



Preliminary Ecological Appraisal and Preliminary Roost Assessment

Alexandra Park School, Bidwell Gardens, London, N11 2AZ

Michael McKenzie (Head)

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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 Michael McKenzie (Head) to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Alexandra Park School, Bidwell Gardens, London, N11 2AZ (hereafter referred to as “the site”). The survey was required to inform a planning application for a multi-storey side extension to the existing flat roof sixth form building on school amenity area (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 8 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Habitats and flora	There are no notable habitats within the site, but three habitats are present within 2km of the site, the closest being deciduous woodland located ~250m south 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 development is limited to the loss of a small area of low-value modified grassland, a species-poor defunct hedgerow and one semi-mature tree. 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. No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to deciduous woodland, indirect effects such as pollution or tree damage could occur during construction.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).
Foraging and commuting bats	Linear habitats such as tree lines and hedgerows as well as scattered scrubs and trees along the site boundary could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of a small area of low-value modified grassland, species-poor defunct hedgerow and one semi-mature tree. Given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. The proposed development may include the use of lighting which could spill on to bat roosting,	A low lighting impact lighting strategy may be adopted for the site and post-development. See Table 8 for full specifications

		foraging or commuting habitat and deter bats from using these areas.	
Badger	There is little refuge for badgers within the site although badgers could commute and forage across the wider site. Due to the highly mobile nature of badgers, their future presence on-site cannot be discounted.	No works will be undertaken within 30m of a badger sett. Low-value modified grassland, one semi-mature tree and a species poor defunct hedgerow will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger 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 badgers, if present.	A precautionary working method will be implemented during construction. See Table 8 for full specifications
Hedgehog	Hedgehogs are extremely mobile and highly adapted to urban landscapes. Although no evidence indicating the presence of hedgehogs was recorded during the site survey, the site does have connectivity for the wider landscape for hedgehogs. As such, the future presence of hedgehogs foraging and commuting for transient periods cannot be discounted.	Low-value modified grassland, one semi-mature tree and a species poor defunct hedgerow will be removed during construction. The loss of such habitats 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. See Table 8 for full specifications

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Michael McKenzie (Head) to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Alexandra Park School, Bidwell Gardens, London, N11 2AZ (hereafter referred to as “the site”). The survey was required to inform a planning application for a multi-storey side extension to the existing flat roof sixth form building on school amenity area (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 TQ 29137 90945 and has an area of approximately 0.2ha comprising school classroom buildings, scattered trees, associated hardstanding and amenity grass with an artificial all-weather sports ground. It is surrounded by residential and commercial dwellings and their associated gardens, scattered parks and playing fields. Muswell Hill Golf Club lies adjacent to the site on the north and west boundaries and allotments also back onto the school at the northeast of the site. Alexandra Palace and Park is approximately 700m to the southeast and the A406 (North Circular Road) runs approximately 840m north of the site. Alexandra Palace train station is located ~1160m southeast of the site. 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 Giorgina Shaw (Accredited Agent under Natural England Bat Licence Number: 2019-41480-CLS-CLS) on Wednesday 16th August 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 one built structure and one tree 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 building 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 building 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.

For any surveyed trees:

A visual inspection was undertaken from ground level using binoculars to identify any possible roost features.

Suitability Assessment

The built structure and tree 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 and Table 2 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
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.

Moderate	Buildings or structures with one or more features suitable for more regular roosting due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation value such as maternity or hibernation roosts. Continuous habitat connected to the wider landscape which could be used by bats for commuting such as lines of trees, linked gardens. Foraging habitat in the surrounding area such as trees, scrub, grassland or water.
Low	Buildings or structures with one or more features suitable for use 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 largely isolated in the landscape. Or an isolated site not connected by prominent linear features.
Negligible	Unsuitable for use by bats.

Table 2: Features of a tree that are correlated with use by bats

Classification	Feature of tree and its context
Moderate to high (Difficult to separate moderate or high value trees from ground level without a close up inspection)	A tree with one or more potential roost sites that are obviously suitable for use by bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. Trees with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential to be 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.
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.

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. However, these records can be purchased upon request.

This limitation has 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 3 below. The presence of non-statutory designated sites within 2km cannot be established without biological records data from Greenspace Information for Greater London CIC (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.

The site lies within the impact risk zone for Hampstead Heath Woods Site of Special Scientific Interest (SSSI), located approximately 3.9km southwest of the site. Proposed development type is not listed as a possible high risk with regard to this designation.

Table 3: Statutory designated sites within 2km radius of the site

Designated site name	Distance from site	Reasons for notification from Natural England
Alexandra Palace & Park Local Nature Reserve (LNR)	~700m south	Sited on one of London's highest points the reserve provides amazing views across the city. The park was declared an LNR in its 150th anniversary year. There are a good range of habitats to see, for an urban area. The reserve is particularly well known for its bird species.
Parkland Walk Local Nature Reserve (LNR)	~1400m south	The predominant habitat at Parkland Walk is secondary woodland. A large area of naturalised wild plum are present in the Islington section of Parkland Walk. English elm is occasionally present and most abundant in the Islington section. The Islington stretch is also very important for a range of wildlife and includes the borough's only area of acidic grassland which is home to several rare plants and insects.
Coppetts Wood and Glebelands Local Nature Reserve (LNR)	~1430m northwest	The Glebelands is a remnant of Finchley Common and is a strip of woodland and ponds. The site is home to a variety of wild flowers and birds and even slow worms.
Coldfall Wood Local Nature Reserve (LNR)	~1500m southwest	Ancient Oak-Hornbeam woodland with coppice, wetland area and stream.

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 4.

Table 4: Weather conditions during the survey

Date:	16/08/2023
Temperature	23°C
Humidity	52%
Cloud Cover	20%
Wind	4mph
Rain	None

Habitats and Flora

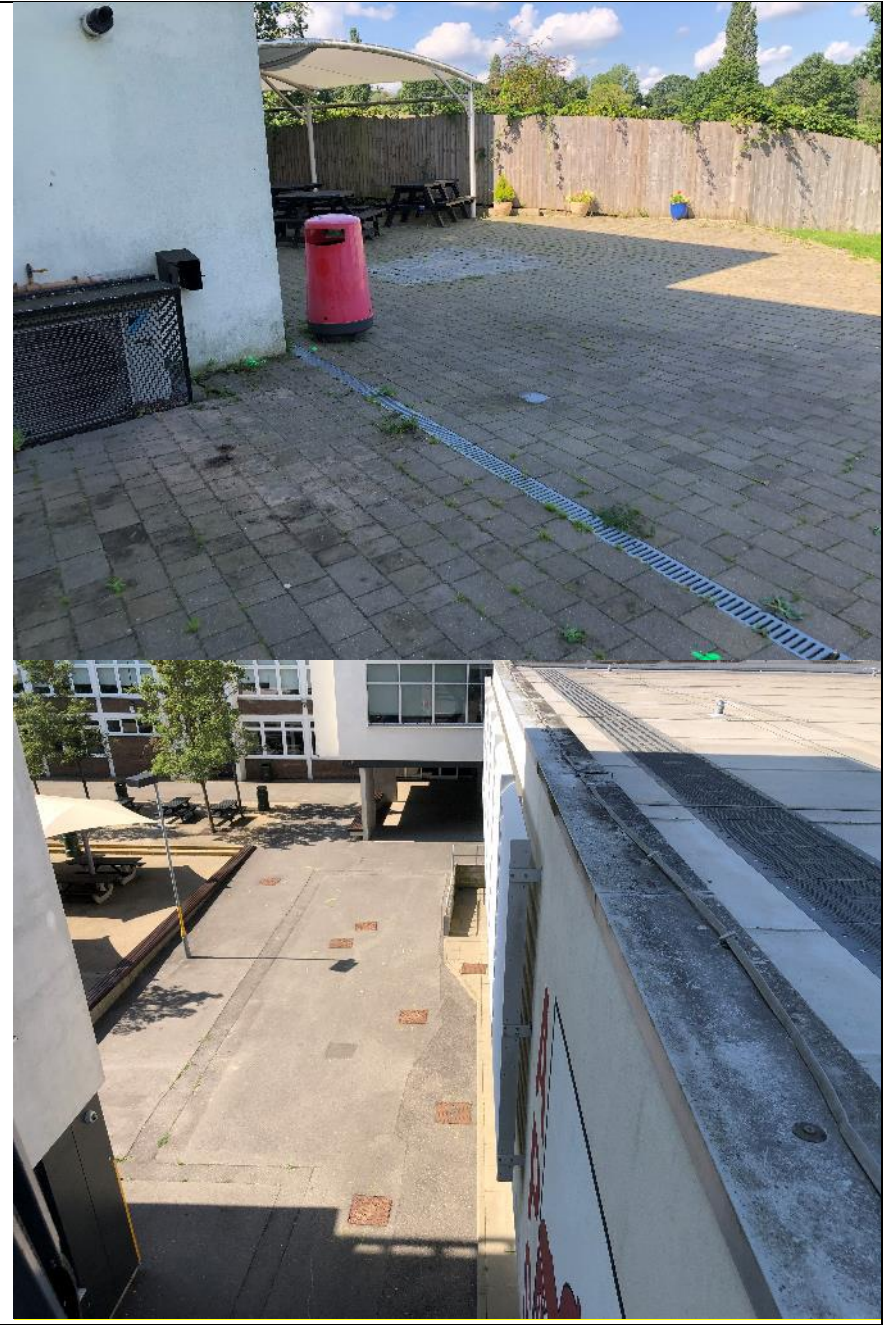
The following habitats are present within and adjacent to the site:

- **u1b5 92:** buildings – educational
- **u1b:** developed land; sealed surface
- **g4, 66, 231, 11:** modified grassland, frequently mown - vegetated garden with scattered trees
- **h2b:** other hedgerows
- **u1e 69:** built linear feature – fence

A description and photographs of each habitat are provided in Table 5.

Table 5: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
u1b5 92: buildings – educational	There is one main built structure (B1, an academic building) within the red line boundary of the school site. As per the proposed development a multi-storey side extension will be erected on the northeast and northwest elevation of B1. Descriptions of the building available in the PRA section below (table 6).	Photographs of buildings available in the PRA section below (table 6).

u1b: developed land; sealed surface	There is hardstanding adjacent to B1 on all aspects in the form of concrete paving, tarmac, and gravel.	
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g4, 66, 231, 11: modified grassland, frequently mown - vegetated garden with scattered trees	The site is dominated by a regularly managed modified grassland to the northeast of the site, which is subject to frequent mowing and disturbance from students, resulting in the short sward length of approximately 5cm. Species richness is poor, comprising perennial rye grass (D), white clover (D), common dandelion (A), common daisy (A), broadleaf plantain (F), ribwort plantain (F), meadow buttercup (F), common nettle (O), thistle (O), shepherd's purse (O), lesser swinecress (O), common ragwort (R), common dock (R) and black medic (R). There is a section of vegetated garden along the eastern boundary at the bottom of the managed grassland area which includes species such as bindweed (D), bramble (A), ivy (A), dogwood (O) and elder (O) growing over and covering a wire mesh fence adjacent to the allotments. Four scattered trees are also present on the managed grassland area. Three of the trees include elder and oak species which are located northeast of the site and at the bottom of the managed grassland area. The other tree is a semi-mature rowan (see red arrow) and is situated close to B1 and lies on the footprint of the proposed extension and was therefore assessed for suitability to support roosting bats in the PRA section below.	 The top photograph shows a wide view of a grassy area with several picnic tables. A red arrow points to a tree in the background. The bottom photograph shows a close-up of a dense thicket of vegetation, including ivy and dogwood, growing over a wire mesh fence.
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h2b: other hedgerows	Along the section of the southern boundary is a species poor hedgerow. This hedgerow is comprised of beech and is partly defunct, with large gaps in places. This hedgerow will be removed as per the proposed development.	
u1e, 69: built linear features, fence	The site is enclosed along the north, northwest, and northeast boundaries. The fence which lies adjacent to the golf course is double skinned and comprises both timber fencing and metal railings (the metal railings set the boundary for Muswell Hill golf club). The fence line adjacent to the allotments covered with dense scrub comprises of wire mesh fencing.	

Fauna

Bats

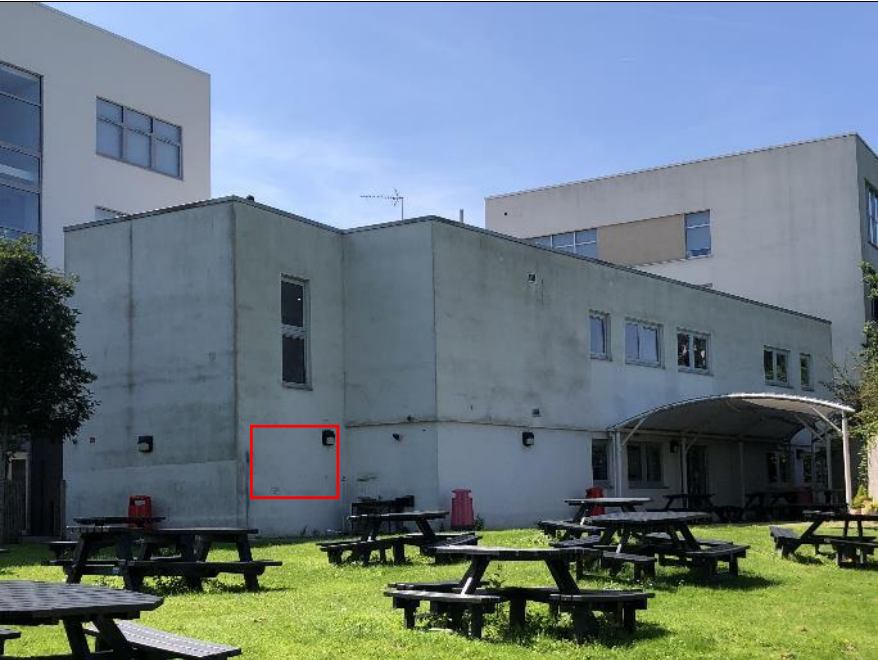
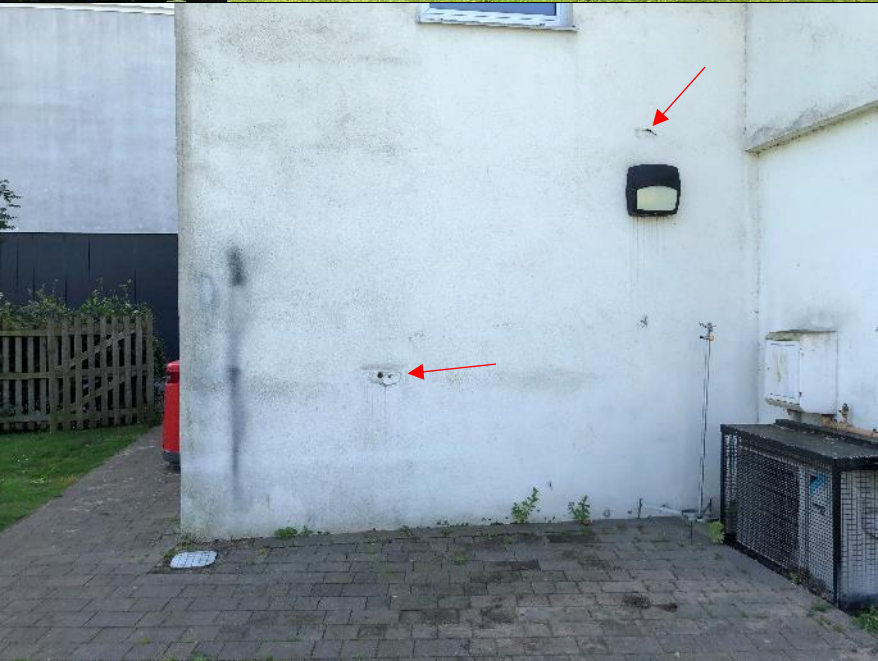
The results of the PRA are provided in Table 6. No evidence of roosting bats was identified during the survey.

Table 6: Assessment of the suitability of the site for bats

Feature	Description	Photographs
Historic records	A search of the MAGIC database returned three granted EPSL within a 2km radius of the site, the closest of which (2018-36809-EPS-MIT) being ~1220m to the west which allowed the destruction of a resting place for common pipistrelles. Details of the other two EPSLs are as follows: • 1,270m north – allowed impact on a breeding site, destruction of a breeding site and damage and destruction of a resting place for common pipistrelles (2015-13317-EPS-MIT). • 1,430m northeast – allowed no impacts and impact on a hibernation site is unknown for daubenton’s bat (2018-36923-EPS-MIT-1).	 Map reproduced from GoogleMaps (2023) depicting aerial overview of habitats within a 2km radius of the site; red dot indicates site location, blue dots indicate EPsLs.
Bat foraging and commuting habitat	Linear habitats such as tree lines and hedgerows as well as scattered scrubs and trees along the site boundary could be used by local bat populations for foraging and commuting. In addition, the adjacent golf course, allotments, and a network of rear amenity gardens link the site to green spaces such as woodlands and parks in the wider landscape.	

B1 - overview	B1 is a detached, two-storey, rendered academic building, with a flat, concrete roof which appears to be in good, sealed condition. The doors and windows are metal framed and in tight-fitting condition throughout. There is an external spiral staircase fixed to B1 situated on the southwest elevation. A metal railing/guard is also fixed externally on B1, covering the second-storey windows on the southeast and southwest elevations. There is no internal loft void within B1, and no chimneys are present. An arched canopy is also present on the northwest elevation, however, is not fixed to B1. B1 will not be demolished per the proposed development; instead, an extension will be constructed on the northeast elevation as well as a reconstruction to the external staircase on the southwest elevation.	
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B1 – southeast and southwest elevation	Windows and doors appear to be in excellent, tight-fitting condition along these elevations with no suitable roosting features. The rendered walls also appear to be in excellent condition with no gaps or crevices suitable to provide access into the building or into an external cavity suitable to support roosting bats. There are no gaps where the overhanging metal lip (part of the roof structure) joins the rendered wall which bats could exploit for roosting or access. A search of the floor, windows and flat surfaces around the building found no evidence of bat use.	
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B1 – northeast and northwest elevation	Windows and rear door appear to be in excellent, tight-fitting condition along these elevations with no suitable roosting features. The rendered walls also appear to be in excellent condition with no gaps or crevices suitable to provide access into the building or into an external cavity suitable to support roosting bats. However, there are two small damages to the wall (see red square opposite) on the northwest elevation. The damages do not provide suitable roosting features for bats (see close-up photograph, below). There are no gaps where the overhanging metal lip (part of the roof structure) joins the rendered wall which bats could exploit for roosting or access. A search of the floor, windows and flat surfaces around the building found no evidence of bat use.	
B1 – northwest elevation – damages to rendered wall	The damages to the wall are approximately 1m and 2m above ground level. Upon close inspection, they do not provide gaps or crevices suitable to provide access into the building or into an external cavity suitable to support roosting bats. The damages are also directly near to an external light and thus are unsuitable for roosting bats due to light disturbance.	

B1 – northwest elevation – arched canopy	An arched canopy is present on the northwest elevation, however, is not fixed to B1. This structure provides no suitable roosting features for bats. A search of the floor also found no evidence of bat use.	
B1 – roof structure	The flat roof of B1 has no suitable features for supporting roosting bats. Access to the roof was via a cherry picker.	

B1 – interior	There is no internal loft void within B1. The walls and ceilings are well sealed. A search of the floor and flat surfaces in and around the building found no evidence of bat use.	
B1 – suitability assessment	B1 is deemed to have an overall negligible suitability for roosting bats in line with Good Practice Guidelines (Collins, J. (Ed) 2016). This is due to the lack of suitable roosting features for void or crevice-dwelling species of bats and no evidence of bats found in or around the site.	N/A
B1 – breeding birds and other incidental observations	No evidence indicating the presence of nesting birds was recorded during the PRA and there are no visible access opportunities into B1 for birds.	N/A

T1 – suitability assessment	T1 is a semi-mature rowan tree which stands at approximately ~ 6m tall (TQ 29151 90952). T1 lies on the footprint of the proposed extension of B1 and will be removed. No roosting features or bat evidence were identified on T1 from ground level. This tree is deemed to have negligible habitat value for roosting bats.	
T1 – breeding birds and other incidental observations	No evidence indicating the presence of breeding birds was found on T1.	N/A

Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 7.

Table 7: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability	Biological records data
Amphibians	Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton <i>et al.</i> 2001). A review of OS aerial imagery indicates the presence of one pond within 500m of the site (aside from a small, manmade pond approximately 3m² which was not found on OS maps and is located within the school site, but not within the red line development boundary). The one pond reviewed on aerial imagery is located approximately 340m east of the proposed development site. The pond is separated from the site by urban infrastructure including tarmac roads, buildings, artificial sports grounds, and extensive managed grassland in the form of a playground, bowling green and recreational grounds which are regularly mown resulting in a short sward length. These landscape features are suboptimal for great crested newts due to a lack of refuge from predation. As a result, and given the distance of this pond from the site, these landscape features are likely to represent a significant barrier to dispersal eliminating connectivity to the site for great crested newts. Additionally, habitats within the site include hard-standing and regularly mown grassland, which along with the presence of suboptimal habitats in the immediate landscape are likely to limit dispersal. Due to this and the current use and management of the proposed development site, no suitable habitat for great crested newts was identified. Per the above, it is highly unlikely this species could be present within the development site at any time of year.	A review of the MAGIC database returned no granted EPSLs or pond survey records for great crested newts (GCN) within 2km of the site. One GCN class survey licence within 2km of the site was returned. The record is located ~ 660m northeast of the site. Due to the distance, the GCN population indicated is likely to be isolated from this site.
Reptiles	The development area provides no significant reptile habitat comprising of buildings, maintained amenity grass and hardstanding associated with the school. Due to the current management and use of the proposed development site, no suitable habitat for common reptiles was identified. It is highly unlikely this species could be present within the development site at any time of year.	A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site.

Badgers	No evidence (e.g., latrines, snuffle holes, hairs and mammal trails) indicating the presence of badgers was recorded during the site survey and no badger setts are foreseen within 30m of the site. There is little refuge for badgers within the site although badgers could commute and forage across the wider site.	Records data for badgers are not held on the MAGIC database.
Hazel Dormouse	The site features no habitats which might provide opportunities for hazel dormouse, such as established woodland or mature, native hedgerows as it is based in an urban setting. It is highly unlikely this species could be present within the development site at any time of year.	A review of the MAGIC database returned no granted EPSL records for hazel dormice within 2km of the site.
Hedgehog	Hedgehogs are extremely mobile and highly adapted to urban landscapes. The site boundaries, grassland and scrub on-site provide suitable foraging and commuting habitat for hedgehogs. As such, presence of hedgehogs during works cannot be discounted.	Records data for hedgehogs are not held on the MAGIC database.
Birds	There are no suitable habitats for any Schedule 1 species such as barn owls on site. No evidence of nesting birds was observed on the building (B1) or tree (T1) or within the development site during the survey. The remaining buildings, scattered trees, and hedges across the rest of the school outside of the redline boundary could support nesting birds (common garden birds). However, no evidence of which was observed, and these areas do not form part of the proposals and will be retained.	Records data for birds are not held on the MAGIC database.
Invertebrates	Trees, scrub, hedgerows, and grassland are able to support a number of common garden invertebrates. However, the site does not offer a large amount of habitat for rarer or notable invertebrate assemblages.	Records data for invertebrates are not held on the MAGIC database.
Riparian mammals (Otter and Water Vole)	There is no connectivity to water courses or riparian habitats in the wider landscape. The site is not suitable for otters or water voles.	A review of the MAGIC database returned no granted EPSL records for otters within 2km of the site. Records data for water voles are not held on the MAGIC database.

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 8 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 comprise the erection of a multi-storey side extension to the existing flat roof sixth form building on school amenity area.

Table 8: 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 Palace and Park Local Nature Reserve (LNR) located ~700m south from the site. The site lies within the impact risk zone for Hampstead Heath Woods Site of Special Scientific Interest (SSSI) located ~3.9km southwest of the site and the proposed development is not listed as a possible high risk for this designation. The presence of non-statutory designated sites within 2km of the site cannot be established without data from Greenspace Information for Greater London CIC (GIGL).	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).

Habitats and flora	There are no notable habitats within the site, but three habitats are present within 2km of the site, the closest being deciduous woodland located ~250m south 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 development is limited to the loss of a small area of low-value modified grassland, a species-poor defunct hedgerow and one semi-mature tree. 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. No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to deciduous woodland, indirect effects such as pollution or tree damage could occur during construction.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).	The following habitat creation and enhancement opportunities could be incorporated into the proposed development: • Planting of native tree species • Planting of hedgerows containing native species, such as hazel, hawthorn, holly, blackthorn and field maple. Species-specific enhancement opportunities are detailed later in this table.
Amphibians	A review of OS aerial imagery indicates the presence of one pond within 500m of the site. The pond is located approximately 340m east of the proposed development site. The pond is separated from the site by urban infrastructure including tarmac roads, buildings, artificial sports grounds, and extensive managed grassland in the form of a playground, bowling green and recreational grounds which are regularly mown resulting in a short sward length. These	The proposed development will result in the loss of a small area of low-value modified grassland, species-poor defunct hedgerow and one semi-mature tree. The loss of such habitats is likely to be inconsequential to local amphibian populations owing to their low value.	No impacts on great crested newt populations will result and no loss of suitable habitat will occur. No further surveys are required.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for amphibians: • A new wildlife pond (no fish or fowl provision) on-site area would be the most beneficial enhancement for amphibians. • Planting of native scrubs • Log piles or brash piles could be created to provide hibernacula and

	landscape features are suboptimal for great crested newts due to a lack of refuge from predation. As a result, and given the distance of this pond from the site, these landscape features are likely to represent a significant barrier to dispersal eliminating connectivity to the site for great crested newts. Additionally, habitats within the site include hard-standing and regularly mown grassland, which along with the presence of suboptimal habitats in the immediate landscape are likely to limit dispersal. Due to this and the current use and management of the proposed development site, no suitable habitat for great crested newts was identified. Per the above, it is highly unlikely this species could be present within the development site at any time of year.			refugia habitat for common amphibians.
Reptiles	The development area provides no significant reptile habitat comprising of buildings, maintained amenity grass and hardstanding associated with the school. Due to the current management and use of the proposed development site, no suitable habitat for common reptiles was identified. It is highly unlikely this species could be present within the	The proposed development will result in the loss of a small area of low-value modified grassland, species-poor defunct hedgerow and one semi-mature tree. The loss of such habitats is likely to be inconsequential to local reptile populations owing to their low value.	No impacts on any reptile populations will result and no loss of suitable reptile habitat will occur. No further surveys are required.	None.

	development site at any time of year.			
Roosting bats (B1 and T1)	The building (B1) has negligible value for roosting bats due to a lack of potential roost features and no evidence of bats found in or around the building. The tree (T1) has negligible value for roosting bats due to no roosting features and the good condition of the tree as well as being of a young age.	Bats are very unlikely to be roosting within this building and tree and as such, there are not anticipated to be any impacts on roosting bats as a result of the extension to this building.	No further surveys are recommended to inform the planning application. 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 two bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be installed on or incorporated within the fabric of the new building on-site or existing buildings or on mature, retained trees around the site boundary. 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 the Integrated Eco Bat Box or the Beaumaris Bat Box or a similar alternative brand.
Foraging and commuting bats	Linear habitats such as tree lines and hedgerows as well as scattered scrubs and trees along the site boundary could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of a small area of low-value modified grassland, species-poor defunct hedgerow and one semi-mature tree. Given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. The proposed development may include the use of lighting	A low impact lighting strategy may 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	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native trees, shrubs and hedgerows to increase foraging opportunities.

		which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	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. • 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 evidence (e.g., latrines, snuffle holes, hairs and mammal trails) indicating the presence of badgers was recorded during the	No works will be undertaken within 30m of a badger sett. Low-value modified grassland, one semi-mature tree and a	A precautionary working method will be implemented during construction, including the following measures:	None.

	site survey and no badger setts are foreseen within 30m of the site. There is little refuge for badgers within the site although badgers could commute and forage across the wider site.	species poor defunct hedgerow will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger 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 badgers, if present.	- 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 badgers could use. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist.	
Hazel dormouse	The site features no habitats which might provide opportunities for hazel dormouse, such as established woodland or mature, native hedgerows as it is based in an urban setting. It is highly unlikely this species could be present within the development site at any time of year.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	Hedgehogs are extremely mobile and highly adapted to urban landscapes. Habitats recorded on site are assessed to provide foraging and commuting opportunities for hedgehogs in the form of scrub, grassland and along the site boundaries, albeit limited. Although no evidence indicating the presence of hedgehogs was recorded during the site survey,	Low-value modified grassland, one semi-mature tree and a species poor defunct hedgerow will be removed during construction. The loss of such habitats 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	A precautionary working method will be implemented during construction, including the following measures: - Vegetation will be maintained at a short sward (5cm). - 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 onto retained	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: Native tree, hedgerow, and shrub planting.

	the site does have connectivity for the wider landscape for hedgehogs. As such, the future presence of hedgehogs foraging and commuting for transient periods cannot be discounted.	result in the death or injury of hedgehogs if present.	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.	
Riparian mammals (Otter and Water Vole)	There is no connectivity to water courses or riparian habitats in the wider landscape. The site is not suitable for otters or water voles.	No impacts are anticipated on otters or water voles as a result of the proposed development.	None.	None.
Birds	There are no suitable habitats for any Schedule 1 species such as barn owls on site. No evidence of nesting birds was observed on the building (B1) or tree (T1) or within the development site during the survey. The remaining buildings, scattered trees, and hedges across the rest of the school outside of the redline boundary could support nesting birds (common garden birds). However, no evidence of which was observed, and these areas do not form part of the proposals and will be retained.	No impacts are anticipated on nesting birds as a result of the proposed development.	None.	The installation of two bird boxes at the site will provide additional nesting habitat for birds. The bird boxes will be installed on mature trees around the site boundaries or retained 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	The site is suitable to common invertebrates.	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates: • Pollinator-friendly species • Retention of deadwood • Planting of native shrubs
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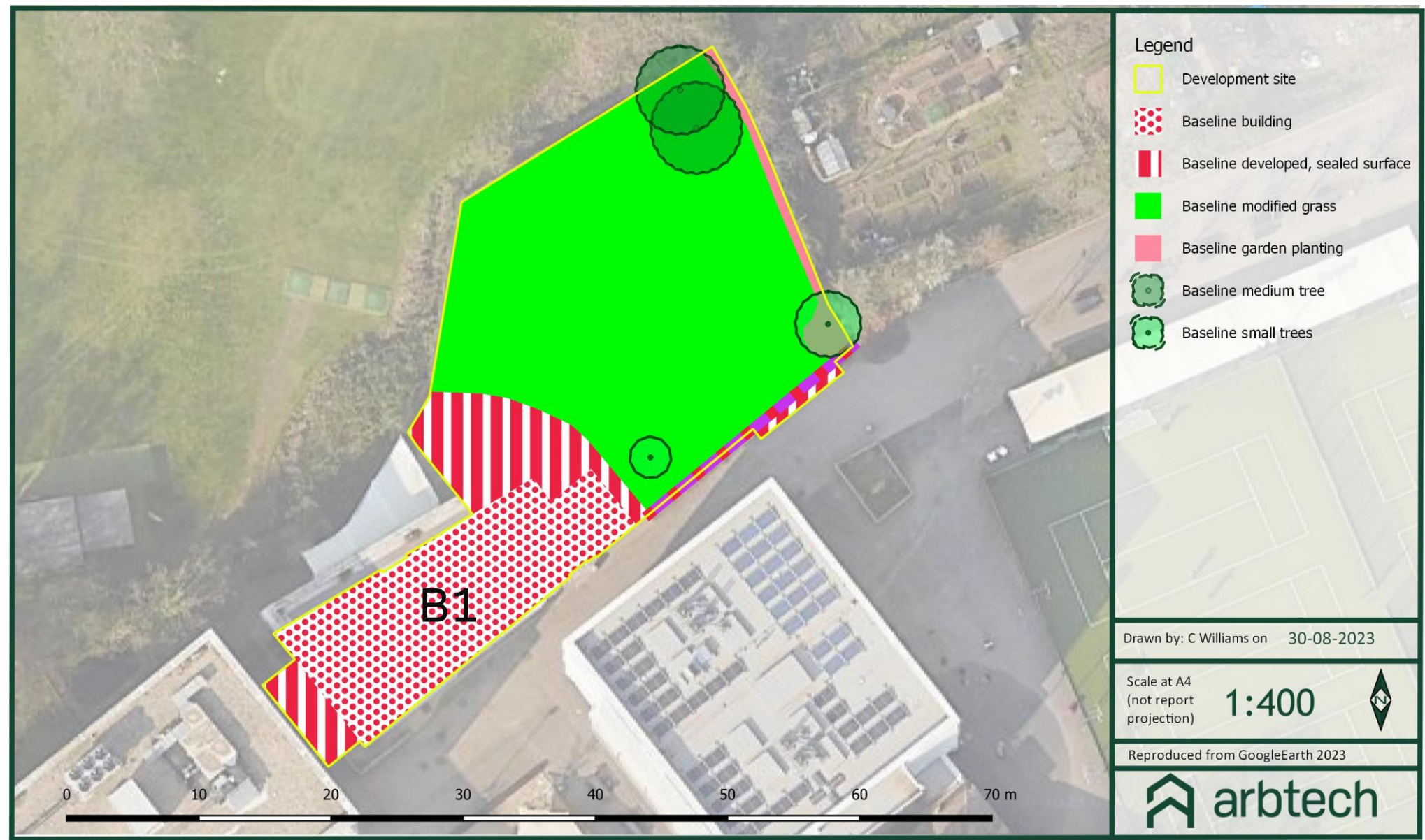
Appendix 1: Proposed Development Plan



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 *Naatrix 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.