



Hampshire
County Council

Bat Survey Report – Preliminary Roost Assessment

Springwood Junior School

For
Hampshire County Council
Property Services

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Hampshire County Council Ecology Team

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Summary

A Preliminary Roost Assessment was carried out to assess the presence or likely absence of bats at Springwood Junior School, Waterloooville. This work is required to support a listed building planning application.

Springwood Junior School is located in Waterloooville. The 3.2-hectare school site contains one main school building and four small outbuildings within grounds of hardstanding, amenity grassland and woodland areas. The site is set in a wider landscape of suburban residential dwellings with small blocks of woodland. The area is of moderate quality habitat for supporting bats.

The main school building is a modern building with a glulam structure. The proposal is for the replacement of the patent glazing rooflights, which run the length of the main school building.

Visual bat survey work found no evidence of bats and bat roosts and that the main school building has negligible suitability for supporting roosting bats.

Overall, the development works are considered to have negligible potential to damage or destroy any roosts and cause harm to individual bats.

No further survey work is required.

1. Introduction

Objectives

- 1.1. The purpose of this study was to provide information on the possible presence or likely absence of bats at Springwood Junior School, Waterloooville, to support a listed building planning application. Where bat roosts are identified, or where their presence cannot be confidently ruled out, the report sets out an assessment of the impacts to these and where necessary makes recommendations for measures to avoid, mitigate or compensate for impacts to bats as necessary, dependent on the nature and scale of the identified impacts.

Site Description

- 1.2. Springwood Junior School is located within the south-east part of Waterloooville, 550m west of the M3 motorway.
- 1.3. The site contains one main school building and four small outbuildings within grounds of hardstanding, amenity grassland and woodland areas.
- 1.4. The main school building (Photo 1, Appendix 3) was constructed in 1982 and is a listed building as a result of the unusual design. The innovative design of the school is the reason for its Grade II listing. The two-story building has an expansive, approximately rectangular roof with a shallow pitch and large overhangs at the ends. Three rows of skylights extend along the length of the roof.

Proposed works

- 1.5. The proposal is to replace the patent glazing rooflights, which run the length of the main school building. Appendix 1 shows the plans of the school.

Limitations

- 1.6. All areas of the site were fully accessible and visible during the survey work. There are therefore no significant limitations to the survey work.

- 1.7. External evidence of bat use, such as droppings stuck to walls or roof faces, are generally rapidly washed or weathered away. However, this is a typical and common factor of visual bat surveys.

2. Methods

Desk-based assessment

- 2.1. A desk-based assessment was carried out by HCCET on 10 February 2023. Geographical Information Systems (GIS) mapping was used in order to identify all records of bats or bat roosts 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.
- 2.2. In addition, records were obtained on habitats of particular value to bats such as woodlands, species-rich grasslands, and waterbodies / river corridors.
- 2.3. The Ecology Team has full access to the extensive datasets maintained by the Hampshire Biodiversity Information Centre (HBIC). However, *“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”* (Paragraph 4 of the HBIC Data Users Declaration).

Field survey - building and tree roost assessment

- 2.4. A visual daytime bat survey was carried out on 10 February 2023 by Nicole Hawkings and Julie Trelvellick. The weather was 9°C, sunny spells, and wind force B1. There were therefore no significant limitations to the survey work.
- 2.5. Survey methodology used during the work is guided by and consistent with that set out in the Bat Conservation Trust's *'Bat Surveys for Professional Ecologists: Good Practice Guidelines'* 3rd edition, (Collins, J. (ed) 2016).
- 2.6. The building was subject to a detailed internal and external search. The aims of this were to identify evidence of bat activity and/or identify the presence of any features that could potentially support roosting bats or features through which bats could gain access to possible roost locations. External areas were

inspected to identify potential bat access points and roosting features. Such features typically include missing, slipped, broken or bowed roof tiles, gaps around fascias and soffits, gaps in brickwork (such as missing mortar or expansion gaps), lifted chimney, roof, or window flashing, and gaps around window and door casements.

2.7. The external inspection also aimed to identify any direct evidence of bat use such as droppings adhering to walls, floors or window sills below gaps, or staining around possible access gaps.

2.8. Features were inspected using Opticron Discovery 10x42 close-focusing 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.

2.9. Where present and safely accessible, any internal voids and similar spaces were inspected for evidence of bat presence such as live bats, corpses, droppings, feeding remains and staining. The building was subsequently assessed for its suitability to support roosting bats, from 'Negligible' to 'High', in line with the survey guidelines.

Habitat suitability for foraging, commuting and other activity

2.10. 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 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.

2.11. The table in Appendix 4 sets out the guidelines for assessing roost suitability and foraging habitat quality.

3. Results

Desk-based assessment

3.1. Appendix 2 shows the location of the site and its surrounding relevant ecological interest features produced during the desk-based assessment.

Designated sites and notable habitats

3.2. The map in Appendix 2 shows that Springwood Junior School lies in an area of ecological interest, with several locally designated sites nearby.

3.3. Frank's Coppice Site of Importance for Nature Conservation (SINC) covers the woodland areas within the school site. Designated for supporting remnants of ancient woodland, this mix of secondary woodland and stands of plantation has a good species diversity and structure.

3.4. Within 500m of the school boundary are an additional 9 SINC's, all designated for supporting ancient semi-natural woodland or remnants thereof. The closest of these is Stakes Coppice Remnant 4 SINC, 45m east of the school site.

3.5. The types and distribution of Priority Habitats in the area follow a very similar pattern, with numerous small blocks of Lowland Mixed Deciduous Woodland within the search area. Almost all of these are associated with a SINC, including the block of this habitat on the north-east side of the school site.

Bat records

3.6. There are several records of recorded bat roosts and bat activity within the search area. These are set out in Appendix 2. In summary, a minimum of 4 species have been recorded within 500m of the school, although there are no records from on site. The closest roost record is a pair of Common Pipistrelle *Pipistrellus pipistrellus* in a building 325m west of the school.

Field survey

3.7. The following sections describe the findings of the field survey work. Photos of relevant features described below are shown in Appendix 3.

Externals

- 3.8. The walls are constructed of a mix of boarding and glazing on the long elevations, and additional areas of brick on the end elevations. The boarding is fully sealed, tightly fitting and heavily painted, with no bowing or gaps. The brickwork is in good repair, and the metal-framed glazing panels, green decorative panels and all other components of the walls fit tightly together, with no gaps present (Photos 2 and 3). The vents shown in Photo 3 serve the kitchen and are unsuitable for bats.
- 3.9. There are a few small, single-story protrusions from the main building, predominantly the classroom stores along the long elevations (Photo 2) and the boiler room on the eastern aspect. These sections have a felt roof, which is in good repair and there are no gaps between the wall and lip of roofing felt.
- 3.10. Large roof overhangs are present on all sides of the main building. The soffits are constructed of parallel planks with spacing of c. 2cm between each (Photos 4 and 5). These gaps provide access into the eaves; however, the underside of the roof is smooth metal, and the space is large and very draughty. The eaves are therefore considered unsuitable for roosting bats due to the lack of places to grip, and the minimal thermal stability.
- 3.11. The main roof is constructed of corrugated metal sheets, with a central line of ridge-light windows and the skylights (Photos 6 and 7). From the ground it was unclear if the ends of the corrugations are blocked, however the temperature underneath the metal panels would be very variable, and of negligible suitability for roosting bats.
- 3.12. At the highest point of the skylights is lead flashing, and where it extends over the occasional openable windows it is lifted in the corners, providing a small space between the flashing and the glass of adjacent glazing panels (Photo 7). From inside the building these can be viewed through the glazing. Similar to the other areas of the roof, these are considered unsuitable to support roosting bats due to the thermal instability, lack of grip and high levels of light.

Internals

- 3.13. Internally, the majority of the building is one open space all the way up to the roof level, without enclosed areas such as lofts. The only enclosed area is above the caretaker's office on the north-east corner of the building. This space is constructed of breezeblocks, and the ceiling is boarded with plywood. No potential entry or exit points to the outdoors were found, and no evidence of bats such as droppings or staining was present.

Habitats for foraging, commuting, and other activity

- 3.14. Figure A1.2 in Appendix 1 shows the on-site habitats and immediate context. Within the large school site the woodland and trees around the site boundary provide a network of moderate quality foraging habitat, although the hardstanding, buildings and amenity grass playing field are of low quality for foraging.
- 3.15. The landscape context of the site is shown in Figure A2.1 in Appendix 2. Although predominantly suburban, this area of Waterloooville also includes numerous small blocks of woodland. This provides good habitat connectivity to larger areas of woodland approximately 500m east of site. These woodlands and linking tree lines are likely to be used by foraging and commuting bats.

4. Discussion

Preliminary Roost Assessment

4.1. The site is considered to be in an area of moderate quality habitat for bats, close to a number of woodlands, and with part of the school grounds designated as Frank's Coppice SINC.

4.2. The main school building is of negligible suitability for supporting bats and bat roosts. There was no evidence of bats or bat roosts on site, and bats are considered to be likely absent from the building.

Impact assessment

4.3. The proposals seek to replace the rooflights on the main school building. This will involve direct impacts to the roof of the building, and the scaffolding could block bat access to areas of the walls.

4.4. Roosting bats are considered to be likely absent from the main school building. Therefore, the proposed works are considered to have negligible impacts to bats.

4.5. The proposed works will not impact any vegetation as works are to the building only, and site compound and scaffolding will be located on hardstanding areas of the site. There will therefore be no impacts to, or loss of, the habitats on site and no impacts to Frank's Coppice SINC.

Relevant legislation

4.6. Bats and their roosts (even when unoccupied) are legally protected under both the Wildlife and Countryside Act 1981 (as amended)¹ and the Conservation of Habitats and Species Regulations 2017².

4.7. This legislation makes it an offence to kill, injure or disturb bats, or to destroy or damage their roosts, even when the bats are not present. It also makes it

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

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

an offence to 'take' a bat. For such work to legally proceed, Natural England (the Government's statutory nature conservation agency) will issue a licence for the work to be able to proceed legally, subject to the proposals meeting certain criteria.

Planning Policy

4.8. Paragraph 180 of the National Planning Policy Framework (NPPF) (MHCLG, 2021) 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. Recommendations and Conclusions

Recommendations

- 5.1. The building has been assessed as presenting negligible roost suitability.
- 5.2. No further surveys are required.
- 5.3. No specific recommendations are made at this time due to the limited nature of the works and lack of likely impacts.
- 5.4. To ensure an overall net gain on site in accordance with the NPPF, it is recommended that a single bat box such as Improved Crevice Bat Box, Low Profile WoodStone Bat Box or equivalent is installed to face roughly south or east on a suitably mature tree within the school grounds, along the woodland edge in the north and east of the site.

Conclusions

- 5.5. The school lies in a landscape of moderate suitability habitat for bats, with woodland on site. Part of the site is designated as a SINC. No habitat will be lost or damaged by the proposed works, so there will be no impact to the SINC or priority habitats.
- 5.6. Visual bat survey work at Springwood Junior School found the building to be impacted to offer negligible suitability to support bats. External inspection identified no evidence of bats or features suitable for supporting roosting bats.
- 5.7. Bats are considered likely absent from the buildings, and the proposed works have negligible potential impacts for bats.
- 5.8. No further survey work is required.
- 5.9. 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 needs to be undertaken.

References

Chartered Institute of Ecology and Environmental Management (CIEEM). (2013), *Guidelines for Preliminary Ecological Appraisal*. CIEEM; Winchester.

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). Bat Conservation Trust; London.

MHCLG, (2021). *National Planning Policy Framework*. Ministry of Housing, Communities and Local Government; London.

Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature; Peterborough.

Appendix 1 – Existing and proposed plans

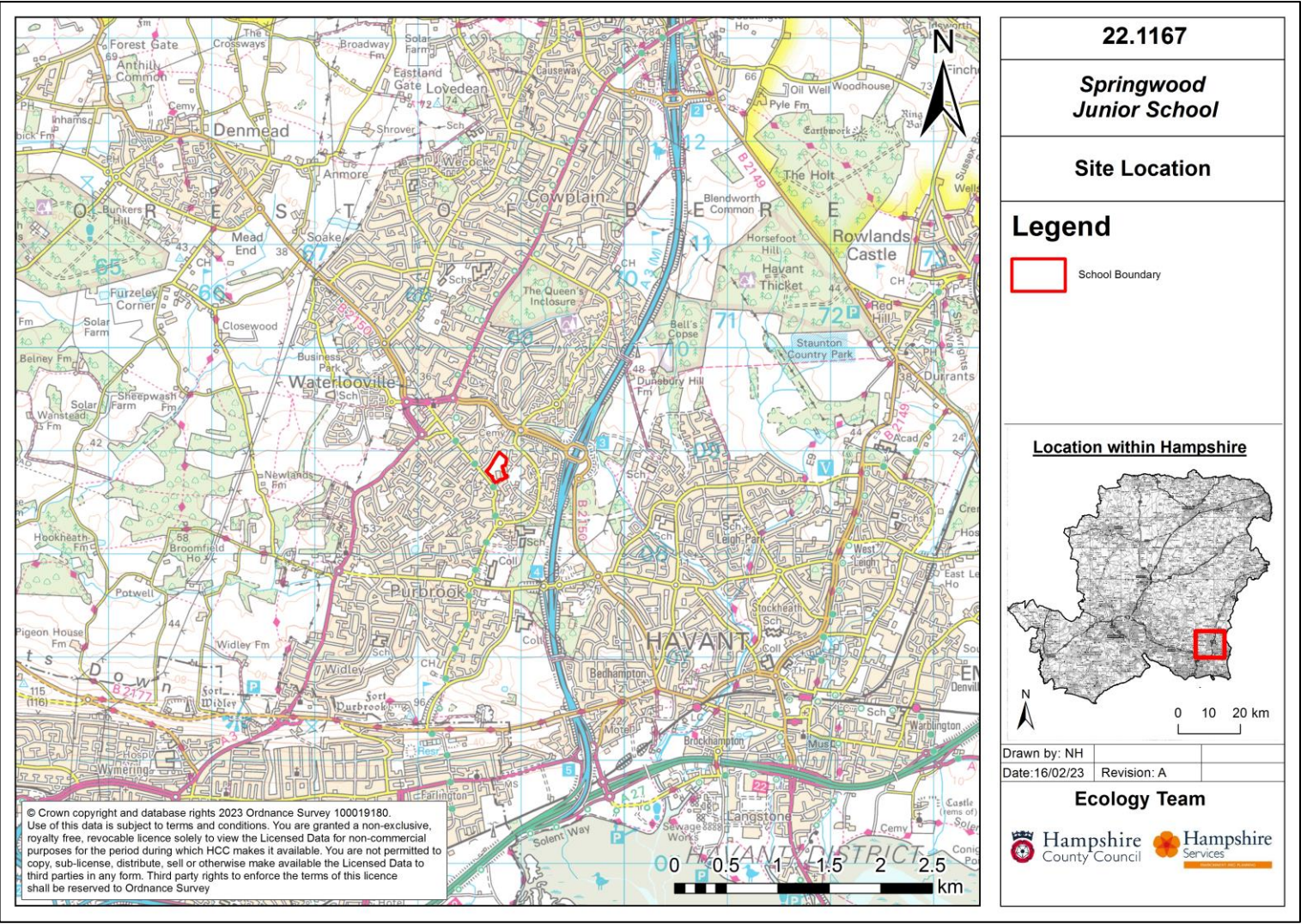


Figure A1.1 Site Location

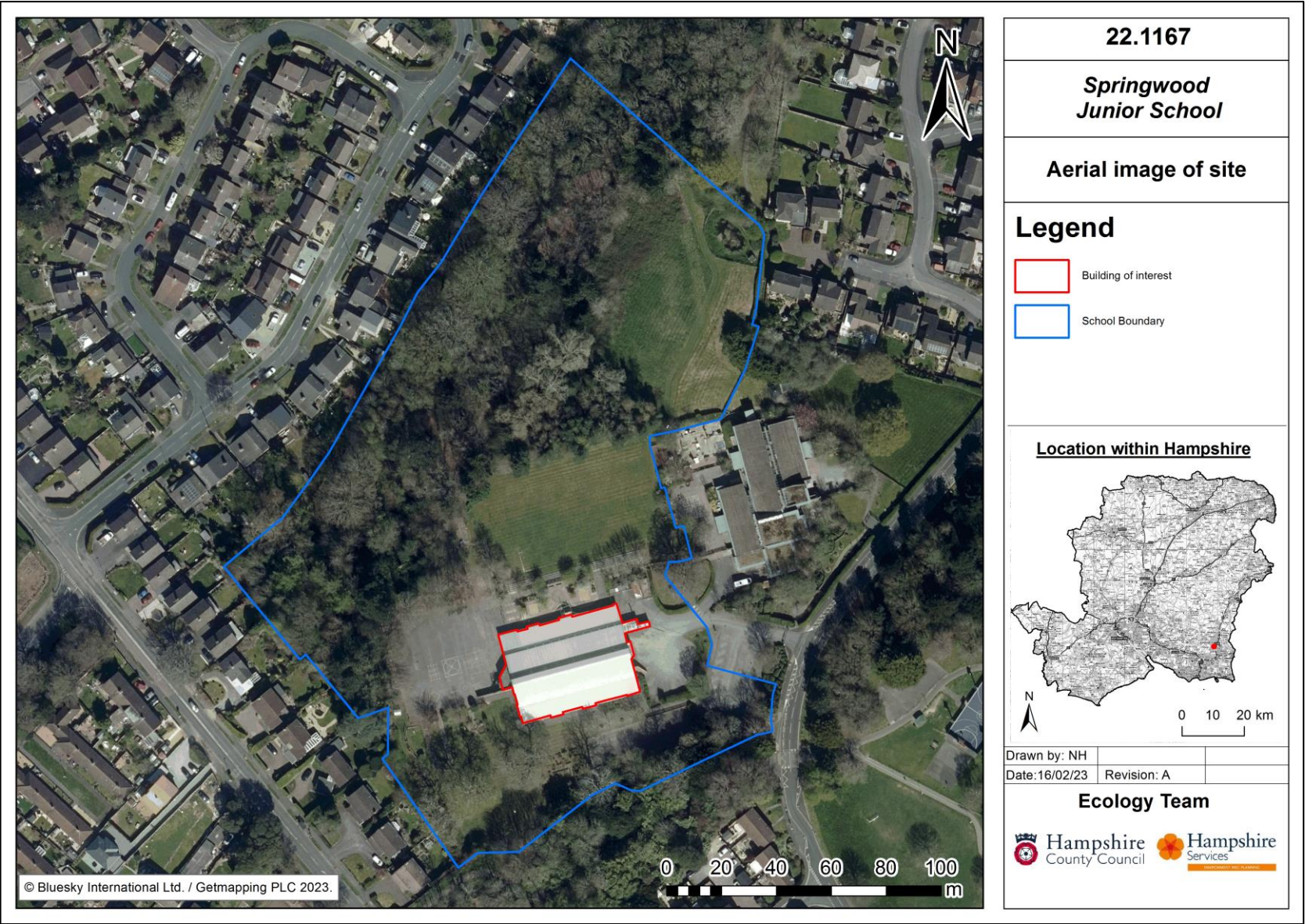


Figure A1.2 Aerial image of site showing building to be affected

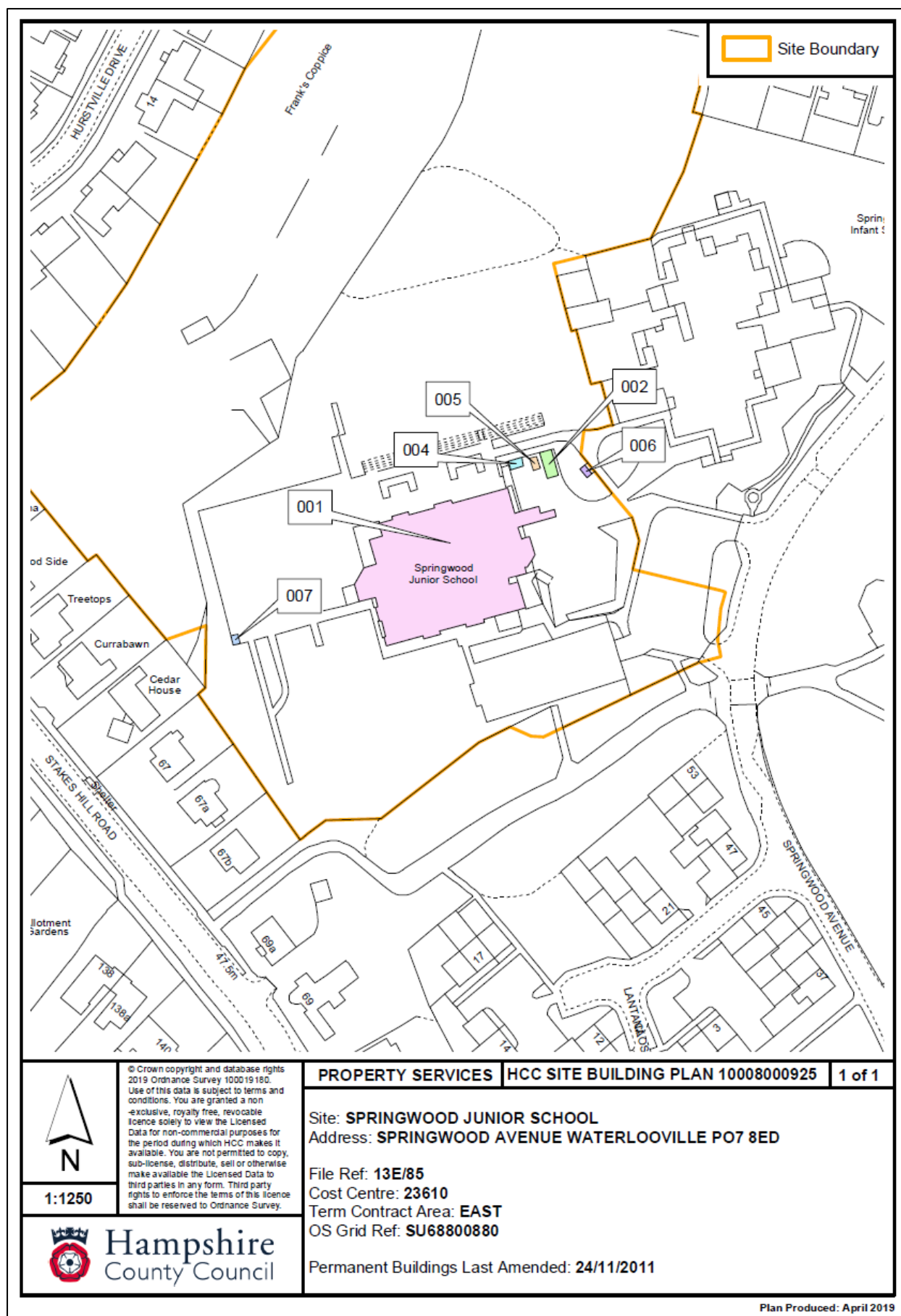


Figure A1.3 Plans of school site showing existing buildings and structures

Appendix 2 – Desk based assessment results

Table A1 Bat records within 0.5km of site

Common name	Taxon name	Details	Distance / bearing from centre of site
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	21 records; 2019; Bat detector.	Closest 125m E
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	3 records; 2019; Bat detector.	Closest 200m SW
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	2015; Roost: 2 live bats identified in the hand; Found during window replacement.	325m W
Myotis Bat species	<i>Myotis</i> sp.	3 records; 2017-2019; Bat detector.	Closest 275m S
Brown Long-eared Bat	<i>Plecotus auritus</i>	2004; Field Record.	300m NW
Long-eared Bat species	<i>Plecotus</i> sp.	2017; Bat detector.	625m SE

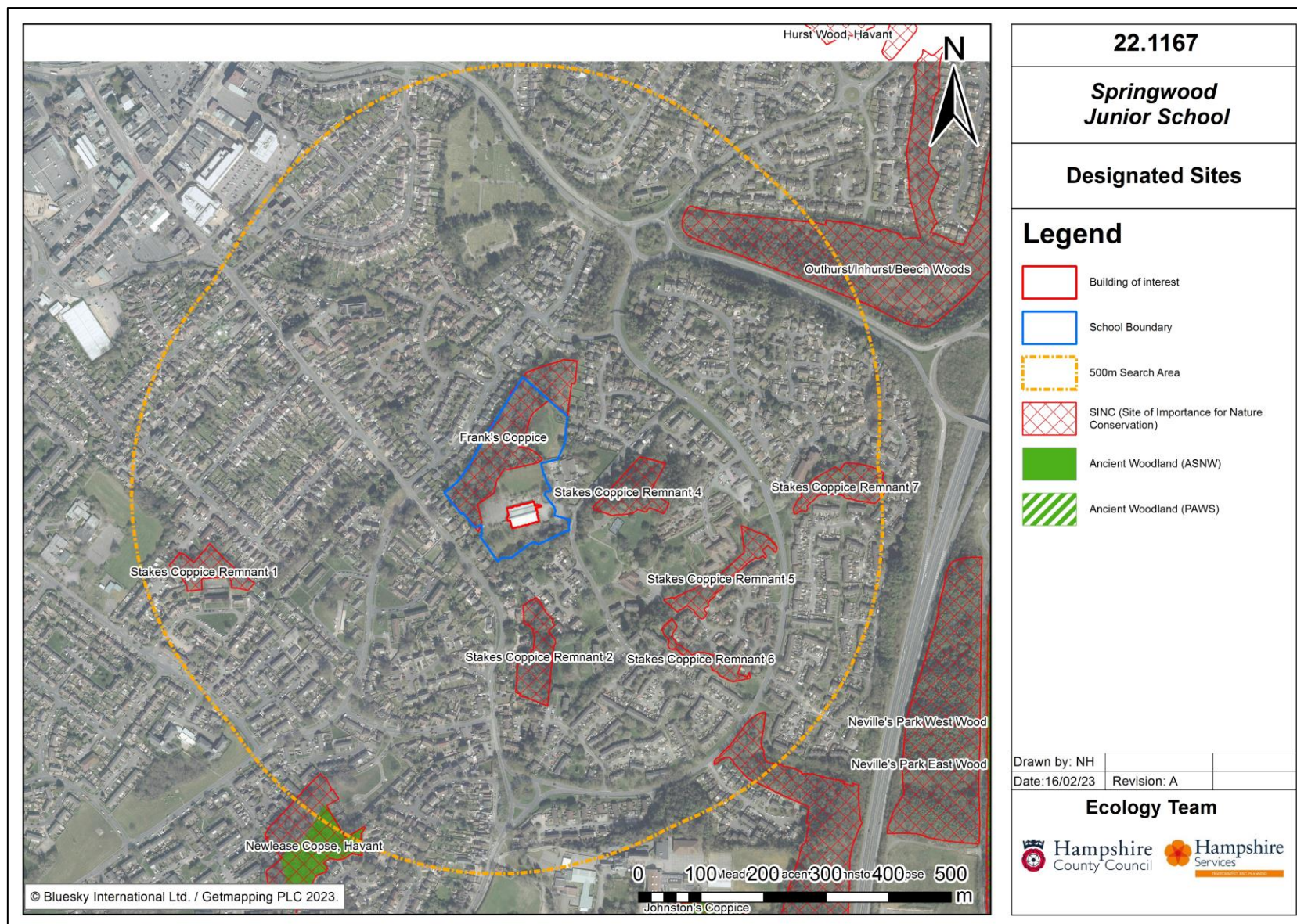


Figure A2.1 Designated sites within 0.5km of the site

Appendix 3 – Photos



Photo 1 General view of the main school building from the east, showing expansive roof of unusual shape.

(Photo from Google street view ©2022 Google)



Photo 2 View from the south, showing typical wall construction, with a mix of boarding and glazing.



Photo 3 View from the north-east, showing tightly-fitting wall components and two large vents into the kitchen.



Photo 4 Cavity within the eaves, lined with smooth metal.



Photo 5 Large overhang at the ends of the building, same construction as the eaves.



Photo 6 General view of the roof from the south.



Photo 7 General view of the roof from the north.



Photo 8 *Detail of corrugated metal roof, glazing and flashing.*



Photo 9 *Inside the loft space above the caretaker's office.*

Appendix 4 – Roost and activity habitat suitability criteria

Table A2 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