

**Bryn Tirion Hall School, Bersham Hall, Bersham
Road, Wrexham**

Extended Phase 1 Ecological Survey & Appraisal

Prepared by:
Dr David Bell
Sensible Ecological Survey Solutions Ltd.

Registered Address:
1 Red Gables
Pepper Street
Appleton Thorn
WARRINGTON
WA4 4SB

Tel 07759 534354
Email mail@sensibleecologicalsurveysolutions.co.uk
Web: www.sensibleecologicalsurveysolutions.co.uk

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1. Introduction

Sensible Ecological Survey Solutions (SESS) was commissioned to complete an extended Phase 1 Ecological Survey and Appraisal for school grounds site referred to as: **"Bryn Tirion Hall School, Bersham Hall, Bersham Road, Wrexham, Cheshire, LL14 4HS"** (to be subsequently referred to as 'the wider site') (Figures A & B).

Plans are currently being advanced to create a new 'soft surface' car park provision to the north east corner of the site. The area of the proposal is rectangular in shape and will be subsequently referred to as the 'Works Area' or 'Development Area'. Access to the new provision will be directly off the current hard standing located to the eastern frontage to the main Bersham Hall building. The proposed works are subject to planning approval.

This survey and appraisal were completed to determine if the development footprint, wider site and immediate surrounds contain important habitats, or have the potential to support wildlife species protected under law or listed under national or local biodiversity action plans.

Figure A: Red line boundary of the wider site.



Figure B: Aerial view of wider site and immediate surrounds (image taken June 2018).

Note: The extensive areas of current amenity grassland and tree lines margins to the norther half of the site.



Photograph 1: General view looking north from southern boundary of proposed works area.

Note: The area comprised largely of amenity grassland with trees partially overhanging western boundary.



Photograph 2: General view looking south along proposed works area.

Note: Small allotment area to the fore (outside works area) and works area to rear with lines of trees to either side.



1.1 Scope

The ecological assessment reviewed in this report comprises of three key elements:

1. An evaluation of the conservation status of the site based on a desktop review of collated data for the site and surrounds, including protected species records and nature conservation designations for the area;
2. An assessment of the site's habitat composition and floristic abundance, derived from a walkover survey.
3. A protected species audit that evaluates the likelihood of protected or otherwise notable species occurring on the site based on appraisal of the site's habitats and features (inc. buildings).

1.2 Acting Consultant Qualifications

The ecological appraisal was completed by Dr David Bell, Director, Sensible Ecological Survey Solutions Ltd (SESS). Dr Bell has forty years' experience as a professional ecologist. He was a Local Planning Authority Principal Ecologist for fourteen years before moving into private sector consultancy. He has led on ecological appraisals at sites across the UK, prepared Environmental Impact Assessments and served as an ecology expert witness at Public Inquiries. Dr Bell is a long standing member of the 'Chartered Institute of Ecology & Environmental Management' (MCIEEM). He has considerable experience in the completion of protected species surveys and assessments, and the development of species mitigation schemes associated with development proposals.

2. Methodology

The extended Phase I Habitat Survey was undertaken with reference to the Institute of Environmental Assessment's 'Guidelines for Baseline Ecological Assessment' (IEMA, 1997). In accordance with these guidelines the survey comprises of both a desk based data trawl and field study, as described below.

2.1 Desk Study

The desk study component of the ecological appraisal comprises reference to statutory and non-statutory nature conservation agency data bases. The aim of this exercise is to supplement the field survey results by collating and reviewing existing ecological information relevant to the site and the local area. Records of legally protected species and sites of importance for nature conservation, e.g. 'Sites of Special Scientific Interest' (SSSI) are obtained from DEFRA's '**Magic**' interactive mapping service in order that potential impacts from the development proposals can be assessed.

Species information was obtained for a **10 km square search area** around the site, in line with standard guidelines (IEMA, 1997). Statutory wildlife sites data was obtained from the DEFRA's '**Magic**' Interactive Mapping web site.

2.2 Phase 1 Habitats Field Survey

The field resurvey and assessment of the site was undertaken on the 24th May 2023

Weather conditions were ideal, and full access was available to all parts of the works area, wider site and immediate surrounds.

Habitats Survey

The Ecological Appraisal was undertaken for the whole site, and for land and features in proximity to the site, following the guidelines recommended by the Joint Nature Conservation Committee (JNCC) and the Institute of Environmental Assessment (IEA). The survey aims to identify habitat types and species present at the time of survey, and also assess the potential of the habitats and features present to support other protected or notable species.

According to IEMA 1997, Phase I surveys can be undertaken all year round to support and verify the findings of the desk study. Although certain protected species surveys need to be undertaken during particular seasons it is possible through a Phase I habitat survey to identify any potential habitats on site where protected species may be present. In the event that suitable habitats are identified, it will be necessary to undertake further seasonal surveys to investigate the potential for protected species fully. However, in the event that no suitable habitats for protected species are identified on site, a Phase I habitat survey is sufficient to determine the potential impacts associated with a proposed development. The dominant plant species were recorded and habitats classified according to their vegetation types. These are presented in the standard Phase I habitats survey format with habitat descriptions and **Habitats Plan** (see **Appendix A**).

The presence of noxious and invasive species, such as Japanese knotweed (*Fallopia japonica*), if encountered during the field survey was also recorded.

3. Results

3.1 Desk Study

Designated Wildlife Sites

No part of the application site has been designated for its nature conservation interest including any statutory designation such as **Site of Special Scientific Interest (SSSI)** or **Local Nature Reserve (LNR)**. The nearest statutory designated site is '**Midland Meres & Mosses Ramsar**' located 6.6 km to the north east (**Table 1 & Figure B**). The site does not fall within any SSSI 'Impact Risk Zone' as identified by Natural England (**Figure D**).

Table 1: Statutory Designated Sites within 12 km radius of site

Sites of Special Scientific Interest (SSSI's)

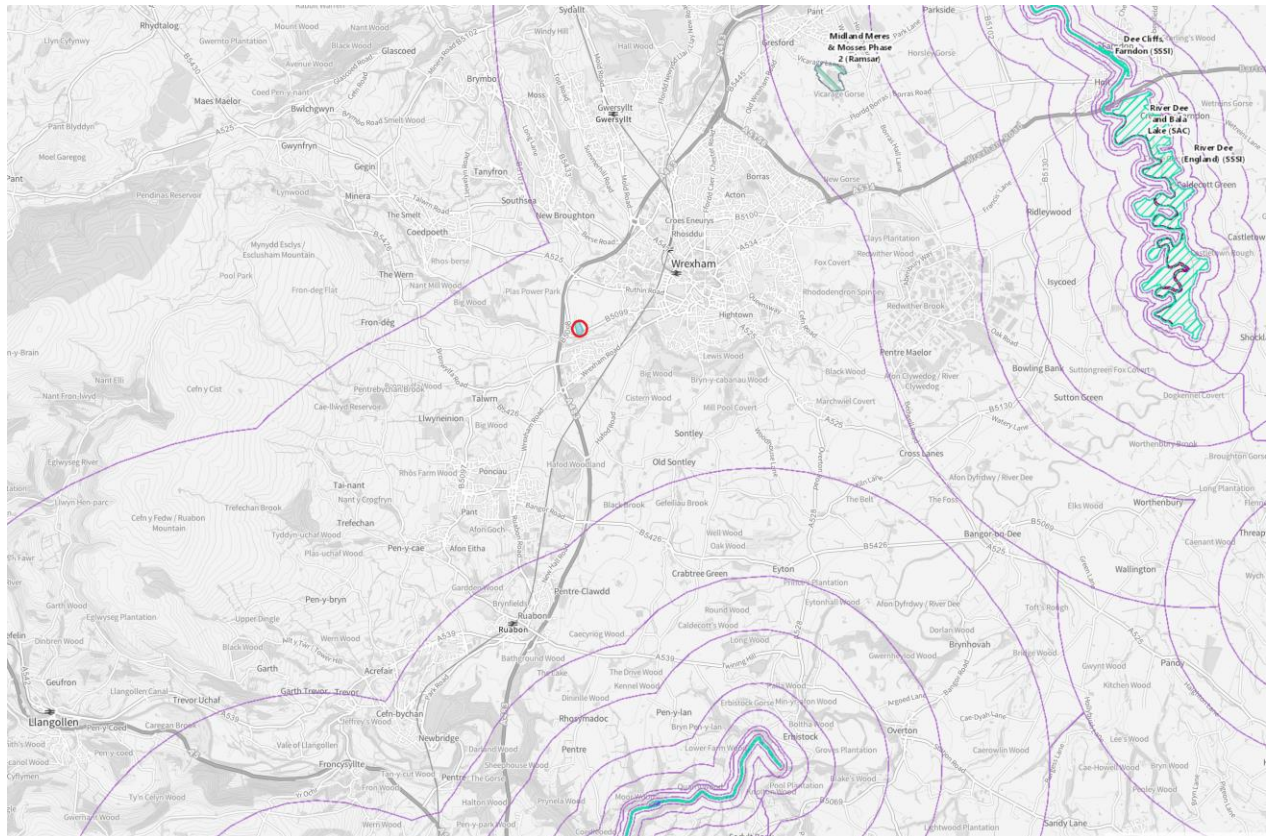
<i>Name</i>	<i>Location</i>
Midland Meres & Mosses Ramsar	6.6km NE
River Dee & Bala Lake	11.0 km E
Ifton Meadows	11.4 km S

Local Nature Reserves (LNR's)

None present

Figure D: Plan showing the distribution of Statutory Wildlife Sites around the site.

Note: The approximate site location is indicated by a red circle). (Data extracted from 'Magic' Interactive mapping). **Note:** The site does not fall within any SSSI 'Impact Risk Zone' as indicated by the purple rings radiating out from some of the surrounding SSSIs.



Protected Species Records

A **National Biodiversity Network** (NBN) data search for a 5km radius around the site generated records for the following notable *legally protected species and/or biodiversity target species***

***the listing below does not infer the species are currently present on the site, only that they have been recorded in the general area and might therefore be present if conditions were favourable.*

Amphibians

Common toad (*Bufo bufo*)

Common frog (*Rana temporaria*)

Palmate newt (*Lissotriton helveticus*)

Smooth newt (*Lissotriton vulgaris*)

Great crested newt (*Triturus cristatus*)

Reptiles

Slow worm (*Anguis fragilis*)

Common Lizard (*Zootoca vivipara*)

Grass snake (*Natrix Helvetica*)

Birds

House sparrow (*Passer domesticus*)

Common Swift (*Apus apus*)

House Martin (*Delichon urbicum*)

House Sparrow (*Passer domesticus*)

Dunnock (*Prunella modularis*)

Swallow (*Hirundo rustica*)

Song Thrush (*Turdus philomelos*)

Starling (*Sturnus vulgaris*)

Mammals

Brown long-eared bat (*Plecotus auritus*)

Common pipistrelle (*Pipistrellus pipistrellus*)

European hedgehog (*Erinaceus europaeus*)

European badger (*Meles meles*)

3.2 Field Survey

Phase 1 Ecological Survey

A Phase I survey was undertaken in order to identify the habitats present within the site, and any habitats or features of ecological importance which may be directly or indirectly affected by any proposed development.

Habitat Descriptions

During the field survey, all habitats present at the site were mapped using the standard methodology (JNCC, 1993). Findings are presented graphically as a **Phase 1 Habitats Plan** (see **Appendix A**).

The habitats survey identified the following habitats within or in proximity to the site (listed in order of decreasing area:

ON SITE

- **Amenity grassland**
- **Scattered trees**
- **Hard standing**

ADJOINING LAND

- **Amenity grassland**
- **Hard-standing**
- **Buildings**
- **Scattered trees**
- **Allotment grounds**
- **Scattered scrub**
- **Tall ruderal**
- **Arable**

Descriptions of Key Habitats recorded at the Site

Amenity Grassland

Over 95% of the proposed development footprint/works area currently comprised of intensively managed amenity grassland of poor species diversity.

The grassland will offer limited foraging opportunities to a range of common passerine bird species; however the habitat is widespread in the general area.

The amenity grassland overall is assessed as having negligible nature conservation value.

Scattered trees

Lines of mature and semi mature trees overhand the development area margins (**Photographs 1, 4 & 5**). The trees have significant local nature conservation and natural landscape value in their own right.

The trees can be expected to support small numbers of nesting birds, although no active nests were detected during the survey. The trees were subject to inspection using binoculars and none had features suitable for roosting bats.

None of the trees have been identified for removal or pruning to accommodate the proposed works.

The trees are assessed as having moderate nature conservation value at the local level.

Hard-standing

A small area of hard standing associated with an access track is found to the southern end of the site (**Photograph 3**). Comprising of concrete and compacted loose stone, the hard standing represents a hostile environment to wildlife.

The area of hard-standing is assessed as having negligible nature conservation value.

Descriptions of Key Habitats recorded in proximity to the Site

Amenity Grassland

Areas of intensively managed amenity grassland are found throughout the wider site (**Photograph 6**) notably to the west and south of the proposed development area.

A public bowling green is present to the immediate east of the school grounds (**Photograph 16**).

The grassland will offer very limited foraging opportunities to a range of common passerine bird species, however the habitat is widespread in the general area.

The amenity grassland is assessed as having low nature conservation value.

Hard-standing

Extensive areas of hard standing are found around the site, largely car parking provision associated with adjoining buildings (**Photograph 7**). The hard-standing represents a hostile environment to wildlife.

The areas of hard-standing are assessed as having negligible nature conservation value.

Buildings

A variety of buildings are present within the wider school grounds site. The only building approaching to within 10m of the proposed development site is the eastern frontage of the extended main school building (**Photograph 8**). The frontage of the building was assessed as having negligible potential to support roosting bats and no evidence of breeding birds was recorded.

The adjoining buildings are assessed as having negligible nature conservation value.

Scattered trees

Trees are scattered across the wider site, some of which are large mature examples (**Photograph 11**). The trees have significant nature conservation value in their own right, and some were identified as having potential to support protected species, including roosting bats (**Photographs 14 & 15**). Other than the lines of trees overhanging the proposed development area as discussed earlier, all the trees are over 10m away, and the nearest tree identified as having bat roost potential is 20m away.

The trees are assessed as having moderate nature conservation value at the local level.

Allotment grounds

A small allotment/vegetable growing area is attached to the northern end of the proposed development area (**Photographs 2 & 9**). The allotment habitats have low nature conservation interest in their own right, however the disturbed ground and potential refuges for wildlife, such as compost bins, could attract reptiles and amphibians into the area. The allotment will not be directly impacted by the proposed works.

The allotment area was assessed as having low nature conservation value.

Scattered scrub

Small stands of scrub, largely hawthorn dominant, are scattered across the wider site (**Photograph 12**). The scrub will offer shelter, foraging and breeding opportunities to a range of birds and small mammals. The small area of the scrub score down its nature conservation value, and the habitat is widespread in the wider local area.

The scattered scrub was assessed as having low nature conservation value.

Tall Ruderal

Small stands of tall ruderal plant communities can be found scattered across the wider site (**Photograph 13**). Often located to field boundaries and associated with scrub, the ruderals will provide foraging and cover to a range of wildlife but again its restricted area scores down its overall value.

The scattered tall ruderal plant communities were assessed as having low nature conservation value.

Arable

Beyond the school grounds to the north and west is found open farmland, managed currently as arable land. The arable land has negligible nature conservation interest, however, there are large field boundary hedgerows which will serve as local wildlife corridors linking to the site (**Photograph 16**).

The arable land was assessed as having negligible nature conservation value; the associated field boundary hedgerows are assessed as having moderate nature conservation value at the local level.

Invasive Plants

No evidence of invasive plant species was recorded within the site boundary or in close proximity to the site boundary.

3.3. Protected Species

Protected species are those with statutory protection measures, as:

- Listed on Schedules of the Wildlife and Countryside Act 1981 (as amended);
- Covered under the Protection of Badgers Act 1992, and;
- Listed on Annexes of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (implemented by the Conservation Regulations 1994 (as amended)).

Notable species are those that are not specifically protected by the statutes mentioned above, but are nevertheless important in a regional or local context. This includes species covered within BAPs and those that are regionally or locally scarce or rare.

Given the nature and location of the site, the following species or animal groups are considered to require special reference and consideration.

Birds

No evidence of specially protected bird species, such as barn owl (*Tyto alba*), was recorded during the site walkover and no suitable roosting opportunities for the species within or in close proximity to the site were identified. None of the trees will be lost, however, given the close proximity of the trees to the site there is a potential risk of harmful disturbance to breeding birds

A range of common passerine species would be expected to be seeking refuge, foraging and nesting within the trees overhanging the proposed development area margins and within the trees and scrub found within the wider site.

No evidence of bird nesting activity in association with adjoining buildings was recorded.

The impact on bird species is currently assessed as low. Commencement of works should ideally take place outside the bird breeding season (1st March – 31st August), if this cannot be achieved then appropriate mitigation measures should be taken to avoid disturbance to nesting sites associated with the trees overhanging the site margins.

Bats

None of the trees overhanging the proposed development area site were identified as having potential to support roosting bats.

Several trees located within the wider site were assessed to have 'low' potential to support roosting bats (**Photographs 14 & 15**), however, all the trees are over 10m from the development area and the risk to bats which may be dependent on them is assessed as negligible

None of the buildings located in close proximity to the proposed car park entrance were assessed as having potential to support roosting bats (**Photograph 8**).

Mature trees present to the development area boundaries and within the wider site, can be expected to attract foraging bats. The proposed car park will not interfere with or obstruct bat access to the trees.

The impact on roosting bats is assessed as negligible; the impact on the local bat population is assessed as negligible.

Amphibians & Reptiles

The wider site offers a range of habitats which can be expected to attract common species of amphibians and reptiles. There are no ponds in proximity to the site and the risk to Great crested newt is assessed as negligible.

The intensively managed amenity grassland (**Photographs 1 & 2**) which currently constitutes the majority of the proposed development area represents a largely hostile terrestrial environment to amphibians and reptiles. Provided the grass is managed as a short sward up to the commencement of works the risk to amphibians and reptiles is low.

The impact on amphibians and reptiles is assessed as low, provided the amenity grassland management scheme continues to maintain a short sward up to commencement of works.

4. Evaluation and Recommendations

GENERAL NATURE CONSERVATION INTEREST

The proposed development area currently comprises almost entirely of intensely managed amenity grassland of negligible nature conservation interest. The most notable features are the line of mature trees whose canopies partially overhang the development area. The trees are assessed to be of moderate nature conservation value at the local level. The trees will be retained and not impacted by the proposed works.

The wider site comprising of the school grounds is largely of a mix of amenity grassland, scattered trees (some large specimen examples), buildings and hard standing. Small stands of scrub and tall ruderals are found scattered across the site, and are of minimal significance.

The site is assessed to be generally of low nature conservation value, with the exception of a number of scattered mature trees of moderate local value.

PROTECTED SPECIES

There was no evidence that the development footprint habitats or features currently support, or having potential to support legally protected or biodiversity target species other than small numbers of breeding birds associated with the overhanging trees. Nesting birds are protected, and therefore it is recommended that site clearance works should take place outside the bird breeding season (1st March - 31st August).

There is a low risk to breeding birds and mitigation measures to protect breeding birds are recommended. The risk to other protected or biodiversity target species, including bats, from the proposed works is assessed as negligible.

DESIGNATED WILDLIFE SITES

The proposed works are small scale and will have negligible impact on the surrounding environment either directly or indirectly. The nearest statutory wildlife site is 6.6 km away (**Table 1; Figure D**). The site does not fall within any identified Natural England SSSI 'Impact Risk Zone'. No threats to designated wildlife sites has been identified.

No statutory or local wildlife sites are considered under threat from the proposed development.

NATURE CONSERVATION GAIN OPPORTUNITIES

Given the previously identified potential of the wider school grounds site to attract a range of wildlife, the following enhancement measures are recommended as nature conservation gain.

BATS

The erection of at least three permanent bat boxes, to be mounted on suitable mature trees across the wider site.

BREEDING BIRDS

The erection of at least three permanent bird nest boxes, to be mounted on suitable mature trees or building frontages across the site.

REPTILES AND AMPHIBIANS

The construction of at least two refugia/hibernacula to the northern end of the site.

Professional advice to be sought from a suitably qualified person on the selection and erection/construction of the above features to maximise their take-up and ongoing usage.

5 References

Biodiversity: The UK Steering Group Report (1995). UK Biodiversity Action Plan.

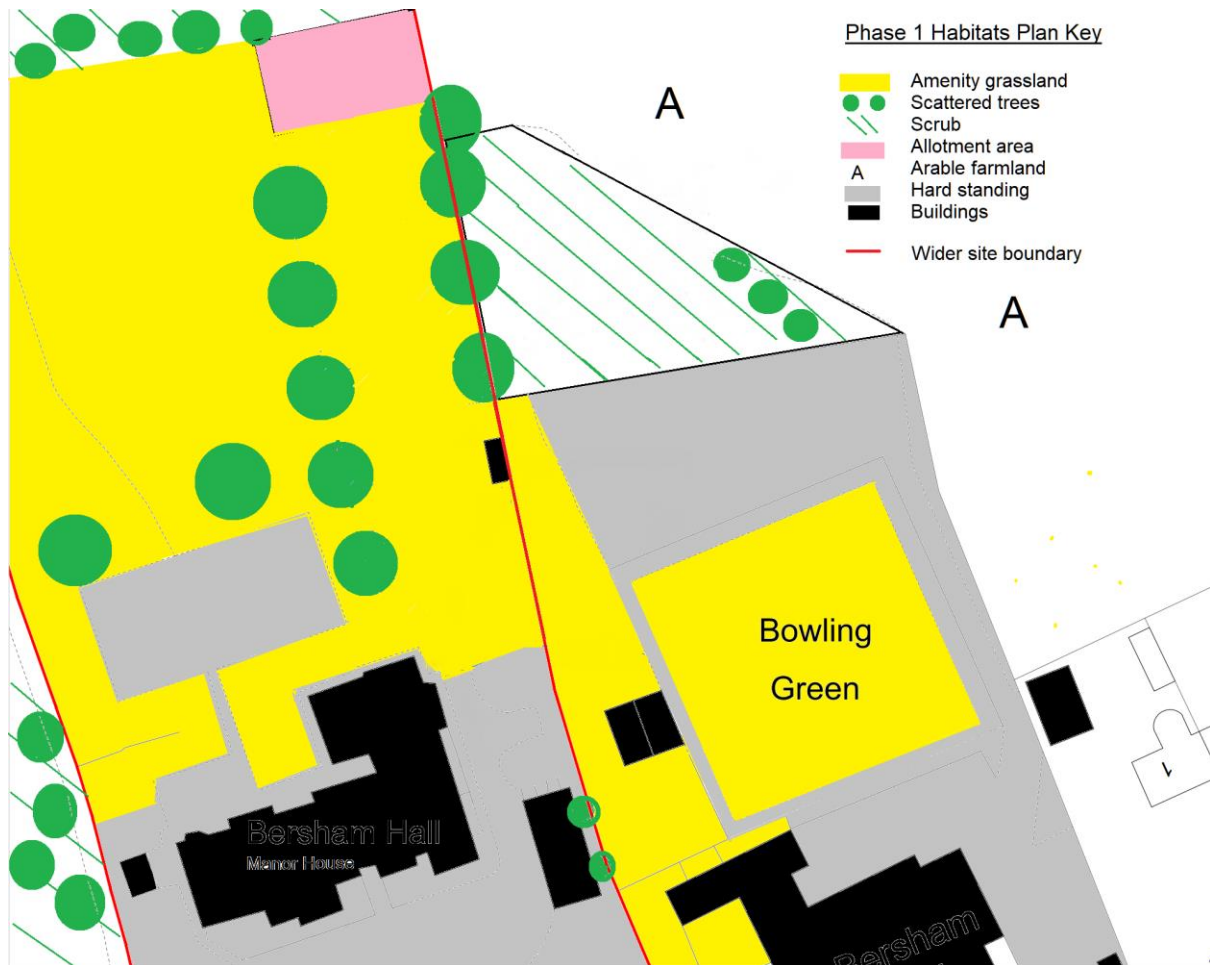
Institute of Environmental Assessment (1997) Guidelines for Baseline Ecological Assessment

Joint Nature Conservation Committee (1990) Handbook for Phase1 Habitat Survey: A Technique for Environmental Audit

The Conservation (Natural Habitats &c.) Regulations 1994

The Wildlife and Countryside Act 1981 (as amended)

Appendix A : Habitats Plan



Appendix B: Photographs

Photograph 3: View of narrow hard standing track linking into southern end of site.



Photograph 4: View of trees overhanging eastern site margin.



Photograph 5: View of trees overhanging western site margin.



Photograph 6: View of amenity grassland within wider site and to the west of development area.



Photograph 7: View of hard standing to south of site and associated with current parking provision.



Photograph 8: View of building to south of site

Note: The east facing frontage is part of a modern extension to the main school building. No potential for roosting bats was identified.



Photograph 9: View of small allotment area to immediate north of development area.



Photograph 10: View of small stand of juvenile trees to north of wider site.



Photograph 11: View of scattered mature trees to west of wider site.

Note: *some of the mature trees within the wider site were assessed to have low bat roost potential.*



Photograph 12: View of line of scrub to wider site margin to the west.



Photograph 13: View of line of tall ruderal plants within wider site.



Photograph 14: Close up of mature oak tree with identified to have bat roost potential.



Photograph 15: Close up of mature chestnut tree identified to have bat roost potential.



Photograph 16: View of bowling green to immediate east of development area.



Photograph 16: View of arable farmland and field boundary hedgerow found to immediate north of school grounds.

Note: The field boundary hedgerows in proximity to the site are locally important and will serve as wildlife corridors linking to the school site.

