

Preliminary Ecological Appraisal Report for Monkhouse Primary, Spalding

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1 Executive Summary

ADAS were commissioned to undertake a Preliminary Ecological Appraisal to provide ecological baseline information to submit with a planning application for the proposed redevelopment of Monkshouse Primary School, Pennygate, Spalding, PE11 1LG.

The client is preparing a planning application to extend existing structures onsite. The application site consisted of a school complex made up of a range of buildings set in grounds that were a mosaic of semi-natural woodland, scattered trees, a recently installed pond, amenity grassland, and shrub borders. Within the application site there was limited potential for protected species.

No designated sites, either statutory or non-statutory, were identified that would be affected by the proposed development.

Taking into account the desk study and site survey results it was concluded that the site offers potential for the following protected species/habitats:

- Reptiles
- Nesting Birds

1.1 Recommendations

For full details of the recommendations and enhancements please refer to section 6 of this report. A summary of the key points are presented below:

Reptiles

Phased clearance will be required if the proposed timber stores and new PE store are located within the woodland.

Nesting Birds

The removal of features suitable for nesting birds should take place outside of the breeding bird season considered to be March to August inclusive. If working during the bird breeding season, undertake a pre-site check by a suitably qualified person to check ahead of works for nesting birds.

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2 Introduction

2.1 Background

On 18 November 2014 ADAS Ecologist Hollie Kent undertook a Preliminary Ecological Appraisal of Monkshouse Primary School, Pennygate, Spalding, PE11 1LG.

The application site consisted of a school complex made up of a range of buildings set in grounds that were a mosaic of semi-natural woodland, scattered trees, a recently installed pond, amenity grassland, and shrub border. The planning application is proposed for the extension of some of the existing structures.

2.2 Aims and Objectives

The aim of the survey and supporting desk study was to satisfy the requirements of the National Planning Policy Framework and relevant legislation. The survey involved identifying ecological features within or near the site that could potentially pose a constraint to the proposed works and highlight any opportunities for incorporating biodiversity enhancements into the proposals.

The objectives of this report are:

- To identify designated nature conservation sites within the vicinity of the site;
- To identify any records and/or populations of protected, notable or scarce species in the vicinity of the site;
- To record habitats or features of ecological interest within or in immediate proximity to the site;
- To record the presence of, or potential for, protected or notable species;
- To make an ecological assessment and highlight potential ecological constraints;
- To outline any further survey work and potential protected species requirements if relevant; and

To make suggestions for mitigation and compensation where appropriate.

2.3 Proposed Works

Works are proposed to extend the school and create ten additional car parking spaces. The extension areas will be restricted to concreted areas or small sections of short amenity grassland. The majority of the application site will not be affected by the proposed development.

2.4 Limitations/Constraints

The Preliminary Ecological Assessment was conducted during November 2014, following standard methodologies and survey protocols (JNCC, 2010). November is at the end of the ecological surveying season, which is considered a sub-optimum time for conducting the survey. However, due to a mild year

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it was considered that sufficient information was obtained to identify the habitat features and relevant recommendations to be made.

2.5 Desk Study

A desk study was carried out to identify statutory designated sites up to 5km, non-statutory sites within 2km and protected species within 2km of the proposed development.

The following sources were consulted:

- Greater Lincolnshire Nature Partnership (GLNP) (http://www.glnp.org.uk/)
- National Biodiversity Network (www.nbn.org.uk)
- Magic (http://www.magic.gov.uk/)

2.6 Field Survey Methodology

A Preliminary Ecological Appraisal was conducted by Hollie Kent ADAS Ecologist using standard techniques and methodologies (JNCC, 2010) and the nomenclature of Stace (2010).

Habitats on site were recorded onto a habitat map (Appendix 1).

2.7 Assessment Methodology

The report and assessment followed standard CIEEM guidelines for Preliminary Ecological Appraisals (Bennett, 2012). The habitat and species value were described and assessed. Definition of habitat values are set out in Appendix 3 and Appendix 4 and are in accordance with the published guidelines for Ecological Impact Assessment (IEEM, 2006).

3 Results

3.1 Desk Study

3.1.1 Designated Sites

There were two statutory designations within 5km of the site. One of the designations was a Site of Special Scientific Interest (SSSI) and the second was a Local Nature Reserve (LNR). There were twelve non-statutory designations within 2km of the site. These were all Local Wildlife Sites (LWS).

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Table 1: Statutory designations within 5km, and non-statutory designations within 2km of the application site;

Site	Designation	Distance and Direction from Site
Cowbit Wash	SSSI	3.3km SSE
Vernatts	LNR	2.5km NE
Disused March Line, Spalding	LWS	1.0km SE
New River	LWS	1.7km SE
Spalding Cemetery	LWS	2.0km NE
Vernatt's Drain	LWS	1.4km NE
South Drove Drain	LWS	1.9km SSE
River Welland Corridor	LWS	1.7km SSE
Counter Drain	LWS	1.5km W
Blue Gowt Drain, North of Pode Hole	LWS	2.0km W
Coronation Channel	LWS	1.5km E
Fourth District Main Drain	LWS	1.9km E
Land North of Spalding Station	LWS	1.6km NE
River Welland in Spalding	LWS	1.6km E

SSSI = Site of Special Scientific Interest

LNR = Local Nature Reserve

LWS = Local Wildlife Site

3.1.2 Species Records

Closest records of selected protected and notable species recorded within 2km of the site. Lincolnshire Environmental Records Centre provide biological data in a resolution from 100m to 1km so placement of individual records is approximate.

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Table 2: Species records within 2km:

Species	Designations	Distance From Site	Most recent record date /date range
Brown Long-eared Bat (*Plecotus Auritus*)	HSD, WCA, UKBAP	1.6KM E, 1.6KM NE & 850M SE	2001-2013
Common Pipistrelle (*Pipistrellus pipistrellus*)	HSD, WCA, UKBAP	All directions nearest 700m SW	1998-2013
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	HSD, WCA, UKBAP	All directions nearest 800m NW	1997-2013
Nathusius Pipistrelle (*Pipistrellus nathusii*)	HSD, WCA, UKBAP	850M SE & 1.5KM SE	2012 & 2013
Noctule Bat (*Nyctalus noctula*)	HSD, WCA, UKBAP	1.4KM SE	2013
Daubenton's Bat (*Myotis daubentonii*)	HSD, WCA, UKBAP	1.4KM SE, 1.0KM E & 1.0KM W	1992-2010
Natterer's Bat (*Myotis nattereri*)	HSD, WCA, UKBAP	850M SE	2012
Whiskered Bat (*Myotis mystacinus*)	HSD, WCA, UKBAP	1.5KM E	2004
Grass Snake (*Natrix natrix*)	WCA, UKBAP	1.5KM SW & 2.0KM W	2009 & 2010
European Water Vole (*Arvicola amphibious*)	WCA, UKBAP	All directions nearest record 450m N	2005-2011
European Otter (*Lutra lutra)*	HSD, WCA, UKBAP	1.5KM SE	2012
European Hedgehog (*Erinaceus europaeus*)	UKBAP	1.8KM SE	2010
Common Toad (*Bufo bufo*)	UKBAP	650M NE	2010
Brown Hare (*Lepus europaeus*)	UKBAP	2.0KM NE	2011
Barn Owl (*Tyto alba*)	Schedule 1	2.0KM SE	2000

Peregrine (*Falco pereginus*)	Schedule 1	1.0KM SE	2008
Kingfisher (*Alcedo atthis*)	Schedule 1	2.0KM SE	2008
Redwing (*Turdus iliacus*)	Schedule 1	2.0KM SE	2008
Fieldfare (*Turdus pilaris*)	Schedule 1	2.0KM SE	2008

HSD – Habitats and Species Directive 2010

WCA – Wildlife and Countryside Act 1981

UKBAP – UK Biodiversity Action Plan 2008

3.2 Habitat Survey Results

The habitats identified on the application site are listed and described below. All habitats are marked on the habitat map, Appendix 1. Photographs can be found in Appendix 2.

- Semi-natural broadleaved woodland;
- Scattered broadleaved trees;
- Scattered Coniferous trees;
- Tall ruderal;
- Standing water;
- Amenity grassland;
- Introduced shrub;
- Fence;
- Buildings;
- Bare ground.

3.2.1 Semi-natural broadleaved woodland

A small area of broadleaved woodland was identified in the south-west corner of the site. The canopy layer consisted of Field Maple (*Acer campestre*), Silver Birch (*Betula pendula*), and a single mature Ash (*Fraxinus excelsior*). The understory consisted of Hazel (*Corylus avellana*), Cherry (*Prunus sp.*), Hawthorne (*Crataegus monogyna*), Elder (*Sambucus nigra*), Holly (*Ilex aquifolium*), and privet (*Ligustrum sp.*). The field layer was largely dominated by Ivy (*Hedra helix*), with abundant Italian Lords-and-Ladies (*Arum italicum spp. Italicum*), and frequent found Ground Ivy (*Glechoma hederacea*), Herb Robert (*Geranium robertianum*), and Common Nettle (*Urtica diocia*).

In addition there was a small planted area to the north of the woodland with the occasional Butterfly-Bush (*Buddleja davidii*), Lavender (*Lavandula sp.*) and Fern (*Dryopteris sp.*) scattered across the area. The woodland appeared to have been a wildlife focused area in the past that had been neglected for some time.

3.2.2 Scattered broadleaved trees

Scattered broad-leaved trees were found around the majority of the site boundaries. The western side of the site was bounded by approximately 30 Lombardy Poplar (*Populus nigra*) trees. The northern boundary consisted of a number of species in clumps between access points to the school.

In the north-west corner there were 11 Silver Birch, and a mature Elder. In addition a mature Beech (*Fagus sylvatica*) tree was present just over the boundary that overhung onto the school grounds. A single Cherry tree was present just east of the western clump. The centre clump along the northern boundary consisted of Cheery and Beech trees, and the north-eastern clump consisted of Hazel and Field Maple.

Along the eastern boundary a number of broadleaved trees overhung the boundary from the bordering residential housing, such as Whitebeam (*Sorbus aria*), and Silver Birch, and in addition a small area of planted fruit trees were present south of the school buildings. Along the southern boundary a number of mature trees were present and consisted of; a semi-mature Oak (*Quercus robur*), two Alders (*Alnus glutinosa*), a Hazel, a Field Maple, three Limes (*Tilia sp.*), an Ash, four Silver Birch, a Norway Maple (*Acer platanoides*) and a Red Oak (*Quercus rubra*). In addition, a single Eucalyptus (*Eucalyptus sp.*) tree was recorded at the entrance to the school reception.

3.2.3 Scattered coniferous trees

A single coniferous tree was located along the southern boundary in the south east corner. In addition a Deodar Cedar (*Cedrus deodara*) was recorded within an area of introduced shrubs just south of the northern boundary on a footpath access into the school.

3.2.4 Tall ruderal

Two small patches of ruderal vegetation dominated by Common Nettle were found to be present on site. The first around two electrical units on the western border to the north of the site, and the second around a pond on the south east boundary.

3.2.5 Standing water

A single pond was located within the application site. This was a small ornamental pond covering approximately 3m^2. The pond was fenced and lined with a wooden platform surround.

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Emergent and marginal plants included ruderal species, and introduced water plants. Bounding the water body was short mown amenity grassland and wooden cladded fencing bounding the site from residential housing.

3.2.6 Amenity grassland

The majority of the landscaping around the school buildings was managed as amenity grassland, which was mown on a regularly basis to create a short tight sward of between 2-5cm. The grassland was dominated by grasses that included Perennial Rye-grass (*Lolium perenne*), and Red Fescue (*Festuca rubra*). Forb species that occurred frequently included Daisy (*Bellis perennis*), and Creeping Buttercup (*Ranunculus repens*).

3.2.7 Introduced shrubs (Ornamental planting)

There were a number of shrub borders around the school buildings that supported a variety of ornamental planted species.

3.2.8 Fence

Fencing bounded the entire site. Other fenced areas included classrooms, bins, play areas, and the pond.

3.2.9 Buildings

A large amount of the site was made up of school buildings. The original school building was constructed in traditional cavity brick with a flat felt roof in 1972. In 2000 a two classroom extension was built with a link corridor connecting to the main building, built in brick with a flat felt roof. Two separate school buildings were installed in 2002 (Nursery and Speech and Language Unit), both brick built with pitch tiled roofs. In 2007 a mobile classroom was sited south of the existing buildings.

3.2.10 Bare ground

Immediately around the school buildings bare ground dominated the landscaping as car parks, playgrounds, and footpaths.

3.3 Protected Species Survey Results

3.3.1 White-clawed Crayfish

There was no suitable habitat for White-clawed Crayfish (*Austropotamobius pallipes*) on the site. Therefore, this species will be considered no further within this report.

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3.3.2 Great Crested Newts

There were no records for Great Crested Newts (*Triturus cristatus*) within 2km of the site. One ornamental pond was identified within the application boundary (as described in section 3.2.3).

Due to a number of factors, the pond was considered unsuitable for Great Crested Newt;

- The water body had been recently installed;
- It's boundary habitats hold little to no suitable terrestrial amphibian habitat; and
- The lack of ponds in the wider area;

In addition, the pond is not to be affected by the proposed works and therefore a Habitat Suitability Index (HSI) of the pond was considered unnecessary.

Given all the factors as stated above Great Crested Newt are considered no further within this report.

3.3.3 Reptiles

Records of Grass Snake (*Natrix natrix*) were supplied by GLNP within 2km of the site. The application site had some suitable habitat for common reptile species within the woodland area.

It is unknown at this time whether the woodland is to be affected as part of the works. Therefore further mitigation is given.

3.3.4 Bats

The records search identified records of eight species of bat within 2km of the site (Table 2), the closest at 700m.

During the survey the buildings were assessed for their suitability to support bats. No evidence of bats or potential roosting opportunities were identified.

There was some limited bat roost potential identified on the mature trees along the southern boundary of the site. These trees are not to be impacted upon by the proposed works.

Due to the number of species records identified within 2km of the site and the linear features identified during the survey including woodland and scattered trees it is considered likely that bats use the area for foraging.

No bat mitigation is suggested but enhancement measures are recommended.

3.3.5 Birds

No nests were observed during the survey. The woodland and scattered trees were likely to provide suitable nesting sites for a number of common garden and parkland birds, and a number of nest boxes

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were observed during the survey visit. There was no habitat with the potential to support nesting Schedule 1 bird species as identified during the desk study.

Some minor mitigation is recommended.

3.3.6 Hazel Dormouse

The woodlands recorded onsite lacked suitable three dimensional habitat to support Hazel Dormouse (*Muscardinus avellanaris*).

Therefore, this species is considered no further within this report.

3.3.7 Water Vole

There was no suitable habitat to support Water Vole (*Arvicola amphibius*).

Therefore, this species is considered no further within this report.

3.3.9 Otter

There was no suitable habitat for Otter (*Lutra lutra*) on the site.

Therefore, this species is considered no further within this report.

4 Discussion

The primary habitat types identified on the site of the proposed development were amenity grassland and bare ground (consisting of tarmac access, paths, car parking facilities and playgrounds). Other habitats included a small area of broadleaved woodland, scattered broadleaved and coniferous trees, two small areas of tall ruderal, a pond, and borders of introduced shrubs. All these habitat types were considered to be of negligible ecological value (Appendix 3). The habitats of interest were the broadleaved woodland to the south-west and the scattered mixed trees across the site, both habitat types were considered to be of neighbourhood value (Appendix 3).

The woodland had suitable features to support common reptile species. It is understood that the woodland could be impacted upon. This is dependent on the final location for a new PE store and the relocated timber stores.

Common nesting birds may nest in the woodland, the scattered trees, and the introduced shrubs. It is understood that only a very small amount of introduced shrub will require removal located to the north of the site. In addition there were bird nest boxes attached to the school itself and within the woodland that could also support breeding birds.

There were no other protected species issues identified in relation to this proposed development.

There were two statutory designated sites within 5km of the site, the closest of which was 2.5km north-east of the site. There were 12 non-statutory designated sites within 2km of the development site, the closest was 1km to the south-east. In relation to the proposed development none of the designated sites will be affected by the works either during the construction or operational phases.

4.1 Consideration of SPAs

There were no European Protected Sites identified within 5km of the proposed development.

4.2 Potential for Future Ecological Change

The site is currently managed in such a way that no future ecological change would be considered even if the development did not happen.

5 Evaluation

Using the criteria in Appendix 3, the majority of habitats on site were considered to be of negligible ecological value due to their low grade and widespread nature. The woodland and scattered trees provided important ecological habitat across the application site and were considered to be of neighbourhood value.

Given the level of information that relates to species that potentially could be associated with the site that includes common and widespread bird species, small mammals and common reptiles, the species assemblages in accordance to Appendix 4 is considered to be Neighbourhood value.

6 Conclusions

The site primarily consisted of species poor habitat with few opportunities to support a range of protected habitats or species.

There was limited potential for impacts on localised and transitional species such as nesting birds and reptiles during the construction phase of works. These can be avoided with the implementation of the recommendations set out below.

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6.1 Recommendations

6.1.1 Reptiles

If works are required that could impact the broadleaved woodland (i.e. The New PE store and relocated timber stores) it is recommended that phased clearance is carried out under an ecological watching brief, and if reptiles are discovered during works they are re-located out of harm's way into the parts of the woodland that are not to be affected.

6.1.2 Nesting Birds

There was potential for nesting birds within the woodland, scattered trees, introduced shrubs and the bird boxes located around site. Birds could be affected during the demolition and construction phase of the proposed works.

Vegetation clearance and the removal of the bird boxes should take place outside of the bird breeding season considered to be March to August inclusive. If working March to end of August, undertake a pre-site check by a suitably qualified person to check ahead of works for nesting birds.

If active nests are found, these must be left undisturbed, with 5m of cover around them, until the young have fledged and the nests are no longer in use.

6.2 Enhancements

Enhancements to the woodland area would vastly increase the overall biodiversity value of the site. It was noted during the survey a number of wildlife features such as bug hotels, bird feeders and nest boxes had been installed into the area, however these appeared to have been neglected for some time. Simple enhancement measures are suggested to increase the value of the site and to build upon what has already been achieved within the area, these enhancement would not only be beneficial to wildlife and the biodiversity of the site, but also for the enjoyment and education of the pupils;

- Relocation of the bird hide to the north of the site to overlook the entire woodland, and to enable viewing of nest boxes;
- A bird 'feeding station' installed in front of the bird hide;
- Squirrel-proof bird feeders installed at the 'feeding station';
- A grassland buffer is allowed to grow-out along the eastern edge of the woodland;
- Rotational shrub cutting to create different structures and ages of growth, benefitting different wildlife at different times;
- Cleaning and re-location of existing nest boxes (to north-east side of trees);
- Installation of additional nest boxes;

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- Installation of bat boxes; and
- A more interactive bug hotel is created which can be dismantled for viewing.

7 Relevant Legislation & Planning Policy

This section sets out the wildlife legislation and policy relevant (or potentially relevant pending further survey) to the proposed development based on the findings of the desk study and field survey. The information found here is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information.

7.1 Natural Environment & Rural Communities Act 2006

Section 40 of the NERC Act, 2006 places a duty upon all local authorities in England to promote and enhance biodiversity in all of their functions. Section 41 lists habitats and species of principal importance for the conservation of biodiversity. Fifty six habitats and 943 species of principal importance are included on the Section 41 list.

These are all the habitats and species in England that have been identified as requiring action in the UK Biodiversity Action Plan (UK BAP). These species and habitats are a material consideration in the planning process.

7.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF) of March 2012 replaced the previous planning policy for biodiversity conservation; Planning Policy Statement 9 (PPS9). Paragraph 117 of the NPPF states that to minimise impacts on biodiversity, planning policies should:

- Plan for biodiversity at the landscape scale, across local authority boundaries;
- 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;

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles (paragraph 118):

- 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.

7.3 Protected Species

7.3.1 Common Reptiles

Slow-worm, Adder, Grass Snake and Common Lizard are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to kill or injure them.

It is not illegal to capture, disturb or to damage their habitats. However, the reptiles themselves are protected so any works to damage their habitat could risk causing harm to reptiles and hence could be illegal.

7.3.2 Birds

Wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to take or harm them, their nests (whilst in use or being built) or their eggs.

Additionally for some species that are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (e.g. Barn Owl), it is an offence to intentionally or recklessly disturb the adults while they are in and around their nest or intentionally or recklessly disturb their dependent young.

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8 References

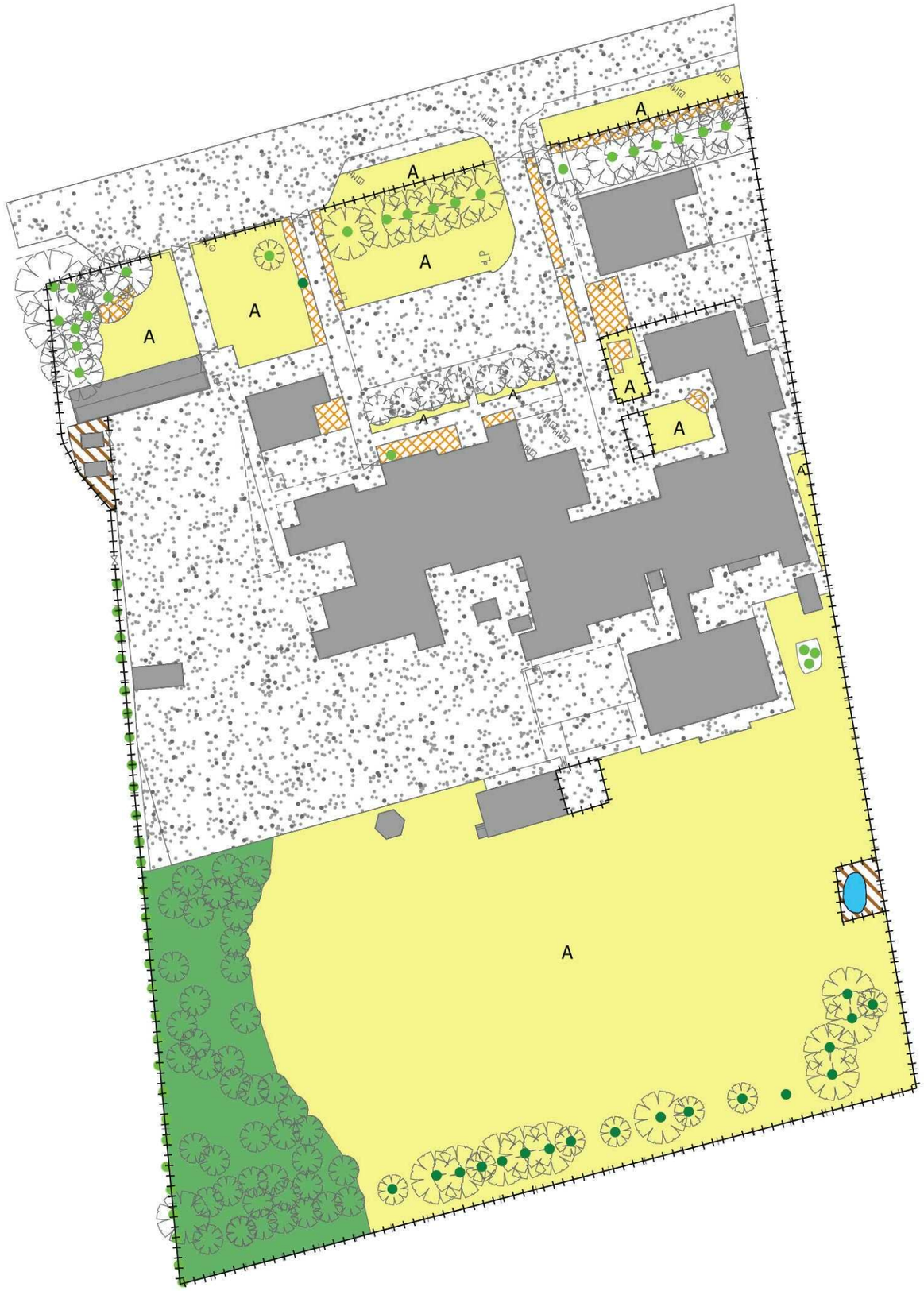
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APPENDIX 1: Habitat map of site

See following page

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ADAS

Monkshouse Primary School,
Pennygate, Spalding. PE11 1LG

Phase 1 Habitat Survey

- Semi-natural broadleaved woodland
- Scattered broadleaved trees
- Scattered coniferous trees
- Tall ruderal
- Standing water
- A — Amenity grassland
- Introduced shrub
- Fence
- Building
- Bare ground

Drawn by: P. Taylor 04/12/2014, Verified by: H. Kent 04/12/2014

N
W E
S

0 10 20 30 40
Metres

Scale 1:650 at A3 size

Base map from a field survey produced
by mouchel business services
May 2012

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Produced by ADAS Environment Group, Wolverhampton. WV9 5AP.

APPENDIX 2: Site photos



Photo 1: Main school building



Photo 2: Playground area



Photo 3: Car park and scattered trees along northern boundary



Photo 4: Amenity grassland playing field and school building



Photo 5: Amenity grassland, mobile building and play area

(Photo's by Mirjana Corovic (Mouchel), 2014)

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APPENDIX 3: Definitions of the level of habitat value

Geographic level of Value	Examples
International value	Ramsar Sites, Special Protection Areas, Biosphere Reserves, Special Areas of Conservation. Sites supporting populations of internationally important species.
National value	SSSIs or non-designated Sites meeting SSSI selection criteria, NNRs, Marine Nature Reserves, NCR Grade 1 Sites. Sites containing viable areas of key habitats identified in the UK Biodiversity Action Plan.
Regional value	Sites containing viable areas of threatened habitats listed in a Regional BAP (or some Natural Areas), comfortably exceeding SINC criteria, but not exceeding SSSI criteria.
County / Metropolitan	Sites meeting the criteria for county or metropolitan designation (SINC, CWS, etc.). Ancient semi-natural woodland, LNRs or viable areas of key habitat types listed in county BAPs/Natural Areas.
District / Borough	Undesignated Sites or features considered to appreciably enrich the habitat resource in the District or Borough.
Parish / Neighbourhood	Undesignated Sites or features which appreciably enrich the habitat resource within the Parish or Neighbourhood.
Negligible value	Low grade and widespread habitats.

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APPENDIX 4: Definitions of the level of species value

Geographic Level of Value	Examples
International	Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population/number of any internationally important species.
National	Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population/number of any nationally important species.
Regional	Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species.
County / Metropolitan	Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan "red data book" or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species.
District / Borough	A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Parish / Neighbourhood	Species that are not threatened but are valued at a local level on intrinsic appeal.
Negligible	Common or widespread species.

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Photographs – Existing School Photos

















