



Preliminary Ecological Appraisal and Preliminary Roost Assessment

Hornsey Police Station, Tottenham Lane, London N8 7EJ

Archaneum

Status	Issue	Name	Date
Draft	1	George Collier-Smith Msci (Hons), Consultant Ecologist	11/04/2023
Final	2	George Collier-Smith Msci (Hons), Consultant Ecologist	18/04/2023
Amended	2.1	George Collier-Smith Msci (Hons), Consultant Ecologist	19/04/2023

Arbtech Consultant's Contact Details:

George Collier-Smith
Consultant Ecologist
Tel: 07706 320 940 **Email:** georgecs@arbtech.co.uk
<https://arbtech.co.uk>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

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

Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

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

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

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Archaneum to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Hornsey Police Station, Tottenham Lane, London N8 7EJ (hereafter referred to as “the site”). The survey was required to inform a planning application for retain, refurbish and extend the existing police station (Block A) alongside the construction of two new build blocks (Blocks B & C) to provide 29 new dwellings (10 houses, 19 flats) with associated landscaping (hereafter referred to as “the proposed development”).

The following is work you will need to commission to comply with planning policy and legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 7 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Habitats and flora	There are no notable habitats within the site but four habitats are present within 2km of the site, the closest being deciduous woodland located 420m from the site. Other habitats within the site are common and widespread and have low ecological value. No protected or notable plant species were recorded during the survey.	The proposed development will be limited to the existing hard standing present on the site. No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the urban location of the site with surrounding physical barriers.	As the site currently consists entirely of hard standing, the proposed green wall and landscaping of the internal courtyard will provide 100% net gain for habitat units under the DEFRA metric (no linear or watercourse features are present on site). It is therefore unlikely that the LPA will request a BNG report or calculation for this application.
Foraging and commuting bats	There are no habitats on the site which could be used by bats for foraging or commuting.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development.
Hedgehog	The site offers no shelter or hibernation opportunities for hedgehogs. However, due to their highly mobile nature and tendency to frequent urban areas the presence of foraging and commuting individuals cannot be discounted.	The development is limited to the loss of existing hard standing which is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.	A precautionary working method will be implemented during construction.

Contents

1.0 Introduction and Context6

1.1 Background 6

1.2 Site Location and Landscape Context 6

1.3 Scope of the Report 6

2.0 Methodology8

2.1 Desk Study 8

2.2 Field Survey 8

2.3 Limitations 9

3.0 Results and Evaluation.....10

3.1 Designated Sites 10

3.2 Field Survey Results 11

4.0 Conclusions, Impacts and Recommendations20

4.1 Informative Guidelines 20

4.2 Evaluation 20

5.0 Bibliography25

Appendix 1: Proposed Development Plan..... 28

Appendix 2: Site Location Plan 32

Appendix 3: Habitat Survey Plan 33

Appendix 4: Legislation and Planning Policy 34

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Archaneum to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Hornsey Police Station, Tottenham Lane, London N8 7EJ (hereafter referred to as “the site”). The survey was required to inform a planning application to retain, refurbish and extend the existing police station (Block A) alongside the construction of two new build blocks (Blocks B & C) to provide 29 new dwellings (10 houses, 19 flats) with associated landscaping (hereafter referred to as “the proposed development”).

A plan showing the proposed development is provided in Appendix 1.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development. The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting.

No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author’s knowledge, by any other consultancy.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference TQ30638902 and has an area of approximately 0.2ha comprising a single block of buildings which comprise Hornsey Police Station. It is surrounded by a highly urban local setting, with residential plots and local stores present in the immediate vicinity of the site. The wider landscape comprises the same infrastructure, and the city of London extends to the south. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

The PEA element of this report describes the baseline ecological conditions at the site, evaluates habitats within the survey area in the context of the wider environment and describes the suitability of those habitats for notable or protected species. It identifies possible ecological constraints as a result of the proposed development and summarises the requirements for further surveys and mitigation measures to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

The PRA element of this report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken to record baseline information on the site and surrounding area including habitat types and their suitability for notable or protected species, including roosting bats.

- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.
- Potential impacts on features of value, as a result of the proposed development, have been identified.
- Recommendations for further surveys and mitigation have been made.
- Opportunities for the enhancement of the site for biodiversity have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a review of the magic.gov.uk database for statutory designated sites within a 2km radius of the site. Landscape value and the presence of notable habitats as well as granted European Protected Species Licence (EPSL) and notable species records held on magic.gov.uk database has also been considered where these are within influencing distance of the site.

2.2 Field Survey

The survey was undertaken by George Collier-Smith (Accredited Agent on Natural England Bat Licence Number: 2018-33540-CLS-CLS) on 12/04/2023.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in *UK Habitat Classification User Manual* (UK Habitat Classification Working Group, 2018). All land parcels are described and mapped and, where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management. Botanical species lists were compiled with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species.

Preliminary Roost Assessment

The PRA focussed on three built structures which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the buildings for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the buildings was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

Suitability Assessment

Built structures were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats

Classification	Feature of building and its context
Moderate to high	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data). Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	A small number of possible roost sites or features, used sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
Negligible	Unsuitable for use by bats.

2.3 Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

There were no specific limitations to the survey.

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 2 below. The presence of non-statutory designated sites within 2km cannot be established without biological records data from GIGL. However, it is considered unlikely that such sites would be present in the immediate vicinity due to the lack of greenspace and built up nature of the land surrounding the site.

Table 2: Statutory designated sites within 2km radius of the site

Designated site name	Distance from site	Reasons for notification from Natural England and GIGL Name
Alexandra Palace and Park LNR	750m north	The Park is home to 694 different types of plants, animals and fungi, including 212 different types of insects and 26 types of arachnids! Big and small, all of these species play a role in balancing our delicate ecosystem. While many plants and animals found in the park are common to London, 38 species in Alexandra Park are classed as rare or protected by legislation.
Railway Fields LNR	1250m south east	Railway Fields Nature Reserve is in the heart of Haringay, North London, where it offers a piece of tranquillity away from busy Green Lanes. This former disused railway goods yard now boasts a Green Flag award for environmental quality. Lush vegetation blocks out noise from surrounding streets, and 21 kinds of butterfly have been recorded as well as more than 60 species of birds.
Parkland Walk LNR	1250m south	Parkland Walk is along the old railway track that ran between Finsbury Park and Alexandra Palace. The 4.5 miles provides a chance to enjoy nature in the heart of the city. It's London's longest local nature reserve and supports a remarkable range of habitats and wildlife. Over 200 species of wildflower have been recorded. It's perhaps the only place in Haringey where orchids rub shoulders with dandelions and ivy clammers up fig trees. Hedgehogs, foxes, butterflies and a vast array of birds are spotted on a daily basis. A rare species of deer, the muntjac, is spotted from time to time.
Queens Wood LNR	1550m west	Queen's Wood is an ancient woodland and dates from at least 1600, possibly from prehistoric times. It became a local nature reserve in 1990. The ground flora is particularly rich for somewhere so close to central London. It includes a large population of: - wood anemone - native bluebells - wood goldilocks - wood sorrel The bird life is diverse and includes all 3 species of woodpecker. Over 100 species of spider have been spotted. A nationally rare jewel beetle is also widespread.
Lee Valley RAMSAR	4000m east	A series of embanked water supply reservoirs, sewage treatment lagoons, and former gravel pits extending along about 24km of the valley from near Ware southward to Finsbury Park in London. These water bodies support internationally important numbers of wintering Gadwall and Shoveler (Criterion 6) and nationally important numbers of several other bird species. The site also contains a range of wetland and valley bottom habitats, both humanmade and semi-natural, which support a diverse array of wetland fauna and flora. Four SSSIs are included within the site. Virtually all parts of the site are subject to management plans in which nature conservation is a high or sole priority. Potential threats from eutrophic condition of the water, over-abstraction of surface water for public supply in periods of drought, and urban development pressures are felt to be addressed by several directives and regulations. Non-consumptive recreational activities are important and mostly well regulated.
Lee Valley SPA	4000m east	The Lee Valley SPA comprises a series of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits that display a range of man-made and semi-natural wetland and valley bottom habitats.

3.2 Field Survey Results

The results of the field survey are illustrated in Appendix 3. The weather conditions recorded at the time of the survey are shown in Table 3.

Table 3: Weather conditions during the survey

Date:	12/04/2023
Temperature	13°C
Humidity	61%
Cloud Cover	0%
Wind	7mph
Rain	None

Habitats and Flora

The following habitats are present within and adjacent to the site:

- Buildings u1b5
- Other developed land; introduced shrubs u1b6 1160
- Built linear feature u1e

A description and photographs of each habitat are provided in Table 4.

No protected or non-native invasive plant species (as listed under Schedules 8 or 9 of the Wildlife and Countryside Act 1981) were identified on the site.

Table 4: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
Buildings u1b5	There are three buildings on site; their descriptions and value to roosting bats are outlined in the PRA section of the report below.	See table 4.

Other developed land;
introduced shrubs
u1b6 1160

The site is dominated by hard standing in the form of a tarmac car park, and concrete paving.

Introduced shrubs are present on the site around the boundaries, and along the perimeter of some buildings. Species identified was solely Butterfly Bush.



Built linear feature u1e	The site is enclosed by large brick walls. These are in excellent condition in all places, and no cracks or broken elements were noted.	
--------------------------	--	---

Fauna

Bats

The results of the PRA are provided in Table 5. No evidence of roosting bats was identified during the survey.

Table 5: Assessment of the suitability of the site for bats

Feature	Description	Photographs
Historical records	A search of the magic database returned two granted EPSLs for bats within 2km of the site. The closest record is located approximately 1400m south; the license allowed for the destruction of a common pipistrelle resting place.	
Bat foraging and commuting habitat	There are no habitats on site which provide foraging and commuting opportunities. Scattered trees present along adjacent roads, and within nearby residential garden areas provide the only foraging and commuting opportunities for local bat populations.	
B1 - overview	B1 is a large brick built building; it comprises three large blocks which are set over a single and two stories. The southern and western block feature pitched tiled roofs fit with flat stone tiles, and the eastern single storey block comprises a flat felt roof. There are numerous timber windows and doors, and the pitched roofs feature many large chimney structures.	
B1 – eastern elevation	The brickwork is in excellent condition, and no cracks are present. No gaps were seen around the edges of any of the windows and doors, or behind the soffit box present. The roof tiles are in a good overall condition and no raised or missing elements were noted. Additionally, there are no cracks in either of the large chimney structures, and the flashing around the base is not raised in any place.	

B1 – southern elevation	There are no cracks in the brickwork, or gaps around the edges of the windows and door. The chimneys are also in a good condition; there are no cracks and the flashing present is not raised in any places. Additionally, there are no raised or missing roof tiles present.	
B1 – northern elevation	The northern elevation comprises all three blocks of B1. The brickwork is in a good overall condition in all places, and no cracks were noted. Additionally, no gaps around the edges of the windows or doors were seen. The roof tiles are in an excellent condition, and no raised or missing elements were seen. The chimney structures present on the roof were also seen to be in a good condition and provide no value to roosting bats. No gaps were present behind the soffit either. In addition, the felt flat roof is in a good overall condition and is not raised or lifted in any place.	

B1 – western elevation	No cracks in the brickwork are present, and there are no gaps around the edges of the window or doors.	
B1 – Roof structure	A picture of the roof structures of B1 were taken internally and shown opposite. No raised or missing tiles were noted. Additionally, no signs of nesting birds were seen on the flat roof.	

B1 – interior	No loft space is present in B1 as a false ceiling is present on the top floors, which is pictured opposite.	
B1 – suitability assessment	B1 was assessed to provide negligible value for roosting bats owing to a lack of roosting features being present.	
B2 – Overview	B2 is a single storey timber building with a pitched roof. It is clad with horizontal timber cladding, and also has UPVC windows and doors. The timber cladding is in excellent condition, and no raised or lifted pieces of boarding were seen. Additionally, there are no gaps around the edges of the windows or door, or behind the UPVC soffit box which wraps the base of the roof. The roof itself is fit with bitumen felt; this is in a good condition in all places and is not raised or lifted along the edges. No loft space is present within B2,	
B2 – Suitability Assessment	B2 was assessed to provide negligible value for roosting bats owing to a lack of available roosting features.	

B3 - Overview	B3 is a single storey brick building in the north western corner of the site. The brickwork is in a good overall condition and no cracks were noted. A timber weatherboard is also seen and there are no gaps behind. The flat roofs are fit with bitumen felt which is in a good condition and provides no value to roosting bats. Additionally, there are no gaps around the edges of the doors or windows present. No loft space is present within B3.	
B3 – Suitability assessment	B2 was assessed to provide negligible value for roosting bats owing to a lack of available roosting features.	

Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 6.

Table 6: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability
Amphibians	There are no ponds located on site. Furthermore, there are no ponds located within 500m of the boundary of the site. The dominating hard standing present on site is considered to be unsuitable terrestrial habitat due to the lack of foraging, commuting and refuge opportunities it provides. Due to the lack of suitable onsite habitats, and no connectivity to suitable breeding habitats the presence of amphibians on site, including great crested newts is considered to be highly unlikely.
Reptiles	The site itself is dominated by hard standing which is considered to be unsuitable terrestrial habitats due to the lack of foraging, commuting and refuge opportunities they provide. Due to the dominating unsuitable on-site habitats and lack of connectivity to higher value areas such as scrub and suitable grassland and presence of fencing, the presence of reptiles on site is considered highly unlikely.
Badgers	No badger activity was recorded on site. Furthermore, no badger setts were recorded on or within 30m of the site. The site is considered to be unsuitable for sett excavation due to the flat terrain and dominating hard standing. Despite the highly mobile nature of badgers, the site itself is highly urbanised in its setting and lacks connectivity to higher value habitats such as appropriately sized woodland. As such, the presence of badgers on site is considered to be highly unlikely.
Hazel Dormouse	No suitable habitat present.
Hedgehog	Due to the lack of vegetated habitats, shelter and refuge opportunities on site are considered to be absent. However, due to the highly mobile nature of hedgehogs and their tendency to frequent highly urban areas the presence of foraging and commuting individuals on site cannot be discounted.
Otter and Water Vole	No suitable riparian habitat present.
Birds	The shrubs onsite were assessed to be too small in size to provide value for nesting birds. Due to the small size of the site and limited habitats present result in the site being assessed to be unsuitable to support a significant population of protected and/or notable population of breeding birds.
Invertebrates	Habitats on site are considered suitable to support an invertebrate assemblage that is common and widespread only. The site lacks features that may provide suitable habitats for protected and/or notable invertebrate species such as complex habitat mosaics and significant coverage of deadwood habitats.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

Likelihood of the Presence of Protected Species

Where physical evidence of the presence of protected species is indeterminate during the survey, the habitats on site are evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Where this report supports a planning application, the ecological interest of the study area (i.e. the area covered by the desk study and field survey) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 7 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development which will be to retain, refurbish and extend the existing police station (Block A) alongside the construction of two new build blocks (Blocks B & C) to provide 29 new dwellings (10 houses, 19 flats) with associated landscaping.

Table 7: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Opportunities ¹ Enhancement
Designated sites	There are four statutory sites within 2km of the site, the closest being Alexandra Park and Gardens located 750m from the site. The presence of non-statutory designated sites within 2km of the	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.	None.	None.

¹ The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

	site cannot be established without data from Greenspace Information for Greater London.			
Habitats and flora	There are no notable habitats within the site but four habitats are present within 2km of the site, the closest being deciduous woodland located 420m from the site. Other habitats within the site are common and widespread and have low ecological value. No protected or notable plant species were recorded during the survey.	The proposed development will be limited to the existing hard standing present on the site. No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the urban location of the site with surrounding physical barriers.	As the site currently consists entirely of hard standing, the proposed green wall and landscaping of the internal courtyard will provide 100% net gain for habitat units under the DEFRA metric (no linear or watercourse features are present on site). It is therefore unlikely that the LPA will request a BNG report or calculation for this application.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development: - Planting of native tree and shrub species. - Green roofs on new buildings. Species-specific enhancement opportunities are detailed later in this table.
Amphibians	No suitable habitat present.	No impacts are anticipated on great crested newt, as a result of the proposed development as this species is considered to be absent from the site.	None.	None.
Reptiles	No suitable habitat present.	No impacts are anticipated on reptiles as a result of the proposed development.	None.	None.
Roosting bats	All buildings on site were assessed to provide negligible value for roosting bats due to a lack of	Bats are very unlikely to be roosting within the buildings on site and as such, there are not anticipated to be any impacts on roosting bats as a result of the demolition part of B1, and the full demolition of B2 and B3.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	The installation of one bat box at the site will provide additional roosting habitat for bats. The bat boxes will be installed on one of the newly erected buildings.

	potential roost features.			Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat boxes will be a specification suitable for crevice dwelling species such as a Beaumaris woodstone bat box or a similar alternative brand.
Foraging and commuting bats	There are no habitats on the site which could be used by bats for foraging or commuting.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native tree, shrub and hedgerows to increase foraging opportunities.

			Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	
Badger	No suitable habitat present.	No impacts are anticipated on badgers as a result of the proposed development.	None.	None.
Hazel dormouse	No suitable habitat present.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	The site offers no shelter or hibernation opportunities for hedgehogs. However, due to their highly mobile nature and tendency to frequent urban areas the presence of foraging and commuting individuals cannot be discounted.	The development is limited to the loss of existing hard standing which is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.	A precautionary working method will be implemented during construction, including the following measures: - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: - Planting of native fruit bearing tree and shrub species. - Installation of gaps under boundary fencing.
Otter and Water Vole	No suitable riparian habitat present.	No impacts are anticipated on otters or water vole as a result of the proposed development.	None.	None.

Birds	The shrubs onsite were assessed to be too small in size to provide value for nesting birds. Due to the small size of the site and limited habitats present result in the site being assessed to be unsuitable to support a significant population of protected and/or notable population of breeding birds.	No impacts are anticipated on nesting birds as a result of the proposed development.	None.	The installation of one bird box at the site will provide additional nesting habitat for birds. The bird boxes will be installed on one of the new buildings. General purpose bird boxes should be positioned 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Species-specific bird boxes should be installed in line with manufacturers specifications
Invertebrates	Habitats on site are considered suitable to support an invertebrate assemblage that is common and widespread only. The site lacks features that may provide suitable habitats for protected and/or notable invertebrate species such as complex habitat mosaics and significant coverage of deadwood habitats.	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	None.

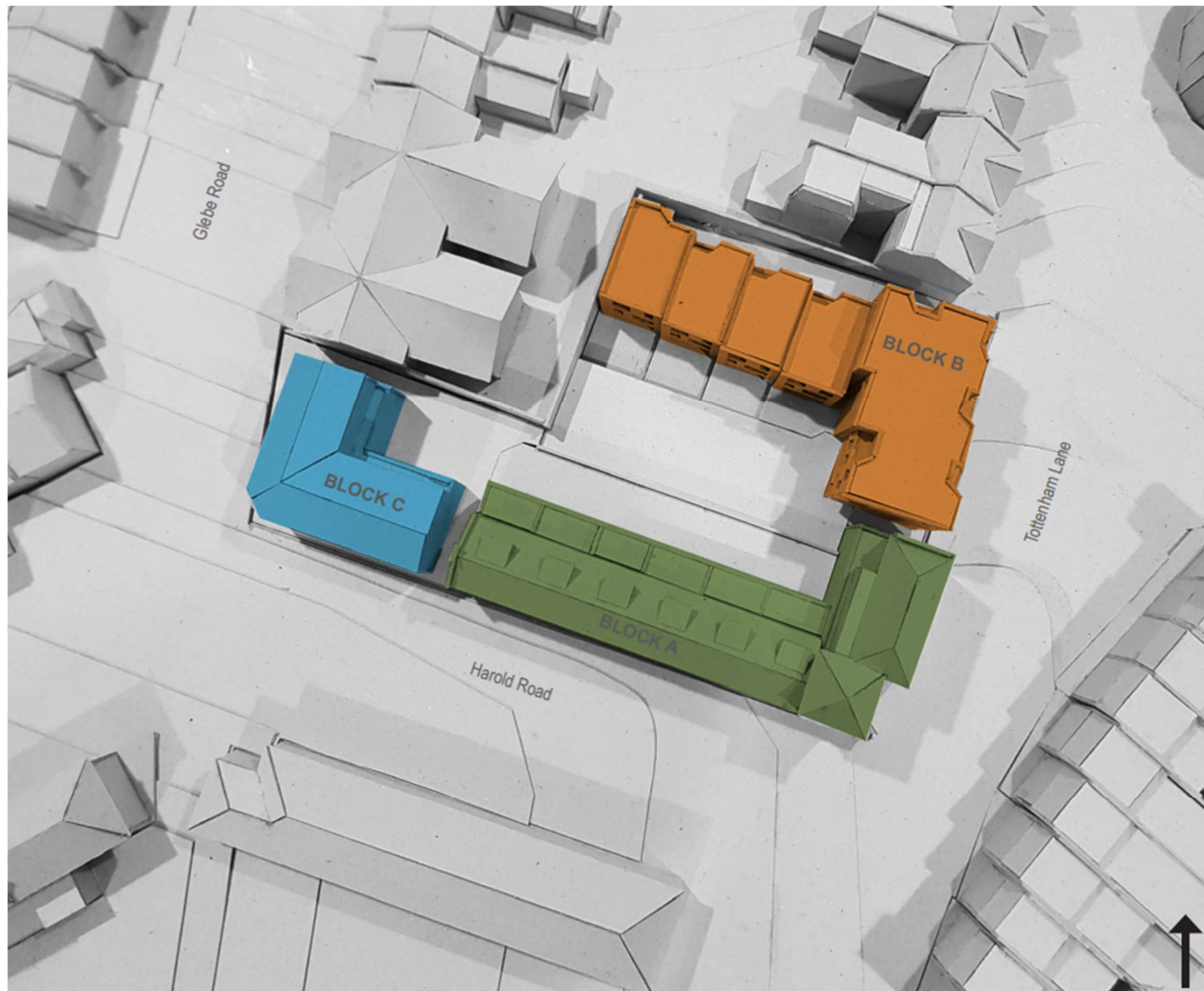
5.0 Bibliography

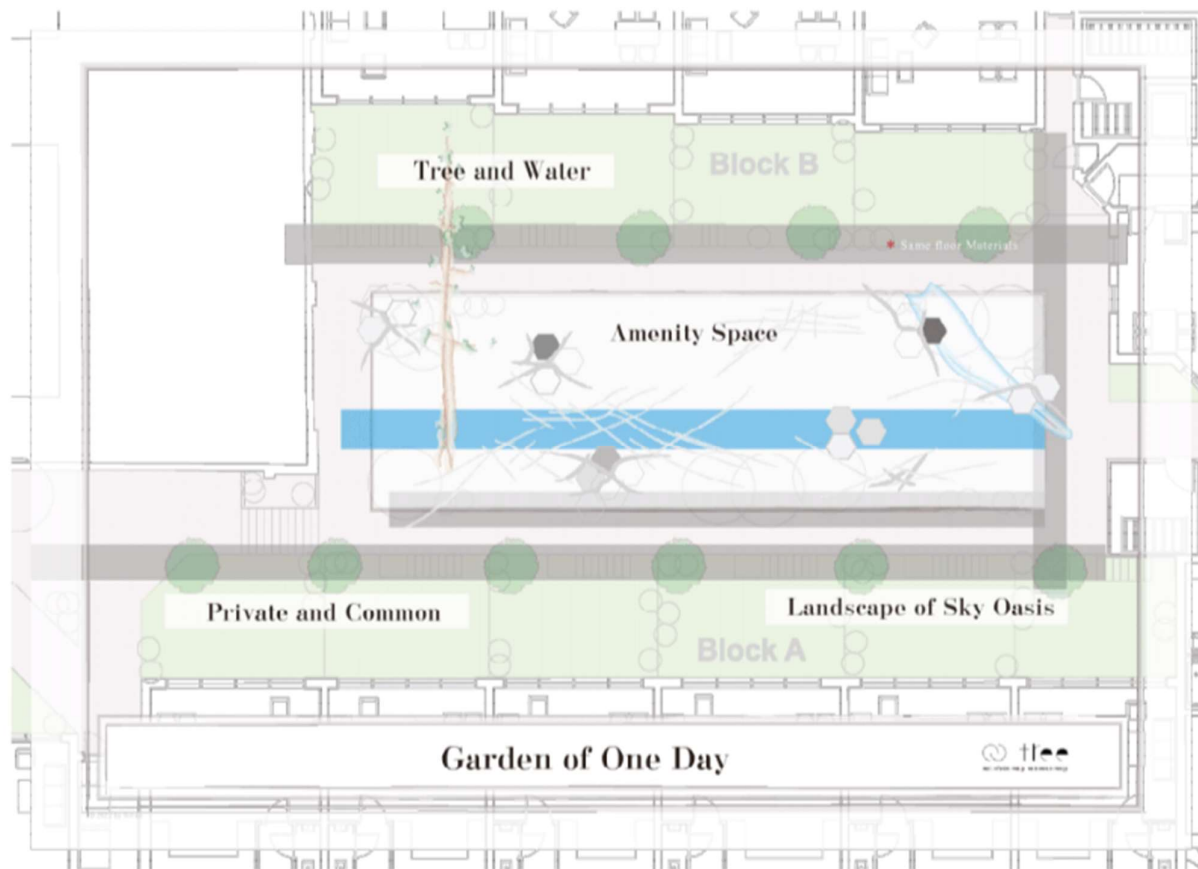
- Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Dejean, T., Griffiths, R., Foster, J., Wilkinson, J., Arnell, A., Brotherton, P., Williams, P. and Dunn, F. (2014). Using eDNA to Develop a National Citizen Science-based Monitoring Programme for the Great Crested Newt (*Triturus cristatus*). Biological Conservation. 183. 10.1016/j.biocon.2014.11.029.
- Bright, P., Morris, P., Mitchell-Jones, T. and Wroot, S. (2006). The Dormouse Conservation Handbook Second Edition.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chanin, P. (2003). Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10. Natural England, Peterborough.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins, J. (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Defra (2007). Hedgerow Survey Handbook. A Standard Procedure for Local Surveys in the UK. Defra, London.
- Edgar, P., Foster, J. and Baker, J (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth
<http://downloads.gigl.org.uk/website/Reptile%20Habitat%20Management%20Handbook.pdf>
- Garland, L. & Markham, S. (2008) Is Important Bat Foraging and Commuting Habitat Legally Protected? <http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf>
- Gent, T. and Gibson, S. (2003). Herpetofauna Workers' Manual. JNCC, Peterborough.
- Gilbert, G., Gibbons, D.W., and Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.
- Google Earth. Accessed on 18/04/2023
- Harris, S., Cresswell, P. and Jefferies, D.J. (1989). Surveying badgers. Mammal Society, London.

- HMSO: Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 <https://www.legislation.gov.uk/ukxi/2019/579/contents/made>
- HMSO: Countryside & Rights of Way Act (2000) <http://jncc.defra.gov.uk/page-1378>
- HMSO: Natural Environmental and Rural Communities Act (2006) <http://www.legislation.gov.uk/ukpga/2006/16/contents>
- HMSO: The Protection of Badgers Act 1992 (as amended) <http://www.legislation.gov.uk/ukpga/1992/51/contents>
- HMSO: Wildlife and Countryside Act 1981 (as amended 01.04.1996) <http://jncc.defra.gov.uk/page-1377>
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting.
- JNCC (2004). Bat Workers Manual, 3rd Edition. <http://jncc.defra.gov.uk/page-2861>
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Langton, T., Beckett, C. and Foster, J (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf
- Magic Database. <http://www.magic.gov.uk/MagicMap.aspx> Accessed on 18/04/2023
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- National Planning Policy Framework (2021). <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Natural England Designated Sites View. <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx> Accessed on 18/04/2023
- Natural England (2005). Organising Surveys to Determine Site Quality for Invertebrates: A Framework Guide for Ecologists. Natural England, Peterborough.
- Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol. <http://www.wildlifeco.co.uk/wp-content/uploads/2014/03/badgers-and-development.pdf>
- Oldham R.S., Keeble J., Swan M.J.S. and Jeffcote M. (2000). Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155. <https://www.thebhs.org/publications/the-herpetological-journal/volume-10-number-4-october-2000/1617-03-evaluating-the-suitability-of-habitat-for-the-great-crested-newt-triturus-cristatus/file>
- Panks, S., White., N., Newsome, A., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2021). Biodiversity Metric 3.0: Auditing and Accounting for Biodiversity – Technical Supplement. Natural England.
- Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.
- Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook. Third Edition. Wildlife Conservation Research Unit, Oxford.

- UK Habitat Classification Working Group (2018). UK Habitat Classification User Manual at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>
- Wray, S., Wells, D., Long, E. and Mitchell-Jones, T (2010). Valuing Bats in Ecological Impact Assessment. IEEM In-Practice. Number 70 (December 2010). Pp. 23-25.

Appendix 1: Proposed Development Plan





Initial sketch





1. Horizontal stone image



2. Vertical stone image



3. Vertical and horizontal stone image



Image of Landscape from above



4. Water caustics in the evening



5. Indirect lighting

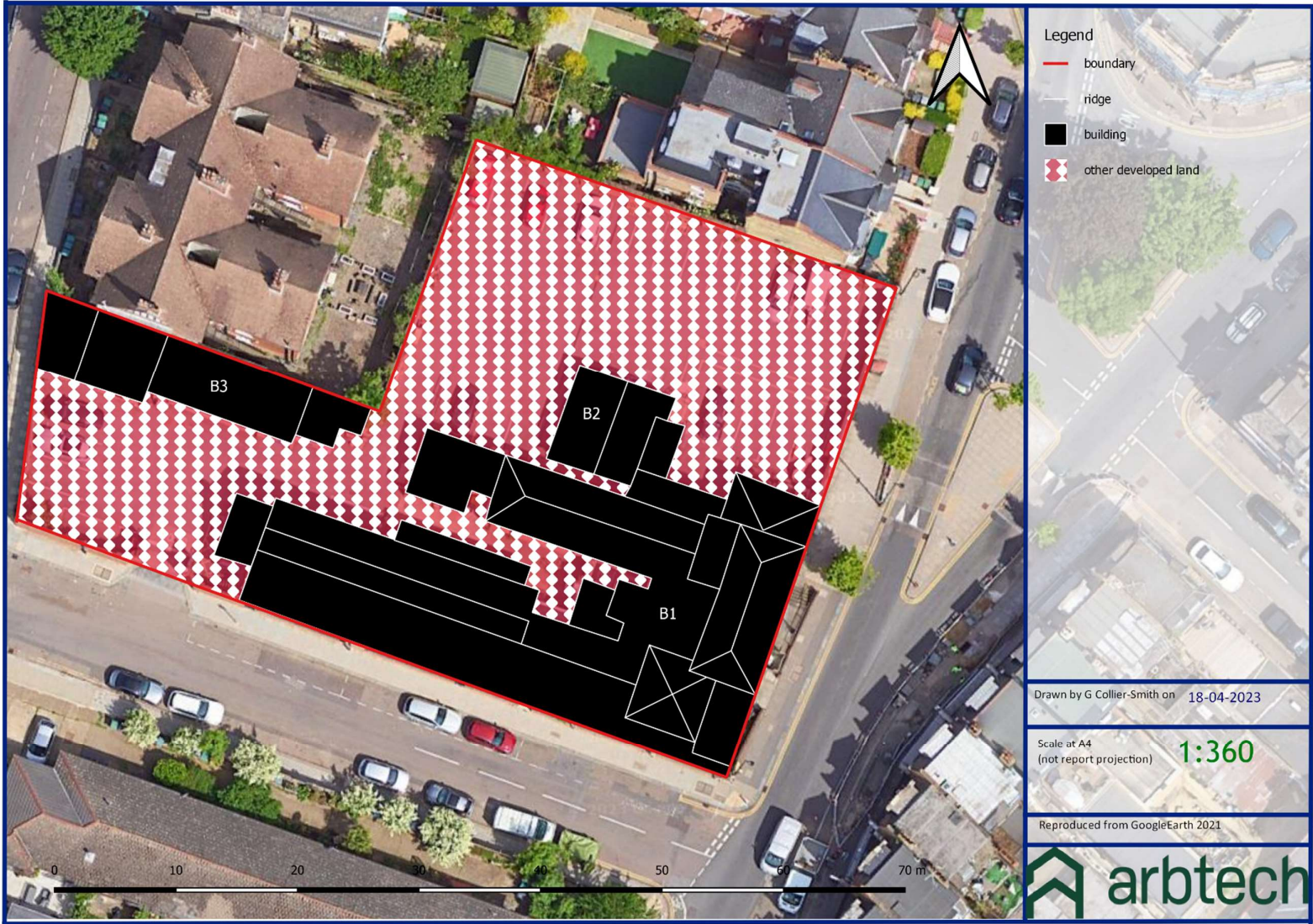


6. Glowing tree

Appendix 2: Site Location Plan



Appendix 3: Habitat Survey Plan



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

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

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

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

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

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

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

The Conservation of Habitats and Species Regulations 2017 (as amended) form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

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

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

National Statutory Designations

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

Local Statutory Designations

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

Non- Statutory Designations

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

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

The Hedgerow Regulations 1997

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

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

National and European Legislation Afforded to Species

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

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

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

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

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

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

Badgers

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

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

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

Birds

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

- Intentionally kill, injure or take any wild bird
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

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

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

Amphibians and Reptiles

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

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

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works likely to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Water Voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England) must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

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

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

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

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works likely to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

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

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

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

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

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

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

Hazel Dormice

Hazel dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate

- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

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

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require a European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White Clawed Crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

- Protected against intentional or reckless taking
- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

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

Wild Mammals (Protection Act) 1996

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

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

Legislation Afforded to Plants

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

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

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

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) will be required from the relevant countryside agency (i.e. Natural England) for works which are likely to affect species of plants listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England to plant or cause to grow in the wild due to their impact on native wildlife.

Species included (but not limited to):

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

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

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

Injurious weeds

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

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

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

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

NATIONAL PLANNING POLICY***Environment Act 2021***

The Environment Act 2021 (EA 2021) received Royal Assent on 9 November 2021 and is expected to become fully mandated within the next couple of years. The Act principally creates a post Brexit framework to protect and enhance the natural environment. Through amendments to the Town and Country Planning Act 1990, the Act will require all planning permissions in England (subject to exemptions which is likely to include householder applications) to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity net gain plan. This will ensure the delivery of a minimum of 10% measurable biodiversity net gain. The principal tool to calculate this will be the Defra Biodiversity 3.0 Metric. Works to enhance habitats can be carried out either onsite or offsite or through the purchase of 'biodiversity credits' from the Secretary of State. However, this flexibility may be removed (subject to regulations) if the onsite habitat is 'irreplaceable'. Both onsite and offsite enhancements must be maintained for at least 30 years after completion of a development (which period may be amended).

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

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

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

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

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

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to ‘local populations’ of EPS and not individuals/site populations.