

Ecological Appraisal

Report for:

***Hampshire County Council –
Property Services***

**Emsworth Primary School,
Victoria Road, Emsworth,
Hampshire, PO10 7LX**

*Extension of two classrooms and internal
refurbishment of one. External landscape, carpark
and drainage works*

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SUMMARY

This report constitutes an assessment of the potential impacts arising from the proposal and site set out below and provides recommendations to ensure that this proposal can reasonably avoid or mitigate such effects identified. If the proposal differs from that set out below, then this assessment and recommendations may not be applicable. Furthermore, the assessment and recommendations are based on surveys which may only be considered valid for up to two years following the date of this report.

- An Extended Phase 1 Ecological Survey was undertaken on 21st July 2016 at Emsworth Primary School, Emsworth. The proposals for the site include the construction of a new 0.5FE Primary School extension and internal refurbishment of existing 1.5FE to bring to a 2FE Primary School. The proposal also includes external landscaping and drainage works with updated car park and access arrangements from Victoria Road.
- The Extended Phase 1 Ecological Survey comprised a desk-based study and field survey to assess the potential for the site to support protected habitats and species.
- Habitats to be directly impacted by the proposed works are planted immature trees, planted shrubs, hard-standing and amenity grassland. The site is considered to be of low ecological value overall.
- A nesting bird check will be required by an appropriately experienced individual prior to vegetation clearance if works are conducted between March-October.
- Consideration should be given to replacing fruit trees which are likely to be of some value to wildlife.
- In line with local and national planning policy, it is recommended that a small ecological enhancement measure is included within the proposals for the site. A simple and effective measure would be the installation bird boxes, such as a specialised sparrow terrace, on the buildings and/ or trees at the site.

1 INTRODUCTION

1.1 Project Description

Hampshire County Council Ecology Team (HCCET) has been commissioned to carry out an Extended Phase 1 Ecological Survey at Emsworth Primary School, Victoria Road, Emsworth, Hampshire, PO10 7LX.

1.1.1 Proposal

Hampshire County Council (HCC) proposes to construct a new 0.5FE Primary School extension to the east and south of the existing buildings and internal refurbishment of an existing 1.5FE to bring to a 2FE Primary School. The proposal also includes external landscaping and drainage works with updated car park and access arrangements from Victoria Road to the west of buildings.

1.1.2 Requirement for Ecological Survey/Assessment

Consultation with HCCET has identified the potential for the site to support legally-protected species.

1.1.3 Limitations to Report

There were no access or weather constraints during the survey.

1.2 Site Description

Emsworth Primary School is situated off Victoria Road in Emsworth, Hampshire. The school site comprises SCOLA buildings, managed grassland, hard-standing and a wildlife area to the north east. A railway line runs adjacent to the north of the school site and the A27 highway is located approximately 140m to the north of the school (**Figure 1**). The surveyed area is located at grid reference SU741062.



Figure 1: Aerial picture of Emsworth Primary School location (blue marker) and surrounding location

2 METHODS

2.1 Desk-based Assessment

A desk-based assessment was carried out by HCCET on 18th July 2016. Geographical Information Systems (GIS) mapping was used in order to identify all records of protected species and habitats within a 500 metre (m) 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.

HCCET had full access to the extensive biological database held by the Hampshire Biodiversity Information Centre (HBIC). The data is aggregated to meet the HBIC Data Users Agreement and attention is drawn to paragraph 5 of the agreement which states: *'Whilst every reasonable effort is made to validate information supplied to and by the Hampshire Biodiversity Information Centre, owing to the dynamic and judgmental nature of information relating to wildlife, HBIC disclaims any responsibility for the accuracy or comprehensiveness of the information supplied, and accepts no liability for any indirect, consequential, or incidental damages or losses arising from use of the information'*.

2.2 Field-based Assessment

An Extended Phase 1 Ecological Survey was carried out on 21st July 2016. The survey entailed a single surveyor 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. A survey area was defined (as shown in Figure 2) comprising areas of the site which could be affected by the proposal, which totalled an area of approximately 9,000m². A brief description of the survey methods used is provided below.

2.2.1 Vegetation

All broad habitat types were identified and a list was compiled of characteristic plant species within each habitat type.

2.2.2 Badger

All areas of the site were inspected for field signs of badger activity. This includes badger setts, latrine sites, dung piles, well-used trails, prints and hairs.

2.2.3 Bats – Built Structures

The whole building was inspected externally from ground level by a single surveyor to identify evidence of bat activity. Where accessible, all internal voids and similar spaces were inspected for evidence of bat presence such as live bats, corpses, droppings, feeding remains and urine- and fur-staining. Where necessary, samples of bat droppings were collected for analysis.

All external areas of the building were inspected visually to identify potential bat access, egress and roosting features. Such features include: missing, slipped, broken or bowed roof materials; gaps within soffits; gaps behind fascias; gaps/holes within brickwork; louvers; lifted lead flashing and gaps around window and door casements. Features were inspected using binoculars and the surveyor was equipped with a high-powered torch. As the building does not contain roof voids, an internal inspection was not undertaken. Survey methods used were those described within Collins (2016).

The structure has been assessed for its potential to support roosting bats based upon the presence of direct evidence or the presence of features suitable access, egress or roosting features. Each structure has been graded using the criteria detailed in **Table 1**.

Table 1 Bat Roost Grading Criteria

Grading Criteria	Reason
Confirmed Bat Roost	Presence of unambiguous evidence: live bats, corpses, droppings, feeding remains, urine- and fur-staining. Bats heard within roost. Known roost based on desk-based assessment.
High Potential	Structure or tree with one or more potential roosting sites 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.
Moderate Potential	Structure or tree with one or more potential roosting 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 (irrespective of species conservation status).
Low Potential	Structure or tree with one or more potential roosting sites that could be used by bats that could only be used by individual bats opportunistically. However these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable habitat to be used on a regular basis by larger numbers of bats (<i>i.e.</i> unlikely to be used for maternity or hibernation). A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.
Negligible Potential	Negligible habitat features on site likely to be used by bats.

2.2.4 Bats – Trees

All trees within the site likely to be impacted were subject to detailed visual inspection from ground level in order to identify features which may offer suitable roosting opportunities for bats. These features include: dense ivy cladding; woodpecker holes; rot holes; limb stubs; cavities; flaking bark; cracks and splits. The methods used were those described within Collins (2016). Each tree has been graded for its potential to support bats based on criteria within outlined **Table 1** above.

2.2.5 Bats – Foraging and Commuting Habitat

An assessment was made of the suitability of the site and the surrounding landscape to support foraging/commuting/flying bats. These activities cover the varied range of behaviours exhibited by bats when they are not roosting and will include feeding, travelling between sites and other social behaviours. The assessment was based on the presence of key habitat features such as woodland, scrub, hedgerows, grassland and open water which are highly attractive to bat species for those activities. Of importance is the presence of unlit semi-natural vegetation and habitat linkage between the site and the surrounding landscape.

The quality of bat foraging/commuting/flying habitat has been assessed using the criteria detailed in **Table 2**.

Table 2 Bat Foraging/Commuting/Flying Habitat Grading Criteria

Grading Criteria	Reason
Optimal Quality	Presence of optimal habitat features such as unlit woodland, scrub, hedgerows, grassland and open water with excellent linkage to similar habitats within the wider landscape. Presence of high potential buildings/trees and/or known roosts within immediate landscape. Sites are generally rural in character.
Moderate Quality	Presence of optimal habitat features such as woodland, scrub, hedgerows, grassland and open water with reasonable linkage to similar habitats within the wider landscape. Limiting factors may include size of site.
Low Quality	Presence of some limited habitat features such as scrub or hedgerows, with minimal linkage to suitable habitats within the wider landscape.
Poor Quality	No suitable habitat present or, if present, highly degraded/fragmented. Minimal unlit areas with no linkage to suitable habitat beyond site. Generally urban in character.

2.2.6 Hazel dormouse

An assessment was made of the suitability of habitat on site to support hazel dormice. Key habitats are woodland, scrub and hedgerows, particularly where these offer dense vegetation within which to nest/hibernate and key resources such as

hazel nuts, fruiting/nectar-rich plants (e.g. hawthorn, bramble) and honeysuckle (for nesting material). Of key importance is the presence of landscape-scale habitat linkages such as hedgerows.

2.2.7 Birds

An assessment was made of the site's suitability to support breeding and wintering bird species. Nesting birds will utilise a broad range of habitats, including: built structures; trees; scrub; isolated shrubs; dense herbaceous vegetation (terrestrial and aquatic) and open grassland.

2.2.8 Reptiles

An assessment was made of the site's suitability to support reptile populations. Key habitat features include: tussocky/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/fragmented habitats even within urban areas.

2.2.9 Amphibians

An assessment was made of terrestrial habitat within the site for suitability to support amphibians. In addition, a desk-based study was carried out to identify water bodies located within 0.5km of the site to assess the presence or absence of great-crested newt in the surrounding area. Connectivity to these ponds was examined in order to assess the likelihood of this species group being present on the development site.

2.2.10 Protected Species Assessment

The surveyed site has been assessed for its potential to support the above-named protected species based upon the criteria in **Table 3**.

Table 3 Protected Species Grading Criteria

Grading Criteria	Justification
Confirmed Presence	Species confirmed on site through direct sighting, presence of field signs (e.g. scat, hair, prints, nest, eggs, habitation etc.) or through desk-based assessment.
High Potential	Presence of optimal habitat features for species. Surveyed site within known range/close to known occurrence. Excellent connectivity to optimal habitat. No justification for discounting presence of species.
Moderate Potential	Presence of some suitable habitat features for species. Surveyed site within/close to known range or known occurrence but factors such as isolation/fragmentation may reduce potential. Presence of species is more likely than not.

Low Potential	Minimal suitable habitat present or, if present, highly degraded/fragmented. Minimal linkage to suitable habitat beyond site. Presence of species unlikely.
Negligible Potential	Site is entirely unsuitable for species. Presence of species highly unlikely.

3 RESULTS

3.1 Desk-based Assessment

3.1.1 Designated Sites

A single Site of Important Nature Conservation is found within 500m of the school site. In addition the school field is highlighted as potentially important under the Solent Wader and Brent Goose strategy. The school field is approximately 0.9km from the coast the Chichester and Langstone Harbour Special Protection Area (SPA). **Table 4** provides details of these sites.

Table 4 Designated sites located within 500m of Emsworth Primary School

Site Name	Distance and Direction from Site (km)	Reason for Designation
Land West of Emsworth Recreation Ground SINC	300m NE	Lowland meadow – supporting <i>Cynosurus cristatus</i> - <i>Centaurea nigra</i> grassland
Solent Wader and Brent Goose strategy site H17	On site	Of uncertain importance. No waders or brent geese have been recorded using the site.

3.1.2 Protected Species

A review of the biological database held by HBIC, as well as records of protected species submitted in association with local planning applications, revealed the presence of a small number of protected and notable species within a 500m radius of the site. Relevant records are shown in **Table 5**.

Table 5 Protected and Notable species located within 500m of Emsworth Primary School

Species	Details	Distance and Direction from Site
Serotine <i>Eptesicus serotinus</i>	Roost record from 2012 to the S	130m S
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	Foraging record from 2012 to the W	450m W
Common pipistrelle <i>Pipistrellus pipistrellus</i>	Foraging record from 2012 to the W	450m W

3.2 Field Survey

3.2.1 Vegetation

Habitats within the surveyed area comprise amenity grassland playing fields with associated landscaped areas and a wildlife pond to the north west of the school building. A native hedgerow encircles the site. The school nature area is located to the north west of the site and includes: cocksfoot (*Dactylis glomerata*); hogweed (*Heracleum sphondylium*); teasel sp. (*Dipsacus sp.*); Yorkshire fog (*Holcus lanatus*); common knapweed (*Centaurea nigra*); bush vetch (*Vicia sepium*); common dandelion (*Taraxacum officinale*); iris sp. (*Iridaceae sp.*); common nettle (*Urtica dioica*); hedge bindweed (*Calystegia sepium*); oxeye daisy (*Leucanthemum vulgare*) and kidney vetch (*Anthyllis vulneraria*).

The native hedgerow consists of: Poplar sp., (*Populus sp.*); hawthorn (*Crataegus monogyna*); bramble (*Rubus fruticosus*); holly (*Ilex aquifolium*); field maple (*Acer campestre*) and sycamore (*Acer pseudoplatanus*). Two sweet chestnut trees (*Castanea sativa*) can be found to the north east of the school buildings and a number of *Prunus* trees to the south.



Figure 2: Aerial photograph displaying surveyed area (red line) at Emsworth primary School.

3.2.2 Bats - Built Structures

The buildings within the school site are well maintained, modern, SCOLA buildings and there is little in the way of suitable features for roosting bats (**Figure 3**).



Figure 3: Main entrance to Emsworth Primary School displaying SCOLA building and slight gap between roofing material and brickwork.

One small gap was identified to the south west of the building, two on the south and one to the south east (**Figure 4**). These were heavily covered with cobwebs and displayed no signs of use by bats. They did not enter a cavity wall and it is unlikely that they are in use by bats. It is therefore concluded that the built structures have **negligible potential** to support bats.



Figure 4: Emsworth primary school design plans displaying potential bat roost features (yellow markers)

3.2.3 Bats – Trees

Scattered fruit trees can be found within the surveyed area however roosting features are not available therefore it is concluded that the site offers **negligible potential** for supporting roosting bats in trees.

3.2.4 Bats – Foraging and Commuting

The surveyed area comprises predominantly amenity grassland and hard standing with planted trees and is therefore of low suitability for attracting foraging/commuting bats. The native hedge to the north of the school is much more suitable and will undoubtedly attract bats. Overall, the site is considered to offer **low quality habitat** for supporting commuting/foraging bats.

3.2.5 Birds

The woody vegetation on site provides opportunities for nesting birds and there is a possibility that small numbers of common and widespread garden bird species will occur and possibly nest.

3.2.6 Reptiles

Areas of hard-standing and managed grassland have **negligible potential for supporting reptiles**. The wildlife area to the north west of the school buildings however is suitable and is assessed to have **moderate potential for supporting reptiles**.



Figure 3: Wildlife refugia to the north west of the school buildings



Figure 4: Wildlife area to the north west of the school buildings

3.2.7 Amphibians

Areas of hard-standing and managed grassland have **negligible potential for supporting amphibians**. The wildlife area however is suitable and is assessed to have **low potential for supporting common amphibians**. Pond in the wildlife area measures approximately 6m x 3m and at time of survey was completely dry. Due to its size and the lack of further suitable watercourses within 500m and urban location of the site, it is therefore considered there is **negligible potential** for great crested newt to occur on the site.

4 ASSESSEMENT OF IMPACTS AND RECOMMENDATIONS

4.1 Designated Sites

The school field is identified in the Solent Waders and Brent Geese Strategy as being of uncertain value to overwintering birds which use the Solent Coastal Habitats, upon which several SPA designations are based. It is therefore necessary to consider whether the proposal is likely to have a Likely Significant Effect (LSE) on the Solent SPAs through the possible disturbance of overwintering birds.

Despite the fact that the field occurs on the Strategy, it is considered unlikely that the field is used by SPA birds in any significant numbers for the following reasons:

- There are no records (in the strategy or the HBIC dataset) of SPA birds using the school field;
- The school field is in an area that already experiences significant levels of disturbance as it is adjacent to a main railway line and is frequently used by the school for sports activities; and
- The site is nearly 1km away from the coast.

It is therefore concluded that there is no potential for the works to result in a LSE on the Solent SPAs

A single locally designated site (one SINC) lies within the 500m search radius. Due to the distance from the site, the limited scale of works and the railway between the sites it is considered that there is no potential for this site to be negatively impacted by the proposal.

4.2 Habitats

The proposals will not result in the loss of any habitat of significant ecological value, however fruit trees do provide resources to a variety of fauna and it is recommended that fruit trees lost to development are replaced elsewhere on the school site.

4.3 Protected Species

4.3.8 Bats – Built structures

All potential bat roost features identified were all heavily cobwebbed and displayed no signs of bat activity. Extensions will not be impacting any part of the structure where features are found. With this in mind it is considered that there is **negligible potential for impact to bats within built structures.**

4.3.1 Bats – Foraging and Commuting

The site, overall, offers limited habitat for supporting foraging/commuting bats. The area of hedgerow to the north and north-west of the buildings are the most suitable but as these are to be avoided it is considered that there will be no loss of bat

foraging/commuting habitat. Overall it is considered that there is **negligible potential for impacts to foraging/commuting bats.**

4.3.2 Birds

Areas of dense woody vegetation such as within the wildlife area and hedgerow to the north and north-west have the potential to support small numbers of common and widespread nesting birds. Whilst this habitat is to be retained, small amounts of vegetation clearance will be required to the south of the site. If vegetation clearance is required within the bird nesting season (March-August inclusive) nesting bird checks will be required prior to vegetation clearance and if nests are discovered an exclusion zone of 5m must be implemented until young have fully fledged. Any fruit trees removed must be replaced on completion of the work to replace any lost nesting habitat. With the above control measures it is considered that there is **negligible potential for impacts to common and widespread nesting birds.**

4.3.3 Reptiles

The site offers small areas of suitable habitat for reptiles however the planned extension works do not encroach into these areas and it is therefore considered that there will be **negligible impacts to reptiles.**

4.3.4 Amphibians

The site contains very limited habitat which may be suitable for supporting amphibian species however planned extension works do not encroach into these areas and it is therefore considered that there will be **negligible impacts to common species of amphibian.**

4.4 Ecological Enhancement

In line with local and national planning policy, it is recommended that a small ecological enhancement measure is included within the proposals for the site. A simple and effective measure would be the installation bird boxes, such as a specialised sparrow terrace, on the buildings and/ or trees at the site.

REFERENCES

Institute of Ecology and Environmental Management (2012). *Guidelines for Preliminary Ecological Appraisal*. IEEM, Winchester.

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