



Hampshire
County Council

Preliminary Ecological Appraisal

Glenwood School, Washington Road,
Emsworth, PO10 7NN

For
Hampshire County Council
Property Services

December 2020

Hampshire County Council Ecology Team

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Report conditions

<i>HCCET reference</i>	20.0803	<i>Client reference</i>	P12594
<i>Report title</i>	Preliminary Ecological Appraisal – Glenwood School, Washington Road, Emsworth, PO10 7NN		
<i>Client</i>	Hampshire County Council Property Services		
<i>Report status</i>	FINAL		
<i>Survey dates</i>	PEA: 29 September 2020		
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<i>Approved by Client PM</i>	Andrew Withers	<i>Date</i>	26 January 2021

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Summary

Hampshire County Council Property Services propose to install a temporary modular classroom at Glenwood School, Emsworth. A Preliminary Ecological Appraisal (PEA) was therefore undertaken on 29 September 2020 to assess the ecological value of the site. This work is required to support a planning application with Havant Borough Council.

The PEA comprises a desk-based assessment and field survey work based on Extended Phase 1 survey methodology to assess the potential for the site to support protected habitats and species.

Habitats to be directly impacted by the proposed works include one mature tree, a small patch of amenity grassland and two vegetable patches. The site is of low ecological value and the proposed works are anticipated to result in an overall net loss of biodiversity, if left unmitigated.

The habitats within the works footprint have the potential to support breeding birds. It is concluded that, if left unmitigated, the proposed works have the potential to disturb and/or harm common and widespread breeding bird species.

No further survey work is recommended for the proposed developments, although a summary mitigation strategy is provided. The mitigation strategy details measures to minimise identified impacts and to provide appropriate compensation and enhancement to offset those impacts. These measures include:

- Planting of two native trees within the site boundary
- Installation of bat and bird boxes on retained trees within the site boundary
- Planting of herbaceous species suitable for insect pollinators

1. Introduction

- 1.1. Hampshire County Council (HCC) Ecology Team (HCCET) has been commissioned by HCC Property Services to undertake a Preliminary Ecological Appraisal (PEA) in relation to the installation of a temporary modular classroom at Glenwood School, Emsworth.
- 1.2. An initial desk-based assessment was undertaken by HCCET in August 2020 (HCCET, Ecological Desk Based Assessment reference 20.0803). This report concluded that a PEA should be carried out, and this work was subsequently commissioned by HCC Property Services.
- 1.3. Three locations were proposed for the temporary classroom within the ecological desk-based assessment; only one location has been considered in this report. The results of the desk-based assessment are incorporated into this report.

Aims and objectives

- 1.4. The purpose of this study was to gather ecological information about the application site and assess the impacts of the development proposals for the sites on sensitive ecological features. This information will be used to support a planning application with Havant Borough Council.
- 1.5. The PEA comprised an extended Phase 1 habitat survey. Where necessary, this PEA report recommends further species-specific survey work. This report will inform HCC Property Services of any identified ecological impacts that may arise from the development proposals. The information gathered would be used to develop an appropriate and proportional strategy to avoid, mitigate and where necessary, compensate for any such impacts.
- 1.6. The report has been prepared in line with the Chartered Institute for Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal (CIEEM, 2013)

Proposed works

- 1.7. The proposed development plans include the installation of a temporary modular classroom within the school grounds. To facilitate the development plans one mature tree is proposed for removal.
- 1.8. The existing site plan and the proposed works plan showing the site boundaries, current at the time of this report are shown in **Appendix 1**.

Site Description

- 1.9. Glenwood school is situated on the northern edge of Emsworth, centred approximately at National Grid Reference SU 7455 0630. The school is located within a semi-rural setting, with residential houses to the south and east of the site and the A27 to the north. There is an allotment located to the west.
- 1.10. The site is essentially split into two halves with the school buildings on the eastern side comprising one- and two-storey buildings with various extensions. The main building is of brick construction with a pitched roof and clay tiles.
- 1.11. Playing areas are situated on the western side of the site, comprising a grass playing field, an artificial 3G pitch, and a hardstanding sports pitch. A line of broadleaved trees forms the northern, western, and southern perimeter of the school. Further habitats within the school boundary include a pond, scrub and introduced shrubs.
- 1.12. A location plan and aerial photo of the site showing the site boundary and its setting are shown in **Appendix 2. Photos 1 - 6** on the photo sheet in **Appendix 3** show the general conditions at the site.

Limitations

- 1.13. All areas of the site were fully accessible and visible during the survey work. The weather was acceptable for completing the site visit and no significant limitations to the survey work were encountered.

2. Legislation

2.1. The following legislation gives legal protection to many species of flora and fauna, and are therefore considered relevant to this assessment:

- The Conservation of Habitats and Species Regulations 2017¹;
- The Wildlife and Countryside Act 1981 (as amended)²;
- Natural Environment and Rural Communities Act 2006³

The Conservation of Habitats and Species Regulations 2017

2.2. The Conservation of Habitats and Species Regulations 2017 (commonly referred to as the Habitats Regulations) provides the mechanism for the designated and protection of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)

2.3. Under the provisions of the regulations, competent authorities (such as Highways Authorities and Local Planning Authorities) are required to undertake a Habitats Regulation Assessment (HRA) if a development is proposed within or adjacent to a SPA or SAC. The project should only proceed or be permitted where the HRA concludes that the proposal will not result in a likely significant effect upon the designated site in question.

2.4. If the assessment concludes that there would be a likely significant effect on the site, a further assessment, an 'Appropriate Assessment', will need to be undertaken. Through this assessment, further studies may be needed and measures may be put in place that allow the HRA to conclude that the proposals would not adversely affect the integrity of the sites in question.

¹ <https://www.legislation.gov.uk/uksi/2019/579/contents/made>

² <http://www.legislation.gov.uk/ukpga/1981/69>

³ <http://www.legislation.gov.uk/ukpga/2006/16/contents>

2.5. The regulations also make it an offence to:

- Deliberately capture, injure or kill European protected animals listed in Schedule 2 of the Regulation
- Deliberately disturb, take/destroy eggs or damage/destroy the breeding/resting site of such an animal.
- Deliberately pick, collect, cut, uproot or destroy a European protected plant listed in Schedule 5 of the Regulations.

2.6. Should the development works impact any species protected under this legislation, a licence from Natural England would need to be obtained before work starts. The licence may permit disturbing, trapping, taking, or handling European protected species and destroying or damaging their habitats in order to carry out the proposed works. Licence applications usually take at least six weeks to be approved by Natural England.

The Convention on Wetlands of International Importance

2.7. The Convention on Wetlands of International Importance, (the Ramsar Convention) provides an international mechanism for protecting wetland sites of global importance.

2.8. The designation of these sites within the UK are generally underpinned by SSSIs, SPAs and / or SACs, thus they receive statutory protection under the Wildlife and Countryside Act and the Habitats Regulations. Under UK government policies, the protection of Ramsar sites extend to the same level as SPAs and SACs. Developments impacting Ramsar sites therefore have the same legal requirements as a SPAs and SACs.

The Wildlife and Countryside Act 1981 (as amended)

2.9. The Wildlife and Countryside Act 1981 (As amended) makes it a legal offence to:

- Intentionally kill, injure or take any species of wild bird.
- Intentionally take, damage or destroy the nest of any wild bird whilst the bird is in the nest or the nest is being built.

- Intentionally kill, injure or take any wild animal listed in Schedule 5 of the Act.
 - Intentionally pick, uproot or destroy any wild plant listed in Schedule 8 of the Act.
 - Introduce invasive non-native species listed in Schedule 9 of the Act.
- 2.10. If any species protected under this act are found to be present on the development site, they will need to be removed safely from site before development works can take place and where necessary compensatory habitat created.
- 2.11. The Wildlife and Countryside Act also provides the mechanism for the designation and protection of Sites of Special Scientific Interest (SSSI).
- 2.12. Should any development impact a SSSI, assent is required from Natural England (NE) before that work can proceed. Appropriate measures would need to be devised and approved by NE to ensure impacts are avoided or mitigated. Permanent net loss of habitats within internationally or nationally designated sites is highly unlikely to be permitted.

Natural Environment and Rural Communities Act 2006

- 2.13. Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC) sets out that all public bodies must have regard to conserving biodiversity as part of any policy or decision making. This includes HCC as Highways Authority.
- 2.14. With respect to this scheme, the Highways Authorities need to demonstrate compliance with this duty. This involves integrating biodiversity within the design when developing new infrastructure.

3. Methods

Desk-based assessment

- 3.1. Findings of the original desk-based assessment undertaken by HCCET in August 2020 are included in this PEA report where appropriate.

Field Survey

- 3.2. Field survey work was carried out on 29 September 2020 by Emma James and Courtney Hooper, two experienced ecological surveyors with HCCET.
- 3.3. The survey followed the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee (JNCC, 2010) and the Institute of Environmental Assessment (IEA, 1995).
- 3.4. 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.
- 3.5. The site survey comprised two surveyors 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.
- 3.6. A brief description of the survey methods used for each species or species group is provided below.

Bats

- 3.7. The trees on site were assessed for their potential to support bats, using methods guided by and consistent with that set out in the Bat Conservation Trust (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition (Collins, 2016).

- 3.8. 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.
- 3.9. 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.
- 3.10. Bat roost suitability and foraging habitat quality was assessed according to the criteria set out in Collins (2016).

Badger

- 3.11. 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.

Hazel Dormouse

- 3.12. 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.

Otter

- 3.13. Any suitable on-site or nearby accessible waterbodies such as lakes, rivers, ditches and streams were inspected for signs of otter *Lutra lutra*, including spraints (droppings), holts and couches (resting places), haul-outs and anal jelly.

Water vole

- 3.14. Suitable on-site or nearby waterbodies were also inspected for signs of water vole *Arvicola amphibius*, such as burrows (particularly those with a characteristic grazed 'lawn' around the entrance), runs along the bank, latrines, feeding signs, runs, and footprints.

Birds

- 3.15. The survey 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.

Reptiles

- 3.16. 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.

Amphibians

- 3.17. 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).

Invertebrates

- 3.18. The site's suitability for invertebrates was assessed based on a search for habitat features such as diverse grassland or woodland habitat, saproxylic (deadwood) habitat, waterbodies and any interfacing areas where these features meet, which can encourage invertebrate diversity.

Other species

- 3.19. The site was also assessed for its suitability to support any Species of Principal Importance (Section 41 of the NERC Act 2006), or those included in the Local Biodiversity Action Plan (LBAP).

4. Results

Field scoping / Zone of Influence

- 4.1. There are no buildings to be affected within the proposed development works and therefore buildings as a potential roosting site for bats have been scoped out of the report.
- 4.2. There are no suitable habitats within the site boundary to support hazel dormice, badger, otter, and water vole. The data search did not return any records of these species within a 1km search radius of the site apart from water vole. There is no ecological connectivity between the areas in the wider landscape that support water vole and the site boundary. These protected and notable species have therefore been scoped out of the report.
- 4.3. The project is small in scale and is considered unlikely to potentially affect any other ecological receptors further afield from the areas within and immediately adjacent to the site. The zone of influence for the project is therefore considered to include the works footprint and a 50m radius from the works area.

Designated Sites

- 4.4. There are four statutory and eight non-statutory nature conservation sites within a 1km search radius of the site.
- 4.5. Chichester & Langstone Harbours Special Protection Area (SPA) and Ramsar site, the Solent Maritime Special Area of Conservation (SAC), and Chichester Harbour Site of Special Scientific Interest (SSSI) are located 850m to the south of Glenwood School. These are internationally and nationally designated areas of coastal and marine habitat which areas of significance for specific habitats types and overwintering bird species.
- 4.6. There are eight locally designated sites within 1km of Glenwood School. The closest, located 170m to the north-west, is the 'Stream west of Emsworth recreation ground' Site of Importance for Nature Conservation (SINC). This site supports narrow-leaved water plantain *Alisma lanceolatum*. Narrow-leaved

water plantain is also found at Westbrook Stream SINC, located 250m south-east of the Glenwood School.

- 4.7. Full details of the designated sites within a 1km search radius of Glenwood School including their corresponding location plans, are shown in **Appendix 4**.

Habitats

- 4.8. At the time of the survey, it was not known where the temporary classroom would be placed, therefore an assessment of the whole site was conducted.
- 4.9. The following section details the habitats within the works footprint although it should be noted that other habitats are present within the surveyed area. Habitats include a pond, line of broadleaved trees, scrub, further areas of amenity grassland, buildings and playing areas.
- 4.10. The main habitats present at and around the development site are shown in the Phase 1 habitat map in **Appendix 5**. The associated site photos are shown in **Appendix 3**.

Notable habitats

- 4.11. There are no priority or notable habitats within the site boundary at Glenwood School.

Hardstanding

- 4.12. Hardstanding, in the form of a tarmac playing area, comprises most of the habitat within the works footprint.

Scattered trees

- 4.13. One sycamore *Acer pseudoplatanus* tree is located within the works footprint. This tree is approximately seven metres in height and is of a mature age. The tree is isolated and does not form part of a linear feature within the site boundary.

Amenity grassland

- 4.14. A small patch of sown amenity grass, approximately 50m², is located within the works footprint. The sward comprises ryegrass *Lolium* and fescue *Festuca* species typical of such habitats.

Introduced shrub

- 4.15. Two wooden raised garden beds are located within the works footprint, covering a combined area of approximately 16m². A small number of vegetables have been planted within these wooden beds.

Protected and Notable Species

Bats

Desk-based assessment

- 4.16. At least eleven bat species have been identified within the search area including Daubenton's bat *Myotis daubentonii*, western barbastelle *Barbastella barbastellus* and Brandt's bat *Myotis brandtii*. A record of a common pipistrelle *Pipistrellus pipistrellus* is located 125m south of the development site, which is the closest bat record to Glenwood School.

Field survey – Tree roosts

- 4.17. No potential roosting features were identified on the sycamore tree to be removed as part of the development proposals. It is therefore considered that this tree has a negligible potential to support roosting bats.

Field survey – Foraging and commuting

- 4.18. A line of broadleaved trees surrounds the northern, southern, and western boundaries of the Glenwood School. These linear features provide a foraging and commuting habitat for a range of common and widespread bat species.
- 4.19. The line of broadleaved trees to the north is adjacent to a railway line and is part of a wider green corridor. It is ecologically connected to high-quality foraging and commuting habitat in the wider landscape. Taking into consideration the habitat surrounding the site, as well as the suitable habitat within the site, it is concluded that the school grounds offers moderate suitability to support foraging and commuting bats.

Breeding birds

Desk-based assessment

- 4.20. The desk-based assessment returned several bird records, largely associated with coastal habitats. The closest bird record to the site is of a Mediterranean gull *Larus melanocephalus*, located 450m east from the centre of the development site.

Field survey

- 4.21. The tree within the works footprint offers suitable habitat to support several common and widespread species of bird. It is therefore likely that this tree will support small numbers of common and widespread species during the breeding bird season.

Reptiles

Desk-based assessment

- 4.22. The desk-based assessment returned several records of slow-worm *Anguis fragilis*. The closest record is located 225m south-west of the site boundary.

Field survey

- 4.23. The habitats within the works footprint are not suitable for supporting reptile species.
- 4.24. Suitable habitat to support reptile species is located elsewhere within the site boundary, including scrub habitat surrounding the school's pond. This habitat is ecologically connected to the allotments west of the site boundary which are of high suitability to support slow-worms.

Amphibians

Desk-based assessment

- 4.25. The desk-based assessment returned two records of common toad *Bufo bufo*. The closest record is located 525m south-east of the site boundary.

Field survey

- 4.26. Although there is a pond within the school site, the habitats within the works footprint are not suitable for supporting amphibian species.

Invertebrates

Desk-based assessment

4.27. The desk-based assessment did not return any records of invertebrates within the search area.

Field survey

4.28. The amenity grassland, introduced shrub, and tree within the works footprint may support common and widespread invertebrate species.

Plants

Desk-based assessment

4.29. The desk-based assessment several species of notable plants within the search radius. The closest record to the development site is narrow-leaved water-plantain *Alisma lanceolatum*, located 200m north from the centre of the development site.

Field survey

4.30. No notable plant species were recorded within the works footprint during the field survey.

5. Impact Assessment

- 5.1. The following sections consider the potential impacts on any identified ecological features and whether the development would be in accordance with policy and legislation.
- 5.2. 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.
- 5.3. Policy CS13 'Green Infrastructure' of the Havant Borough Core Strategy states that planning permission will only be granted for proposals that maintain the network of green infrastructure identified at regional and local levels, incorporates improvements to existing green infrastructure, does not undermine the functional integrity of green infrastructure and creates new green infrastructure through on-site provision. Planning permission will not be granted if the proposals comprise the integrity of the overall green infrastructure network.

Designated sites

Statutory sites

- 5.4. Due to the small scale and localised nature of the proposals, the works are not considered to affect directly or indirectly any of the statutory sites within the 1km search radius.

Non-statutory sites

- 5.5. Due to the small scale and localised nature of the proposals, the works are not considered to affect directly or indirectly any of the non-statutory sites within the 1km search radius.

Habitats

Scattered trees

- 5.6. One mature sycamore tree is to be removed as a result of the development proposals.
- 5.7. If left unmitigated there will be a low adverse impact to the ecological value of the site and an overall net loss of biodiversity. The loss will not be significant beyond site level.

Amenity grassland

- 5.8. The small patch of amenity grass within the site boundary is to be removed through the development proposals. Amenity grassland is widespread within the site boundary and the surrounding landscape.
- 5.9. The loss of this habitat is therefore not significant beyond site level, although if left unmitigated, there will be a low adverse impact on the ecological value of the site and an overall net loss of biodiversity.

Introduced shrub

- 5.10. The patches of introduced shrub within the works footprint are to be removed through the development proposals.
- 5.11. This habitat is of low ecological value to the site. The loss of this introduced shrub is therefore likely to have a low adverse impact to the ecological value of the site and an overall net loss of biodiversity, if left unmitigated. The loss of this habitat is not significant beyond site level.

Protected and Notable Species

Bats

- 5.12. The tree to be removed offers negligible suitability to support roosting bats. No impacts to roosting bats are therefore anticipated as a result of the installation of the modular classroom.
- 5.13. Bats use linear features within the landscape for foraging and commuting. The tree to be removed is not part of a linear feature on site which likely supports

large numbers of commuting bats. The loss of a singular tree is therefore anticipated to have a negligible impact on foraging and commuting bat species.

Breeding birds

5.14. The tree to be removed offers suitable nesting habitat to support common and widespread bird species. The clearance of this tree would therefore cause disturbance and/or direct harm to breeding birds if undertaken during the main breeding bird season. Breeding birds, their eggs, nests and young are fully protected under the Wildlife and Countryside Act 1981 (as amended).

5.15. The works will result in a loss of nesting habitat within the site boundary. It is considered that the works will not have a significant impact on breeding birds and these impacts will be seen at site level only.

Reptiles

5.16. As reptile species are unlikely to be present within the affected habitats, the proposals will have a negligible impact on these species.

Amphibians

5.17. As reptile species are unlikely to be present within the affected habitats, the proposals will have a negligible impact on these species.

Invertebrates

5.18. As notable invertebrates are unlikely to be present within the affected habitats, the proposals will have a negligible impact on these species.

Plants

5.19. As notable plants are unlikely to be present within the affected habitats, the proposals will have a negligible impact on plant species.

Impact assessment summary

5.20. 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:

- Removal of one mature tree
- Loss of nesting habitat and potential harm/disturbance to breeding birds

6. Recommendations

- 6.1. 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.

Habitats

- 6.2. The scheme should integrate measures to ensure the net loss in biodiversity is appropriately addressed. The following broad strategy is suggested at this stage, although this should be refined through discussions with the project manager and relevant contractors.
- 6.3. To mitigate for the loss of low ecological value habitats within the site boundary, it is recommended that two native tree species are planted within the site boundary.
- 6.4. Native tree and scrub species can support a larger diversity of native fauna in comparison to non-native species. Native trees species that should be considered include oak *Quercus robur*, lime *Tilia x europaea*, field maple *Acer campestre* and hawthorn *Crataegus monogyna*.

Protected and notable species

Breeding birds

- 6.5. In order to avoid impacts to nesting birds, it is advised that clearance of the trees and scrub understorey should take place outside the main bird nesting season, between September and February (inclusive).
- 6.6. If this timing is not possible, clearance during the main bird nesting season can only proceed after a thorough and careful check by an experience ecologist for active nests. If any active bird nests are encountered, these will need to be left undisturbed with a suitable buffer zone determined by the ecologist. These nests must be left until the chicks have fledged or are no longer dependant on the nest.

- 6.7. Please note – clearance of suitable bird nesting habitat in the spring or summer carries a higher risk of delays if active nests are encountered.

Enhancements

- 6.8. The NPPF seeks to deliver net gains to biodiversity within the planning system wherever possible. The following are examples of some potential options for enhancing the site ecologically:

- Installation of bird nesting boxes and bat boxes on remaining trees
- Planting of herbaceous species suitable for insect pollinators

- 6.9. These recommendations are based on the understanding of the ecological characteristic 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.

7. Conclusions

- 7.1. The Preliminary Ecological Appraisal at Glenwood School identified that the site supports habitats of low ecological value. Habitats within the works footprint include hardstanding, scattered trees, amenity grassland, and introduced shrub. Other habitats within the school's ground include a line of broadleaved trees, a pond, scrub, buildings, amenity grassland and hardstanding.
- 7.2. The assessment concluded that there are unlikely to be any adverse impacts to designated sites within the surrounding area.
- 7.3. One tree, a small patch of amenity grassland, and ornamental shrubs are to be lost through the development proposals. The habitats within the works footprint are of low ecological value and their loss will not have a significant ecological impact beyond site level. It will however result in an overall net loss in biodiversity at the site.
- 7.4. The habitats within the works footprint are suitable for supporting breeding birds. If left unmitigated, low adverse impacts are anticipated to these protected species. Recommendations have been made to ensure that impacts on protected species, if present, are mitigated.
- 7.5. It is recommended that two native tree species are planted within the school's grounds to mitigate for the loss of low ecological value habitats. Further ecological enhancements are recommended to increase the ecological value of the site.
- 7.6. 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 – Existing and Proposed Plans

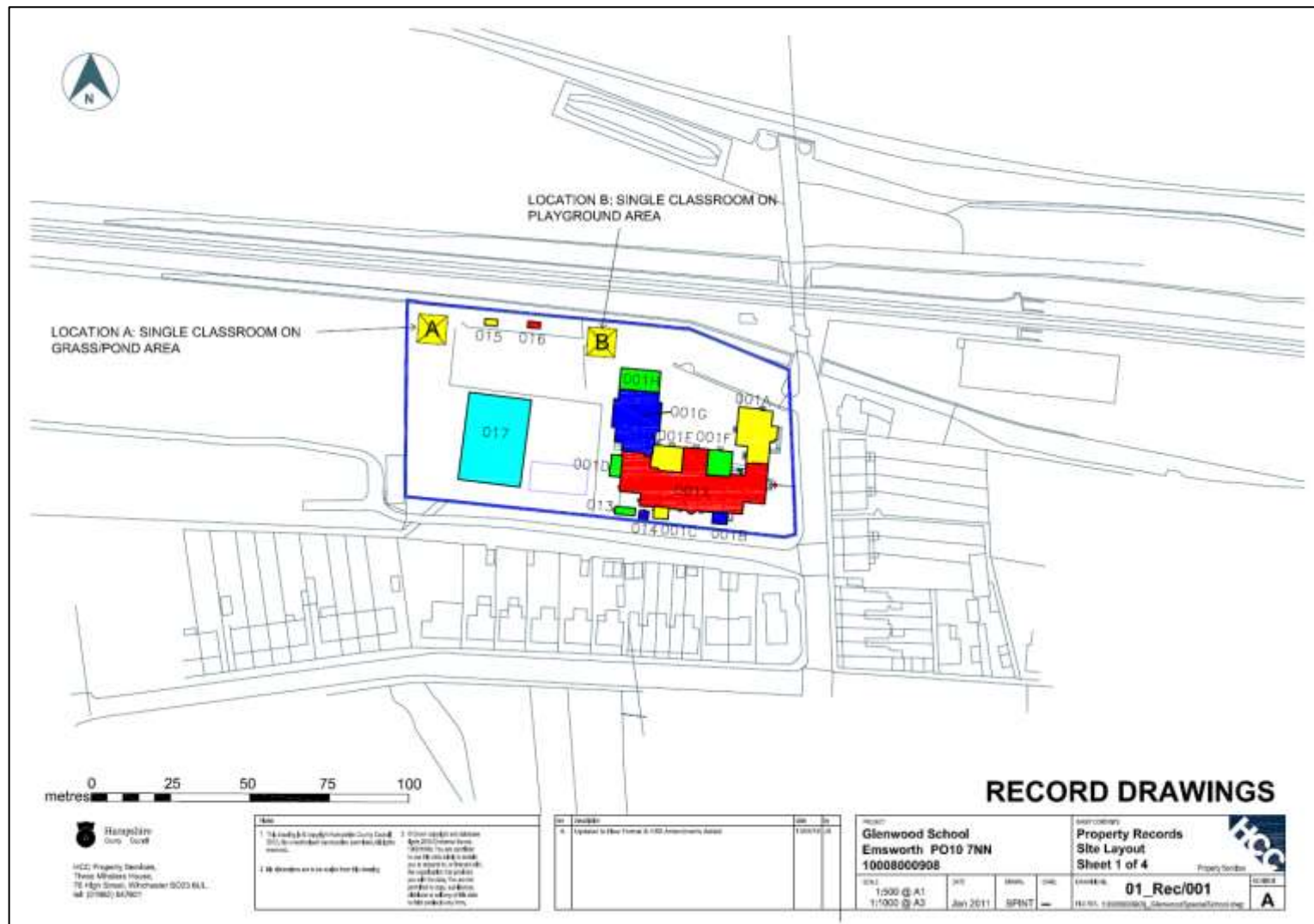


Figure 1A.1: Proposed plans for the installation of a temporary modular classroom, Glenwood School, Emsworth

Appendix 2 – Photos



Photo 1 *Habitats to be affected by the development proposals*



Photo 2 *Hardstanding and buildings adjacent to the works footprint*



Photo 3 *Amenity grassland, line of trees and artificial playing fields south of the works footprint*



Photo 4 *Pond within the school's ground, located west of the works footprint*



Photo 5 *Amenity grassland and line of trees south of the site boundary*



Photo 6 *Scrub habitat north of the pond within the site boundary*

Appendix 3 – Site Location and Aerial Photo

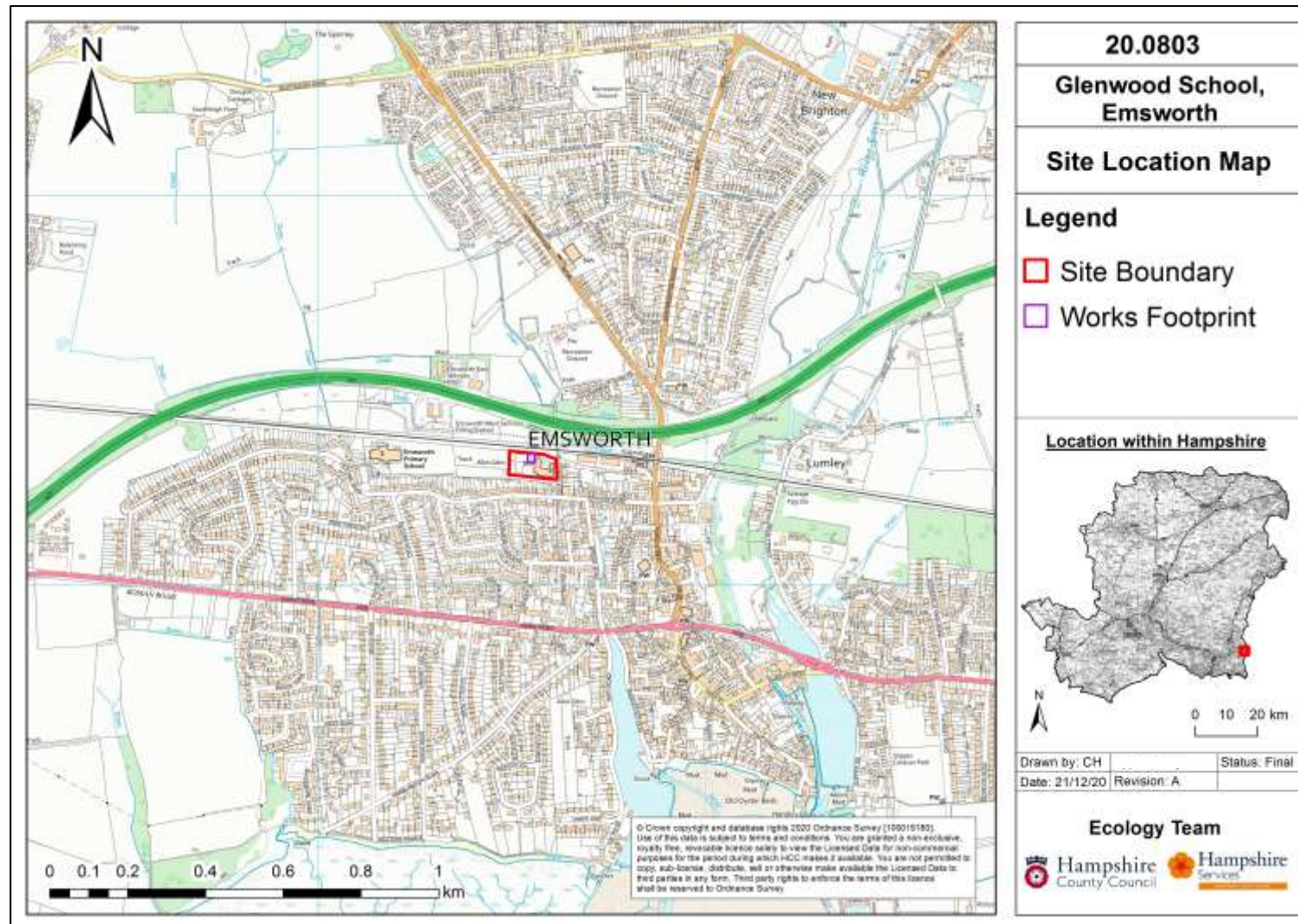


Figure A2.1 Location of Glenwood School within the wider landscape



Figure A2.2 Aerial image of the site at Glenwood School

Appendix 4 – Desk-based assessment findings

Table A4.1 Designated sites located within 1km of Glenwood School

Site Name	Reason for Designation	Distance and Direction from Site
<i>Internationally-designated sites</i>		
Chichester Harbour SPA, SAC & Ramsar	Qualifying features: ▪ Bar-tailed godwit <i>Limosa lapponica</i> ▪ Common tern <i>Sterna hirundo</i> ▪ Curlew <i>Numenius arquata</i> ▪ Dark-bellied brent goose <i>Branta bernicla bernicla</i> ▪ Dunlin <i>Calidris alpina alpina</i> ▪ Grey plover <i>Pluvialis squatarola</i> ▪ Little tern <i>Sternula albifrons</i> ▪ Pintail <i>Anas acuta</i> ▪ Red-breasted merganser <i>Mergus serrator</i> ▪ Redshank <i>Tringa totanus</i> ▪ Ringed plover <i>Charadrius hiaticula</i> ▪ Sanderling <i>Calidris alba</i> ▪ Sandwich tern <i>Thalasseus sandvicensis</i> ▪ Shelduck <i>Tadorna tadorna</i> ▪ Shoveler <i>Spatula clypeata</i> ▪ Teal <i>Anas crecca</i> ▪ Turnstone <i>Arenaria interpres</i> ▪ Wigeon <i>Mareca penelope</i>	0.85km SW
<i>Nationally-designated sites</i>		
Chichester Harbour SSSI	Chichester Harbour is a large estuarine basin in which at low water extensive mud and sandflats are exposed, drained by channels which unite to make a common exit to the sea. The site is of particular significance for wintering wildfowl and waders and also breeding birds both within the Harbour and in the surrounding permanent pasture fields and woodlands. There is a wide range of habitats which have important plant communities. Notable invertebrates include the long-winged conehead <i>Conocephalus discolor</i> and the moths, starwort shark <i>Cucullia asteris</i>, the sand dart <i>Agrotis ripae</i>, shore wainscot <i>Mythimna litoralis</i> and lunar hornet <i>Sphecia bemeciformis</i>.	0.85km SW

Site Name	Reason for Designation	Distance and Direction from Site
Sites of Importance for Nature Conservation (SINCs)		
Stream West of Emsworth Recreation Ground	Sites which support one or more notable species (<i>Alisma lanceolatum</i>)	0.17km NW
Westbrook Stream, Bridge Road	Sites which support one or more notable species (<i>Alisma lanceolatum</i>)	0.25km SE
Land West of Emsworth Recreation Ground	Designated as semi-improved grasslands which retain a significant element of unimproved grassland.	0.26km N
Lumley Meadow	Designated as agriculturally unimproved grasslands Sites which support one or more notable species (<i>Sanguisorba officinalis</i> , <i>Rorippa amphibia</i> , <i>Eleocharis uniglumis</i> , <i>Carex divisa</i>)	0.48km E
Emsworth Millpond	Designated as semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands.	0.48km SE
Brook Farm B	Sites which support one or more notable species (<i>Misopates orontium</i> , <i>Spergula arvensis</i>)	0.9km SW
Road Verges of Ecological Importance (RVEIs)		
U609 Bridge Road, Emsworth	Floral species of interest. Fair herb presence	0.23km SE
Local Nature Reserve (LNR)		
Brook Meadow (Emsworth)	Sites which support one or more notable species (<i>Arvicola amphibious</i>)	0.45km E

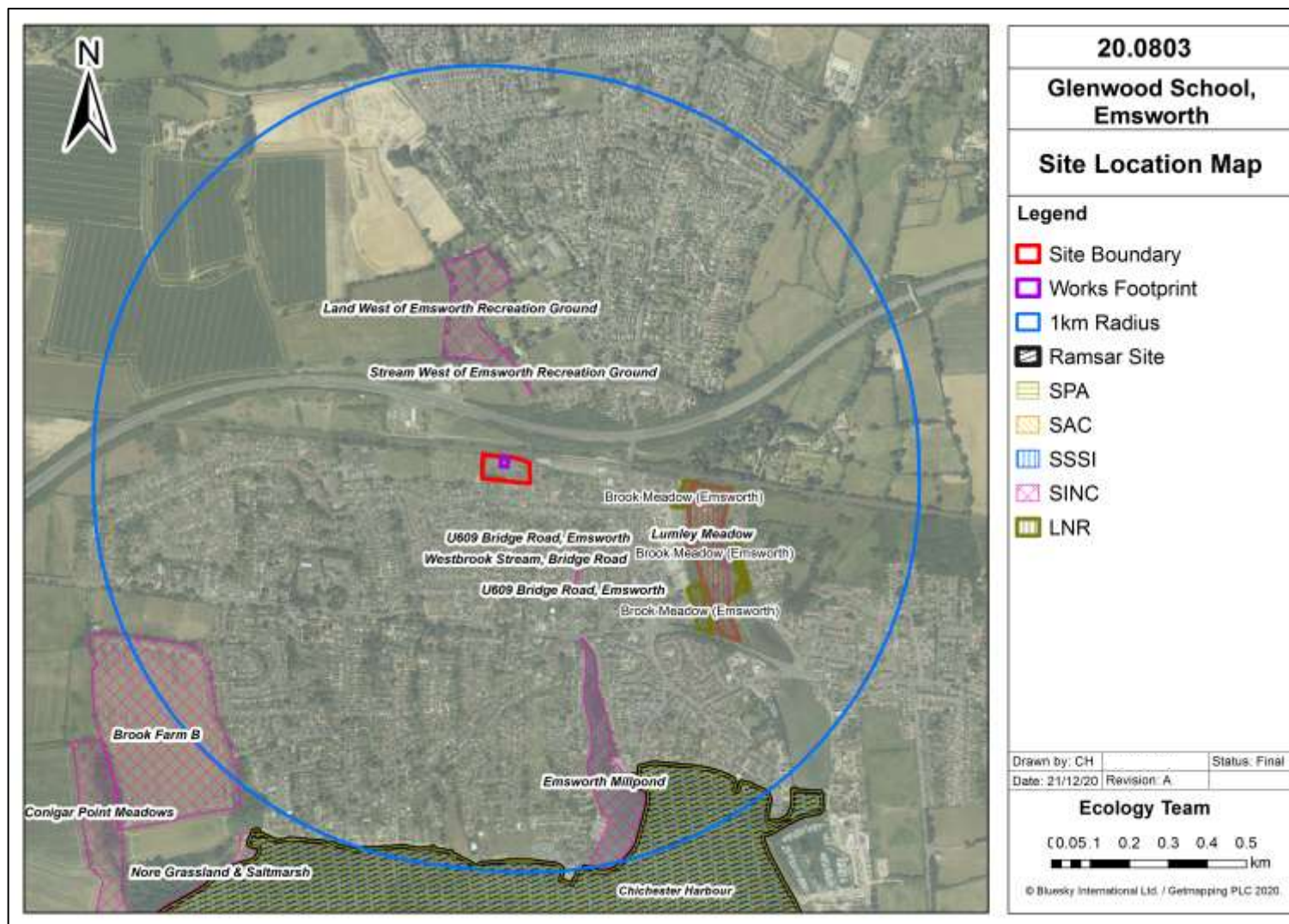


Figure A4.1 Map of nearby designated sites within a 1km search area around the development site

Table A4.2 Protected and notable species located within 1km of Glenwood School

Common name	Taxon name	Details	Distance and direction from site
Bats			
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	Multiple field records between 2013 and 2019	Closest = 125m S; Furthest = 975m S
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	Multiple field records between 2012 and 2019	Closest = 175m SW; Furthest = 975m S
Serotine	<i>Eptesicus serotinus</i>	Roost Visit, 2012	400m SW
Long-eared Bat species	<i>Plecotus sp.</i>	Field Record, 2017, 2019	475m E
Noctule Bat	<i>Nyctalus noctula</i>	Multiple field records between 2010 and 2019	Closest = 475m E Furthest = 950m NE
Serotine	<i>Eptesicus serotinus</i>	Multiple field records between 2015 and 2019	Closest = 500m N Furthest = 925m NE
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	Multiple field records between 2015 and 2019	Closest = 550m SE Furthest = 925m NE
Daubenton's Bat	<i>Myotis daubentonii</i>	Multiple field records between 2015 and 2019	Closest = 575m E Furthest = 925m NE
Brown Long-eared Bat	<i>Plecotus auritus</i>	Multiple field records between 2016 and 2019	Closest = 575m E
Brown Long-eared Bat	<i>Plecotus auritus</i>	Bat in hand, 2006	575m SE
Western Barbastelle	<i>Barbastella barbastellus</i>	Field Observation, 2018	925m NE
Brandt's Bat	<i>Myotis brandtii</i>	Bat in hand, 2007	925m SW
Lesser Noctule	<i>Nyctalus leisleri</i>	Field Record, 2018	950m NE
Mammals (non-bats)			

Common name	Taxon name	Details	Distance and direction from site
West European Hedgehog	<i>Erinaceus europaeus</i>	Road casualty; 2015	425m S
West European Hedgehog	<i>Erinaceus europaeus</i>	Road casualty; 2017	450m SE
European Water Vole	<i>Arvicola amphibius</i>	Multiple field observations, 2008, 2009	Closest = 475m E Furthest = 625m SE
West European Hedgehog	<i>Erinaceus europaeus</i>	Multiple field records, 2018, 2019	Closest = 675m N Furthest = 925m W
Amphibians			
Slow-worm	<i>Anguis fragilis</i>	Field Record, 2014; 2015	225m SW
Slow-worm	<i>Anguis fragilis</i>	Field Record, 2016	475m E; 500m SE; 625m SE
Slow-worm	<i>Anguis fragilis</i>	Field Record, 2016	500m SE
Common Toad	<i>Bufo bufo</i>	Field Record, 2016	625m SE
Common Toad	<i>Bufo bufo</i>	Field Record, 2010	675m E
Invertebrates			
Cinnabar	<i>Tyria jacobaeae</i>	Photographic record, 2006	50m E
Stag Beetle	<i>Lucanus cervus</i>	Multiple record from National Stag Beetle Surveys, 2015 - 2019	Closest = 175m SW Furthest = 900m SW
Silver-washed Fritillary	<i>Argynnis paphia</i>	Field Record 2010, 2016	400m SE; 975m N
Lobe-spurred Furrow Bee	<i>Lasioglossum (Euclyptus) pauxillum</i>	Field Record, 2004	575m E
Plants			
Narrow-leaved Water-plantain	<i>Alisma lanceolatum</i>	Field Record, 2011	200m N
Narrow-leaved Water-plantain	<i>Alisma lanceolatum</i>	Field Record, 2009	300m SE

Common name	Taxon name	Details	Distance and direction from site
Narrow-leaved Water-plantain	<i>Alisma lanceolatum</i>	Field Record, 2006	350m SE
Strawberry Clover	<i>Trifolium fragiferum</i>	Field Record, 2011	400m N
Wild Clary	<i>Salvia verbenaca</i>	Field Record, 2014	500m NE
Great Burnet	<i>Sanguisorba officinalis</i>	Field Record, 2014	550m E
Divided Sedge	<i>Carex divisa</i>	Field Record, 1998	600m E
Strawberry Clover	<i>Trifolium fragiferum</i>	Field Record, 2006	600m E
Divided Sedge	<i>Carex divisa</i>	Field Record, 2006	600m E
Great Yellow-cress	<i>Rorippa amphibia</i>	Field Record, 2006	600m E
Strawberry Clover	<i>Trifolium fragiferum</i>	Field Record, 1998	600m E
Slender Spike-rush	<i>Eleocharis uniglumis</i>	Field Record, 2012	625m SE
Divided Sedge	<i>Carex divisa</i>	Field Record, 2012	625m SE
Wild Clary	<i>Salvia verbenaca</i>	Field Record; 2010, 2015	675m NE
Butcher's-broom	<i>Ruscus aculeatus</i>	Field Record, 2008	850m N
Pale Toadflax	<i>Linaria repens</i>	Field Record, 1997	850m S
Sea-buckthorn	<i>Hippophae rhamnoides</i>	Field Record, 1997	850m S

Appendix 5 – Phase 1 Habitat Map



Figure A5: Phase 1 habitat map for Glenwood School, Emsworth

Appendix 6 – Roost and activity habitat suitability criteria

Table A6.1 Roost and activity habitat suitability criteria

Suitability	Roosting habitat	Habitat for foraging, commuting and other activity
<i>Negligible</i>	Negligible habitat features on site likely to be used by bats	Negligible habitat features on site likely to be used by bats
<i>Low</i>	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain Potential Roost Features (PRFs) but with none seen from the ground or features seen with only very limited roost potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
<i>Moderate</i>	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
<i>High</i>	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland