

**Barnsley Schools
Extended Phase 1 DRAFT Report**

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Contents

1.1 Introduction	1
1.2 Assessment Methodology	2
1.3 Baseline Conditions	2
1.4 Evaluation & Recommendations	36
1.5 Conclusions	40

References

Appendices

Appendix 1

Figure 1-8 Phase 1 *Habitat Plans* for Barnsley Schools

1.1 Introduction

RPS was commissioned by Barnsley District Council to undertake an initial ecological assessment for ten schools in the Barnsley region. At all schools the application sites comprised a series of buildings and their associated grounds and playing fields. The buildings date from between the late 1850's to the modern day. Field surveys in the form of extended Phase 1 habitat surveys were undertaken during July and August 2006.

Most of the schools are located within predominantly urban areas, with woodland or farmland associated with some of the sites. Trees, scrub or patches of woodland are found within or bordering the grounds and playing fields of all of the sites. The nine schools surveyed were as follows:

- **St.Michaels School;**
- **Edward Sheerien School;**
- **Kingstone School;**
- **Holgate School;**
- **Penistone Grammar School;**
- **Darton High School;**
- **Greenacre Special School;**
- **Dearne High School;**
- **The Springwell Centre, and;**
- **Kirk Balk School.**

1.2 Assessment Methodology

Extended Phase 1 Survey

The survey followed Phase 1 habitat survey methodology (JNCC, 1993) and was extended to assess faunal potential. This involves walking the whole 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).

Desk Study

The desk study, using a 2km area of search around each site, involved contact with a number of key data holders including:

English Nature

The Environment Agency

Sheffield Wildlife Trust

Barnsley Metropolitan Borough Council

Sheffield Badger Group

Local Bat Recorder (Eric Bennett)

Local Bird Recorder (John Wint)

Barnsley Bird Study Group (Christine McKee)

1.3 Baseline Conditions

Desk Study

The desk study exercise was undertaken during July 2006. The consultees and their responses are shown below in Table 1.

Table 1 Summary of consultation

Consultee	Date of response	Information provided
English Nature	Response not yet received	
Environment Agency	Response not yet received	
Sheffield Wildlife Trust	Response not yet received	
Barnsley Metropolitan Borough Council	Response not yet received	
Sheffield Badger Group	Response not yet received	
Local Bat Recorder	Response not yet received	
Local Bird Recorder	Response not yet received	
Barnsley Bird Study Group	Response not yet received	

English Nature Natural Area

English Nature's Natural Areas are sub-divisions of England, each with a characteristic association of wildlife and natural features. Each Natural Area has a unique identity resulting from the interaction of wildlife, landforms, geology, land use and human impact.

Each Natural Area includes specific habitats highlighted as being of national and local significance.

The study area is located within the Coal Measures Natural Area.

Coal Measures

This Natural Area has the following habitat of national significance:

Earth heritage.

The Natural Area also has the following habitats of local significance:

Acid grassland;
Fen, marsh and swamp;
Lowland heathland;
Neutral grassland;
Rivers and Streams;
Standing open water and canals, and;
Wet woodland.

This Natural Area is characterised by dense populations centred on a number of towns and cities that developed largely as a result of the underlying coal fields. These are deposits of shales and sandstones of late Carboniferous age (c. 320-295 million years old), which were deposited in equatorial swamps. Peat accumulated in these swamps and has subsequently been converted to coal.

The topography of the Natural Area is gently undulating and the network of towns and cities is characterised by a matrix of acidic ancient and secondary woodlands, valley wetlands, neutral and acid grasslands, and mixed agriculture. Canals, mill-ponds and natural rivers are also important features.

Local Biodiversity Action Plan (LBAP)

The Barnsley Biodiversity Action Plan (BAP), produced by the Barnsley Biodiversity Trust, provides a practical plan for the conservation and enhancement of wildlife and habitats in the Borough including the study area. The BAP identifies priorities for nature conservation in Barnsley, comprising action plans for 19 species and 18 habitats.

Species Action Plans include:

Bluebell, Otter, Pipistrelle Bat, Brown Hare, Water Vole, Great Crested Newt, White-Clawed Crayfish, Glow Worm, Barn Owl, Bittern, Corn Bunting, Grey Partridge, Lapwing, Linnet, Little Ringed Plover, Skylark, Song Thrush, Tree Sparrow and Twite.

Habitat Action Plans include:

Upland Oak Woodland, Upland Mixed Ash Woodland, Wet Woodland, Parkland, Ancient & Species-Rich Hedgerows, Cereal Field Margins, Floodplain Grazing Marsh, Lowland Meadows, Lowland Dry Acidic Grassland, Lowland Heathland, Upland Heathland, Rush Pasture, Reedbeds, Ponds & Canals, Running Water, Standing Water, Urban Built-Up Areas and Post-Industrial Derelict Degraded Land.

Results from Desk Study

At the production of this report (August 2006) no data had yet been received from any consultees, and therefore this section of the report is incomplete. Data, when received will be forwarded to the client together with comments on the significance of any records.

Habitat descriptions

This section has been divided into two main sections, those from the field survey of the school grounds and those from the buildings.

Field survey - general

Figures 1-8 in Appendix 1 are Phase 1 habitat plans for the study sites. All the sites comprise school buildings, hardstanding, playing fields and, in some cases, areas of boundary tree planting, scrub and woodland patches. Mature trees can also be found within the hardstanding or between buildings on some of the sites.

Summary description for school sites

Hardstanding:

All the schools have considerable areas of hardstanding, for use by the children during breaks, or for sporting activities. None of these areas were considered to have any ecological interest.

Playing fields:

All the playing fields have vegetative compositions typical of amenity grasslands. They are all sown and species poor. Perennial rye-grass (*Lolium perenne*) dominates with annual meadow-grass (*Poa annua*) in abundance. A few associated but less common species include daisy (*Bellis perennis*), dandelion (*Taraxacum* sp.), white clover (*Trifolium repens*) and creeping buttercup (*Ranunculus repens*).

Trees:

Most of the schools have mature and semi-mature native or amenity trees on-site. In some cases these trees are clearly planted and are scattered between the buildings. There are mature trees at some sites including specimens with dense growths of ivy, cracks, die back and rot around limb breaks. It is possible that some trees are used as occasional summer roosts, for bats and therefore all appropriate trees were assessed for their potential value as bat roosts. Many of the trees are also of considerable benefit to nesting birds.

Scrub and Tall Ruderals:

Patches of amenity or native scrub and tall ruderals were located on the fringes of amenity grasslands in most of the schools surveyed.

Woodland:

Woodland habitats can be found within the grounds of three schools:

Penistone Grammar School;

Darton School, and;

Greenacre School.

Hedgerows:

Species-rich or species-poor native hedges can be found lining the grounds of:

Kingston School;

Holgate School;

Dearne School;

Penistone Grammar School;

Darton School, and;

Kirk Balk School.

Ponds & wetlands:

School ponds were noted within the grounds of the following schools:

Penistone Grammar School;

Kingston School, and;

Darton School.

Habitat description from field survey – specific sites

St. Michaels School & Edward Sheerin School (Phase 1 Habitat Base Map No.1)

St. Michaels and Edward Sheerin Schools are located in the Carlton area of Barnsley, in a predominantly urban setting. St. Michaels is to the south of the proposed development, and Edward Sheerin to the north. To the north and east of both schools can be found housing and local industry, and to the west is further housing. To the south of the site can be found open grassland and scrub.

Habitats found within the site boundaries of these two schools are typical of all the schools surveyed. These include areas of hard standing, amenity grassland, amenity trees, scrub, and some small patches of tall ruderal vegetation of nettle (*Urtica dioica*), mugwort (*Artemisia vulgaris*), rosebay willowherb (*Chamerion angustifolium*), creeping thistle (*Cirsium vulgare*) and broadleaved dock (*Rumex obtusifolius*). There is a large patch of tall ruderals to the south of the site, which is associated with a line of planted trees including ash (*Fraxinus excelsior*), elder (*Sambucus nigra*), blackthorn (*Prunus spinosa*) and cherry (*Prunus sp.*) [TN 02]

One small amenity hedgerow was noted at the entrance to St. Michaels, with a range of amenity and native species including garden privet (*Ligustrum ovifolium*), cherry and sycamore (*Acer pseudoplatanus*) [TN 01]. This hedge would not appear to have particular ecological value, except to nesting birds.

Kingstone School & Holgate School (Phase 1 Habitat Base Map No's 2 & 3)

These two adjacent schools are in the Shaw Lands area of Barnsley, just west of the town centre. To the north of both sites can be found local industry and housing. To the south, west and east are open fields and further housing. Kingstone School lies immediately southwest of Holgate School.

Trees

Kingston has a number of mature trees within its grounds that are considered suitable for nesting birds and roosting bats. These include a mature oak and sycamore tree to the south of the site (TN 01).

To the north of Kingstone School there is a planted area of mature beech and conifer species (TN 05).

Hedgerows

Both these schools have hedgerows within their grounds. Kingston has an intact species-poor hawthorn hedge running alongside Broadway (TN 02), forming the north-eastern boundary of the school, and two other similar hedges forming the south eastern and south western boundaries of the site (TN 03). Whilst none of these hedgerows are species-rich, they do have ecological value to nesting birds, and as potential flight-lines for bats.

Holgate has extensive hedgerows across the school grounds. Most are species poor and dominated by hawthorn, but one hedge (TN 03) forming the southern boundary of the school, is species rich. This hedge contains a mixture of hawthorn (*Crataegus monogyna*), willow (*Salix sp.*), elder, beech (*Fagus sylvatica*), dog rose (*Rosa canina*), guelder rose (*Viburnum opulus*) and blackthorn.

Ponds

Kingstone School contains a new wildlife pond (TN 04), which does not have any ecological value at present. However, this may need to be re-assessed for its suitability to harbour great crested newts if development is delayed by more than two years.

Japanese knotweed

Japanese knotweed was noted very close to the grounds of Holgate School (TN 02). Japanese knotweed is listed in Schedule 9 of the Wildlife and Countryside Act (1981), as amended, as a controlled weed. This makes it an offence to cause knotweed to grow elsewhere by incorrect handling and removal. Whilst outside the school grounds at present, if it has spread into the grounds by the time of development, it will require a management strategy.

Additional areas of interest for Kingstone School includes a patch of semi-improved neutral grassland (TN 06) and a wet flush (TN 07) that is dominated by willowherb species (*Epilobium sp.*).

Penistone Grammar School (Phase 1 Habitat Base Map No.4)

This school is located in a rural setting, just outside the village of Penistone, to the west of Barnsley. To the north, west and south of the school are agricultural fields. To the east can be found woodland, a weir and stream, and two large reservoirs.

This diverse site has a number of potential ecological issues.

Woodland & Trees

Woodland to the north east of the site contains a mixture of mature native and introduced species, including Scots pine (*Pinus sylvestris*), beech, oak (*Quercus sp.*), sycamore lime (*Tilia sp.*), horse chestnut (*Aesculus hippocastanum*), ash birch (*Betula sp.*), willow, holly (*Ilex aquifolium*) and hazel (TN01).

There are a number of mature trees within the grounds of the school. These include:

1. Two mature sycamores, a lime tree and a horse chestnut to the south eastern corner of the site (TN 02);
2. A mature copper beech and two sycamore to the south west of the site (TN 03);
3. A stand of seven mature sycamore in the south western corner of the playing field immediately north of the sixth form centre (TN 04);
4. A stand of semi-mature poplar (*Populus sp.*), sycamore and ash trees in the playing fields to the far west of the site (TN 05);
5. Mature beech and sycamore trees to the frontage of the school (alongside B6462), and lining the northern aspect of Fulford building (TN 06);
6. Mature beech, Scots pine (three), lime (three) and ash within the grounds immediately south and west of Weirfield House (TN 07), and;
7. Mature lime on eastern border of outbuildings to Weirfield House (TN 07).

Some of these trees have bat potential, particularly those surrounding Weirfield House. If any of these trees are due for felling, then detailed inspections should be made of these trees for evidence to support roosting bats. This should take place when the trees are no longer in leaf, which will reveal potential roosting holes.

In addition to their value for bats, these trees have considerable bird nesting value.

Pond

Adjacent to the woodland, and within the school grounds, is a pond of recent origin (TN 08). This small pond (6m x 3m) does not appear to be suitable at present to harbour great crested newts (GCN), as it is small, of recent origin, and has no marginal or aquatic vegetation. However, if a delay of more than two years occurs between now and the proposed development, this pond should be reassessed.

This woodland leads to a weir and stream, which is outside the boundary of the school. The stream connects two large water bodies. One of these is adjacent to the grounds of the school at its north eastern tip; the other is parallel to the playing fields further to the south. Initial indications suggest that neither of these water bodies appear suitable for great crested newts, as they appear to be used as fishing ponds. However, in order to confirm this, a suitability study for great crested newt potential is recommended for these water bodies.

Hedgerows can found to the south of the site, near to the Netherfields Sixth Form College. A native hedge stretches for 35m and contains hawthorn, sycamore and elder. An amenity privet hedge containing beech, alder and cherry, in addition to introduced species is also present in this area (TN 09).

Darton High School (Phase 1 Habitat Base Map No.5)

Darton School is in a predominantly agricultural area to the north of Barnsley. Open farmland can be found to the north, west and south of this school. Urban areas border the eastern areas of the school.

Woodland

An area of dense plantation woodland can be found at the south western corner of this site. This contains a variety of semi-mature and scrub species of birch, Scots pine, sweet chestnut (*Castanea sativa*), sycamore, oak, rowan (*Sorbus aucuparia*), hazel and hawthorn. Potential badger activity was noted within this area, with three access points under the school security fencing (see Figure 1).

Figure 1: gap under school fence, with animal run beyond



Trees

There are a number of mature trees scattered across this site. Those of ecological value include the mature poplars and aspen (*Prunus tremula*) to the north west of the site (TN 02), and to the north east of the site, one of which has bat potential (TN 01).

Figure 2: Potential bat roost in poplar (TN 02)



Hedgerows

Hedgerows surround this site, but the majority of these are outside the boundary of the school. Exception to this can be found at the south eastern tip of the site, where a hedge stretches along the eastern boundary of the school for 250m (TN 6), and at the southern boundary of the amenity fields at the north eastern tip of the site (TN 7), where a fragmented hedge stretches for 170m. The former hedge is intact and 3m high, being dominated by hawthorn, with sycamore, cherry, elder, and bramble (*Rubus fruticosus* agg.). This in turn becomes infiltrated with garden shrubs and beech, before becoming more natural again. Whilst this hedge is not species-rich, it does have some value to nesting birds and should be retained if possible.

The latter hedge is similar, being dominated by hawthorn, blackthorn, elder and privet.

Pond

A well-established pond to the south eastern border of the site (7m x 5m, TN 05), with a good range of vegetation and surrounding habitat. However, the presence of stickleback fish will rule out the possibility that GCN are breeding within this pond, as they are voracious predators of newt larvae.

Greenacre Special School (Phase 1 Habitat Base Map No.6)

Greenacre School is located within an industrial/urban setting, very close to Kingstone & Holgate Schools. Local industry can be found to the north, and housing is to the south and west. Playing fields border the southern and eastern margins of this school.

In general, this school does not have any unusual habitats or species. However, scrub woodland can be found to the west of the site, which may be of value to badgers (TN 1). Whilst no evidence of badgers was seen during the initial Phase 1 survey, the presence of badgers cannot be ruled out without a full survey at an appropriate time of year (November-June. During the late summer months vegetation is very dense, and badger signs can often be missed). This woodland is surrounded by large stands of tall ruderal vegetation, with little ecological value. There are no mature trees of note elsewhere within the school grounds.

Dearne High School (Phase 1 Habitat Base Map No.7)

Dearne School is within the town of Goldthorpe, located 11 miles to the east of Barnsley. It is in a predominantly urban setting, with housing to the north and west. Open fields can be found to the east, and two fishing reservoirs are in close proximity to the southern border of this school.

This school does not contain any rare or unusual habitats. Amenity grasslands, with tall ruderal herbs and occasional scrub fringing the edges, dominate the majority of the grounds. A wet ditch/stream was found to the far southwest (TN 02), but this was outside the application site. Beyond this were two large fishing reservoirs. None of these habitats were considered suitable for great crested newts.

Hedgerows line many of the nearby fields, but none were within the boundaries of the school. A single hedgerow was found within the site, adjacent to the caretakers house (TN 01). This gappy hedgerow, whilst containing a variety of species, was not considered to have particular ecological value.

The Springwell Centre (Phase 1 Habitat Base Map No.8)

This school is located in Carlton, in very close proximity to St. Michaels and Edward Sheerien Schools. To the south of the school are the grounds of a primary school, and to the north and west is housing. To the east the school is bordered by extensive woodland (Spring Wood).

Patches of tall ruderals (rosebay willowherb, nettle and docks) and plantation woodland of cherry, sycamore, and bramble in patches towards the edges of the site. Otherwise the school has no notable habitats. The large area of woodland (Spring Wood) to the east may well contain badgers, but there was no evidence of badgers on site, and no potential badger access under the perimeter fencing of the school.

Kirk Balk School (Phase 1 Habitat Base Map No.9)

This school is located in a residential area in Hoyland, south of Barnsley. Housing borders the eastern and southern areas of this school. To the north is a cemetery, and to the west is a mixture of open fields and housing.

Other than the buildings this school had limited wildlife value. A mixed hedgerow, with dogwood (*Cornus sp.*), hawthorn, whitebeam (*Sorbus sp.*), guelder rose, elder, ash with mature poplar standards was noted at the south eastern tip of the site (TN 01). This short (20m) stretch of intact hedgerow has obvious value for nesting birds. Other hedgerows occur to the north east of the site. These are species poor with hawthorn, elder and holly (*Ilex aquifolium*) with ash standards (TN 03).

An area of trees and scrub with elder, hawthorn, ash, dog rose (north west of site, TN 02) was also highlighted for its value to nesting birds.

Patches of tall ruderals including rosebay willowherb and hogweed (*Heracleum sphondylium*) occurs to the north and west of the site.

Buildings description from field survey

General

The study areas are predominantly open ground with buildings of limited value for mammals other than bats. All the schools have buildings of similar age and layout, dating from the late 1950's to the present day. The older buildings range from single-storey to three-storey brick and concrete structures. In general they have flat bitumen roofs, iron or wooden-framed windows, and wooden or artificial fascia boards and soffits. The modern buildings tend to be brick with sloping corrugated roofs, uPVC windows, and plastic fascia boards, soffits and guttering. In terms of ecological interest school buildings such as these have potential as bat roosts. As a result all buildings were assessed for their bat-roosting potential.

In addition to these modern buildings, some of the schools have considerably older buildings. These include Penistone Grammar School, with buildings dating back to the 1850's, Holgate School (1908 and 1920's), and Dearne and Kirk Balk Schools (1930's). These buildings are constructed of Yorkshire stone or brick, with sloping roofs with slate, stone, or concrete roof and ridge tiles. These buildings were also assessed for their bat potential.

Legal Status of Bats

All British species of bats are protected under Schedule 5 of the Wildlife & Countryside Act, 1981 (as amended). They are also included in Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994, which is the domestic implementation of the EC Habitats Directive.

This legislative background makes it an offence to intentionally kill, injure or capture (take) bats and intentionally or recklessly disturb any bat while it is occupying a structure or place that it uses for shelter or protection. Under the Countryside and Rights of Way Act (2000) it is also an offence to intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.

The implications of the above with relation to the proposals are that where it is necessary during the construction of the new school to remove trees, buildings or structures in which bats roost, it must first be determined that this work is necessary and permissible, and if so that any necessary licenses are subsequently obtained from DEFRA. Licenses will only normally be issued in such cases if English Nature are satisfied that the works are permissible and that appropriate measures are being put into place to mitigate adverse effects.

Building descriptions from field survey – specific sites

St. Michaels School

This collection of school buildings date from around the 1960's. The main buildings comprise:

Main Hall and Chapel

This building consists of a large brick-built single-storey hall with a rounded stone frontage that forms the chapel. The hall has a flat bitumen roof, with wooden framed windows. The building is generally in a good state of repair, and the few holes noted were covered in cobwebs. The bitumen-clad roof overhangs the walls, with wooden soffits and plastic down-pipes to the main building. The chapel has a rounded dome, sitting on top of a flat concrete roof. Concrete slabs overhang the circular walls, with no apparent gaps seen. The large windows, all uPVC, are intact. There is no evidence of bats using this building.

Figure 1: Main Hall and Chapel



Main Block

The main block is constructed of brick and ranges from one to two storeys, and has a flat bitumen roof, wooden window frames, soffits and fascias, and concrete lintels. There were gaps seen between the brickwork of the main block (rooms 1-5), but no signs of bats were seen. The few remaining holes seen were covered in cobwebs, suggesting that bats are not using the buildings.

Figure 2: Main Block



Boiler House

The only other building considered to have any potential value for bats is the boiler house, as there are gaps at the top between the brickwork and the wooden soffits. However, bird droppings can clearly be seen around these holes. As bats and birds tend not to co-exist within such structures (Drewitt 2006), it is assumed bats are not roosting within this building.

Figure 3: Boiler House



There were gaps in the brickwork around room 19, but these were covered in cobwebs. There were also loose barge boards in rooms 21 & 23 (IT Suite), but these were again covered in cobwebs. The presence of cobwebs is an indicator that bats are not using a crevice or hole, as regular bat use would inhibit spiders and maintain free space.

Other Buildings

Apart from the buildings described above, the school has a few prefabricated blocks, which are modern in construction and have no ecological value.

Edward Sheerien School

The majority of the school buildings date from the 1960's, and are redbrick structures with flat bitumen roofs with synthetic guttering and overhangs. Except for the caretakers house and boiler room, few opportunities were seen within this school for bats. Whilst some of the buildings were in a general state of disrepair, few gaps were seen. There was also a lack of suitable foraging habitat surrounding most of the buildings.

Figure 1: Main Reception



Figure 2: Caretakers House



A redbrick two-storey structure, with a flat roof. A hole within the soffits, facing the boiler house, was identified. Anecdotal reports exist of bats emerging from this hole during the preceding weeks.

Figure 3: Caretakers House



Figure 4: Boiler House



The boiler house & water tower have potential for bats, and a false ceiling means access to this area was not possible.

Other Buildings

Gap in bargeboards between the technology rooms (Figure 5), and at the rear of the science block, did not reveal any evidence of bats.

Figure 5: Loose Bargeboards, Technology



Holgate School

The frontage of this school is dominated by a redbrick building dating from 1908, consisting of two storeys with a basement, and a pitched slate roof (Figure 1). This building is known as A-block. Running parallel to this building, at the rear, is B-block, a later building of similar style (circa 1920). Due to the age and design of these buildings (e.g. sloping tiled roofs and overhangs, roof spaces), they are considered to have bat potential, and a full internal inspection of any roof voids is recommended. There were a number of loose tiles to the front of the main building, and loose tiles and some loose flashing to the rear and sides of B-block.

Figure 1: Frontage of main building and reception



Figure 2: Rear building (B-block), hole in brickwork



Other notable buildings

C-Block

C-block, which is to the left of the main building, is a modern redbrick building with a sloping concrete-tiled roof. To one corner of this building can be found several missing or loose tiles and a hole with potential bat access (Figure 3).

Figure 3: C - Block (kitchens), gap and missing/loose tiles



Caretakers House

The caretakers house, dating from 1911, is a two-storey redbrick structure with a gable end and a pitched, tiled roof. The chimney flashing is intact, but the presence of some loose tiles means that this house also has bat potential, and an internal inspection is again recommended.

Figure 4: Caretakers House



None of the other buildings on site (sports hall, gym, city learning centre) were considered to offer any bat potential.

Kingstone School

This school is divided into two main sections, known as the North and South Buildings. The north building dates from the 1960's, and ranges from one-two storeys. This area also includes the ex-caretakers house. The buildings in this region do not appear to have any bat potential.

Figure 1: North building



The south building (Figure 3) dates from the 1950's, and this area includes the sports hall, performing arts and the water tower. This area also includes the caretakers house and the boiler house. The caretakers house has a gap in the brickwork on the side facing main reception (Figure 3). This building is also covered in ivy and has good surrounding habitat (well-developed gardens with trees and shrubs).

Figure 2: South building



Figure 3: Gap in wall of caretakers house



There is a hole in the brickwork in the water tower at the back of the old performing arts building (Figure 4) that has bat potential.

Figure 4: Gap in brickwork in water tower



There are also loose bargeboards in the region of the I-T suite, to the corner of the south building opposite the row of poplar trees (Figure 5).

Figure 5: Loose soffits/bargeboards in the region of the I-T suite



Greenacre School

A small school, the building dates from the 1960's, and is built in a concentric design. There are no potential bat issues with any of the buildings at this school.

Springwell Centre

A small school, dating from the 1960's. One potential bat roost was identified in the boiler room, where bat access is possible via loose barge boards. An internal inspection for evidence of bats is recommended for this building.



Dearne High School

The main building dates from the 1930's (Figure 1). The building is redbrick, with a sloping tiled roof, and wooden soffits. An internal roof void inspection is recommended for all areas where possible. The frontage has one hole to the right of the main entrance, and some loose soffits (Figure 2).

Figure 1: main building frontage



Figure 2: gaps in soffits



Within this building are three quads. The quad to the east has some bat potential, as roof tiles are missing, and gaps exist in soffits (Figure 3).

Figure 3: missing roof tiles in quad



The rear of the old building (facing the new block) has one area of loose soffits (Figure 4).

Figure 4: loose soffits at rear of main building



Facing the rear of the old building is a modern extension with evidence of perch roosting by an owl/raptor (droppings and pellets).

The caretakers house, a redbrick two-storey house with a pitched sloping roof has some bat potential, as there is loose brickwork in one corner (Figure 5). As a result, an internal inspection of this building, and of the other buildings with bat potential at this school, are recommended.

Figure 5: caretakers house



Penistone Grammar School

This school is in a rural setting just outside the village of Penistone, and contains some very old buildings dating from the 1850's. Many potential bat roosts were identified within the buildings comprising the 6th form block, Weirfield and C-Block. In addition to the older buildings, there are also a collection of modern buildings scattered around the main campus, including the reception area, gym, library, music, caretakers house, Sanderson, Bowman, and Winterbottom buildings.

The school also has significant grounds, with many mature trees located within the boundaries of the school. Some of these trees have the potential to harbour roosting bats.

Weirfield House

The oldest building within the grounds of the school (1850). Built from traditional Yorkshire stone, with a pitched roof over two-three storeys, the building has two gable ends, two chimney-stacks, and one skylight. All flashings appear intact except at the base of one chimney-stack, and one missing tile was noted. The house has outbuildings, in a general state of disrepair.

Figure 1: Weirfield building



C-Block

A stone building, with a pitched roof and stone tiles. Two dormer windows have missing stone tiles on either side.

Figure 2: C-block



Fulford building

A large stone-built building with two-three storeys (circa 1910), with a pitched, slate roof. There are five dormer windows, all apparently intact. Some loose tiles were seen, but the building is generally in a good state of repair.

Figure 3: Fulford building



Netherfields sixth-form college

A collection of houses, buildings and barns dating from around 1850-1900. The buildings are in varying states of disrepair. There is one large building adjacent to the B6462, and a further 7-8 connecting houses in a cross-formation, further east. In addition, there are two small outhouses, or barns, within a masonry wall dividing the Netherfields area from the main body of the school to the north. There are gaps in the brickwork throughout most of these buildings, and many loose and missing roof and ridge tiles. As a result, internal inspections of these buildings for their potential to support roosting bats, is recommended, in addition to all other suitable buildings.

Figure 4: one of the sixth form buildings



Figure 5: loose tiles, sixth form



Other buildings

All other buildings (reception, gym, library, music, caretakers house, Sanderson, Bowman, Winterbottom) were modern in design. All were assessed, but none were considered to have any potential to support roosting bats.

Darton High School

A modern 1960's school with extensive grounds. Only one potential bat roost was noted within the school buildings, at the corner of the dining room (Figure 1)

Figure 1: loose brickwork at corner of dining room



Kirk Balk School

This school consists of a mixture of modern buildings from the 1960's and 1970's, and older buildings dating back to the 1930's.

The main bulk of the site, comprising reception and administration, the gym and main hall, the science block, technology, the dining room, history, R.E, and languages generally have low bat potential.

The buildings to the east of the school that make up the English & Special Needs and the Maths & Geography blocks are the older ones, and these have bat potential.

Older Buildings

Two large square buildings to the east and north of the site, which form the original school buildings (Figure 1). They are both redbrick structures, with basement cellars, and pitched slate-tiled roofs. There are a number of loose and missing roof tiles on both buildings, in addition to loose flashing around the joins between some buildings.

Both buildings have been subjected to modifications, including the replacement of the traditional window frames with uPVC double-glazing throughout. In places, modern guttering and soffits have replaced the traditional stone and wooden structures. Where the traditional features still exist, gaps have appeared in some of the stonework, especially around stone entrance porches.

These buildings face onto a local access road, lined with mature trees. If bats are present, these trees will provide for good foraging and connecting habitat.

Figure 1: English & Special Needs (1930's buildings)



Figure 2: loose tiles around northwest corner of Maths & Geography (1930's buildings)



Figure 3: loose flashing to south of Maths & Geography (1930's buildings)



Modern Buildings

Most of the modern buildings have restricted bat potential. These buildings tend to have flat bitumen-covered roofs, and have wooden fascia boards covering all external walls. Most of these are intact. Where gaps exist, such as in Figure 5, the holes do not appear to lead into crevices that would be considered suitable as bat roosts. Missing grills to a vent above an entrance to the science block allowed for potential access for bats into the roof space above (Figure 6), but no actual signs of bats (droppings, stainings) were seen.

Figure 4: main hall, eastern face



Figure 5: hole in fascia boards of main hall, eastern face



Figure 6: missing grills on vents, giving access to roof space in science block



It is recommended that internal inspections be carried out on all roof voids within the older buildings to the east, in order to look for evidence of bats.

Evaluation & Recommendations

All of the habitats found within the grounds of the ten schools were considered to be common and widespread. None of the sites contained any rare or unusual species, and none had habitats of high botanical interest. The features considered to have the highest wildlife value were the buildings (for bats), woodland (for badgers), hedgerows (for nesting birds) and mature trees (for nesting birds and possibly bats).

Bats

Some of the school buildings were considered to have good potential roosting opportunities for bats. If these buildings are included within development plans then a detailed bat survey including internal inspection of roof spaces, and emergence surveys should be undertaken.

Bats have been known to inhabit school buildings similar to those within this survey. In particular, the two pipistrelle species (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*) are often associated with modern post 1960's buildings. These crevice-dwelling bats do not need roof voids in order to roost, and can be found under loose barge boards, fascia boards and roof tiles in the summer months. The older buildings, with roof voids, may harbour the above bats, in addition to open-roosting species such as brown long-eared bats (*Plecotus auritus*).

The school buildings were surveyed for their potential to support roosting bats. This entailed searching for potential access points into crevices and roof voids. All these holes were scrutinised for evidence of use by bats, such as staining around holes, feeding remains, droppings and an absence of cobwebs.

Whilst no direct evidence of bats was seen during the initial surveys, they cannot be ruled out without undertaking internal inspections and emergence surveys. There were numerous potential holes identified that could have been in use by bats. Potential roosting sites have therefore been identified in the baseline survey, and these should form the basis of any additional further work. This additional work should therefore include internal inspections and any recommended emergence surveys.

Bat surveys

As a result of the findings of this report, bat surveys are recommended for most of the schools: Internal inspections should be carried out for all the accessible roof voids. These, in conjunction with more detailed external bat assessment of the suitable buildings, will determine the number of emergence surveys to be undertaken. Where no roof voids are present, emergence surveys alone are recommended.

Recommended internal inspections of roof voids

Holgate School (A-block, B-block, C-block & caretakers house);

Springwell centre (boiler room);

Dearne School (main building, new building, caretakers house);

Penistone Grammar School (all sixth form buildings, Wierfield, C-Block, Fulford);

Darton School (poplar tree; endoscope inspection);

Kirk Balk School (English/Special Needs and Maths/Geography).

Recommended emergence surveys

Edward Sheerien School

Caretakers house (opposite boiler room);

Boiler room (opposite Caretakers house);

Technology (loose barge-boards).

Kingstone School

Caretakers house (hole in wall);

Water tower (hole in wall).

Springwell centre

Boiler room fascia boards (but internal inspection may rule this out).

Penistone Grammar School

All sixth form buildings, Wierfield, C-Block, Fulford, as dictated by internal inspection.

Darton School

Dining room, far left.

Kirk Balk School

English/Special Needs and Maths/Geography, as dictated by internal inspection;

Science block: missing grill.

If these surveys do reveal the presence of roosting bats then a suitable licence will need to be sought from DEFRA. The implications of the above with relation to the proposals are that where it is necessary during the construction to remove trees, buildings or structures in which bats roost, it must first be determined that this work is necessary and permissible, and if so that any necessary licenses are subsequently obtained from DEFRA. Licenses will only normally be issued in such cases if English Nature is satisfied that the works are permissible and that appropriate measures are being put into place to mitigate adverse effects.

In the event that bats were to be found within the buildings or any trees other than those mentioned above during demolition or felling, all work must stop immediately and advice must be sought from a qualified ecologist and English Nature. Emergency mitigation measures to rescue and provide alternative roosting for the bats found would need to be undertaken, which would require a licence from DEFRA.

Badgers

Badgers and their habitats are protected under the Protection of Badger Act (1992). Three schools (Darton, Penistone, and Greenacre) contained woodland within their grounds that were considered suitable badger habitat. Whilst no badger setts were found during the Phase 1 surveys, it was not considered an ideal time of year to search for them, as in places the undergrowth was dense and impenetrable. Potential foraging badger activity was noted within the grounds of Darton School. More detailed badger surveys are therefore recommended for:

Darton School;

Penistone Grammar School, and;

Kingstone School.

Great crested newts (GCN)

GCN are protected under Schedule 5 of the Wildlife & Countryside Act, 1981 (as amended). They are also included in Schedule 2 of the Conservation (Natural Habitats) Regulations 1994.

Three schools contained ponds within their grounds (Penistone, Kingstone and, Darton). None of these ponds were considered particularly suitable for GCN. The pond at Darton is well established but contains stickleback fish (the two species do not tend to co-exist). The ponds at Penistone and Kingstone are small and unsuitable at present, as they are newly established. However, if development does not take place within the next two years these water bodies may need to be re-assessed. However, unless GCN are present in the area (awaiting desk study results), it is considered very unlikely that these ponds would be considered suitable as GCN natal ponds.

As GCN are able to migrate up to 500m from their breeding ponds, all water bodies within this distance were identified from OS maps. Schools with water bodies within this distance include Penistone Grammar School and Dearne School. Whilst these water bodies are not considered suitable from initial observations (they are large and appear to be stocked with fish), GCN suitability surveys are recommended in order to rule out this possibility.

Hedgerows:

One species-rich hedge was noted within the grounds of Kirk-Balk School. Species-poor native hedges can be found lining the grounds of:

Kingstone School;

Holgate School;

Dearne School;

Penistone Grammar School;

Darton School, and;

Kirk Balk School.

None of these hedgerows are considered to have high ecological value, other than to nesting birds. Most hedgerows encountered were species-poor and dominated by hawthorn. The only species-rich hedgerow (Kirk Balk) was adjacent to a private dwelling and appeared to have been planted. However, all hedgerows are important to nesting birds. In addition, they form valuable wildlife corridors to species such as bats, which often use them as flight-lines. As a result, efforts should be made to retain all these native hedgerows within the landscape designs for the new schools.

Trees

The majority of trees identified during the Phase 1 survey were not considered to have high ecological value, other than to nesting birds. There were a few specimen trees that were considered to potential value to bats, in particular at Darton School (poplar), Kingstone School (oak, sycamore) and Penistone School (a number of mature trees). All these trees should be retained within the proposed landscape designs if possible. If not, they should be assessed for their potential to harbour bat roosts, prior to felling.

Vegetation clearance with regard to nesting birds

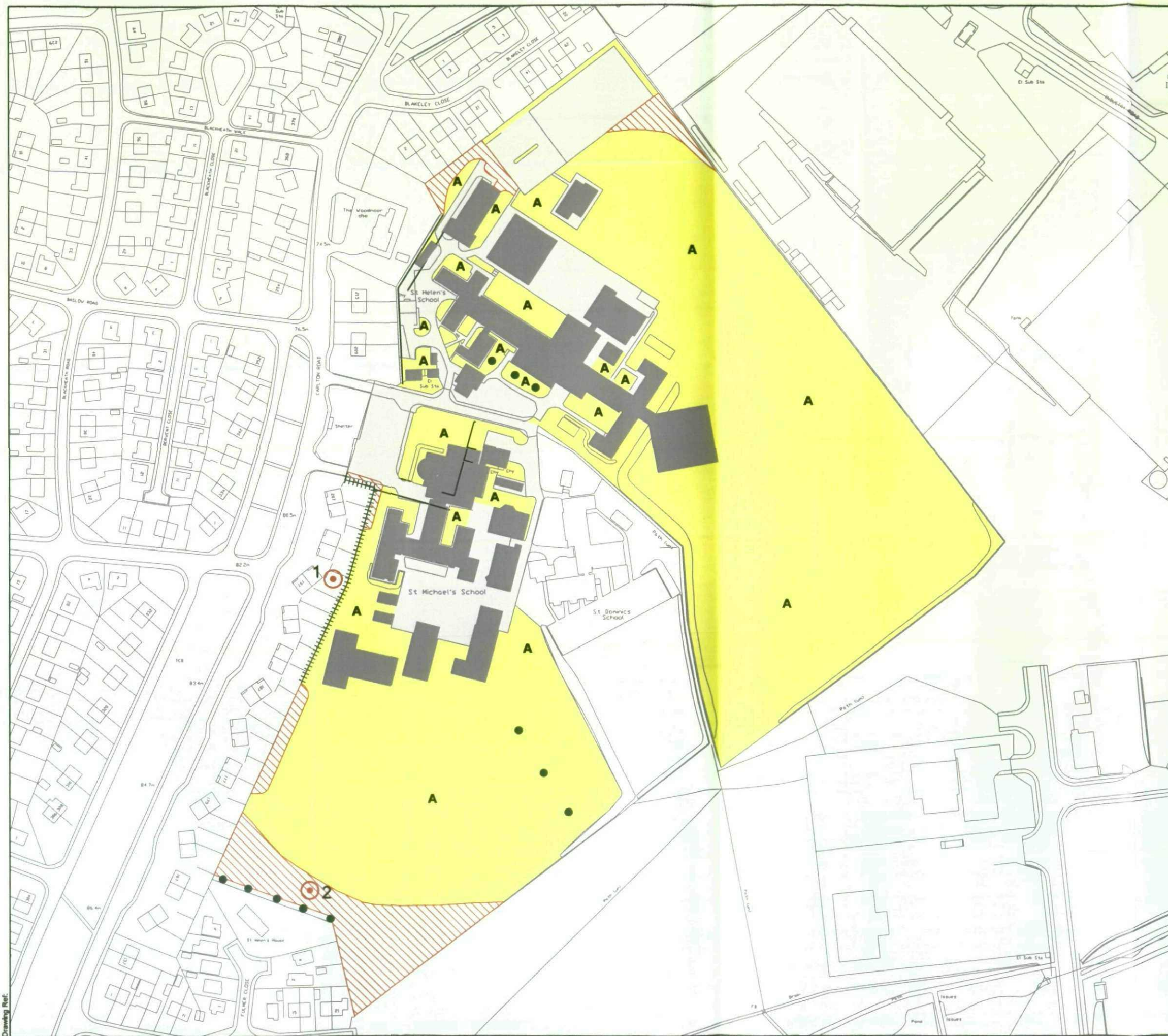
All birds, their nests and young are protected against death, injury or destruction by the Wildlife and Countryside Act 1981 (as amended). Nesting birds will occur within woodland, scrub and hedgerows. In order to avoid conflict with nesting birds it is recommended that all vegetation clearance, and building demolition take place outside of the bird-nesting season, which generally runs from March to August inclusive.

Conclusions

Bats have been identified as the main ecological constraints to the proposed development of the ten schools. As a result, bat surveys have been recommended for the majority of the schools surveyed. In addition, badger surveys have been recommended for a further three schools, and great crested newt suitability surveys on land surrounding two of the schools.

References

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- Mitchell-Jones, A.J. (2004) *Bat mitigation guidelines*. English Nature
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KEY

- Buildings
- Hard Standing
- Target Note
- Amenity Grassland
- Neutral Grassland Semi Improved
- Semi Improved Grassland
- Dry Heath/Acid Grassland Mosaic
- Coniferous Plantation
- Broad Leaved Plantation
- Mixed Plantation
- Scattered Trees
- Scattered Scrub
- Dense Scrub
- Tall Ruderal
- Introduced Scrub
- Standing Water
- Running Water
- Fence
- Species Poor Hedge & Trees
- Species Rich Hedge & Trees
- Intact Hedge Native Species Rich
- Wall

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KEY

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	Hard Standing
	Target Note
	Amenity Grassland
	Neutral Grassland Semi Improved
	Semi Improved Grassland
	Dry Heath/Acid Grassland Mosaic
	Coniferous Plantation
	Broad Leaved Plantation
	Mixed Plantation
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	Fence
	Species Poor Hedge & Trees
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KEY	
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	Hard Standing
	Target Note
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	Neutral Grassland Semi Improved
	Semi Improved Grassland
	Dry Heath/Acid Grassland Mosaic
	Coniferous Plantation
	Broad Leaved Plantation
	Mixed Plantation
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	Dense Scrub
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	Introduced Scrub
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	Fence
	Species Poor Hedge & Trees
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Rev:	Date:	Amendment:	Name:	Checked:

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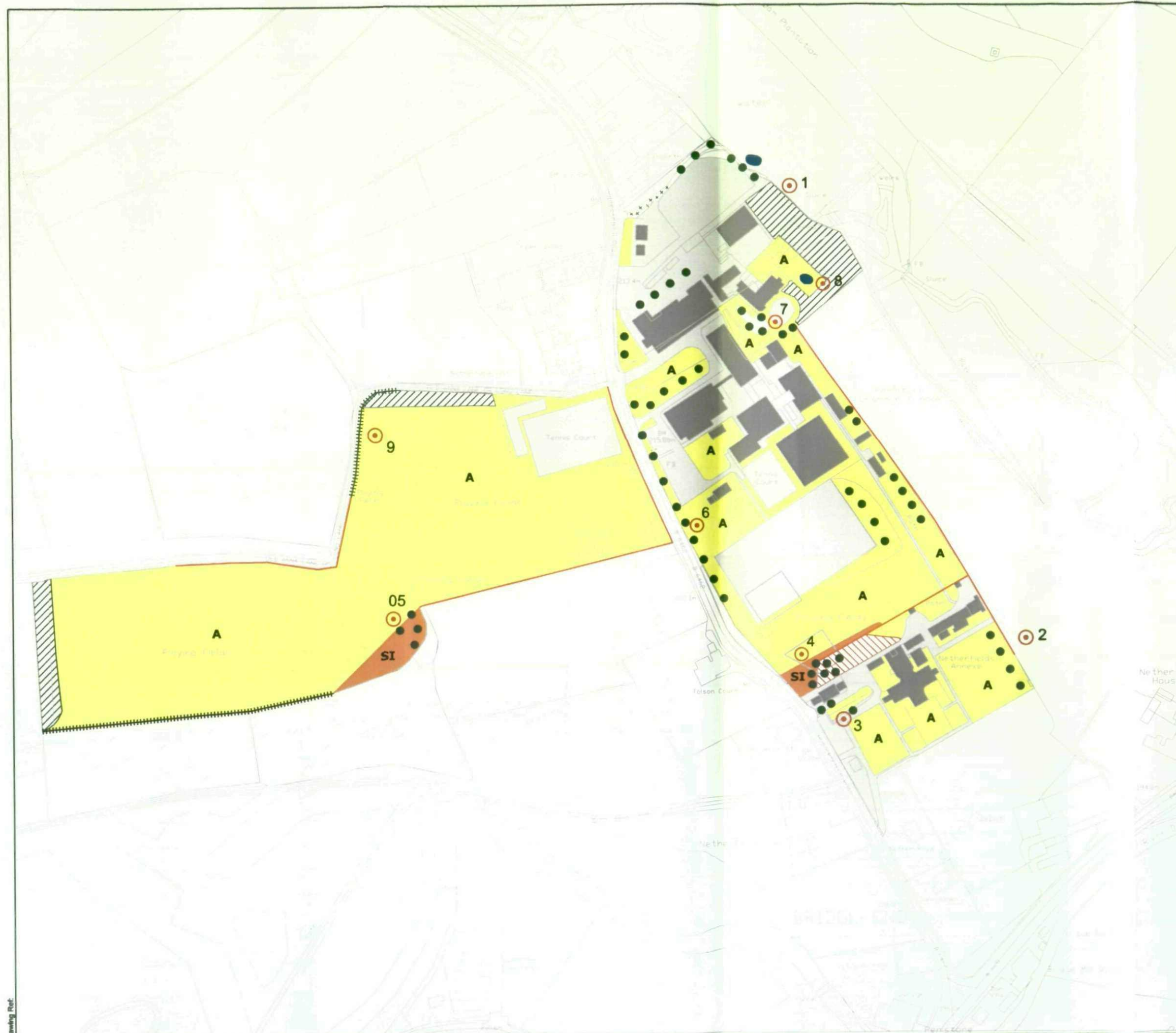
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 Holgate Phase I Habitat Survey
 Base Map No. 3

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Drawn: HP Checked: AV Job Ref: DHL2745

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KEY	
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	Hard Standing
	Target Note
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	Neutral Grassland Semi Improved
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Rev:	Date:	Amendment:	Name:	Checked:
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KEY

- Buildings
- Hard Standing
- Target Note
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- Neutral Grassland Semi Improved
- Semi Improved Grassland
- Dry Heath/Acid Grassland Mosaic
- Coniferous Plantation
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- Fence
- Species Poor Hedge & Trees
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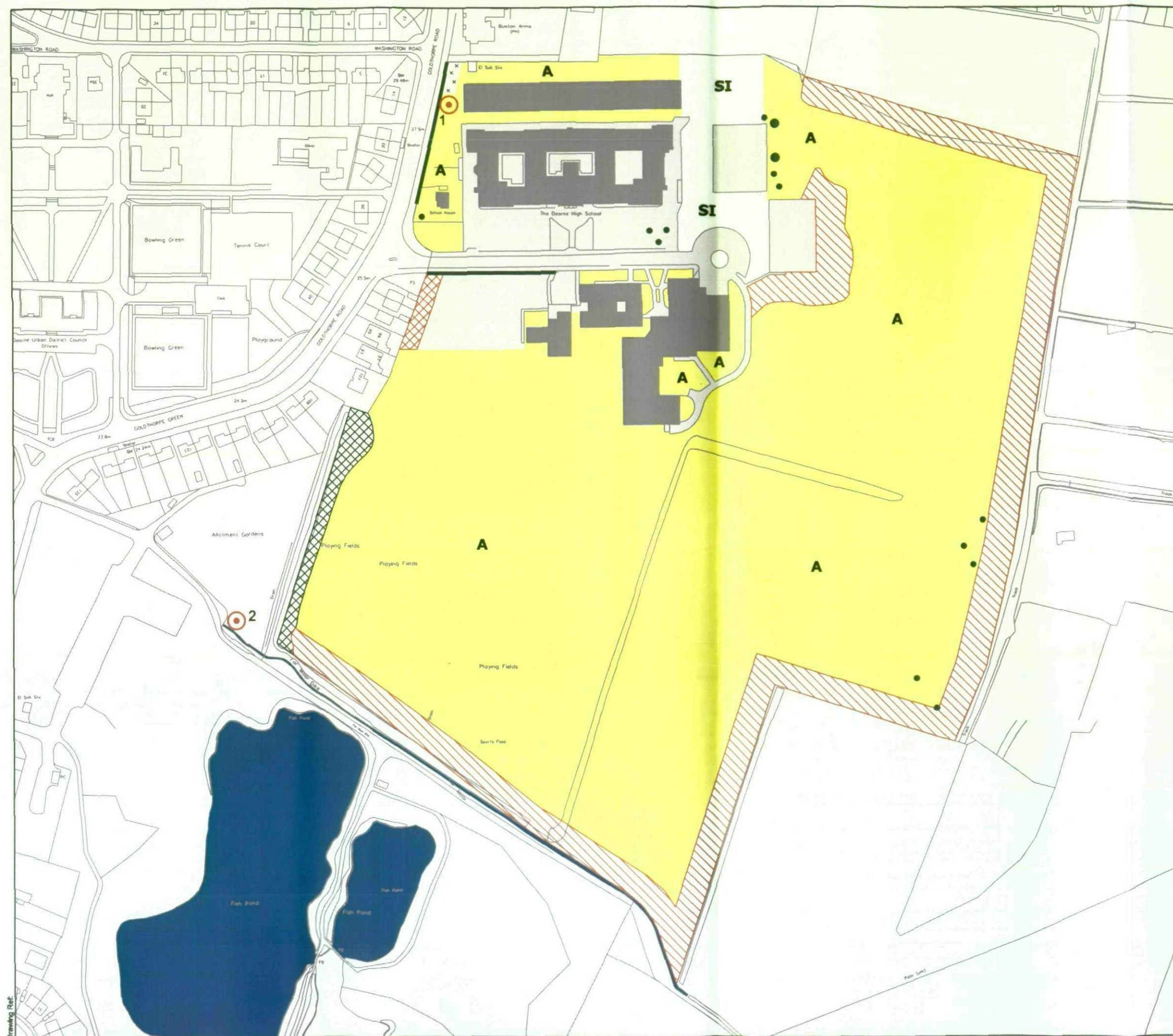
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	Target Note
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Drawing Ref:



KEY

- Buildings
- Hard Standing
- Target Note
- A Amenity Grassland
- SI Neutral Grassland Semi Improved
- SI Semi Improved Grassland
- Dry Heath/Acid Grassland Mosaic
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Project: Barnsley Schools

Title: Deane Phase I Habitat Survey
Base Map No. 7

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Figure Number: 07 **Rev:** -

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KEY

- Buildings
- Hard Standing
- Target Note
- Amenity Grassland
- Neutral Grassland Semi Improved
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