



**Preliminary Ecological Appraisal and
Biodiversity Net Gain (BNG) Report:**
The Pavilion at Bishop Winnington Ingram C of E
Primary and Nursery School

Client:
Bishop Winnington Ingram C of
E Primary and Nursery School

Date:
July 15, 2026

Author:
Paul Liptrot

Project:
P228

Version
V01

Quality Assurance

Project Number	P228
Project Name	Bishop Winnington Ingram C of E Primary and Nursery School
site location	Bishop Winnington-Ingram CofE Primary School, Southcote Rise, Ickenham, Ruislip, Greater London, England, HA4 7LW, TQ 08572 87714 Google Maps
Filename	P228 BWI BNG and PEA Everything Ecology 2026-07-15.docx
Version	V01

Principal Authors	
Paul Liptrot MCIEEM	
Check By	
Elizabeth McBride BSc(Hons), MCIEEM – 14/07/2026	
Version History	
Version and Date	Details - notes of revisions
V01	July 2026

Field Investigations and Data

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work. Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by Everything Ecology Ltd for inaccuracies in the data supplied by any other party.

Declaration of Compliance

The information which we have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed within this document are our true and professional bona fide opinions.

Copyright

The contents and layout of this report are subject to copyright owned by Everything Ecology Ltd

Third-Party Disclaimer

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Everything Ecology Ltd at the instruction of, and for use by, our client named on the front of the report. It does not in any way constitute advice to any third party who is able to access it by any means. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Contents

1	Summary	5
1.1	Purpose of report.....	5
1.2	Methods.....	5
1.3	Key Issues and Conclusions	5
2	Introduction	8
2.1	Background Information	8
2.2	Objectives.....	8
3	Methods	9
3.1	Desk study and data consultation	9
3.2	Field survey	9
3.2.1	Habitats	9
3.2.2	Protected and Notable Species Assessment.....	12
3.3	Constraints and Limitations	14
4	Baseline Ecological Conditions	15
4.1	Designated sites.....	15
4.1.1	Statutory Designated sites	15
4.1.2	European Mitigation Licence Applications	15
4.2	Habitats	15
4.2.1	Developed land; sealed surface and buildings	15
4.2.2	Modified grassland	16
4.2.3	Introduced shrub	17
4.2.4	Bare ground	17
4.2.5	Individual trees (secondary code 32).....	17
4.2.6	Native Species hedgerow	18
4.3	Biodiversity Net Gain Baseline	18
4.4	Species and Species Groups.....	21
4.4.1	Plants	21
4.4.2	Amphibians	21
4.4.3	Birds	21
4.4.4	Bats	22
4.4.5	Reptiles	23
4.4.6	Hedgehog	23
4.4.7	Otter	23
4.4.8	Badger.....	23
5	Ecological constraints and opportunities, and recommendations for mitigation and further survey	25
5.1	Proposals	25
5.2	Designated sites.....	25
5.3	BNG	25
5.3.1	Retained and lost Habitats	25
5.3.2	Habitat and Hedgerow Creation	25
5.3.3	Condition Assessment and Assumptions for Proposed Habitats	29

5.4	Species and species groups	30
5.4.1	Bats	30
5.4.2	Birds	31
5.5	Enhancement	32
6	Conclusions	33
7	References	34
8	Figures	35
9	Appendices	40
9.1	Desktop study	41
9.1.1	GIGL Report	42
9.2	Species-specific enhancements	44
9.2.1	Bird boxes	44
9.2.2	Bat boxes	49
10	The Biodiversity Net Gain Principles	53
11	Planning Policy and Legislation	54
11.1	The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2020	54
11.2	Wildlife & Countryside Act 1981	54
11.3	Section 41 Habitats and Species (NERC Act 2006)	55
11.4	The Protection of Badgers Act 1992	55
11.5	National Planning Policy Framework	55
11.6	International and National Biodiversity Designations	56

Figures

Figure 8-1	Location Plan	36
Figure 8-2	Baseline UKHab Plan	37
Figure 8-3	Designated sites	38
Figure 8-4	Post-development UKHab plan	39

Tables

Table 1-1	Habitats and BNG	5
Table 1-2	Protected and notable species	6
Table 1-3	Species-specific enhancement	6
Table 2-1	Objectives of the report	8
Table 3-1	Organisations consulted for biological records	9
Table 3-2	Designated sites	9
Table 3-3	UKHab metadata	10
Table 3-4	Weather Conditions	14
Table 3-5	Surveyor details	14
Table 4-1	Tree Details	18
Table 4-2	On-site Habitat Baseline (Area units)	19
Table 4-3	On-site Hedge Baseline (linear units)	20
Table 5-1	On-site Habitat Creation	27
Table 5-2	On-site Hedge Creation	28
Table 5-3	Proposed Hedgerow Species	29
Table 9-1	Granted European Mitigation Licence within 2 km	41
Table 9-2	Local Nature Reserves (England)	41

Table 9-3 sites of Special Scientific Interest (England)	41
Table 10-1: The Good Practice Principles	53

1 Summary

1.1 Purpose of report

1. This report presents a Preliminary Ecological Appraisal (PEA) and Biodiversity Net Gain (BNG) assessment of Bishop Winnington Ingram C of E Primary School, Southcote Rise, Ickenham, Ruislip, Greater London HA4 7LW.
2. The proposal is to extend the car parking provision in the west of the site (Area A), and to construct a community pavilion within the sports field in the east of the site (Area B).
3. To provide context and to assess the site for protected species, the full site area (site within the ownership of the school) has been surveyed. However, the BNG calculation for the onsite habitats has been restricted to the development areas (i.e. Areas A and B).
4. Please refer to Section 124 for a location plan.

1.2 Methods

5. A desk study, including a consultation with Greenspace Information for Greater London (GiGL), has been undertaken as part of the appraisal.
6. A field survey was undertaken on 25th June 2026, where the following methods were used to assess the site habitats and their likelihood of supporting protected and notable species:
 - Habitat identification and mapping – using the UK Habitat Classification scheme methodology.
 - Protected and notable species assessment.
7. The UKHab habitat classifications were transposed into the Statutory Biodiversity Metric 1.0.4 to determine the site baseline and post-development value.

1.3 Key Issues and Conclusions

8. Table 1-1 and Table 1-2 provide a summary of the assessment's key issues and conclusions.

Table 1-1 Habitats and BNG

Item	Details
On-site habitat Area (Area A and Area B)	Area A = 0.04 ha, Area B = 0.13 ha
Irreplaceable habitat	No irreplaceable habitats were recorded on-site.
Priority habitats	Native species hedgerows and mature lines of trees were recorded on site, but will not be lost as part of the proposals
Habitat units	The site's baseline habitat unit value is 0.69. The proposed

Item	Details
	development will result in a net gain of 0.11 (15.53%) , resulting in a post-intervention value of 0.76 habitat units.
Hedgerow units	The site's baseline linear habitat unit value is 0.11 . The proposed development will result in a net gain of 0.17 linear units (96.90%).
Water course units	No watercourse units were recorded on site.
Trading rules	The metric trading rules for area and linear habitats have been satisfied by creating the proposed habitats.
Off-site habitat creation or contribution	Not currently required
Biodiversity Management and Monitoring Plan	Required
Recommendations	The current proposal fulfils the statutory 10% net gain required for Biodiversity Net Gain, so no further habitat enhancement is required. Species-specific habitat features are also recommended to further enhance the site, see below.

9. The following species or species groups have been scoped out for the assessment using the site's geographical location (i.e. reduced likelihood of species being present due to known species distribution) and suitability of the site's habitat to support each species or species group: Notable assemblages of invertebrates, white-clawed crayfish, otter and water vole.

Table 1-2 Protected and notable species

Receptor	Further survey	Mitigation Required	Rationale and further information
<u>Birds</u>	Dependent on the seasonal timing of habitat removal	Yes: Standard nesting bird protection measures and timing constraints- including nesting bird checks if works are undertaken in the nesting period (March to August).	The habitat on site is suitable for nesting birds. As such, vegetation clearance and works to the building's external areas could damage or destroy nesting sites or injure wild birds if not undertaken appropriately.
<u>Bats</u>	No –	Lighting strategy to reduce lighting impacts on the retained hedgerow to the west of Area A and adjacent offsite woodland to the north of Area B.	Tree 3, which offers low suitability for roosting bats, will be retained as part of the works. Building 1 is unsuitable for roosting bats, so no further surveys are required . It is likely the site is used by bats for both foraging and commuting. The scope of the proposed works is not considered significant enough to have an impact at a local level, so further surveys to determine activity level are not considered proportionate. However, inappropriate lighting would likely pull the insects out of their dark habitat, reducing food availability and dark foraging areas or hindering commuting activity, which could negatively affect bats at the site level. As such, a Lighting strategy is required. See section 5.4.1 for recommended specifications

10. The recommended outline species-specific enhancement is detailed in
11. Table 1-3.

Table 1-3 Species-specific enhancement

Receptor	Enhancement measures
<u>Birds – house</u>	Wall-integrated nesting features should be installed to enhance the site for nesting birds. See Section

sparrows, swifts and starlings	<u>9.2.1</u> for examples.
Bats – crevice-dwelling species	Wall-integrated bat boxes should be installed. See <u>Section 9.2.2</u> for examples.

2 Introduction

2.1 Background Information

12. Bishop Winnington Ingram C of E Primary School commissioned a Preliminary Ecological Appraisal and Biodiversity Net Gain Assessment to inform the redevelopment of the school, which is located at Southcote Rise, Ickenham, Ruislip, Greater London, HA4 7LW, OS Central Grid Reference: TQ 08572 87714.
13. The current proposals include the construction of a community pavilion in the east of the site (Area A) and the extension of the car park within the west of the site (Area B).
14. Area A consists of modified recreational grassland, native species hedgerow and urban trees.
15. Area B includes hardstanding, urban trees and introduced shrubs.
16. The location plan for the site is available in Section 125.
17. This report was written by Paul Liptrot, BSc (Hons) MCIEEM. Paul has 14 years of experience conducting ecological assessments. Paul holds a Natural England Class 4 bat licence, a Natural England Class 1 great crested newt (GCN) licence and a Natural England barn owl licence. He also has experience producing and implementing mitigation licences for bats and badgers, and is registered on level 1 of the Earned Recognition Mitigation Class Licence.

2.2 Objectives

18. The objectives of this report are shown in Table 2-1.

Table 2-1. Objectives of the report

Objectives
To provide an ecological baseline for the site.
To identify key ecological constraints to the proposals.
To inform master planning to allow significant ecological effects to be avoided or minimised wherever possible.
To allow any further ecological surveys required to inform an Ecological Impact Assessment to be identified and appropriately designed.
To allow likely mitigation or compensation measures to be developed.
To determine the on-site baseline habitat value using the DEFRA Statutory Biodiversity Metric
To determine the feasibility of achieving a 10% net gain on site.

3 Methods

3.1 Desk study and data consultation

19. Ecological and biological records for the site and the surrounding area (up to two kilometres) were requested from the organisations included in Table 3-1.

Table 3-1 Organisations consulted for biological records¹.

Date	Organisation	Details of records requested
10/07/2026	Multi-Agency Geographic Information for the Countryside (MAGIC)	All relevant habitat and species layers checked within 2 km of the site centroid, including granted European Protected Species Licences, Great Crested Newt Licence Returns and Priority Habitats – 2 km
16/06/2026	Greenspace Information for Greater London (GiGL)	Standard 1 km data search

20. Information regarding designated wildlife sites within the local area was requested from the organisations in Table 3-2.

Table 3-2 Designated sites.

Date	Organisation	Details of the information requested
10/07/2026	Multi-Agency Geographic Information for the Countryside (MAGIC)	Local Nature Reserves, National Nature Reserves, Ancient Woodland, sites of Special Scientific Interest, Areas of Outstanding Natural Beauty, Special Areas of Conservation, Special Protection Areas, or Ramsar sites within a 2 km radius of the site.

21. In addition to the above, online mapping sources, including Google Maps, Google Earth Pro and Grid Reference Finder, were used to view satellite imagery and online maps of the site and surrounding land.

3.2 Field survey

3.2.1 Habitats

UK Habitat Classification System

22. The survey was carried out in accordance with the UK Habitat Classification System (UKHab) methodology². The habitats within the boundary of the site were broadly mapped, describing the principal habitat types and identifying the dominant plant species

¹ Serach grid reference

² UKHab Ltd (2023). UK Habitat Classification Version 2.0 at <http://www.ukhab.org/>

present within each habitat type. A botanical species list sufficient to determine broad habitat types was collected on site. The DAFOR scale has been used to rate the abundance of plant species as follows:

Dominant – 76-100% cover
Abundant – 51-75% cover
Frequent – 26-50% cover
Occasional – 11-25% cover
Rare – 1-10% cover
Present – abundance not estimated.

23. The information collected during the survey was then approximately digitally mapped using a combination of field maps, GPS waypoints, satellite images and QGIS software. The UKHab plan is available in Section 125.
24. Please refer to Table 3-3 for UKHab metadata.

Table 3-3 UKHab metadata

Metadata	Item
Scope	Baseline habitat survey to inform BNG baseline
Area surveyed	With the red line boundary
Edition	UKHab 2.0
Minimum mapping unit	25 m ²
Secondary Codes	All Secondary Codes
Map projection	British National Grid
Year	2026
Surveyor	Paul Liptrot MCIEEM

Biodiversity Net Gain

25. The Biodiversity Net Gain (BNG) assessment has been undertaken in accordance with the requirements of the Environment Act 2021 and current national guidance. BNG requires development to deliver a minimum 10% increase in biodiversity value compared to the pre-development baseline.
26. The assessment follows the mitigation hierarchy, whereby impacts to biodiversity are first avoided, then minimised, with habitat creation and enhancement undertaken to compensate for residual losses

Biodiversity Metric

27. The assessment has been completed using the Statutory Biodiversity Metric (DEFRA), which provides a standardised method to quantify biodiversity value in biodiversity units.
28. The metric evaluates habitats based on:
- habitat type

- area or length
- condition
- distinctiveness
- strategic significance

29. These variables are used to calculate baseline and post-development biodiversity units for area habitats, hedgerows and watercourses separately.

Baseline Habitat Assessment

30. A habitat survey of the site was undertaken to identify and map all habitats in accordance with recognised classification systems (i.e., UKHab).

31. For each habitat parcel, the following were recorded:

- habitat type and extent (area or length)
- condition (e.g. poor, moderate, good)
- distinctiveness category

32. Baseline biodiversity units were calculated by inputting this data into the Statutory Biodiversity Metric tool.

Post-Development Assessment

33. The proposed development layout was assessed to determine:

- habitats to be retained
- habitats to be enhanced
- habitats to be created
- habitats to be lost

34. Post-development biodiversity units were calculated within the metric tool, considering habitat creation, enhancement measures and time to target condition.

Calculation of Net Gain

35. Net gain was calculated using the following formula:

$$\text{net gain (\%)} = (\text{post-development units} - \text{baseline units}) \div \text{baseline units} \times 100$$

36. A minimum 10% increase in biodiversity units is required to meet statutory BNG requirements.

Mapping and Measurement

37. Habitat areas and linear features (e.g. hedgerows) were measured using GIS software (QGIS 3.40.12), with habitat parcels grouped where appropriate based on composition and condition. The habitat parcels and linear habitats were mapped with the aid of both the OS Master Map and the topographical survey provided by the client's design team.

Scope/limitations of Assessment

38. Any trees that were outside the red line boundary but included in the arboriculture survey were excluded from the metric calculation (i.e. T1, T2, T4, T5, T11-T30, T33 and T34).
39. Trees T6, T7, T8, T9, T10 form part of hedgerow 1 (H01) and are not medium, large or veteran trees, so have not been mapped as individual trees.
40. Only habitats and trees (T3, T31 and T32) directly within the application boundary and subject to measurable change have been included in the calculation to ensure that the assessment remains proportionate and consistent with the statutory biodiversity metric approach.

Invasive flora - Controlled and invasive species assessment

41. The site was checked for the presence of invasive non-native species, including Japanese knotweed *Fallopia japonica*, Himalayan/Indian balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum* and New Zealand pygmyweed *Crassula helmsii*.
42. An active search for these species was not undertaken. However, if these or any other potentially invasive species were observed on the site, they were recorded and target-noted where possible.

3.2.2 Protected and Notable Species Assessment

Scope of Assessment

43. The following species or species groups have been scoped out for the assessment using the site's geographical location (i.e. reduced likelihood of species being present due to known species distribution) and suitability of the site's habitat to support each species or species group: Notable assemblages of invertebrates, white-clawed crayfish, and water vole, polecat (*Mustela putorius*), harvest mouse (*Micromys minutus*) and brown hare (*Lepus europaeus*) and otter.

Bats

44. The site's buildings and trees were assessed for suitability to support roosting bats in line with current best practice guidelines (Collins, 2023; Reason and Wray, 2023).

NERC S. 41 Mammals

45. The survey included an assessment of the habitats on site for their potential to support NERC Section 41 species, such as hedgehog (*Erinaceus europaeus*), polecat (*Mustela putorius*), harvest mouse (*Micromys minutus*) and brown hare (*Lepus europaeus*).

Badger

46. Suitable habitats were searched for evidence of badgers, including setts, snuffle holes, runs, and the presence of hair on squeeze holes under fences or through any scrub habitat (Badger Trust, 2023; Harris et al., 1989).

Amphibians, including Great Crested Newts.

47. Aerial images and online mapping resources were searched for standing water bodies or other wetland habitats (ponds, lakes, ditches, marshes, or swamp habitats) within 250 m of the site, which would likely be suitable for amphibians.
48. The habitat within the survey area was assessed for its suitability to support terrestrial GCN. Any features of particular interest for GCN were noted and mapped during the UKHab assessment and compared against the terrestrial habitat requirements of GCN detailed in the Great Crested Newt Conservation Handbook and Great Crested Newt Mitigation Guidelines (Hayes and Whitehurst, 2001; Langton et al., 2001).
49. Features searched for and noted were suitable daytime refugia (logs, bricks, and rubble); undergrowth and leaf litter for foraging and overwintering; rough grassland, pasture and hedgerows for foraging and movement between ponds and dispersal; and refugia in mammal burrows and tree stump voids for when the weather becomes colder.

Reptiles – Habitat Suitability Assessment

50. The suitability of the site's habitats for reptiles was assessed following the NARRS Reptile Habitat guide (The Herpetological Conservation Trust, 2007). This includes assessing the presence of variable vegetation structures with a mixture of vegetation heights, tangled or thorny areas, mosaics, bare patches, lots of edges ('ecotones') and good basking places. The number of sunny, south-facing, unshaded locations was assessed. The site's topography and connectivity around the site were also considered.

Birds – Habitat Suitability Assessment

51. Suitable habitats on the site were checked for evidence of breeding, which includes noting defunct nests and the presence of suitable nesting habitats.

Survey Timing and Weather Conditions

52. The survey took place in daylight hours with good visibility. See Table 3-4 for weather conditions.

Table 3-4 Weather Conditions

Measure	High	Low	Average
Temperature	32.7 °C	21.2 °C	27.4 °C
Dew Point	21.4 °C	17.5 °C	19.6 °C
Humidity	89 %	44 %	64 %
Precipitation	0.00 mm	--	--

Surveyors

53. The survey visits were undertaken by the surveyors, as detailed in Table 3-5.

Table 3-5 Surveyor details

Date	Surveyor	Position and qualifications
25/06/2026	Paul Liptrot	Principal Ecologist, BSc (Hons) MCIEEM. Natural England Class 4 Bat licence number: CL20-2018-37087-CLS-CLS. 12 years' experience undertaking bat surveys
	Eliza Merrills	Graduate Ecologist BSc (Hons) MSc

3.3 Constraints and Limitations

Constraints/limitations	Response
The findings and conclusions of ecological assessments have a limited shelf life.	Ecological conditions and constraints will change over time, so this report's findings are valid for 12-18 months. After that, the report should be reviewed to assess whether the survey should be updated (CIEEM, 2019).

4 Baseline Ecological Conditions

55. This section outlines the site's baseline ecological conditions.

4.1 Designated sites

4.1.1 Statutory Designated sites

56. Ruislip Woods, which is a Site of Special Scientific Interest (SSSI) and National Nature Reserve, is located 740 m to the north of the site.

57. Ruislip Local Nature Reserve is located 1.7 km to the east of the site.

4.1.2 European Mitigation Licence Applications

58. Two granted European Protected Species Mitigation Licence (EPSML) for bats and three protected licences for great crested newts were returned within 2 km. The closest was for a non-breeding common pipistrelle roost located 0.13 km to the east

59. Please refer to section 9.1 for full details of the licences returned.

4.2 Habitats

60. A UKHab plan of the habitats within the site is in Section 125.

61. The UKHab habitats recorded on the site are as follows:

4.2.1 Developed land; sealed surface and buildings



Photo 1 example ; sealed surface in Area B

62. Area B includes areas for paved ground, tarmac and hardstanding . The vegetation within this area comprised less than 10% of the habitat's surface. As such, it has been classified as u1b - developed land; sealed surface.

4.2.2 Modified grassland



Photo 2 Modified grassland and T3 within Area A



Photo 3 Modified grassland in front of residential dwelling in Area B

63. Area A (compartment 1) consists entirely of modified short mown grassland which is current used as a recreational sports pitch. Area B includes two areas of modified grassland in front of the residential property (compartment 2). The swards in both areas support a limited range of common broadleaved herbs typical of modified grassland (i.e. fewer than 6 species per square metre). The following species were recorded throughout Area A and the wider sports pitch; white clover *Trifolium repens*, yarrow *Achillea millefolium*, greater plantain *Plantago major*, ribwort plantain *Plantago lanceolata*, common daisy *Bellis perennis*, common mouse-ear *Cerastium fontanum*, self-heal *Prunella vulgaris*, creeping buttercup *Ranunculus repens* and chickweed *Stellaria media*. Bent grasses *Agrostis spp.*, perennial rye grass and Yorkshire fog are also present, with locally occasional wall barley *Hordeum murinum*. Compartment 2 was less diverse with bent species, Yorkshire fog and common daisy recorded.
64. The species assemblage in both grassland area is characteristic of regularly managed amenity grassland of generally low botanical diversity and limited nature conservation value.

4.2.3 Introduced shrub



Photo 4 Introduced Shrub

65. An area of introduced shrub was present within area B, including cherry laurel *Prunus laurocerasus*, variegated laurel *Prunus Lusitanica 'Variegata'* and other evergreen shrubs

4.2.4 Bare ground



Photo 5 Bare ground under T32

66. Compartment 3 is a small area of bare ground under T32.

4.2.5 Individual trees (secondary code 32)

67. Two large trees are within the red line boundary (T31 and T32), both in moderate condition. T3 tree is a medium-sized tree in good condition that is also included in the metric, as the root protection area is to be impacted by the works.

68. See Table 4-1 for tabulated survey results

Table 4-1 Tree Details

Code	Name	DBH (mm)	Comments	Size	Condition	Bat roost suitability
T31	Quercus robur (pedunculate oak)	640		Large	Moderate	
T32	Carpinus betulus (Hornbeam)	630		Large	Moderate	

4.2.6 Native Species hedgerow

69. The west boundary of Area A includes a native species hedgerow approximately 3.5m in height and 3.5m in width, with only limited gaps throughout its length of the red line boundary. The hedgerow is dominated by blackthorn *Prunus spinosa*, with occasional field maple *Acer campestre*, ash *Fraxinus excelsior* and wild cherry *Prunus avium*. Overall, the hedgerow forms a well-established and largely intact linear habitat feature within the red line boundary. The hedgerow does become gappy to the north, where it merges into bramble scrub outside the red line boundary.

4.3 Biodiversity Net Gain Baseline

Strategic Significance

70. The site is not within the LNRS; as such, all habitats on the site have been assessed as Area/compensation not in local strategy/ no local strategy (i.e. low Strategic Significance).

Baseline Calculation

71. The DEFRA Statutory Biodiversity Metric was used to calculate the site's baseline habitat unit, shown in Table 4-2 and hedgerow units, shown in Table 4-3

72. With the exception of urban trees, the site comprises habitats of very low or low distinctiveness.

Table 4-2 On-site Habitat Baseline (Area units)

Existing area habitats				Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline
Broad Habitat	Habitat Type	Irreplaceable habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units
Grassland	Modified grassland	No	0.038	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required $\geq$	0.08
Urban	Bare ground	No	0.0005	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required $\geq$	0.00
Urban	Developed land; sealed surface	No	0.1222	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
Urban	Introduced shrub	No	0.0068	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required $\geq$	0.01
Grassland	Modified grassland	No	0.0053	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required $\geq$	0.01
Individual trees	Urban tree	No	0.0733	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat	0.59

							required (≥)	
	Total habitat area		0.25				Total number of units	0.69
	Site Area (Excluding area of individual trees, green walls, intertidal hard structures)		0.17					

Table 4-3 On-site Hedge Baseline (linear units)

Existing hedgerow habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline
Hedge number	Habitat type	Length (km)	Distinctiveness	Condition	Strategic significance		Total hedgerow units
H01	Native hedgerow	0.019	Low	Good	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.11
	Total length	0.02				Total number of units	0.11

4.4 Species and Species Groups

4.4.1 Plants

The plant species recorded on site are considered common and widespread. No notable plant species were recorded during the site visit. All the area habitats on site are of low or very low distinctiveness and, as such, are unlikely to support rare plant species.

Invasive Species

73. No non-native invasive species were recorded on site.

4.4.2 Amphibians

74. No records of amphibians were returned for the site. Records for common toad *Bufo bufo* and common frog *Rana temporaria* and great crested newt *Triturus cristatus* were returned in the data search; all records were over 1km from the site.
75. No standing waterbodies (i.e. breeding habitat) were identified on site or within 250 m of the site. The closest waterbody, as referenced on Ordnance Survey maps, is located approximately 370 m to the Ruislip Duck Pond.
76. The connectivity between the site and Ruislip Duck Pond is likely to be significantly restricted due to urban barriers such as garden fences and roads. As such, the site is considered to offer negligible suitability for terrestrial amphibians and requires no further consideration.

4.4.3 Birds

77. The desk study returned records of 51 notable bird species within approximately 2 km of the site, including a range of species protected under the Wildlife and Countryside Act 1981, Birds Directive Annex I, Section 41 of the NERC Act, and local conservation priority lists. Notable species recorded in the local area include Kingfisher *Alcedo atthis*, Swift *Apus apus*, House Martin *Delichon urbicum*, House Sparrow *Passer domesticus*, Red Kite *Milvus milvus*, Little Egret *Egretta garzetta*, Bittern *Botaurus stellaris*, Pochard *Aythya ferina*, Gadwall *Mareca strepera*, Starling *Sturnus vulgaris*, Song Thrush *Turdus philomelos*, and Skylark *Alauda arvensis*.
78. The closest notable records comprise Kingfisher and House Sparrow at approximately 121 m north-east of the site, Swift at 223 m south, Grey Wagtail at 255 m east, Song Thrush at 430 m north-east, and Greenfinch, Merlin, Pied Flycatcher, Spotted Flycatcher, Woodcock, Redwing and Fieldfare at approximately 570 m from the site.

79. During the field survey, a parakeet was noted on the site.
80. No defunct nests were noted; however, Hedgerow 1 and Trees T3, T31 and T32 do offer suitability for nesting birds. The site's habitats are likely to offer low local value to common and widespread bird species.

4.4.4 Bats

Roost suitability

Building 1

The western section of the school (Building 1) is included in the redline boundary but will not be impacted directly by the proposals. Building 1 offers negligible suitability for roosting bats. The building comprises a series of single and two-storey flat-roofed adjoining buildings. No potential roosting features were noted during the survey visit. The building was generally in a good state of repair with no suitable gaps or roosting spaces noted.

Tree 3

81. Tree 3 contains two cavities. Cavity 1 was open and not considered suitable for roosting. Cavity 2 was a frost crack at the base of the tree, which offers suitability for roosting bats, but did not contain any bats or evidence of bats (i.e. droppings) during the survey visit



Photo 6 Cavity 1



Photo 7 Cavity 2

Habitat suitability - foraging and commuting

82. The habitats within the site are considered to offer moderate suitability for foraging bats, as Areas A and B are bordered by mature lines of trees, which connect the site to good quality habitat ~ 100 m to the north along the River Pinn.

4.4.5 Reptiles

83. No suitable reptile basking or potential breeding site was noted during the survey visit.
84. The site's boundary habitats may offer some limited value to common reptile species, allowing movement throughout the adjoining habitats. But the site is considered to offer negligible suitability for reptile species and, as such, is unlikely to support a significant local population.
85. As such, reptiles are considered to offer no further constraints to the proposal at this time.

4.4.6 Hedgehog

86. The boundary habitats and wider site are likely to be used by hedgehogs. No habitat which is likely to be used by the species is to be lost as part of the proposals.
87. As such, the species offer no further constraint to the proposals at this time. However, standard construction protection measures should be implemented to protect the species during construction.

4.4.7 Otter

88. The river Pinn is located ~100 m to the north of the site, and the habitat on site may provide cover for otters whilst away from the river. However, the schools boundary fence will likely significantly limit the dispersal of this specie.
89. As such otter are considered not to offer any further constraints at this time.

4.4.8 Badger

90. No evidence of badgers *Meles meles* was recorded during the site visit within the red line boundaries or within the wider school grounds. The habitats adjacent to the site may offer some opportunities for the species, however, the grounds of the school are enclosed in a metal fence which will likely restrict movement through the site.
91. No badger records were returned within the 1 km data consultation with GiGL.
92. As such badger are considered not to offer any further constraints at this time.

5 Ecological constraints and opportunities, and recommendations for mitigation and further survey

5.1 Proposals

- 93. A proposed site layout plan was provided by the client design team at Metashape Architects and was used to determine the habitat changes on the site.
- 94. The proposals involve the construction of a community pavilion (Area A) with a green roof and the redesign of the car park to accommodate more parking spaces (Area B). The proposal will result in the loss of modified grassland and hardstanding.
- 95. Building 1 and all trees within the redline boundary are to be retained as part of the proposals.
- 96. The proposals include three new native trees and a native hedgerow, an of introduced shrub and areas of modified grassland.
- 97. A proposed post-intervention habitat plan is included in section 8.

5.2 Designated sites

- 98. No statutory or non-statutory sites will be negatively affected by the proposed development.

5.3 BNG

5.3.1 Retained and lost Habitats

- 99. The proposals will result in the loss of modified grassland, introduced shrub and hardstanding. The native hedgerow H1 with Area A will be retained and managed as a hedgerow, and the site trees T31 and T32 will be retained as part of the proposals.

5.3.2 Habitat and Hedgerow Creation

- 100. The proposals will result in the creation of a modified grassland, a biodiverse green roof and an introduced shrub. It will also include the planting of three native tree species and the creation of a native species hedgerow.
- 101. The proposed development will result in a net gain of **0.11 habitat units (15.53%)**.
- 102. The proposal therefore meets the statutory net gain requirements on-site

103. The metric trading rules for area habitats have been satisfied.
104. Please refer to Table 5-1 for the table showing on-site habitat creation calculations.

Table 5-1 On-site Habitat Creation

Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty multipliers	Habitat units delivered
			Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation	
Urban	Biodiverse green roof	0.024	Medium	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	10	Medium	0.14
Urban	Developed land; sealed surface	0.014	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Low	0.00
Urban	Developed land; sealed surface	0.116	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Low	0.00
Urban	Introduced shrub	0.0004	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.00
Grassland	Modified grassland	0.018	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.03
Individual trees	Urban tree	0.012214512	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	27	Low	0.04
	Total habitat area	0.18							0.21
	Site Area (Excluding area of individual trees, green walls,	0.17							

	intertidal hard structures)								
--	-----------------------------	--	--	--	--	--	--	--	--

Table 5-2 On-site Hedge Creation

	Proposed habitats		Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty risk multipliers	Hedge units delivered
New hedge number	Habitat type	Length (km)	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation	
H02	Native hedgerow	0.033	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	0.11
		0.03							0.11

105. A native species hedgerow will be created as part of the proposals within Area B. The hedgerow will be managed to moderate condition and include species detailed in Table 5-3

Table 5-3 Proposed Hedgerow Species

Common name	Scientific name	Recommended percentage
Hawthorn	<i>Crataegus monogyna</i>	50%
Blackthorn	<i>Prunus spinosa</i>	20%
Hazel	<i>Corylus avellana</i>	10%
Field Maple	<i>Acer campestre</i>	10%
Dog Rose	<i>Rosa canina</i>	5%
Guelder Rose	<i>Viburnum opulus</i>	5%

106. The proposed development will result in a net gain of 0.11 (96.90%) hedgerow units.
107. The metric trading rules for linear habitats have been satisfied through the creation of the proposed habitats.

5.3.3 Condition Assessment and Assumptions for Proposed Habitats

Green Roof

108. A Bio-solar green roof will be fitted on the proposed pavilion. The roof will be established using the BauderGREEN Flora 3 Seed Mix, designed to provide a biodiverse vegetation assemblage suited to extensive green roof conditions. Management will be undertaken by a specialist green roof contractor, with twice-yearly inspections to ensure continued establishment, vegetation health, and absence of undesirable or invasive species. Based on the design specification and management commitments, it is assumed that the substrate depth, drainage, and planting regime will support successful vegetation establishment and long-term functionality.

Modified Grassland

109. Compartment 2 will comprise a proposed species-rich grassland seeded using the Emorsgate Flowering Lawn Mix EL1 at a rate of 4 g/m² and will be maintained by a designated management company.
110. While the seed mix is designed to enhance floristic diversity compared to standard amenity grassland, it is acknowledged that, due to the constraints of the urban

environment (including soil conditions, disturbance, and management regime), the habitat is unlikely to achieve the criteria beyond modified grassland in good condition.

Urban Trees

111. The three proposed small native trees are anticipated to reach moderate condition due to restricted rooting volumes and limited growing space within the modified grassland in Area B.

5.4 Species and species groups

5.4.1 Bats

Roosting

112. The frost crack at the base of tree T3 offers suitability for roosting bats. However, as Tree 3 is to be retained as part of the proposals, no further survey is required for roosting bats.
113. The site is considered to offer moderate suitability for foraging and commuting for bats. As such, a light plan is recommended to ensure light spill is minimised along the boundaries of the site. See below for further details.

Bat-Friendly Lighting Specifications

- **Avoid lighting of sensitive areas**
No artificial lighting shall be directed towards key bat habitats, including commuting corridors, boundary vegetation, or adjacent habitats of higher ecological value.
- **Maintain dark corridors**
Retain unlit buffer zones along ecological boundaries (e.g. northern boundary) to preserve continuous dark commuting routes for bats.
- **Limit illuminance levels**
Light spill onto bat habitats shall be minimised, with illumination levels not exceeding **0.5 lux** at habitat boundaries.
- **Directional luminaires**
All luminaires shall be directional and fully shielded, with optics designed to focus light only where required and prevent spill into adjacent habitats.
- **Zero upward light output**
Lighting units shall achieve **0% upward light (ULR = 0%)** to minimise sky glow and disturbance.
- **Warm colour temperature**
Light sources shall be warm-white only, with a maximum colour temperature of **2700K or lower** to reduce blue light content.
- **Low-intensity lighting**
Lighting should be kept to the lowest intensity necessary, avoiding excessive brightness and glare, which can disrupt bat behaviour.

- **Appropriate mounting height and positioning**

Luminaires shall be installed at the lowest practical height and positioned away from sensitive features such as hedgerows and trees.

- **Light spill mitigation measures**

- Use hoods, shields, or baffles and, where necessary, physical or vegetative screening to prevent light encroachment into habitats.

- **Lighting controls**

External lighting shall be fitted with timers, motion sensors (PIR), or dimming controls to minimise operational hours.

- **Operational restrictions**

Lighting shall be used only when required and shall be switched off or reduced during periods of inactivity to limit disturbance.

- **Verification and compliance**

Lighting proposals shall be supported by lux contour plans demonstrating compliance with ecological thresholds at site boundaries.

- **Control of internal light spill**

Glazing on elevations facing ecologically sensitive boundaries (i.e. the northern boundary) should be designed to minimise light spill, which may include the use of low-transmittance or tinted glazing, non-reflective coatings, or built-in internal blinds/curtains. Internal lighting should also be designed to reduce outward spillage through measures such as recessed (sunken) luminaires, directional fittings, and avoiding high-intensity lighting close to windows.

114. In accordance with best practice guidance (ILP/BCT GN08), the proposed lighting strategy should prioritise the avoidance of illumination to sensitive habitats and maintain dark corridors along site boundaries. Where lighting is required, it must utilise low-intensity, warm-colour, directionally controlled luminaires with strict limits on light spill (≤ 0.5 lux). The inclusion of shielding, appropriate positioning, and time-controlled operation will ensure that impacts on commuting and foraging bats are minimised and that the ecological functionality of adjacent habitats is retained.

5.4.2 Birds

115. No further survey is required if the proposed works are undertaken outside the main nesting period (the nesting period extends from March to August inclusive). A detailed breeding bird survey has not been undertaken as part of this PEA.
116. It is considered possible that the site offers nesting opportunities for a number of common bird species. However, the extent of the habitats will likely restrict the site from being used by rare or notable bird species.
117. Foraging habitats are also considered suitable for birds on site. As some existing habitats are to be retained and similar habitats will replace those removed, impacts to foraging birds are considered negligible.

118. As the site offers suitability for nesting birds, the proposed works, without suitable avoidance or mitigation, could destroy or disturb active bird nests, resulting in individual birds and/or chicks being injured or killed.
119. Under the Wildlife and Countryside Act 1981, as amended (section 1), it is an offence to remove, damage or destroy the nest of any wild bird while that nest is in use or being built. Planning consent for development does not provide a defence against prosecution under this Act.
120. It is recommended that the works be undertaken outside the main bird nesting period. Some bird species, such as pigeons, can nest throughout the entire year, and some bird species, like blackbirds, can have multiple broods, which can extend the nesting period. Likewise, if the weather is favourable, some species can start nesting in late winter. Therefore, before the proposed works start on site, a visual assessment by construction staff or a designated biodiversity champion must be undertaken if the works are undertaken outside the main nesting period.
121. Should works need to be carried out within the main nesting period, a suitable method statement for the protection of nesting birds will need to be put in place, which will include:
- A pre-works inspection of suitable nesting features and nests within the site buildings and habitats and the immediate work area should be undertaken by a Suitably Qualified Ecologist (SQE). If active nests are found, work cannot commence until all chicks have fledged.
 - If, at any point during the works, nesting birds are found, works should be suspended, and advice should be sought from a Suitably Qualified Ecologist.
122. Any new planting should seek to comprise native berry-bearing species to provide suitable foraging and nesting habitats for common birds.

5.5 Enhancement

123. The proposals should include species-specific features to further enhance the site for biodiversity. It is recommended that integrated or wall-mounted bird-nesting features for swifts and house sparrows, and bat-roosting features, be included in the proposed designs.
124. Example features are included in the Appendix 9.

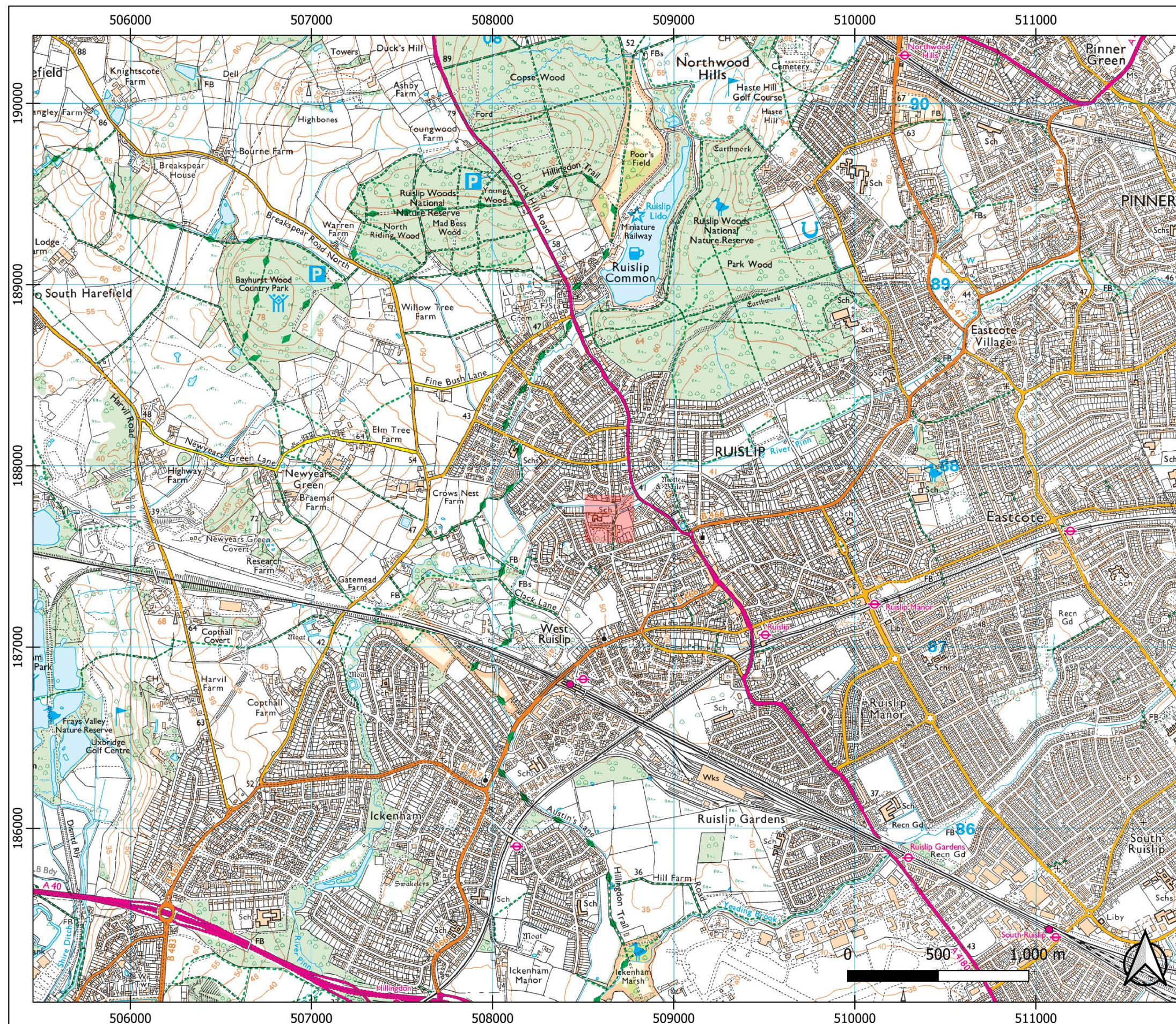
6 Conclusions

125. The proposed development at Bishop Winnington Ingram C of E Primary School has been designed to avoid significant ecological impacts and to provide measurable biodiversity enhancements. No irreplaceable habitats will be affected, and the existing native hedgerow and trees within the site will be retained as part of the development. The site is considered to have limited ecological constraints, with no further surveys required for bats or other protected species at this time. Appropriate mitigation measures, including the implementation of a sensitive lighting design and safeguards for nesting birds, will ensure compliance with relevant wildlife legislation and minimise potential impacts during construction and operation.
126. The proposed habitat creation and enhancement measures, including a biodiverse green roof, native tree planting and the establishment of a new native species hedgerow, will deliver a net gain of 15.53% in habitat units and 96.90% in hedgerow units. The proposals therefore exceed the statutory requirement to achieve a minimum 10% Biodiversity Net Gain and satisfy the biodiversity metric trading rules without the need for off-site compensation. Subject to the implementation of the recommended management, monitoring and enhancement measures, the development is considered to accord with the mitigation hierarchy and will provide a long-term positive contribution to biodiversity within the site and the surrounding area

7 References

- Badger Trust, 2023. Badger Protection: Best Practice Guidance for Developers, Ecologists and Planners (England).
- Calderdale Council, 2023. Biodiversity Net Gain Supplementary Planning Document.
- CIEEM, 2019. CIEEM Advice note on the Lifespan of Ecological Reports and Surveys.
- Collins, J. (Ed.), 2023. Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. The Bat Conservation Trust.
- Harris, S., Cresswell, P., Jefferies, D.J., 1989. Surveying badgers. Mammal Society, London.
- Hayes, C., Whitehurst, J., 2001. Great crested newt mitigation guidelines: working today for nature tomorrow. English Nature, Peterborough, U.K.
- Julia Baker, 2016. Biodiversity Net Gain Good practice principles for development.
- Langton, T., Beckett, C., Foster, J., 2001. Great crested newt conservation handbook. Froglife, Halesowrth.
- Reason, P.F., Wray, S., 2023. UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats (No. Version 1.1). Chartered Institute of Ecology and Environmental Management.
- The Herpetological Conservation Trust, 2007. Reptile Habitat Guide; National Amphibian and Reptile Recording Scheme.

8 Figures



RGB Aerial Photography - ©BlueskyInternational Limited, © Crown copyright and database rights [2017] OS 0100042840, QGIS3.40.10-Bratislava



Site

- ▭ Red Line Boundary
- ▭ Ownership Boundary



E: info@everythingecology.co.uk

Project	BWI School		
Title	Location Plan		
OS Grid	TQ0864187705		
Client	BWI School		
Map date	Size	Author	Version
2026-07-15	A3	Paul Liptrot	V01

Figure 8-1 Location Plan



Figure 8-2 Baseline UKHab Plan

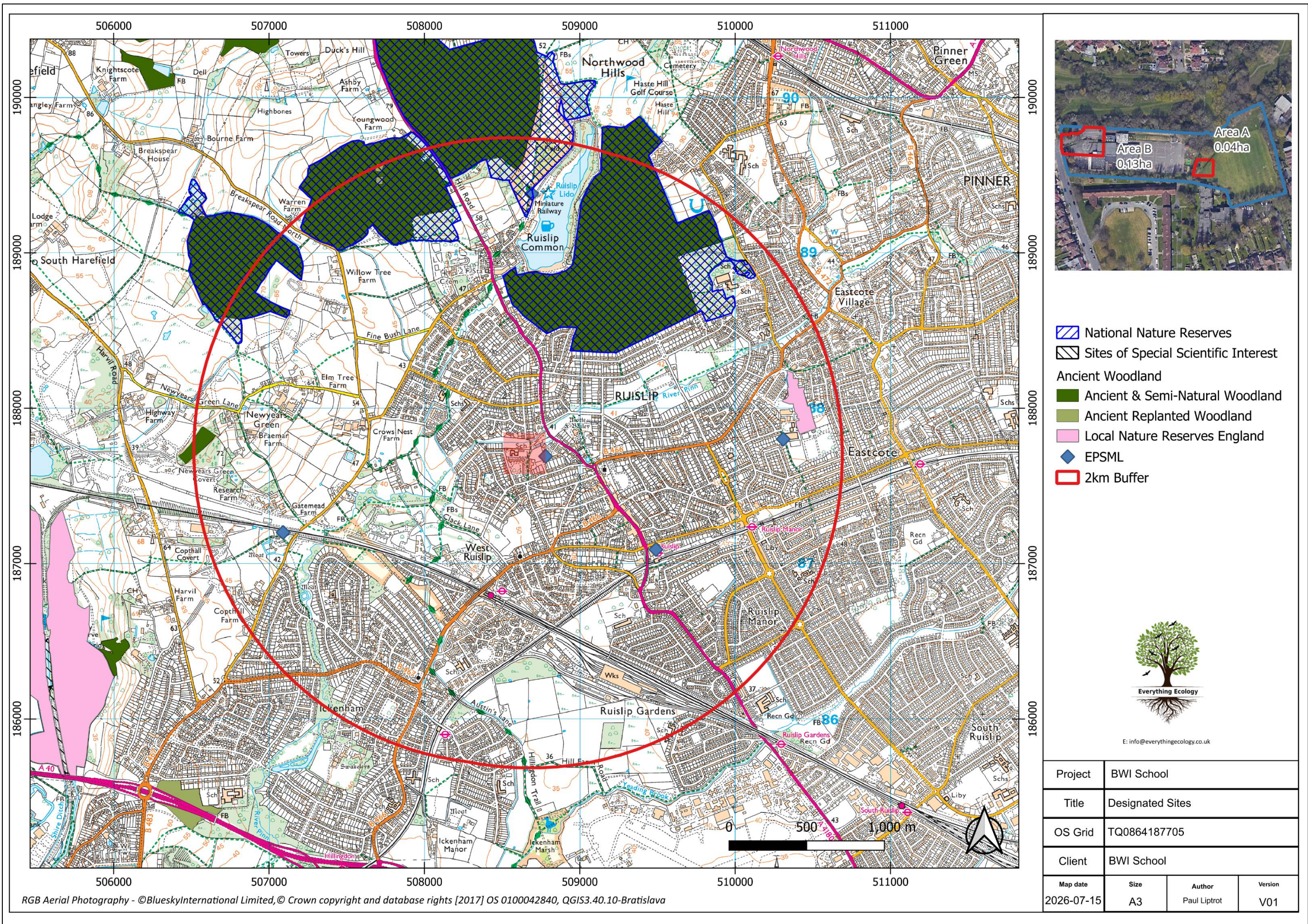


Figure 8-3 Designated sites

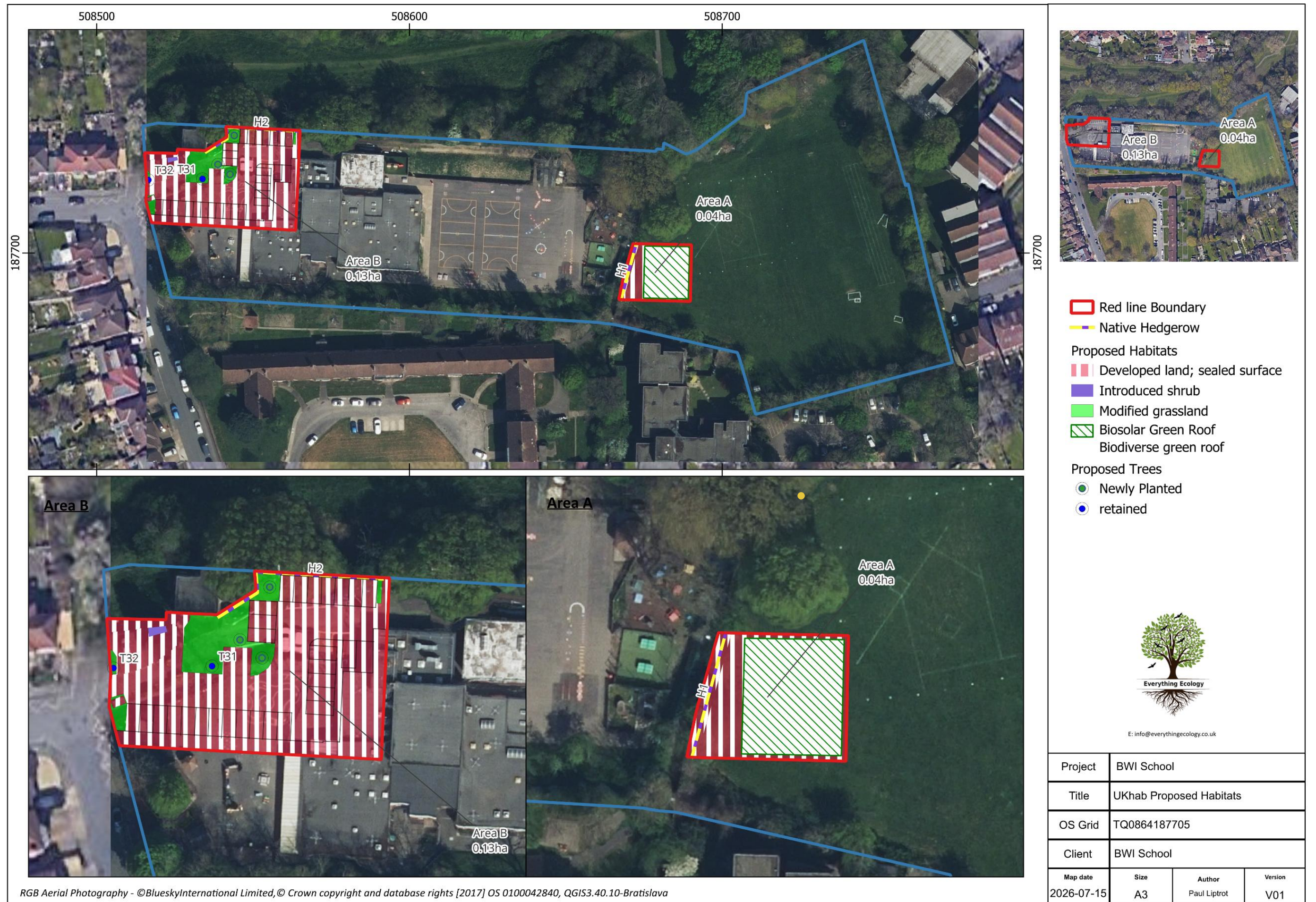


Figure 8-4 Post-development UKHab plan

9 Appendices

9.1 Desktop study ³

Table 9-1 Granted European Mitigation Licence within 2 km

Case reference of the granted application	Species Group	Species on the licence	Licence Start Date	Licence End Date	Does a licence impact on a breeding site	Does the licence allow damage to the breeding site	Does the licence allow damage to a resting place	Does the licence allow the destruction of the breeding site	Does the licence allow the destruction of a resting place	Grid reference	Distance and bearing from the site (km) ⁴
EPSM2012-5295	Amphibian	Great Crested Newt	25/02/2013	01/12/2013	N			N	Y	TQ07098720	1.65 (E)
EPSM2010-1919	Bat	C-PIP	28/06/2010	30/11/2010	N			N	Y	TQ08788769	0.13 (W)
EPSM2009-534	Amphibian	Great Crested Newt	13/02/2009	31/03/2009	N			N	Y	TQ10318780	1.66 (W)
EPSM2012-4855	Bat	C-PIP;S-PIP	08/10/2012	01/09/2015	N			N	Y	TQ09498709	1.04 (NW)
EPSM2012-4868	Amphibian	Great Crested Newt	26/04/2013	30/06/2015	N			N	Y	TQ08698938	1.67 (S)

Table 9-2 Local Nature Reserves (England)

REF_CODE	NAME	MEASURE	HYPERLINK	Distance	Bearing
1009561	RUISLIP	3.736667	Link	1.7	East

Table 9-3 sites of Special Scientific Interest (England)

NAME	Area ha	HOTLINK	Distance	Bearing
Ruislip Woods SSSI	307.45	link	0.7	North

³ Desk-based ecological data were obtained from the DEFRA Multi-Agency Geographic Information for the Countryside (MAGIC) online mapping tool. A site search was undertaken using a 2 km buffer around the site, with relevant statutory and non-statutory nature conservation layers reviewed. Distances and spatial relationships are derived from on-screen measurements within MAGIC and are therefore approximate.

^{4/8} Circa distance measured using Magic application

9.1.1 GiGL Report



In
Partnership
with



GiGL Greenspace Inform
the capital's environ

THIS SUMMARY PAGE MAY BE PUBLISHED
THE FULL REPORT AND MAPS MAY NOT BE PUBLISHED IN THE PUBLIC
DOMAIN

Ecological Data Search 27811 - Summary Page

A 2000m ecological data search was carried out for site Bishop Winnington Ingram C of E Primary and Nursery School on behalf of Everything Ecology on 16 Jun 2026.

The following datasets were consulted for this report:

- Statutory sites ✓
- Non-statutory sites (incl. proposed) ✓
- Species records ✓
- Blue infrastructure ✓
- Habitats ✓
- Open spaces ✓
- Strategic areas ✓

Results

Statutory sites	2 statutory sites and 1 LNR
Non-statutory sites	
SINCs	15 SINCs
Proposed SINCs	None present within search area
Areas of Deficiency	Present within search area
Geological sites	None present within search area
Species records	
Protected and notable species	3450 species records
Non-native species	438 species records
Axiophyte species	1036 species records
Blue infrastructure	
Catchment Plan River Restoration Opportunities	Not present within search area
EA River Restoration Opportunities	Present within search area
Notable Thames Structures	Not present within search area
Habitats	
BAP habitat suitability	Present within search area

Open spaces	Present within search area
Strategic areas	
Important Invertebrate Areas (IIAs)	Not present within search area
B-Lines	Present within search area

The report is compiled using data held by GiGL at the time of the request. Note that GiGL does not currently hold comprehensive species data for all areas. Even where data is held, a lack of records for a species in a defined geographical area does not necessarily mean that the species does not occur there.

Permission

This data search report is valid until 16/06/2027 for the site named above.

Prepared by Dave Ritchie
16 Jun 2026

9.2 Species-specific enhancements

9.2.1 Bird boxes

Vivara Pro WoodStone House Sparrow Nest Box		Swift Block (Large)	
			
House sparrows (<i>Passer domesticus</i>) are sociable opportunists that survive in most UK habitats, from towns and cities to farmland and countryside. Substantial declines in both urban and rural populations (estimated 71% decrease between 1977 and 2008) have led to concerns for this species. This House Sparrow Nest Box is manufactured from WoodStone - a mix of concrete and FSC wood fibres. This material is strong and highly insulating which helps to provide a thermally stable environment within the box. It also protects against damage from predators such as cats, woodpeckers and		The Swift Block is designed to create nesting space for swifts that can be easily integrated into new builds or retrofitted in existing properties. The front of the Swift Block is designed to sit flush with the outside bricks of a build, with the entrance slightly protruding. The Swift Block features an internal nesting bowl, a small entrance hole to deter larger birds and predators, full instructions cast into the surface for easy fitting, and a stylish entrance feature. Made from cast concrete, meaning that it is long lasting and will not rot or deteriorate like a traditional wooden nest box. The cast concrete is made	

squirrels. It is available with one or two breeding chambers, which can be particularly suitable for house sparrows as they prefer to nest in colonies.

The House Sparrow Nest Box can be integrated into the masonry of a new house or fixed onto an external wall using strong screws and wall plugs (not included). If possible, it should be positioned near to vegetation and at a minimum of 2m above ground.

using up to 75% waste materials from the Cornish China Clay industry and is standard UK breezeblock size.

The Swift Block should be positioned at least 5m from ground level avoiding south facing walls, on the side of a building that gets shade during the day, or under an overhang or eaves. It should be mounted away from windows and vents and predator access. Swift Blocks should also be placed in a spot with clear adjacent access, allowing high speed, direct flight entry.

N.b The Swift Block does include a plate to close off the back of the box.⁵

9A Schwegler House Martin Nest		No. 10B Schwegler Swallow Nest
		
		

⁵ All available from NHBS
<https://www.nhbs.com/4?q=&hPP=60&idx=titles&p=0&fR%5Bhide%5D%5B0%5D=false&fR%5Blive%5D%5B0%5D=true&fR%5Bshops.id%5D%5B0%5D=4&fR%5Bsubsidiaries%5D%5B0%5D=1&slug=bird-boxes>

Easily fixed under the eaves on the outside walls of buildings, these nest boxes are perfect for house martins to return to year after year. The bowl-shaped nest is made of air-permeable wood-concrete and a backing board made of exterior grade, formaldehyde-free chipboard to prevent warping.

Siting: Under eaves on the external walls of buildings at a minimum height of 2m above the ground, on the sheltered side of the building. As the chipboard on these nests is moisture resistant but not weatherproof, they should always be positioned in a sheltered site, such as under overhanging eaves.

The 10B Nest Bowl is made entirely from Woodcrete, a durable blend of wood and concrete that is guaranteed to last for at least 25 years. It is designed to be installed inside an outbuilding such as a shed, stable or barn where there is constant access for birds through a door or window. As swallows are social nesters more than one bowl can be used in the same building, although they should be placed at least one metre apart. The distance between the top of the bowl and the ceiling should be a minimum of 6cm.

The design of the bowl means that it can be easily cleaned out in the autumn when the birds have departed. Cleaning is not absolutely necessary but is recommended if possible.

1B Schwegler Nest Box

Schwegler Insect Nesting Aid, Wood-concrete



Natural cavity nest sites have declined dramatically so providing a nest box in your garden or woodland can provide much-needed breeding and roosting space for cavity-nesting species. The 1B is the bestselling nest box for garden birds and will attract a wide range of species and is available with different entrance hole sizes. Examples of bird species attracted to the different entrance hole sizes are:

32mm: great, blue, marsh, coal and crested tit, redstart, nuthatch, collared and pied flycatcher, wryneck, tree and house sparrow (and bats)



By providing a safe haven for species of solitary Hymenopterans, such as wild bees, sand wasps and common wasps, you can promote these species in your garden. These species fulfil essential ecological roles including pollination and pest control.

Ideally place the nesting aid in a sunny site that is protected from wind and rain. Examples of good sites include allotment sheds, pergolas, walls, gardens and even balconies up to the third or fourth floor. Remember to leave the aid outside during the winter otherwise the insects will emerge from their winter hiding places too early and die. The house is made from wood-concrete; an exceedingly durable, rot-proof and breathable natural material designed to mimic the properties of natural nest sites and last 20 - 25 years.

26mm: blue, marsh, coal and crested tit and possibly wren. All other species are prevented from using the nest box due to the smaller entrance hole

Oval (29 x 55mm): redstarts (because more light enters the brood chamber) and it is suitable for all other species which nest in the 32mm boxes

Schwegler bird boxes are carefully designed to provide a stable environment and to mimic natural nest and roost sites with internal brood chamber dimensions that are similar to natural cavities. These Woodcrete nest boxes are famous for their durability - lasting for at least 20-25 years. Woodcrete is a breathable blend of wood, concrete and clay which will not rot, leak, crack or warp, whilst preventing condensation and maintaining more constant temperatures inside than wooden boxes.

Bee Brick (multiple can be made into a wall or integrated into buildings)



The Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees. Alternatively, it can be used as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.

Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back.

Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used. Lavender, honeysuckle and buddleia are all pollinator-

	friendly plants. Bee Bricks are made in Cornwall in England using the waste material from the Cornish China clay industry. 75% of the brick is made from recycled materials and concrete, making it both strong and environmentally friendly.
--	---

9.2.2 Bat boxes

Vivara Pro Build-in WoodStone Bat Box	Ibstock Enclosed Bat Box 'C'
--	-------------------------------------

Vivara Pro Build-in WoodStone Bat Box



The Vivara Pro Build-in WoodStone Bat Box has been specifically designed to fit into the cavity of house walls. It features a slim sized entrance hole which can sit flush in a course of bricks to provide a discreet entry way for bats. It is manufactured from hard-wearing WoodStone and plywood with removable side panels so that several boxes can be placed side by side. Position the box at least 2m above ground level away from artificial light sources. WoodStone is a mixture of sawdust from FSC wood sources and concrete, and it is designed to last for years. It is breathable so there will be no problems with condensation and Woodstone maintains a consistent

Ibstock Enclosed Bat Box 'C'



The Enclosed Bat Box 'C' from Ibstock is designed for the pipistrelle bat. It is ideal for new builds as it can be integrated directly into the brickwork to produce a discrete but attractive home for bats.

The inside of the box is designed to create several roosting zones which are ideal for crevice dwelling bats such as the pipistrelle. The bottom entrance means that no maintenance is required as droppings will simply fall out the bottom.

Vivara Pro Build-in WoodStone Bat Box	Ibstock Enclosed Bat Box 'C'
temperature inside, providing excellent insulation for roosting bats. Dimensions: (H) 500 x (W) 210 x (D) 150mm, Weight: 5.6kg * Height: 500mm * Width: 210mm * Depth: 150mm * Weight: 5.6kg * Material: WoodStone	This Ibstock Bat Box C is available in two sizes and three colours. Choose from smooth red, smooth blue or smooth cream brick. The box has an attractive bat motive on the front and is both durable and fully frost resistant. Dimensions: Small Box - 215 x 215mm, Large Box - 215 x 290mm. 6

⁶ All available from NHBS

https://www.nhbs.com/4?q=&hPP=60&idx=titles&p=0&fR%5Bhide%5D%5B0%5D=false&fR%5Blive%5D%5B0%5D=true&fR%5Bshops.id%5D%5B0%5D=4&fR%5Bsubsidiaries%5D%5B0%5D=1&fR%5Bsubjects_equipment.lvl1%5D%5B0%5D=Bat%20Boxes%20%3E%20Integrated%20Bat%20Boxes&slug=bird-boxes



10 The Biodiversity Net Gain Principles

127. CIRIA, CIEEM, and IEMA developed the Biodiversity Net Gain Good Practice Principles in 2016 (Julia Baker, 2016), which form the basis of a more in-depth document detailing the ten main good practice principles for achieving biodiversity net gain. These principles must be met for net gain to be achieved.

128. The ten Good Practice principles are summarised in **Table 10-1**.

Table 10-1: The Good Practice Principles

Principle	In Practice
1. Apply the mitigation hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses with gains elsewhere.
2. Avoid losing biodiversity that cannot be offset elsewhere	Avoid impacts on irreplaceable biodiversity, i.e., statutory designated sites such as SSSIs – these impacts cannot be offset to achieve net gain.
3. Be inclusive and equitable	Engage stakeholders early and involve them in designing, implementing, monitoring and evaluating the approach to net gain. Achieve net gain in partnership with stakeholders where possible.
4. Address risk	Mitigate difficulty, uncertainty and other risk to achieving net gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risk, as well as to compensate for the time between the losses occurring and the gains being fully realised.
5. Make a measurable net gain contribution	Achieve a measurable, overall gain for biodiversity, and the services ecosystems provide while directly contributing towards nature conservation priorities.
6. Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly justified choices when: • Delivering compensation that is ecologically equivalent in type, amount, and condition and that accounts for the location and timing of biodiversity losses. • Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation. • Achieve net gain locally for the development while also contributing towards nature conservation priorities at local, regional, and national levels. • Enhancing existing or creating new habitat. • Enhancing ecological connectivity by creating bigger, better, and joined areas for biodiversity.
7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations, i.e. do not deliver something that would occur anyway.
8. Create a net gain legacy	Ensure net gain generates long-term benefits by: • Engaging stakeholders and jointly agreeing to practical solutions that secure net gain in perpetuity. • Planning for adaptive management and securing dedicated funding for long-term management. • Designing net gain for biodiversity to be resilient to external factors, especially climate change. • Mitigating risks for other land uses. • Avoiding displacing harmful activities from one location to another. • Supporting local-level management of net gain activities.
9. Optimise sustainability	Prioritise BNG and, where possible, optimise the wider environmental benefits for a sustainable society and economy

10. Be transparent

Communicate all net gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

11 Planning Policy and Legislation

129. This legal information is a summary and intended for general guidance only. It is recommended that the original documentation be referred to for detailed and definitive information.

11.1 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2020

130. The Conservation of Habitats and Species Regulations 2017 (as amended) transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is absent at the time). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2020, which continue the same provision for European protected species, licensing requirements, and protected areas after the United Kingdom's exit from the European Union.

11.2 Wildlife & Countryside Act 1981

131. The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006 (which also places a duty on authorities to have due regard for biodiversity and nature conservation) consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:
- Intentionally kill, injure, or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act or its dependent young while it is nesting.
 - Intentionally kill, injure, or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection.
 - Pick or uproot any wild plant listed under Schedule 8 of the Act.

11.3 Section 41 Habitats and Species (NERC Act 2006)

132. Section 41 (S41) of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers, such as public bodies, including local and regional authorities, in implementing their duty under Section 40.

11.4 The Protection of Badgers Act 1992

133. This Act was introduced to combat the threats posed to badgers by illegal activities such as badger digging/badger baiting and sets out a list of offences.

11.5 National Planning Policy Framework

134. The National Planning Policy Framework (NPPF) outlines government planning policies and how they should be applied to local authorities (Ministry of Housing, Communities & Local Government, 2021). The framework places emphasis on sustainable development, encouraging the re-use of land that has previously been developed, overusing land that has a higher environmental value and minimising impacts on biodiversity. The NPPF has three overarching objectives:

- An economic objective – to help build a strong, responsive and competitive economy by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity and by identifying and coordinating the provision of infrastructure.
- A social objective – to support strong, vibrant and healthy communities by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support 'communities' health, social and cultural well-being.
- An environmental objective – to contribute to protecting and enhancing our natural, built and historic environment, including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

135. It also states that to conserve and enhance the natural environment, planning policies and decisions should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)
- Recognising the intrinsic character and beauty of the countryside and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land and of trees and woodland

- Maintaining the character of the undeveloped coast while improving public access to it where appropriate
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate

11.6 International and National Biodiversity Designations

136. Ramsar sites are listed under the Convention on Wetlands of International Importance under the criteria of rarity and diversity of both habitat and species and fragility of ecosystems. They are afforded statutory protection under paragraph 118 of the National Planning Policy Framework.
137. Special Protection Areas (SPA) are classified under the EC Directive on the Conservation of Wild Birds to ensure the survival and reproduction of migratory and other species. They are afforded statutory protection under the law.
138. Special Areas of Conservation (SAC) are designated under the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora to maintain or restore natural habitats and wild species. They are afforded statutory protection under the law.
139. sites of Special Scientific Interest (SSSI) are identified under the Wildlife and Countryside Act (1981) for habitat and natural features, including flora and fauna, geology and geomorphology.
140. National Nature Reserves (NNR) are identified to protect habitats and communities of plants and animals and geological or physical geographical features of special interest.
141. In the case of European designated sites, a Habitats Regulations Appropriate Assessment is required for any proposal likely to have significant effects on the site.
142. The Flood Risk Regulations (2009) and the Flood and Water Management Act (2010) establish how flood and coastal erosion risks will be managed in England and Wales.