

Ruislip High School, Ruislip

Ecological Appraisal

Final Report

August 2017

P14/65-4E



Ruislip High School, Ruislip

Ecological Appraisal

Report Release Sheet

Draft/Final:	Final Report
Issue Number:	P14/65-4E
Date:	August 2017
Client:	London Borough of Hillingdon Corporate and Property Construction Civic Centre High Street Middlesex UB8 1UW
Main Author(s):	Daniel O'Sullivan BSc (Hons) MRes MCIEEM
Contributors/Surveyors:	Daniel O'Sullivan BSc (Hons) MRes MCIEEM
Report Prepared for Issue by:	 Daniel O'Sullivan BSc (Hons) MRes MCIEEM
Report Approved for Issue by:	 Alison Hogan BSc (Hons) MSc MCIEEM

Doc. No EPR 10 Issue 04



Ecological Planning & Research Ltd

The Barn, Micheldever Station, Winchester, Hampshire SO21 3AR
Tel: 01962 794720 Fax: 01962 794721 email: info@epr.uk.com www.epr.uk.com

Ruislip High School, Ruislip

Ecological Appraisal

Contents

Executive Summary

1.	Introduction	1
2.	Methodology.....	2
3.	Results and Recommendations.....	4
4.	Enhancements.....	10
5.	Conclusions.....	11
6.	References	12

Maps

Map 1	Site Location and Nature Conservation Designations
Map 2	Habitats and Features

Appendices

Appendix 1	Applicable Nature Conservation Related Legislation and Policy
Appendix 2	Summary of Survey Methods
Appendix 3	Photographs of the Site
Appendix 4	Plant Species List
Appendix 5	Design Proposals

Ruislip High School, Ruislip

Ecological Appraisal

EXECUTIVE SUMMARY

This report has been prepared by Ecological Planning & Research Ltd (EPR) for London Borough of Hillingdon (LBH). EPR was commissioned by LBH to undertake an ecological appraisal to supply ecological information to aid in establishing design parameters for proposed works to Ruislip High School off Sidmouth Drive in Ruislip. A Phase 1 habitat survey of Ruislip High School site was undertaken on 10 December 2014 and an update survey conducted on 6 June 2017 by an experienced EPR ecologist. This report contains the results of the Phase 1 survey.

The site measures approximately 1.97ha and comprised of primarily amenity grassland, buildings and hard standing. There are also a number scattered trees and planted areas throughout the school with range of exotic shrubs.

There are three national statutory designated sites within 5km of the site: Ruislip Woods Site of Special Scientific Interest (SSSI; approx. 2.4km north-west); Fray's Farm Meadows SSSI (approx. 4.1km west); Denham Lock Wood SSSI (approx. 4.5km west). There are also ten locally designated sites within 5km of the site, with Ruislip Local Nature Reserve (LNR) the nearest and lies approximately 1.7km to the north. There are four non-statutory designated Sites of Borough Importance within 1 km of the site: Yeading Brook Site of Importance for Nature Conservation (SINC; approx. 45m south and east; Ickenham Marsh, Austin's Lane Pastures and Freezeland Covert SINC (approx. 200m to the south); Herlwyn Park Recreation Ground and railway banks SINC (approx. 450m west); Cavendish Recreation Ground SINC (870m north-east). For the reasons given in this report, it is considered unlikely that these designated sites would be impacted as a result of any works to the site. However, local planning policy may require a contribution to be made to help enhance SINC in close proximity to development.

A small number of mature trees on site were found to have features suitable to potentially support roosting bats. These trees are understood to be retained. Should any of these features be affected by the proposed development, then recommendations for further surveys have been made.

The areas introduced shrub and the scattered trees are likely to provide important local resources for nesting birds. The buildings on site may also have the potential to be used by nesting birds. Should any areas suitable for nesting birds be affected by the proposed development, then recommendations for appropriate mitigation have been made.

To comply with local planning policy, it is recommended that the trees and pond on site are retained and protected.

Enhancement recommendations to benefit local wildlife on site have also been provided such as bat and bird box installation.

The presence of protected species is a material consideration in the decision-making process for the local planning authority with regards to planning applications. Therefore, the recommendations made within this report in relation to protected species should be adhered to before submitting a planning application.

Ruislip High School, Ruislip

Ecological Appraisal

1. INTRODUCTION

Background

- 1.1 Ecological Planning & Research Ltd (EPR) was commissioned by London Borough of Hillingdon in October 2014 to undertake an ecological appraisal of Ruislip High School site. The ecological survey is required to supply information to aid in establishing design parameters for proposed works to the school.
- 1.2 This report contains the results of the ecological appraisal that involved a Phase 1 habitat survey to identify habitats and features with the potential to support protected species, species of conservation concern, and/or ecological features of importance within the site. A desk study search was also conducted to identify designated sites of known wildlife value within, or near to the site, as well as protected species records within the area. The information gathered from the Phase 1 habitat survey and desk study was used to assess the importance of the site for wildlife. An update walkover survey of the site was conducted in June 2017 to assess whether the habitats had changed since the original Phase 1 survey in 2014.

Site Location and Description

- 1.3 Ruislip High School is located south of Sidmouth Drive in Ruislip, Middlesex at Ordnance Survey grid reference TQ 10190 86105 (see **Map 1**). The assessment site encompassed the entirety of Ruislip High School and is hereafter referred to as the 'site'.
- 1.4 The site measures approximately 1.97ha and comprises a building, trees, grassland, ornamental planting and hard standing. The site is surrounded by a residential landscape.

Outline of the Scheme

- 1.5 Ruislip High School site is proposing accommodating additional classroom spaces and sports changing facilities within the existing curtilage. The ecological surveys are required to help the design team establish design parameters and formulate planning proposals for the school. This report is based on design proposals as shown in **Appendix 5**.

Applicable Nature Conservation Related Legislation and Planning Policy

- 1.6 The key legislative provisions and policies of relevance to this report with respect to the redevelopment proposals and their potential effects on ecological features of value are set out in **Appendix 1**.

2. METHODOLOGY

Introduction

- 2.1 The ecological appraisal is based on information gathered following a desk study and fieldwork carried out in order to identify potential ecological opportunities and constraints likely to arise in respect of any development of this land. Where necessary, recommendations are made for further ecological survey work that will need to be agreed in consultation with the Local Planning Authority.

Assessment Methodology

- 2.2 The assessment methodology and general approach adopted in this report is in line with guidance in The Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the United Kingdom* (2016).

Defining the Zone of Influence

- 2.3 In order to define the spatial scope of the ecological appraisal it was necessary to predict the likely Zone of Influence (ZOI) of any development of Ruislip High School. The ZOI of a proposed development is defined in CIEEM's ecological impact assessment (EclA) guidelines as '*...the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities*'.
- 2.4 The ZOI will be further refined as the project progresses, but initially has been based on a desk study and a Phase 1 habitat survey, undertaken to identify the areas and ecological resources that are likely to be affected by a scheme, with consideration of the type of activities that may occur.
- 2.5 It is considered that in most cases the ZOI of the redevelopment proposals for Ruislip High School is unlikely to extend beyond the site boundary and immediately adjacent habitats. The following specific exception could apply:
- Where changes to habitats and environmental conditions on site may impact upon bat roosts within the local area due to increased lighting or loss of commuting/foraging habitat on site, upon which local roost(s) may be dependant.

Desk Study

- 2.6 A desk study was carried out in order to gather and refer to existing species records both within the site and in the surrounding area. Information concerning the location designated conservation sites in relation to the site was also gathered. This involved interrogation of internet resources, including the National Biodiversity Network (NBN) website and Multi-Agency Geographic Information for the Countryside (MAGIC).
- 2.7 The Greenspace Information for Greater London (GiGL) was commissioned to provide records of European protected species within a 5km radius and UK protected and other notable species within a 2km radius. Information on local wildlife sites within a 2km radius was also requested. These records are discussed, where relevant, within this report.

Field Survey Methodology

- 2.8 An ecological appraisal of Ruislip High School was undertaken on 10 December 2014 by Daniel O'Sullivan of EPR. An update walkover survey of the site was conducted on 6 June 2017 by Daniel O'Sullivan of EPR, which confirmed that the habitats within the site have not changed since the survey was carried out in 2014. As part of this a Phase 1 habitat survey was undertaken in accordance with the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC, 2010).
- 2.9 The different habitats and ecological features present within the survey area were mapped and classified, and the dominant plant species identified. In addition, any evidence of, or potential for, protected species on the site was noted (see **Appendix 2** for a summary of survey methods). Where relevant, habitat immediately adjacent to the site was also assessed, as this can have a bearing on the possible presence of protected species on the site.

Survey Limitations and Constraints

- 2.10 The first Phase 1 habitat survey was undertaken in December 2014, during good weather conditions, which is considered a sub-optimal period for this type of survey. However, the broad habitat types and the majority of plant species were identifiable and it was possible to assess the potential of the site to support protected species, so this limitation is not considered to be significant in this instance. The update Phase 1 habitat survey was undertaken in June 2017, during good weather conditions, which is an optimal period for this survey.

3. RESULTS AND RECOMMENDATIONS

Geographic and Historic Context

- 3.1 The application site is located within the town of Ruislip. The landscape is that of an urban setting.
- 3.2 With reference to the 2" to the mile map of 1807, it is apparent that the landscape in the local area was formerly part of an agricultural landscape of fields and hedgerows.

Designated Nature Conservation Sites

Statutory Nature Conservation Sites

- 3.3 There are three nationally designated sites within 5km of the site (see **Map 1**). Ruislip Woods Site of Special Scientific Interest (SSSI) lies approximately 2.4km north-west of the site. The SSSI is designated as it forms an extensive example of ancient semi-natural woodland, including some of the largest unbroken blocks that remain in Greater London. The woodland and also the other semi-natural habitats within the SSSI support a number of plant and insect species that are rare or scarce in a national or local context. Fray's Farm Meadows SSSI lies approximately 4.1km to the west of the site. The SSSI is designated as it is one of the last remaining examples of relatively unimproved wet alluvial grassland in Greater London and the Colne Valley. Denham Lock Wood SSSI lies approximately 4.5km to the west of the site and is designated for its diverse area of open mire and wet woodland habitat.
- 3.4 There are also ten locally designated sites within 5km of the site, with Ruislip Local Nature Reserve (LNR) the nearest and lies approximately 1.7km to the north (see **Map 1**).
- 3.5 Local planning policy (see **Appendix 1**) requires areas of International, National and County importance and ancient woodland to be retained and protected. The proposals are unlikely to have an effect on these statutory designated sites and their important attributes for the following reasons:
- Any planned expansion to the school will attract pupils from existing dwellings in the area and will not contribute to an increase in the local residential population that could lead to increased recreational pressures on the designated sites mentioned;
 - The development will be separated from statutory sites by existing roads and urban infrastructure; and
 - The development will be restricted to within the site boundary.
- 3.6 The statutory designated sites are therefore not considered further within this assessment.

Non-statutory Local Wildlife Sites

- 3.7 There are four non-statutory designated Sites of Borough Importance within 1 km of the site. The nearest is Yeading Brook Site of Importance for Nature Conservation (SINC) which is located 45m to the south and east. This SINC comprises the brook and riparian habitats, and

adjacent areas of rough grassland and native hedgerow. The site is freely accessible to the public and there are footpaths on both sides of the river along much of the river corridor. Ickenham Marsh, Austin's Lane Pastures and Freezeland Covert SINC is approximately 200m south of the site, Herlwyn Park Recreation Ground and railway banks SINC is approximately 450m west and Cavendish Recreation Ground is approximately 870m north-east.

- 3.8 Local planning policy (see **Appendix 1**) requires areas of Metropolitan, Borough and Local importance to be retained and protected. For the same reasons as outlined in Section 3.6 it is considered unlikely that the proposed development would have an effect on these non-statutory designated sites. However, local planning policy states that '*appropriate contributions from developers to help enhance Sites of Importance for Nature Conservation in close proximity to development and to deliver/assist in the delivery of actions within the Biodiversity Action Plan*' should be made (see **Appendix 1**). Therefore, as part of the proposed development a contribution may be required to satisfy local planning policy.

Habitats and Vegetation

Introduction

- 3.9 The Phase 1 habitat survey recorded the different habitat types present within the application site and a preliminary assessment of their relative ecological importance has been made. The habitats and ecological features identified within the study area are discussed below and illustrated on **Map 2**. Where appropriate, features discussed in the text are indicated by **Target Notes (TN)** on the map. Relevant photographs are given in **Appendix 3**.

- 3.10 The school grounds are meticulously maintained. The majority of the site comprised amenity grassland, buildings and hard standing. There are also a number of planted areas throughout the school with a range of exotic shrubs. The site boundary is a combination of palisade and chain link fencing. The following Phase 1 habitats were recorded as being present on site at the time of the survey:

- Mixed scattered trees;
- Amenity grassland;
- Introduced shrub;
- Buildings;
- Hard standing; and
- Standing water.

Mixed Scattered Trees

- 3.11 A number of scattered trees are present throughout the site. The majority of trees were mature with Bird Cherry *Prunus padus* being dominant and Hybrid Black-poplar *Populus x Canadensis* agg. also abundant.

- 3.12 The scattered trees at Ruislip High School are considered to be of within the ZOI importance. It is understood that five semi-mature trees are to be removed, although tree planting will occur at a greater extent which will more than compensate for those to be lost. Local planning policy (see **Appendix 1**) requires trees to be retained and protected. It is recommended that the retained trees are protected to prevent damage by implementing a suitable buffer zone to protect the rooting area adjacent to each tree during construction. In accordance with British Standard BS5837:2012 *Trees in relation to design, demolition and construction – recommendations*, this ‘root protection area’ is calculated in relation to the circumference of the tree trunk. The protection of these trees during construction should be set out in the Construction Environmental Management Plan (CEMP). No further survey is required.

Amenity Grassland

- 3.13 The areas of amenity grassland on site are generally species-poor and are characterised by Perennial Rye-grass *Lolium perenne* and White Clover *Trifolium repens* being abundant. These areas of habitat are very closely mown, resulting in a poor structure.
- 3.14 The amenity grassland at Ruislip High School is considered to be of limited importance at the ZOI level and is unlikely to present a significant constraint to the proposed development. No further survey is required.

Introduced Shrub

- 3.15 There are a number of areas of introduced shrub habitat throughout the site. These areas are planted with non-native species that included Laurel species *Prunus* spp. and Cotoneaster species *Cotoneaster* spp.
- 3.16 The introduced shrub at Ruislip High School is considered to be of limited importance at the ZOI level and is unlikely to present a significant constraint to the proposed development. No further survey is required.

Buildings and Hard Standing

- 3.17 The site contained predominantly a building, areas of hard standing and associated pathways. The building on site is of recent construction, being no more than 10 years old. The building is of concrete, glass and metal cladding design and has a sedum roof. The building was well maintained and in very good condition.

Standing Water

- 3.18 There is one area of standing water within the site located in the area of amenity grassland to the south of the site. This is a raised ornamental pond and measures approximately 2 x 4m. The pond is felt lined with vertical concrete sides and has a vertical sided wooden cladded outer border. Emergent vegetation is present within the pond. This type of pond is listed as a Habitat of Principal Importance under Section 41 of the Natural Environment Research Council (NERC) Act 2006 based on selection criteria and standing water is a local Biodiversity Action Plan (BAP) habitat. From anecdotal evidence of an employee at the school, the pond is used by Common Frog *Rana temporaria* for breeding. The pond at Ruislip High School is

considered to be of importance at the local level. It is understood that the pond is to be retained as part of the development.

Protected and Valued Species

Introduction

- 3.19 The ZOI includes habitats with the potential to support a number of species protected under both UK and European legislation. The advice for Planning Authorities at paragraph 99 of Government Circular *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System* Conservation is that they must establish the presence of such protected species, and the extent that they may be affected by proposed development, before planning permission is granted. In the case of species protected by European legislation, the possible consequences for development is so great that it is necessary to understand them at the land-use planning stage, so that appropriate impact avoidance measure can be taken into account.
- 3.20 Government guidance in NPPF also indicates that Planning Authorities must also take steps to further the conservation of *Habitats and Species of Principal Importance* (Natural Environment and Rural Communities (NERC) Act 2006) not just those protected by law.

Bats

- 3.21 The ZOI has the potential to support bat roosts in mature trees. A small number of trees along the western boundary with bat roost potential were noted due to the presence of suitable features such as cracks, fissures and holes (**TN1**). The data request from GiGL returned records for a small number of bat species within a 5km radius of Ruislip High School, with two of the more common species of bat Common Pipistrelle *Pipistrellus pipistrellus* (approximately 1.1km north-west in 2006) and Brown Long-eared Bat *Plecotus auritus* (700m south-west in 2008) recorded within 2km of the site. The closest record is from 2006 where an unidentified bat species was recorded 237m to the south-west of the site boundary.
- 3.22 In addition, the scattered trees along the boundaries have the potential to provide a network of commuting routes and foraging resources for bats in the locality.
- 3.23 All species of bat native to the UK are protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended), as outlined in **Appendix 1**. All bat species are of varying degrees of conservation importance. Based on the proposals, it is considered unlikely that the proposed works will affect the features or areas identified as being suitable to support bats.
- 3.24 If design plans change that could result in any of the features or areas suitable for bats being affected as part of the proposed development, then in order to assess the likely impact on bats and ensure compliance with legislation it is recommended that potential use of the site for bats be thoroughly investigated through further survey. This will inform any necessary mitigation measures or management methods and licence requirements. The presence of some species

can have very significant consequences for land use choices. It is therefore recommended that these surveys are undertaken at the land use planning stage.

- 3.25 Initially, a scoping survey would be conducted by an experienced bat ecologist to make a preliminary assessment of bat roost potential in trees and to identify potential bat commuting routes and foraging resources. Some initial activity surveys may then be required during the active bat season (May to September inclusive). For example, fixed point and transect surveys at optimum locations across the area would provide some information on the use of the site by bats, and would allow additional surveys to be planned as necessary. Surveys would be carried out in accordance with Bat Conservation Trust's Bat Surveys Good Practice Guidelines (2016).
- 3.26 As a general recommendation, any development proposals should not impede the use of the site by bats. It is also recommended that measures incorporating sensitive lighting into the development design are implemented as part of the development designs to avoid additional lighting of the boundary vegetation.

Breeding Birds

- 3.27 The areas of introduced shrub and scattered trees are likely to provide local resources for nesting birds. The buildings on site may also have the potential to be used by nesting birds. Bird species recorded during the survey included Feral Pigeon *Columba livia*. The data request from GiGL returned records for the previous 10 year period for a small number of bird species listed as Species of Principal Importance within a 1km radius of Ruislip High School that included Song Thrush *Turdus philomelos* (684m north in 2004) and Starling *Sturnus vulgaris* (564m south-west in 2004). Both Song Thrush and Starling are local BAP species.
- 3.28 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), as outlined in **Appendix 1**. It is illegal to damage, take, or destroy a wild bird's nest whilst it is being built or is in use, or to take or destroy its eggs. Therefore, if the areas suitable for nesting birds is affected as part of the proposed development, then mitigation will be required to avoid an adverse effect upon breeding birds, particularly damage caused to eggs and nestlings. Any clearance of buildings, trees, shrubs or hedges above 50cm in height should be undertaken between September and February inclusive, outside of the nesting season. If this is not possible, works should be preceded by a check for nests by a suitably qualified ecologist not longer than 24 hours before commencement of works. If nesting birds are discovered during this check, then a suitable buffer area will need to be retained around nests to ensure their protection until any young have fledged.
- 3.29 It is recommended that the habitat potentially used by nesting birds is retained or compensate for the loss of habitat by replacing on a like-for-like basis or greater extent using native plants species of local provenance. This will benefit not only those species recorded on site but also Species of Principal Importance and local BAP species which may be present in the local area.

Other Protected Species

- 3.30 Due to the ponds design it is considered unlikely that Great Crested Newt *Triturus cristatus* (GCN) would be able to access this water body. Also, taking into consideration the site and the single known water body (an overflow pond from Yeading Brook) within 500m is bordered and surrounded by major roads set in an urban environment acting as a significant barrier to movement, the limited suitable habitat on site and the nearest known record from the GiGL data request being approximately 1.5km west of the site in 2006, it is considered unlikely that GCN would be encountered during development. Therefore, no further surveys or mitigation are recommended. If GCN are found during the proposed development, then all works should stop immediately and a suitably qualified ecologist notified. GCN are protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended), as outlined in **Appendix 1**. No signs of any other protected species or habitats considered suitable to potentially support other protected species were recorded during the survey.

Other Species of Principal Importance

- 3.31 The ornamental pond on site has been identified as being suitable to support certain amphibian species. This includes Common Toad *Bufo bufo* which is listed as a Species of Principal Importance under the NERC Act 2006 and is also a local BAP species. The nearest known record returned from the GiGL data request is approximately 1.5km north-west of the site in 2006. It is understood that the pond is to be retained as part of the development.

4. ENHANCEMENTS

- 4.1 The National Planning Policy Framework (NPPF, 2012; **Appendix 1**) advises that biodiversity enhancements should be an integral part of development proposals, and opportunities to provide enhancements should be delivered wherever possible. At the local level, this principle is supported by The London Plan and London Borough of Hillingdon Local Plan (see **Appendix 1**).
- 4.2 Considering the proposals, general recommendations have been made that could be considered for inclusion in the overall site that will benefit local wildlife.
- 4.3 The site presents opportunities for ecological enhancements. Areas of grassland at the edge of the site boundary could be managed to provide a variation in grassland habitats with management examples including: allow grass to grow long and remain unmanaged (i.e. not mown); scarify areas and allow naturally regenerating; or, enhancing through a prescribed mowing regime to create wildflower meadow areas. Providing a variety of grassland habitats would benefit a more diverse range of wildlife on the site.
- 4.4 Bat and bird boxes could be installed on the outside of new and existing buildings. For example, Swift *Apus apus*, House Sparrow *Passer domesticus* and Starling boxes could be attached to buildings.
- 4.5 The use of native trees and shrubs should be included in any landscape designs such as Pedunculate Oak, Hazel *Corylus avellane* and Hawthorn *Crataegus monogyna*.

5. CONCLUSIONS

- 5.1 It should be possible for development of the site to take place without contravening the nature conservation related legislation and policy set out in **Appendix 1**. This can be achieved through sensitive design and by carrying out further surveys, where necessary, to inform robust mitigation measures, as described throughout this report.
- 5.2 Development will be restricted to existing areas of hard standing and amenity grassland that are considered of limited ecological importance. Developing within these areas where mature trees and the pond are not present will ensure those important habitats highlighted for retention will not be impacted upon.
- 5.3 If designs change whereby habitat identified as being suitable for bats is likely to be affected by the proposals, further surveys will be required to fully assess the likely impacts and to design suitable mitigation strategies.
- 5.4 There are also opportunities to deliver biodiversity enhancements on site which would support local and national biodiversity policy.

6. REFERENCES

British Standard BS5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*. BSI, London.

English Nature. 2004. *An assessment of the efficacy of capture techniques and the value of different habitats for the great crested newt Triturus cristatus*. English Nature, Peterborough.

English Nature. 2001. *Great Crested Newt Mitigation Guidelines*. English Nature, Version August 2001.

Froglife. 1999. *Reptile Survey: An Introduction to Planning, Conduction and Interpreting Surveys for Snake and Lizard Conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

Gent, T. and Gibson, S. 2003 *The Herpetofauna Workers Manual*. Joint Nature Conservation Committee, Peterborough.

Greater London Authority, 2016. *The London Plan Spatial Development Strategy for Greater London*.

Hillingdon Biodiversity Partnership. Accessed 2014 at <http://www.hillingdon.gov.uk/article/7319/Biodiversity-partnership>

HM Government. 1981. *The Wildlife and Countryside Act 1981*.

HM Government, 2000. *Countryside and Rights of Way Act 2000*.

HM Government. 2010. *The Conservation of Habitats and Species Regulations*.

HM Government, 2012. *National Planning Policy Framework*. Department for Communities and Local Government.

Collins, J. 2016. *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London. 3rd Edition.

CIEEM. 2016. *Guidelines for Ecological Impact Assessment in the United Kingdom*. Institute of Ecology and Environmental Management, Winchester.

Joint Nature Conservation Committee (JNCC), 2010. *Handbook for Phase 1 habitat survey: A technique for environmental audit*. JNCC, Peterborough.

Joint Nature Conservation Committee (JNCC). 2010. *UK Priority Species Pages – Version 2*. www.jncc.gov.uk/page-5161

Joint Nature Conservation Committee (JNCC) (Accessed December 2014). *Conservation Designations for UK Taxa*. www.jncc.gov.uk/page-3408.

Langton, T., Beckett, C. and Foster, J. 2001. *Great Crested Newt Conservation Handbook*. Froglife, Halesworth

London Biodiversity Partnership. London Biodiversity Action Plan. Accessed 2014 at <http://www.lbp.org.uk/index.htm>

London Borough of Hillingdon, 2012. *Local Plan*.

MAGIC the Multi-Agency Geographic Information for the Countryside. Accessed 2014 at www.magic.gov.uk

Mitchell-Jones, A.J. 2004. *Bat mitigation guideline*. English Nature, Peterborough.

National Biodiversity Network's Gateway. (Accessed December 2014). <http://data.nbn.org.uk/>

ODPM. 2005b. Circular 06/05: *Biodiversity and Geological Conservation – Statutory Obligations and their impact within the planning system*. TSO, London.

ODPM. 2006. *Planning for Biodiversity and Geological Conservation: A Guide to Good Practice*. TSO, London.

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*, Vol 10, pp. 143-155.

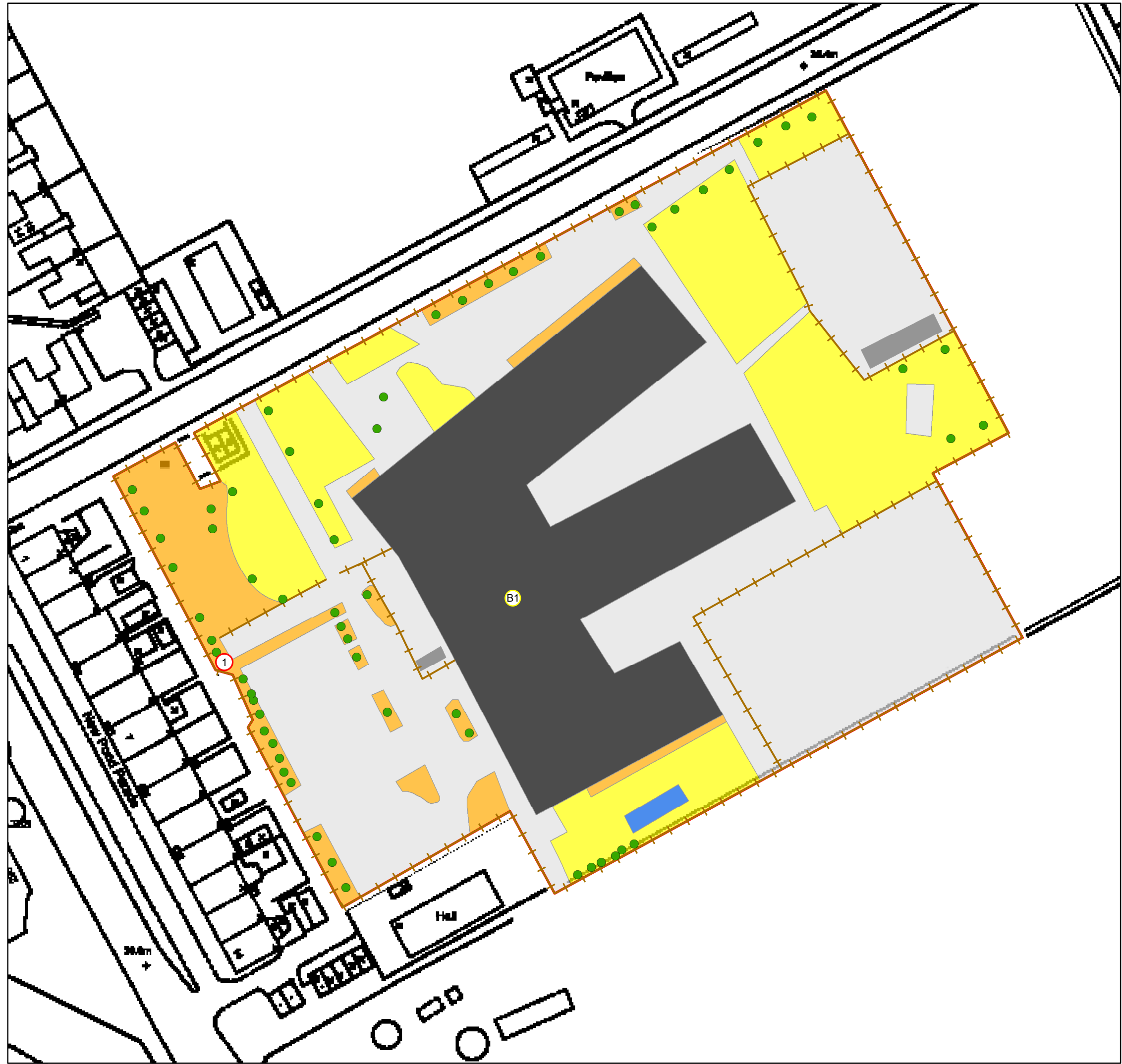
Stace, C. 2010. *New Flora of the British Isles*. 3rd edition. Cambridge University Press, Cambridge.

UK Biodiversity Action Plan (UKBAP). Accessed 2014 at www.jncc.gov.uk

Maps

Map 1 Site Location and Nature Conservation Designations

Map 2 Habitats and Features



MAP 2 Ruislip Habitats & Features

KEY



Site boundary



Fence



Amenity grassland



Introduced shrub



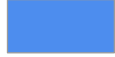
Building



Container



Hardstanding



Pond



Scattered trees



Target note (with ID)



Building reference (with ID)

1 - Hole in dead branch of mature tree suitable for roosting bats

SCALE: 1:800 at A3

0 10 20 30 Metres



Ecological Planning & Research

CLIENT: London Borough of Hillingdon

PROJECT: Schools of Hillingdon

DATE: December 2014

C:\Project Data\Schools\Hillingdon\GIS\Map2_Ruislip_Habitats_P1465_081214.mxd

P14/65

Ordnance Survey (c) Crown copyright 2007. All rights reserved. License number 100005596.

Appendix 1

Applicable Nature Conservation Related Legislation and Policy

Appendix 1 is intended to provide an overview of the main features of legislation and policy relating to nature conservation in England and the implications for development.

KEY WILDLIFE LEGISLATION

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010¹ (known as the “Habitats Regulations”) transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the European “Habitats Directive”) into UK legislation. These regulations consolidate all the various amendments made to the preceding “Conservation Regulations” 1994 for England and Wales.

The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) Regulations 2012.²

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which form part of the Natura 2000 network of protected areas across Europe. The Regulations also prohibit the deliberate capture, killing or disturbance of European Protected Species (EPS), which include *inter alia* Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, Otter *Lutra lutra* and all native species of bat, and make it an offence to destroy or damage either the nesting or breeding sites of these species. The above actions can be made lawful through the granting of licenses after Natural England (the licensing authority in England) is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the EPS.

Further information on SPAs, SACs and European Protected Species (Licensing and Protected Species) is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981³ is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

¹ The Conservation of Habitats and Species Regulations 2010. Available from:

<http://www.legislation.gov.uk/uksi/2010/490/contents/made>

² The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from:

<http://www.legislation.gov.uk/uksi/2012/1927/contents/made>

³ The Wildlife and Countryside Act 1981. Available from:

<http://www.legislation.gov.uk/ukpga/1981/69/contents>

Table A1.1: Key Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times.
Schedule 1 Part 2	Protects listed birds through special penalties during the close season.
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring.
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking.
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead).
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection.
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection.
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale.
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000⁴ have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

⁴ The Countryside and Rights of Way (CRoW) Act 2000. Available from: <http://www.legislation.gov.uk/ukpga/2000/37/contents>

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006⁵ was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) 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 in England⁶. Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on species and habitats of Principal Importance is provided in the relevant sub-section of this Appendix.

PLANNING POLICY & GUIDANCE

Listed below is the main planning policy and government guidance that relates to the conservation of nature and development at all levels of government.

National Level

National Planning Policy Framework (NPPF)

The National Planning Policy Framework⁷ sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 14), with a requirement to consider its economic, social and environmental dimensions. This does not apply where development requiring Appropriate Assessment under the Habitats Directive is being considered, planned or determined (paragraph 119).

Section 11 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and replaces the preceding Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation. It specifies that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

⁵ The Natural Environment and Rural Communities Act 2006. Available from: www.legislation.gov.uk/ukpga/2006/16/contents

⁶ The S40 list replaces the previously prepared list of habitats and species of Principal Importance for the conservation of biological diversity in England that was published under Section 74 (2) of the Countryside and Rights of Way Act 2000.

⁷ DCLG (2012). *National Planning Policy Framework*. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland;
- development proposals where the primary objective is to conserve and enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged.

In the case of SSSIs and irreplaceable habitats, exceptions may be made if it can be clearly demonstrated that the benefits of the development, at this particular site, outweigh the costs in terms of loss or adverse impacts.

Section 11 also specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/058 to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence or otherwise of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;
- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

⁸ ODPM (2005). *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*. Available from: <http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity>

Good Practice & Standards

DCLG Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG)⁹ was launched by the Department for Communities and Local Government (DCLG) as a web-based tool in March 2014 to accompany the National Planning Policy Framework. The webpages are set out in an accessible Q&A format. The PPG consolidates and supersedes existing guidance on a range of planning-related topics, clarifies some of the statements made in the NPPF, and provides links to relevant legislation and other sources of advice.

The Guidance outlines a number of important principles in relation to nature conservation and biodiversity, including the need to integrate biodiversity into all stages of the planning process and to consider opportunities to enhance biodiversity and contribute to the Government's commitments and targets set out in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services* (see below). It also lists a number of issues that should be considered in relation to biodiversity, including local biodiversity plans and strategies, Section 41 species and habitats, the need for ecological surveys, local ecological networks, and statutory obligations with regard to internationally and nationally designated sites – all of which are discussed throughout this Appendix.

The guidance also requires that “an ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate” and recommends that “local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development.”

Other guidance

In addition to the Planning Practice Guidance, various other forms of guidance and standards are available to help manage biodiversity through the development process. Of particular note is *British Standard BS42020:2013 Biodiversity – Code of practice for planning and development*,¹⁰ published in August 2013, which replaces *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*.

This document is designed to complement the National Planning Policy Framework and is aimed at organisations concerned with ecological issues throughout the planning process, including local authorities, developers, planners and ecological consultants. It sets out clear, step-by-step recommendations on how to incorporate biodiversity considerations at all stages of the planning process, with a focus on the provision of consistent, high quality and appropriate ecological information, effective decision making, and high standards of professional conduct and competence.

⁹ DCLG (2014). Planning Practice Guidance. Available from: <http://planningguidance.planningportal.gov.uk/>

¹⁰ The British Standards Institution (2013). BS42020:2013 Biodiversity – Code of practice for planning and development. Available from: <http://shop.bsigroup.com/ProductDetail/?pid=00000000030258704>

Local Level

The London Plan¹¹ and adopted London Borough of Hillingdon Local Plan¹² (2012) sets out the overarching objectives and planning policy for the Borough. Those of relevance to ecology are described below.

The London Plan includes a specific policy on biodiversity and access to nature, **Policy 7.19**. This states the following considerations with regards to planning decisions:

Development proposals should:

- *“wherever possible, make a positive contribution to the protection, enhancement, creation and management of biodiversity”;*
- *“prioritise assisting in achieving targets in biodiversity action plans (BAPs)...and/or improve access to nature in areas deficient in accessible wildlife site”;*
- *“not adversely affect the integrity of European sites, and be resisted where they have significant adverse impact on European or nationally designated sites or on the population or conservation status of a protected species, or a priority species or habitat identified in a UK, London or appropriate regional BAP or borough BAP.”*

On Sites of Importance for Nature Conservation development proposals should:

- *“give the highest protection to sites with existing or proposed international designations (SACs, SPAs, Ramsar sites) and national designations (SSSIs, NNRs) in line with the relevant EU and UK guidance and regulations”;*
- *“give strong protection to sites of metropolitan importance for nature conservation (SMIs). These are sites jointly identified by the Mayor and boroughs as having strategic nature conservation importance”;*
- *“give sites of borough and local importance for nature conservation the level of protection commensurate with their importance”.*

When considering proposals that would affect directly, indirectly or cumulatively a site of recognised nature conservation interest, the following hierarchy will apply:

- *“avoid adverse impact to the biodiversity interest”;*
- *“minimize impact and seek mitigation”;*
- *“only in exceptional cases where the benefits of the proposal outweigh the biodiversity impacts, seek appropriate compensation”.*

The London Plan also acknowledges the importance of trees and woodlands in **Policy 7.21** and stipulates that *“existing trees of value should be retained and any loss as the result of development should be replaced following the principle of ‘right place, right tree’. Wherever appropriate, the*

¹¹https://www.london.gov.uk/sites/default/files/the_london_plan_2016_jan_2017_fix.pdf

¹²<http://www.hillingdon.gov.uk/23501>

planting of additional trees should be included in new developments, particularly large-canopied species”.

Policy EM7 of London Borough of Hillingdon’s Local Plan sets out how Hillingdon’s biodiversity and geological conservation will be preserved and enhanced with particular attention given to:

- *“the protection and enhancement of all Sites of Importance for Nature Conservation. Sites with Metropolitan and Borough Grade 1 importance will be protected from any adverse impacts and loss. Borough Grade 2 and Sites of Local Importance will be protected from loss with harmful impacts mitigated through appropriate compensation”;*
- *“the protection and enhancement of populations of protected species as well as priority species and habitats identified within the UK, London and the Hillingdon Biodiversity Action Plan”;*
- *“appropriate contributions from developers to help enhance Sites of Importance for Nature Conservation in close proximity to development and to deliver/assist in the delivery of actions within the Biodiversity Action Plan”;*
- *“the provision of biodiversity improvements from all development, where feasible”;*
- *“the provision of green roofs and living walls which contribute to biodiversity and help tackle climate change”;*
- *“the use of sustainable drainage systems that promote ecological connectivity and natural habitats”.*

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets” (paragraph 117). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level. An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The UK Biodiversity Action Plan 2007 (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework*¹³ and individual national biodiversity strategies. The UK framework sets out the overarching vision, strategic goals and priority activities for the UK’s work towards international biodiversity targets (known as the ‘Aichi Targets’), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010. The Framework’s overall vision is that “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”

¹³ JNCC and Defra (on behalf of the Four Countries’ Biodiversity Group) (2012). *The UK Post-2010 Biodiversity Framework*. Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*¹⁴ is the national biodiversity strategy, which has the stated mission “(...)to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.” In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets objectives relating to terrestrial and marine habitats and ecosystems, species and people. These include:

- Establishing coherent and resilient ecological networks, described as “a network of high quality sites, protected by buffer zones, and connected by wildlife corridors and smaller, but still wildlife-rich, ‘stepping-stone’ sites”;
- Taking targeted action for the recovery of priority species whose conservation is not delivered through wider habitat-based and ecosystem measures;
- Establishing Nature Improvement Areas and Marine Protected Areas;
- Bringing more SSSIs into favourable condition;
- Reducing environmental pressures by working with sectors such as agriculture, forestry, planning and development.

A network of 48 Local Nature Partnerships have been set up across England to help deliver these objectives.

Note that as these changes are still relatively new, some local plans and government guidance documents/circulars still refer to the UK BAP and ‘UK BAP priority habitats and species’. These habitats and species are listed under Section 41 of the NERC Act, and **remain a material consideration in the planning process**. They are now described as ‘Species/Habitats of Principal Importance’, though they are also commonly referred to as ‘Section 41 Species/Habitats’ or simply ‘Priority Species/Habitats’. Further guidance is given in the relevant sections below.

Local level

Despite the changes to national level biodiversity policy described above, county and district level BAPs still apply. The **London Biodiversity Action Plan**¹⁵ consists of targets for maintaining, restoring and creating priority habitats and protecting priority species.

Delivering Biodiversity Opportunities

Where practicable, opportunities should also be sought to achieve a **net gain** (i.e. enhancement) of biodiversity. Support for biodiversity enhancement is provided in the Public Authority ‘Biodiversity Duty’ under the NERC Act 2006 and in the key principles of the NPPF, as described above.

Enhancement projects may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable urban drainage schemes (SUDS) and green roofs. Planning conditions and

¹⁴ DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

¹⁵ <http://www.lbp.org.uk/londonap.html>

obligations are increasingly being used to mandate biodiversity enhancement on or off a development site, either through design or through financial support.

Many ideas for incorporating ecological enhancement into planning and development can be found in the biodiversity action plans and/or strategies relevant to the policy or development area, or through initiatives led by the Local Nature Partnership. At the national level, twelve Nature Improvement Areas were set up in 2012 in order to deliver landscape-scale conservation objectives, and many regions and counties have also identified and mapped 'Biodiversity Opportunity Areas', 'Nature Maps' or 'Strategic Nature Areas' where conservation action such as habitat creation and restoration will deliver the greatest benefits for biodiversity.

Other sources of ideas and opportunities include schemes led by conservation NGOs, such as the Wildlife Trusts' 'Living Landscapes' and the RSPB's 'Futurescapes', which are working in partnership with landowners and local communities across the country to restore ecosystems and ecological networks.

SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

Statutory Sites

Internationally Important Sites

Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2010 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in Great Britain. Ramsar sites are, as a matter of national planning policy, subject to the same strict protection. Any plan or project considered likely to affect a SAC, SPA or Ramsar site must be subject to an assessment, as set out under Regulation 61, and Regulation 102 in respect of Land Use Plans.

Ramsar sites are wetlands of international importance. The majority of terrestrial Ramsar sites in England are also notified as SPAs and/or Sites of Special Scientific Interest (SSSIs).

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the EU Habitats Directive 1992. SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the EU Birds Directive 1979. Together, SACs and SPAs make up the Natura 2000 network of Sites of Community Importance throughout Europe.

Development Control

Development proposals or damaging activities which may affect a European or international site will be subject to rigorous examination by local planning authorities (or other 'competent authority'), through a process commonly referred to as 'Habitats Regulations Assessment'. The onus is on the developer to provide the necessary information to inform this process.

Under the Conservation of Habitats and Species Regulations 2010 (as amended), the competent authority must determine in the first instance whether a proposed development is likely to have a significant effect on the European or Ramsar site, either alone or in combination with other plans and projects.

If a likely significant effect cannot be precluded on the basis of objective information, the competent authority must undertake an 'Appropriate Assessment' to fully assess these implications against the site's conservation objectives. A precautionary approach must be taken with respect to determining whether or not there would be an impact, and the appropriate nature conservation body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed, the competent authority may not undertake or authorise the plan or project until they have established (based on the conclusions of the Appropriate Assessment) that the activity will not adversely affect the integrity of the European or Ramsar site. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

Nationally Important Sites

Sites of Special Scientific Interest (SSSI)

The Wildlife and Countryside Act 1981 (as amended) and the CROW Act 2000 provide the primary legal basis for the protection of SSSI. These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity.

National Nature Reserve (NNR)

NNRs are declared under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981, as amended by Environmental Protection Act 1990. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. NNRs represent the very best parts of England's SSSIs. The majority of NNRs also have European nature conservation designations.

Development Control

A development proposal that is likely to affect nationally important sites will be subject to special scrutiny by the local authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites.

Regionally & Locally Important Sites

Local Nature Reserves

Local Nature Reserves are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with

nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

Non-Statutory Sites

Local Wildlife Sites

Local authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites', 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local and structure plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of sites as set out above. Further information is typically provided in local level planning policy.

Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance in England for the conservation of biodiversity under Section 41 of the NERC Act 2006¹⁶. The NPPF, Government Circular 06/05, good practice guidance and the NERC Act place a clear responsibility on planning authorities to further the conservation of these habitats. They can be a material consideration in planning decisions, and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

¹⁶ The S41 List of Species & Habitats of Principal Importance in England is available from:
<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

Hedgerows

Hedgerows can act as wildlife corridors that are essential for migration, dispersal and genetic exchange of wild species. Hedgerows that qualify as a Habitat of Principal importance under S41 of the NERC Act 2006 are a material consideration in the planning system.

Under the Hedgerow Regulations 1997, it is an offence to remove a hedgerow without submitting a notice to the Local Planning Authority and waiting for their decision. The Regulations are aimed at countryside hedges and do not apply to hedges around private dwellings or where planning permission has been granted for a project that includes hedge removal. Hedgerows that satisfy wildlife, archaeological, historical or landscape criteria qualify as 'important' under the Regulations. If a hedgerow is not important, the Local Planning Authority may not prevent its removal; however, Local Planning Authorities are required under the Regulations to protect and retain important hedgerows unless satisfied that the circumstances justify its removal.

Trees & Woodlands

Tree Preservation Orders

Tree Preservation Orders (TPOs) may be declared under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999 to protect individual trees and woodlands from development and cutting. TPOs are designed to preserve amenity or landscape conservation. The importance of trees as wildlife habitat may be taken into account, but alone is not sufficient to warrant a TPO. For this reason, TPOs do not fit comfortably under the remit of nature conservation. Further guidance on TPOs in relation to development is available from the Department for Communities and Local Government¹⁷.

Ancient Woodland & Veteran Trees

Ancient woods are areas continuously wooded for at least 400 years. Even an ancient wood which has been replanted may still have remnants of ancient woodland wildlife and historical features and has potential to be restored. Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are advised under the NPPF not to grant planning permission for any development that would result in the loss or deterioration of ancient woodland or veteran trees unless the need for, and benefits of, the development outweigh the loss. Local Planning Authorities in the south-east of England must take into account Natural England's *Standing Advice on development and Ancient Woodland*¹⁸.

Surface & Ground Waters

Surface waters (including flowing and standing water) and ground water can directly and indirectly impact upon the conservation of nature. Careful planning and the application of the Environment Agency's *Pollution Prevention Guidelines*¹⁹ can help reduce the risk of construction and maintenance work causing pollution to surface and ground waters. Some activities with the

¹⁷ Office of the Deputy Prime Minister (2000). Tree Preservation Orders: A Guide to the Law and Good Practice. Available from: <http://www.communities.gov.uk/publications/planningandbuilding/tposguide>

¹⁸ Natural England (2011). Standing Advice for Ancient Woodland. Available from: http://www.naturalengland.org.uk/regions/south_east/ourwork/standingadvice/ancientwoodland/default.aspx

¹⁹ Environment Agency (2007). Pollution Prevention Guidelines Works and Maintenance In or Near Water: PPG5. Available from: <http://www.environment-agency.gov.uk/netregs/links/107968.aspx>

potential to impact watercourses or groundwater may require consent under the Water Resources Act 1991.

SPECIES PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England. It is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by proposed development. This can best be achieved by undertaking surveys early in the planning process. Mitigation measures are required to minimise disturbance to protected species and may necessitate a licence. Natural England offers further detailed advice which can be applied to planning applications that affect protected species²⁰.

Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which 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.

The following species of mammal are protected further by law in England:

Dormouse

The Dormouse *Muscardinus avellanarius* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2010 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Dormice;
- Intentionally, deliberately or recklessly disturb Dormice in such a way as to be likely to significantly affect the ability of any significant group of Dormice to survive, breed, or rear or nurture their young or the local distribution of or abundance of the species;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Dormice for shelter or protection (whether occupied or not) or intentionally or recklessly disturb a Dormouse whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Dormouse;
- Possess or transport a Dormouse (or any part thereof) unless under licence; and
- Sell or exchange Dormice.

Development proposals affecting the Dormouse require a European Protected Species licence from Natural England.

²⁰ Natural England, 2011. *Standing Advice for Protected Species*. Available from: <http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx>

Badger

The Protection of Badgers Act 1992 offers considerable protection to both badgers and badger setts. This legislation was enacted to protect the Badger *Meles meles* against baiting and not as a means of species recovery for it is common in England. It is an offence to cruelly treat, kill or take Badgers, but it is also illegal to intentionally or recklessly damage or disturb a badger sett whilst it indicates signs of current use by a Badger.

Natural England has issued guidance to help developers and their proponents avoid sett disturbance and to identify setts that are in current use²¹. It is important to maintain adequate foraging territory in development proposals affecting badgers as the destruction or severance of large areas of foraging territory could also be taken to include habitat loss. Licences to disturb Badgers and their setts in respect of development may be issued by Natural England provided provisions are made to minimise disturbance.

Bats

There are 18 species of bat in the UK, seven of which are Species of Principal Importance in England. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2010 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species licence from Natural England.

Birds

49 species of bird are listed as Species of Principal Importance in England. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

²¹ Natural England (2009). Protection of Badgers Act 1992 (as amended) Interpretation of 'Disturbance' in relation to badgers occupying a sett. Available from:

http://www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf

Natural England (2009). Guidance on 'Current Use' in the definition of a Badger Sett. Available from:

http://www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

Schedule 1 of the Wildlife and Countryside Act 1981 affords extra protection for a number of species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependant young, constitutes an offence.

Reptiles

All four of the widespread British species of reptile, including the Common Lizard *Lacerta vivipara*, Slow-Worm *Anguis fragilis*, Grass Snake *Natrix natrix* and Adder *Vipera berus*, are Species of Principal Importance in England. They are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife & Countryside Act 1981 (as amended) from intentional killing, injury and trade. The habitat of the four widespread reptiles is not legally protected; however the replacement of habitat lost through development may be required through the planning system. Mitigation for these species is not subject to licensing by Natural England but should nonetheless be planned to minimise disturbance.

The Smooth Snake *Coronella austriaca* and the Sand Lizard *Lacerta agilis* are the rarest reptile species in Britain. In addition to the protection that is afforded to the widespread species of reptile listed above, these species are protected further under Schedule 5 (Sections 9.4b and 9.4c) of the Wildlife and Countryside Act 1981 (as amended). They are also European Protected Species protected under the Habitat Regulations 2010 (as amended). This legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Sand Lizards or Smooth Snakes;
- Intentionally, deliberately or recklessly disturb Sand Lizards or Smooth Snakes in such a way as to be likely to significantly affect the ability of any significant group of Sand Lizards or Smooth Snakes to survive, breed, or rear or nurture their young or the local distribution or abundance of either species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Sand Lizards or Smooth Snakes for shelter or protection, or intentionally or recklessly disturb a Sand Lizard or Smooth Snake whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Sand Lizard or Smooth Snake;
- Keep, sell, or exchange Sand Lizards or Smooth Snakes or their eggs;
- Deliberately take or destroy their eggs.

Development proposals affecting Smooth Snake or Sand Lizard require a European Protected Species licence from Natural England.

Great Crested Newt

The Great Crested Newt *Triturus cristatus* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2010 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Great Crested Newts;

- Intentionally, deliberately or recklessly disturb Great Crested Newts in such a way as to be likely to significantly affect the ability of any significant group of Newts to survive, breed, or rear or nurture their young or the local distribution of or abundance the species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Great Crested Newts for shelter or protection, or intentionally or recklessly disturb a Great Crested Newt whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Great Crested Newt; and
- Possess, sell or transport a Great Crested Newt, or anything derived from it.

Development proposals affecting the Great Crested Newt require a European Protected Species licence from Natural England.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set out in the law, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

Conservation Licences

In the context of development, conservation licences are normally only relevant to mitigation involving the capture of Water Voles *Arvicola amphibius* or White-Clawed Crayfish *Austropotamobius pallipes*. Conservation licences are granted to permit the trapping and translocation of these species on the condition that the development activity is properly planned and executed and thereby contributes to the conservation of the population of the species.

Badger Licences

Licences to disturb Badgers and their setts in respect of development may be issued by Natural England provided provisions are made to minimise disturbance.

European Protected Species Licences

A European Protected Species Licence is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitat Regulations 2010 (as amended); including *inter alia* all species of bats, Dormouse, Great Crested Newt and Otter. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

1. The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
2. There is no satisfactory alternative; and

3. The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance in England for the conservation of biodiversity under Section 41 (S41) of the NERC Act 2006. This list of species includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier²²). While these species may not be legally protected, there is a clear responsibility on planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species and habitats and to enhance them where possible. Additional guidance to developers is typically provided in level planning policies.

Invasive Non-Native Species

There are a number of species not ordinarily resident to the UK. Those which pose a significant threat to our ecology and economy are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). For an offence to be committed, a species must be released or allowed to escape into the wild. For example, if a plant listed on Schedule 9 is not adequately controlled by a land owner, once they are aware that it is present, and the species is allowed to spread into adjoining areas, then this could constitute an offence.

²² The Hen Harrier has also been included on the List because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

Appendix 2

Appraisal Methodology

This ecological appraisal has been completed following guidance in The Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for the Ecological Impact Assessment in the United Kingdom* (2016).

DESK STUDY METHODOLOGY

A desk study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the Zone of Influence and the wider area. This involved interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC), aerial photos, current Ordnance Survey maps and the Old Maps online database. Reference was also made to local planning policies, strategies and initiatives relating to biodiversity as detailed in **Appendix 1**.

Greenspace Information for Greater London was commissioned to provide information from their database to provide existing data records with full coverage of the site. Statutory site designations for nature conservation and protected species records were identified within a 5km radius, all other records were obtained for 2km radius from the centre of the site.

FIELDWORK METHODOLOGY

The field survey was completed by Daniel O'Sullivan on 10 December 2014. An update walkover survey was carried out on 6 June 2017 by Daniel O'Sullivan. The entire site and immediate surrounds (where access was permitted) was walked, recording habitats and features of potential value to wildlife and any evidence of, or potential for, protected or notable species or habitats, in accordance with the methods described below.

Land Use, Habitat Types, Vegetation Communities and Flora

Within the study area the land use, habitat types and landscape features (such as hedgerows and veteran trees) were described and mapped. For each main habitat type the dominant vegetation communities were recorded, along with any notable or indicator plant species, (including Japanese Knotweed where present). A preliminary evaluation of the structure, quality and likely management of each habitat or feature was also carried out.

The survey method used to record this information was based on Phase 1 Habitat Survey methodology (JNCC 2010).

Badgers

Consideration was given to the presence of habitat potentially suitable for supporting Badgers, including woodland and grassland. Potential evidence of the presence of Badgers was looked out for and noted, including earthworks that might be Badger setts, and signs such as dung pits, mammal pathways through ground vegetation and under fences, and hairs on fences.

Bats

Bats use buildings and trees for roosting and breeding and, where present, a preliminary assessment of the potential for these features to support bats was undertaken during the survey in accordance

with categories set out within the Bat Conservation Trust's Bat Surveys Good Practice Guidelines (3rd edition, 2016). Potential may include gaps beneath roof or hanging tiles, in soffits, or beneath the end of ridge tiles, but also under the edge of felt on flat roofs. In trees potential roosting features include woodpecker holes, splits in branches and peeling bark.

Preliminary evidence was obtained through noting any staining around potential roost entrances, and looking for bat droppings, for example on window sills. A preliminary evaluation was also undertaken of potential bat foraging habitat in the area, including woodland, pasture, hedges and watercourses.

Dormouse

The type and quality of habitat with the potential to be suitable for supporting Dormice, such as woodland and hedgerows, was considered during the survey. In particular the presence of oak, hazel and berry-bearing shrubs was noted, and the connectivity of habitat recorded.

Water Voles

The presence and quality of watercourses with the potential to support Water Voles was recorded during the survey. Potential evidence of Water Voles, including burrows in the tops and vertical face of riverbanks, and feeding evidence was recorded where appropriate.

Otter

Where watercourses are present, a preliminary evaluation of the quality of the riparian habitat for potentially supporting Otters was made. A preliminary search was made for signs of Otters, including spraints which are often left in prominent places on river banks, such as logs and bare patches of ground.

Birds

Any birds seen whilst carrying out the survey were recorded, and the type and quality of habitats available for birds was considered, including vegetation suitable for nesting, and habitat with the potential to support valued species, including breeding and wintering birds.

Amphibians

Consideration was given to the presence of habitat potentially suitable for supporting amphibians, including water bodies (ponds, ditches), woodland, scrub and rough grassland, and features such as log piles that might provide hibernation areas. Where appropriate, effort to gather direct evidence of amphibians was undertaken by making a preliminary search for eggs by examining vegetation within reach of the margins of water bodies, and for resting animals on land by looking under potential refuges, such as stones, wood and rubbish near to water bodies.

Reptiles

The presence and quality of habitat considered potentially suitable for supporting reptiles was recorded. This included areas providing basking and foraging areas, hibernation and breeding sites, such as rough grassland and scrub, banks, burrows, rubble piles, compost heaps, hedgebanks and water bodies.

Invertebrates

Readily identifiable invertebrates seen during the survey were recorded, and habitats and features likely to support noteworthy groups and species were noted, for example herb-rich grasslands, areas of bare ground and deadwood habitats, including woodland and veteran trees.

Appendix 3

Photographs of the Site



Photograph 1. Example of amenity grassland on site with scattered trees



Photograph 2. Building on site



Photograph 3. Example of mature tree having bat roost potential



Photograph 4. Example of introduced shrub on site



Photograph 5. Ornamental pond



Photograph 6. Mature scattered trees along boundary of site

Appendix 4

Plant Species List

Mixed Scattered Trees

Common name	Scientific name	Abundance (DAFOR)
Bird Cherry	<i>Prunus padus</i>	D
Hybrid Black-poplar	<i>Populus x canadensis</i> agg	A
Cherry Species	<i>Prunus</i> spp.	O
Hornbeam	<i>Carpinus betulus</i>	O
Blackthorn	<i>Prunus spinosa</i>	R
Butterfly-bush	<i>Buddleja davidii</i>	R
London Plane	<i>Platanus x acerifolia</i>	R
Silver Birch	<i>Betula pendula</i>	R

Amenity Grassland

Common name	Scientific name	Abundance (DAFOR)
Perennial Rye-grass	<i>Lolium perenne</i>	D
Red Fescue	<i>Festuca rubra</i>	A
Daisy	<i>Bellis perennis</i>	A
White Clover	<i>Trifolium repens</i>	A
Creeping Buttercup	<i>Ranunculus repens</i>	F
Cow Parsley	<i>Anthriscus sylvestris</i>	O
Dandelion	<i>Taraxacum</i> agg	O
Greater Plantain	<i>Plantago major</i>	O
Ribwort Plantain	<i>Plantago lanceolata</i>	O
Common Ragwort	<i>Senecio jacobaea</i>	R
Dwarf Thistle	<i>Cirsium acaule</i>	R

Introduced Shrub

Common name	Scientific name	Abundance (DAFOR)
Laurel Species		D
Cotoneaster Species	<i>Cotoneaster</i> spp.	A
Lavender Species	<i>Lavandula</i> spp.	O

Appendix 5

Design Proposals

Notes.

Drawing to be read in conjunction with designer risk register



Furniture Images
Benches - Artform Urban Treeline or similar approved
Tree grille - Artform Urban Perla Q or similar approved
Tables and Benches - Bailey Streetwires Green or similar approved

Plant schedule Species	Size & Spec.	Spacing	No.
NATIVE TREES			
Acer campestre 'Streetwise'	10-12 Select standard 3.0-3.5m height CG	as shown	8
Pyrus calleryana 'Chanticleer'	12-14 Heavy standard 3.5-4.0m height CG / BR, 2m clear stem	as shown	6
Orchard Trees (to be confirmed with school prior to tender)			
Apple: Bramleys Seedling	C10 Standard, 2m height		1
Apple: Worcester Pearmain	C10 Standard, 2m height		1
Pear: Williams Bon Chretien	C10 Standard, 2m height		1
Plum: Marjorie Seedling	C10 Standard, 2m height		1
NATIVE HEDGE			
Carpinus betulus	900-1200 BR	5 / lin m	185
LOW ORNAMENTAL SHRUB PLANTING			
Hebe 'Mrs Winder'	200-300 C2	7/m2	70
PLANTER SENSORY PLANTING			
Alysis citrodora	C2 bushy	7/m2	14
Artemisia vulgaris	C2 bushy	7/m2	14
Stachys byzantina	C2 bushy	7/m2	14
Lavandula angustifolia 'Hidcote'	C1 bushy	5/m2	10
Origanum vulgare 'Compactum'	C1 bushy	15/m2	30
Pennisetum alopecuroides Hamelin	C1 bushy	5/m2	10
Rosmarinus officinalis	C1 bushy	10/m2	20
Rudbeckia fulgida sultii 'Goldsturm'	C1 bushy	7/m2	14
Salvia officinalis 'Purpurascens'	C1 bushy	5/m2	10
Silene acaulis	C1 bushy	15/m2	30
Thymus citriodorus aurea	C1 bushy	7/m2	14
Salvia pratensis	C1 bushy	10/m2	20
Eryngium planum	C1 bushy	10/m2	20

Notes:
Landscape Implementation Guidelines.
The approved hard and soft landscaping scheme for the whole site shall be carried out prior to occupation of the building or during the first planting season following the full completion of building works, whichever is sooner.
All planting and landscape operations shall comply with the requirements specified in BS 3936 (1992) Nursery Stock Part One, BS 4428 (1989) Code of Practice for General Landscape Operations (excluding hard surfaces) and BS8545 Trees from nursery to independence in the landscape.
Any plant species shown on the approved landscape scheme which within a period of 5 years from the completion of the development dies, is removed or in the opinion of the LPA becomes seriously damaged or diseased shall be replaced in the same place in the next planting season with identical species unless the LPA gives written consent to any variation.
Proposed Tree Planting
Stock size proposed is as shown.
Tree support for semi mature specimens shall be an underground strapped anchor system with ground anchors including an integrated irrigation and aeration system.
Other tree support to be two softwood stakes @ 7.5cm diameter @ 230cm length and should be driven into the ground to knee-height with ties and horizontal cross support.
Tree pit size to conform to BS8545 Trees from nursery to independence in the landscape.
Proposed Shrub and Hedge Row Planting
Hedge row planting to be planted as shown in the plant schedule, to be planted in the first available planting season following the occupation of the building or the completion of the development (whichever is sooner), in a minimum 450mm depth of clean topsoil, with a minimum of 50mm approved bark mulch applied.
Proposed Seeding / Turfing
Seeding / turfing to be carried out in the first available seeding / turfing season following the occupation of the building or the completion of the development (whichever is sooner), in a minimum 150mm depth of clean topsoil.
Additional Notes.
- Existing trees and vegetation to be retained are to be protected during construction to BS:5837:2012
- Any necessary tree works to be carried out by an approved tree surgeon to BS 3998.
- Trees, hedges and shrubs shown to be retained on the approved plan shall not be damaged, uprooted, felled, lopped or topped without the prior written consent of the local planning authority.
- If any retained tree, hedge or shrub is removed or severely damaged during construction work, or is found to be seriously diseased or dying, another tree, hedge or shrub shall be planted at the same place and shall be of a size and species to be agreed in writing by the Local Planning Authority and shall be planted in the first planting season following the completion of the development or the occupation of the buildings, whichever is the earlier.

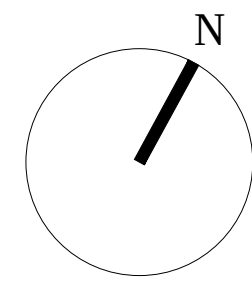
Hard Landscape Legend

P1	Paving - Concrete slab paving 400 x 400mm, Natural grey colour. To be textured slabs or similar approved
P2	Surfacing - Block paving to match existing
P3	Surfacing - Resin bound gravel
P4	Surfacing - Artificial grass sports pitch
E	Edging - Concrete pin kerb 914 x 150 x 50mm

Soft Landscape Legend

F1	Furniture - Gero table and benches by Bailey Street Scene or similar approved
F2	Furniture - Gero bench by Bailey Street Scene or similar approved
F3	Furniture - Treeline bench components by Artform Urban, or similar approved
F4	Furniture - Perla Q tree grille by Artform Urban, galv & powder coated or similar approved
F5	Fencing - 1.45m high metal fence to match existing
T	Proposed tree - refer to planting schedule
H	Planting - Hedge Refer to plant schedule
S	Planting - Shrubs Refer to plant schedule
G	Grass - Lawn

- Notes:**
1 Drainage: Refer to Engineers drawings and specification
2 Highway / Civils works: Refer to Engineers drawings and specification
3 Sub bases and foundations: Refer to Engineers drawings and specification
4 Lighting / Mugs Lighting: Refer to M&E Engineers / Lighting Specialist drawings and specification
5 Refer to Project Health and Safety File for locations and details of existing services
6 Road marking white lining: Refer to Engineers drawings and specification



Revisions:
P1 ISSUED FOR PLANNING Aug 17

Landscape Architect

ijla

M: 07906 477473 W: www.ijla.co.uk E: ian@ijla.co.uk

Contractors are not to scale from this drawing. All dimensions are to be checked on site. Any discrepancies, omissions and/or omissions between this drawing and information given elsewhere are to be reported to this office for clarification before proceeding.

STATUS:

PLANNING

Project Title:
Ruislip High School

Drawing Title:
Landscape Plan

Sheet 1 of 2

Scale: 1:200@A0 Drawn: team

Date: May 17

Drawing Number: M297-100 Revision: P1

Revised references:
1 - CRN/rev0170801/050-160089 - Ruislip High School - Option 7

Proposed v6 COPY.dwg 3