


BE **Brooks Ecological** Ltd

*Cost effective, grounded advice*

**Ecological Assessment  
Willowgarth High School  
Grimethorpe**

Report reference: BE-R-0938-01  
April 2011

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Report Title:	Ecological Assessment Willowgarth High School, Grimethorpe
Report Reference:	BE-R-0938-01
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### Summary Statement

The site has been found to be of generally low ecological value, based on its supporting a very limited range of common species poor habitats.

The site will require further surveys to properly assess its status in relation to bats, and amphibians.

General recommendations are included in terms of preventing impacts on nesting birds and the control of invasive plant species.

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## Introduction

Brooks Ecological Ltd was commissioned to undertake an Ecological Assessment of Willowgarth High School, Grimethorpe (SE 412 101).

### *Site Proposals*

The proposals involve the demolition of existing buildings on site to make way for new development. Currently the school sports field and an area of pasture to the south east of the site are not included within the plans.

### *Potential impacts*

The following potential impacts are highlighted and the report which follows sets out the significance of these impacts relative to the ecological value of the site and the potential presence of protected or notable species:

- Clearance of scrub vegetation;
- Removal of trees;
- Loss of areas currently occupied by habitat to built development; and
- Demolition of existing buildings.

## Desk Study

A desk study was carried out to identify species or habitats that are considered important in a local context and to identify any species recorded locally that may be associated with the application site. This information can be used to help target groups that need to be considered in more detail in order to identify the ecological baseline for the application site.

## Designated Sites

A search of the MAGIC website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Scientific Interest [SSSI's]) as well as many non-statutorily listed habitats (e.g. Ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats.

Two designated sites are located within 2 km of the proposal site.

1. A Site of Scientific Interest (SSI) occurs within 2 km of the site, namely: Carlton Main Brickworks. This is located 1752 m south of the site and is designated for its earth heritage and therefore development at Willowgarth will not have any adverse impacts on this site.
2. A Local Nature Reserve (LNR) occurs within 2 km of the site, namely West Haigh Wood, which is located c.1765 m south east of the proposal site. This site is important woodland for the study and conservation of wildlife at a local or district context. There is no information which describes this site further in the records. These interests would not be adversely affected by the proposed development of the application site.

### **Aerial Photography and Detailed Map Study**

Aerial photographs published on commonly used websites were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This approach can be very useful in determining if a site is potentially a key part of a wider wildlife corridor or an important node of habitat in an otherwise ecologically poor landscape. It can also identify potentially important faunal habitat (in particular ponds) which could have a bearing on the ecology of the application site. Ponds may sometimes not be apparent on aerial photographs so we also refer to close detailed maps that identify all ponds issues and drains. We use Promap Street + scale maps for this purpose.

Willowgarth High School is located on the northern edge of Grimethorpe with the nearby village of Brierley approximately 200 m to the north. The surrounding area is dominated by arable farming, with a few small scattered blocks of woodland, the closest of which, Tom Bank Wood, borders the site to the east. Some of the fields are bordered by hedgerows, but many appear to be either gappy or remnant sections, with few mature and continuous hedges.

There are no large watercourses near the site, but numerous drains and issues run through many of the adjacent fields with the closest approximately 140 m to the west. Approximately 250 m to the south east lie the first of a series of large ponds, while a smaller pond is located 310 m to the south west.

### **English Nature Natural Area**

The site falls within *Natural Area 24 Coal Measures*

Based on shale and sandstone deposits natural area 24 is characterized by dense population centres such as Sheffield, Leeds and Wakefield. The area's ecology reflects the changing geology which underlies it and is typified by mixed

agriculture, acidic / ancient woodlands, valley wetlands and acidic / neutral grasslands.

There are no nationally important conservation priorities. Local Conservation priorities for the area are;

- Acid Grassland
- Fen, Marsh and Swamp
- Lowland Heathland
- Neutral Grassland
- Rivers and Streams
- Standing and open water
- Wet Woodland

The site contains an ornamental pond, the value of which is discussed in the relevant section of the report.

### Local Biodiversity Action Plan

The local BAP is 'Barnsley Biodiversity Action Plan'. Under this BAP plans have been created for the species or groups listed in Table 1.

**Table 1: Species Action Plans**

Species/group	Potentially on site	Likely to be significantly affected?
Great Crested Newt ( <i>Triturus cristatus</i> )	Yes	Possibly
Skylark ( <i>Alauda arvensis</i> )	No	N/A
White-clawed Crayfish ( <i>Austropotomobius pallipes</i> )	No	N/A
Grey Partridge ( <i>Perdix perdix</i> )	No	N/A
Twite ( <i>Carduelis flavirostris</i> )	No	N/A
Little Ringed Plover ( <i>Charadrius dubius</i> )	No	N/A
Bluebell ( <i>Hyacinthoides non-scripta</i> )	No	N/A
Glow Worm ( <i>Lampyris noctiluca</i> )	No	N/A
Barn Owl ( <i>Tyto alba</i> )	No	N/A
Lapwing ( <i>Vanellus vanellus</i> )	No	N/A
Water Vole ( <i>Arvicola terrestris</i> )	No	N/A
Otter ( <i>Lutra lutra</i> )	No	N/A
Bats	Yes	Possibly
Hedgehog ( <i>Erinaceus europaeus</i> )	Yes	No
Kestrel ( <i>Falco tinnunculus</i> )	Yes	No
Tree Sparrow ( <i>Passer montanus</i> )	Yes	No
Bullhead ( <i>Cottus gobio</i> )	No	N/A
Dingy Skipper ( <i>Erynnis tages</i> )	No	N/A
Salmon ( <i>Salmo salar</i> )	No	N/A

Action plans have also been produced for the habitats in Table 2, below.

**Table 2: Habitat Action Plans**

Habitat	Present on site	Likely to be significantly affected?
Upland Oakwood	No	N/A
Lowland Mixed Deciduous Woodland	No	N/A
Wet Woodland	No	N/A
Wood Pasture and Parkland	No	N/A
Arable Field Margins	No	N/A
Floodplain Grazing Marsh	No	N/A
Lowland Meadows	No	N/A
Lowland Dry Acidic Grassland	No	N/A
Lowland Heathland	No	N/A
Upland Heathland	No	N/A
Blanket Bog	No	N/A
Ponds	Yes	Yes
Purple Moor Grass and Rush Pasture	No	N/A
Reedbeds	No	N/A
Rivers	No	N/A
Open Mosaic Habitats on Previously Developed Land	No	N/A
Hedgerows	Yes	Possibly

There is a single ornamental pond within the school grounds and a number of hedgerows, chiefly on the boundary of the site. The value of these habitats is discussed later in the report. None of the other habitats are represented.

## Records

The Barnsley area does not have any dedicated ecological record holder at this time. Records of any protected or otherwise notable species were collected from the National Biodiversity Network (NBN) Gateway website.

Records were received of water vole, bats, brown hare, harvest mouse, hedgehog, great crested newt, grass snake, small heath, kingfisher and a range of bird species from within the 10 km search area. No grid references or other indication of the exact location of any of these records were provided. However, the closest bat records are for common pipistrelle species approximately 1.5 km to the south of the site while great crested newts are recorded at Goldthorpe, around 8 km to the south east as well as at a site near High Ackworth some 5 km to the north. There are no records for tree sparrow within 10 km of the site.

## Phase 1 Habitat Survey

### Survey Method

The survey was carried out on the 12<sup>th</sup> of April 2011 by an experienced field ecologist and member of the Institute of Ecology and Environmental Management (IEEM).

The survey followed a Phase 1 habitat survey methodology (JNCC, 1993) and was extended to assess faunal potential. This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). Evidence of fauna and faunal habitat is also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the Guidelines for Baseline Ecological Assessment (IEA, 1995).

## **Results**

The application site is made up predominately of school buildings and associated grounds and playing fields. It also includes small pockets of rough pasture located at the southern boundary of the school.

The following habitats were identified:

- Buildings
- Hardstanding
- Amenity grassland
- Shrub planting
- Hedgerow
- Scrub
- Trees
- Rough pasture

Water bodies on site comprise:

- Ornamental pond

### *Buildings*

This includes the complex arrangement of high school buildings and will be dealt with in detail in the bat roost potential section of the report.

### *Hardstanding*

The site includes areas of tarmaced driveways, paved paths as well as playgrounds and tennis courts. As the school is still occupied, these areas are well used and currently support no vegetation.

### *Amenity grassland*

The northern section of the site is made up of extensive areas of playing fields, regularly mown and dominated by a limited range of common grasses. Abundant species include perennial rye-grass (*Lolium perenne*), meadow grasses (*Poa* spp.), white clover (*Trifolium repens*), dandelion (*Taraxacum* agg.), ribwort plantain (*Plantago lanceolata*) and the common moss *Rhytidiadelphus squarrosus*.



**Figure 1**

View of sports field looking south

Beyond the sports fields and surrounding the buildings and playgrounds, the ground has been less trampled or mowed less frequently which has resulted in a wider range of forb species including common field speedwell (*Veronica persica*), cow parsley (*Anthriscus sylvestris*), groundsel (*Senecio vulgaris*), mugwort (*Artemisia vulgaris*) red dead nettle (*Lamium album*) and sun spurge (*Euphorbia helioscopia*). Closer to the school boundary, stands of cocksfoot are established along with nettle (*Urtica dioica*), hedge garlic (*Alliaria petiolata*) and small amounts of bramble (*Rubus fruticosus* agg.)



**Figure 2**

Area of grassland at eastern boundary

### *Shrub planting*

As part of the landscaping of the site, a range of shrubs have been planted around the buildings though most are located close to the school entrance at the western end and around a small paved courtyard surrounding by classrooms.



**Figure 3**

Landscape planting situated by the entrance of the school

Species include spirea (*Spirea arguta*) weigela (*Weigela sp.*) periwinkle (*Vinca major*), holly (*Ilex aquifolium*), butterfly bush (*Buddleia davidii*), roses (*Rosa sp.*), senecio (*Senecio sp.*), cotoneaster (*Cotoneaster sp.*) and barberry (*Berberis sp.*). Planting also includes a range of dwarf conifers including juniper (*Juniperus sp.*) and false cypress (*Chamaecyparis sp.*). These areas are generally well maintained with few non woody species established although small patches of common dog violet (*Viola riviniana*) and herb Robert (*Geranium robertianum*) are found growing below the shrubs. A range of tree saplings are also included as apart of the school's landscaping and these include alder (*Alnus glutinosa*), field maple (*Acer campestre*), ornamental cherry (*Prunus sp.*), hazel (*Corylus avellana*) and rowan (*Sorbus aucuparia*). These bands of saplings are also located at the northern side of the school buildings as well as in a line across a section of the sports field.

Within a separately fenced area currently used as a children's centre additional landscaping includes small vegetable patches and areas of spring bulb planting within the amenity grassland.



**Figure 4**

Gardens forming part of the children's centre

### Hedgerow

A small ornamental hedge containing primarily beech (*Fagus sylvatica*) with occasional hawthorn (*Crataegus monogyna*) and forsythia (*Forsythia sp.*) is located close to school buildings and forms part of the landscaping of the site.

**Figure 5**

Ornamental hedge within the school boundary

Along the western boundary, adjoining the sports fields is a dense heavily managed hedge made up primarily of hawthorn with occasional wych elm (*Ulmus glabra*).

**Figure 6**

View of hedgerow that borders sports fields at the western boundary of the school.

At the south western corner of the school grounds, bordering areas of grassland and car parking, a less managed stretch of hawthorn hedge includes a slightly more diverse mix of species including blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), dog rose (*Rosa canina*), Japanese rose (*Rosa rugosa*) and field maple.

**Figure 7**

View of hedgerow adjoining car park at south western corner of the site

A stretch of hawthorn hedge is also found within the pasture to the south of the school although most of this borders the site, separating it from the adjoining housing estate and does not appear to fall within the application boundary. Some scattered fragments of hawthorn with occasional bramble and elder are located at the southern boundary of the pasture where it meets another area of rough grassland.

**Figure 8**

View of hedgerow at southern edge of site within area not included within development proposals

None of these hedges appeared to be particularly old or contain a diverse field layer.

### Scrub

This occupies a relatively small area of the overall site and is limited to boundaries or areas beneath trees where mowing has not taken place. Bramble is the dominant species along with nettle (*Urtica dioica*), hogweed (*Heracleum sphondylium*) and hedge bindweed (*Calystegia sepium*).

### Trees

Landscaping of the site has included the planting of a number of trees arranged mainly around the southern boundary of the school. Species include ash (*Fraxinus excelsior*), beech, horse chestnut (*Aesculus hippocastanum*), birch (*Betula sp.*), alder, cherry, sycamore (*Acer pseudoplatanus*), weeping willow (*Salix chrysocoma*) and lime (*Tilia sp.*).



**Figure 9**

Short line of planted limes in grassland to the south of the school

Although well established, none of the trees have reached full maturity and many specimens appeared to have been recently planted.

**Figure 10**

Example of tree planting found within the school grounds at the south western end of the site.

### *Rough pasture*

Located directly to the south of the school grounds is an area of grassland currently used by dog walkers and as grazing for horses. The area is relatively uniform although only the western section of grassland is currently included as part of the development. The habitat is dominated by perennial rye grass with other grasses including Yorkshire fog (*Holcus lanatus*), cocksfoot (*Dactylis glomerata*) and red fescue (*Festuca rubra*).

**Figure 11**

View of pasture facing west

Forb species include dandelion (*Taraxacum agg.*), creeping buttercup (*Ranunculus repens*), ribwort plantain, greater plantain (*Plantago major*) and common sorrel (*Rumex acetosa*). Grazing animals are tethered, resulting in a patchwork of closely grazed patches along with less disturbed areas. This has resulted in some areas of greater diversity with examples of common bird's foot trefoil (*Lotus corniculatus*), common knapweed (*Centaurea nigra*), meadow vetchling (*Lathyrus pratensis*), lesser trefoil (*Trifolium dubium*) and creeping thistle (*Cirsium arvense*). The pasture is bordered by domestic gardens to the south and west with the remains of a post and wire fence. Directly beyond this is a hawthorn hedgerow which appears to be outside the site boundary though within its shade dense stands of nettle with occasional bramble are now established.

### *Ornamental Pond*

An ornamental pond is located close to the reception area of the school, surrounded by areas of hard standing and buildings. Although most of the sides are vertical concrete, a small area of banked earth is found along one side which would provide easy access to the pond for amphibians.



**Figure 12**

Ornamental pond at school reception

Emergent vegetation includes bog bean (*Menyanthes trifoliata*), marsh marigold (*Caltha palustris*) and pondweeds (*Potamogeton sp.*)

## Fauna

### Bats

None of the trees on site are mature enough to offer any features such as rot holes, inclusions etc. suited to bat roosting. The site is likely to provide good foraging for local bat populations given the small wooded areas and lines of hedgerows. The potential for buildings to support bats is discussed in the bat roost potential section of the report.

### Amphibians

The site contains a single pond which could provide suitable habitat for amphibians including the protected species great crested newt *Triturus cristatus*. Although the immediate area is dominated by buildings, there is potentially suitable terrestrial habitat within the site and given that the pond has been established for some years, it is not possible to rule out the presence of great crested newt on the site without the use of further surveys.

An additional collection of ponds is located outside the site approximately 220 m from the site boundary, though 250 m from the land included as part of the development. These ponds could provide suitable habitat for great crested newt and are located adjacent to areas of undeveloped land that would provide good terrestrial habitat for any newts using the ponds.



**Figure 13**

Pond located outside the development boundary viewed from the south west

Given their location, it would seem very unlikely that great crested newts, if present, would travel to use the limited terrestrial habitat offered by the school grounds, while far more suitable areas are located closer to the ponds. Given

this, it is felt that additional surveys on ponds outside the site boundary should not be required.

There is an additional small pond located 310 m to the south west of the site. This is separated from the school by areas of ploughed fields, housing and a main road making it highly unlikely that if amphibians are present in this pond they would access any terrestrial habitat on the site.

### *Reptiles*

The site is made up largely of well managed areas which are subject to high levels of disturbance. The only marginally suitable habitat is located at the eastern side of the pasture which is not currently scheduled for development. However, although this area does contain some very limited habitat it is considered highly unlikely that reptiles will be present due to the regular use of the area by local people both as a thoroughfare and for walking dogs. The closest reptile record is for grass snake is at South Emsall over 6 km to the east.

### *Birds*

It is likely that the hedgerows on the site along with the denser patches of scrub along the margins of the pasture will provide nesting for a range of common bird species. Birds may also make use of some of the more mature trees on the site.

### *Protected mammals*

With the possible exception of bats, the site does not offer any suitable habitat for any protected species of mammals. No evidence of badger was found on the site.

### *Invasive Plants*

Two species listed on Schedule 9 (Part 2) of the Wildlife and Countryside Act (1981) were found on site; Japanese Rose (*Rosa rugosa*) is found within the hedgerow at the southern boundary of the site while fishbone cotoneaster (*Cotoneaster horizontalis*) is included within landscaping in front of the school reception. Care should be taken during any works on site to ensure that these species are not caused to spread beyond the site boundary or in relation to its disposal off-site – both would constitute a potential offence under this recently updated legislation.

The location of these plants is shown on plan BE-D-0938-01.

## Bat Roost Potential Survey

### Box 1 Legal background

Bats are afforded full protection under The Wildlife and Countryside Act (1981) plus amendments, and the Conservation of Habitats and Species Regulations 2010. Under these Acts it is an offence among others, to recklessly kill, injure or disturb bats. It is also an offence to destroy or obstruct a roost even if bats are not in occupancy at the time of the action.

There are no defences against contravention of the Conservation of Habitats and Species Regulations 2010 which means that it is important for detailed and well designed bat surveys to be carried out, prior to carrying out activities that may impact upon bat roosts such as demolition of buildings or removal of trees.

Where bats are found within a potential development site, a license from Natural England may need to be secured if works that could otherwise contravene legislation are to be carried out. These licences are only issued where Natural England is satisfied that works are unavoidable and would not have a negative impact on the favourable conservation status of bats. A Natural England license requires that the potential development site has full planning permission and that bats were a material consideration of the planning permission.

### Box 2 Bat roosts

Bats roost in buildings and trees in different locations depending upon time of year and environmental factors such as position of the sun, proximity to heat sources and feeding grounds. The following types are commonly referred to:

#### Transitional roosts:

Bats frequently gather early in the season (March to April) before dispersing to summer roosts. Bats can be found in high numbers in these roosts for a very short period. Transitional roosts can also be found shortly before hibernation in August to October when bats (depending upon species) can gather in roosts not used earlier in the season.

#### Maternity roosts:

These are among the most important roosts and are normally occupied from May to August. Depending on the species involved, some maternity roosts can contain a very significant proportion of the local population.

#### Summer (non-breeding) roosts

Small groups of non-breeding female and male bats can gather in these roosts or bats from a local population may choose to roost individually. There are normally a large number of suitable locations for summer non-breeding roosts and these may be routinely used or used only on an occasional basis. Irregularly used summer roosts can be very hard to find without unreasonable survey effort.

#### Mating roosts

Around September bats will gather in roost to mate; these are often in different locations than summer or breeding roosts.

#### Hibernation roosts

As bats in hibernation roosts are highly vulnerable to disturbance and bats can be present in large numbers these are considered to be among the most important bat roosts. Many species of bats roost in large and nationally important hibernation roosts associated with underground sites, many of which are well known and protected. However, the most common bat in the UK (the common pipistrelle) is largely unaccounted for in winter but thought to disperse and roost individually or in small groups in thermally stable cracks and crevices in thick walls or trees.

### Local Status

The application site is within the natural range of species of bats listed in Table 3 below.

**Table 3:** bat species recorded within 100km of the application site

Species	National status
Pipistrelles ( <i>Pipistrellus pipistrellus</i> and <i>P. pygmaeus</i> )	widespread/common
Nathusius' Pipistrelle ( <i>Pipistrellus nathusii</i> )	Widespread/rare
Noctule ( <i>Nyctalus noctula</i> )	widespread/frequent
Leisler's ( <i>Nyctalus leisleri</i> )	widespread/rare
Brown long-eared ( <i>Plecotus auritus</i> )	widespread/common
Natterer's ( <i>Myotis nattereri</i> )	widespread/frequent
Daubenton's ( <i>Myotis daubentonii</i> )	widespread/common
Whiskered/Brandt's ( <i>Myotis mystacinus</i> and <i>M. brandtii</i> )	widespread/scarce
Alcathoe's ( <i>Myotis alcathoe</i> )	Local/unknown

### Method

A thorough daytime inspection of the site was made in April 2011 in order to look for evidence of bats and assess bat roosting potential. Evidence of bats may take the form of droppings, feeding remains, live bats, dead bats, stains on masonry or timber from the oils in bats' fur and claw marks made by bats regularly roosting in the same location.

Bat roosting potential of the building was classified according to the following criteria set out in Table 4 below, developed with reference to the Bat Mitigation Guidelines (2004), Bat Workers Manual (2004) and the Bat Conservation Trust Good Practice Guidelines (2007).

**Table 4:** Bat roosting potential in buildings

Roosting potential	Criteria
Good	Buildings that have many areas suitable for roosting with a large number of potential access points. These are normally in sheltered locations, subject to low variation in temperature. Buildings with good potential could be used for a whole range of roosts including maternity roosts.
Moderate	Buildings with a smaller number of areas suitable for roosting, but still supporting features that could be attractive to bats and potentially support maternity roosts.
Limited	Buildings with limited roosting opportunities. These may be in locations that are subject to wide temperature fluctuations and drafts. They could be used as occasional or transient roosts, but are unsuitable for maternity roosts. Buildings that would otherwise be moderate to good potential but have reduced value due to other factors such as exposed location, separation from nearby foraging, or presence of strong lighting.
Very Limited	Buildings that have no obvious places for bats to roost, but could be used on a sporadic or occasional basis for feeding or solitary day roosting.
None	Buildings which appear unsuitable for roosting bats due to clear lack of roosting spaces such as voids etc and/or absence of suitable access points.

Survey work was carried out by Anne Proud BA (Hons), MSc. Anne has over 5 years experience of carrying out bat surveys in a professional capacity, holds an English Nature scientific licence for all counties of England (20102428) and is an active member of the West Yorkshire Bat Group.

## Results

The buildings on the site are divided into sections for description; these have been marked up on plan BE-D-0938-02.

### *Building 1*

This building is a large sports hall with a single pitched roof. The walls on the east and west elevations are of modern brick construction. These are both in good condition, well sealed throughout and offer no potential access for bats. The northern and southern elevations have three different panels on the walls. At ground level the walls are corrugated metal panels, above these are corrugated plastic panels and finally on the top section of the wall are wooden panels (Figure 14). Some of the wooden panels on the northern elevation are either missing or starting to break away. This has created a number of potential ingress points leading behind the wooden panels. From ground level these gaps do not appear to lead into large voids as timber frame behind the panels block access into any potential void spaces.



**Figure 14**

Building 1: Sports Hall

### *Building 2*

This section is an extension on the southern elevation of the sports hall (Building 1) which has a slightly different construction. The northern elevation has a breeze

block lower wall and glass panel windows above. These are well sealed and offer no access for bats. All of the other walls have a modern brick construction similar to Building 1. On the southern elevation there is a row of windows below the roof and a small boxed eave section. The boxed eave is well sealed apart from a single broken section of plastic panel (Figure 16 below), which could allow access for bats into the boxed eave.



**Figure 15**

Building 2



**Figure 16**

Building 2 showing boxed eaves and broken section of plastic panelling

### *Building 3*

This is a tall single storey construction with a flat roof. The walls are constructed from large pebble dashed concrete panel façades. Between these concrete panel façades are small gaps which lead to a plastic sheet behind. Bats could potentially access between the panels which could possibly hold a large roost. Otherwise these gaps are likely to offer potential roost space for solitary bats on an occasional basis.



**Figure 17**

Building 3

### *Building 4*

This section is connected to Buildings 2 and 6 on the northern and southern elevations respectively. This is a two storey building with a flat roof and modern brick walls with small windows (Figure 18). The entire building is in good condition (apart from peeling paintwork) and is well sealed throughout offering no bat roost potential.

### *Building 5*

This is a small single garage with a flat metal roof and concrete pebble dashed walls (Figure 18). This presents no roosting opportunities for bats.



**Figure 18**

Buildings 4 and 5

*Building 6*

A large modern brick construction with a double pitched metal roof surrounded by a large parapet wall. The entire building is well sealed throughout and presents no roosting opportunities for bats.



**Figure 19**

Building 6

### *Building 7*

This is a single storey extension on the western elevation of building 6. Again this has a modern brick construction with a flat roof. The entire building is well sealed throughout and presents no roosting opportunities for bats.

### *Building 8*

This is a single garage with a shallow single pitched metal roof and concrete breeze block walls. There is a wooden fascia board that surrounds the roof but this is flush to the wall. This building presents no roosting opportunities for bats.

### *Building 9*

This consists of the main entrance building and a large class room section which runs in an L shape in a western direction. This is a large double storey section with a flat roof, modern brick walls and large windows (figure 20). A boxed eave runs around most of this building. But this appears to be well sealed throughout and offers no potential access for bats. The entire building is well sealed throughout and presents no roosting opportunities for bats.



**Figure 20**

Building 9

### *Building 10*

This is a tall one storey classroom connected to the main school building by a small walkway. It has a flat roof and large pebble dashed concrete panel façade walls the same as building 3 (figure 21). Again bats could possibly access behind these concrete panels (figure 22). Whilst these voids do not appear to be large enough to support large roosts they provide potential roost sites for crevice

dwelling bat such as pipistrelles. The height of the building make more detailed inspection impossible and it is possible that some voids may be much larger. This building is located close to the tree line that borders the school ground, which is good foraging habitat for the local bat populations. Overall building 10 offers limited bat roost potential.



**Figure 21**

Building 10



**Figure 22**

Gaps between concrete panel facade on building 10.

### *Building 11*

This is a large two storey building with a flat roof and PVCu glass and plastic panel walls. All the walls are well sealed and offer no roosting opportunities for bats.



**Figure 23**

Building 11

### *Building 12*

This is a single storey building with a similar wall construction to building 9, which is connected on the eastern elevation. It has a metal boxed eave which is well sealed to the wall and roof. The roof is a modern corrugated metal double pitched hipped roof. The entire building is well sealed throughout and presents no roosting opportunities for bats.

### *Building 13*

This is a modern nursery building with a tiled double pitched roof and modern brick walls (figure 24). Below some sections of the roof is a plastic boxed eave but as the building has only recently been built this is in a good condition and offer no potential access for bats. There is a large conservatory extension on the southern elevation. The entire building is well sealed throughout and presents no roosting opportunities for bats.

**Figure 24**

Building 13

#### *Building 14*

This building is a similar construction to buildings 3 and 10, with a flat roof and pebble dashed concrete façade walls. These walls appear to be better sealed and smaller than buildings 3 and 10 and therefore only offer very limited roost potential. An internal inspection of the boiler room in this section found no evidence of bats, but there was potential access through the louvre shutters on the door. This is unlikely as they were very dirty and showed no wear marks which would indicate bat use this feature for access into the boiler room.

#### *Building 15*

This is a two storey brick building, very recently constructed with no crevices with in the brickwork and well sealed eaves beneath a corrugated metal roof. It contains no obvious features which could provide roosting for bats.



**Figure 25**

Building 15

*Building 16*

A small bike shed with a flat metal roof and concrete pebble dashed walls. This presents no roosting opportunities for bats.

## Evaluation and Recommendations

The school as a whole presents a variety of roost potential, this is summarised in table 5 below which should be read in conjunction with plan BE-D-0938-02.

**Table 5** – Roost potential summary.

Building	Roost Potential Assessment	Notes
1	Limited	Accessible wall crevices
2	Very Limited	Missing plastic fascia board
3	Limited	Potential access between concrete panels
4	None	
5	None	
6	None	
7	None	
8	None	
9	None	
10	Limited	Potential access between concrete panels
11	None	
12	None	
13	None	
14	Very Limited	Potential access between concrete panels but only one storey high.
15	None	
16	None	

Where buildings have limited bat roost potential further work should be considered. Various options present themselves in relation to clarifying the status of the school in relation to roosting bats. As a timetable or extent for works is not known various options can be considered at this stage and are outlined below.

Buildings rated as having very limited or no potential in the table above can be demolished or affected with minimal risk to bats – these are marked in green on plan BE-D-0938-01.

Buildings rated as having limited potential as bat roosts carry a low (but still present) risk of affecting bats in their re-development. These are marked in orange on plan BE-0938-02 and include buildings 1,3 and 10. Ideally further work involving emergence survey during bat's active season (May – early September) should be carried out on these buildings before they are affected.

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## Overall Evaluation and Recommendations

The site is assessed as being of relatively low ecological value being largely made up of school buildings and associated grounds which are heavily managed and subject to frequent disturbance. A small parcel of land to the south of the school is also included as part of the proposals; this is a relatively species poor habitat currently used for grazing horses and by local dog walkers. Its loss is unlikely to have an impact on local biodiversity given its current state and the close proximity of much larger areas of similar habitat which do not form part of the proposals.

However, the following recommendations are made in order to ensure that no wildlife legislation is contravened as part of the development:

- Amphibian survey to be carried out on the pond on the site to establish the absence of great crested newt prior to development. Four visits between end March and early June (must include 2 visits in the period mid April to mid June). An additional two visits to determine population size will be required if great crested newts are found.
- Any clearance of trees, hedges or scrub after the 1<sup>st</sup> of March should be preceded by a nesting bird survey to ensure that the Wildlife and Countryside Act (1981) is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.
- Emergence surveys on buildings identified as having limited potential to support bats. These should be carried out between the months of May to August.
- Steps should be taken by the developer to ensure that plants present on the site which are listed under Schedule 9 of the Wildlife and Countryside Act do not spread to any adjoining land.

The UK government's guidance on nature conservation in relation to development (PPS9) makes it clear that opportunities should be sought through their planning system to use development as an opportunity to enhance sites for wildlife where possible and this has been reinforced in The Natural Environment and Rural Communities Act 2006. Although plans for the site are not yet finalised, the retention and improvement of current hedgerows on site would be an effective way of maintaining and enhancing biodiversity on this site. This could include re planting current gaps in hedges with UK native species such as hazel, blackthorn, ash and field maple.

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## References

IEA. (1995). *Guidelines for Baseline Ecological Assessment*. Chapman and Hall

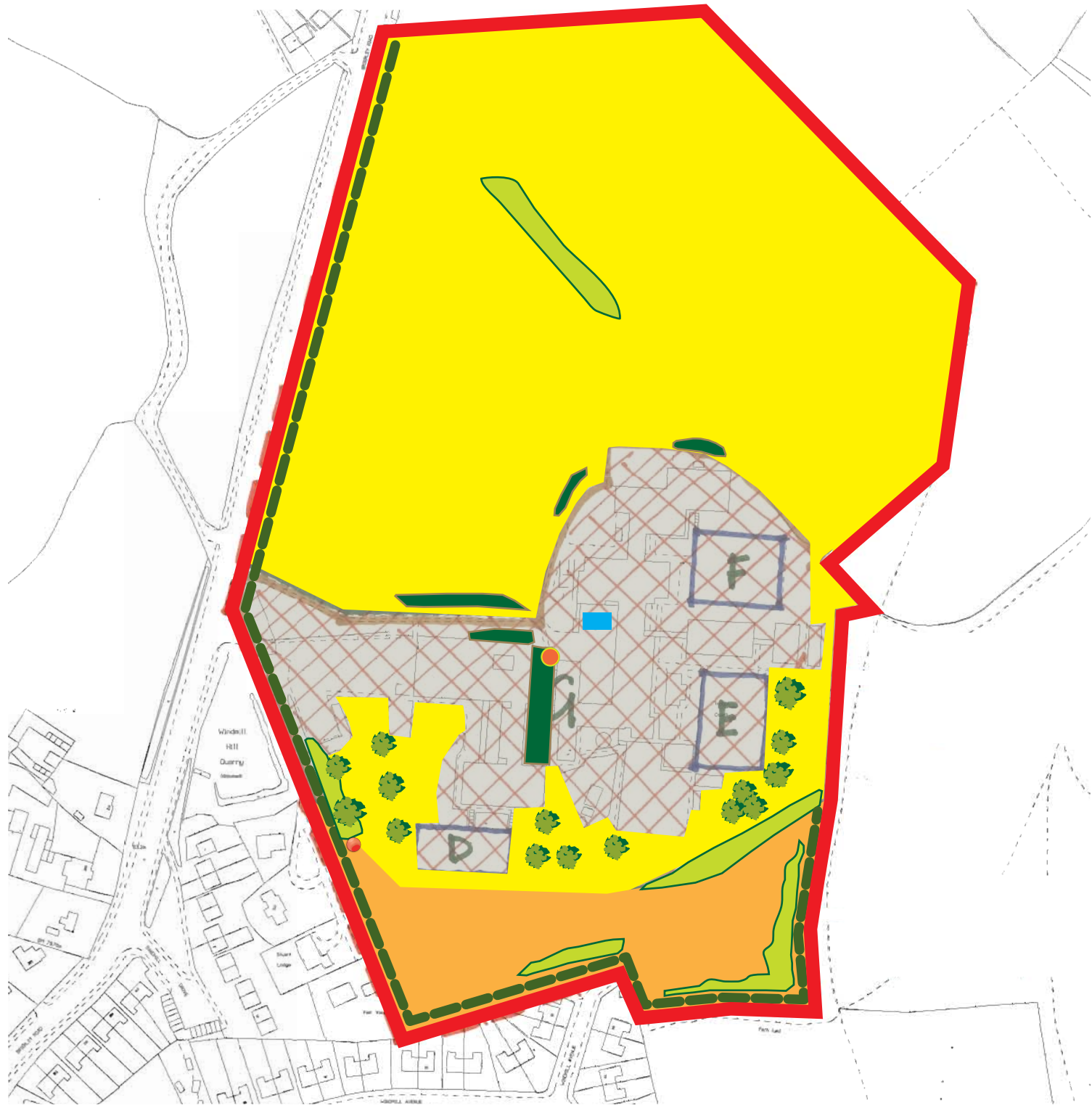
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-  Pond
-  Application site boundary
-  Hedge
-  Japanese rose
-  Cotoneaster
-  Built environment
-  Trees
-  Scrub
-  Rough pasture
-  Shrub planting
-  Amenity grass

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