



St Paul's
Church,
Whitley
Wood Lane,
Reading,
Berkshire,
RG2 8PN

Preliminary Ecological Appraisal Report

December
2019

Ref: 19-6409



QUALITY STANDARDS CONTROL

The signatories below verify that this document has been prepared in accordance with our quality control requirements. These procedures do not affect the content and views expressed by the originator.

This document must only be treated as a draft unless it has been signed by the originators and approved by a director.

<i>Revision</i>	-
Date	22/01/2020
Prepared by	P. Holden MSc MCIEEM (on behalf of Syntegra Group)
Checked by	S. Prior
Authorised by	P. Holden

Note

The advice which we have prepared and provided within this report is in accordance with the CIEEM Code of Professional Conduct. We confirm that the opinions expressed are our true and professional opinions. Opinions and information provided in the report are based on Syntegra Group Ltd using reasonable skill, care and diligence in the preparation of the same in compliance with the CIEEM Code of Professional Conduct.

Validity of Data

The findings of the site survey are valid for a period of 12 months from the date of the survey. If approved works have not commenced by this date, then an updated site survey could be required to inform any changes to the habitats and protected species present on site in order to inform any updated mitigation and or precautionary measures required on site.

LIMITATIONS

Syntegra Consulting Ltd ("SC") has prepared this report for the sole use of the **client**, in accordance with the agreement under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by SC.

The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by SC has not been independently verified by SC, unless otherwise stated in the report.

The methodology adopted and the sources of information used by SC in providing its services are outlined in this report. The work described in this report was undertaken in **2019** and is based on the conditions encountered and the information available during the said period of time. The scope of this report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

SC disclaim any undertaking or obligation to advise any person of any change in any matter affecting the report, which may come or be brought to SC's attention after the date of the report.

Certain statements made in the report that are not historical facts may constitute estimates, projections or other forward-looking statements and even though they are based on reasonable assumptions as of the date of the report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. SC specifically does not guarantee or warrant any estimate or projections contained in this report.

Where applicable, costs may vary outside the ranges quoted. Whilst cost estimates are provided for individual issues in this report these are based upon information at the time which can be incomplete. Cost estimates for such issues may therefore vary from those provided. Where costs are supplied, these estimates should be considered in aggregate only. No reliance should be made in relation to any division of aggregate costs, including in relation to any issue, site or other subdivision.

No allowance has been made for changes in prices or exchange rates or changes in any other conditions which may result in price fluctuations in the future. Where assessments of works or costs necessary to achieve compliance have been made, these are based upon measures which, in SC's experience, could normally be negotiated with the relevant authorities under present legislation and enforcement practice, assuming a pro-active and reasonable approach by site management.

Forecast cost estimates do not include such costs associated with any negotiations, appeals or other non-technical actions associated with the agreement on measures to meet the requirements of the authorities, nor are potential business loss and interruption costs considered that may be incurred as part of any technical measures.

Copyright

©This report is the copyright of SC. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited

Executive Summary

St Paul's Church, Whitley Wood Lane, Reading, Berkshire, RG2 8PN, is being promoted for development by DLK Architects on behalf of the applicant, The PCC of St Paul's Church Whitley Wood. The proposed development is a new church centre and health centre, in order to accommodate the development, the existing dwellings, church and play barn on site will be demolished along with vegetation clearance.

The proposed development site comprises of a mixed-use site consisting of both residential grounds and church grounds. The mixed plot contains areas of hard standing with areas of Improved grassland, defunct hedgerows, garden typical plantings, trees, and patches of scrub. The sites main habitat is hard standing in the form of buildings, with both gravel and hard standing driveways and paths. The site has signs of active management. The buildings on site were subject to a preliminary roost assessment.

Habitats on the site are considered to be of moderate ecological value and the presence of protected species is of moderate potential. The site has hard standing areas, patches of improved grassland, defunct hedgerows, garden typical planting areas, trees and patches of scrub. The internal roost assessment of the dwellings noted potential access points with limited areas of crevice roosting opportunities and found no active or remnant signs of roosting bats. The play barn internal survey had no areas of potential access or crevice roosting opportunities. The internal of the church centre loft space noted no areas of potential access or potential crevice roosting opportunities. The external roost assessment of the dwellings noted potential access points and crevice roosting opportunities for bats within the walls, soffit boards and barge boards. The external survey of the play barn noted potential access points and crevice roosting opportunities within the rear soffit boards. The external survey of the church centre noted limited areas of potential access and crevice roosting opportunities. The external building surveys found no remnant or active nesting sites. One ash tree within the site boundary presented potential features suitable for roosting bats. Areas of scrub and compost on site provide low potential for use by hedgehogs and reptiles. The site provides moderate potential for foraging and traversing grounds for use by local bats. The sites trees, hedgerows, and scrub provide good foraging and nesting grounds for local birds. No evidence of invasive species identified under Schedule 9 of the Wildlife and Countryside Act (1981 as amended) have been identified on or directly adjacent to the site.

The nature of the proposed development (i.e. demolish the buildings with selective vegetation clearance and levelling to provide a new health centre and church centre), and the size of the site are all factors which will combine to result in a minor negative impact upon surrounding habitats, protected species and wildlife in general, which can be compensated with further surveys, mitigation and precautionary measures along with recommendations for enhancements. With targeted recommendations to enhance biodiversity, the development of the site is likely to increase its ecological value and provide net gains to biodiversity in accordance with section 15 of the National Planning Policy Framework (NPPF) (DfCLG, 2019), and Policy EN12 of The Reading Borough Local Plan (Reading Council, 2019) along with the relevant wildlife legislation. The following further surveys and precautionary methods are recommended:

- As the site has potential for nesting birds, works must be carried outside of the nest bird season (generally March to August inclusive), unless a nesting bird survey is carried out by a suitability qualified ecologist;
- The play barn and dwellings noted potential features suitable for roosting bats, it is recommended that given the location one dusk or dawn echolocation survey is carried out to determine likely absence or confirmed presence.
- One mature ash tree within the southern boundary had notable features suitable for roosting bats, should any works be required to this tree or require removal to facilitate the development, then a further echolocation survey will be required during the active survey season (May to August inclusive);
- Hedgerows, scrub and compost pile on site provide suitable shelter areas for hedgehogs, it is recommended these areas are cleared outside of the hibernation period (mid-October- mid-March inclusive).
- The boundaries of the site areas provide some suitability by reptiles however given the location of the site it is of lower potential and Reasonable Avoidance Measures can be used.

Contents

1.0 Introduction and Aims	7
2.0 Methodology	8
3.0 Constraints	10
4.0 Results	11
5.0 Impact Assessment and Recommendations	16
6.0 Conclusions	21
7.0 References	23

Appendices

Appendix I:	Statutory Sites of Nature Conservation within 2km
Appendix II:	Photos of the Site
Appendix III:	Extended Phase Habitat 1 Map
Appendix IV:	Legislation

1.0 Introduction and Aims

- 1.1 Syntegra Group was commissioned by DLK Architects on behalf of the applicant, The PCC of St Paul's Church Whitley Wood, to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at St Paul's Church, Whitley Wood Lane, Reading, Berkshire, RG2 8PN (Grid ref: SU 7182 6954).
- 1.2 This report has been prepared in support of the application being submitted by DLK Architects on behalf of the applicant, The PCC of St Paul's Church Whitley Wood to Reading Council ('the Council') for the development of St Paul's Church, Whitley Wood Lane, Reading ('the site').
- 1.3 The objectives of this PEA were to:
- Map the main ecological features within the site and compile a plant species list for each habitat type;
 - make an initial assessment of the presence or likely absence of species of conservation concern, survey the buildings and trees on site, and identify the presence or likely absence of bats and nesting birds;
 - identify any legal and planning policy constraints relevant to nature conservation which may affect the development;
 - determine any potential further ecological issue;
 - determine the need for further surveys and mitigation; make recommendations for minimising impacts on biodiversity and providing net gains in biodiversity, where possible, in accordance with Section 15: Conserving and Enhancing the Natural Environment, of the National Planning Policy Framework (NPPF) (DfCLG,2019) and Policy EN12 of The Reading Borough Local Plan (Reading Council, 2019).
- 1.4 The site survey was undertaken by suitably qualified ecologist Patricia Holden MSc MCIEEM on the 11th December 2019. The weather conditions were suitable with 60% overcast with a slight breeze. The timing of the survey was within the sub-optimal surveying period but still allows for the ecologists to make a robust assessment of the habitats present and their overall potential to support protected species.
- 1.5 The current site comprises of both church and residential land, with two semi- detached dwellings, one detached church centre and one play barn set within hard standing. The site is in an active managed state with areas of garden typical planting, amenity grassland, trees and hedgerows.

2.0 **Methodology**

Preliminary Ecological Appraisal

- 2.1 The methods outlined in the CIEEM Guidance for Preliminary Ecological Appraisals (2017) were used for this survey. The field survey comprised of an extended Phase 1 survey (JNCC, 2010) of the proposed development site. This is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites.
- 2.2 Incidental records of fauna were also made during the survey and the habitats identified were evaluated for their potential to support legally protected species, other species of conservation concern and any listed species of principal importance under the NERC Act (2006). When appraising the overall potential of protected species during the survey, the habitat(s) on site were assessed as present, high, moderate, low and negligible.
- 2.3 Invasive species listed under Schedule 9 of the Wildlife Countryside Act (1981 as amended) were searched for and recorded.
- 2.4 The survey was led by Patricia Holden MSc MCIEEM, a member of the Chartered Institute of Ecology and Ecology Management and follows the institutes Code of Professional conduct when undertaking ecological surveys (CIEEM 2016).

Desktop Study

- 2.5 Syntegra Consulting undertook a basic internet-based search of statutory designated sites within 2km of the site using the Natural England/DEFRA web-based MAGIC database (www.MAGIC.gov.uk) for MAGIC.
- 2.6 Ordnance survey maps and aerial images of the site were examined online using bing.com/maps and maps.google.co.uk.
- 2.7 The Reading Borough Local Plan was consulted for details on policies relevant to designated sites, protected species and general ecology protection.

Zone of Influence (Zol)

- 2.8 The Zol is used to assess any potential direct and indirect impacts or risks to the site and the immediate surrounding habitats. The Zol is also used to determine the feasibility for enhancements for the site and within the surrounding areas/habitats. The Zol is based on the following: the site itself, the areas directly adjacent to the site and areas up to 1km outside of the site including statutory and non-statutory designated sites. The Zol looks for potential impacts to habitats and species with possible connectivity to the site itself.

Preliminary Roost Assessment and Preliminary Ground Level Tree Roost Assessment

- 2.9 The surveys were carried out by Patricia Holden MSc MCIEEM (Bat Licence # upon request), the Director of Ecology Services at Syntegra Group, a licenced and experienced ecologist who has undergone professional training in bat surveying techniques and undertaken numerous preliminary roost assessments. The survey followed guidelines by the Bat Conservation Trust (2016) Bat Surveys Good Practice Guidelines 3rd edition. The buildings and trees were assessed as either negligible, low, moderate, high or confirmed, refer to table 1 below. The tree inspections were carried out during the sub-optimal period for surveying as the trees have foliage.

Table 1: Roost Classification, adapted from Collins 2016

Category	Description of Roosting Habitat	Number of Surveys Required
Negligible	Little to no suitable locations for roosting, not ideal for supporting bats	No further surveys
Low	A structure with one or more potential roosting spaces that could be used by opportunistic individual. The features and surrounding habitats do not provide enough suitable conditions and or space for use as a maternity or hibernation roost. A tree that could contain potential roosting features but not observed from ground.	One Survey carried out between the May and August (dusk or dawn)
Moderate	A structure or tree with one or more potential roosting spaces that could be use by individuals based on the features (size, shelter, conditions and surrounding habitat) but unlikely to support a roost of high conservation value	Two further surveys (one dusk and one dawn, spaced two weeks or more) between May-September with one survey between May and August.
High	A structure or tree with one or more potential roosting spaces that are suitable for use regular use and or larger numbers of bats for a more prolonged period due to the conditions and surrounding habitats. A tree with one or more potential roost sites suitable for use by a larger number of bats.	Three further surveys (at least one dawn) carried out between May to September with two undertaken between May to August. The surveys must be undertaken two weeks apart, spaced surveys are preferred
Confirmed	Positive evidence of bats - i.e. droppings, individuals or bat records	

3.0 Constraints

- 3.1 The surveys were undertaken within the sub-optimal period in the year for botanical surveys, although some short-lived annual species may not have been identified. It is considered that no rare or threatened plant species are present on the site and therefore the timing of the survey does not significantly impact upon the findings detailed in this report as the ecologist was able to classify and assess the value of the habitats on site. It is possible that certain flowering herbs and or ephemerals may have not been recorded during the winter survey and an extensive species list was not obtained but it is considered that the species characteristic to the habitats on site were recorded. The survey provides a snapshot of the site and does not show seasonal differences.
- 3.2 The building inspections were undertaken during a time when bats are active during suitable conditions and have started to move out of swarming sites and transitional roosting spaces into hibernation roosts (BCT 2016). Whilst evidence of roosting can be confirmed by a daytime inspection, very often features that could support bats cannot be searched thoroughly to confirm whether bats are indeed roosting. The surveyor had no access to the garage at no 1 as it was locked at the time of the survey. The internal inspection of no 3 loft space was not accessible to the surveyor due to health and safety, layers of thick insulated sheets did not allow for secure views and footing of the timber supports.
- 3.3 The tree inspections were undertaken during the optimal surveying time, when most trees have lost dense foliage making features identifiable. Whilst every effort was made to complete a full tree roost assessment, potential roosting features and/or signs of bat presence may not have been visible from the ground. As such, it is possible that not all trees offering bat roost potential and/or hosted actual bat roosts were recorded. However, the potential for use within the onsite trees was established.
- 3.4 The client is responsible for reading and understanding the advice given in this report. The client must ensure that, where recommended, mitigation is followed through.

4.0 Results

Extended Phase 1 Survey

- 4.1 The site has two semi-detached dwellings set within hard standing pavement, one detached church building set within gravel and hard standing and one detached play barn set within hard standing. The surrounding habitat are further areas of both hard standing and gravel, areas of Improved Grassland, areas of garden typical planting, defunct hedgerows, and scrub.
- 4.2 The site is irregular in shape. The site comprises of two semi-detached dwellings, one detached church building and one play barn. The site is accessed off Whitely Wood Lane. The wider landscape comprises of a mixture of residential land, commercial land and roads.

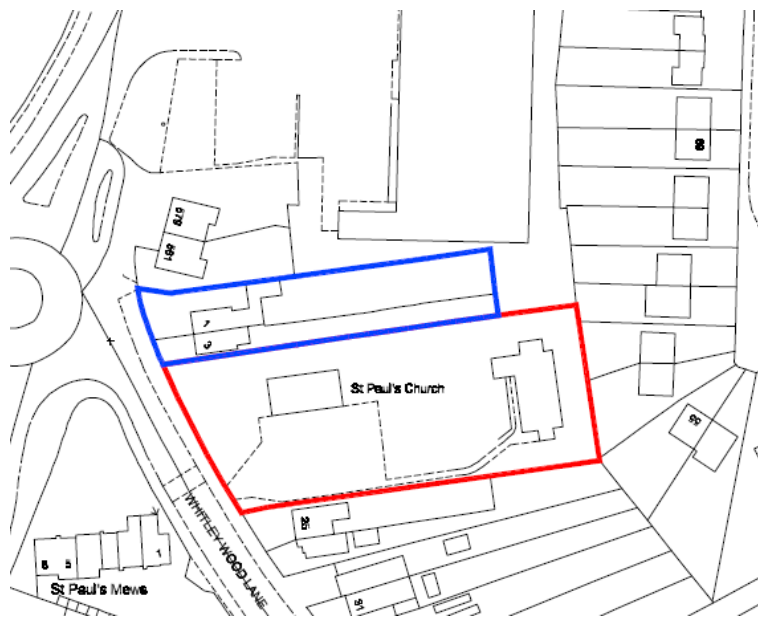


Figure 1: OS image of the site, as provided by the agent

- 4.3 No ponds are located within 500m radius of the site.
- 4.4 There are five broad habitat types found within the site and on the site boundaries, these are:
- Hard standing
 - Improved Grassland
 - Garden Typical
 - Scrub
 - Defunct Hedgerows and Trees

Hard standing

- 4.5 The site's main habitat on site is hard standing. The buildings are all set within hard standing. A hard standing drive is situated within the northern section of no 1 dwelling and hard standing paths are located to the sides and rear of both dwellings, with laid gravel to the rear of no 3. A gravel drive that starts within the south-western boundary of the site and carries on forming a car park. A small hard standing path extends from the car park towards the play barn. The rear of the church building has a hard standing patio.

Improved Grassland

- 4.6 Areas of Improved Grassland are located within the eastern grounds of the dwellings, in a managed state. A small unmanaged patch is located within the southern front grounds of no 1 dwelling. Within the western section of the church grounds is an area of Improved grassland. Further grassland is located within the eastern section of the church grounds extending towards the play barn and to the rear and northern side of the play barn. The grassland at the time of the survey shows signs of management. Species include: false oat grass (*Arrhenatherum elatius*), rye grass (*Lolium perenne*), meadow grass (*Poa sp.*), with scattered forb species including dandelion (*Taraxacum officinale*), thistle (*Cirsium spp.*), ribwort (*Plantago lanceolata*), creeping cinquefoil (*Potentilla reptans*), groundsel (*Senecio vulgaris*), buttercup (*Ranunculus repens*), clover (*Trifolium repens*), yarrow (*Trifolium repens*), and herb Robert (*Geranium robertianum*).

Garden Typical

- 4.7 Areas of garden typical area are found to the front, sides, and rear of the dwellings, mainly non-natives. Species include: palm tree, privet (*Ligustrum spp.*), buddleia, roses (*Rosa spp.*), dog rose (*Rosa canina*), snowdrops (*Galanthus nivalis*), and barberry.

Scrub

- 4.8 Pockets of scrub with occasional ruderal species encroach within the grassland and found within the boundaries of the site. Two compost piles are located along the northern boundary of the site. Species include: bramble (*Rubus fruticosus*), nettle (*Urtica dioica*), various saplings, ground ivy (*Glechoma hederacea*), thistle, sticky weed (*Galium aparine*), wood avens (*Geum urbanum*), toadflax (*Linaria vulgaris*), sun spurge (*Euphorbia helioscopia*), bind weed (*Convolvulus arvensis*), rosebay willow herb (*Chamerion angustifolium*), and ivy (*Hedera helix*).

Defunct Hedgerows and Trees

- 4.9 Areas of defunct hedgerows and scattered mature, semi-mature and immature trees are located within the site boundaries and throughout the site. The hedgerows within the southern and eastern boundaries show little signs of management with average heights over 2 metres. Species include: ash (*Acer pseudoplatanus*), privet, bramble, laurel, cherry (*Prunus avium*), holly (*Ilex aquifolium*), oak (*Quercus robur*) and maple (*Acer spp.*).

Preliminary Roost Assessment

- 4.10 The daytime external inspections consisted of two semi-detached dwellings, one detached church building and one detached play barn, set within hard standing. and one detached outbuilding set within hard standing. The exteriors of the buildings were inspected for access points, crevice roosting opportunities, and evidence of bats and or nesting birds.
- 4.11 The table below summaries the external survey of the buildings and identifies the confirmed and potential features along with the overall potential. Under the section, Confirmed Evidence/Potential, green denotes limited to low potential for use by roosting bats and yellow denotes potential for use by roosting bats.

Table 2: Summary External Inspection of the buildings Features, Confirmed Presence and or Potential

Location	Material	Features	Potential
Play barn roof	Corrugated metal with timber former bell tower	Corrugated metal sheets in a good state of repair. Two grated vents located on both the western and eastern elevations. Former bell tower in a good state of repair with no holes, missing areas or weathered sections.	Limited potential for access and crevice roosting opportunities
Play barn Walls	Painted corrugated metal and timber porch with timber window frames	Corrugated metal walls are tight and intact with no areas of lift, gaps, weathered areas or holes. Timber porch meets the main corrugated metal walls with no holes, gaps or missing sections. Windows set within tight fitting timber frames, with no weathered or holes.	Limited potential for access and crevice roosting opportunities
Play barn Soffit and barge boards	Timber and uPVC	Timber and uPVC tight and intact against walls. One large hole with signs of weathering on the western elevation, area appears recessed to adjacent soffit board areas	Potential for access and crevice roosting opportunities
Church building roof space	Cement interlocking tiles	Two slight lifts in tiles on northern elevation but given the nature of the tiles likely little to no egress potential. Rest of roof in good state of repair with no holes, significant lifts or missing tiles.	Limited Potential for access and crevice roosting opportunities
Church building walls	Brick	Good state of repair with no holes, cracks, gaps or missing tiles	Limited Potential for access and crevice roosting opportunities

Church building Soffit and barge boards	uPVC and timber	Tight and intact, no signs of weathering, holes, gaps or cracks	Limited Potential for access and crevice roosting opportunities
No 1 and No 3 dwelling roof	Slate tiles with clay ridge single storey felt and asbestos	Tiles all intact and tight, no notable lifts, gaps, holes or missing tiles and or cement. Tiled valleys with no notable lifts, gaps or missing sections. Felt and asbestos sheets in a good state of repair	Limited Potential for access and crevice roosting opportunities
No 1 and No 3 dwelling dormers	Wooden boards and slate roof	Notable gaps between edge soffit boards and tiled roof, nesting debris noted within no 1	Confirmed nesting use and potential for access and roosting space
No 1 and No 3 dwelling walls	Brick	Porch coming away from main dwelling wall space on western elevation with notable gap and recessed area. Holes noted within the upper gable wall on southern and northern elevation. Missing cement mortar on upper eastern wall.	Potential for access and crevice roosting opportunities
No 1 and No 3 dwelling windows and doors	Set within timber and uPVC frames	Glass windows intact, some windows in no 1 boarded with plywood, doors intact, frames in good state of repair with no holes, weathered sections or gaps	Limited Potential for access and crevice roosting opportunities
No 1 and No 3 dwelling soffit and barge boards	Timber	Missing timber boards on southern elevation garage with recess into roof and wall space, upper southern gable with notable hole and gaps. Weathered hole on eastern elevation.	Potential for access and crevice roosting opportunities
No 1 and No 3 dwelling chimney	Brick with lead flashing	Tight and intact features, no lifts in flashing, chimney breast in good state of repair	Limited potential for access and crevice roosting opportunities

4.12 The internal inspection of the buildings looked for features suitable for use by crevice roosting bats, potential access points and signs of presence in the form of debris, droppings, marks and stains. A total of four lofts were inspected: one within each dwelling, separated by a brick fire break wall, one within the play barn and one within the church building.

- 4.13 In summary, the play barn had one loft space with the rest of the building with living space that extends into the roof space consisting of timber boards. Within the play barn roof and wall space no potential access points were noted. The loft space accessed via a loft ladder noted a timber boarded space with no potential access points or crevice roosting spaces noted. No signs of bats in the form of marks, stains, droppings and or debris was noted.
- 4.14 In summary, the church building had one loft space accessed via a hatch. The ridge height was 2 metres. The roof space consisted of timber trussed beams with felt underlay. The floor space consists of timber and insulation. The gable walls consisted of cement. No areas of potential access or crevice opportunities was noted. No signs of bats in the form of droppings, debris, marks and or stains was noted.
- 4.15 In summary, no 1 dwelling loft space had varying heights of 2.5 metres and 1.8 metres. A dormer loft space on the western loft space had a height of 0.5 metres. The loft space had four brick walls. The northern elevation brick wall had a large hole with visible light. Visible light was also noted within the dormer edges on western elevation. The roof space consists of bitumen felt with timber battens and beams. The floors consist of timber boards and insulation. The space noted potential access points and limited crevice roosting opportunities. No signs of bats in the form of droppings, debris, marks and or stains was noted.
- 4.16 In summary, no 3 dwelling loft space had multiple layers of thick insulation sheets (over 40cm thick) covering all floor space making it unsafe for the ecologist to gain footing for inspection.
- 4.17 All trees on site were subject to a ground level tree roost assessment. Within the site itself, west of the play barn, is a mature oak tree, the tree was linear in shape with no notable features and deemed of negligible potential. One ash tree within the southern boundary directly adjacent to the play barn had ivy clad and was deemed of low bat roosting potential. The rest of the trees on site were deemed negligible potential given their form, structure and age.

5.0 Impact Assessment and Recommendations

Statutory and Non-Statutory Sites

- 5.1 The site is within 1.8km of local nature reserve Pearman's Copse. No other statutory designated sites were located within 2km of the site. The site is within 1km of the Local Wildlife Site Whitley Park Farm and St Patricks Hall Pond.
- 5.2 The site is not directly adjacent to any statutory or non-statutory sites of nature conservation. It is not considered likely that the site works will have any direct or indirect impacts on the other statutory and non-statutory designated sites given the distance between the site, the intervening habitats and the site does have connecting habitats/watercourses. As good practice it is recommended that pollution prevention measures from GOV.UK (2016) are in place during and post construction to prevent any potential indirect impacts from the site.
- 5.3 The proposed development with further surveys, mitigation measures and precautionary measures in place will not cause impacts on local wildlife and will ensure connectivity within the wider landscape. The site can incorporate further native planting within the plot. The site has potential to enhance the area for local wildlife by use of nesting boxes, bat boxes, and placement of insect/bug hotels. Sensitive lighting would ensure to maintain linkages across the landscape.

Protected Habitats

- 5.4 The site does meet the criteria of any s41 habitats of principal importance. No ancient woodland or deciduous woodland are located on or directly adjacent to the site. The hedgerows on site do not meet the criteria to be Important, given their defunct nature and lack of species diversity.

Planning Policies

- 5.5 The planning policies look to paragraphs 170-183 of the National Plan Policy Framework (2019), in particular paragraph 170, '*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*'; as well as paragraph 175, '*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*'. In line with Local Plan Policies: policy EN12: Biodiversity and Green Network, of the Reading Borough Local Plan (2019), '*The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network.*' And '*On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should: Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.*'

- 5.6 According to the Proposals Maps, the site is not within any known Green Network. In terms of overall value for protected species. The site has high potential for use by local birds as nesting, low to moderate potential for use by roosting bats, moderate potential for use by foraging and traversing bats, moderate potential for use for use by foraging/sheltering invertebrates, low potential for reptiles, and low potential for hedgehogs. In line with policy EN12, the application site must ensure retainment and enhancements for local biodiversity. Further bat surveys on site will determine the sites overall value for hosting potential roosts, foraging and traversing value. It is recommended that any new planting uses a mixture of wildlife friendly and native species to compensate for the loss of foraging grounds. Within the boundaries of the site and within the buildings to compensate for the loss of shelter sites, insect hotels/bug boxes, bat boxes and nesting boxes will be placed. The future lighting on site must ensure a lighting plan that is direct, low light spill, low lux and have hooded designs, it is recommended that no light spill is directed on boundary tree lines given the potential for traversing and foraging bats. These recommended enhancement measures would ensure a net gain and would also meet the aims of biodiversity policy for Reading Borough Council.

Protected Species

Plants

- 5.7 All plant species recorded on the site are common and widespread, and it is considered that no rare or threatened plant species are present on the site. It is likely that some short-lived annual species were missed due to the timing of the survey. No listed invasive weeds were recorded on or directly adjacent to the site. There is scope to enhance the site by incorporating native wildlife planting within the plot, particularly climbers such as honeysuckle and ivy on future fencing would be attractive for use and benefit both local invertebrates and foraging birds and bats. Hedgerow and tree boundaries are recommended for retention given their overall value for shelter and foraging use, if these are to be removed then new native species are to be planted. To compensate for the loss of scrub and ruderal species on site an area of wildflower meadow ideally within a discrete area that will ensure its vitality. Fencing along the boundaries must be raised or hedgehog gaps are incorporated to allow future movement on and off site.

Bats

- 5.8 All bat species are legally protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended) and Regulation 43 of The Conservation of Habitats and Species Regulations 2017 (from hereon, the '2017 Habitats Regulations'), making bats a material consideration in the planning process. Use of DEFRA's MAGIC Map has returned seven known mitigation licences, with the closest application for the damage and destruction of both shelter and breeding places for common pipistrelle in 2015, 400 metres south of the site. The next closest application is from 2009, for the destruction of a known resting site for common pipistrelle. A known population of crevice roosting bats are within 400 metres of the site.

- 5.10 The play barn and dwellings had notable features providing crevice roosting opportunities and potential access points. The play barn was deemed of low potential and the dwellings are of moderate potential for roosting bats. Of the trees onsite, only one ivy clad ash tree was deemed as low potential for use by roosting bats.
- 5.11 The site is considered to contain 'low to moderate' quality foraging habitat, as it largely comprises of hard standing, improved grassland, hedgerows, trees, and pockets of scrub. The immediate site surroundings include industrial land, hotel, commercial land and residential with limited linear features such as hedgerows and trees. The further surveys will determine the sites overall value for local bats.
- 5.12 The proposed works can ensure future use as potential foraging and traversing grounds for local bats by a lighting scheme that is low lux, of low level (i.e. bollard with hood design, lamps angled and hooded), motion sensed, and direct lighting. Future enhancements for bats, can be achieved by planting vegetation of native and wildlife friendly species that attract insects (such as jasmine, evening primrose, rosemary, ivy, lavender and honeysuckle) and provide future foraging grounds for local bats.

Birds

- 5.13 The site is characterised by hard standing with trees, hedgerows, patches of scrub and grassland. The inspections of the buildings did not find any internal nesting sites and the external surveys did note one potential nest site within the dormer of no 1 along with potential features suitable for nesting birds such as sparrows and tits. The sites trees and hedgerows provide suitability for nesting birds. The site has moderate to high suitability for use as foraging areas for local birds. The site is considered to be of **site importance** for nesting and foraging birds.
- 5.14 The versatility of most bird species means they can utilise almost any habitats encountered, and it is considered that the dwelling could host suitable nesting site along with the vegetation on site and adjacent to the site could provide suitability for use by nesting birds. It is recommended that given the potential use of the building by nesting birds, that the building and vegetation are demolished/cleared outside of nesting bird season (March to August inclusive) or unless first checked by a suitably qualified ecologist. The loss of potential nesting sites will require compensation in form of nesting boxes.
- 5.15 The proposed site plan does show retainment and removal of trees and potentially the hedgerow on the southern boundary, as such there will be a minor negative impact to local nesting and foraging birds. Any replacement trees or hedgerows on site must be of native with a selection of fruit bearing varieties (i.e. cherry, hawthorn, blackthorn) to compensate for the loss of both shelter and foraging opportunities and to ensure no net loss. The installation of various bird boxes on site, will provide nesting sites for a variety of species post-development, these include use of incorporated sparrow terraced boxes within the eastern side of one building and placement of bird boxes within retained trees.

Badgers

- 5.16 Badgers (*Meles meles*) are legally protected under The Protection of Badgers Act 1992 and, as such, are of consideration when applying the principles of the NPPF (DfCLG, 2019). It is a criminal offence to:
- Wilfully kill, injure, or take any badger;
 - Possess or cruelly ill-treat a badger;
 - Possess any dead badger or part of one;
 - Possess or control a living, healthy badger;
 - Intentionally or recklessly damage, destroy or obstruct access to a sett, or disturb a badger whilst it is occupying a sett.
- 5.17 No evidence indicating that badgers have excavated setts on the site was found during the survey and no evidence of foraging activity was found (e.g. snuffle holes, latrines, hair, feeding remains). Animal paths were noted within the western section of the site, but these are likely to be from foxes given the notable smell. No setts were seen within the habitats directly surrounding the site. The surrounding habitats offer limited potential that a population is within the immediate area. Precautionary measures must be in place for works, with all trenches, holes and ditches either covered or a mammal ladder provided at all times.

Great Crested Newts

- 5.18 GCN are legally protected under section 9 of the Wildlife and Countryside Act 1981 (as amended) and regulation 43 of The Conservation of Habitats and Species Regulations (2017) thus making GCN a material consideration of the planning process. The site itself has areas of shelter and foraging habitat for this species and common amphibian species.
- 5.19 From studying OS maps and aerial photographs, no ponds were identified within 500 metres of the site. The DEFRA MAGIC search returned one known GCN licence in 2010 just over 1km from the site. Given the intervening habitats and lack of suitable water bodies within 500 metres of the site, it is considered of limited to no potential that newts are within the immediate landscape or onsite. No further surveys are recommended.

Reptiles

- 5.20 The site's boundary habitats including compost piles offer potential for foraging and sheltering opportunities as well as traversing grounds for local reptiles. As the site is further bound by less favoured habitats including a supermarket and roads it is of lower potential that that individuals are established both onsite and within the local vicinity.
- 5.21 It is not considered that a presence/absence survey is necessary but rather mitigation and precautionary measures for the proposed works. It is recommended that the boundary habitats and compost piles are cleared under the ecologists direction, outside of the hibernation period. The onsite grassland areas show signs of management and these should continue to have active management.

Hedgehogs

- 5.22 Hedgehog (*Erinaceus europaeus*) are protected under UK law, by the Wildlife and Countryside Act 1981 (as amended). The boundary habitats and compost piles have suitability for hedgehogs. The wider local landscape has limited favourable connectivity or habitats that would be of value and use for this species and it is likely of lower potential they are present onsite. The site works must have precautionary and mitigation measures in place with areas cleared with care and outside of the hibernation period, under the ecologists direction. Any future trenches, holes or ditches must have at all times a mammal ladder provided as means as escape, these ladders must be checked daily by site staff. Any future fences on site will have hedgehog gravel boards in place to ensure connectivity across the landscape.

Dormice

- 5.23 The site itself has limited linkages to further suitable sites that have potential to support this species. The sites boundary hedgerows provide little to no suitability for use by dormice given their defunct nature and structure. No further surveys are recommended.

Invertebrates

- 5.24 The site has compost piles, grassland, hedgerows, trees, scrub and ruderal on site that could provide some suitability for use by local invertebrates. No dead wood suitable for use by Saproxyllic invertebrates, including stag beetle was noted during the site inspection. The site's scrub, trees, hedgerow, and grassland are likely to support a small amount of both common and notable invertebrate species, such as butterflies, moths, flies, and bees. It is not considered that any further surveys are required. The site is considered to be of **site importance** for use by local invertebrates.
- 5.25 As the site proposals will have removal of the grassland habitats, scrub, a selection of trees and hedgerow, there is potential for loss of shelter and foraging grounds by local invertebrates. To ensure that there is no net loss on site use of bee bricks and insect towers with further wildlife planting will be required to ensure impacts upon notable invertebrate species or significant populations of widespread species from the proposed development will be reduced. The inclusion of nectar rich plants in any landscaping design, coupled with the installation of 'insect hotels/bug boxes' would provide good invertebrate habitat on the site post-development. It is recommended that a wildflower meadow area is created and maintained within a discrete location on site. Management of this area once established will require annual strimming to heights of 20cm during the early autumn, arisings must be removed after one day to ensure that seeds disperse and add no further nutrients from the cuttings to the soil.

6.0 Conclusions

6.1 Habitats on the site are considered to be of moderate ecological value and the presence of protected species is of low to moderate potential. The site has hard standing areas, patches of improved grassland, defunct hedgerows, garden typical planting areas, trees and patches of scrub. The internal roost assessment of the dwellings noted potential access points with limited areas of crevice roosting opportunities and found no active or remnant signs of roosting bats. The play barn internal survey had no areas of potential access or crevice roosting opportunities. The internal of the church centre loft space noted no areas of potential access or potential crevice roosting opportunities. The external roost assessment of the dwellings noted potential access points and crevice roosting opportunities for bats within the walls, soffit boards and barge boards. The external survey of the play barn noted potential access points and crevice roosting opportunities within the rear soffit boards. The external survey of the church centre noted limited areas of potential access and crevice roosting opportunities. The external building surveys found no remnant or active nesting sites. One ash tree within the site boundary presented potential features suitable for roosting bats. Areas of scrub and compost on site provide low potential for use by hedgehogs and reptiles. The site provides moderate potential for foraging and traversing grounds for use by local bats. The sites trees, hedgerows, and scrub provide good foraging and nesting grounds for local birds. No evidence of invasive species identified under Schedule 9 of the Wildlife and Countryside Act (1981 as amended) have been identified on or directly adjacent to the site. The nature of the proposed development, with additional surveys, mitigation and precautionary measures in place, will ensure that the proposals will have no adverse impacts upon surrounding habitats, protected species and wildlife in general. The following further precautionary methods are recommended:

- As the site has potential for nesting birds, works must be carried outside of the nest bird season (generally March to August inclusive), unless a nesting bird survey is carried out by a suitability qualified ecologist;
- The play barn and dwellings noted potential features suitable for roosting bats, it is recommended that given the location one dusk or dawn echolocation survey is carried out to determine likely absence or confirmed presence.
- One mature ash tree within the southern boundary had notable features suitable for roosting bats, should any works be required to this tree or require removal to facilitate the development, then a further echolocation survey will be required during the active survey season (May to August inclusive);
- Hedgerows, scrub and compost pile on site provide suitable shelter areas for hedgehogs, it is recommended these areas are cleared outside of the hibernation period (mid-October- mid-March inclusive).
- The boundaries of the site areas provide some suitability by reptiles however given the location of the site it is of lower potential and Reasonable Avoidance Measures can be used.

6.2 The table below summarises the potential protected species on site, proposed mitigation methods and prescribed enhancements for the site.

Table 3: Potential Protected Species/Habitats on Site and Proposed Mitigation and Enhancement

Species/Habitats	Impact	Mitigation	Compensation
Bats	Potential loss of roosting areas, foraging and traversing grounds	Further surveys in line with BCT survey guidelines. The further surveys to determine mitigation required and if active inform the EPSL	Direct lighting on site, Vincent pro bat box hung on a suitable tree on site (3-5 metres, facing southerly), native/wildlife friendly planting onsite
Nesting Birds	Potential loss of nesting sites	Works to suitable trees, hedgerows, scrub and dwelling outside nesting bird season (March to August inclusive), unless first checked by SQE	Incorporation of future nesting sites on site by use of terraced house sparrow boxes within the eastern walls and further boxes within retained trees
Local invertebrates	Potential loss of foraging sites, and shelter sites	n/a	use of native and wildlife planting on site including area of wildflower meadow mix, bug boxes/hotels placed within boundary vegetation
Hedgehogs/Reptiles	Potential shelter, foraging and traversing grounds	Clearance of notable features under ecologist direction. Mammal ladders provided for any trenches, holes and or ditches	Future fencing to use hedgehog gates, no lighting directed at boundary tree/hedgerows

6.3 It is considered that any potential adverse impacts from the proposed development upon specific protected species will be able to be wholly mitigated through an ecologically lead design process. In addition, a sensitive landscape design could provide enhancements to the habitats on and adjacent to the site which in turn will benefit multiple species and biodiversity in general, in accordance with Section 15 of the NPPF (DfCLG, 2019), and policy EN12 of the Reading Borough Local Plan (Reading Council, 2019). Proposed enhancements include:

- Nesting Boxes/Bat Boxes
- Wildlife-friendly planting scheme including wildflower meadow area
- Bug boxes/hotels
- Lighting plan that is direct and of low light spill

7.0 References

ARG UK (2010). *Advice Note 5, Great Crested Newt Habitat Suitability Index*. Amphibian and Reptile Group UK.

Department for Communities and Local Government (2019). *National Planning Policy Framework*. www.communities.gov.uk

English Nature (2001). *Great crested newt mitigation guidelines*. English Nature, Peterborough.

Froglife (1999). *Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Peterborough.

Gent, A.H., & Gibson S.D. (1998). *Herpetofauna workers' manual*. Joint Nature Conservation Committee, Peterborough.

Gunnell, K., Grant, G. and Williams, C. (2012). *Landscape and Urban Design for Bats and Biodiversity*, Bat Conservation Trust.

Hundt (2016). *Bat Surveys-Good Practice Guidelines*. 3rd edition. Bat Conservation Trust, London.

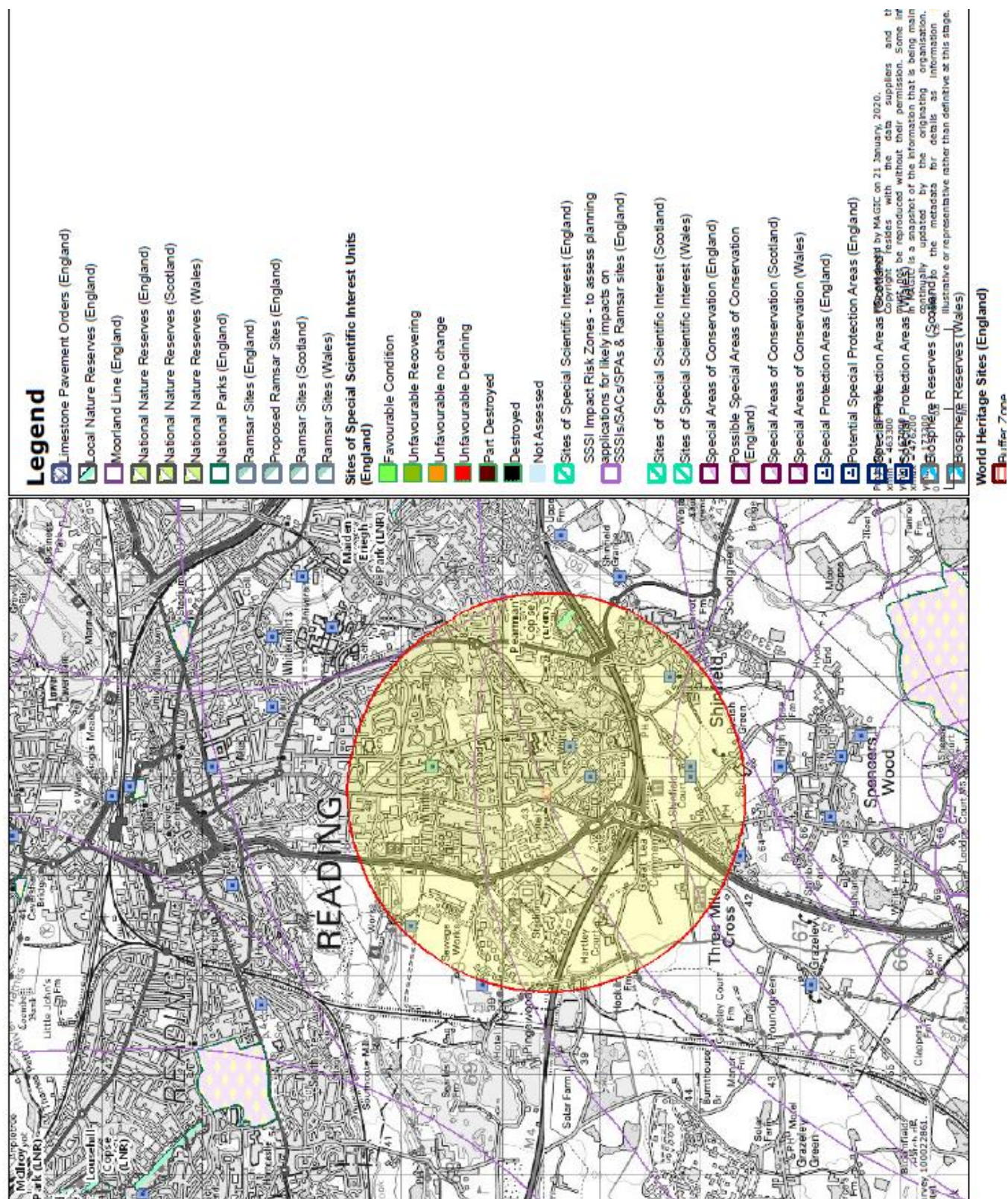
JNCC (2010) *Handbook for Phase 1 habitat survey- A technique for environmental audit*. ISBN 0 86139 636 7.

MAGIC. Multi-Agency Geographic Information for the Countryside. <https://magic.defra.gov.uk/>

Reading Borough Council. 2019. Reading Borough Local Plan.

Stace, C. A. (1997). *New Flora of the British Isles, 2nd Edition*. Cambridge University Press. Cambridge.

Appendix I: Statutory and Non-Statutory Nature Conservation Sites within 2km



Appendix II: Photos of the Site



well-worn path within western section of site – likely fox



ivy clad ash tree with potential for use by roosting bats



remnant nest site within ash tree



compost pile within southern boundary of site



hole within no 1 loft space – direct access into loft space



grated and wired vents of play barn roof



hole and weathered soffit at rear of play barn



missing board on south elevation of dwelling 3 with recess space



worn/weathered board with nesting material noted on western elevation of dwelling 1



porch coming away from dwelling wall no 1



hole in upper gable wall of eastern elevation

Appendix III: Extended Phase Habitat 1 Map



Appendix IV: Legislation

This section details the legislation relevant to the protection of species and habitats. It also details the relevant policies within national, regional, and local planning policy.

NPPF

The National Planning Policy Framework in summary requires that the planning system should aim to contribute and enhance the natural and local environment. The aims are to: protect and enhance valued landscapes as well as geological conservation interests and soils; recognising the wider benefits of ecosystem services; and minimising impacts on biodiversity and providing net gains in biodiversity where possible.

Biodiversity Laws

Statutory protection is afforded to certain wild habitats and species through European Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (the 'Habitats Directive'). This has been adopted into UK legislation under the 2017 Habitats Regulations. At the national level protection is found in the Wildlife and Countryside Act (WCA 1981; as amended) and it is designed to protect species and habitats considered to be of principal importance in order to conserve biodiversity.

Under Regulation 43 of the 2017 Habitats Regulations it is an offence to deliberately capture or kill a wild animal of a European protected species, deliberately disturb any such animal and to damage or destroy a breeding site or resting site. Since August 2007 amendments to the Conservation (Natural Habitats) Regulations 1994 have changed the term 'deliberately disturb' such that it is an offence if the species are disturbed in such a way that it is likely to significantly affect the colony's ability to survive, breed or rear their young; or affect the local distribution or abundance of that species.

The WCA 1981 (as amended) is the principle mechanism for the statutory protection of wild flora and fauna in the United Kingdom. Reptiles, including slow worms and grass snakes, are protected under Schedule 9(1) against intentional killing and injuring. Nesting birds are also protected under the WCA 1981 (as amended) which makes it an offence to intentionally kill, injure or take them, take, damage or destroy their nest whilst in use or being built, or to take or destroy their eggs.

All species of bats are strictly protected through UK and European regulations. Bats have been placed on protected lists due to the overall steady decline of species over the last century. Under section 9 in conjunction with Schedule 5 of the WCA 1981 (as amended), all bats are protected from intentional or reckless disturbance. Additional protection for all bat species is provided under Schedule 2 of The Conservation of Habitats and Species Regulations 2017. Licences are needed if the disturbance is to produce a significant effect on the bat colony, which would otherwise be an offence. These may be granted for the purposes specified under section 16 of the WCA 1981 as well as under Section 55 under the Habitat Regulations, following the submission of a licence application to Natural England.

Badgers are protected under the Badger Protection Act 1992 and under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended); badgers are classified as a species of conservation concern under the UK Biodiversity Action Plan and listed under Appendix III of the Bern Convention.