



Design & Access Statement

E04759

APPENDIX C

Ecological Survey and Report



Hampshire
County Council

Preliminary Ecological Appraisal

Ranikhet Academy, Spey Road, Tilehurst
Reading, Berkshire RG30 4ED

For
Hampshire County Council
Property Services

February 2021

Hampshire County Council Ecology Team

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Report conditions

<i>HCCET reference</i>	20.0328	<i>Client reference</i>	E04759
<i>Report title</i>	Preliminary Ecological Appraisal – Ranikhet Academy, Spey Road Tilehurst Reading, Berkshire, RG30 4ED		
<i>Client</i>	Hampshire County Council – Property Services		
<i>Report status</i>	Final		
<i>Survey dates</i>	PEA: 11 June 2020		
<i>Surveyor(s)</i>	Camilla Mitchell		
<i>Written by</i>	Camilla Mitchell and Adam Egglesfield (<i>interim version</i>)	<i>Date</i>	October 2020
	Adam Egglesfield (<i>final version</i>)		9 February 2021
<i>Technical review by</i>	Maral Miri	<i>Date</i>	10 February 2021
<i>Authorised by</i>	Adam Egglesfield	<i>Date</i>	26 February 2021
<i>Approved by Client PM</i>	Nick Collett	<i>Date</i>	26 February 2021

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Contents

Summary	1
1. Introduction	2
Objectives	2
Site Description	2
Proposed works	3
Limitations	3
2. Methods	4
Desk-based assessment	4
<i>Zone of influence (Zol)</i>	4
<i>Scoping</i>	4
<i>Data search</i>	4
Field survey	5
3. Results	8
Desk-based assessment	8
<i>Designated sites</i>	8
<i>Notable habitats</i>	8
<i>Protected and notable species</i>	8
<i>Fieldwork scoping / Zone of influence</i>	9
Field Survey	9
<i>Habitats</i>	9
<i>Badger</i>	11
<i>Bats – built structures</i>	11
<i>Bats – trees</i>	12
<i>Bats – foraging and commuting</i>	12
<i>Hazel dormouse</i>	13
<i>Birds</i>	13
<i>Reptiles</i>	13
<i>Amphibians</i>	13
4. Impact Assessment	14
Planning policy and legislation	14
Potential impacts on sites, habitats and species	15
<i>Designated sites</i>	15
<i>Vegetation and habitats</i>	15
<i>Badger</i>	15
<i>Hazel dormouse</i>	16
<i>Breeding birds</i>	16
<i>Reptiles</i>	16
<i>Amphibians</i>	16
<i>Bats</i>	16
Impact assessment summary	16
5. Recommendations for Mitigation and Enhancement	17

Introduction	17
Mitigation	17
<i>Bee orchids</i>	17
<i>Nesting birds</i>	18
Enhancements	18
BREEAM.....	19
6. Conclusions	20
References	21
Appendix 1 – Site Location and Aerial Photo	22
Appendix 2 – Photos.....	24
Appendix 3 – Existing and Proposed Plans.....	28
Appendix 4 – Desk-based Assessment Findings	31
Appendix 5 – Phase 1 Habitat Map	36
Appendix 6 – Ecological enhancement scheme.....	37
Appendix 7 – BREEAM calculation.....	38

Summary

A Preliminary Ecological Appraisal (PEA) was undertaken on 11 June 2020 at Ranikhet Academy Primary School, Spey Road, Reading, RG30 4ED.

The PEA follows a desk-based assessment conducted in May 2020 and comprises field survey work based on Extended Phase 1 survey methodology to assess the potential for the site to support protected habitats and species and assess the impacts of the development plans on these.

The site is a complex of modern flat and mono-pitched school buildings with areas of hardstanding playground, grassed areas, and a large artificial pitch within the grounds.

Other than hardstanding and buildings, habitats at the site are dominated by amenity grassland, with areas of more species-rich semi-improved grassland and small areas of amenity landscaping introduced shrub. The site is considered to be of low ecological value overall, although part of the site does support a small population of bee orchid *Ophrys apifera*.

The development will result in the loss of most of these habitats, although the area of more diverse grassland will be retained, and the proposal will include a greater degree of planting than is currently present.

The survey finds no evidence that the site supports bat roosts, hazel dormice, great crested newts or other notable amphibians, or reptiles. The small areas of woody shrub vegetation and small individual trees may support nesting birds.

In the absence of avoidance and mitigation measures, the development would be likely to harm occupied birds' nests and to destroy the bee orchid population. Recommendations are made to avoid these impacts through timing and supervision of the work, and a careful on-site translocation method for the orchid population.

Assessment of the biodiversity gains from the development through BREEAM assessment found that the development would result in a significant net gain in biodiversity.

Provided these recommendations are followed, it is concluded that the development will have no adverse impacts on biodiversity and will deliver biodiversity gains.

1. Introduction

Objectives

- 1.1. The purpose of this study was to gather ecological information about the site at Ranikhet Academy Primary School, Spey Road, Tilehurst, Reading, Berkshire, RG30 4ED, and assess the impacts of the development proposals for the site on these features, in order to support a planning application with Reading Borough Council.
- 1.2. The ecology work took the form of a Preliminary Ecological Appraisal (PEA), which follows an initial desk-based assessment carried out in May 2020 and comprises an Extended Phase 1 Habitat Survey as well as further review of the initial desk-based assessment findings and the proposed plans at the time of the assessment. A PEA may need to be followed up where necessary by species-specific survey work. If necessary, this PEA report recommends further species-specific survey work.
- 1.3. The PEA was carried out by Camilla Mitchell an experienced ecological surveyor with HCCET, and who holds a current licence to survey for bats.
- 1.4. If the PEA and any recommended additional work identifies likely impacts to biodiversity, the information gathered would be used to develop an appropriate and proportionate strategy to avoid, mitigate and where necessary, compensate for any such impacts.
- 1.5. The survey work was also carried out to enable a formal assessment of the ecological gains made from the development proposals through the application of the BREEAM assessment methodology.

Site Description

- 1.6. Ranikhet Academy Primary School is a school site comprising a complex of flat roofed and pitched roof modern buildings, areas of managed grass, hardstanding, artificial sports areas and some scattered planted trees and shrubs.

- 1.7. The site is set within an extensive mature residential area to the west of Reading approximately 1km to the south of the River Thames. The surrounding area is predominantly dwellings and associated gardens. Green space in the surrounding area includes a woodland belt approximately 120m to the south west of the site and areas of parkland and grassland approximately 600m to the north west, south west and west of the site.
- 1.8. The location plan and aerial photo of the site showing the site boundary and its setting are shown in **Figure A1.1** and **Figure A1.2** in **Appendix 1**. **Photos 1** to **3** in **Appendix 2** show general views of the site.

Proposed works

- 1.9. The development proposals are for the replacement of the existing school buildings with a new build 2FE Primary School. This will entail the demolition of the existing buildings. It is proposed to keep the existing school open while the new school is constructed to ensure that school provision is maintained during the project.
- 1.10. The existing site plan and the proposed layout are shown in **Appendix 3**.

Limitations

- 1.11. All areas of the site were fully accessible and visible during the survey work. The weather was overcast, with light breeze (Beaufort F2-3), occasional light drizzle, 100% cloud cover and temperature of 14°C. There are therefore no significant limitations to the survey work.

2. Methods

Desk-based assessment

- 2.1. A desk-based assessment was carried out by HCCET in May 2020 (HCCET, May 2020). A formal desk-based assessment report was produced at that time. The key findings of the study are reproduced where relevant in the following sections and appendices of this report.
- 2.2. The desk-based assessment comprised the following elements:

Zone of influence (Zol)

- 2.3. The development proposals and the site were reviewed to establish the likely extent of impacts from the scheme at which potential ecological receptors might be affected. This was based on established criteria (such as Natural England's Impact Zones for Sites of Special Scientific Interest (SSSI)) or published zones around certain European designated sites. Where established criteria are not present, the Zol was based on the ecologist's professional judgement. Where necessary, the Zol for relevant receptors are discussed in the following sections.

Scoping

- 2.4. An initial review of the site and the proposals were carried out to consider the likelihood of particular ecological receptors being present at the site or nearby (within relevant Zol). Where this scoping confidently concluded that a particular receptor is likely absent (for example there are unlikely to be water vole at a site with no on-site or nearby waterbodies), these are not considered in detail in the report.

Data search

- 2.5. Geographical Information Systems (GIS) mapping was used in order to identify all records of protected species and habitats within a 1km radius of the site. Given the localised nature of the proposals this search radius was considered sufficient for assessing risk to all ecological features. In addition, records were obtained of all statutory and non-statutory designated nature conservation sites within the search radius.

- 2.6. The data used in the desk-based assessment was supplied by the Thames Valley Environmental Records Centre (TVERC).
- 2.7. The findings of the desk-based assessment in terms of establishing the local and wider ecological context of the site has also been used where relevant to inform recommendations for biodiversity net gain, as set out in Section 5.

Field survey

- 2.8. Field survey work was carried out on 11 June 2020. This followed the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee (JNCC, 2010) and the Institute of Environmental Assessment (IEA, 1995). Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site. It should be noted that the habitat categories used by the Phase 1 Habitat Survey Methodology do not mirror the habitat types considered to be conservation priorities. Where relevant and necessary, this is discussed further in Section 4.
- 2.9. The site survey entailed a single surveyor, Camilla Mitchell, Ecologist, undertaking a methodical investigation of all areas of the site in order to identify the presence of, or habitat considered suitable for supporting, legally protected species. Assessment of the nature and value of habitats and vegetation at the site was also carried out. A brief description of the survey methods used is provided below.
- 2.10. The site was inspected for field signs of badger *Meles meles* such as badger setts, latrine sites, dung piles, well-used trails, prints, foraging activity, and hairs.
- 2.11. An assessment was made of the suitability of habitat on site to support hazel dormice *Muscardinus avellanarius*. Key habitats for this species are woodland, scrub and hedgerows, particularly where these offer dense vegetation for nesting or hibernation, along with food resources such as hazelnuts, fruiting and nectar-rich plants (e.g. hawthorn, bramble) and honeysuckle (for nesting material). The presence of important landscape-scale habitat linkages between suitable habitats was considered.

- 2.12. The survey also included a consideration of the site's suitability to support breeding bird species. These will utilise a broad range of habitats, including structures such as houses and outbuildings, trees, scrub, isolated shrubs, dense herbaceous vegetation (terrestrial and aquatic) and open grassland.
- 2.13. The site's suitability to support reptiles was also considered. Key habitat features for reptiles include tussocky or patchy grassland, scrub edge, linear watercourses, ponds, compost heaps, brash piles and rubble/soil heaps. Linkage to suitable habitat within the surrounding landscape will increase the potential for reptiles to occur, although populations can occur within isolated or fragmented habitats even within urban areas.
- 2.14. An assessment was made of all water bodies and terrestrial habitat within the site and within the surrounding landscape for their suitability to support populations of amphibians, particularly great crested newt *Triturus cristatus* (GCN). Ponds were assessed where possible according to the Habitat Suitability Index (HSI) assessment method (Oldham et al, 2000).
- 2.15. Trees were assessed for their potential to support bats, using methods guided by and consistent with that set out in Collins (ed) (2016). Relevant trees were inspected from ground level to identify evidence of bat activity and/or identify the presence of any potential roost features (PRFs) such as rot holes, flaking bark, cracks or splits and areas of extensive deadwood.
- 2.16. Trees were inspected using Opticron Discovery 10x42 close-focussing binoculars and where necessary and safely possible, a ladder. High-powered torches (Clulite Clubman CB2 and Lenser P7.2) were used to illuminate potential roost and roost access features.
- 2.17. An assessment was made of the suitability of the site and the surrounding landscape to support foraging, commuting and other flying behaviours such as swarming and social interactions. The assessment was based on the presence of key habitat features such as woodland, scrub, hedgerows, grassland, and open water and watercourses, which are highly attractive to bats as both a foraging resource and as commuting routes. The presence of such habitats, particularly in a mosaic with other suitable habitats, typically increases the potential for structures to be exploited by bats where suitable roost and access

opportunities are present. The presence of unlit semi-natural vegetation and habitat linkages between the site and the surrounding landscape were also considered.

- 2.18. Bat roost suitability and foraging habitat quality was assessed according to the criteria set out in Collins (2016).

3. Results

Desk-based assessment

Designated sites

- 3.1. **Appendix 4** shows the location of the site and its surrounding relevant designated statutory and non-statutory sites.
- 3.2. There are no statutory designated sites such as Sites of Special Scientific Interest (SSSI) within 1km of the site. There are five non-statutory designated Local Wildlife Sites (LWS) within 1km of the site; three of these sites are also designated as Local Nature Reserves (LNR). These comprise important woodland and grassland areas. Lousehill Copse LWS and LNR is the nearest of such sites, located approximately 140m to the west of the school. The details of these sites are shown in **Table A3.1** in **Appendix 4** and their location in **Figure A4.1** in **Appendix 3**.

Notable habitats

- 3.3. There are no recorded notable habitats on site.
- 3.4. The surrounding area is largely urban, comprising dwellings and associated gardens. Notable habitats in the wider area are associated with the locally designated sites discussed above and comprise deciduous woodland to the west, north west and south east, woodland pasture to the south west, parkland within Prospect Park, and lowland dry acid grassland within McIlroy Park.

Protected and notable species

- 3.5. The data return from TVERC included numerous protected and notable species records within the search area. Relevant records are shown in **Appendix 4**.
- 3.6. The dataset included several records of at least six species of bats within the search area, including one record of a roost of brown long-eared bat *Plecotus auritus* located approximately 350m to the south east of the site.
- 3.7. Records of notable bird species that are often associated with built structures including house sparrow *Passer domesticus*, house martin *Delichon urbicum* and starling *Sturnus vulgaris* were returned.

- 3.8. The desk study returned several records of slow worm *Anguis fragilis* from Lousehill Copse 200 – 250m to the north west of the site.
- 3.9. Records of notable invertebrates and plants largely associated with the locally designated sites and associated notable habitats were also returned.

Fieldwork scoping / Zone of influence

- 3.10. From a review of the plans and the desk-based assessment, it is considered unlikely that riparian mammals (otter and water vole) would be present or affected, and therefore these species are scoped out from further assessment.
- 3.11. The project is relatively small in scale and is considered unlikely to potentially affect any ecological receptors further afield from the areas within and immediately adjacent to the site. Therefore, the Zol for the project on other receptors is considered to extend no further than 25m from the works area.

Field Survey

Habitats

- 3.12. The main habitats present at and around the site are shown in the Phase 1 habitat map in **Figure A5.1** in **Appendix 5**.

B2.2 Semi-improved neutral grassland

- 3.13. There are two areas of semi-improved neutral grassland on site. The area to the south western part of the site appears to be less regularly managed and has a longer, more tussocky sward. It has a moderate diversity of species, although no rare or notable species were noted. See **Photo 4**.
- 3.14. Species present here at Target Note (TN) **TN1** on **Figure A5.1** include perennial ryegrass *Lolium perenne*, annual meadow-grass *Poa annua*, shepherd's purse *Capsella bursa-pastoris*, yarrow *Achillea millefolium*, daisy *Bellis perennis*, sheep's sorrel *Rumex acetosella*, black knapweed *Centaurea nigra*, wall barley *Hordeum murinum*, common mallow *Malva neglecta*, wild carrot *Daucus carota*, cats-ear *Hypochaeris radicata*, nipplewort *Lapsana communis*, and crane's-bill *Geranium* sp.

- 3.15. The second area of semi-improved grassland is located to the south of the site (TN2). This had a similar species composition and long sward as at TN1. See **Photo 5**.

J1.2 Amenity grassland

- 3.16. There are several areas of more managed amenity grassland around the site. The largest area is a grass play area central to the site. The other areas of amenity grassland are general strips of soft landscaping around the site circulation areas.
- 3.17. The amenity grassland areas have a typically lower species diversity, with only common and widespread species noted. For example, at **TN3**, the grass species is dominated by perennial ryegrass, with wall barley, creeping buttercup *Ranunculus repens*, ribwort plantain *Plantago lanceolata*, and yarrow.
- 3.18. At **TN4**, grass includes perennial ryegrass, Yorkshire fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius*, white clover *Trifolium repens*, wall barley, cat's-ear, ribwort plantain, daisy, and field bindweed *Convolvulus pluricaulis*.
- 3.19. The most notable area of amenity grassland is on the north-west corner of the site, at **TN5**. Although the majority of the grassland here is short-mown common grass species, with some creeping cinquefoil *Potentilla reptans*, several spikes of bee orchid *Ophrys apifera* were seen (see **Photo 6**)
- 3.20. A range of other common species were generally noted around the site within the amenity grassland areas, including for example, weld *Reseda luteola*, bristly ox-tongue *Helminthotheca echioides*, ragwort *Senecio jacobea*, barren brome *Anisantha sterilis*, spear thistle *Cirsium vulgare*, oxeye daisy *Leucanthemum vulgare*, and common poppy *Papaver rhoeas*.

J1.4 Introduced shrub

- 3.21. There are several small areas of soft landscaping shrub around the site, such as in the small central courtyard (**TN6, Photo 7**), where species noted include cotoneaster *Cotoneaster horizontalis*, rose *Rosa* sp., butterfly bush *Buddleja davidii*, tutsan *Hypericum androsaemum*, and cherry *Prunus* sp.

3.22. There is also a small garden area to the north of the site (**Photo 8**).

Other habitats

3.23. There are several individual trees around the site as shown in **Figure A5.1**. Species include black locust *Robinia pseudoacacia*, cherry *Prunus avium*, willow *Carex* sp., silver birch *Betula pendula*, hawthorn *Crataegus monogyna*, and field maple *Acer campestre*. See **Photos 9** and **10**.

3.24. There are areas of hardstanding circulation / paths as well as a large hardstanding play area (**Photos 11** and **12**). There is a large artificial sports pitch to the south of the site (**Photo 13**).

3.25. The site slopes upwards from the north to the south, with the artificial pitch being accessed up a shallow flight of steps set into the surrounding amenity grassland.

3.26. The site is bounded by a full-height metal security fence.

Badger

3.27. The desk-based assessment returned no records of badger. No evidence of badger foraging or sett building activity was noted on the site. In view of the site's habitats and use, it is confidently concluded that badgers are absent from the site.

Bats – built structures

3.28. The desk-based assessment returned a small number of records of bats within the search area.

3.29. Internally, there are no typical loft voids, and the majority of the site is either flat roofed or has a shallow monopitch. On one section of the buildings, to the north-west part of the school, the original flat roof has been retrofitted with a more modern profiled metal 'over-roof' (**Photo 14**). The small void between these two structures was accessed and inspected – see **Photos 15** and **16**.

3.30. No evidence of bat activity was noted in this void, and the internal conditions were generally unsuitable for supporting roosting bats due to the smooth metal surfaces. No external light was visible in any areas of the void.

- 3.31. Externally, there are a range of construction features. There are several areas of painted timber weatherboarding and fascia around the various buildings (see for example **Photos 17** and **18**). These were closely inspected, and no areas of damage or gaps were noted, that were suitable for allowing bats to access crevice roosting opportunities.
- 3.32. No gaps or cracks were noted in any areas of brickwork.
- 3.33. The areas of interlocking concrete pantiles to the sloping mono-pitched roof sections were closely inspected and no areas of slipped or damaged roof tile noted (see **Photo 19**).
- 3.34. The soffit boxes were inspected and found to be tight to the external brickwork with no gaps present. See **Photo 20**.
- 3.35. Overall, it is considered that the on-site buildings offer **negligible bat roost suitability**.

Bats – trees

- 3.36. The on-site trees were inspected, and no potential roost features noted. The on-site trees are considered not to support bat roosts.

Bats – foraging and commuting

- 3.37. The desk-based assessment returned records indicative of bat foraging or commuting activity within the search area. The site itself is dominated by habitats of low structural and species diversity and presents an area of low-quality bat foraging habitat. There are floodlights around the sports pitch, which will further reduce the suitability the area for foraging bats.
- 3.38. There are areas of high-quality foraging habitat within the local area, in the woodland LWS identified in the desk-based assessment. However, there are poor habitat links (such as dark wooded corridors) between the site and these areas of higher value foraging habitat.
- 3.39. The site may be intermittently and occasionally exploited by bats passing through the wider urban landscape, but the site is not considered to be an important part to the local bat foraging resource.

Hazel dormouse

- 3.40. There is no habitat on site suitable for supporting hazel dormouse, nor is there any suitable habitat adjacent to the site. The nearby woodlands are likely to offer suitable dormouse habitat, but no records of the species have been returned in the TVERC data, and there are no suitable ecological linkages between these areas and the school.
- 3.41. It is confidently concluded that dormice are absent from the site.

Birds

- 3.42. No evidence of nesting birds was noted on site. However, the small areas of ornamental shrub do offer some areas of suitable nesting habitat, and the site may therefore support small numbers of more widespread bird species during the breeding season.

Reptiles

- 3.43. No evidence of reptiles was seen during the survey. The larger area of tussocky, structured semi-improved grassland to the south-west part of the site offers a small area of suitable reptile habitat, although no areas of suitable hibernation habitat (such as log piles or undisturbed rubble piles) was seen. The area of suitable habitat is highly isolated from any other areas of suitable habitat and is small in extent.
- 3.44. Therefore, in view of these factors, it is considered that reptiles are likely absent.

Amphibians

- 3.45. No records of great crested newt or other notable amphibians were returned in the TVERC data. Examination of Ordnance Survey maps did not identify any ponds within 250m of the site. The area of tussocky semi-improved grassland to the south-west part of the site does offer a small area of suitable terrestrial habitat, but as discussed above, this is isolated from other suitable habitats and does not offer any hibernation opportunity. It is considered that great crested newts and other amphibians are likely absent from the site.

4. Impact Assessment

Planning policy and legislation

4.1. Paragraph 175 of the National Planning Policy Framework (NPPF) (MHCLG, 2019) requires that when determining planning applications, if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

4.2. Policy CS36 'Biodiversity and Geology' of the Reading Borough Council Adopted Core Strategy (revised 2015) states that:

“Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes.”

4.3. The supporting text to the policy states that:

“Protected species identified by the Species Action Plan of the Reading Biodiversity Action Plan (BAP) and their habitats must also be protected from any direct or indirect harm resulting from development.”

4.4. Many species of animal are legally protected under both domestic or international law (the Wildlife and Countryside Act 1981 (as amended)¹ and the Conservation of Habitats and Species Regulations 2017² respectively). Badgers and their setts are protected under the Badgers Act 1992³.

4.5. With reference to bats, hazel dormice, and great crested newts, these are European Protected Species (EPS). This legislation makes it an offence to kill, injure or disturb them, or to destroy or damage their breeding sites and resting places (even when the animals are not present). For such work to legally proceed, Natural England (the Government's statutory nature conservation

¹ <http://www.legislation.gov.uk/ukpga/1981/69>

² <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

³ <http://www.legislation.gov.uk/ukpga/1992/51/contents>

agency) will issue a licence for the work to be able to proceed legally, subject to the proposals meeting certain criteria.

- 4.6. The following sections consider the potential impacts on any identified ecological features and whether the development would be in accordance with policy and legislation.

Potential impacts on sites, habitats and species

Designated sites

- 4.7. The nearest locally designated sites are sufficiently far from the application site for there to be no reasonable likelihood of impacts due to the lack of impact pathways and the nature of the proposed works.

Vegetation and habitats

- 4.8. The development will result in the removal of the majority of the amenity grassland, the introduced shrub, and some of the semi-improved grassland. However, most of the more species diverse and structured grassland area to the south-west of the site is outside the current footprint of the demolition and construction works.
- 4.9. The proposals include substantial elements of new soft landscaping, including a greater degree of tree cover as well as substantial areas of landscaping shrub and amenity grassland. Overall, it is considered that the development would not result in an overall net loss of biodiversity from a reduction in habitats.
- 4.10. However, in the absence of mitigation, the development may result in impacts to the existing population of bee orchid. Although this area is not within the area immediately and directly affected by either demolition or construction, given the proximity of these plants to the works, construction activity and landscaping is likely to result in damage to this area.
- 4.11. In the absence of mitigation, it is concluded that the development would result in the loss of this population of orchids.

Badger

- 4.12. Badgers are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on badgers.

Hazel dormouse

- 4.13. Hazel dormice are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on hazel dormice.

Breeding birds

- 4.14. If site clearance takes place in the spring or summer, there is a risk that any active bird nests would be destroyed. Active birds' nests are legally protected under the Wildlife and Countryside Act.

Reptiles

- 4.15. Reptiles are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on reptiles.

Amphibians

- 4.16. GCN and notable amphibians are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on GCN.

Bats

- 4.17. Bats and bat roosts are considered likely absent from the site. It is therefore concluded that the development will have a negligible impact on bat roosts.
- 4.18. The site presents an area of low-quality foraging habitat. Construction phase impacts would result in a short-term reduction in the availability of the site as a foraging resource. However, given the poor quality of the habitat, this is not seen as a significant adverse impact. Upon completion of the landscaping, the development is likely to deliver a slight net gain to the quality of the site's foraging suitability.

Impact assessment summary

- 4.19. In summary, in the absence of measures to avoid, mitigate, or compensate for impacts, it is concluded that the development would have the potential for the following impacts:

- Loss of a population of bee orchid.
- Destruction of active bird nests.

- 4.20. The following section sets out a strategy to address these impacts.

5. Recommendations for Mitigation and Enhancement

Introduction

- 5.1. This section provides details of recommendations considered necessary in order to ensure that potential ecological constraints are considered fully. This includes recommendations for additional survey works and for mitigation, compensation or enhancement measures to avoid, lessen or offset the identified impacts to ecological features arising from the proposed works.

Mitigation

Bee orchids

- 5.2. Local on-site translocation exercise is recommended to preserve the existing population. If done carefully, translocation of bee orchids within the same site is generally successful and is therefore appropriate. Prior to translocation, the area of grassland that has been identified as supporting orchids must be re-checked during the main flowering season in 2021 and the extent of the population properly mapped, together with locations of individual plants and groups of plants identified.
- 5.3. During this period, this area of the site must be managed in a sympathetic manner – where bee orchid spikes are identified early in the season (before the first mowing period) they must be marked with stakes, canes, or other suitable markers. Future mowing must avoid these.
- 5.4. The area of semi-improved grassland to the south-west part of the site is being retained and would be a suitable site to receive the orchids. The orchids should be carefully lifted from the existing location using an excavator bucket and transferred immediately to prepared planting divots in the receptor area. This work should be carried out under the supervision of a suitably experienced ecologist and in conditions that are suitable – i.e. not in excessively warm, dry, or wet conditions.

Nesting birds

- 5.5. Clearance of suitable nesting bird habitat should be carried out during the autumn and winter – between September and February inclusive. Birds will not be nesting during this period, removing the risk of harming active nests.
- 5.6. If this is not possible then affected habitat should be checked by a suitably experienced ecologist immediately prior to clearance starting. Clearance of habitat must only proceed during spring and summer if the supervising ecologist is satisfied that no active nests are present.

Enhancements

- 5.7. The NPPF and local planning policy seeks to deliver net gains to biodiversity within the planning system wherever possible. The planning authority, in determining this planning application are likely to seek such biodiversity gains. Ecological gains are also key to ensuring the development delivers ecological BREEAM credits.
- 5.8. The following paragraphs therefore set out the opportunities that are to be followed to deliver these gains. These have been developed following the survey and a review of the site to develop an understanding of the ecological characteristics of the site gained during the site survey work and an understanding of the local and wider ecological context of the site gained through the desk-based assessment.
- 5.9. These enhancements are also proposed in order to demonstrate and support the BREEAM assessment of the ecological gains from the development.
- 5.10. The key focus of the enhancement is the area of existing semi-improved grassland to the south-west, which supports the highest plant diversity on the site at present, and which is suitable to receive the translocated bee orchids.
- 5.11. These areas will be sown with Emorsgate EM5 meadow mix. Once established, these areas will be managed by a 'light touch' mowing regime that will promote plant diversity. The main new and enhanced meadow areas will be mown in the early spring and then left until late summer before mowing again once the flowers have set seed.

- 5.12. These areas will be further enhanced with the introduction of boulders and dead wood such as part-buried tree stumps from arisings from the initial site clearance works to create structural diversity.
- 5.13. Areas of higher foot traffic such as either side of the path through the meadow area, the planting scheme will use a more hard-wearing seed mix such as Germinal Countryside College and School mix.
- 5.14. Across the rest of the site, the planting scheme will utilise appropriate native tree and shrub species.
- 5.15. The ecological enhancement scheme is shown in Appendix 6, overlaid on the relevant area of the overall site layout from Appendix 3.

BREEAM

- 5.16. GIS was used to calculate the areas of existing habitats and proposed habitats. These figures were then entered into the BREEAM 'Change in Ecological Value' calculator. This is shown in Appendix 7.
- 5.17. The BREEAM calculation shows that the development will deliver a 42% net gain in biodiversity.

6. Conclusions

- 6.1. The Preliminary Ecological Appraisal was carried out at Ranikhet Academy Primary School to assess the potential ecological impacts of redevelopment plans for the site.
- 6.2. The PEA concluded that the development would not affect any nearby locally designated wildlife sites, and that the site is not ecologically connected to any areas of higher ecological value in the surrounding area.
- 6.3. The habitats at the site are all of low ecological value, although the area of semi-improved grassland to the south-west part of the site support a higher diversity of species and is more structurally diverse. There is a small population of bee orchids in the north-west corner of the site.
- 6.4. The survey found no evidence that the site supports bat roosts, hazel dormice, great crested newts or other notable amphibians, or reptiles. The small areas of woody shrub vegetation and small individual trees may support nesting birds during the breeding season.
- 6.5. In the absence of avoidance and mitigation measures, the development would be likely to harm occupied birds' nests and to destroy the bee orchid population.
- 6.6. Recommendations are made to avoid these impacts through timing and supervision of the work, and a careful on-site translocation method for the orchid population.
- 6.7. BREEAM assessment shows a net gain in biodiversity value of 42%.
- 6.8. Provided these recommendations are followed, it is concluded that the development will have no adverse impacts on biodiversity and will deliver biodiversity gains in accordance with policy.
- 6.9. Unless otherwise advised, the findings and recommendations in this report are solely based on the plans and brief provided to HCCET. The results and findings are valid for two years from the date of the initial field survey. HCCET should be contacted if this report is to be used after this period to check if any updating work need to be undertaken.

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Appendix 1 – Site Location and Aerial Photo

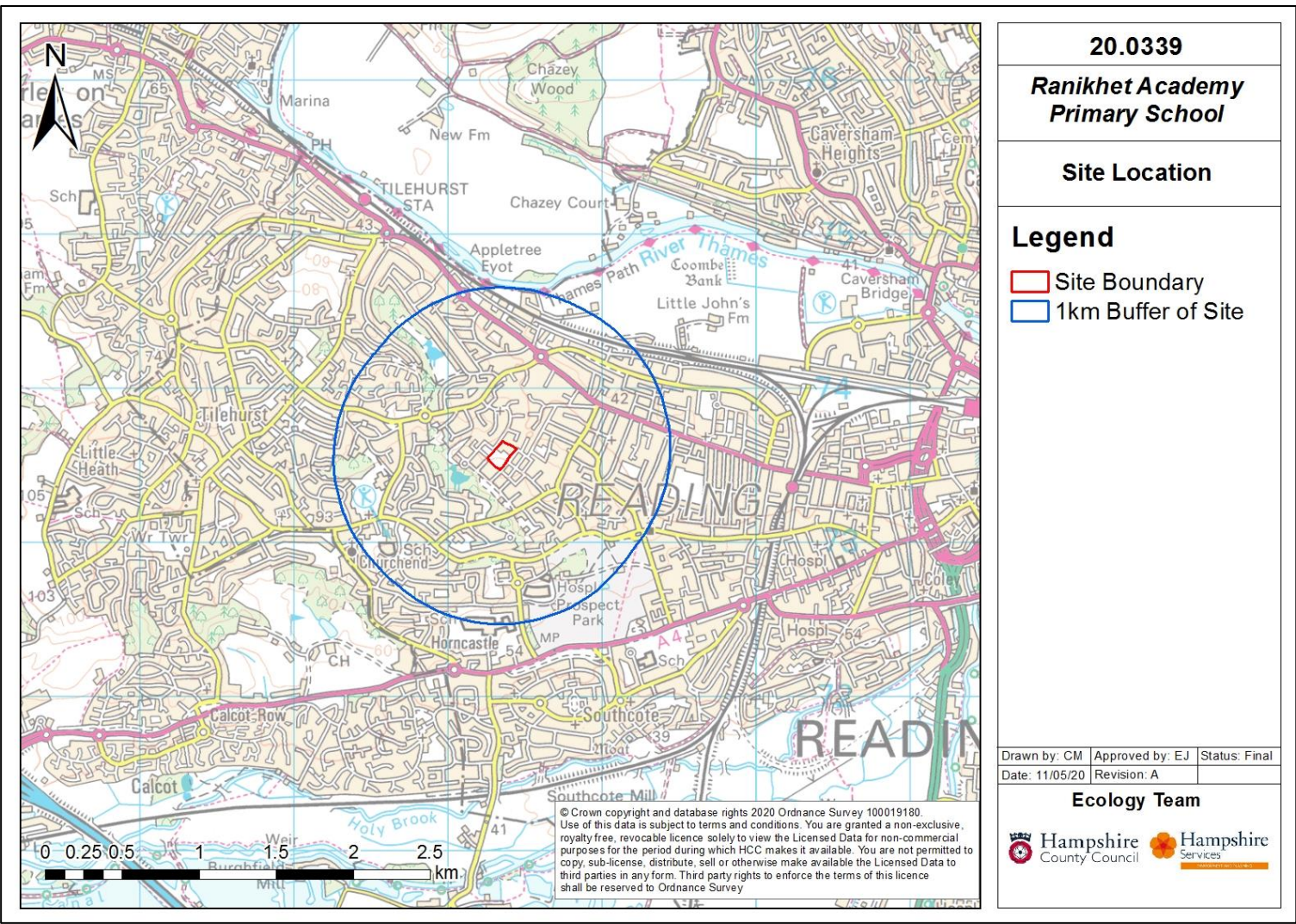


Figure A2.1 Site Location

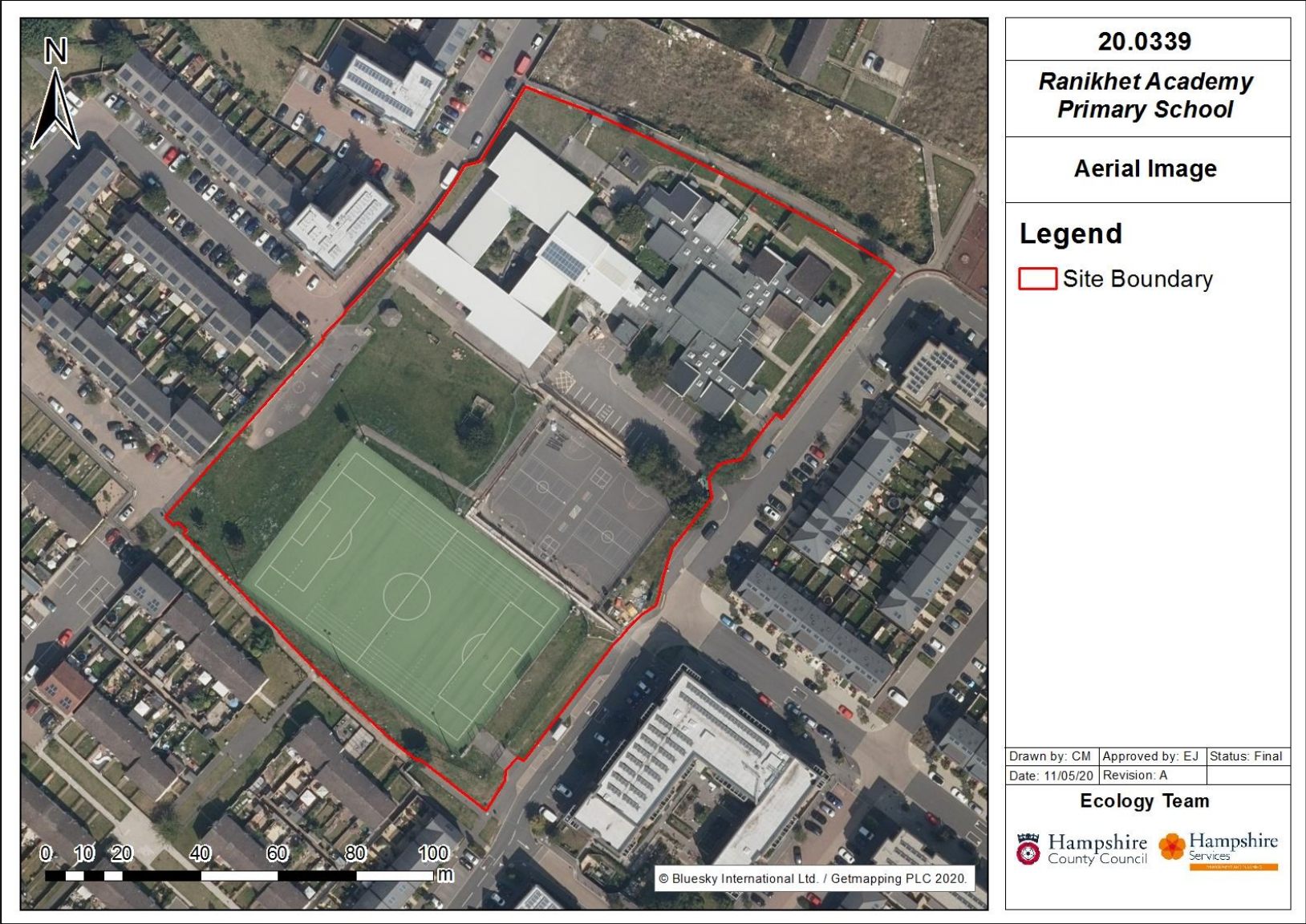


Figure A1.1 Aerial image of the site

Appendix 2 – Photos



Photo 1 General view of school buildings



Photo 2 General view of school buildings



Photo 3 General view of pitch to south-west of school



Photo 4 Semi-improved neutral grassland to south-west



Photo 5 Semi-improved neutral grassland to south-east of site



Photo 6 Bee orchid in amenity grassland north-west of site



Photo 7 Central courtyard area



Photo 8 Garden area



Photo 9 Cherry tree within amenity grassland at centre of site.



Photo 10 Trees east of site.



Photo 11 Hard standing path to south of site



Photo 12 Artificial sports pitch to south-west of site



Photo 13 Main area of artificial pitch



Photo 14 Over-roofed section of building – exterior view



Photo 15 Interior void of over-roofed section



Photo 16 Interior void of over-roofed section



Photo 17 Timber weather boarding on building to north-east of site



Photo 18 Timber weather boarding, building to north of site



Photo 19 Interlocking concrete pantiles. Building to north east of site



Photo 20 Soffit box. Building to north east of site.

Appendix 3 – Existing and Proposed Plans

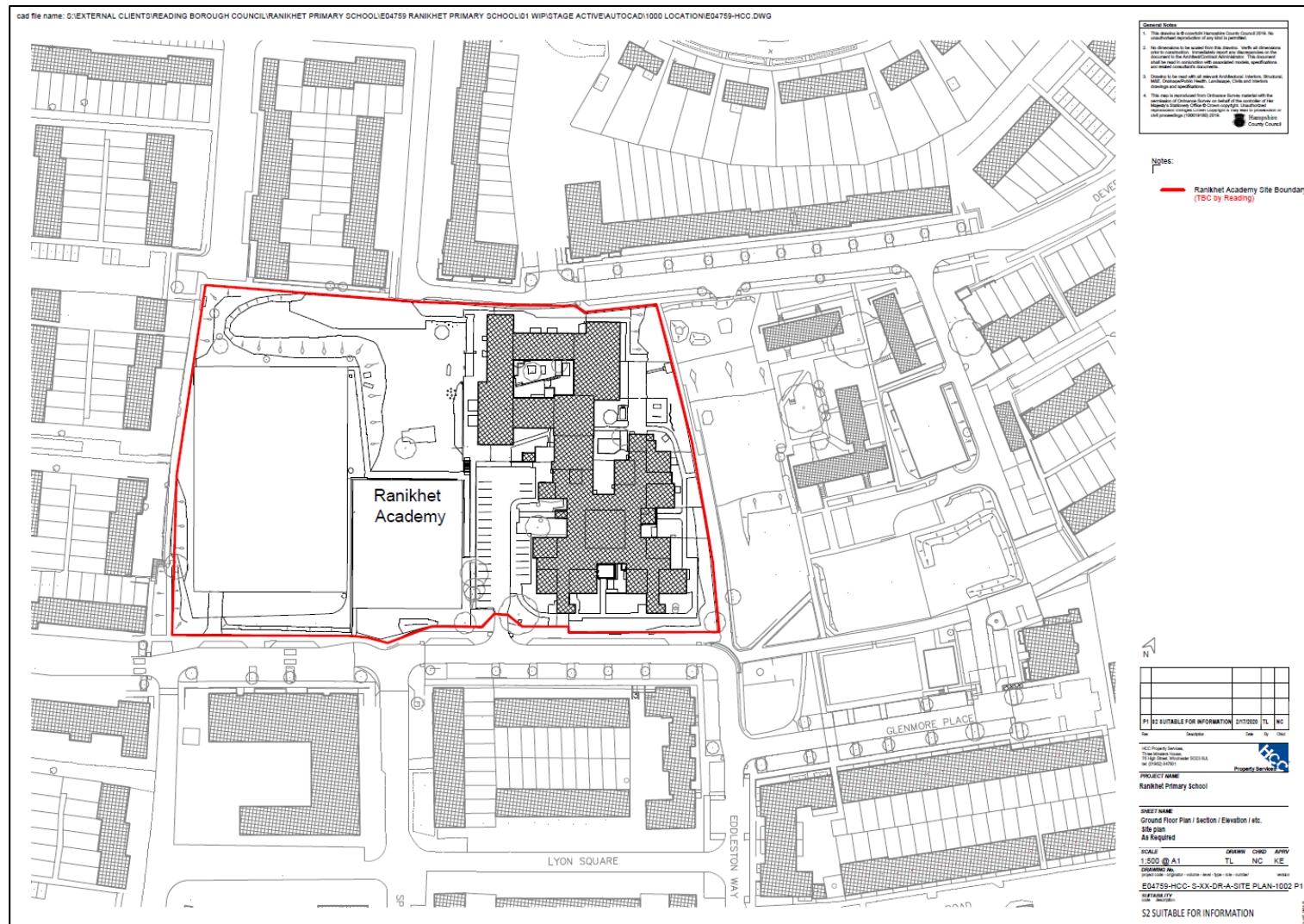


Figure A3.1 Existing plans for site: Ranikhet Academy Site Plan E04759-HCC-S-XX-DR-A-EXTG PLAN-1002P1. Feb 2020



Figure A3.2 Existing plans for site: Ranikhet Academy Site Plan E04759-HCC-S-XX-DR-A-EXTG PLAN-2000P1. Feb 2020



Figure A3.3 Proposed layout plan E04759-HCC-XX-SK-L-1200 (January 2020)

Appendix 4 – Desk-based Assessment Findings

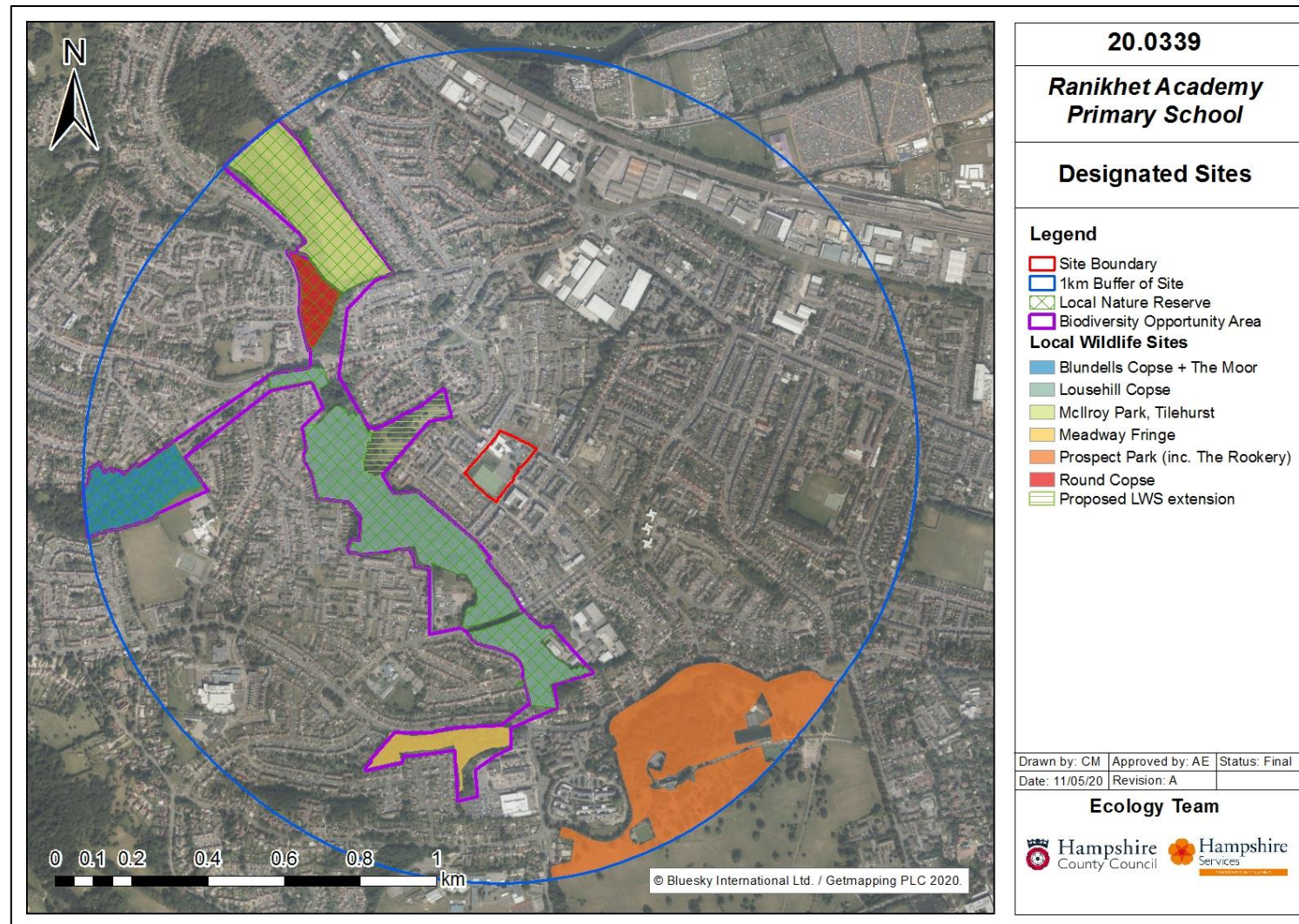


Figure A4.1 Map of nearby designated sites and 1km/search area

Table A4.1 Designated sites within 1km of Ranikhet Academy Primary School

Site Name	Reason for Designation	Distance and Direction from Site
<i>Locally designated sites</i>		
Lousehill Copse LWS and LNR	Site supports lowland mixed deciduous woodland with important and locally scarce plant species including: ramsoms, soft shield-fern <i>Polystichum setiferum</i> , hard shield-fern <i>P. aculeatum</i> , scaly male-fern <i>Dryopteris affinis</i> and opposite-leaved golden-saxifrage <i>Chrysosplenium oppositifolium</i> . The site supports notable bird species: song thrush <i>Turdus philomelos</i> , marsh tit <i>Poecile palustris</i> , stock dove <i>Columba oenas</i> , house martin <i>Delichon urbicum</i> , and dunnoek <i>Prunella modularis</i> .	140m W
McIlroy Park (including Round Copse) LWS and LNR	Site supports lowland mixed deciduous woodland, areas of grassland and scrub Woodland supports mixed coppice including hazel, hornbeam <i>Carpinus betulus</i> , oak, ash, birch <i>Betula</i> sp. and beech <i>Fagus sylvatica</i> . Rich ground flora includes dog's mercury <i>Mercurialis perennis</i> , sanicle <i>Sanicula europaea</i> , wood anemone <i>Anemone nemorosa</i> , wood spurge <i>Euphorbia amygdaloides</i> and pignut <i>Conopodium majus</i> .	550m NW
Meadway Fringe – LWS	Site supports woodland including a good range of woodland plants and ancient woodland indicator species including moschatel <i>Adoxa moschatellina</i> , wood anemone, common bluebell <i>Hyacinthoides non-scripta</i> , and wood speedwell ; and unimproved neutral grasslands with a diversity of herbs including cowslip <i>Primula veris</i> and bird's-foot trefoil <i>Lotus corniculatus</i> .	590m S
Prospect Park (includes The Rookery) LWS	Site supports lowland mixed deciduous woodland, lowland wood pasture and parkland habitats. Site supports priority, protected and notable species: stag beetle <i>Lucanus cervus</i> , common toad <i>Bufo bufo</i> , grass snake <i>Natrix helvetica</i> , noctule <i>Nyctalus noctula</i> , common pipistrelle <i>Pipistrellus</i>	650m SE

Site Name	Reason for Designation	Distance and Direction from Site
	<i>pipistrellus</i> , brambling <i>Fringilla montifringilla</i> , fieldfare <i>Turdus pilaris</i> and common bluebell.	
Blundells Copse and The Moor LWS and LNR	Site supports lowland mixed deciduous woodland and wet woodland habitats with woodland indicator species including alder buckthorn <i>Frangula alnus</i> , bluebell, opposite-leaved golden saxifrage, pignut <i>Conopodium majus</i> , remote sedge <i>Carex remota</i> , sanicle <i>Sanicula europaea</i> and wood meadow-grass <i>Poa nemoralis</i> . Supports range of notable species including common frog <i>Rana temporaria</i> , meadow pipit <i>Anthus pratensis</i> , bluebell and wood sorrel <i>Oxalis acetosella</i> .	700m W

Table A4.2 Protected and notable species located within 1km of the site

Common name	Taxon name	Details	Distance and direction from site
<i>Bats</i>			
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	2013, 2018 bat detector records	200m SW, 750m E
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	2018 bat detector record	200m SW
Daubenton's bat	<i>Myotis daubentonii</i>	2018 bat detector record	200m SW
Noctule	<i>Nyctalus noctula</i>	2018 bat detector record	200m SW
Brown long-eared bat	<i>Plecotus auritus</i>	2017 record of roost	350m SE
Serotine	<i>Eptesicus serotinus</i>	2018 bat detector record	400m W

Common name	Taxon name	Details	Distance and direction from site
Unidentified bat	Chiroptera	2004, 2006, 2007, 2008, 2009, 2011, 2014, 2016, 2017, 2019 Multiple records	450m NW
Mammals (non-bats)			
Badger	<i>Meles meles</i>	2008, 2018 record of setts, Lousehill Copse 2015, 2016, 2017, multiple records of individuals	100m W, 400m S, 400m NW, 600m NW, 700m NW, 900m N,
Hedgehog	<i>Erinaceus europaeus</i>	2004, 2005, 2009, 2013, 2014, 2018, 2019 multiple observation records	350m E, 350m NW, 500m NW, 600m SE, 800m NW, 900m E, 1km NW
Reptiles			
Slow worm	<i>Anguis fragilis</i>	2009, 2019 – several records from Lousehill Copse	200m W, 250m NW
Amphibians			
Palmate newt	<i>Lissotriton helveticus</i>	2018, record from Lousehill Copse	200m SW
Common frog	<i>Rana temporaria</i>	2004, 2008, several records	200m S, 400m N, 900m W
Smooth newt	<i>Lissotriton vulgaris</i>	2007, 2008, 2011, records from Lousehill Copse and Tilehurst	200m S, 400m N
Birds			
1997 – 2019 multiple records of many species including: Barnacle goose <i>Branta leucopsis</i> , bullfinch <i>Phyrrhula phyrrhula</i> , common redpoll <i>Acanthis flammea</i> , cuckoo <i>Cuculus canorus</i> , fieldfare <i>Turdus pilaris</i> , firecrest <i>Regulus ignicapilla</i> , great black-backed gull <i>Larus marinus</i> , house martin <i>Delichon urbicum</i> , house sparrow <i>Passer domesticus</i> , lapwing <i>Vanellus vanellus</i> , redwing <i>Turdus iliacus</i> , song thrush <i>Turdus philomelos</i> , starling <i>Sturnus vulgaris</i> , and swift <i>Apus apus</i> .			<1km

Common name	Taxon name	Details	Distance and direction from site
<i>Invertebrates</i>			
Cinnabar moth	<i>Tyria jacobaeae</i>	1997 – 2019 several field records from Mclloy's Park, Lousehill Copse and Prospect Park	200m SW, 900m NW, 950m SE
Stag beetle	<i>Lucanus cervus</i>	1997 – 2019 multiple field records from Tilehurst, Prospect Park and residential areas.	1km NW, 950m SE
Common club-tail	<i>Gomphus vulgatissimus</i>	2017 field records	1km N
<i>Plants</i>			
Tormentil	<i>Potentilla erecta</i>	2008 record from Round Copse	600m NW
Winter Heliotrope	<i>Petasites fragrans</i>	2008 record from Round Copse	600m NW
Stinking Hellebore	<i>Helleborus foetidus</i>	2008 record from Round Copse	600m NW
Bluebell	<i>Hyacinthoides non-scripta</i>	2004, 2008 and 2018 several records from Blundells Copse, Meadway Fringe, Mclloy's Park and Round Copse	650m S, 850m W, 900m NW
Corn marigold	<i>Glebionis segetum</i>	2008 record from Mclloy's Park	800m NW
Sanicle	<i>Sanicula europaea</i>	2018 record from Blundells Copse	850m W
Three-cornered Garlic	<i>Allium triquetrum</i>	2018 record from Blundells Copse	850m W
Wood-sorrel	<i>Oxalis acetosella</i>	2018 record from Blundells Copse	850m W

Appendix 5 – Phase 1 Habitat Map

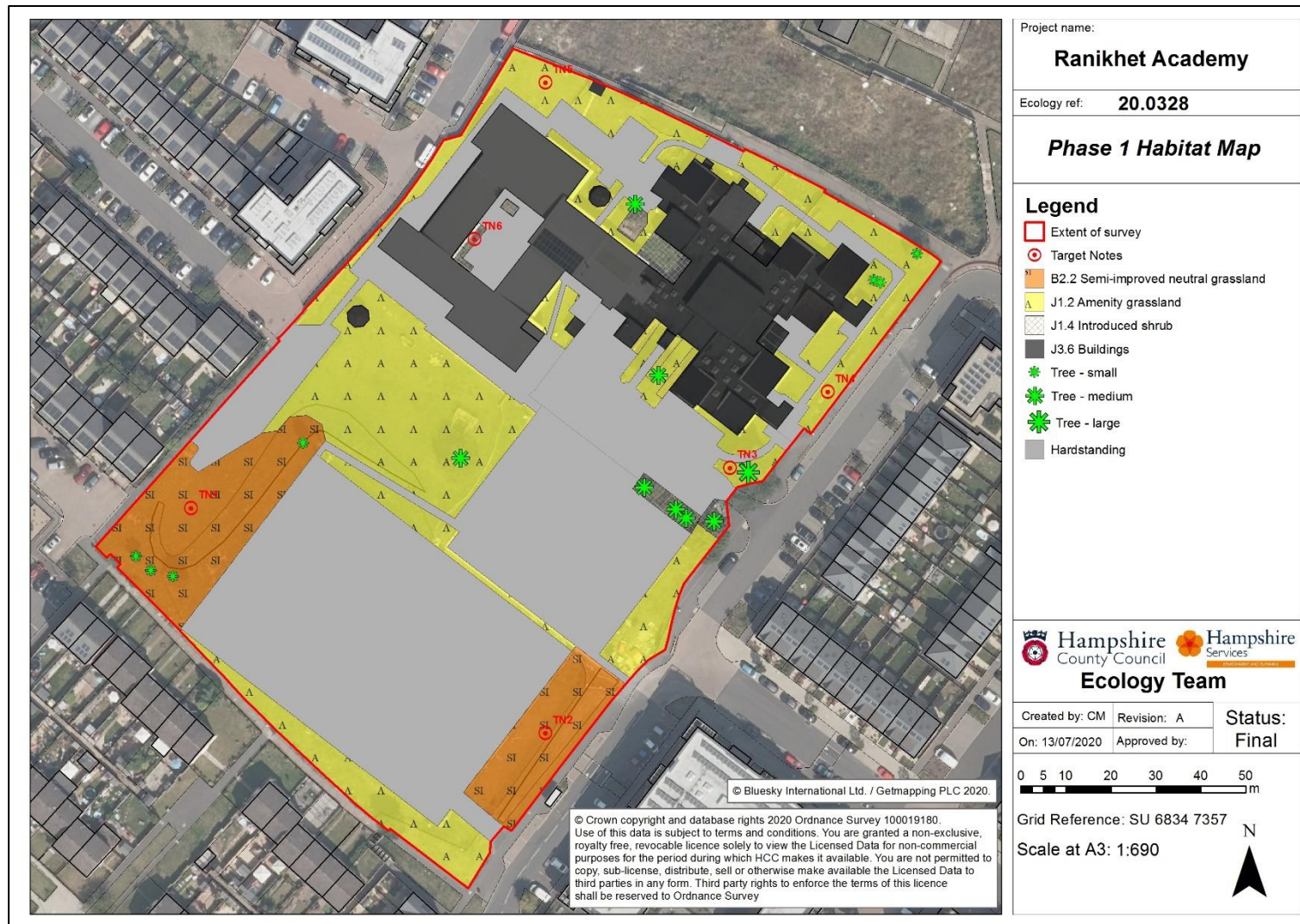
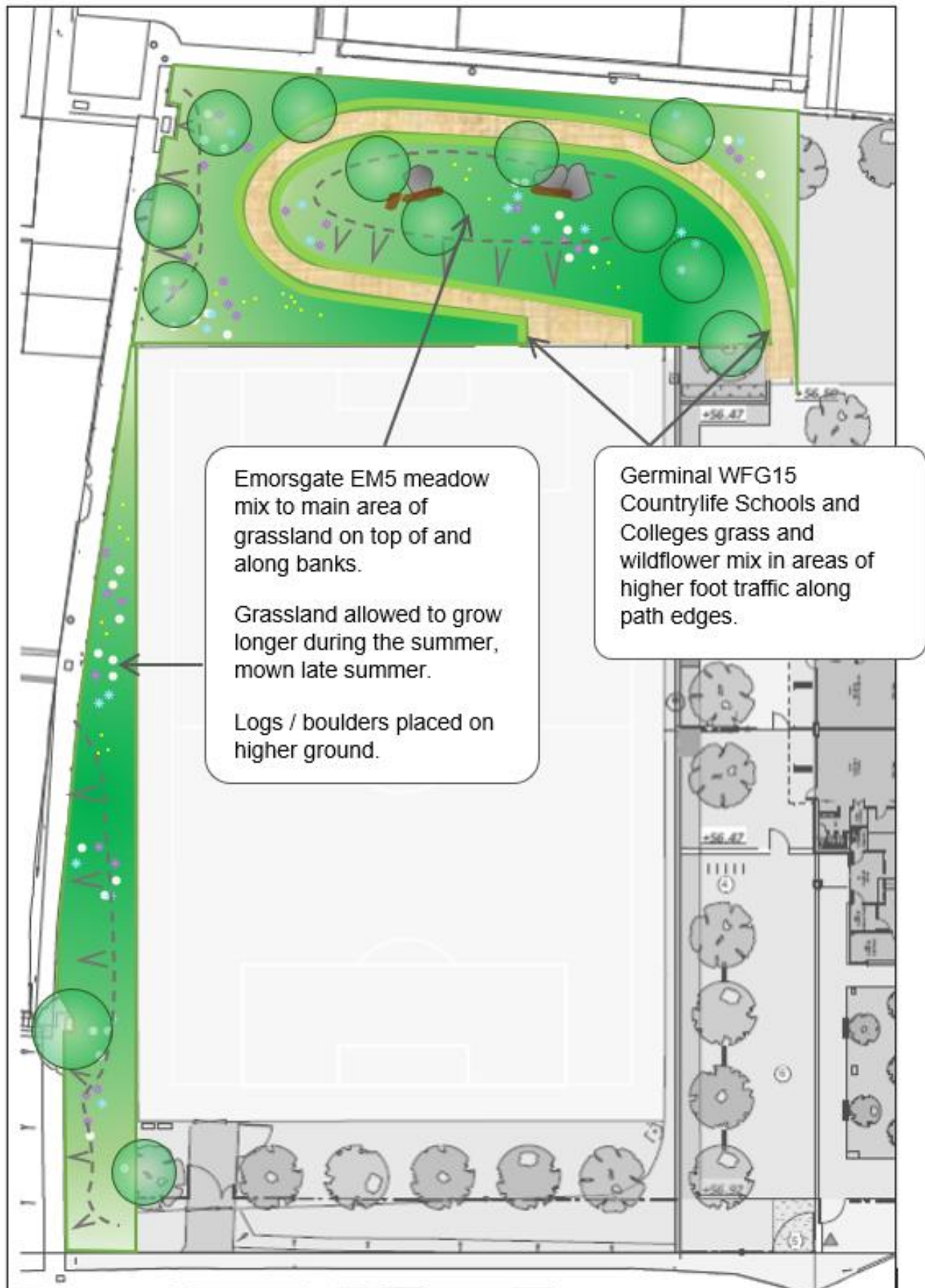


Figure A5.1 Phase 1 Habitat Map

Appendix 6 – Ecological Enhancement Scheme



Appendix 7 – BREEAM calculation

- Please see separate Excel file