



**Fenswood
Ecology**

**Kewstoke Primary School
Preliminary Ecological Appraisal
March 2022**

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Kewstoke Primary School Ecological Appraisal

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Summary

Fenswood Ecology was commissioned by North Somerset Council to undertake a preliminary ecological appraisal at Kewstoke Primary School (centred around Ordnance Survey Grid Reference: ST 33758 63399). An ecological assessment of the site was undertaken by Jamie Edmonds & Grace Temlett in March 2022.

The ecological value of the site was assessed, along with the likely presence of protected or notable species, and any potential ecological constraints to the proposed development.

Recorded site habitats were building and hard standing. Site habitats were considered to not be of importance to nature conservation.

The main school building offers high bat roosting potential due to the numerous gaps around tiles, flashing and dormers. Therefore, it is recommended that a minimum of two bat surveys are completed between May – October. A minimum of two emergence surveys should be completed at dusk at a time when weather conditions are suitable. Each survey should be a minimum of two weeks apart. Due to the size and shape of the building it is anticipated that four surveyors will be needed to cover the site at each survey.

Results from the bat surveys will determine if mitigation and a European Protected Species licence will be required from Natural England.

Introduction

Fenswood Ecology was commissioned by North Somerset Council to undertake a preliminary ecological appraisal at Kewstoke Primary School (centred around Ordnance Survey Grid Reference: ST 33758 63399). An ecological assessment of the site was undertaken by Jamie Edmonds & Grace Temlett in March 2022.

The purpose of survey work at the site was to carry out an ecological assessment and to review the potential for the site to contain, or be used by, species protected or considered to be of primary importance under UK legislation, namely the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and the Natural Environment and Rural Communities Act 2006.

This report details the findings of the survey work and subsequent assessment. Methodologies employed are described including site surveys and evaluation and the need for any further survey work and/or mitigation measures are included, where appropriate.

Methodology

Data Consultation

A full search of biological records was requested from Bristol Regional Environmental Records Centre (BRERC) in March 2022 for protected and notable species within 1km of the site and 2km for bats.

The Multi-Agency Geographical Information for the Countryside (MAGIC) website (<http://magic.defra.gov.uk>) was consulted in March 2022 for information on statutory designated sites of nature conservation interest within 1 km of the application area.

Information obtained from BRERC, MAGIC and any other relevant sources are included within the report where appropriate.

Ecological Site Assessment

The site was surveyed by Jamie Edmonds & Grace Temlett on 7th March 2022 following an extended Phase 1 habitat survey methodology (JNCC, 2010). This survey method aims to characterise habitats and communities present but is not intended to provide a complete list of all plants occurring across the site.

The habitats and vegetation types present were recorded on to a field map and any evidence of protected species encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species.

Habitats and species of principal importance that are listed under Section 41 of

the Natural Environment and Rural Communities (NERC) Act 2006 and the Local Biodiversity Action Plans (LBAP) were noted where necessary.

Site photographs are provided in Appendix 1. Information on habitat distribution is presented in Appendix 2, and identify features of interest, where appropriate.

The value and sensitivity of ecological features present on site was determined based on the guidance given in 'Guidelines on Ecological Impact Assessment' (IEEM, 2016). Individual ecological receptors (habitats and species that could be affected by the development) for the scheme were assigned levels of importance for nature conservation. The highest level is international, then decreasing in order of importance through national, county, district, local to lastly, zone of immediate influence only.

European Protected Species

Based on the habitats present on site and within the immediate area survey for the following species/species groups was undertaken during the Phase 1 habitat survey.

Amphibians

A desk based search was undertaken prior to the site visit using a 1:2500 scale Ordnance Survey (OS) map to identify any water bodies within 500 m of the application area that are not separated from the site by a major barrier (i.e. rivers, motorways, A roads) to amphibian dispersal.

There are no ponds on site and no ponds within 500m not separated by a significant barrier.

Bats

All trees and buildings on site were inspected to assess their potential to support roosting bats, in accordance with current best practice guidelines (Collins, 2016).

An individual tree may have several features of potential interest to roosting bats. It is not always possible to confirm usage of a feature by bats as often the animals may be present on one day and no evidence of occupation may be found on the next. Consequently, it is normal practice when undertaking such surveys to assign each feature to a defined category of roosting potential as follows:

Negligible: This category is usually used where a feature appears initially to have significant bat roost potential but is considered on closer inspection to have no or very limited potential to support roosting bats. It is usually used during surveys to confirm that inspection of a feature has been carried out and has found that the feature is not considered to comprise suitable habitat for roosting bats.

Low: This category is used to describe a feature that may have some superficial interest to roosting bats but is considered suboptimal to the extent that bats are not considered likely to use the feature for shelter. A cavity that is open at the top allowing access to wind and rain may be considered to be of low bat roost potential.

Moderate: This category is used to describe a feature that has some potential to support roosting bats but is considered to be less than ideal in some way. For example, the feature may be occupied by other animals, such as birds or squirrel; it may be subject to disturbance or have sub-optimal connectivity with navigational features.

High: This category is used to describe an optimal feature considered to be ideally suitable for use by roosting bats where no evidence of occupation by bats has been found. Features considered to be of high bat roost potential may include upwards-leading cavities of appropriate dimensions and height from the ground, with no obstructions below the cavity entrance. The tree may be particularly prominent within the landscape and is likely to have good connectivity with navigational features and sufficient suitable foraging habitat in the vicinity.

Confirmed: This category is used where positive evidence of bats usage has been recorded from a feature. For example, bats or bat droppings may be present, or existing bat records may be associated with the feature. A licence from Natural England is likely to be required if the bat roost is to be disturbed by the development.

The habitats on site were also assessed for their potential to be used by foraging and commuting bats.

Birds

A formal bird survey was not undertaken as part of this assessment, however whilst on site the opportunity was taken to record all species of birds encountered.

Hazel dormouse

The habitats present on site were assessed for their suitability to support hazel dormice and for connectivity with other suitable habitat within the surrounding area.

Reptiles

The habitats present on site were assessed for their suitability to support basking, foraging and hibernating reptiles and for connectivity with other suitable habitat within the surrounding area.

Riparian Mammals and White-clawed Crayfish

A desk-based search was undertaken using an OS map to identify any

watercourses within 30m of the application area.

There are no watercourses within 30m of the proposed site, therefore otters (*Lutra lutra*), European water vole (*Arvicola amphibious*) and white clawed crayfish (*Austropotamobius pallipes*) are not considered receptors and subsequently not mentioned again in this report.

Other Protected and Notable Species

The opportunity was taken whilst on site to assess habitats for the potential to support nationally or locally scarce or notable species, or any species protected under domestic legislation.

Badger

Signs of badger (*Meles meles*) activity were searched for within the application area, and within 30m of the site where accessible, as part of the extended Phase 1 survey. Survey followed standard methodology detailed in Surveying Badgers (Harris *et al.*, 1989). This included survey for badger setts, along with survey of linear features and boundaries for signs of badger activity including dung pits, foraging marks, feeding signs and pathways.

Invasive Species

During the initial protected species walkover survey, the opportunity was also taken to record the presence of any invasive plant or animal species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), if present.

Limitations to Survey

Access to the full application site was provided.

The survey was undertaken outside the optimal botanical survey season, but due to the habitat types onsite, it is considered that a robust evaluation of habitat types, potential species constraints and the overall site character has been made.

Where it was not possible to make a robust evaluation, recommendations for further assessment and surveys have been included.

Findings and Evaluation

Site Description

The site consists of a primary school with multiple buildings of various ages and with extensions added at various points. Immediately to the north of the main buildings is the main road, with hard standing play area to the east, west and south. Beyond the school boundary to the south is a native woodland, to the north, east and west is the village of Kewstoke.

Designated Sites

The proposed site falls within the SSSI/SAC impact zone for the Severn Estuary which is designated as an SSSI, SAC, SPA and Ramsar. At its closest point the estuary designation is 780m to the west. The estuary has an immense tidal range (the second highest in the world) with a classic funnel shape, making it unique in Britain and very rare worldwide. The intertidal zone of mudflats, sand banks, rocky platforms and saltmarsh is one of the largest and most important in Britain. The estuarine fauna includes internationally important populations of waterfowl; invertebrate populations of considerable interest; and large populations of migratory fish (Natural England, 2022).

Weston Woods LNR is also situated 290m to the southwest. This is a 130ha woodland, which has naturally re-vegetated after it was clear felled during World War One. There is a small area of ancient woodland within the site known as Ashcombe Wood. The reserve has an abundance of common plant, animal and bird species (Natural England, 2022*).

Habitats

The habitats below are listed in order of dominance across the site.

Building

The main school building is constructed from stone/ brick and has a tiled roof. The building has been modified and extended several times at the rear in the past. There are also three dormers at the rear of the building, which appear to be in disrepair and have been boarded up.

This habitat is species poor and man-made and therefore is considered to be of importance to nature conservation within the zone of immediate influence only.

Hard standing

The curtilage immediately surrounding the main school building is tarmac, which is used as access and a playground.

This habitat is species poor and man-made and therefore is considered to be of importance to nature conservation within the zone of immediate influence only. This habitat will not be discussed further in this report.

Species

Amphibians

There were 14 records of common frog (*Rana temporaria*) and three records of common toad (*Bufo bufo*) within 1km of the site provided by BRERC.

There are no ponds on site and no ponds within 500m. The site is a combination of manmade habitats and as such it is considered that the site is of low importance to amphibians within the immediate zone of influence and will not be discussed further in this report.

Badgers

Eleven records of badgers within 1km of the site were provided by BRERC.

No badger setts or evidence of badgers using the site were identified during the survey. The habitats surrounding the site offers good foraging habitat, but it is highly unlikely that badgers would use the barn and hard standing. Therefore, the site is considered to be of low importance to badgers within the immediate zone of influence.

Bats

The main school building offers high bat roosting potential, numerous gaps can be seen in tiles and along lead flashing. No access is possible into the roof space of the building due to a suspended ceiling.

Records from BRERC showed that there have been seven recorded bat roosts (1984-2017) within 2km of the site. Five roosts were for pipistrelle (*Pipistrellus spp.*) species, one serotine (*Eptesicus serotinus*) and the remaining roost did not identify the species. BRERC also provided records for individually recorded bats within 2km, in total eleven bats records had been made between 1996 and 2021. Six bats were not identified to a species, three were Common pipistrelle (*Pipistrellus pipistrellus*), one for Soprano pipistrelle (*Pipistrellus pygmaeus*) and one for Brown long eared (*Plecotus auratus*)

Further survey work is required to determine if the school building is important to bats.

Birds

In 2009, a re-assessment of Birds of Conservation Concern (BoCC) was published by Eaton *et al.* (2009), which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern.

“Red” is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. “Amber” is the next most critical group, with species qualifying for this status as a result of either recovery from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more. These categories are followed by Green, indicating that the

species are relatively unthreatened.

No formal bird survey was undertaken during the site visit in March 2022 however the building was visually inspected for its suitability for nesting birds. No birds were seen using the proposed site at the time of survey and no disused nests were observed on the exterior structure.

The site is considered to be of low importance to nesting birds given the wider landscape habitat available.

Hazel Dormouse

BRERC provided no records of dormice (*Muscardinus avellanarius*) within 1km of the site.

There are no habitats within site suitable or adjacent to support hazel dormice. Therefore, it is considered that the site is not important to hazel dormice within the immediate zone of influence and not discussed further in this report.

Reptiles

BRERC provided one reptile record within 1km of the site, this was a slow worm (*Anguis fragilis*) recorded in 2010.

The onsite and adjacent habitats are not suitable to support reptile species as they are all man made with low ecological value. Therefore, the site is considered not to be important to reptile species within the immediate zone of influence and are not discussed further in this report.

Other Key and Protected Species

Invertebrates

Habitats typically considered of high value to invertebrates include deadwood, wetland and significant expanses of brownfield. The proposed site comprises manmade structures and is very small in size. As such, the proposed site is considered to support a range of common invertebrate species only and is not considered to be of importance to invertebrates within the immediate zone of influence and are not discussed further in this report.

Invasive Species

No invasive species were noted within the proposed site and will therefore not be mentioned again within this report.

Ecological Assessment and Mitigation

The Scheme

The project is to replace the existing roof on the main school building.

Designated Sites

Although both the Severn Estuary and Weston Woods are within 1km of the school, the works proposed to the roof of the main school building should not impact or jeopardise either site as their habitats do not align and they are a great enough distance away not to cause disturbance.

Species

Bats

All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). Under Regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).

All UK bats are also included on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*R. hipposideros*), noctule (*Nyctalus noctula*) and soprano pipistrelle (*Pipistrellus pygmaeus*) bats are included as priority species within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

The main school building offers high bat roosting potential due to the numerous gaps around tiles, flashing and dormers. Therefore, it is recommended that a minimum of two bat surveys are completed between May – October. A minimum of two emergence surveys should be completed at dusk at a time when weather conditions are suitable. Each survey should be a minimum of two weeks apart. Due to the size and shape of the building it is anticipated that four surveyors will be needed to cover the site at each survey.

Results from the bat surveys will determine if mitigation and a European Protected Species licence will be required from Natural England.

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Appendix 1: Site photographs



Photo 1. Rear of the main school building (south)



Photo 2. Front of the main school building looking east.

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Photo 3. Western end of the main school building



Photo 4. Central dormer at the rear of the main building

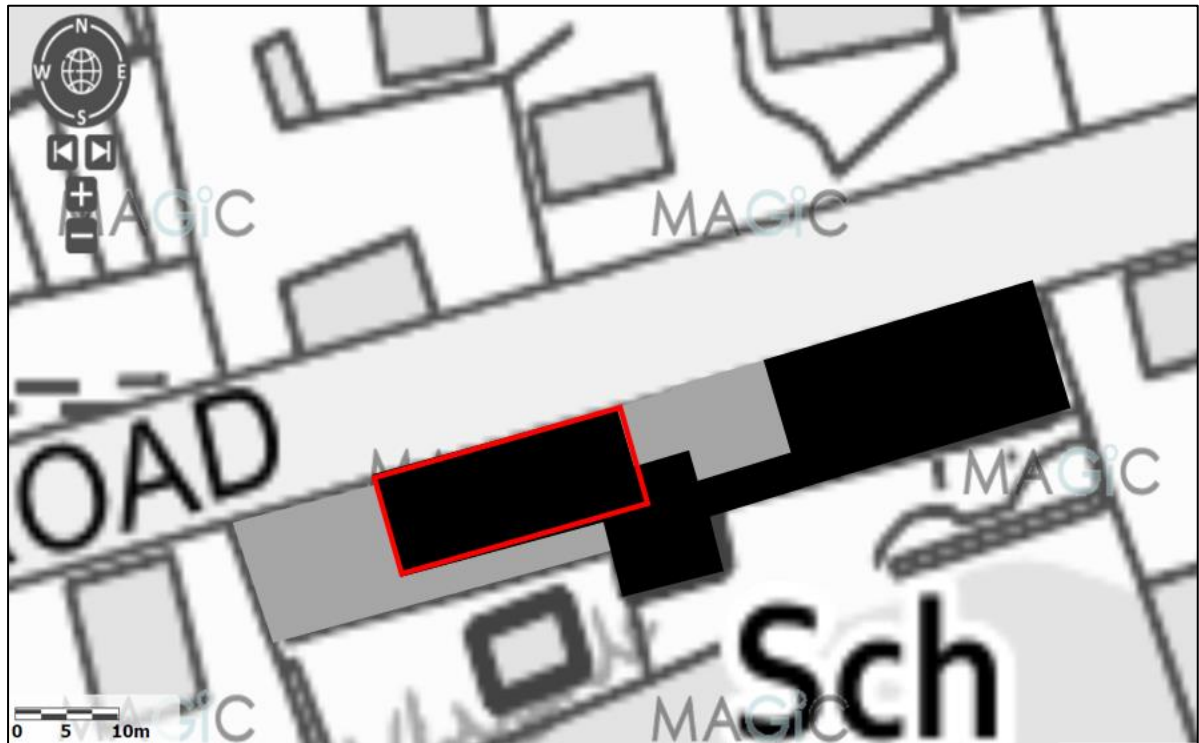
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Photo 5. Inside the main building

Appendix 2

Figure 1 – Phase 1 Habitat Map



Key




-  Red Line Boundary
-  Building
-  Hard Standing

Figure 2. Designated Site Search Map (1km Buffer)

Designated Site Map

MAGiC

