



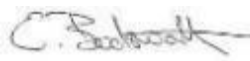
**Land at Blessed Hugh Faringdon Catholic School,
Fawley Road, Southcote, Reading,
Berkshire RG30 3EP**

Preliminary Ecological Appraisal

June 2015

***on behalf of* Hampshire County Council**

Client	Hampshire County Council
Job name	Land at Blessed Hugh Faringdon Catholic School, Fawley Road, Southcote, Reading, Berkshire RG30 3EP
Survey date	18 th May 2016
Report date	6 th June 2016
Report title	Preliminary Ecological Appraisal
Reference	W2001_rep_Blessed Hugh Faringdon School_06-06-16

	Signed	Name	Position	Date
Prepared by		Edward Bodsworth MA PhD MCIEEM	Director	06/06/16

Report Contents

1	Introduction	1
1.1	Site Description	1
1.2	Proposed Works	1
1.3	Aims of Study	1
1.3.1	Bat Ecology	1
2	Methodology	2
2.1	Desk Study	2
2.2	Field Surveys	3
2.2.1	Phase 1 Habitat Survey	3
2.2.2	Initial Bat Survey	3
3	Results & Evaluation	4
3.1	Desk Study	4
3.1.1	Sites of Nature Conservation Importance	4
3.1.2	Species	4
3.2	Habitats	6
3.2.1	Hard-standing	6
3.2.2	Amenity Grassland	6
3.2.3	Shrubbery & Garden	6
3.2.4	Buildings	7
3.2.5	Boundaries	7
3.3	Species	7
3.3.1	Birds	7
3.3.2	Bats	7
3.3.3	Reptiles	7
3.3.4	Amphibians	7
3.3.5	Other Species	8
3.4	Relevant Legislation & Policy Guidance	8
3.4.1	Nesting Birds	8
3.4.2	The Natural Environment and Rural Communities Act 2006	8
3.4.3	National Planning Policy Framework (NPPF)	8
3.4.4	UK Post-2010 Biodiversity Framework	9
4	Potential Impacts	10
4.1	Sites of Nature Conservation Importance	10
4.2	Habitats	10
4.3	Species	10
4.3.1	Birds	10
4.3.2	Bats	10
4.3.3	Other Species	11
5	Recommendations	11
5.1	Further Surveys	11
5.2	Habitats	11
5.3	Species	11
5.3.1	Birds	11
6	References	12
7	Appendix 1. Photographs	13
8	Appendix 2. Site Location Plans	14
9	Appendix 3. Existing Site Plan	15

10 Appendix 4. TVERC Data Search Results.....	16
11 Appendix 5. Protected/Notable Species Records	26

1 Introduction

1.1 Site Description

The Blessed Hugh Faringdon School is located to the east of Fawley Road, to the south of the Bath Road (A4) within the suburb of Southcote, Reading, in Berkshire. The approximate Ordnance Survey grid reference for the school is SU692722. The focus of this study is an area of land located to the west and south of the main school building. For the purposes of this report, the study area is referred to as 'the site'. It should be noted that the main school building is not included within the site.

The site comprises areas of amenity grassland (lawn), with shrubberies and garden planting as well as areas of concrete and tarmac hard-standing. Three outbuildings are also located within the site, and are labelled as Buildings 1, 2 & 3 for the purposes of this report. Building 1 is a pre-fabricated portacabin (Asperger Resource Base), Building 2 is a bicycle shelter and Building 3 is a bungalow (Health & Social Care Teaching).

The school is located within a suburban area of Reading, with residential development to the west, south and east. To the north of the school, and to the north of the Bath Road, is Prospect Park; an area of amenity parkland with grassland, parkland trees and some woodland. The River Kennet is located approximately 1km to the south of the school. The River Thames is located approximately 2.5km to the north.

1.2 Proposed Works

There are proposed alterations to the school which include the removal of Buildings 1, 2 & 3.

1.3 Aims of Study

The aims of this study are to describe and evaluate the habitats present within the site and to assess the potential for the site to support protected and notable species. The report discusses the likely impacts of the proposed development on the ecology of the site, on valued habitats and on protected/notable species. The study also makes recommendations for appropriate mitigation measures and habitat enhancement with regard to habitats and species. The need for further ecological survey work is discussed in light of the impact assessment.

In addition, the study undertakes a survey the buildings for bats and/or evidence of bats and assesses the overall potential of the buildings to support roosting bats. The report discusses the likely impacts of the proposed demolition of the buildings on bats and makes recommendations for appropriate mitigation and compensation measures in this regard. The potential impacts on bats are assessed in accordance with the legal protection afforded to bats under The Conservation of Habitats & Species Regulations 2010. The need for a European Protected Species (bat) licence is discussed in light of the impact assessment.

1.3.1 Bat Ecology

Bats are the only mammals to have developed the ability of true flight. At present, over 1,100 species of bat are recognised worldwide, making bats the second largest mammal group after rodents. As well as flight, bats have evolved a system of navigation and orientation using echolocation which has allowed many species to become nocturnal. There are 18 species of bat that occur within the British Isles, of which 17 are known to breed here. More species occur in the south and west of the country, with species numbers declining towards the north and into Scotland.

All bat species in the UK are nocturnal and feed exclusively on insects (they are insectivorous) which they catch in flight during their night-time activity, using echolocation to locate and home-in on their prey. Bats will roost during the daytime and seek out dark, enclosed and undisturbed places in which to do so, often using a variety of roosting sites within their home range. Different roost sites are used

for different purposes (such as mating, giving birth and hibernation) and at different periods of a bat's life cycle.

During the summer, female bats will gather together in a maternity or breeding roost. In the UK, this starts to occur towards the end of May and the females will seek out a warm and undisturbed site in which to give birth. Because maternity roosts require a particular set of environmental attributes (such as location, temperature, orientation and size), breeding bats tend to return to roost and breed in the same locations year after year. Given that bats live a relatively long time (anywhere from 10-20 years), and only give birth to one pup a year, maternity colonies are crucial to the reproduction and survival of the local population and can be very sensitive to environmental change.

Relatively little is known about hibernation roosts, as tracking and locating hibernating bats is very difficult. However, many species (particularly those within the genera *Myotis* and *Rhinolophus*) have been found within underground sites such as caves, mines and cellars, where the temperature remains constant and low throughout the winter allowing the bats to remain in a state of torpor. The spring and autumn are periods of transition and bats can use a number of different locations on a temporary basis, often moving between roosts as environmental conditions change and temperatures fluctuate. In the autumn, bats will mate and it has been shown that male and female bats will gather at particular locations (such as a building, cave or tree) to meet, socialise and mate.

Bats choose to roost in a number of different locations, depending on the species, their activity pattern and the period of their lifecycle. Certain species, such as the pipistrelles, favour crevices and small cavities for roosting and will use features such as cracks, crevices and small rot holes in the boughs and trunks of trees and within certain features of buildings such as boxed eaves, gaps under roof tiles, hanging tiles and soffit boards. Other species favour large, uncluttered roof spaces and lofts within buildings where they can hang up on the underside of the roof and use the interior space for flying prior to emergence. Hollow trees, cellars, caves, barns, churches and cavity walls can also all be used for roosting, given suitable access. Certain species, such as the noctule, favour roosting sites within trees whilst others tend to favour buildings. Roost sites may be used by only a very small number of bats, such as solitary males, or may offer shelter to tens or hundreds of bats within maternity and hibernation roost sites.

The suitability of roosting sites is also highly influenced by the location or context of a tree, building or cave. Roost sites are most often favoured when they are within close proximity to foraging habitats and where those habitats are connected to one another within the landscape by features such as hedgerows, woodlands, rivers or sunken lanes along which bats disperse and 'commute' from place to place. Suitable foraging habitats are any places where insect prey is diverse and abundant such as woodlands, ponds, lakes, rivers, scrub, hedgerows and unimproved grassland or pasture. Thus, the ecological context of a site is very important for determining if bats may be present within a roost and the potential for a roost to be present tends to be much higher within rural or village locations.

2 Methodology

2.1 Desk Study

The Thames Valley Environmental Records Centre (TVERC) was contacted to collate records that it holds for protected/notable species and non-statutory sites of nature conservation importance within a 1km radius of the site. The Multi-Agency Geographic Information for the Countryside (www.magic.gov.uk) website was searched for information regarding internationally protected sites (e.g. Special Areas of Conservation) within 5km of the survey area and statutory sites of nature conservation importance (e.g. Sites of Special Scientific Interest) within a 1km radius of the site. Other Internet resources interrogated as part of the desk study include:

- The Ordnance Survey - www.ordnancesurvey.co.uk
- Bing Maps - www.bing.com/maps

- Old Maps - www.old-maps.co.uk
- Google Earth - www.earth.google.co.uk

The UK Post-2010 Biodiversity Framework (formerly the UK Biodiversity Action Plan) and the Berkshire Biodiversity Action Plan (BAP) were also consulted to gather information pertaining to priority habitats and species for conservation action at the national and local level.

Aerial photography interpretation was used to place the site into an ecological context and to provide information on the nature of the habitats beyond the site boundary. The information gathered is used to put the site into an ecological context and to provide a baseline to the habitat assessment.

2.2 Field Surveys

2.2.1 Phase 1 Habitat Survey

A Phase 1 Habitat Survey was undertaken on 18th May 2016 by Tracy Gray *BSc GradCIEEM*, an experienced ecologist. A walkover of the site was conducted and a description of the habitats present was prepared using standard Phase 1 Habitat Survey methodology (JNCC 2010). Target notes were also prepared on features of particular ecological interest within the site and an assessment was made of the site's potential to support protected and notable species (such as species listed under the UK Post-2010 Biodiversity Framework and Section 41 of the NERC Act 2006).

2.2.2 Initial Bat Survey

An initial survey for bats (building inspection survey) was also undertaken on the 18th May 2016 by Miss Gray. Miss Gray holds a licence to survey for bats in all counties of England (Level 2 WML-CL18 Licence 2015-14396-CLS-CLS) and has over four years of experience in surveying for bats.

An internal and external survey of Buildings 1, 2 & 3 was undertaken in order to look for bats and/or evidence of bats and to assess the potential of the buildings to support roosting bats. The bat survey was undertaken according to best practice guidelines published by the Bat Conservation Trust (Collins 2016) and the *Bat Workers Manual* (JNCC 2010).

The study also takes into account the nature of the buildings and the ecological context of the site, including the following factors which may increase the likelihood of roosting bats being present (Collins 2016):

- Age of the building (pre-20th Century or early 20th Century construction)
- Nature of construction; traditional brick, stone or timber construction
- Large and complicated roof void with unobstructed flying spaces
- Large (>20 cm) roof timbers with mortise joints, cracks and holes
- Entrances and gaps for bats to fly and crawl through
- Poorly maintained fabric providing ready access points for bats into roofs, walls; but at the same time not being too draughty and cool
- Roof warmed by the sun, south-facing roofs in particular
- Weatherboarding and/or hanging tiles with gaps
- Undisturbed roof voids
- Buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year
- Buildings or built structures close to good foraging habitat, in particular mature trees, parkland, woodland or wetland, especially in a rural setting

The following criteria are used to determine the level of 'bat roost potential' within buildings (Collins 2016):

- **Negligible:** Negligible habitat features on site likely to be used by roosting bats

- **Low:** 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).
- **Moderate:** A structure 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.
- **High:** A structure with one or 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 habitats.

3 Results & Evaluation

3.1 Desk Study

Please refer to Appendix 4 & Appendix 5 or the detailed results of the data search undertaken through the TVERC. The following sections summarise the most pertinent data gathered during the desk study.

3.1.1 Sites of Nature Conservation Importance

3.1.1.1 Statutory Sites

There are no statutory sites of nature conservation importance, such as Sites of Special Scientific Interest, within a 1km radius of the site. There are no internationally designated sites of nature conservation importance, such as Special Areas of Conservation, within a 5km radius of the site.

3.1.1.2 Non-statutory Sites

Table 1 provides a summary of the Local Wildlife Sites (LWS) and other non-statutory sites within the local area. Please refer to Appendix 4 for detailed site descriptions.

Table 1. Non-statutory sites of nature conservation importance within 1km of the school.

Site Name	Distance & Direction from Site	Area	Nature of Site
Lousehill Copse	1km - NW	13.16ha	Semi-natural Woodland
Fobney & Kennet Valley Meadows	0.4km - S	140.4ha	Wet Grassland with Swamp
Holy Brook	0.6km - S	N/A (Length - 4.5km)	Chalk River
Prospect Park	0.1km - NW	24.1ha	Lowland Mixed Deciduous Woodland
River Kennet/Kennet and Avon Canal	0.9km - S	N/A	Chalk River
Kennet Valley East	0.9km - SW	N/A	Chalk Valley
West Reading Woodlands and LNR	1km - NW	N/A	Lowland Mixed Deciduous Woodland & Parkland

3.1.2 Species

There are no records of protected or notable species from within the site. However, the TVERC hold a number of records of: plants, invertebrates, amphibians, birds, and mammals from within a 1km radius of the site. A summary of the species considered most relevant to the site is provided below, for a full species list please refer to Appendix 5 (separate document).

3.1.2.1 Plants

The Records Centre holds 6 records of bluebell *Hyacinthoides non-scripta* from within the local area (2010 – most recent record). The records come from a small copse of wood, positioned at the edge of Prospect Park, approximately 200m to the north-west of the site.

Other notable plant species included within the data search include Good-King-Henry *Chenopodium bonus-henricus* and whorled water-milfoil *Myriophyllum verticillatum*. Both records date from 1985 and may not provide accurate information regarding the species' current status.

3.1.2.2 Invertebrates

There are 50 records of stag beetle *Lucanus cervus* from within the search area. The records are well distributed through the local area, with observations of the species occurring within private gardens to the east and west of the school. There are 18 records (consisting of both male and female specimens) from property located approximately 300m to the south-east of the site. The stag beetle requires areas of dead and decaying wood in which the larvae develop. The species occurs in woodland as well as in gardens and parkland. The sparse planting of trees and shrubs amongst amenity grassland is not considered to be suitable habitat for stage beetles.

There is a single record of cinnabar moth *Tyria jacobaea* from Prospect Park to the immediate north of the site. The cinnabar is a relatively common species in Britain occurring within a variety of habitats including gardens and parkland, where the larvae feed on ragwort *Senecio jacobaeae*. The site is unsuitable for the cinnabar moth.

Other species of invertebrate returned within the data search include freshwater pearl mussel *Margaritifera margaritifera* and a caddis fly species *Rhyacophila fasciata*. The ornamental pond within the site is not suitable habitat for freshwater pearl mussel or caddisfly.

3.1.2.3 Fish

Bullhead *Cottus gobio* was recorded from the Holy Brook in 2009. The ornamental pond is not suitable for this species.

3.1.2.4 Amphibians

Common frogs have been recorded from Prospect Park, most recently in 2010. Although the ornamental pond is likely to offer limited habitat to breeding amphibians the presence of goldfish within the pond is considered to deter breeding frogs and other amphibian species. The other habitats within the school are not considered suitable for amphibians during the terrestrial phase of their lifecycle.

3.1.2.5 Reptiles

Slow worm *Anguilla fragilis* and grass snake were recorded in 2009 from locations approximately 580m to the south-east, and 860m to the south-west of the school respectively. Grassland habitats within the site are not considered suitable for reptile species due to their short sward and lack of sheltered areas favoured by such species.

3.1.2.6 Birds

A large number of bird records are held for the search area by the Records Centre. The majority of the records come from Prospect Park and date from between 1985 and 2012. Species recorded consist mostly of common garden and farmland birds. Such species include: mallard *Anas platyrhynchos*, black-headed gull *Chroicocephalus ridibundus*, swift *Apus apus*, green woodpecker *Picus viridis*, dunnoek *Prunella modularis* and song thrush *Turdus philomelos*. The habitats within the survey site is not considered suitable for uncommon species of bird such as brambling *Fringilla montifringilla*, firecrest *Regulus ignicapilla*, hobby *Falco subbuteo* or barn owl *Tyto alba*. See Section 3.3.1 for further details regarding opportunities for breeding birds within the site.

3.1.2.7 Bats

Species of bat returned within the data search include common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, noctule *Nyctalus noctula* and mouse-eared bats *Myotis* species. The nearest record (to the survey site) is of a *Myotis* species from a property on Granville Road in 1986. Please refer to Section 3.3.2 for a discussion regarding the suitability of the site for bats.

3.1.2.8 Other Species

The TVERC holds 6 records of water vole *Arvicola amphibius* from Holy Brook/Kennet & Avon Canal between 2000 & 2009. There are no watercourses within the school grounds that are suitable for this species and water voles are absent from the site.

3.2 Habitats

Photographs of the site are presented in Appendix 1.

3.2.1 Hard-standing

The site includes areas of concrete and tarmacked hard-standing serving as car parks, pathways and driveways. Access onto Fawley Road is via a pathway and driveway to the north-western side of the site, and a pavement and stairway to the south-eastern side of the site.

3.2.2 Amenity Grassland

The dominant habitat type is amenity grassland, managed as a lawn, and dominated by common grass species. Herbs are present in low abundance and include dandelion *Taraxacum officinale*, daisy *Bellis perennis*, creeping buttercup *Ranunculus repens*, white clover *Trifolium repens* and greater plantain *Plantago major*.

The amenity grassland is considered to be of low ecological value. This is due to the dominance of common grass species and the low abundance of common and widespread herbaceous species. No rare or uncommon plant species are present and the habitat is not considered to meet the criteria for valued grassland habitats under the UK Post-2010 Biodiversity Framework or Section 41 of the NERC Act 2006, such as 'Lowland Meadows'.

3.2.3 Shrubbery & Garden

The landscaping of the gardens have been planted with a number of non-native, ornamental shrubs including *Philadelphus* sp., *Hebe* sp., *Mahonia* sp., *Ligustrum ovalifolium* and *Syringa vulgaris*. Young cherry *Prunus* sp. and rowan *Sorbus aucuparia* are also present in certain areas. Herbaceous species associated with areas of shrub planting and garden include red dead-nettle *Lamium purpureum*, common fumitory *Fumaria officinalis*, ground ivy *Glechoma hederacea*, ribwort plantain *Plantago lanceolata* and stinging nettle *Urtica dioica*.

Areas of shrub planting and garden are considered to be of low ecological value. This is due to the fact that the shrubs are mostly non-native and the herbaceous species are common and widespread, and typical of gardens (some may refer to them as 'weeds'). The habitat is not considered to meet the criteria for any valued habitats under the UK Post-2010 Biodiversity Framework or Section 41 of the NERC Act 2006.

To the south-western corner of the main school building is a small ornamental pond. The pond measures approximately 3.5m by 2m and is lined with a plastic liner and paving around the margins. The pond is stocked with goldfish and has a dense covering of Canadian pondweed *Elodea canadensis*, with some sedges to the peripheries. The pond is not considered to be suitable habitat for breeding great crested newts *Triturus cristatus*. The pond is not considered to meet the criteria for valued pond habitats under the UK Post-2010 Biodiversity Framework or Section 41 of the NERC Act 2006 and is considered to be of low ecological value.

3.2.4 Buildings

3.2.4.1 Building 1

Building 1 is located to the west of the main school building, within an area of hard-standing. The building is of a pre-fabricated, simple construction on a brick base. The roof has a shallow pitch and a covering of close-fitting clay tiles. There is no loft space. The walls are of a pre-fabricated material.

The building has been assessed as having 'negligible' potential to offer shelter to roosting bats.

3.2.4.2 Building 2

Building 2 is a plastic and metal bicycle shelter. The shelter has an open roof and grilled gates. The building has been assessed as having no potential to offer shelter to roosting bats.

3.2.4.3 Building 3

Building 3 is a bungalow of brick construction, with a pitched roof that has a covering of bitumen felt. The eaves are sealed with plastic soffits and silicon sealant. There is a single brick chimney with lead flashing to its base.

There is a loft void over Building 3, with a floor to ridge height of approximately 1.25m. The roof is of wooden boarding, supported by a simple wooden frame. The space is dominated by a water tank on a plinth to the centre of the roof void.

The building has been assessed as having 'negligible' potential to offer shelter to roosting bats. All three buildings are of negligible inherent ecological value.

3.2.5 Boundaries

To the north-east of the site is the main school building. To the north is the playing field of the school. The western boundary along Fawley Road is marked by a metal fence and a tall hedge of Leyland cypress *Cupressocyparis leylandii*, with some *Prunus* species also present. The southern boundary is marked by a low brick wall and metal fence. All boundaries are of low ecological value.

3.3 Species

3.3.1 Birds

Shrubs and trees offer potential nesting opportunities to bird species. However, the quality and extent of the habitat are considered to be poor and the bird assemblage is likely to comprise common and widespread species that are typical of garden habitats; rare species are unlikely to occur. The site is unsuitable for ground-nesting bird species.

3.3.2 Bats

There are no trees within the site that could offer shelter to roosting bats due to lack of suitable crevice features such as rot holes, cavities or flaking bark. All three buildings are considered to have no or 'negligible' potential to offer shelter to roosting bats. Roosting bats are considered to be absent from the site.

3.3.3 Reptiles

The amenity grassland is not suitable habitat for reptiles. The grassland is species-poor and is managed for its amenity value. The sward is cut short and offers no obvious shelter to reptiles.

3.3.4 Amphibians

The small, ornamental pond is not considered to be suitable habitat for breeding great crested newts. This is due to the very small size of the pond and the fact that it is stocked with fish; major predators of newt eggs and larvae. In addition, there are no ponds located within a 500m radius of the site and

it is considered unlikely that amphibians will disperse to the site during the terrestrial phase of their lifecycle. Given this, great crested newts are considered to be absent from the site.

3.3.5 *Other Species*

The site is considered to be unsuitable for other species.

3.4 **Relevant Legislation & Policy Guidance**

3.4.1 *Nesting Birds*

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. The nesting season for most species is between March and August inclusive.

3.4.2 *The Natural Environment and Rural Communities Act 2006*

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on the Secretary of State to publish, review and revise lists of living organisms and types of habitat in England that are of principal importance for the purpose of conserving English biodiversity. It also requires the Secretary of State to take, and promote the taking of, steps to further the conservation of the listed organisms and habitats. The current list of species and habitats is the same as those listed with the UK Post-2010 Biodiversity Framework (see below).

3.4.3 *National Planning Policy Framework (NPPF)*

The National Planning Policy Framework (NPPF) was published in March 2012 and this new document forms a key part of the Government's reforms to make the planning system less complex and more accessible, to protect the environment and to promote sustainable growth. The NPPF states that the planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. To minimise impacts on biodiversity and geodiversity, planning policies should:

- plan for biodiversity at a landscape-scale across local authority boundaries;
- identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;
- aim to prevent harm to geological conservation interests; and
- where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas.

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm 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;
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites:
 - ❖ potential Special Protection Areas and possible Special Areas of Conservation;
 - ❖ listed or proposed Ramsar sites; and
 - ❖ sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites

The Government will “now embark on a new exercise to consider what underpinning guidance continues to be needed” with the outcome of this process being “an appropriate and easy to use set of guidance, focussing on issues that require national expression, to support implementation of the National Planning Policy Framework.” The Government has “not established the process or set a timetable” for this yet and “until such time as the guidance review is complete, the existing guidance where relevant can still be used.” Regarding what guidance is still relevant, “Annex 3 of the NPPF indicates that ODPM Circular 06/2005: *Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System* (Circular 06/05) is still relevant. This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

3.4.4 UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework succeeds the UK Biodiversity Action Plan (BAP) and ‘Conserving Biodiversity - the UK Approach’. The Framework continues the conservation work initiated by the UK BAP following the establishment of the Convention on Biological Diversity in 1992. The purpose of the Biodiversity Framework is to set a broad enabling structure for conservation action across the UK until 2020, in summary:

- To set out a shared vision and priorities for UK-scale activities, in a framework jointly owned by the four countries, and to which their own strategies will contribute.

- To identify priority work at a UK level which will be needed to help deliver biodiversity targets and the EU Biodiversity Strategy.
- To facilitate the aggregation and collation of information on activity and outcomes across all countries of the UK, where the four countries agree this will bring benefits compared to individual country work.
- To streamline governance arrangements for UK-scale activity.

Many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species and the plans for the priority species and habitats agreed under UK BAP still form the basis of the Framework.

There are no priority habitats listed under the UK Post-2010 Biodiversity Framework that are considered to be relevant to the site. Priority species listed under the UK Post-2010 Biodiversity Framework which are considered to be potentially relevant to the site are:

- Dunnock (potential for nesting in shrubs and foraging within the site)

4 Potential Impacts

4.1 Sites of Nature Conservation Importance

There are no predicted impacts on statutory or non-statutory sites of nature conservation importance as a result of the proposed development. This is due to the distance of such sites from the construction zone, as well as the nature and scale of the proposals.

4.2 Habitats

The proposals will affect areas of hard-standing, amenity grassland and planted shrubs and young trees. These habitats are considered to be of negligible and low ecological value and there are foreseeable ecological impacts as a result of habitat loss. The small ornamental pond is also considered to be of low ecological value and offers little or no habitat to breeding amphibians.

4.3 Species

4.3.1 Birds

Removal of trees, shrubs and woody vegetation during the bird breeding season may result in the destruction of active birds' nests and the killing/injury of eggs and young.

4.3.2 Bats

There are no foreseeable impacts on roosting bats. There is no evidence to suggest that the buildings are being used as a place of shelter/protection by roosting bats and the buildings are considered to have 'negligible' potential to offer shelter to bats within an undetectable roost site.

As a result of this conclusion, works to the buildings are unlikely to result in any significant impacts on bats or the places that they use for breeding, shelter and/or protection (roosts) and no specific compensation measures are considered necessary (Mitchell-Jones 2004).

Since no significant impacts on bats are predicted under The Conservation of Habitats and Species Regulations 2010, a European Protected Species (bat) licence will not be required for the proposed works to proceed. Since there are no predicted impacts on bats or their habitats, it is not necessary to consider the 'three tests' of The Conservation of Habitats and Species Regulations 2010 in this instance

4.3.3 Other Species

There are no predicted impacts on other species such as rare plants, invertebrates, badgers, amphibians or reptiles.

5 Recommendations

5.1 Further Surveys

No further survey are considered necessary.

5.2 Habitats

It is recommended that new areas of garden and landscape planting are designed, planted and managed to maximise their value to wildlife. One key element of this would be the species used within the planting, which should comprise native species (preferably of local provenance) where possible, as well as ornamental plants of known value to wildlife. The key will be to provide a variety of flowers and fruits throughout the year in order to provide food for insects and birds, as well as providing potential nest sites through the planting of trees and shrubs.

Native tree and shrub species which are considered suitable for the site include:

- Beech *Fagus sylvatica*
- Blackthorn *Prunus spinosa*
- Crab apple *Malus sylvestris*
- Dog rose *Rosa canina*
- Dogwood *Cornus sanguinea*
- English oak *Quercus robur*
- Field maple *Acer campestre*
- Guelder rose *Viburnum opulus*
- Hawthorn *Crataegus monogyna*
- Hazel *Corylus avellana*
- Holly *Ilex aquifolium*
- Hornbeam *Carpinus betulus*
- Spindle *Euonymus europaeus*
- Wayfaring tree *Viburnum lantana*
- Wild cherry *Prunus avium*

Garden planting should aim to provide ground cover for animals such as hedgehogs and invertebrates, and so low-growing ground cover should be encouraged. Native species such as bugle, ivy and periwinkle could be used for this purpose, or ornamental species such as lady's mantle, elephant's ears or perennial geraniums may also be suitable for formal areas of ornamental planting. A diversity of structure should also be encouraged through the planting of small trees, with shrubs and herbaceous plants below.

5.3 Species

5.3.1 Birds

Removal of woody vegetation should be undertaken outside of the bird breeding period, avoiding March to August inclusive. This will protect birds from the destruction of active nests and the killing/injury of eggs and young.

The erection of bird nesting boxes is also recommended in order to provide suitable nest sites for species within the local area, as nest boxes can be excellent substitutes for the holes found in old trees. Over 60 species are known to adopt nest boxes including blue tits, great tits, starlings, robins and sparrows. The location and nature of the nest box depends on the species it is designed for;

boxes for tits, sparrows or starlings should be fixed two to four metres up a tree or a wall; open-fronted boxes for robins and wrens need to be low down, below 2m, and well-hidden in vegetation. Unless there are trees or buildings which shade the box during the day, boxes should be faced between north and east, thus avoiding strong sunlight and the wettest winds.

On dwellings, the integration of bird boxes is particularly recommended as species such as house sparrow and swift will readily adopt such features as nest sites. The following bird nesting features are recommended:

- Ibstock Swift Box
- Schwegler Swift and Bat Box 1MF
- Schwegler Swift Box Type 25
- Schwegler House Sparrow Brick Box Type 24
- Schwegler Sparrow Terrace 1SP

6 References

Altringham, J., 2003. *British Bats*. Harper Collins.

Emery, M. 2008. *The effect of street lighting on bats*. Urbis Lighting Ltd.

Harris S., Cresswell P. and Jefferies D., 1989. *Surveying Badgers*. Mammal Society

Hundt, L., 2012. *Bat Surveys: Good Practice Guidelines*. Bat Conservation Trust.

Chartered Institute of Ecology and Environmental Management (CIEEM) - Colebourn, K., Box, J., Byron, H., French, N., Hall, M., Knightbridge, R., Oxford, M., Treweek, J., Wells, M., Ader, K., Moon, S., Archer, J. and Byrne, D., 2006 *Guidelines for Ecological Impact Assessment*. Chartered Institute of Ecology and Environmental Management.

JNCC, 2010. *Handbook for Phase 1 Habitat Survey - a technique for environmental audit*. JNCC First published 1990; reprinted in 2010.

Rydell J. & Racey, P. A. 1995. *Street lamps and the feeding ecology of insectivorous bats*. Recent Advances in Bat Biology Zool Soc Lond Symposium abstracts

Stone, E.L., Jones, G., & Harris, S. 2009. *Street lighting disturbs commuting bats*. Current Biology 19:1-5.

Wembridge, D., 2011 *The state of Britain's hedgehogs 2011*. People's Trust for Endangered Species and British Hedgehog Preservation Society.

7 Appendix 1. Photographs



Photograph 1. Building 3.



Photograph 2. The loft space of Building 3.



Photograph 3. Building 2.



Photograph 4. Building 1.



Photograph 5. The small, ornamental pond.

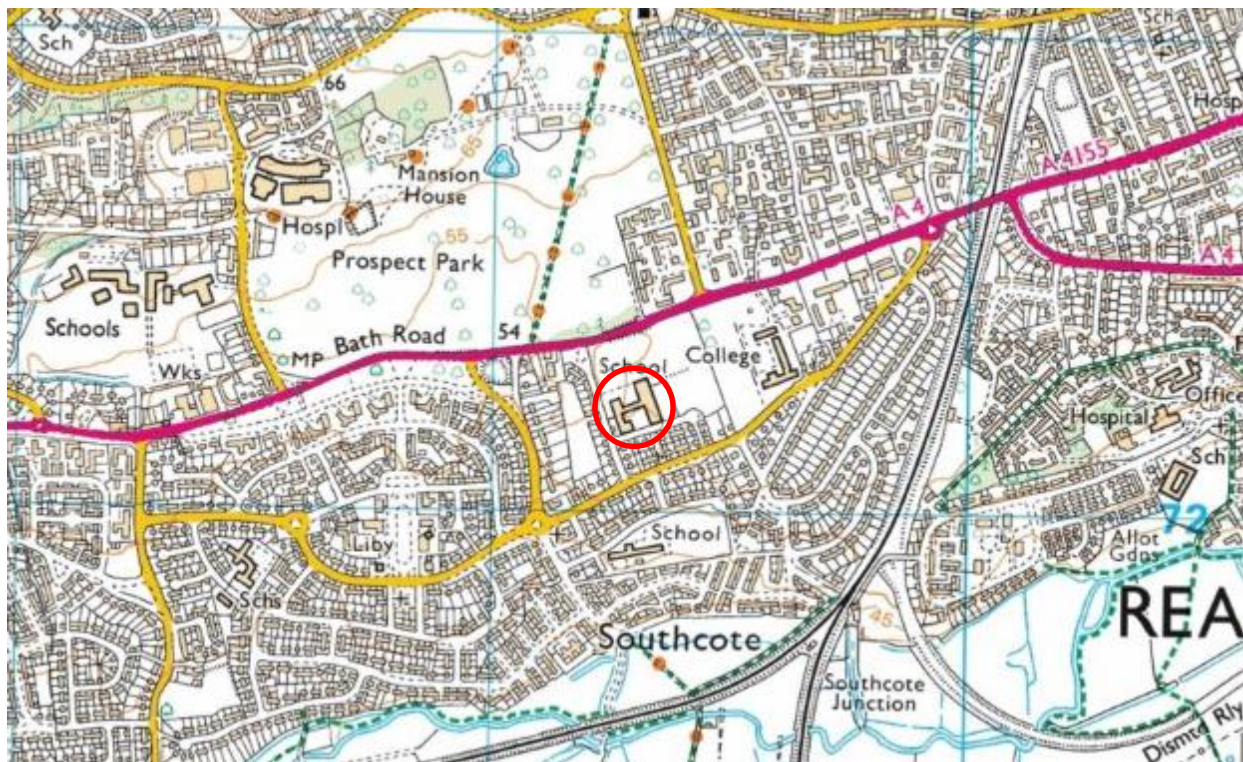


Photograph 6. A general view of amenity grassland, shrub and tree planting.

8 Appendix 2. Site Location Plans

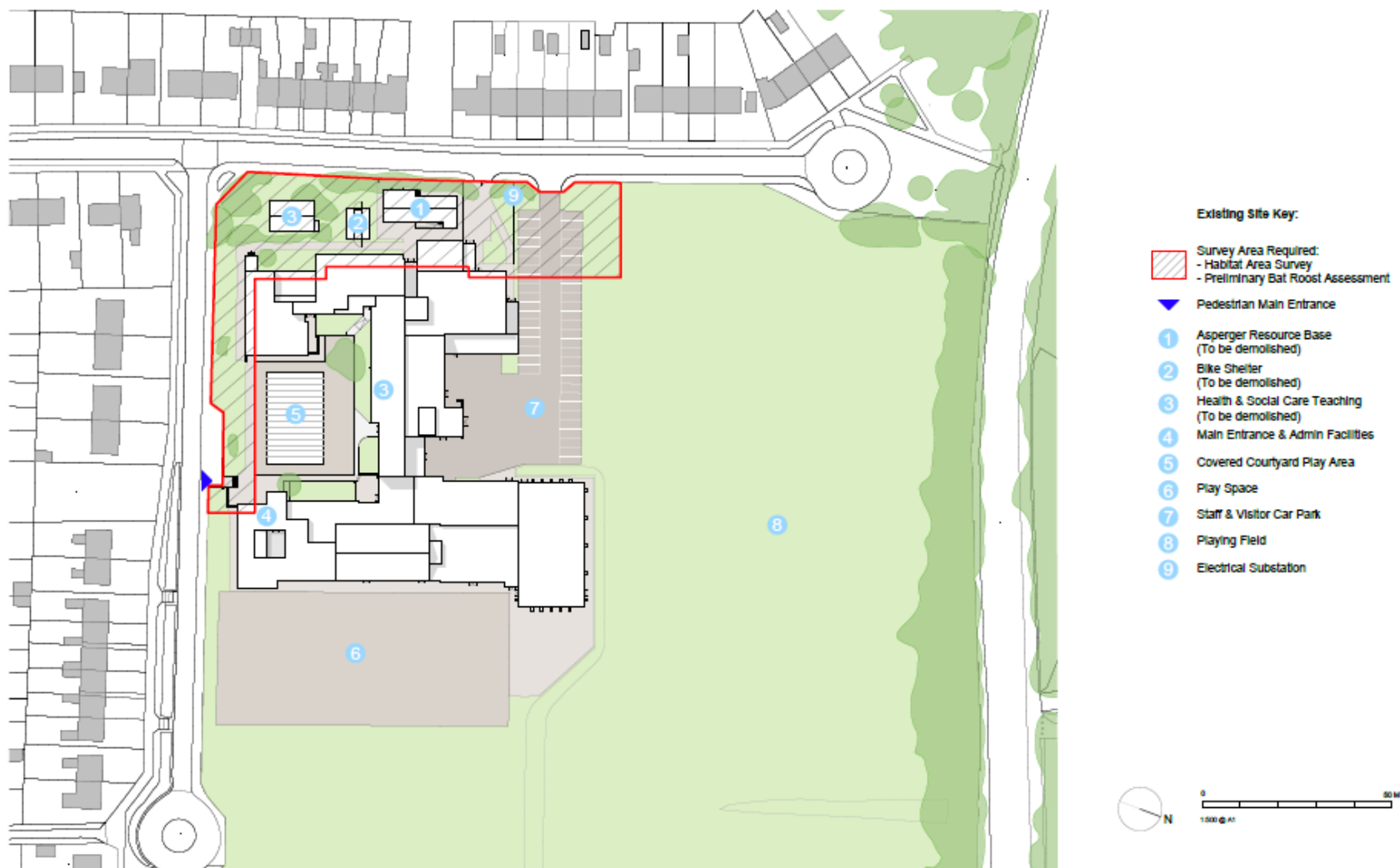


Aerial photograph showing the approximate location of the site (outlined in red) Source: <https://earth.google.com/>

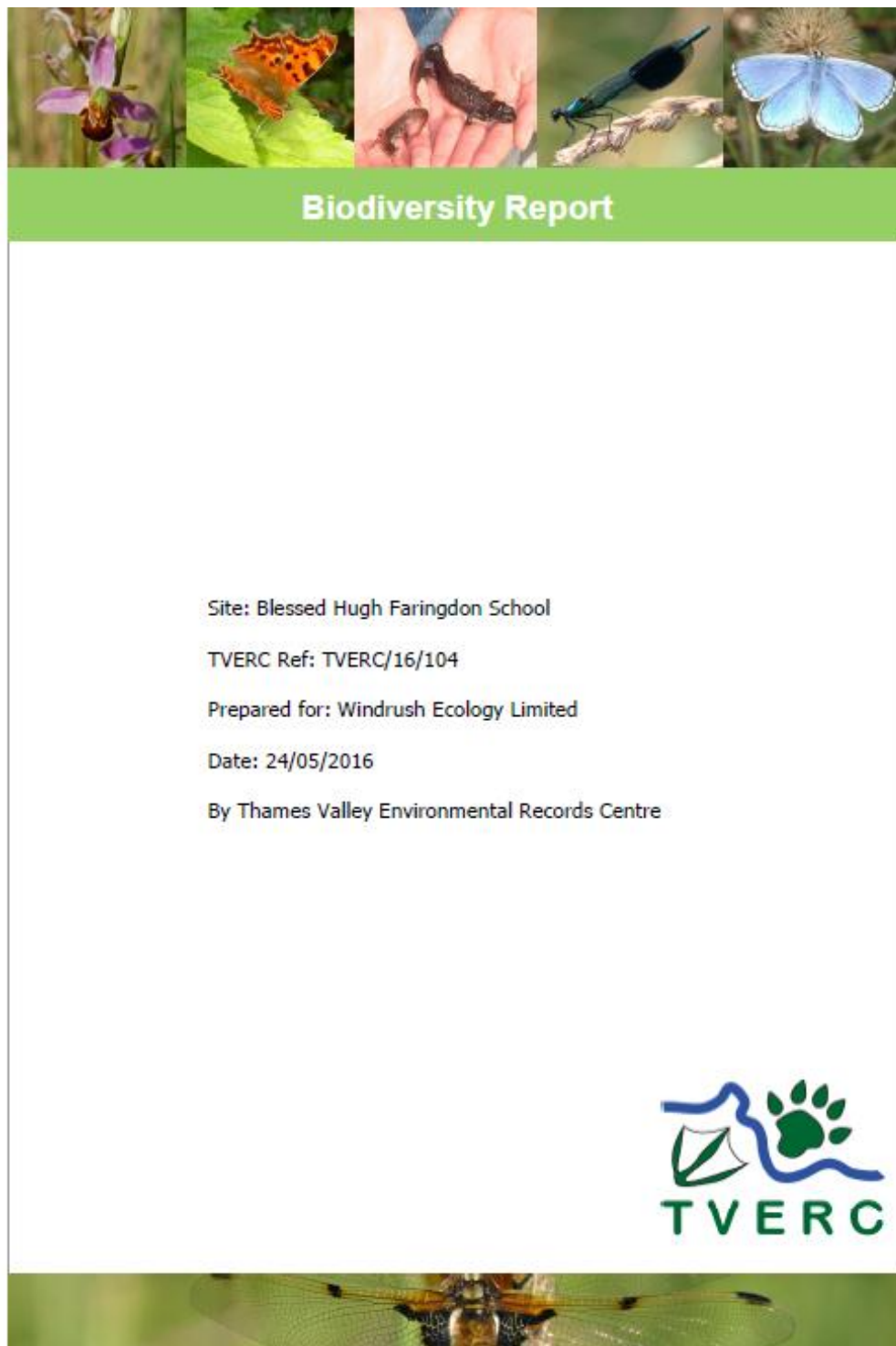


Ordnance Survey map showing the location of the school (circled in red) within the local area. Source: www.bing.com/maps/

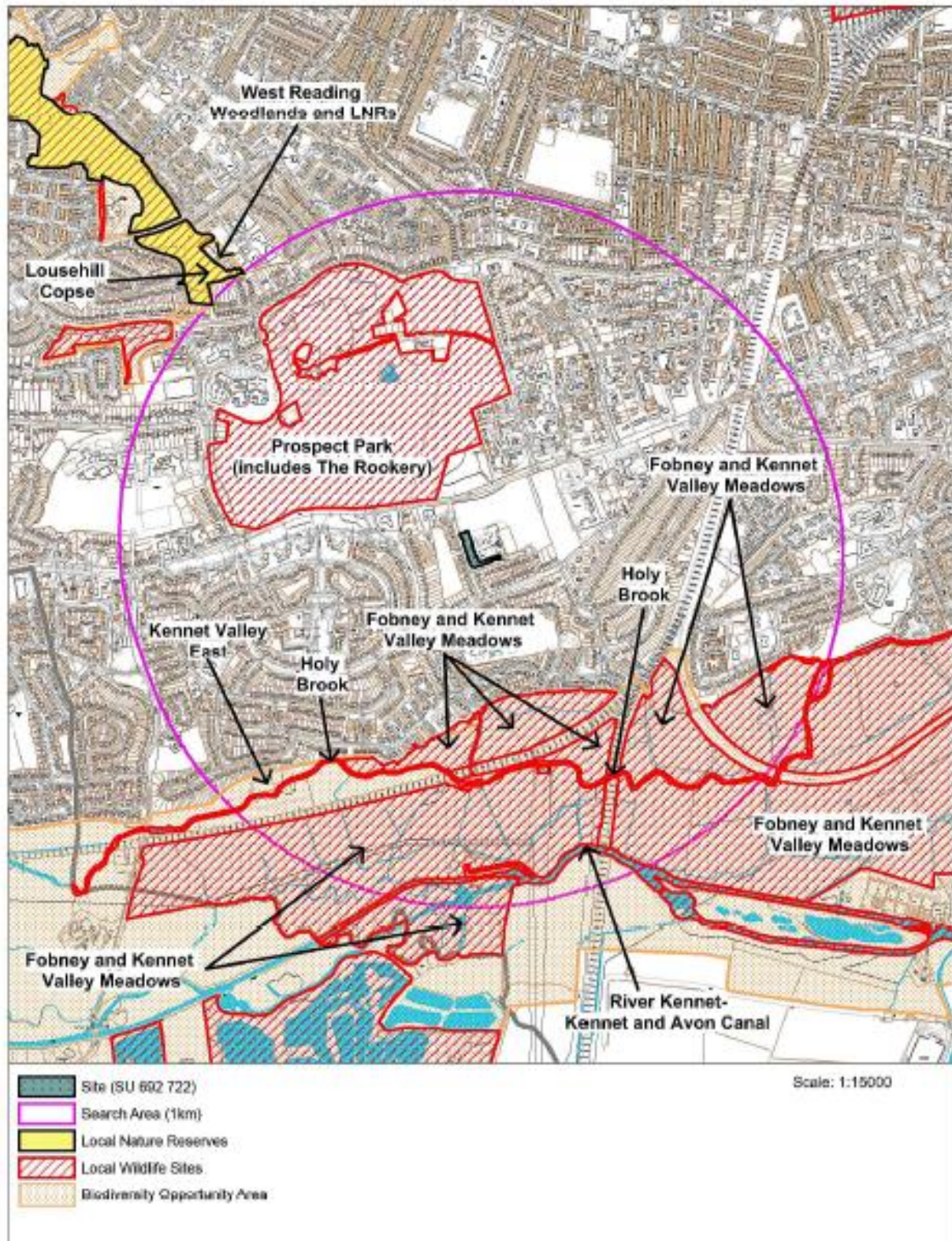
9 Appendix 3. Existing Site Plan



10 Appendix 4. TVERC Data Search Results



Blessed Hugh Faringdon School Designated Wildlife Sites Map



Berkshire Local Wildlife Site Citation**LOUSEHILL COPSE**

Site Code: SU67W02

Grid Reference: SU680734

Area (ha): 13.16

Local Authority: Reading

Last Survey Date(s): 24th-28th May 2006

Date Selected or Reconfirmed: 2007

Site Description

This site consists of three parcels of broadleaved semi-natural woodland separated by roads within the urban area of Reading. The woodland lies on an escarpment with London Clay overlying Reading Beds and there are some steep slopes dipping north-east. The clays have been worked for bricks and tiles in this area and the woodlands contain excavations indicating this past use. The site part of the West Reading Woodlands Local Nature Reserve although there are a few minor differences in boundaries.

The largest and central is the most diverse in terms of structure and botanical species and has areas of coppice and small streams, a pond and an associated wet woodland flora. The woodland is mainly dominated by oak with ash, wild cherry and birch. There are small patches of wet woodland with alder and willow associated with the streams. Part of the site has many horse chestnut and lime and there are patches of young secondary woodland. Together the three areas contain some important and locally scarce plant species which indicate a long continuity of woodland. These include ramsons, soft shield-fern, hard shield-fern and scaly male-fern and opposite-leaved golden-saxifrage

The three areas are a Local Nature Reserve and are managed partly by local volunteers and they are an important local amenity. Two of the parcels are well-used by the public and have many paths.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Lowland Mixed Deciduous Woodland, Wet woodland

LEGALLY PROTECTED SPECIES:

SECTION 41 SPECIES OF PRINCIPAL IMPORTANCE: song thrush (1994)

RED DATA BOOK (RDB) SPECIES: none recorded

NATIONALLY SCARCE (NSC) SPECIES: none recorded

BIRDS OF CONSERVATION CONCERN (BoCC) RECORDED:

Red List Species: marsh tit (1994), song thrush (1994)

Amber List Species: stock dove (1994), house martin (1994), dunnock (1994)

Berkshire Local Wildlife Site Description**FOBNEY & KENNET VALLEY MEADOWS**

Site Code: SU77A03

Grid Reference: SU701714

Area (ha): 140.4

Local Authority: Reading

Last Survey Date(s): 2004

Date Selected or Reconfirmed: 2004

Site Description

A large area of permanent pasture with some wet grassland and patches of swamp vegetation. The site has a good series of ditches with tall wetland and aquatic species and a small area of woodland. Species found along the ditches include common reed, common marsh bedstraw, yellow flag iris, purple loosestrife, water mint, hemlock water-dropwort, fennel pondweed, marsh woundwort and lesser water parsnip. Dragonflies and damselflies seen here include the common darter, banded demoiselle and common hawker. The meadows flood regularly in winter providing an attractive area for overwintering wildfowl.

There are also areas of unmanaged grassland with areas of swamp, scrub and tall herb vegetation, including the recently added areas along Rose Kiln Lane. There is a backwater of the River Kennet near Southcote Lock which has been recorded as being rich in aquatic species including the rare river water-dropwort, fennel pondweed, flowering rush, and spiked water milfoil.

Berkshire Local Wildlife Site Citation**HOLY BROOK**

Site Code: SU77B01

Grid Reference: SU703718

Length (km): 4.5

Local Authority: Reading Borough Council

Last Survey Date(s): 11/06/2012

Date Selected or Reconfirmed: 2014

Site Description

This site was originally designated as a number of separate sites which have now been combined. These were the stretch south of Berkley Avenue and the stretch between Berkley Avenue and the Reading Inner Distribution Road. The Holy Brook is a stream that carries water from and emptying back into the River Kennet, a chalk river. The western end of the site lies just west of the Burghfield Road although the brook originates further west near Theale. The central section it flows through the Fobney and River Kennet Meadows. To the east its course is adjacent to housing and through commercial and industrial areas. The site ends at the Reading Inner Distribution Road. Here the Brook is canalised within concrete revetments which are absent in the rest of its length. Alder and willows line the banks and a variety of wetland species are found along the banks with stands of reed sweet-grass, hemlock water-dropwort and occasional water dock. Water-crowfoots (*Ranunculus aquatilis/fluitans*) were recorded in the Brook in 1987 and 1994. A number of notable invertebrates have been recorded in Holy Brook and water vole has been recorded in the central and western sections.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Chalk river.

PROTECTED SPECIES:

SECTION 41 SPECIES OF PRINCIPAL IMPORTANCE:

RED DATA BOOK (RDB) SPECIES RECORDED:

NATIONALLY SCARCE (NSC) SPECIES RECORDED:

BIRDS OF CONSERVATION CONCERN (BoCC) RECORDED:

Red List Species: House sparrow

Amber List Species: Mute swan

TYPICAL SPECIES OF WETLAND HABITATS (2004): Common alder, reed sweet-grass, water dock, goat willow, crack willow, common osier, hemlock water-dropwort (7).

Berkshire Local Wildlife Site Citation**PROSPECT PARK (INCLUDES THE ROOKERY)**

Site Code: SU67W01

Grid Reference: SU68827285

Area (ha): 24.1

Local Authority: Reading

Last Survey Date(s): 25/6/2010

Date Selected or Reconfirmed: 23/4/2012

Site Description

This site consists of Prospect Park and includes The Rookery. Prior to the notification of Prospect Park the Rookery was already a Local Wildlife Site.

The Rookery is a small area of lowland mixed deciduous woodland sitting on a small plateau raised above the surrounding Prospect Park to the south. The canopy is largely oak dominated and even aged in some areas the canopy is joined by occasional other trees including ash, horse chestnut, beech, sycamore and common lime. The understorey has occasional hazel, blackthorn and hawthorn, but is largely sparse and open. The ground flora is dominated by creeping soft grass, areas of bramble and common nettle and areas of cow parsley and cleavers with only the occasional species of interest including locally abundant patches of bluebell, locally frequent wood anemone and rare wood millet and wood melick. 14 Ancient Woodland Indicators species found overall of which 12 were found during the 2010 survey.

Prospect Park is an historic parkland site in the heart of Reading mainly consisting of closely mown amenity grassland and associated public amenities including a bowling green, pavilion, car parks, toilets, playground, tennis courts and football pitches. Throughout the grassland are a significant number of mature and veteran trees of a variety of species, with a number of dead wood habitat types present. The site is bounded to the south by hedgerows and areas of scrub and scrub woodland. The site contains a species poor shaded pond.

There is an area of grassland with species typical of lowland meadow habitat present on the slopes below the mansion/pub with occasional herb of yellow rattle, common bird's foot trefoil, black knapweed and common sorrel. The grassland continues to the west of the mansion/pub which maybe a remnant of a once larger orchard given the two old apple trees present.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Lowland Mixed Deciduous Woodland, Lowland wood pasture and parkland.

SECTION 41 PRIORITY SPECIES OF PRINCIPAL IMPORTANCE: Common Toad (1986), Stag Beetle (1997), Grass Snake (1986), Noctule Bat (1985), House Sparrow (1997), Song Thrush (1997, 2000) and Cinnabar (1997)

LEGALLY PROTECTED SPECIES: Bluebell (2010), Common Toad (1986), Bluebell (1997), Stag Beetle (1997), Brambling (1985), Redwing (1985, 1997), Fieldfare (1985), Grass Snake (1986), Noctule (1985, Pipistelle (1985) and Common Frog (1986 and 2007)

RED DATA BOOK SPECIES: A Mirid Bug, *Lygus pratensis* (1997)

NATIONALLY SCARCE or NOTABLE SPECIES: Nationally Notable B - Stag Beetle (1997)

BIRDS OF CONSERVATION CONCERN:

Red list: Herring Gull (1985), House Sparrow (1997), Satrling (1997), 1994), Redwing(1985, 1997), Song Thrush (1997, 2000) and Fieldfare (1985)

Amber list: Mallard (1997), Kestrel (1997), Black Headed Gull (1997, 1985), Willow Warbler (1985), Green Woodpecker (1997, 1985), Dunnock (1997), Hedge Accentor (1985, 1994) and Mistle Thrush (1997)

TYPICAL SPECIES OF HABITAT:

Ancient Woodland: Field Maple (1986, 2010), Wood Anemone (2010), Hairy Brome (2010), Wood Sedge (2010), Giant Fescue (1986, 1997, 2010), Creeping Soft Grass (2010), Bluebell (1997, 2010), Holly (1986, 1997, 2010), Wood Melick (1986, 1997, 2010), Wood Millet (1986, 2010), Wild Cherry (1986, 1997, 2010), Field Rose (2010), Goldenrod (1997) and Bush Vetch (1986)

Lowland Meadow: Meadow Foxtail (1997, 2010), Sweet Vernal Grass (1997, 2010), Black Knapweed (1997, 2010), Crested Dog's Tail (2010), Red Fescue (1997, 2010), Meadowsweet (1997), Lady's Bedstraw (2010), Autumn Hawkbit (1997), Rough Hawkbit (1997, 2010), Oxeye Daisy (2010), Common Bird's Foot Trefoil (1997, 2010), Yellow Rattle (2010), Quaking Oat Grass (2010) and Yellow Oat Grass (2010).

Berkshire Local Wildlife Site Citation**RIVER KENNET/KENNET AND AVON CANAL**

Site Code: SU77A02

Grid Reference: SU685709 – SU713719 Area (ha):

Local Authority: Reading

Last Survey Date(s): May 2004

Date Designated or Reconfirmed: 2004

Site Description

A section of the River Kennet and the Kennet and Avon Canal from near Burghfield Bridge, south-east of Reading, to Waterloo Meadows adjacent to Edgar Road near the centre of Reading. The River Kennet is one of the best examples of a chalk river nationally, and is an UK BAP Priority Habitat. The Kennet & Avon Canal section is also fed by water from the River Kennet and is also calcareous in nature.

SECTION 41 HABITAT(S) OF PRINCIPAL IMPORTANCE: Chalk river.

PROTECTED SPECIES: Water vole (2000), Freshwater crayfish (1979), Bluebell (2004)

SECTION 41 SPECIES OF PRINCIPAL IMPORTANCE: Water vole (2000), Freshwater crayfish (1979)

RED DATA BOOK (RDB) SPECIES RECORDED: Freshwater crayfish (1979),

NATIONALLY SCARCE (NSC) SPECIES RECORDED: Whorled water-milfoil (1985), River water-dropwort (1985), Chives (1985), Beautiful demoiselle (local - 2004).

BIRDS OF CONSERVATION CONCERN (BoCC) RECORDED:

Red List Species:

Amber List Species: Green woodpecker, mute swan, cuckoo.

TYPICAL SPECIES OF WETLAND HABITAT: Common alder, fool's water-cress, winter-cress, cuckooflower, lesser pond-sedge, marsh thistle, hemp agrimony, meadowsweet, floating sweet-grass, reed sweet-grass, yellow flag iris, soft rush, hard rush, purple loosestrife, water mint, water forget-me-not, water chickweed, amphibious bistort, butterbur, canary reed-grass, common reed, lesser spearwort, celery-leaved buttercup, clustered dock, water dock, goat willow, grey willow, crack willow, common osier, water figwort, branched bur-reed, marsh woundwort, greater reedmace, common valerian, brooklime, hemlock water-dropwort (36).

Kennet Valley East

The Kennet Valley from Newbury to Reading extending to include large areas of gravel pits in the east. The area includes all the area in the valley covered by the West Berkshire Living landscape Project. Also includes the lower section of the Enborne Valley extending to include the valley of a tributary stream at Ashford Hill.

Geology: this area lies on the alluvium and River Terrace sand and gravel.

Topography: flat riverside land

Biodiversity:

- **Chalk River:** The River Kennet is an important chalk river and is notified as an SSSI as far as Woolhampton.
- **Reedbeds:** This area supports the most extensive areas of reedbed habitat in Berkshire including the SSSI and LNR at Thatcham and the SSSI at Woolhampton.
- **Fen:** There are some areas of tall fen habitat especially near Thatcham as well as areas within gravel pits in the east and in some of the meadows. There are also areas in the valley at Ashford Hill.
- **Wet woodland:** There are patches of willow dominated woodland.
- **Lowland meadow:** the most important area is at Ashford Hill where the valley supports a diversity of lowland meadow and fen habitat.
- **Wet grassland:** there are remnant areas of wet grassland throughout the valley.
- **Standing water:** The extensive gravel pits in the east provide important habitat for birds. Hosehill Lake is a Local Nature Reserve. Aldermaston Gravel Pit is an SSSI and Nature Reserve. The associated fen, scrub and woodland habitat adds greatly to the diversity of the area. The Kennet and Avon Canal runs the whole length of the area.
-

Geodiversity: Brimpton Gravel Pit has important geological exposures.

Access: The canal provides the main focus of access, while the are accessible Local Nature Reserves at Thatcham and Hosehill Lake near Theale.

Targets and Opportunities: River management, restoration and protection. Management and re-creation of reedbed and fen. Management of gravel pits and associated habitats. Potential for some nature conservation after use in future mineral extraction. Management, restoration and re-creation of lowland meadow and wet grassland habitat. The west of the area is within the West Berkshire Living Landscape boundary.

West Reading Woodlands and LNR

An urban fringe and urban site. In the west it encompasses the escarpments at the edge of the Pang Valley where there is much woodland and land owned by Englefield Estate. The rest of the area includes the Reading Woodlands Local Nature reserve, a group of mainly wooded sites within Tilehurst as well as a number of other woodlands in this area.

Joint Character Area: Thames Valley. The northern sections fall into The Chilterns.

Geology: The western slopes are chalk with Reading beds to the south and a small area of London Clay clay, silt and sand near Calcot. At the top of the slope there are more areas of Reading Beds with some glacial Winter Gravel. The rest of the area is a mixture of the same London Clay Formation, Reading Beds, a little Winter Gravel and at McIlroy Park the glacial Black Park Gravel Formation.

Topography: There is a west facing escarpment in the west while most of the areas in Tilehurst area on the slopes of the plateau in the area

Biodiversity:

- **Lowland Mixed Deciduous Woodland:** There are extensive areas of ancient woodland on the western escarpment and a number of sites located within Tilehurst which are form the West Reading Woodlands LNR.
- **Parkland:** There is a small area of parkland at Purley Hall near Pangbourne.

Geodiversity: Includes the exposures at Pincent's Kiln SSSI.

Access: A number of accessible LNR sites in an urban location. A number of bridleways in the west including parts of the Berkshire Circular Routes.

Targets and Opportunities: woodland management, parkland management, potential for restoration of grassland habitats on the steeper slopes in the west in particular. The LNR provide good opportunities for woodland management within an urban setting. Much of the western area is owned by the Sulham Estate who are keen to enter the HLS scheme at the time of writing.

11 Appendix 5. Protected/Notable Species Records

See Appendix 5 (separate document)