing a water resource and increased foraging opportunities for bats and other wildlife.

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3.6 Birds

Desk Study

Records of species returned by the data search included a range of species typical of the landscape surrounding the Site and included notable[31] species listed in Table 4, overleaf.

Table 4: Notable Birds within Data Search

3.6.1

Species		Protection			
Scientific Name	**Common Name**	**Schedule 1 WCA**	**BoCC Status**	**National Priority**	**Local Priority**
Apus apus	Swift		Red	✓	✓
Alauda arvensis	Skylark		Red	✓	✓
Emberiza ctrinella	Yellowhammer		Red	✓	✓
Passer domesticus	House sparrow		Red	✓	✓
Sturnus vulgaris	Starling		Red	✓	✓
Tyto alba	Barn owl	✓	Green		

Field Survey

3.6.2 The field survey noted the following species on the Site, seen in Table 5:

Table 5: Birds Recorded Onsite

Species			Protection			
Scientific Name	**Common Name**	**Breeding?**	**Schedule 1 WCA**	**BoCC Status**	**National Priority**	**Local Priority**
Cyanistes caeruleus	Blue tit	Possible		Green		
Erithacus rubecula	Robin	Possible		Green		
Turdus merula	Blackbird	Possible		Green		
Columba palumbus	Pigeon	Possible		Green		
Pica pica	Magpie	Possible		Green		

3.6.3 The hedgerows, scattered scrub, dense scrub and scattered trees on the Site had suitability for a wide range of common small passerine birds. The grassland on Site was not suitable for ground nesting birds such as skylark, as these prefer open areas 20- 25 m away from hedges.

Two wood pigeon nests were observed on Site, in two of the scattered horse chestnut trees.

3.6.4

Assessment of Effects

The development will result in the loss of nesting habitat in the form of a section of Hedgerow 2 and could see the damage or destruction of active nests if clearance is undertaken during the nesting season.

Requirements

Clearance of the section of Hedgerow 2 for the access road should be undertaken outside of the nesting bird season. The nesting bird season is considered to run from March to September, inclusive, but does vary depending on weather.

If this is not possible and clearance is undertaken during the during nesting season, then it should only be undertaken within 24-48 hours of a nesting bird check undertaken by a suitably experienced ecologist. Should nests be encountered then clearance around the nest will be paused and a reasonable buffer installed until young have fledged the nest.

The loss of nesting habitat should be compensated for by including the native hedgerow planting as suggested within the separate BNG assessment report and new planting areas of woody shrub/scrub species. The habitat loss that will occur prior to the maturing of this new habitats, is small in comparison with the scale of the Site and will not see a significant reduction in breeding habitat for hedgerow nesting species.

Enhancements for Biodiversity Net Gain

The following enhancements are considered suitable:

3.6.5
- A kestrel box, pole mounted at least 4 m high in the south of the Site.

3.7 Reptiles

Desk Study

3.7.1 The desk study returned two records for grass snake (*Natrix helvetica*) and three records for slow worm (*Anguis fragilis*) within 1 km of the Site. The nearest record was 632 m to the west of the Site and was dated 2005.

Field Survey

3.7.2 No reptiles were seen during the site visit, however there was suitable foraging habitat across the Site, in the form of tussocky grassland. The scattered scrub and dense scrub areas also include potential refugia for reptiles. It is considered that species such as slow-worm or common lizard could be present.

3.7.3

Assessment of Effects

The Site is of such a size that it could support a population of reptiles in its own right. If a population of reptiles is present onsite or if reptiles transiently use the site, there is a risk of killing/ injuring reptiles during Site works that include the clearance of the space for the access road and the north section of the Site. If a population of

3.7.4 reptiles is present, there is the additional risk of local extinction of the population if the development proceeds unmitigated.

Survey Results (Added March 2023)

3.7.5 Reptile surveys were set up on 28th August 2022. Following a period for artificial cover objects to bed in after and any reptiles present to become accustomed to, and being to use the cover objects, seven survey visits were undertaken during the months of September and early October 2022. No reptiles were recorded on the Site during the survey and as such, reptiles are considered to be likely absent from the Site.

3.7.6

Updated Assessment of Effects

Reptiles have been shown to be likely absent from the Site and therefore are highly likely to be impacted by the proposals.

Requirements

No further requirements.

3.8 Hazel dormice

Desk Study

The desk study returned no record for hazel dormouse (*Muscardinus avellanarius*), however records exist in the wider landscape area and the Site is located within an area of known hazel dormice distribution within the UK[32].

Field Survey

3.8.1 The Site includes areas of scattered bramble, and dense blackthorn scrub as well as two hedgerows, Hedgerow 1 along the eastern boundary and Hedgerow 2 across the site dividing it in two sections (north and south). Hedgerow 1 on its northern section it's young and has signs of management by flailing which greatly reduces

3.8.2 it suitability for hazel dormouse. The areas of scattered bramble and dense blackthorn scrub are mainly concentrated adjacent to Hedgerow 2 and within the southern section of the Site. Further south, off site, there is a small woodland block. Although presence is unlikely, habitats onsite provide low suitability for foraging, nesting, and hibernation potential for hazel dormouse.

Assessment of Effects

3.8.3 A small section of hedgerow, and blackthorn dense scrub will need to be removed to facilitate the development and a new access road for the development.

Hedgerow 2 has low suitability for hazel dormice, and it's only connected on one side to further hedgerows, other suitable habitats such as the block of woodland to the south, that connects via hedgerows further south with Paxton Brook and Green Lane Wood. The removal of a section of Hedgerow 2 and a section of blackthorn dense scrub to facilitate a new access road for the development, although unlikely, could result in the disturbance of individual dormice and will result in the loss of a small area of low suitability habitat. However, with compensatory habitat the permanent loss of suitable habitat will be minimised. In addition, the site plans have been redesigned to push the access road the west of the Site (where a gap for power lines already exists on the hedgerow), therefore the small loss is not considered to have a significant impact on suitable habitat connectivity for hazel dormice.

3.8.4 The anticipated impacts of the development are not considered to be significant in terms of habitat loss or fragmentation and are not considered likely to have an impact on the Favourable Conservation Status of the species.

Requirements

A Method Statement to be produced to mitigate any residual risk for disturbance impacts. This will specify; timings of works, for example, cutting the dense scrub to ground level by hand in winter and grub roots out in May-June. The supervision of works by an Ecological Clerk of Works (EcCoW) and compensatory planting in the new planting areas with a species mix including hazel and other woody species such as beech, hornbeam, and holly and the provision of nest boxes as 'enhancement'.

In particular, the new hedgerow planting along the bridleway, as well as the scrub planting to the south of the should be tailored to a dormouse suitable mix as mentioned above.

The lighting measures proposed for bats will also reduce negative impacts to dormice.

Enhancements for Biodiversity Net Gain

Provision of two nest boxes within the southeastern section of Hedgerow 1, near the wildlife enhancement dedicated area with the new pond and hedgerow and scrub planting.

3.9 Badgers

3.8.5 Included within a confidential Appendix (Appendix 4.)

3.10 Priority & Notable Species

Desk Study

The desk study returned no records for brown hare (*Lepus europaeus*) but returned 347 records of hedgehog (*Erinaceus europaeus*) within 1 km of the Site. The nearest record for hedgehog was 100 m west and was dated 2021.

3.10.1

Field Survey

3.10.2 The field survey did not record any notable species onsite. The Site does provide suitable foraging habitat for hedgehogs.

Assessment of Effects

3.10.3 The development has potential to cause injury or death to small mammals, including hedgehog, disturbed during Site clearance. However, the development is unlikely to cause any impacts to the population of any notable or priority species.

3.10.4

Requirements

Clearance of the Site should be in conjunction with any other recommendations.

3.10.5 Any small mammal disturbed during construction should be allowed to flee on their own volition or relocated to the Site boundary.

Enhancements for Biodiversity Net Gain

Three solitary bee hotels or posts to be incorporated in the development.

The provision for new planting of hedgerows, native scrub, and the creation of a pond describe within the habitat section will also benefit hedgehogs by improving the available suitable foraging habitat.

4 Enhancements for Biodiversity Net Gain Summary

As per the National Planning Policy Framework[1] all new developments are required to deliver a net gain in biodiversity. In order to achieve this, the mitigation measures described in the preceding sections as well as the biodiversity enhancements should be implemented.

A brief summary of the recommended biodiversity enhancements for the Site is detailed in Table 6, below. For more detail on these enhancements, including recommended specifications, please refer to the species-specific sections of this report. It is considered that these measures, undertaken in conjunction with the Requirements detailed within this report, will ensure that the development achieves a biodiversity net gain.

Table 6: Summary of Additional Biodiversity Enhancement Measures

Group or Habitat	Enhancement
Habitats	See separate Biodiversity Net Gain assessment report.
Bats	Landscape proposals should incorporate night scented plants or those species beneficial to bats. A bat rocket to be included in the southern section of the Site, near the enhancement area. The creation of a wildlife pond will benefit bats by providing an additional foraging area as included within the separate BNG assessment report.
Birds	A kestrel box, pole mounted at least 4 m high in the south of the Site.
Hazel dormouse	Provision of two dormice nest boxes within the southeastern section of Hedgerow 1, near the wildlife enhancement dedicated area with the new pond and hedgerow and scrub planting as included within the BNG assessment report.
Priority & Notable Species	Three solitary bee hotels or posts to be incorporated in the development. The provision for new planting of hedgerows, native scrub, and the creation of a pond describe within the separate BNG assessment report will also benefit hedgehogs by improving the available suitable foraging habitat.

5 References

[1] MHCLG: Ministry of Housing, Communities and Local Government, 2021. National Planning Policy Framework. [online] Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

[2] Maddock, A. ed., 2008. UK Biodiversity Action Plan; Priority Habitat Descriptions. [pdf] Available at: http://archive.jncc.gov.uk/PDF/UKBAP_PriorityHabitatDesc-Rev2011.pdf

[3] https://magic.defra.gov.uk/MagicMap.aspx

[4] http://wsbrc.org.uk/

[5] http://www.link2nature.org.uk/uploads/LBAPpages/Wiltshire%20BAP%202008.pdf

[6] JNCC [Joint Nature Conservation Council], 2007. Report on the Species and Habitat Review. [pdf] Available at: http://archive.jncc.gov.uk/PDF/UKBAP_Species-HabitatsReview-2007.pdf.

[7] JNCC, 2019. UK Post-2010 Biodiversity Framework (2012–2019). [online] Available at: https://hub.jncc.gov.uk/assets/587024ff-864f-4d1d-a669-f38cb448abdc.

[8] CIEEM, 2017. Guidelines for Preliminary Ecological Appraisal: Second Edition. December 2017.

[9] UK Habitat Classification Working Group (2018) UK Habitat Classification – Habitat Definitions V1.0.

[10] The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (*SI 2019: 579*) Available at: https://www.legislation.gov.uk/uksi/2019/579/contents/made

[11] Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal 10(4), 143-155.

[12] Collins, J. ed., 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed). The Bat Conservation Trust, London.

[13] Bright, P., Morris, P., and Mitchell-Jones, T., (2006) The Dormouse Conservation Handbook (2nd ed.), English Nature.

[14] Wildlife and Countryside Act 1981 as amended (*SI 1981 c.69*) Available online at: http://www.legislation.gov.uk/ukpga/1981/69

[15] Natural Environment and Rural Communities Act 2006, c.16. Available at: http://www.legislation.gov.uk/ukpga/2006/16.

[16] BSBI [Botanical Society of Britain & Ireland], 2018. Great Britain Red List for vascular plants. [xlsx] Available at: https://bsbi.org/download/10959/.

[17] https://www.legislation.gov.uk/ukpga/2021/30/part/6/crossheading/biodiversity-gain-in-planning/enacted

[18] UK Habitat Classification Working Group (2018) UK Habitat Classification – Habitat Definitions V1.0.

[19] https://www.legislation.gov.uk/uksi/1997/1160/contents/made

[20] The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 [online] Available at: https://www.legislation.gov.uk/uksi/2019/579/contents/made

[21] Bat Special Areas of Conservation (SAC) Planning Guidance for Wiltshire. [pdf]. Available at: https://www.wiltshire.gov.uk/media/992/Bat-S-A-C-developers-guidance-inc-Bath-Bradford-on-Avon-Chilmark-and-Mottisfont/pdf/Bath-and-bradford-on-avon-september-2015-bat-sac-guidance.pdf

[22] Trowbridge Bat Mitigation Strategy SPD [pdf]. Available at: https://www.wiltshire.gov.uk/media/8861/Trowbridge-Bat-Mitigation-Strategy-summary-document-of-TBMS-for-planners-and-public/pdf/TBMS_summary_document_rev03.pdf?m=637842476566570000

[23] Trowbridge Bat Mitigation Strategy – Summary document [pdf]. Available at: https://www.wiltshire.gov.uk/media/8861/Trowbridge-Bat-Mitigation-Strategy-summary-document-of-TBMS-for-planners-and-public/pdf/TBMS_summary_document_rev03.pdf?m=637842476566570000

[24] Cresswell, W., and Whitworth, R., 2004. English Nature Research Reports No. 576 - An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus*. English Nature, Peterborough, UK.

[25] Practical Ecology Ltd 2023, L230414 Letter of Intent Regarding proposed Bat Survey Effort Devizes Road, Trowbridge. April 2023

[26] Miles, J., Ferguson, J., Smith, N., and Fox, H., 2018. Guidance Note 08/18 Bats and artificial lighting in the UK. [pdf] Available at: https://cdn.bats.org.uk/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf.

[27] Gunnell, K., Grant, G., and Williams, C., 2012. Landscape and urban design for bats and biodiversity. Bat Conservation Trust, London, UK.

[28] Stone, E.L., Jones, G., Harris, S., 2012. Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats. Glob. Change Biol. 18, 2458–2465.

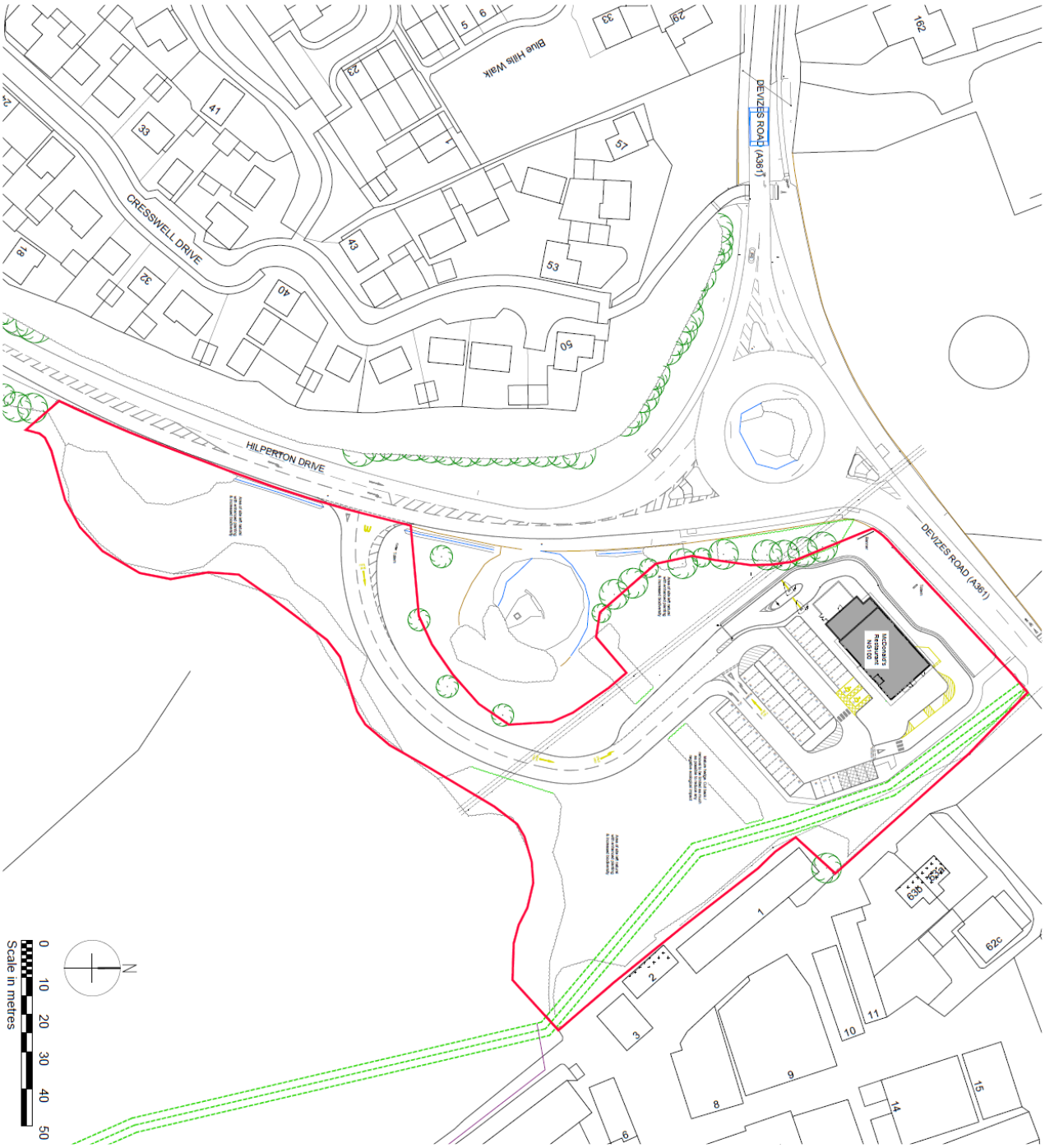
[29] Fure, A., 2012. Bats and Lighting – six years on. The London Naturalist 91, 69-88.

[30] LAUK lighting Ltd 2023 McDonald's Trowbridge Lighting Impact Assessment Report, May 2023

[31] Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove, A., Noble, D., Stroud, D., and Gregory, R., 2015. Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands, and Isle of Man. British Birds 108, 708-746.

[32] Britain's Mammals 2018: The Mammal Society's Guide to their Population and Conservation Status.

Appendix 1: Proposed Site Plan



NG100

Notes:
All drawings to be read in conjunction with all other drawings as noted on issue sheet.

Proposed McDonald's Demise = 1.11 Acres

Existing Bridleway (indicatively shown)

Engineering Zone (indicatively shown)

F	14.09.22	DT	Lane stack increased
E	14.09.22	JK	Access road re-aligned to reduce impact on existing landscaping
D	13.09.22	JK	Access road re-aligned to reduce impact on existing landscaping
C	08.09.22	JK	Parking and patio layout updated. ADL Tracking amendments.
B	31.08.22	JK	Updated to show existing cycle route to consultant's amendments to this site to same.
A	24.08.22	MK	Layout adjusted to highway consultants Bridleway location adjusted to Council specification.

GENERAL NOTES:
All works are to be undertaken in accordance with the Building Regulations and the latest British Standards.
All products are to be installed in accordance with the manufacturer's recommendations.
All risks assessed to comply with the designer's responsibility under the Construction (Design Management) Regulations 2015.

PROPOSED DEVELOPMENT AT
Hilperton Drive / Paxcroft Mead
TROWBRIDGE BA14

TITLE No.
NB 6017

ON BEHALF OF
McDonald's Restaurants Ltd

DRAWING TITLE
Wider Site Plan
NG100 Unit
Side by Side CCDs

DRAWN BY / CHECKED BY
BV

SCALE @ A1
1:1000

DATE
August 2022

DRAWING No.
8297-SA-B01T-SK24 F

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Appendix 2: Site Photographs



Photo 1: Overview from the northwestern of the Site



Photo 2: View from the north looking southwest.



Photo 3: View of the northwest corner.



Photo 4: View of the northeast corner.



Photo 5: Full length of the dividing hedgerow (hedgerow 2).



Photo 6: Gap in hedgerow 2 to allow the crossing of the bridleway.



Photo 7: Hedgerow 2 from the south and area of dense blackthorn scrub.



Photo 8: Overview of the southern grass field.



Photo 9: Scatter horse chestnut trees mark the boundary with the mound.



Photo 10: Scattered scrub on the most southern section of the Site.



Photo 11: Western boundary. The new access road will open to this boundary.



Photo 12: Southern corner of the Site looking northeast.

Appendix 3: Legislation

The following sections outline the legislation protecting each species or group of species where appropriate which have been considered as part of the preceding report.
Important notes:

- Practical Ecology Ltd's reports do **not** purport legal advice.
- The outline of legislation provided is not comprehensive and the original texts of the relevant legislation must be referred to for a full list of offences.

European Protected Species

Overview

The Bern Convention (The Convention on the Conservation of European Wildlife and Natural Habitats) was adopted in 1979. To implement the agreement, the European Community adopted the EC Habitats Directive.
The EC Habitats Directive has been written into UK law in the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). The Conservation of Habitats and Species Regulations 2017 (as amended) provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (amendments) (EU Exit) (2019) which continue the same provision for European protected species, licensing requirements and protected areas after the UK's exist from the European Union. In addition, the Countryside and Rights of Way Act 2000 strengthened the wildlife legislation in the UK. In relation to development, a person commits an offence regarding a species protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 (as amended) if they:

- Deliberately capture, injure or kill an EPS;
- Deliberately or recklessly disturb wild animals of any such species in such a way as to be likely to significantly affect;
    - The ability of any significant group of animals to survive, breed or rear of nurture their young;
    - The local distribution or abundance of that species.
- Damages or destroys a breeding site or resting place (even if unintentional or when the animal is not present);
- Intentionally or recklessly obstructs access to a structure or place used for protection or shelter; and
- This applies regardless of the life stage (i.e. eggs, young, adult).

The following sections outline the offences that can be committed against each species or group of species which are protected by European law and tranches of UK law which strengthen that protection.

Great Crested Newts (*Triturus cristatus*)

Great crested newts and their breeding sites (ponds) or resting places are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 (as amended) and Section 9 of the Wildlife and Countryside Act 1981.
It is an offence to:

- intentionally or recklessly kill, injure or handle a great crested newt;
- to possess a great crested newt (whether live or dead);
- disturb a great crested newt – this includes in particular:
    - Any disturbance or obstruction which is likely to impair their ability to survive, breed or reproduce, or to rear or nurture their young; or
    - Any disturbance or obstruction that impairs their ability to hibernate or affecting their local distribution and abundance;
- sell or offer a great crested newt for sale without a licence.

It is also an offence to intentionally or recklessly damage, destroy or obstruct access to any place used by great crested newts for shelter, whether they are present or not.

Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 (as amended) and Section 9 of the Wildlife and Countryside Act 1981.
It is an offence to:

- intentionally kill, injure or handle a bat;
- to possess a bat (whether live or dead);
- disturb a roosting bat; or
- sell or offer a bat for sale without a licence.

It is also an offence to intentionally or recklessly damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.
A roost is defined as 'any structure or place which (a bat) uses for shelter or protection'. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of the survey.

Otter (Lutra lutra)

Otters and their breeding sites (holts) or resting places are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 (as amended) and Section 9 of the Wildlife and Countryside Act 1981.
It is an offence to:

- Deliberately or recklessly capture, kill, disturb or injure otters;
- Deliberately or recklessly damage or destroy a breeding or resting place;
- Deliberately or recklessly obstruct access to their resting or sheltering places; or
- possess, sell, control or transport live or dead otters, or parts of otters.

Common dormouse (Muscardinus avellanarius)

Common dormice and their breeding sites or resting places are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 (as amended) and Section 9 of the Wildlife and Countryside Act 1981.
It is an offence to:

- Deliberately or recklessly capture, kill, disturb or injure common dormice;
- Deliberately or recklessly damage or destroy a breeding or resting place;
- Deliberately or recklessly disturb a common dormouse whilst in structure or place of shelter or protection;
- Deliberately or recklessly obstruct access to their resting or sheltering places; or
- possess, sell, control or transport live or dead common dormice, or parts of common dormice.

Other Species

Badgers (Meles meles)

Badgers are fully protected in the UK by the Protection of Badgers Act, 1992 and by Schedule 6 of the Wildlife and Countryside Act 1981 as amended. The Protection of Badgers Act 1992 was introduced in recognition of the additional threats that badgers face from illegal badger digging and baiting. Under the Act, it is an offence *inter alia* to:

- Wilfully kill, injure or take a badger, or to attempt to do so;
- Cruelly ill-treat a badger; or
- Intentionally or recklessly interfere with a badger sett by;
    - damaging a sett or any part of one;
    - destroying a sett;
    - obstructing access to or any entrance of a sett;
    - causing a dog to enter a sett; or
    - disturbing a badger when it is occupying a sett.

The purpose of this legislation is to ensure that badgers are humanely treated.

Water Vole (Arvicola terrestris)

Water vole and their breeding sites or resting places (burrows) are protected under Schedule 5 of the Wildlife and Countryside Act 1981. It is an offence to:

- Deliberately or recklessly capture, kill, disturb or injure water voles;
- Deliberately or recklessly damage or destroy a breeding or resting place;
- Deliberately or recklessly disturb a water vole whilst in structure or place of shelter or protection;
- Deliberately or recklessly obstruct access to their resting or sheltering places; or
- Possess, sell, control or transport live or dead water voles, or parts of water voles.

NB: In the case of water voles, a place of shelter or breeding or resting place is only likely to constitute an 'active' burrow.

Reptiles

All six of the UK's reptile species are protected under the Wildlife and Countryside Act 1981 (as amended).
Of the more common reptiles, it is illegal to intentionally kill or injure common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), an adder (*Vipera berus*) and grass snake (*Natrix helvetica*).

White-Clawed Crayfish (Austropotomobius pallipes)

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- Take a white-clawed crayfish from the wild;
- Sell or offer the sale of a whole or any part of a white-clawed crayfish.

This applies to all life stages.

Birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built;
- intentionally take or destroy the nest or eggs of any wild bird. [Special penalties are liable for these offences involving birds listed on **Schedule 1**].

Birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) have an additional level of protection. With regards to these species, it is it is an offence to deliberately or recklessly:

- disturb them whilst they are nesting, building a nest, in or near a nest that contains their young;
- disturb their dependent young.

Invasive Species

Certain species of plants and animals that do not naturally occur in Great Britain have become established in the wild and represent a threat to the natural fauna and flora. Section 14 of the Wildlife & Countryside Act 1981 (as amended) prohibits the release of any animal species that are 'not ordinarily resident or is not a regular visitor to Great Britain in a wild state'. Therefore, under Section 14 it is an offence to allow the establishment of plant species listed on Schedule 9 Part 2 in the wild.

Wild Mammals

Mammal species not of primary conservation concern do receive protection from unnecessary suffering through the Wild Mammals Protection Act (1996).