

Preliminary Ecological Appraisal

Including: Extended Phase 1 Habitat Assessment Bat Scoping Assessment

Barnard Park Copenhagen Street Islington N1 0ER

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1 NON-TECHNICAL SUMMARY

- 1.1 This report has been instructed by London Borough of Islington Parks Department.
- 1.2 The proposed development involves the redevelopment of the park to improve its usability for sports and its biodiversity value.
- 1.3 The site survey included an assessment of the habitats found within the site and its immediate surroundings and the likely impact of the proposed development on habitats of ecological value and protected and notable species.
- 1.4 This report is broadly considered valid for a duration of two years, although some ecological factors may change within shorter timescales.

1.5 **Key results**

- The site is dominated by amenity grassland, trees, bare ground and hardstanding.
- The site contains potentially suitable habitat for the following protected species;
 reptiles, bats, nesting birds and hedgehogs.
- The site itself is designated a Site of Importance for Nature Conservation (SINC).
- The proposed development is due to result in the loss of a small number of trees and large amounts of bare ground. The majority of the on-site trees are due to be retained within the development. The retained habitats including grassland and introduced shrub within the site are due to be enhanced under the proposed development.

1.6 Recommendations

- Tree protection areas and methods are being advised by a suitably qualified arboricultural consultant.
- Habitat manipulation techniques will be appropriate to minimise the risk of harm to reptiles (see report for details).
- Features suitable for bats are present within the buildings on site. To confirm
 whether bat roosts are present, an emergence/re-entry survey should be
 undertaken on one occasion between May and August (inclusive).
- To avoid an impact on commuting and foraging bats, it is recommended that lighting is designed to minimise illumination of suitable habitats.
- Vegetation, including trees, suitable for nesting birds may only be removed during the nesting season if they have been checked by an ecologist and no nests are present.

- Care should be taken when removing brash or dense vegetation to avoid harm to hedgehogs which may be present.
- Three invasive plant species were recorded within the site small-leaved cotoneaster (Cotoneaster microphyllus), buddleia (Buddleja davidii) and cherry laurel (Prunus laurocerasus). To avoid spreading these plants, they should be disposed of responsibly.

2 INTRODUCTION

Background

- 2.1 This report has been instructed by London Borough of Islington Parks Department.
- 2.2 The proposed development involves the redevelopment of the park to improves its usability for sports and the park's biodiversity value. As part of this development the current on-site buildings will be demolished, and a new community centre will be built on the footprint of the current building B2 (One-o-clock building)

Purpose of the report

- 2.3 This report assesses the ecological interest of the site and the potential impacts of the proposed development on biodiversity.
- 2.4 Ecological surveys are sequential in nature and any follow up, species-specific reports will supersede the information present in this report, even if both are submitted together.
- 2.5 TMA have been instructed to undertake a Preliminary Ecological Appraisal a method of ecological assessment outlined in the CIEEM Guidelines for Preliminary Ecological Appraisal (2017). These guidelines state that the aims of the Preliminary Ecological Appraisal are to identify key ecological constraints associated with a project; identify any mitigation measures likely to be required; identify any additional surveys that may be required; and identify opportunities to deliver ecological enhancement.
- 2.6 This report aims to satisfy the requirements of the National Planning Policy Framework (MHCLG, 2019), identifying ecological features or protected species within or near the site that could potentially be impacted by the proposed development. Information on opportunities for incorporating biodiversity enhancements into the development proposals can be found within the Ecological Enhancement Scheme.
- 2.7 This report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM, 2017) and with Biodiversity Code of Practice for Planning and Development (BSI, 2013).
- 2.8 To provide information to support the ecological assessment, a bat scoping survey has also been undertaken.

Limitations

2.9 The site was accessed during April 2021, a time when the majority of plant species would be expected to be evident, particularly extensive stands of invasive species such as Japanese knotweed (*Fallopia japonica*) or giant hogweed (*Heracleum*

- *mantegazzianum*). Where further botanical or invasive species surveys are considered necessary, these have been recommended within this report.
- 2.10 A small area in the north-west of the site was inaccessible at the time of the survey (see Appendix A for location) due to a locked gate, which allows access to the area, being unopenable. This is not considered to be a constraint to this report as this area is not due to be impacted by the proposed development.
- 2.11 A small number of trees could not be fully viewed from all angles at the time of the survey as they are located within private land (see Appendix E for details). This is not considered to be a constraint to the assessment as these trees are not due to be impacted by the proposed development.
- 2.12 The roof voids of the two buildings on site did not have a viable means of access, see Appendix D for details). This limitation has been taken into account when making recommendations for further survey.
- 2.13 As the attributes of the site and its potential for protected, notable and invasive species may change over time, this report is broadly considered valid for a duration of two years, after which time it is recommended that an update site assessment is undertaken. In some cases, protected or invasive species use of a site may change over a shorter timescale, for instance the extent of invasive plant species, which may change month to month. In such cases, appropriate precautionary advice or recommendations for update surveys are given within this report. Although invasive plant species have been recorded if observed within the site, we cannot guarantee that all occurrences have been found.

Information supplied

- 2.14 This report has been prepared with reference to the following supplied documents/plans, showing the extent of the site boundary and the proposed development (at this stage). Please note the below-named plans may be superseded or updated without warranting an update of this report, if the changes are insignificant to the impact of the development on biodiversity:
 - Barnard Park Improvements Proposals Masterplan, Ireland Albrecht Landscape Architects, January 2016 as revised (IA-365-LMP-P01)

Site location

2.15 The site is a public park located within a busy London area. The area immediately surrounding the site comprises predominately residential streets. Small areas of parkland are present within the wider environment.

2.16 The central grid reference for the site is TQ 31032 83761. The surveyed site covers approximately 3 hectares.

3 RELEVANT LOCAL PLANNING POLICY

Islington's Core Strategy (February 2011)

3.1 Open space and green infrastructure - Policy CS 15

- 3.2 The council will provide inclusive spaces for residents and visitors, and create a greener borough by:
- 3.3 A. Protecting all existing local open spaces, including open spaces of heritage value, as well as incidental green space, trees and private gardens. Further policies will be identified in the Development Management Policies.
- 3.4 B. Improving the quality and function of open and green spaces for all users in accordance with the Green Space Assessment and Action Plan as well as the Inclusive Landscape Design Supplementary Planning Document.
- 3.5 C. Improving access to open space and maximising opportunities for further provision across the borough, but particularly in those areas that currently have little or no open space locally (identified in Map 3.10 Open space priorities) by:
 - creating new open spaces on underused land such as the council's housing land, under-used car parking areas, roads and other void spaces. Underused spaces which could be further explored for use as open space are identified in Map 3.11 below. Sites will be formally identified in other parts of the Local Development Framework
 - making better use of housing amenity space so that it can help to provide an open space function
 - creating and enhancing civic spaces
 - seeking on site, or financial contributions, towards open and civic spaces from new development - details will be set out in the Development Management Policies
 - better utilising the Regent's Canal and the spaces around it
 - ensuring that existing and new open spaces are designed in an inclusive way, guided by the Inclusive Landscape Design SPD
 - creating and improving accessible links between open spaces in the borough, which encourage walking and promote cycling in line with Islington Cycling Action Plan.
 - D. Protecting and enhancing biodiversity across the borough and addressing deficiencies in access to nature. Sites of Importance for Nature Conservation (SINCs) will be protected in line with their hierarchical importance (26) and improvements to their biodiversity value will be supported. SINCs will be identified

and designated in the Development Management Policies. Other key habitats, and priority species within them, will also be protected and enhanced including:

- built environment
- canals, waterways and standing water (this includes ponds)
- parks and urban green spaces private gardens, community gardens, and allotments
- railside land
- school grounds
- woodland
- acid grassland
- cemeteries
- other habitats deemed important for London
- 3.6 Access to nature will be increased, including by improving the biodiversity value of the parks and gardens identified in Map 3.12. Further ways of increasing access to nature, along with other priorities for the protection and enhancement of habitats will be set out in the Biodiversity Action Plan.
- 3.7 E. Supporting local food production through the protection of existing food growing sites. Opportunities for new food growing spaces will be sought elsewhere including from new private developments.
- 3.8 F. Maximising opportunities to green' the borough through planting, green roofs, and green corridors to encourage and connect green spaces across the borough, identifying streets, sites and strategic development areas where greening measures could happen. These opportunities will be identified through the Climate Change Adaptation Strategy, and the Biodiversity Action Plan, before being brought together with other opportunities in an Open Space and Green Infrastructure Strategy.
- 3.9 G. Maximising the contribution of new and existing open spaces to broader sustainability objectives including SUDS, climate change adaptation and biodiversity. These opportunities will be set out in the aforementioned Open Space and Green Infrastructure Strategy. H. Finally, Islington's two identified Locally Important Geological Sites (LIGS) will be protected, managed and enhanced.

The London Plan (2021)

Policy G1 Green infrastructure

- 3.10 A Londons network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits.
- 3.11 B Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A.
- 3.12 C Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:
- 3.13 1) identify key green infrastructure assets, their function and their potential function
- 3.14 2) identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.
- 3.15 D Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.

Policy G6 Biodiversity and access to nature

- 3.16 A Sites of Importance for Nature Conservation (SINCs) should be protected.
- 3.17 B Boroughs, in developing Development Plans, should:
- 3.18 1) use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks
- 3.19 2) identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them
- 3.20 3) support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans
- 3.21 4) seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context
- 3.22 5) ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.

- 3.23 C Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:
- 3.24 1) avoid damaging the significant ecological features of the site
- 3.25 2) minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site
- 3.26 3) deliver off-site compensation of better biodiversity value. D Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.
- 3.27 E Proposals which reduce deficiencies in access to nature should be considered positively.

Policy G7 Trees and woodlands

- 3.28 A London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of Londons urban forest the area of London under the canopy of trees.
- 3.29 B In their Development Plans, boroughs should: 1) protect 'veteran' trees and ancient woodland where these are not already part of a protected site 2) identify opportunities for tree planting in strategic locations.
- 3.30 C Development proposals should ensure that, wherever possible, existing trees of value are retained. If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

4 SURVEY METHODOLOGY

Data Searches

- 4.1 The governments MAGIC search tool was searched for statutory sites designated for nature conservation interest within 7 km of the site, and for records of European Protected Species licences within 2 km of the site.
- 4.2 Greenspace Information for Greater London (GiGL) was consulted for records of nonstatutory sites designated for nature conservation interest and for historic records of protected or notable species within 2 km of the site.

Site Survey

- 4.3 The initial survey was undertaken on 19th of April 2021 by Hattie Taylor of Tim Moya Associates, an experienced Consultant Ecologist and Qualifying Member of the Chartered Institute for Ecology and Environmental Management (CIEEM). During the survey the weather conditions were not considered to pose any limitations to the survey.
- 4.4 During the initial survey, access into building B2 (One-o-clock building) was not possible. A survey of this building was undertaken on the 4th of May 2021 by Brooke Waites of Tim Moya Associates, an experienced Senior Ecologist and Associate Member of the Chartered Institute for Ecology and Environmental Management (CIEEM) and Hattie Taylor. During the survey the weather conditions were not considered to pose any limitations to the survey.
- 4.5 The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (JNCC, 2010). Dominant plant species were recorded for each habitat present.
- 4.6 The site was inspected for evidence of and its potential to support protected or notable species, especially those listed under *The Conservation of Habitats and Species Regulations 2017*, the *Wildlife & Countryside Act 1981* (as amended), including those given extra protection under the *Natural Environment and Rural Communities (NERC) Act 2006* and *Countryside & Rights of Way (CRoW) Act 2000*, and listed on the UK and local Biodiversity Action Plans. Such species include amphibians, reptiles, bats, badgers, birds, dormice and water voles. Evidence of badgers was searched for throughout the site, including setts, footprints, feeding signs, hairs and droppings.
- 4.7 The site was searched for evidence of invasive plant species, such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), horizontal/wall cotoneaster (*Cotoneaster horizontalis*) and floating pennywort (*Hydrocotyle ranunculoides*).

Bat Scoping Survey

- 4.8 The bat scoping survey was undertaken in accordance with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016). The surveyor (Brooke Waites) holds a Natural England licence to disturb bats whilst surveying. The buildings were inspected externally from all angles using binoculars and internally using a high-powered torch. Trees were inspected from ground level, using binoculars where needed and a high-powered torch to inspect potential bat roost features. Where possible, a ladder was used to inspect features within 3 m of ground level. An endoscope was used to investigate cavities where possible. All aspects of each tree were viewed, and wherever visibility was restricted (e.g. due to ivy or foliage), this is stated in the report.
- 4.9 Evidence searched for included bat droppings, feeding remains, staining from urine or grease marks and potential access points into roosting cavities. Features indicating potential for bat roosts included gaps beneath roof tiles, weatherboarding and/or hanging tiles, missing mortar, holes in tree trunks, cracks in tree limbs, loose bark and dense ivy growth.

5 DESK STUDY RESULTS

Designated Sites

- 5.1 The site itself is a Local level Site of Importance for Nature Conservation (SINC).
- 5.2 There are twenty-three statutory designations within 7 km of the proposed development and fifty-six non-statutory designations within 2 km of the proposed development as follows:

Table 1. Statutory designations of nature conservation interest

Closest statutory site:				
Site name	Designation	Distance and direction from proposed works (km)	Description	
Barnsbury Wood	LNR	0.3 NW	Small area of woodland managed for ecology.	
Other statutory designations: One further SPA, three further SSSIs and eighteen further LNRs are located between 0.97 km and 7 km from the proposed development site.				
SPA - Special	lature Reserve Protection Area Special Scientific	c Interest		

Table 2. Non-statutory designations of nature conservation interest

Closest I	non-statutory s	site:	
Site name	Designation	Distance and direction from proposed works (km)	Description
Barnard Park	SINC	0	Local level SINC. The majority of the park comprises species-poor grassland with scattered trees. The park is designated as a SINC on account of its size and function in the landscape and ecology of the local area. To the west of the main body of the park is Hemingford Road Green (known as Barnard Park extension) which supports a wildflower meadow.
Fifty-five developm		re located between	en 1.8 km and 2 km from the proposed
Key:			
SINC - Si	te of Importance	e for Nature Cons	servation

Historic Species Records

5.3 Local Ecological Records Centre data searches return hundreds of species records. The table below summarises records of key protected species considered to be most sensitive to impact from proposed developments. Numerous additional notable species records were returned for the 2 km radius, which are considered unlikely to be impacted by the proposed development and are therefore not summarised below. For instance, species for which no suitable habitat is present close to the site (see end of table).

Table 3. Existing protected species records

	Local Ecolog	EPS Licences granted		
Species	Number of records within 2km	Closest record to site (km) and orientation*	Most recent record	No. of EPS licences granted within 2km
Badger (Meles meles)	1	0.94 Confidential	2003	N/A
Bat species (Chiroptera)	265	0.33 SW	2020	1
Black Redstart (Phoenicurus ochruros)	82	0.64 Confidential	2019	N/A
Common Lizard (Lacerta Zootoca vivipara)	1	1.09 W	2001	N/A
Hedgehog (Erinaceus europaeus)	21	0.75 NW	2019	N/A
Stag Beetle (Lucanus cervus)	31	0.3 NE	2020	N/A

No records were returned of the following key protected/notable species: Adder (Vipera berus), Dormouse (Muscardinus avellanarius), Grass Snake (Natrix natrix), Great Crested Newt (Triturus cristatus), Slow-worm (Anguis fragilis), Water Vole (Arvicola amphibius), White Clawed Crayfish (Austropotamobius pallipes)

Records were returned of the following species amongst others but no suitable habitat is present close to the site: Barn Owl (*Tyto alba*), Otter (*Lutra lutra*)

- 5.4 Records of bats given in the table above include records of 8 bat species, including the following: common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius pipistrelle (*Pipistrellus nathusii*), unknown pipistrelle species (*Pipistrellus* sp.), brown long-eared (*Plecotus auritus*), Leisler's (*Nyctalus leisleri*), noctule (*Nyctalus noctula*), Natterer's (*Myotis nattereri*), Daubenton's (*Myotis daubentonii*).
- 5.5 One EPS licence has been granted for bats within 2 km of the site as follows: 1.96 km south-west of the site, allowing the destruction of a resting place for soprano pipistrelle, 2017.

^{*} Where the distance of records is further than the search radius, this is due to lack of accuracy in the record's coordinates. The true location of the record may be inside the search radius.

6 RESULTS OF HABITAT SURVEY

Habitats and Vegetation

6.1 A Phase 1 Habitat Plan can be found in Appendix A illustrating the habitats present. Photographs of the site are contained in Appendix B.

Table 4. Habitats present within the site

Habitat type	Description	Dominant plant species	Overall biodiversity value*	Habitats of Principal Importance**	Additional Notes
Buildings and hard standing	Two buildings are present in the west of the site. Areas of hard standing are present throughout the site.	None	Negligible	No	Bat roost potential is assessed in Table 5, below.
Amenity grassland	The site is dominated by short mown amenity grassland.	Perennial Rye-grass (Lolium perenne), Annual Meadow-grass (Poa annua), Daisy (Bellis perennis)	Low	No	
Introduced shrubs	Small areas of introduced shrubs are present throughout the site.	Daffodil (Narcissus pseudonarcissus subsp. pseudonarcissus), Cherry Laurel (Laurocerasus officinalis), Common Box (Buxus sempervirens)	Moderate	No	Provide a feeding resource for birds and invertebrates.
Dense/Scattered Scrub	An area of scrub habitat is present to the north-west of the site.	Ivy (Hedera helix), Buddleja (Buddleja sp.), Green alkanet (Pentaglottis sempervirens)	Moderate	No	Dense scrub provides a sheltering and feeding resource for a range of species including bird, invertebrates, reptiles and small mammals.
Trees	Large trees are present throughout the site.	London Plane (Platanus x hispanica), Common Lime (Tilia x vulgaris), Wild Cherry (Cerasus avium)	Moderate	No	Provide a feeding resource for a range of invertebrates and a nesting and feeding resource for birds.

Habitat type	Description	Dominant plant species	Overall biodiversity value*	Habitats of Principal Importance**	Additional Notes
Bare ground	A large area of sports area comprising bare ground is present in the north-east of the site. Pathways of bare ground are present in the east of the site.	None	Negligible	No	

^{*}Overall biodiversity value of a habitat is guided by the criteria listed in section 4.6 of the Guidelines for Ecological Impact Assessment (CIEEM, 2018), which include habitats required by rare or uncommon animal or plant species, habitat connectivity and species-rich assemblages of plants.

** Habitats of principal importance included in Section 41 of the NERC Act.

Protected/Notable Species Potential

- 6.2 The table below details the suitability of habitats within the site for key protected/notable species.
- 6.3 Species not detailed below are considered unlikely to be significantly impacted by the proposed works.

Table 5. Protected species potential

Species group	Strict Protection*	Species of Principal Importance**	General habitat requirements	Suitable habitat within site	Additional notes (e.g. evidence of species)
Great crested newt	Yes	Yes	Breed in ponds and other waterbodies. Terrestrial habitat includes woodland and grassland.	Scrub habitat in the north-west of the site and pockets of introduced shrub throughout the site offer some suitability for great crested newts.	No ponds have been identified within 500m of the site and the site is not well connected to areas of suitable within the wider environment.
Reptiles	Yes	Yes - all reptiles	Long grass, scattered scrub, hedgerows, rubble and log piles.	Scrub habitat in the north-west of the site and pockets of introduced shrub throughout the site offer some suitability for reptiles.	
Bats	Yes	Yes - several species	Roost in buildings, tree cavities, bridges and caves.	Both buildings with the site are considered to have low potential for roosting bats. The	Refer to Section 7 of this report.

Species group	Strict Protection*	Species of Principal Importance**	General habitat requirements	Suitable habitat within site	Additional notes (e.g. evidence of species)
				site offers moderate foraging and	
_				commuting habitat for bats.	
Dormouse	Yes	Yes	Hedgerows, dense scrub, deciduous woodland with	The site is considered unsuitable for	
				dormice due to the lack of connectivity with	
			connected canopy and good ground flora.	good dormice habitat within the wider area and due to the limited amount of suitable	
			ground nora.	habitat within the site itself.	
Water vole	Yes	Yes	Rivers, streams, wet ditches.	No suitable habitats	
Otter	Yes	Yes	Rivers and lakes	No suitable habitats	
White-clawed crayfish	Yes	Yes	Canals, streams, rivers, lakes, reservoirs and water- filled quarries	No suitable habitats	
Badger	Yes	No	Woodland, dense scrub, meadows, field edges.	The site offers some potential foraging habitat for badgers; however the site is not well connected to suitable habitat within the wider area and badgers may be deterred from using the park due to its frequent human presence.	No evidence of badgers was found during the survey, such as setts, footprints, latrines, feeding evidence or hairs.
Hedgehog	No	Yes	Woodland, hedgerow, gardens, parks	The habitats within the site offer good foraging and sheltering habitats for hedgehogs.	
Stag beetle	No	Yes	Woodland, hedgerow, orchard, parks	Woodland vegetation and scrub within the site offers suitable habitat for stag beetles.	
Other	No	Various	Species-dependent. High	Introduced shrubs and woodland	
invertebrates			invertebrate diversity is	vegetation offer a variety of flowering plants	
			favoured in sites with a	as a feeding resource for invertebrates.	
			mosaic of habitats and		
Nooting birds	\\/hilot	Various	diverse plant assemblage.	Corub obrubo and trace neuticularly	
Nesting birds	Whilst	Various	Trees, shrubs, scrub, hedgerows, cavities within	Scrub, shrubs and trees, particularly where vegetation is dense and undisturbed.	
	Nesting		buildings, waterbodies,	vegetation is defise and undisturbed.	

Species group	Strict Protection*	Species of Principal Importance**	General habitat requirements	Suitable habitat within site	Additional notes (e.g. evidence of species)
			arable fields, bare/stony ground.		
Invasive Plant Species	No	No	Species-dependent: Waste land, railway verges, riverbanks, waterbodies	The invasive plant species small-leaved cotoneaster (Cotoneaster microphyllus), buddleia (Buddleja davidii) and cherry laurel (Prunus laurocerasus) were identified within the site. See appendix A for locations.	

7 RESULTS OF BAT SCOPING ASSESSMENT

Buildings

- 7.1 Building names and locations are shown on the Phase 1 Habitat Plan (Appendix A). In Appendix C, target notes have been used to identify features such as potential bat access points. Full details of the Bat Scoping Survey findings are contained in Appendix D, including building descriptions and inspection findings.
- 7.2 Roof voids are not the only area of a building that may be used by roosting bats. Bats often roost underneath roof tiles, hanging tiles, wooden cladding, inside cavity walls and amongst brickwork. In these locations, evidence of a bat roost may be concealed.
- 7.3 The roof voids for both buildings were not accessible as there is currently no viable access point for surveyors into the roof void.
- 7.4 Building B1 (playground building) was assessed as having **Low** potential for roosting bats, due to the presence of potential roost features including gaps behind the plastic fascia boards.
- 7.5 Building B2 (one-o-clock building) was assessed as having **Low** potential for roosting bats, due to the presence of potential roost features including gaps behind wooden panels and gaps under fascia boards.

Trees

- 7.6 There are a number of trees within the surveyed area, including three trees with features potentially suitable for use by roosting bats (T30 T79 and T109), however none of these are due to be impacted by the proposed development.
- 7.7 Tree dimensions, inspection notes and recommendations for each tree are listed in Appendix E of this report.

Foraging and commuting habitat

7.8 The location of the site and the surrounding area is considered to be of moderate value for commuting and foraging bats. The site itself includes parkland vegetation which provide good opportunities for foraging and commuting bats. The wider landscape contains some habitats suitable for regular use by foraging and commuting bats, such as parkland and mature trees. It is likely that foraging or commuting bats use the site itself to a reasonable extent.

8 CONCLUSIONS AND RECOMMENDATIONS

8.1 For any constraints identified, mitigation options should follow the Mitigation Hierarchy as set out in British Standard BS42020 (BSI, 2013). This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures.

Overall Ecological Value

- 8.2 The park is considered to be of moderate ecological value due to the presence of mature trees and flowering vegetation.
- 8.3 The proposed development is due to result in the loss of a number of trees. Replacement trees and additional trees are due to be planted within the development proposals. The remaining habitats are due to be retained and enhanced within the development.
- 8.4 The park refurbishment (and enhancement) will contribute to policy CS 15 (Open space and green infrastructure) of Islington's Core Strategy by improving the biodiversity value of the park and addressing deficiencies in access to nature. The refurbishment (and enhancement) will also contribute to Policy G1 (Green infrastructure) of the London Plan (2021) by enhancing a green and open space within the city.
- 8.5 The proposed development is not due to result in the loss of significant habitats of ecological value and the ecological enhancement strategy for the site will increase the overall biodiversity value of the park, although the recommendations below should be followed to minimise the risk of impact on habitats of ecological value and protected and notable species.

Designated Sites

Statutory Designated Sites

- 8.6 The proposed development site is located 0.3 km from Barnsbury Wood LNR (northwest) and 0.97 km from Camley Street Nature Park LNR (south-west). All other statutory sites are located over 1 km away.
- 8.7 Given the localised nature of the works within the park, there is unlikely to be a detrimental impact on these or any other statutory designated sites.

Non-statutory Designated Sites

8.8 The site itself is a Local level Site of Importance for Nature Conservation (SINC) on account of its size and function in the landscape and ecology of the local area. The proposed works will retain the majority of trees within the park which are currently the main features of ecological interest. Additional tree planting will be included within the park and the grassland habitat, which dominates the site, will be enhanced with a more diverse range of species including areas of biodiverse wildflower meadow. The new area of orchard planting, green roof and pond and the installation of bat and bird boxes will provide significant new habitat types to the park to maximise its value for a range of wildlife. These ecological enhancement measures will be fully detailed within the Ecological Enhancement Scheme. As such, the proposed redevelopment of the park is due to result in significant increases in the ecological value of the SINC site. It is hoped that the SINC site, following redevelopment, may attain a higher level of SINC designation - Borough Grade II or Grade I level. This would need to be formally assessed following the redevelopment.

Habitats of Principal Importance

8.9 No habitats within or directly adjacent to the proposed development site are listed as Habitats of Principal Importance under Section 41 of the NERC Act (Refer to Appendix G).

Other Notable Habitats

8.10 The following habitats are not classed as Habitats of Principal Importance, but nevertheless are considered to be of notable biodiversity value in the context of the site and its surroundings:

Trees

- 8.11 A large number of trees are present on the peripheries of the site and off-site areas.

 The majority of trees are due to be retained within the proposed development.
- 8.12 Recommendation: Trees should be retained or replaced within the development site wherever possible. Where trees are to be retained, tree protection areas and methods are being advised by a suitably qualified arboricultural consultant.

Protected Species

8.13 The following species are protected against harm/destruction/disturbance by European or UK Law - for details see Appendix G.

Great Crested Newts

- 8.14 Great crested newts are legally protected from killing, injury, capture and deliberate disturbance. Habitats used by great crested newts are also protected (see Appendix G for details).
- 8.15 Local Ecological Records Centres returned no previous records of great crested newts within 2 km of the proposed development site. Furthermore, no ponds were identified within 500 m of the site.
- 8.16 Therefore, it is considered unlikely that the proposed development will impact great crested newt populations or individual great crested newts.
- 8.17 As such, no further surveys or mitigation are recommended regarding great crested newts.

Reptiles

- 8.18 All species of native reptiles are legally protected against killing or injury (see Appendix G for details).
- 8.19 Common lizards have been previously recorded within 2 km of the site. The scrub habitats present in the north-west of the site offer limited suitable habitat for reptiles, particularly slow-worm. Scrub vegetation in the north-west part of the site is due to be retained within the proposed development, this will avoid an impact on reptiles which may be present.
- 8.20 Habitat manipulation techniques will be appropriate to minimise the risk of harm to reptiles, as follows:
- 8.21 Recommendation: To prevent colonisation of the site by reptiles prior to completion of the development, it is recommended that grassland vegetation is mown regularly to keep it to a height of no more than 15 cm. Additionally, during the construction process, it is recommended that storage of rubble, soil and other materials close to the periphery of the site should be avoided.

Roosting Bats - Buildings

- 8.22 All species of bat are legally protected from disturbance or harm and their roosts are protected from damage or destruction (see Appendix G for details).
- 8.23 Two buildings within the site were assessed as having Low potential for roosting batsthe playground building (building B1) and the one-o-clock building (building B2).
- 8.24 The proposed development includes demolition of all buildings. Therefore, if the buildings are used by roosting bats, bat roost features would be destroyed and bats may be disturbed, injured or killed during demolition or dismantling works.

- 8.25 Recommendation: To ascertain whether the buildings are used by roosting bats, in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), it is recommended that the playground building (building B1) and the one-o-clock building (building B2) are both subject to a single nocturnal emergence/reentry survey (also known as dusk/dawn or presence/absence) at dawn or dusk. Eight observation points in total will be required to cover the potential access points identified on the buildings. The surveys should be undertaken between May and August, inclusive.
- 8.26 If the surveys confirm the use of any buildings by roosting bats, additional emergence/re-entry surveys may be required (three total).
- 8.27 Any proposed development works likely to disturb bats or damage/destroy bat roosts may only be undertaken once a Natural England Mitigation Licence has been obtained. This would require a detailed bat mitigation strategy including the provision of alternative roosting features within the development site.

Roosting Bats - Trees

- 8.28 The trees within the site have all been assessed for their potential for roosting bats. The majority of trees were assessed as having negligible potential to support bats, due to the absence of features such as cracks, crevices or dense ivy growth. These trees can be removed if needed without risk to roosting bats. A number of trees were assessed as having potential for roosting bats due to the presence of potentially suitable roosting features, however these trees are not due to be impacted under the proposed developments.
- 8.29 No trees with features suitable for roosting bats are due to be significantly impacted by the proposed development. As such, the proposed development is not expected to have any impact on potential bat roosts within trees.
- 8.30 As such, no further surveys or mitigation are recommended regarding roosting bats in trees.

Foraging and Commuting Bats

- 8.31 Due to the habitats present within the site and the local landscape, it is considered likely that foraging or commuting bats use the site to a certain extent.
- 8.32 The foraging and commuting behaviour of bats is known to be altered by artificial lighting and bats may avoid illuminated areas (ILP, 2018). The new football pitch in the centre of the site will require lighting, but this shold be limited to the required areas and light spill into other areas should be minimised.

- 8.33 Recommendation: To avoid a detrimental impact on bats using the site, there should be no increased light spillage on to suitable habitats, particularly areas of mature trees, where bats are most likely to forage and commute. Lighting should be kept to a low level. The following measures should be implemented within the lighting scheme as appropriate:
 - Minimise light spill through careful aiming, positioning and selection of luminaires and column heights.
 - LED luminaires should be used where possible due to their sharp cut off, lower intensity and dimming capacity.
 - Lighting must have no upward spill.
 - Warm white luminaires with peak >550nm. UV lighting should be avoided.
 - Reduce the light intensity to the minimum required for safety and security;
 - Where security lamps are used these should use a trigger to illuminate them (e.g. infra-red detector), and switch off after a short period, rather than remaining on all night.
 - Further guidance is available in Bats and artificial lighting in the UK (ILP, 2018).
 - In some cases a Lighting Impact Assessment may be required to demonstrate that lighting will not have a detrimental impact on bats.

Dormice

- 8.34 Dormice are legally protected from disturbance or harm and their breeding sites and resting places are protected from damage or destruction (see Appendix G for details).
- 8.35 No records of dormice within 2 km of the site have been returned by record centres.
- 8.36 The habitats within the site are of limited suitability for dormice and connections to suitable habitat in the surrounding landscape are poor.
- 8.37 Therefore, dormice are considered unlikely to be present within the site.
- 8.38 As such, no further surveys or mitigation are recommended with regards to dormice.

Water Vole and Otter

- 8.39 Otters and water voles are legally protected from harm, capture and disturbance and their breeding sites and resting places are fully protected (see Appendix G for details).
- 8.40 No habitat suitable for water voles or otters is present within or adjacent to the site.
- 8.41 Therefore, the proposed development is considered unlikely to impact these species.

8.42 As such, no further surveys or mitigation are recommended with regards to water vole or otter.

White-clawed Crayfish

- 8.43 White-clawed crayfish are legally protected from harm, capture and disturbance (see Appendix G for details).
- 8.44 No habitat suitable for white-clawed crayfish is present within or adjacent to the site.
- 8.45 Therefore, the proposed development is considered unlikely to impact this species.
- 8.46 As such, no further surveys or mitigation are recommended with regards to whiteclawed crayfish.

Badger

- 8.47 Badgers are legally protected against killing, injury or disturbance and their setts are protected against interference (see Appendix G for details).
- 8.48 Although the habitats within the site offer some suitability for badgers and badgers may be found in the wider area, no evidence of badgers was recorded during the survey.
- 8.49 Therefore, the proposed development is considered unlikely to impact badgers or their setts.
- 8.50 As such, no further surveys or mitigation are recommended with regards to badgers.

Invertebrates

- 8.51 Approximately 400 invertebrate species are listed as Species of Principle Importance' under Section 41 of the NERC Act (see Appendix G) and decision makers must have regard to the conservation of these species.
- 8.52 Although common invertebrates are likely to be found within the site, the habitats within the site are common and widespread, such as introduced shrub, scrub and trees. The proposed development will increase the amount of suitable habitat for invertebrates.
- 8.53 Therefore, it is considered unlikely that the proposed works will significantly impact important populations of invertebrates. The ecological enhancement strategy designed for this site is particularly targeted towards enhancing the value of the site to invertebrates

Nesting Birds

8.54 All birds are protected against killing, injury or capture, and eggs and active nests are protected. Some bird species are also protected against disturbance (see Appendix G for details).

- 8.55 The site includes trees, scrub and shrubbery which are suitable for nesting birds during the nesting season (typically March to August inclusive). Removal of suitable nesting habitats may result in the destruction of active bird nests, eggs or young.
- 8.56 Recommendation: To avoid destruction of active bird nests, it is recommended that dense vegetation and tree removal is only undertaken outside the bird nesting season. Vegetation removal may only be undertaken during the nesting season if a careful check by a suitably experienced ecologist can confirm that no active bird nests are present. If bird nests are present within vegetation to be removed, it must be left in place and not disturbed until all the young have fledged and cease to return to the nest.

Other Species

Hedgehog

- 8.57 The site includes habitats suitable for hedgehogs to be present. Whilst not a strictly protected species, the hedgehog is listed as a Species of Principal Importance (see Appendix G) and decision makers must have regard to the conservation of their populations.
- 8.58 Recommendation: Care should be taken when removing scrub/shrub vegetation to avoid harm to hedgehogs which may be present. Once vegetation has been removed to a height of 150-300 mm, it should be checked by a member of site staff to ensure that no hedgehogs are present. If any hedgehogs are present, they may be moved to suitable habitat nearby.

Invasive Species

Invasive plant species

- 8.59 Small-leaved cotoneaster (Cotoneaster microphyllus), buddleia (Buddleja davidii) and cherry laurel (Prunus laurocerasus) recorded within the site (see target notes, Appendix A).
- 8.60 Small-leaved cotoneaster is listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as an invasive plant species. It is prohibited to plant or otherwise cause this species to grow in the wild.
- 8.61 Buddleia and cherry laurel are not listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as legally-controlled invasive plant species, but are known to be invasive in some circumstances (Natural England, 2011).
- 8.62 Recommendation: These plants are unlikely to cause problems in their current location within the site, but their spread should be avoided. If removal of these plants is required

as part of the works, they should be disposed of responsibly (e.g. mulching, burning on site or removal to landfill) so that the plants cannot spread.

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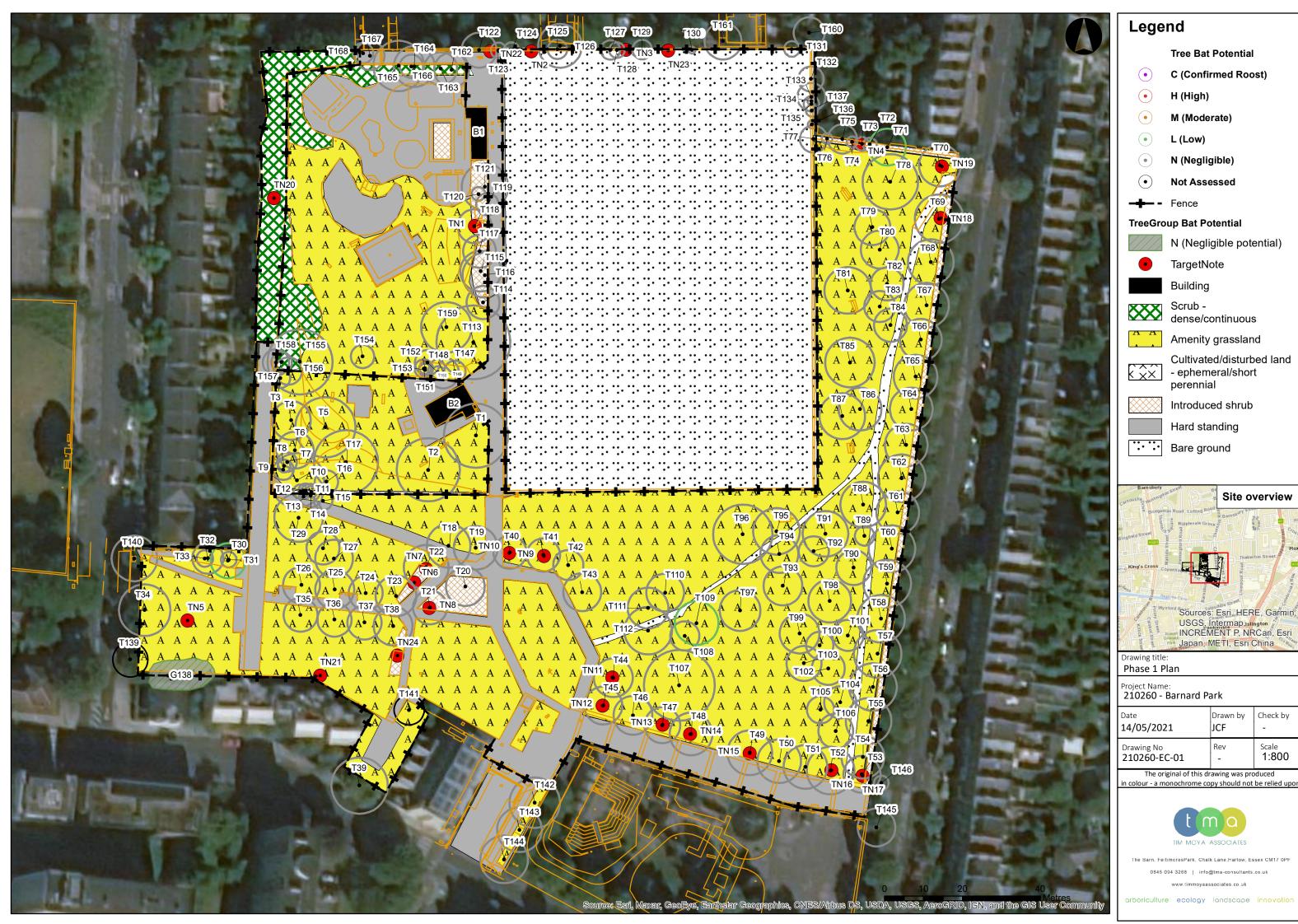
• References

APPENDIX G

• Wildlife Legislation

APPENDIX A

• Habitat Plan



Check by

1:800

APPENDIX B

Images

Photo 1 – On-o-clock (B2) building viewed from the north.

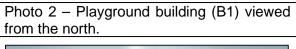






Photo 3 – Area of bare ground in the north of the site view to the west.

Photo 4 – Scrub vegetation in the north-west of the site.





Photo 5 – Amenity grassland, bare ground and scattered trees in the north-east of the site.

Photo 6 – Amenity grassland and scattered trees in the south-east of the site.





APPENDIX C

• Target note schedule

Target Note Schedule



Target notes

Object ID	Туре	Notes and findings
1	Bird evidence	Bird Box
2	Invasive plant species	Buddleia
3	Invasive plant species	Buddleia
4	Invasive plant species	Buddleia
5	Miscellanous target note	Number of prunus recently planted
6	Invasive plant species	Small-leaved cotoneaster
7	Bird nest	Birds nest within tree T22
8	Bird evidence	Bird feeder present in tree T21
9	Bird nest	Bird nest present in tree T41
10	Bird nest	Bird nest present in tree T40
11	Bird nest	Bird nest present in tree T44
12	Bird nest	Bird nest present in tree T45
13	Bird nest	Bird nest present in tree T47
14	Bird nest	Bird nest present in tree T48
15	Bird nest	Bird nest present in tree T49

Target notes

Object ID	Туре	Notes and findings
16	Bird nest	Bird nest present in tree T52
17	Bird nest	Bird nest present in tree T53
18	Bird nest	Bird nest present in tree T69
19	Bird nest	Bird nest present in tree T70
20	Survey limitation	Area within the fenced section in the north-west of the site could not be fully accessed at the time of the survey as the access gate could not be unlocked.
21	Miscellanous target note	Lights present on fence
22	Mammal evidence	Gap in fence
23	Mammal evidence	Gap in fence
24	Invasive plant species	Cherry laurel

APPENDIX D

• Building bat assessment schedule



210260 - Barnard Park BOTH

210260ED-11

Object ID REF 1 Playground building	1 Storeys	Use of Building Storage/offi ce/toilet	Roof type Condition Flat Good		Z Cellars	O Chimneys	Roof void present	Z Bats evidence	— Bat roost potential	Z Hibernation pot.	Yes Internal Inspection	Potential bat access points Potential bat roost features Eaves - gaps under fascia boards Eaves - gaps under fascia boards. Other internal roost feature	Ecological notes Area above office roof which used to hold water tank inaccessable at the time of the survey.	Recommendations - Emergence / return surveys (May to August), if bat roost features are due to be impacted- The building should be surveyed on one occasion, at dawn or dusk. Four observation points in total will be required to cover the potential access points identified on the building. The surveys should be undertaken between May and August, inclusive.	Survey date 19/04/2021
2 One-o-clock building	1	Storage/co mmunity building	Pitched Good	Roof external: Bitumen felt Roof internal: unknown Wall: Brick	N	0	Y	N	L	N	Limited	Eaves - gaps behind soffit boxes. Eaves - gaps under fascia boards Other wall roost feature	Gaps between wooden panels and wall may provide suitable features. The roof void of the building is inaccessible.		04/05/2021

Bat roost and Hibernation potential

C - Confirmed H - High M - Moderate L - Low N - Negligible



APPENDIX E

• Tree bat potential schedule

Tree bat potential



Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
1	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
2	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
3	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
4	Tilia sp. Lime sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
5	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
6	Tilia sp. Lime sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
7	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
8	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
9	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
10	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
11	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
12	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
13	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
14	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
15	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
16	Sorbus sp. Sorbus sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
17	Cedrus atlantica Atlas Cedar	Tree	Negligible	No notable potential bat roost features	No further surveys required.
18	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
19	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
20	Prunus sp. Cherry sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
21	Prunus sp. Cherry sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
22	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
23	Tilia x vulgaris Common Lime	Tree	Negligible	Crevice approximately 8 meters high in the main stem facing northeast. Not considered a suitable bat roost feature as it would fill with water when it rains.	No further surveys required.
24	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
25	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
26	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
27	Sorbus aria Whitebeam	Tree	Negligible	No notable potential bat roost features	No further surveys required.
28	Sorbus aria Whitebeam	Tree	Negligible	No notable potential bat roost features	No further surveys required.
29	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
30	Acer pseudoplatanus Sycamore	Tree	Low	Large amount of ivy which would obscure potential bat features.	Precautionary soft-fell if felling required. Precautionary soft-fell if felling is required.
31	Cotoneaster sp. Tree Cotoneaster	Tree	Negligible	No notable potential bat roost features	No further surveys required.
32	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
33	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
34	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
35	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
36	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
37	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
38	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
39	Aesculus hippocastanum Horse Chestnut	Tree	Negligible	No notable potential bat roost features	No further surveys required.
40	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
41	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
42	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
43	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
44	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
45	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
46	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
47	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
48	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
49	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
50	Tilia x vulgaris Common Lime	Tree	Negligible	Crevice in main stem approximately 10 meters high facing east. Would fill with water when it rains.	No further surveys required.
51	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
52	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
53	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
54	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
55	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
56	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
57	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
58	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
59	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
60	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
61	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
62	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
63	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
64	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
65	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
66	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
67	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
68	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
69	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
70	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
71	Ailanthus altissima Tree Of Heaven	Tree	Low	Ivy cover. Tree can not be fully viewed from all angles.	If due to be impacted the tree should be fully viewed from all angles by a suitably qualified ecologist
72	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.
73	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.
74	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
75	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.
76	Cotoneaster sp. Tree Cotoneaster	Tree	Negligible	No notable potential bat roost features	No further surveys required.
77	Ailanthus altissima Tree Of Heaven	Tree	Negligible	No notable potential bat roost features	No further surveys required.
78	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
79	Cerasus avium Wild Cherry	Tree	Negligible	Lifted bark on main steam, does not appear to provide a crevice of sufficient depth for roosting bats.	No further surveys required.
80	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
81	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
82	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
83	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
84	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
85	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
86	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
87	Cerasus avium Wild Cherry	Tree	Negligible	Peeling bark in main stem. Does not seem to form feature	No further surveys required.
88	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
89	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
90	Robinia pseudoacacia False Acacia sp./Black	Tree	Negligible	No notable potential bat roost features	No further surveys required.
91	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
92	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
93	Acer platanoides Norway Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
94	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
95	Acer platanoides Norway Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
96	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
97	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
98	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
99	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
100	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
101	Robinia pseudoacacia False Acacia sp./Black	Tree	Negligible	No notable potential bat roost features	No further surveys required.
102	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
103	Acer platanoides Norway Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
104	Acer platanoides Norway Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.

		Tree	BCT Category (explanation at end of		
Tree No.	Species	Tree group	schedule)	Notes	Ecological Recommendations
105	Sorbus aucuparia Rowan/Mountain Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
106	Prunus sp. Cherry sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
107	Platanus x hispanica London Plane	Tree	Negligible	No notable potential bat roost features	No further surveys required.
108	Acer campestre Field Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
109	Acer campestre Field Maple	Tree	Low	Crevice in branch approximately 10 meters high facing north. Appears not to provide a deep cavity.	An endoscope inspection of the cavity should be carried out by a suitably qualified ecologist if this tree is due to be impacted by the proposed works.
110	Acer campestre Field Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
111	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
112	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
113	Acer saccharinum Silver Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
114	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
115	Salix sp. Willow sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
116	Ailanthus altissima Tree Of Heaven	Tree	Negligible	No notable potential bat roost features	No further surveys required.
117	Prunus sp. Cherry sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
118	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
119	Betula pendula Silver Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
120	Betula sp. Birch	Tree	Negligible	No notable potential bat roost features	No further surveys required.
121	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
122	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
123	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.
124	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
125	Ailanthus altissima Tree Of Heaven	Tree	Negligible	No notable potential bat roost features	No further surveys required.
126	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
127	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.
128	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
129	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
130	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
131	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
132	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
133	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
134	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
135	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
136	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
137	Sambucus nigra Elder	Tree	Negligible	No notable potential bat roost features	No further surveys required.
138	Betula pendula Silver Birch	TreeGroup	Negligible	No notable potential bat roost features	No further surveys required.
139	Tilia x vulgaris Common Lime	Tree		Off-site tree, not fully inspected	Full inspection by a suitably qualified ecologist if due to be impacted.
140	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
141	Pyracantha coccinea Pyracantha	Tree		Off-site tree not fully inspected.	Full inspection by a suitably qualified ecologist if due to be impacted.
142	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
143	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
144	Tilia x vulgaris Common Lime	Tree	Negligible	No notable potential bat roost features	No further surveys required.
145	Acer platanoides Norway Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
146	Malus tschonoskii Pillar Apple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
147	Sorbus aucuparia Rowan/Mountain Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
148	Salix sp. Willow sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
149	Sorbus aucuparia Rowan/Mountain Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
150	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
151	Fraxinus excelsior Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
152	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
153	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
154	Aesculus hippocastanum Horse Chestnut	Tree	Negligible	No notable potential bat roost features	No further surveys required.
155	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
156	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
157	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
158	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
159	Acer saccharinum Silver Maple	Tree	Negligible	No notable potential bat roost features	No further surveys required.
160	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
161	Acer pseudoplatanus Sycamore	Tree	Negligible	No notable potential bat roost features	No further surveys required.
162	Malus sp. Apple sp.	Tree	Negligible	No notable potential bat roost features	No further surveys required.
163	Prunus cerasifera Cherry Plum (Myrobalan)	Tree	Negligible	No notable potential bat roost features	No further surveys required.
164	Fraxinus angustifolia Narrow Leaved Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Ecological Recommendations
165	Cerasus avium Wild Cherry	Tree	Negligible	No notable potential bat roost features	No further surveys required.
166	Fraxinus angustifolia Narrow Leaved Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.
167	Prunus cerasifera Cherry Plum (Myrobalan)	Tree	Negligible	No notable potential bat roost features	No further surveys required.
168	Sorbus aucuparia Rowan/Mountain Ash	Tree	Negligible	No notable potential bat roost features	No further surveys required.

Bat Potential

Negligible - Negligible habitat features on site likely to be used by roosting bats.

Low - A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.

Moderate - A tree with one or more potential roost sites 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.

- A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Roost - A known or confirmed bat roost.

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

Soft-fell method

For some trees (see above), it is recommended that a precautionary 'soft-fell/prune' method is used in order to minimise the risk of harm to bats, as follows:

- 1. During felling/ pruning, trees or limbs must be lowered carefully to the ground using ropes.
- 2. If any cracks or fissures are observed, cross-cutting these features must be avoided.
- 3. Trees and limbs must left on the ground for 24 hours, to allow any bats to escape if present, although this is considered unlikely.

APPENDIX F

References

References

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APPENDIX G

• Wildlife Legislation

Statutes and English Law

Reptiles

All species of native reptiles are protected against killing or injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) are further protected under The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 against capture or disturbance and the places they use for breeding, resting, shelter and protection are protected from being damaged or destroyed.

Great Crested Newts

The great crested newt and its habitat are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This legislation makes it an offence to deliberately kill, injure or capture a great crested newt; deliberately disturb a great crested newt; damage, destroy or obstruct access to a structure used for shelter or protection by a great crested newt; or possess or transport a great crested newt.

Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone intentionally to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992 which makes it an offence to kill, injure or possess a badger; interfere with, damage or destroy a badger sett including obstructing access to a badger sett; cruelly treat or harm a badger; or disturb a badger in a sett.

Otters

Otters and their resting places are protected under the Wildlife and Countryside Act 1981 (as amended) and the The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This legislation makes it an offence to deliberately kill, injure or capture an otter; deliberately disturb an otter in their breeding or resting places; damage, destroy or obstruct access to their resting or breeding places.

Water Voles

Water voles are protected under the Wildlife and Countryside Act 1981 (as amended) from killing or taking by certain prohibited methods. Their breeding and resting places are fully protected from damage, destruction or obstruction; it is also an offence to disturb them in these places.

Dormice

Hazel dormice are protected under both The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981 (as amended). Dormice and their breeding sites and resting places are fully protected. Without a licence it is an offence for anyone to deliberately disturb, capture, injure or kill them. It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess or sell a wild dormouse.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to kill, injure or take wild birds; take, damage or destroy the nest of wild birds while it is in use or being built; or take or destroy the eggs of wild birds.

Certain bird species are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (as amended). Under this legislation they are afforded the same protection as all wild birds and are also protected against **disturbance** whilst building a nest, or on or near a nest containing eggs and or unfledged young.

White-clawed crayfish

White-clawed crayfish are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) protecting them from harm, disturbance and

capture without an appropriate licence. It is illegal to buy or sell white-clawed crayfish whether alive or dead.

Invertebrates

Three UK invertebrate species are protected under The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – large blue butterfly, fisher's estuarine moth, little ramshorn whirlpool snail. It is an offence for anyone to deliberately disturb, capture, injure or kill them. It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess, or sell these species.

Approximately 400 further invertebrate species are listed as 'Species of Principle Importance under Section 41 of the NERC Act (see below).

Invasive Plant Species

It is prohibited to plant or otherwise cause to grow in the wild any species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The Environmental Protection Act 1990 also classifies certain invasive plants as controlled waste which must be disposed of safely at an appropriately licensed landfill site (e.g. Japanese knotweed).

Under section 57 of the Anti-social Behaviour, Crime and Policing Act 2014, if an individual or an organisation fails to control an invasive plant species which is having a detrimental effect on the quality of life of those in the locality. A notice can be issued after a mandatory written warning has been served. Breach of this notice, without reasonable excuse, would be a criminal offence, subject to fixed penalty notice (a penalty of £100) or prosecution. On summary conviction an individual could be liable to a level 4 fine and an organisation (e.g. a company) could be liable to a fine not exceeding £20,000.

Planning Policy

In addition to the statutes described above, various planning policy imposes duties upon planning applicants to take account of protected species and habitats at sites of proposed development and in particular, protected species. The objective of this policy is to prevent a net loss of species and habitats diversity identified as priorities for the U.K. as a consequence of development activity.

National Planning Policy Framework (NPPF)

The National Planning Policy Framework is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution.

Planning policies should promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

Natural Environment and Rural Communities Act (NERC Act)

<u>Section 40 of the Natural Environment and Rural Communities Act 2006</u> places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity.

Priority Habitats and Species

Priority habitats and species are defined (NPPF, 2018) as 'Species and Habitats of Principle Importance included in the England Biodiversity List published by the Secretary of State under Section 41 (S41) of the Natural Environment and Rural Communities Act 2006 (NERC Act)'. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six **habitats** of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels.

There are 943 **species** of principal importance included on the S41 list. These are the species found in England which were identified as requiring action and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the Hen Harrier has also been included on the

list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

ODPM Circular 06/2005

This Government Circular entitled 'Biodiversity and Geological conservation – Statutory obligations and their impact within the planning system' (ODPM, 2005) provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

The potential effects of a development, on habitats or species listed as priorities under Section 41 of the NERC Act, and by Local Biodiversity Partnerships, together with policies in the England Biodiversity Strategy, are capable of being a material consideration in the preparation of regional spatial strategies and local development documents and the making of planning decisions.

The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development. Where this is the case, the survey should be completed and any necessary measures to protect the species should be in place, through conditions and/or planning obligations, before the permission is granted.

Statutory and Non-Statutory Sites

Name	Statutory/Non- statutory	Definition
SAC – Special Area of Conservation	Statutory	Strictly protected sites designated under the EC Habitats Directive, that will make a significant contribution to conserving habitats or species identified in Annexe I and II of the Directive (as amended).
SPA – Special Protection Area	Statutory	Strictly protected sites classified in accordance with Article 4 of the EC Birds Directive. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive).
SSSI – Site of Special Scientific Interest	Statutory	SSSIs provide statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features.
NNR – National Nature Reserve	Statutory	NNRs contain examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats or to provide opportunities for scientific study.
LNR – Local Nature Reserve	Statutory	LNRs are declared and managed for nature conservation, and provide opportunities for research and education, or simply enjoying and having contact with nature.
Ramsar – Ramsar Site	Statutory	Ramsar sites are wetlands of international importance designated under the Ramsar Convention.
LWS – Local Wildlife Site	Non-statutory	Areas of land with significant wildlife value for the local area.
SINC – Site of Importance for Nature Conservation	Non-statutory	Areas of land with significant wildlife value for the local area.
CWS – County Wildlife Site	Non-statutory	Areas of land with significant wildlife value for the county.



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