



Preliminary Ecological Appraisal and Preliminary Roost Assessment

Meadow View, Belgrave Drive, Caversham, RG4 7DX

Tara Walsh

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Draft	1	Jonathan Stuttard, Senior Consultant BSc (hons) MSc	25/08/2021
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Guidelines

This assessment has been undertaken in accordance with the following guidance:

- Chartered Institute of Ecology and Environmental Management 'Guidelines for Preliminary Ecological Appraisal Second Edition, December 2017';
- Chartered Institute of Ecology and Environmental Management 'Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine, September 2018'; and
- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation, and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary, and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is documented in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, the low impact on ecological receptors identified through both the site survey and search of local biological records, and the passive interface with the mitigation hierarchy, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application or support the recommendations for further surveys.

Executive summary

Arbtech were commissioned by Tara Walsh to undertake a Preliminary Ecological Appraisal (PEA) and a Preliminary Roost Assessment (PRA) at Meadow View, Belgrave Road, Caversham, RG4 7DX (hereafter referred to as the site). The survey was completed on 23/08/2021. This PEA and PRA report details the findings of an ecological desk study, an Extended Phase 1 Habitat Survey and a Preliminary Roost Assessment of buildings and trees for roosting bats.

No previous reports have been produced for the site by Arbtech Consulting Ltd.

Plans have not been provided by the client. However, the plans were discussed on site.

It is understood that the main residential dwelling and adjacent garage on site will be demolished to facilitate the construction of a new residential dwelling.

Summary of Recommendations

Buildings B1 and B2 are assessed to provide Low potential to support roosting bats.

It is therefore recommended that a single dusk emergence or dawn re-entry bat survey is undertaken at both B1 and B2 to determine the presence or likely-absence of roosting bats in line with current guidance. The survey should be undertaken during the optimal season for survey between mid-May and August.

Given the proximity of these buildings, it is assessed that B1 and B2 can be surveyed simultaneously. Two surveyors are recommended to provide full coverage of the buildings. Recommended surveyor locations are shown in Appendix 1.

Note that if any bats are recorded roosting within B1 or B2, then an additional two emergence and/or re-entry bat surveys will be required to characterise the roost during the optimal season for survey.

It is noted that for buildings assigned a low potential only, the Local Planning Authority sometimes accept surveys undertaken during a suboptimal time period (i.e. September) to inform the planning application should the conditions be suitable for survey. However, this comes with a risk as it cannot be guaranteed that the Local Planning Authority will accept this survey timing and they may request a survey during the optimal season for survey. Note that emergence and re-entry bat surveys cannot be undertaken between October and April as bats are mostly inactive during this period.

Mitigation and enhancement measures are also recommended to ensure compliance with wildlife legislation and local planning policy.

- Should any tree or Hedgerow clearance works be required to facilitate the proposed development, clearance works should be undertaken outside the core nesting period for breeding birds between 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees by a suitably qualified ecologist for active nests should be undertaken immediately prior to the commencement of works. Any active nests assessed to be impacted will need to be retained until the young have fledged.
- Site specific enhancements including the provision of a single bird nest box has also been recommended to enhance the value of the site in line with the Local Planning Authority's duty to ask for enhancements under the NPPF (2019).
- Bat related enhancements measures will be determined following the results of the recommended survey.

The full site evaluation can be read in section 4.0 of this report.

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1.0 Introduction and Context

1.1 Background

Arbtech were commissioned by Tara Walsh to undertake a Preliminary Ecological Appraisal (PEA) and a Preliminary Roost Assessment (PRA) at Meadow View, Belgrave Road, Caversham, RG4 7DX (hereafter referred to as the site). The survey was completed on 23/08/2021. This PEA and PRA report details the findings of an ecological desk study, an Extended Phase 1 Habitat Survey and a Preliminary Roost Assessment of Buildings and trees for roosting bats.

No previous reports have been produced for the site by Arbtech Consulting Ltd.

1.2 Site Context

The site is located at National Grid Reference SU 69490 75521 and has an area of approximately 0.1ha. The site is characterised by a single residential property alongside associated gardens and outbuildings. Habitats recorded on site include buildings, species-poor semi-improved grassland, tall ruderal vegetation, species-poor hedgerows, scattered trees, hardstanding, bare ground, and fence.

1.3 Scope of the report

This PEA describes the baseline ecological conditions recorded at the site, evaluates habitats within the survey area in the context of the wider environment, and describes the suitability of those habitats to support notable and/ or protected species.

Furthermore, this PEA includes the results of a PRA. The PRA provides a description of features that provide potential to support roosting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence recorded during the site survey that establishes the presence of roosting bats.

The PEA also aims to identify potential ecological impacts as a result of the proposed development and subsequently summarises any requirements for further surveys and mitigation measures as to comply with current nature conservation legislation and local planning policy. Results detailed within this report aim to satisfy the ecological requirements for planning consent.

The purpose of this report is to:

- Identify the potential of the site to support important ecological features within the identified Zone of Influence (Zoi) and any resulting constraints to the proposed development;
- Allow any assessed significant ecological effects to be avoided or minimised where necessary;
- Determine requirements for further ecological surveys where required;
- Determine mitigation measures (in line with the Mitigation Hierarchy¹) to be developed, to ensure compliance with nature conservation legislation and planning policy; and
- Allow any required ecological enhancement measures to be developed.

This report should be read in conjunction with information provided in the appendices including:

¹ BS 42020:2013 Clause 5.2

- A Phase 1 Habitat Map is presented in **Appendix 1**;
- A PRA Survey Plan is present in **Appendix 2**;
- Relevant desk study results are shown in **Appendix 3**; and
- A summary of relevant legislation is presented in **Appendix 4**.

1.4 Project Description

Plans have not been provided by the client. However, the plans were discussed on site.

It is understood that the main residential dwelling and adjacent garage on site will be demolished to facilitate the construction of a new residential dwelling.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of statutory designated sites, Priority Habitats Listed under Section 41 of the NERC Act (see **Appendix 3**) and granted European Protected Species Mitigation Licenses (EPSML) records for bats held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps. It is noted that additional ecological data was not commissioned. However, given the small scale of the development and the low ecological value of the site, the above desk study is considered suitable to inform this assessment.

2.2 Extended Phase 1 Habitat Survey

The survey was undertaken by Jonathan Stuttard BSc (Hons) MSc (Senior Consultant) on 23/08/2021. Jonathan Stuttard is accredited on Natural England Bat License **2017-32515-CLS-CLS**.

The Phase 1 habitat survey was undertaken using the Joint Nature Conservancy Council (JNCC, 2010) ² standard phase 1 survey technique. The Survey was extended by undertaking an assessment of the Site to support protected and/ or notable species. All habitats recorded on site were mapped according to JNCC Phase 1 habitat classification. Where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management.

The ecological value of the site has been assessed based on the Guidelines for ecological impact assessment (CIEEM, 2018), and the Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring (Hill, 2005), using geographic frames of reference. The biodiversity value of any identified designated sites, habitat types and associated species assemblages has been considered. The distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981 as amended 1996) were also noted throughout the site.

2.3 Preliminary Roost Assessment

The PRA comprised an external and internal assessment of buildings on site in addition to a ground-based assessment of trees for their potential to support roosting bats. The surveys were led by an experienced ecologist and were based on current best practice guidelines (Collins, 2016)³. All features that are likely to be impacted by the proposed development were assessed for their potential to support roosting bats. The surveyor systematically surveyed all features suitable for-bats and signs of bat activity.

The PRA of each building and tree included a visual inspection (including the use of binoculars and torches where required) of the exterior of each building and tree for evidence of bat use (e.g. droppings, scratch marks, staining and sightings). Factors considered whilst undertaking the PRA comprised internal conditions, presence of features suitable for use by roosting bats, proximity to foraging habitats or cover and potential for disturbance. Notes were made relating to relevant characteristics of features providing potential access points and roosting opportunities for bats. **Table 1** below details the rationale for determining bat roost potential of buildings and trees subject to the PRA.

² JNCC. (2010). *Handbook for Phase 1 Habitat Survey*. Nature Conservancy Council

³ Collins, J. (ed) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

Table 1: Rationale for assigning bat roost potential

Assigned Bat Roosting Potential	Description/ rationale
Confirmed roost	Evidence of roosting bats within the building or tree.
High	A building or tree with one or more Potential Roost Features (PRFs) that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Medium	A building or tree with one or more PRFs that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
Low	A building or tree with one or more PRF that could be used by individual bats opportunistically. However, these PRFs do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Negligible	Negligible features on site likely to be used by roosting bats.

2.4 Suitability Assessment

The likelihood of occurrence of protected species is ranked according to the criteria listed in **Table 2** below. The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Table 2: showing criteria considered when assessing the likelihood of occurrence of protected species

Present	Species are confirmed as present from the current survey or historical confirmed records.
High	Habitat and features of high quality for species or species assemblage. Species known to be present in wider landscape (desk study records). Good quality surrounding habitat and good connectivity.
Medium	Habitat and features of moderate quality. The site in combination with surrounding land provides all habitat or ecological conditions required by the species or assemblage. Within known national distribution of species and local records in desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance or poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
Low	Habitats within the survey area poor quality. Few or no records from data search. Despite above, presence cannot be discounted as within national range, all required features or conditions present on site and in surrounding landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
Negligible	Very limited poor-quality habitats and features. No local records from desk study; site on edge of, or outside, national range. Surrounding habitats considered unlikely to support species or species assemblage.

2.4 Limitations

It should be noted that whilst every effort has been made to describe and evaluate the baseline ecological conditions of the site, this PEA provides a preliminary assessment with regards to the potential of the site to support protected and/ or notable species. Confirmation of the presence/ likely absence of protected and/ or notable species may require additional survey effort; the requirements for further surveys (where necessary) are detailed below within this report.

There are no site-specific limitations.

3.0 Results and Evaluation

3.1 Desk Study

A summary of the desk study results is provided below; full details are included in **Appendix 3**.

3.2 Designated sites

The site is not located within any statutory designated sites. However, a single statutory designated site comprising a Local Nature Reserve (LNR) is located within 2km, as described in **Table 3** below.

Table 3: Designated sites within 2km radius of the site

Designated Site Name	Distance from Site (approx.)	Reasons for Notification from Natural England
Statutory Sites		
McIlroy Park LNR	2.0km south-west	An extensive natural park with good views of the River Thames. The Park is mostly comprised of semi-improved grassland alongside heather dominated heath and broom scrub. Ancient woodland is present on the parks peripheries which contains a number of ancient woodland indicator species within its ground flora such as English bluebell, wood anemone and butcher's broom.

3.4 Historical records

A search of the magic.gov.uk database for granted European Protected Species Mitigation Licences (EPSMLs) within a 2km radius of the site has been completed. Displaced bats from licenced sites >1km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licenced site. A number of EPSML have been granted within 2km of the site. Notably, six EPSML have been granted within 1km of the site, as detailed in **Table 4** below.

Table 4: Granted EPSMLs (bats) within 2km of the site

Case reference of granted application	Approx. distance from site	Bat Species Effected	Licence Start Date:	Licence End Date:	Impacts allowed by licence
2015-14137-EPS-MIT	0.2km south	Common pipistrelle, soprano pipistrelle	16/09/15	15/09/20	Impacts to a resting place
2017-29064-EPS-MIT	0.3km east	Soprano pipistrelle	01/09/17	01/09/2027	Impacts to a breeding site and resting place

2015-13539-EPS-MIT	0.5km south-east	Common pipistrelle	02/09/15	01/09/16	Impacts to a resting place
2014-3600-EPS-MIT	0.5km north	Common pipistrelle	29/09/14	01/10/2019	Impacts to a resting place
2014-2980-EPS-MIT	0.6km east	Common pipistrelle, soprano pipistrelle	12/09/14	01/10/2015	Impacts to a resting place
2015-18560-EPS-MIT	0.7km north	Soprano pipistrelle, brown long eared	25/01/16	31/01/21	Impacts to a resting place

3.3 The Wider Environment

A review of the designated sites, aerial photographs (**Figure 1**), the MAGIC database and OS maps has been undertaken. Collated, the position of the site in association with habitats present within the wider landscape is described below:

The site is located directly adjacent to residential properties and their associated gardens on the north, east and south aspects; Belgrave Road encloses the site to the west. Beyond this infrastructure, the landscape is dominated by further urban infrastructure associated with Caversham Town Centre to the south and east and open green areas comprising agricultural land and a golf course to the north and west.

The area surrounding the site within 2km contains a number of priority habitats that are likely to be of significant ecological value. Priority habitats located within 2km predominantly comprise a mosaic of deciduous woodland, ancient semi-natural woodland, ancient re-planted woodland, and wood pasture and parkland. Other priority habitats located within 2km include small and sporadically distributed pockets of good quality semi-improved grassland, lowland dry acidic grassland, urban open mosaic habitats, lowland meadows, and traditional orchards. It is also noted that the River Thames and adjacent riparian habitat is located 0.4km south. These high value habitats are well connected to the site for highly mobile protected and/ or notable species groups such as bats, birds and badgers via continuous vegetated habitats such as tree lines, residential gardens, woodland edge and the River Thames. However, given the presence of some urban infrastructure such as buildings and hardstanding roads enclosing the site, less mobile protected and/or notable species groups such as reptiles and amphibians may have reduced accessibility to the site. Priority habitats within 2km of the site are listed in **Table 5** below and shown in **Appendix 2**.

Table 5: priority habitat inventory within 2km

Habitat	Closest distance from site (approximate)
Deciduous Woodland	0.2km south
Ancient semi-natural woodland	1.8km north-west
Ancient re-planted woodland	0.9km west
Wood pasture and parkland	2.0km west
Traditional orchards	0.5km east
Open mosaic habitat	1.5km south-east

Good quality semi-improved grassland	1.0km west
Lowland dry acidic grassland	2.0km south-west



Figure 1: Location of the site showing the wider landscape.

3.5 Extended Phase 1 Habitat Survey

The site is characterised by a single residential property alongside associated gardens and outbuildings. Habitats recorded on and directly adjacent to the site during the 'Extended' Phase 1

Habitat Survey comprise:

- Buildings;
- Species-poor semi-improved grassland;
- Tall ruderal vegetation;
- Species-poor hedgerow;
- Scattered trees;
- Hardstanding;
- Bare ground; and
- Fence.

All Habitats were mapped and are shown in **Appendix 1**.

It is noted that the weather conditions during the site visit were considered suitable being bright and 19°C.

3.6 Habitat descriptions

Buildings The site is dominated by a single residential house (B1; see Appendix 1). Two other buildings are present on site including a garage (B2; see Appendix 1) and a greenhouse (B3; see Appendix 1). These buildings and their potential to support roosting bats are described in the PRA section below.	n/a	
Species-poor semi-improved grassland Species-poor semi-improved grassland is present both within the front and rear garden on site. The grassland is present as a result of lapsed managements of amenity lawns. As a result, additional species have been able to colonise. Species recorded include perennial rye grass <i>Lolium perenne</i>, false oat grass <i>Arrhenatherum elatius</i>, Yorkshire fog <i>Holcus lanatus</i>, common daisy <i>Bellis perennis</i>, red clover <i>Trifolium pretense</i>, autumn hawkbit <i>Leontodon autumnalis</i>, common mouse-ear <i>Cerastium fontanum</i>, wavy bittercress <i>Cardamine flexuosa</i> and occasional ground ivy <i>Glechoma hederacea</i>.	 Photograph 1 – Species-poor semi-improved grassland located in the rear garden on site.	 Photograph 2 – Species-poor semi-improved grassland located in the front garden on site.

Tall ruderal vegetation

Tall ruderal vegetation has colonised an area of cleared land located adjacent to the east site boundary. Species recorded include common nettle *Urtica dioica*, sycamore saplings *Acer pseudoplatanus*, ivy *Hedera spp.*, Canadian fleabane *Erigeron canadensis*, and hedge bindweed *Calystegia sepium*. Two dead New Zealand falx *Phormium tenax* plants are also present. It is likely that this area was once a section of introduced shrubs that became overgrown and subsequently cleared of vegetation.

It is noted that a log pile is present amongst the tall ruderal vegetation adjacent to the north-east site boundary (**TN1**; see **Appendix 1**).



Photograph 3 – Tall ruderal vegetation located in the rear garden on site.

Species-poor hedgerow

Species-poor hedgerows are present along the north, south and east site boundaries. The hedgerow present on the east boundary is approximately 5m in length and 1m in width and is dominated by Leyland cypress *Cupressus leylandii*. The hedgerow present along the north site boundary is approximately 4m in length and 1.5m in width and is dominated by Portuguese laurel *Prunus lucitanica*. The hedgerow present along the south site boundary is approximately 7m in length and 1m in width and is dominated by privet *Ligustrum vulgare*.

It is noted that the hedgerows on site do not comply with characteristics consistent of an 'Important Hedgerow' as stipulated by the Hedgerow Regulations 1997.



Photograph 4 – A section of species-poor hedgerow located on the east site boundary.



Photograph 5 – A section of species poor hedgerow located on south site boundary.

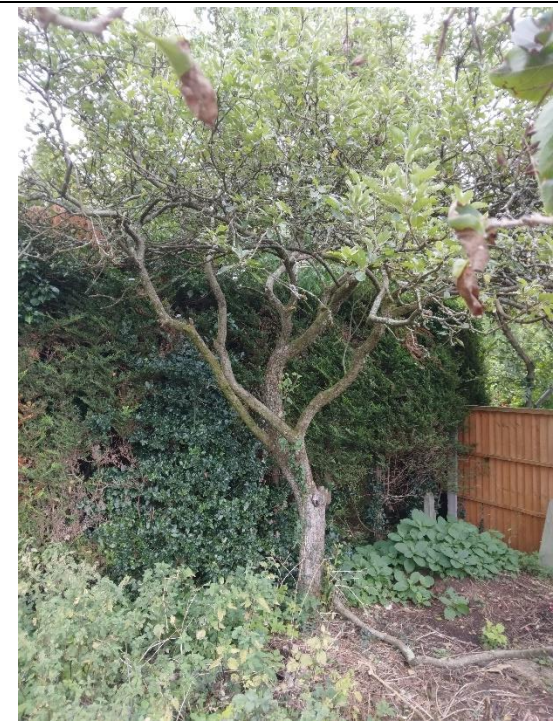
Scattered trees

A number of individual trees are present within both the front and rear gardens on site. All trees are semi-mature in age and are in a good structural condition. Species recorded include holly *Illex aquifolium*, apple *Malus spp.*, pear *Pyrus spp.* and hawthorn *Crateagus monogyna*.

It is noted that no trees on site have potential to support roosting bats.



Photograph 6 – A holly tree located adjacent to the south-west site boundary.



Photograph 7 – A pear tree located adjacent to the south-east site boundary.

Hardstanding Hardstanding is present on site in the form of a pedestrian paths.	n/a
Bare ground Bare ground is present on site in the form of a driveway.	n/a
Fence Timber fencing encloses the majority of the site boundary on all aspects.	n/a

3.7 PRA Assessment

Buildings - B1

External - west aspect

B1 is a single storey residential bungalow. The building is brick-built with a single-pitched, clay tiled roof. The west aspect of B1 retains a number of timber framed windows and a timber framed door. Although the windows and doors present some signs of dilapidation this is cosmetic only; the windows and doors are gapless and do not provide any potential access into the building for bats. The clay tiled roof appears to be mostly in good condition. The roof has no visible missing or slipped tiles. However, it is noted that the chimney stack is in poor structural condition and leans significantly. As a result, roof tiles on the ridge line and directly adjacent to the chimney stack in addition to the lead flashing have lifted which provides a cavity that could be utilised by a small number of crevice-dwelling bats for transient roosting periods. A timber soffit is present covering the eaves. The soffit on the west aspect is in good condition and prevents any access into the loft space for bats through the eaves.

The west aspect of B1 presents potential roosting features suitable to support a small number of crevice-dwelling bats for transient roosting periods.



Photograph 8 – West aspect of B1.



Photograph 9 – A close view of the chimney stack. Note that the chimney stack is leaning and there are gaps underneath lifted tiles and lead flashing.

Buildings - B1**External - east aspect**

The east aspect of B1 is of the same construction and condition as the west aspect with the addition of a small timber frames conservatory. The conservatory does not present any features suitable to support roosting bats. It is noted that the leaning chimney stack also results in lifted tiles and lead flashing on the east aspect that could be utilised by a small number of crevice-dwelling bats for transient roosting periods. Furthermore, the timber soffit box on the east aspect has some narrow gaps directly adjacent to the brickwork. These gaps were surveyed using a high-powered torch and it is confirmed that they do not provide access into the loft space. However, these gaps provide access to a small cavity that could be utilised by a small number of crevice-dwelling bats for transient roosting periods.

The east aspect of B1 presents potential roosting features suitable to support a small number of crevice-dwelling bats for transient roosting periods.



Photograph 10 – East aspect of B1.



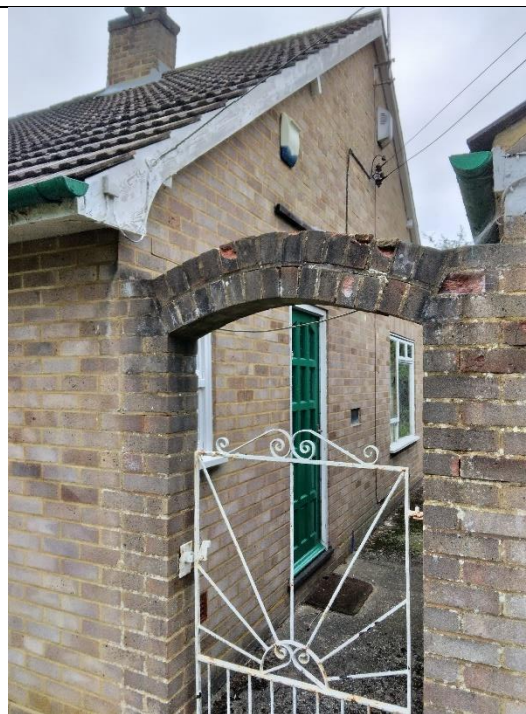
Photograph 11 – A close view of the soffit box on the east aspect. Note small gaps between the soffit and wall.

Buildings B1**External – Gable ends**

The south gable end of B1 is brick-built and retains a number of timber framed windows and a timber framed door. The windows and door appear to be in good, gapless condition and there are no visible access opportunities for bats. Roofing tiles are fixed directly to a timber fascia board. The tiles are tightly fixed to the fascia and there are no gaps or crevices that may provide a potential roosting opportunity for bats.

The north gable end of B1 is of the same construction as the south gable end but without windows or doors. A small gap is present where the gable end fascia board meets the soffit box on the north-east corner. This gap was surveyed using a high-powered torch and it is confirmed there the gap does not provide access into the loft space. However, the gaps provide access to a small cavity that could be utilised by a small number of crevice-dwelling bats for transient roosting periods.

There are no potential roosting features on the south gable end. However, the north gable end presents a single potential roosting features suitable to support a small number of crevice-dwelling bats for transient roosting periods.



Photograph 12 – south gable end of B1.



Photograph 13 – north gable end of B2.

Buildings – B1**Internal**

The loft space of B1 is constructed using a number of timber trusses, beams and supports. A bitumen roof felt is fitted underneath all tiles and is in good gapless condition. The gable ends are exposed block work and the brick-built chimney stack is present centrally. It is noted that no natural light enters the loft space and all eaves are fully blocked. There is no insulation installed within the loft.

There are no visible access opportunities into the loft space of B1 for bats. Furthermore, no evidence of roosting bats was recorded within the loft space.



Photograph 14 – Internal view of the loft space within B1.



Photograph 15 – Internal view of the loft space within B1.

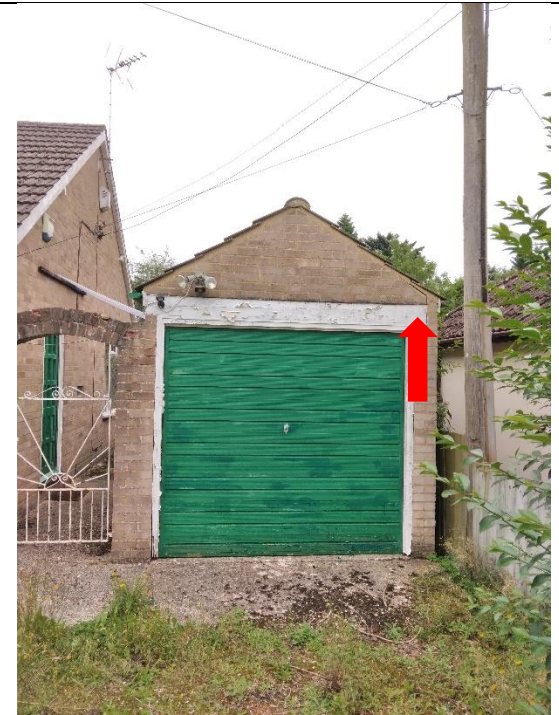
Buildings - B2**External**

B2 is a brick built single storey garage with a single pitched, clay tiled roof. The east aspect of B2 has a single timber framed window in good, gapless condition. The tiles are fixed directly to the brickwork with mortar on this aspect; there is no missing mortar that may provide access into a cavity for bats. The west aspect of B2 is dominated by a tilting garage door. It is noted that a small crevice has opened between the brickwork and the timber lintel. This gap does not provide access into the garage. However, the crevice present is suitable to support a small number of crevice-dwelling bats for transient roosting periods. The roof of B2 appears to be in good condition with no slipped or missing tiles.

A single potential roosting feature is present on the west aspect of B2.



Photograph 16 – East aspect of B2.



Photograph 17 – West Aspect of B2.

Buildings – B2**Internal**

The roof of B2 is constructed using a number of timber trusses and beams. A bitumen roofing felt is installed underneath all tiles which is in good gapless condition. There is not loft space present. The window on the east aspect illuminated the entirety of the garage internally during the day; this is suboptimal conditions for void dwelling bats. Furthermore, there are no visible access opportunities into the building internally.

There are no visible access opportunities into B2 for bats. Furthermore, no evidence of roosting bats was recorded within the loft space.



Photograph 18 – Internal conditions of B2.

Buildings - B3

B3 is a green house built on brick foundations. The green house is illuminated during daylight hours and is not considered suitable to support roosting bats.



Photograph 19 – South aspect of B3.

Trees

All trees on site are assessed to be of negligible potential to support roosting bats. This is due to a lack of features present across all trees on site that are typically utilised by roosting bats such as rot holes, linear faults and branch wounds. All trees are semi-mature in age and are in good structural condition.

3.7 Protected and/ or notable species evidence

No evidence of the presence of protected and/or notable species were recorded on site survey the site survey. Furthermore, no invasive species listed under Schedule 9 of the wildlife and countryside Act 1981 (as amended) were recorded on Site.

4.0 Conclusions, Impacts and Recommendations

An assessment of the site to support protected species, any requirements for further survey, and recommended mitigation and enhancement measures are detailed in **Table 6** below.

Table 6: Site Assessment

Ecological Factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (2019)
Designated sites	The site is not subject to any statutory designations. A single statutory designated site in the form of a LNR is located within 2km of the site.	No direct or indirect impacts to the LNR within 2km of the site are anticipated. This is due to the small scale of the development and the significant distance between the site and LNR.	None.	None.
Priority Habitats	All habitats on site are considered to be common and widespread and are assessed to be of low or negligible ecological value. It is noted that all hedgerows present on site are not considered to represent an 'Important Hedgerow' as stipulated by the Hedgerow Regulations 1997 and are thus not afforded additional consideration for the planning application. A number of priority habitats are located within 2km of the site. The nearest priority habitat comprises a section of deciduous woodland located 0.2km south of the site.	No direct or indirect impacts to priority habitats within 2km of the site are anticipated. This is due to the small scale of the development and the significant distance between the site and nearest priority habitat.	None.	None.
Invasive / Non-native species	No invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded on site.	None.	None.	None.

Bats - roosting	As a result of the PRA, potential roosting features considered suitable to support a small number of crevice-dwelling bats only were recorded upon both B1 and B2. As a result, B1 and B2 are assessed to provide low potential to support roosting bats. B3 is assessed to provide negligible potential to support roosting bats due to a lack of external roosting features and unsuitable internal conditions.	Buildings B1 and B2 are proposed to be demolished in full to facilitate the proposed development. As above, B1 and B2 will be directly impacted by the proposed development. This has potential to result in the destruction of bat roosts and could result in death or injury of bats. This would contravene current wildlife legislation and planning policy.	It is recommended that a single dusk emergence or dawn re-entry bat survey is undertaken at both B1 and B2 to determine the presence or likely-absence of roosting bats in line with current guidance. The survey should be undertaken during the optimal season for survey between mid-May and August. Given the proximity of these buildings, it is assessed that B1 and B2 can be surveyed simultaneously. Two surveyors are recommended to provide full coverage of the buildings. Recommended surveyor locations are shown in Appendix 1. If any bats are recorded roosting within B1 or B2, then an additional two emergence and/or re-entry bat surveys will be required to characterise the roost during the optimal season for survey. It is noted that for buildings assigned a low potential only, the Local Planning Authority sometimes accept surveys undertaken during a suboptimal time period (i.e. September) to inform the planning application should the conditions be suitable for survey. However, this comes with a risk as it cannot be guaranteed that the Local Planning Authority will accept this survey timing and they may request a survey during the optimal season for survey. Note that emergence and re-entry bat Surveys cannot be undertaken between October and April as bats are mostly inactive during this period.	To be determined following further survey.
Bats – Foraging and commuting	Habitats on site are not considered to provide significant opportunities for foraging and commuting bats due to their assessed low or negligible ecological value and small extent.	None.	None.	None.

Birds	Due to the small size of the site and the small extent of habitats recorded on site, the site is not considered suitable to support a significant population of protected and/ or notable population of breeding birds. However, the species-poor hedgerows and scattered trees on site are assessed to provide nesting opportunities for a small number of common breeding birds.	Should any trees or sections of hedgerow need to be removed to facilitate the proposed development, active bird nests may be destroyed.	Should any tree or Hedgerow clearance works be required to facilitate the proposed development, clearance works should be undertaken outside the core nesting period for breeding birds between 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees by a suitably qualified ecologist for active nests should be undertaken immediately prior to the commencement of works. Any active nests assessed to be impacted will need to be retained until the young have fledged.	The installation of a single Schwegler bird box upon the new building in association with the development to enhance the site for birds. Suggested nest boxes include: • Schwegler 1SP Sparrow Terrace; or • Schwegler 1B nest boxes; or • Schwegler 2H Robin Boxes. Nest boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole.
Badgers	Habitats on site provide limited foraging opportunities for badgers in the form Species-poor semi-improved grassland and species-poor hedgerow. However, no badger setts were recorded on or within 30m of the Site. Furthermore, no evidence of badger activity was recorded on site.	None.	None.	None.
Reptiles	Although the tall ruderal vegetation which contains a log pile has limited potential to provide foraging and commuting opportunities for reptiles, it is considered highly unlikely that reptiles are present on Site. The tall ruderal vegetation present is small in extent and poorly connected to habitats in the wider landscape. Other habitats that dominate the site represent significant barriers to dispersal for reptiles	None.	None.	None.

	including buildings, hard standing and bare ground. Furthermore, the site is mostly enclosed by additional residential properties and other urban infrastructure. It is therefore considered highly unlikely that any reptiles are present on Site.			
Other protected and/or notable species	Due to the type and extent of habitats recorded on Site, it is not considered suitable to consider any other protected and/ or notable species within this assessment.	None.	None.	None.

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Appendix 1: Phase 1 Habitat Survey Plan



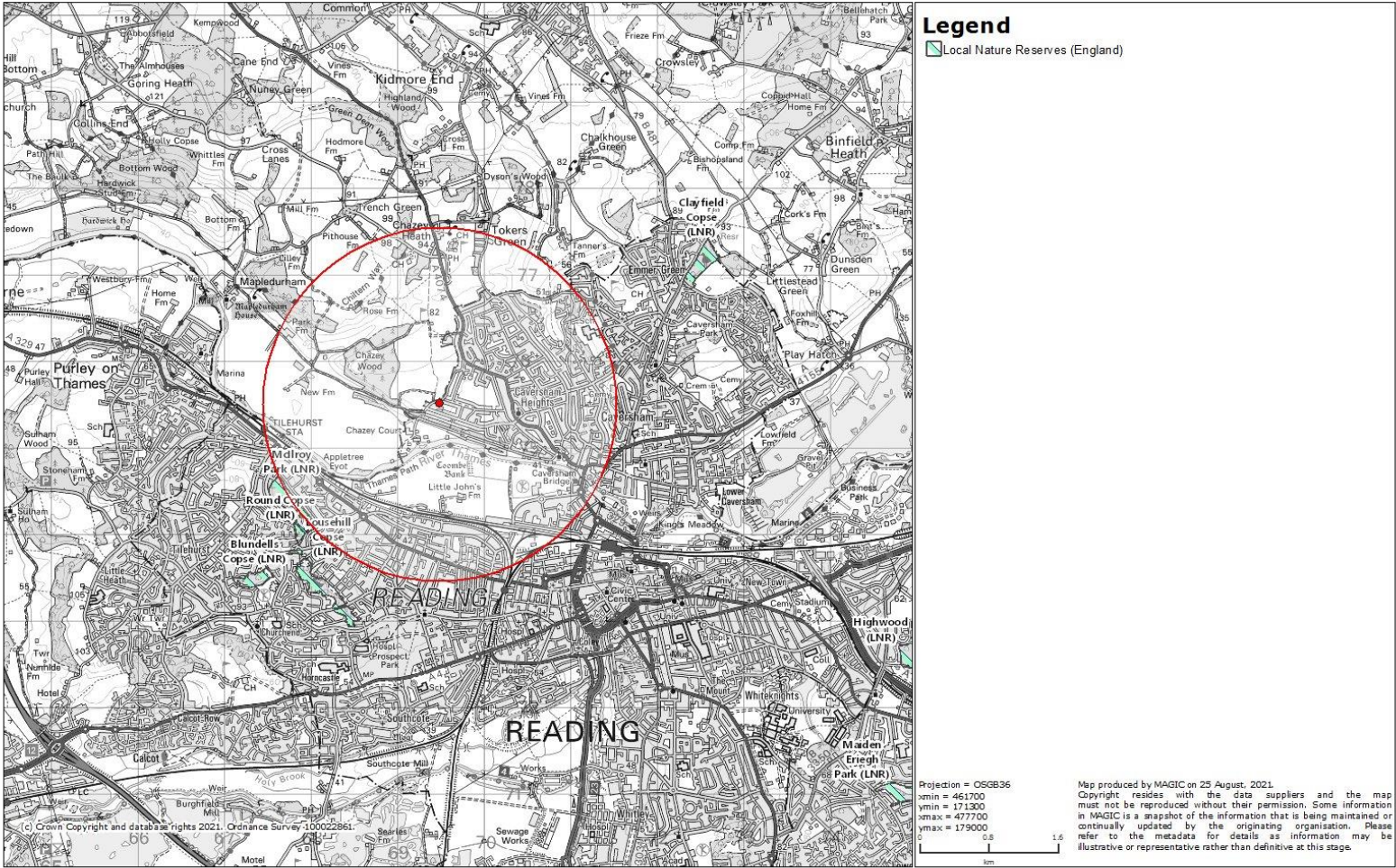
Appendix 2: PRA Survey Plan



Appendix 3: Desk Study Information

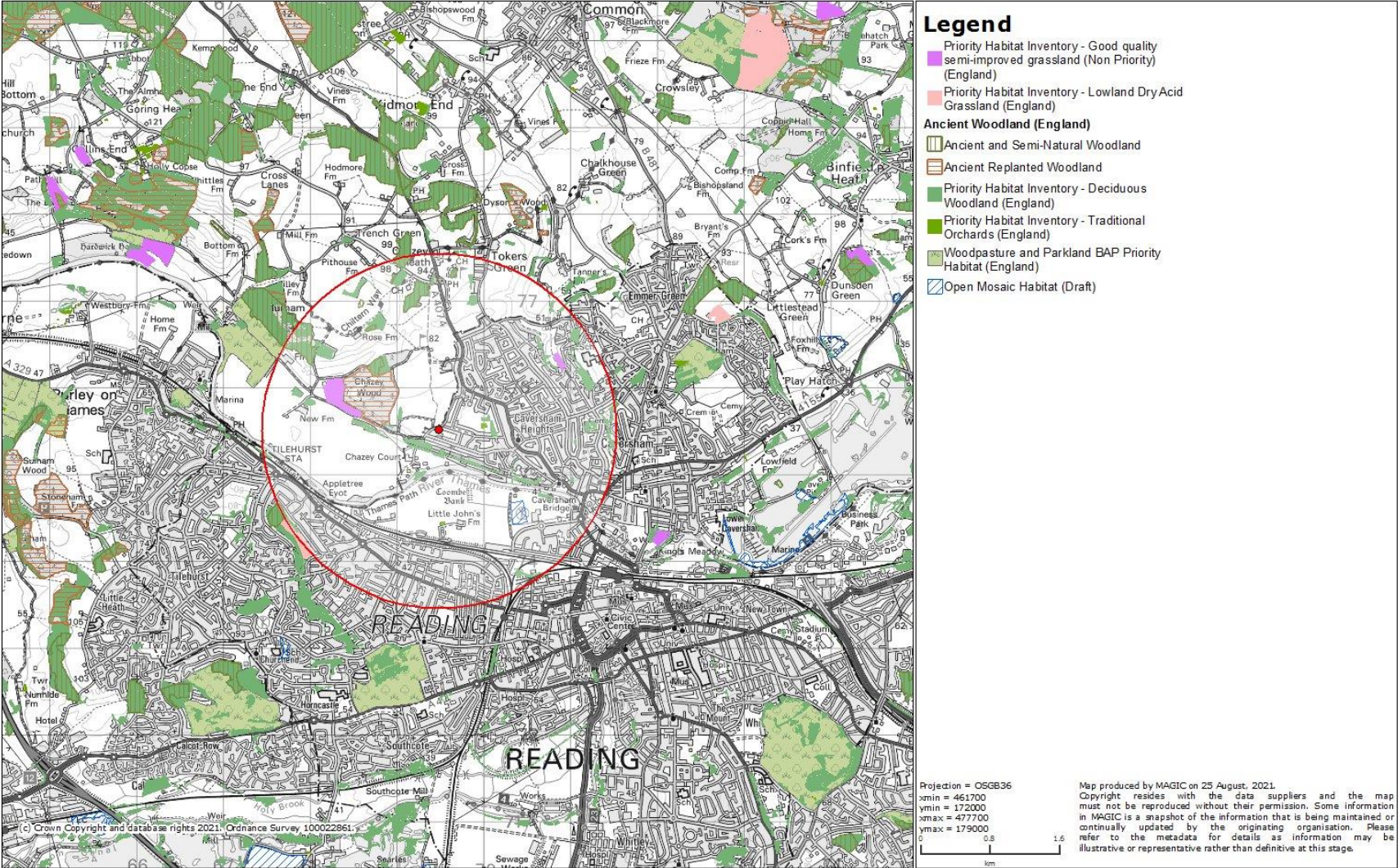
MAGiC

Designated sites



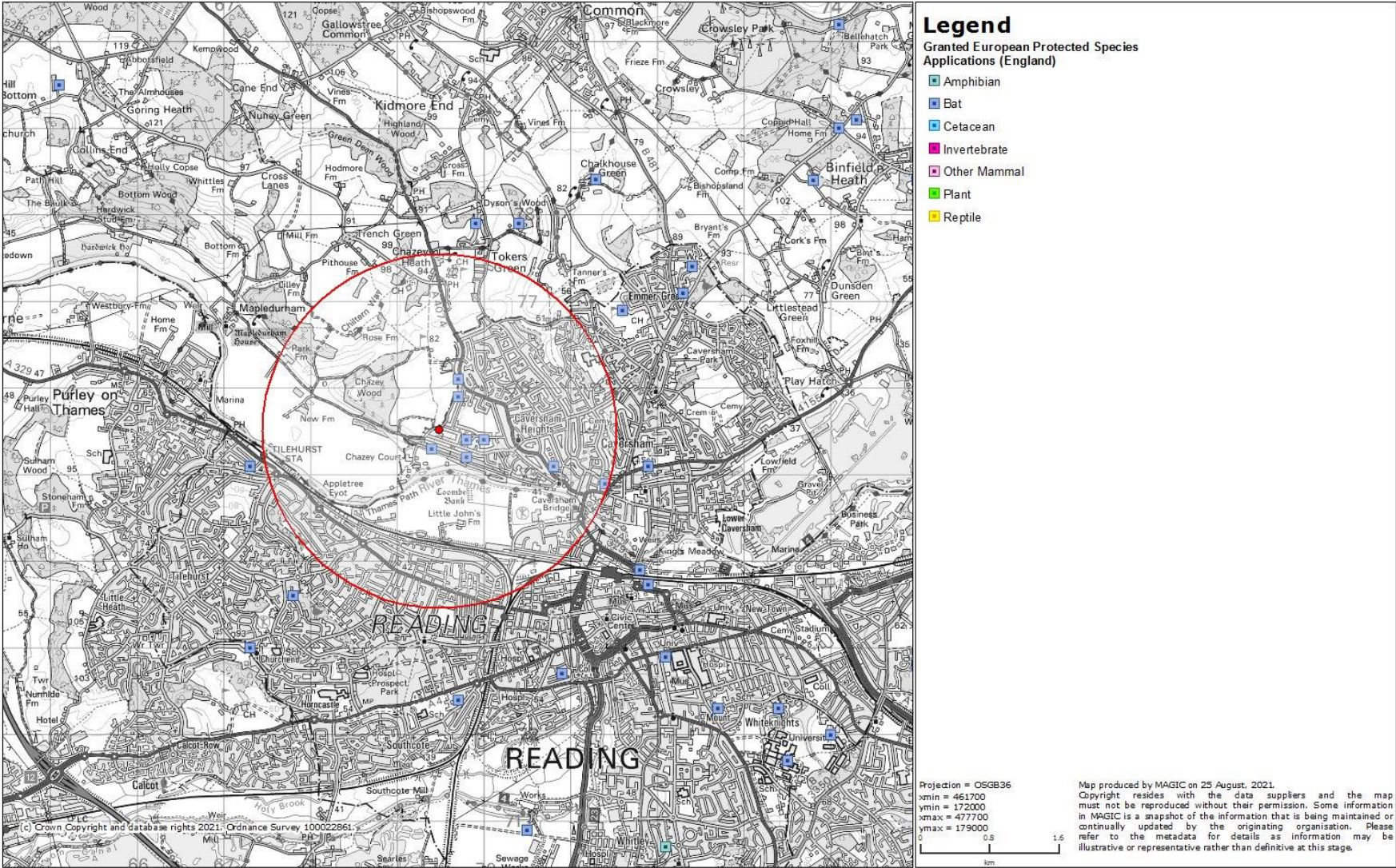
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Priority habitats



MAGiC

Granted EPSML



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1,000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many annex II species): a strict protection regime must be applied across their entire natural range within the EU, both within and outside Natura 2000 sites.

Annex V species (over 90): Member States must ensure that their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles from the coast (i.e. 'territorial waters') are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2017 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994.

The Conservation of Offshore Marine Habitats and Species Regulations 2017 consolidate and update the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007. The 2017 Regulations introduce amendments which transfer responsibility for European nature conservation in the Welsh offshore region to Welsh Ministers. This gives Welsh Ministers similar powers in Welsh offshore waters to those currently exercised by Scottish Ministers in Scottish offshore waters. These regulations transpose into national law Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), and elements of Council Directive 2009/147/EC on the conservation of wild birds (Wild Birds Directive) in the UK offshore area. They came into force on 30th November 2017. These regulations apply to the UK's offshore marine area which covers waters beyond 12 nautical miles, within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area. The Conservation of Habitats and Species Regulations 2017 form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12nm in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as "*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*".

However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). This has been amended by the Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations (2019) which continue the same provision for European protected species, licensing requirements and protected sites after the UK leaves the EU.

The following notes are relevant for all species protected under the EC Habitats Directive:

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

The Habitats Regulations do not define the act of 'migration' and, therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.

In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests':

- The action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment;
- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

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

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000) and Nature Conservation (Scotland) Act 2004.

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof

- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agency's to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) and are commonly referred to as "Schedule 1" birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

Works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Effects on development works:

The relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

National Planning Policy Framework (England)

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.