

PRELIMINARY ECOLOGICAL APPRAISAL

QEHS HEXHAM



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DRAFT

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A. SUMMARY

E3 Ecology Ltd was commissioned by Faithful and Gould in October 2018 to undertake a Preliminary Ecological Appraisal (PEA) of land at Queen Elizabeth High School, Hexham.

No proposals are currently available.

Consultation with the MAGIC website¹ indicated that the nearest SSSI is Tyne Watersmeet 1.3km away. The school lies within the SSSI impact risk zone for large scale developments over 1ha.

The Environmental Records Information Centre North East (ERIC NE) indicated the likely presence of a range of bat species, hedgehog and perhaps badger within 2km of the site.

Consultation with Northumberland Bat Group and the caretaker indicated that a number of roosts are present in the adjacent Hydro building, that is outwith this assessment.

Previous survey work at QEHS by E3 recorded bat roosts of small numbers of common and soprano pipistrelle bats behind the timber cladding of the main school building.

Preliminary Ecological Appraisal indicated that the main habitat constraints are likely to be the mature parkland features, which will have both a landscape and nature conservation value, with the mature trees providing habitats for bats and birds, and good green corridors. Areas are identified as broadleaved woodland priority habitat on MAGIC Maps. The very old lawns within the parkland areas have potential habitat value and would need summer survey, ideally after being left un-cut for a month.

The wider tree and shrub areas contribute to the character of the area and will again be of value to bats and birds in particular, with the older, slower growing tree species being a more significant constraint. The north west area, which appears to be a former nursery, has quite a nice mix of habitats and plant species which will contribute to local biodiversity, but the main constraints are at the boundaries where mature oaks and large, diverse hedges are present. Sports pitches and areas of amenity grassland are generally of low conservation value.

Rhododendron, a Schedule 9 weed species, is present in the grounds.

The quality of the setting means it is much more likely that suitable buildings and late maturity trees will support roosting bats. The old sports pavilion has a high risk of supporting roosts.

There is evidence that badger may use the north-western area for foraging, but no confirmed setts were recorded. Red squirrel are considered to be most likely to be absent given the number of recent grey squirrel records.

No wetlands that appeared suitable for great crested newts were recorded, or were evident from aerial photographs or OS maps, though garden ponds may be present in adjacent properties. A small stream runs through part of the site, and along the northern boundary, but it is small and shallow and unlikely to support otter or water vole.

Ideally, all the mature trees would be retained. If mature trees are to be lost then detailed tree surveys to assess bat roost presence would be required. The school buildings vary in bat roost suitability, with some having known roosts, others having potential and some being well

¹ MAGIC website: www.magic.gov.uk

sealed and of negligible suitability. The areas of cover provide good potential habitat for hedgehog.

Additional survey work is required to reliably assess the value for species such as bats and birds.

No other protected or priority species is likely to be affected by the proposals.

Any school redevelopment is not predicted to have any impacts on statutory/non-statutory sites. Bat roosts are present in buildings and works to any buildings will require additional survey work. Roosts are likely to result in licensing issues rather than being a major constraint to development design, unless large maternity roosts of scarcer species are present.

The following additional surveys are likely to be required to inform development design, depending on proposed design, and will need to be undertaken prior to a planning application:

- Wintering bird risk assessment.
- Breeding bird surveys April to June, including nocturnal.
- Monthly bat surveys and remote monitoring May to September (assuming large scale development is planned).
- Emergence surveys of any buildings to be affected with a risk of supporting bat roosts May to September (number of surveys will depend on building risk).
- Survey of any trees that may be expected to be lost for potential bat roost features.
- Winter badger checking survey.
- Botanical survey in May and June of older grassland.

B. INTRODUCTION

E3 Ecology Ltd was commissioned by Faithful and Gould in October 2018 to undertake a Preliminary Ecological Appraisal (PEA) of land at Queen Elizabeth High School, Hexham.

No proposals are currently available.

The purpose of this report is:

- To identify key ecological constraints to development
- To inform master-planning to allow significant ecological effects to be avoided or minimised wherever possible
- To allow the further ecological surveys needed to inform an ecological impact assessment to be identified and appropriately designed
- To form a basis for agreeing the scope of the ecological impact assessment with relevant consultees

The site is located in Hexham at an approximate central grid reference of NY9243 6392. The site location is illustrated in the figure below.

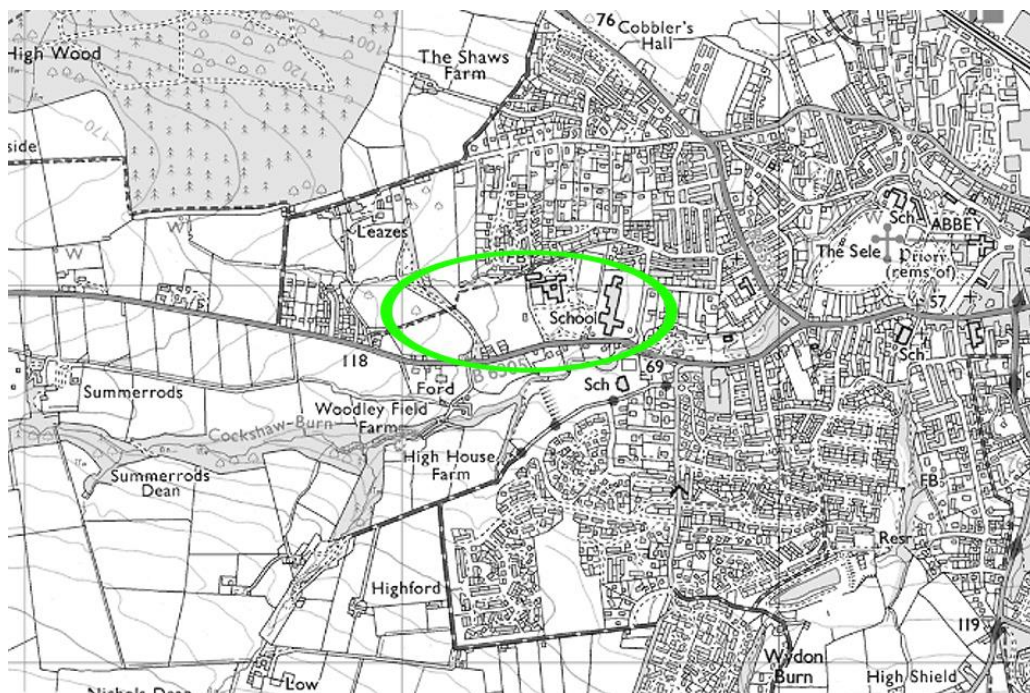


FIGURE 1: SITE LOCATION

(OS mapping © Crown copyright and database rights 2016/2017 OS 0100039392)

C. PLANNING POLICY AND LEGISLATIVE CONTEXT

C.1 NATIONAL PLANNING POLICY

The table below details the key paragraphs from the National Planning Policy Framework (NPPF)² relating to the natural environment:

TABLE 1: NATIONAL PLANNING POLICY FRAMEWORK: NATURAL ENVIRONMENT	
Statement	Paragraph
<p>Planning policies and decisions should contribute to and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. 	170
<p>Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework³; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.</p>	171
<p>Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads⁴. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development⁵ other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:</p> <ul style="list-style-type: none"> a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy; b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated. 	172
<p>Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the</p>	173

² National Planning Policy Framework (July 2018), Department for Communities and Local Government,

³ Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.

⁴ English National Parks and the Broads: UK Government Vision and Circular 2010 provides further guidance and information about their statutory purposes, management and other matters.

⁵ For the purposes of paragraphs 172 and 173, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.	
<p>To protect and enhance biodiversity and geodiversity, plans should:</p> <ul style="list-style-type: none"> a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity⁶; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation⁷; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity. 	174
<p>When determining planning applications, local planning authorities should apply the following principles:</p> <ul style="list-style-type: none"> a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), b) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; c) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; d) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁸ and a suitable compensation strategy exists; and e) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity. 	175
<p>The following should be given the same protection as habitats sites:</p> <ul style="list-style-type: none"> a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites⁹; and c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites. 	176
The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.	177

Section 40 of the Natural Environment and Rural Communities Act 2006, places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity.

Planning Practice Guidance¹⁰ states:

- *'The National Planning Policy Framework is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that*

⁶ Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

⁷ Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

⁸ For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

⁹ Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.

¹⁰ Planning Practice Guidance: Natural Environment (www.planningguidance.communities.gov)

a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution’ (para. 007).

- ‘Information on biodiversity impacts and opportunities should inform all stages of development An ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate’ (para. 016).
- ‘Where an Environmental Impact Assessment is not needed it might still be appropriate to undertake an ecological survey, for example, where protected species may be present’ (para. 016).
- ‘Local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity’ (para. 016).
- ‘Biodiversity enhancement in and around development should be led by a local understanding of ecological networks, and should seek to include:
 - habitat restoration, re-creation and expansion;
 - improved links between existing sites;
 - buffering of existing important sites;
 - new biodiversity features within development; and
 - securing management for long term enhancement’ (para. 017).

C.2 PROTECTED SPECIES LEGISLATION

The table below details the relevant legislation for those protected species that may be present on this site.

TABLE 2: SUMMARISED SPECIES LEGISLATION		
Species	Relevant Legislation	Level of Protection
Bats (All species)	<ul style="list-style-type: none"> • Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as European protected species under Conservation of Habitats and Species Regulations 2017 • Bats are also protected by the Wild Mammals (Protection) Act 1996 	The WCA (1981) and Conservation of Habitats and Species Regulations 2017 make it an offence to: <ul style="list-style-type: none"> • Intentionally kill, injure, or take any species of bat • Intentionally or recklessly disturb bats • Intentionally or recklessly damage destroy or obstruct access to bat roosts
Otter	<ul style="list-style-type: none"> • Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as European protected species under Conservation of Habitats and Species Regulations 2017 • Otters are also protected by the Wild Mammals (Protection) Act 1996 	The WCA (1981) and Conservation of Habitats and Species Regulations 2017 make it an offence to: <ul style="list-style-type: none"> • intentionally kill, injure, or take otters • intentionally or recklessly disturb otters • intentionally or damage destroy or obstruct access to otter holts or any place used by the animal for shelter or protection
Red Squirrel	<ul style="list-style-type: none"> • Full protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Red squirrels are also protected by the Wild Mammals (Protection) Act 1996 	The WCA (1981) makes it an offence to: <ul style="list-style-type: none"> • intentionally kill, injure, or take red squirrels • intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection or disturb red squirrels whilst they are using such a place.

Species	Relevant Legislation	Level of Protection
Birds	<ul style="list-style-type: none"> Protection under the Wildlife and Countryside Act (1981) as amended with the exception of some species listed in Schedule 2 of the Act 	<p>The WCA (1981) makes it an offence to (with exceptions for certain species):</p> <ul style="list-style-type: none"> Intentionally kill, injure or take any wild bird Intentionally take, damage or destroy nests in use or being built (including ground nesting birds) Intentionally take, damage or destroy eggs Species listed on Schedule 1 of the WCA or their dependant young are afforded additional protection from disturbance whilst they are at their nests
Badger	<ul style="list-style-type: none"> Protection of Badgers Act 1992 Badgers are also protected by the Wild Mammals (Protection) Act 1996 	<p>The Protection of Badgers Act (1992) makes it an offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> Damage a badger sett or any part of it Destroy a badger sett Obstruct access to, or any entrance of a badger sett Disturb a badger whilst it is occupying a badger sett
<p><i>Under the Countryside and Rights of Way Act 2000 (CROW Act) the offence in section 9(4) of the Wildlife and Countryside Act 1981 of damaging a place of shelter or disturbing those species given full protection under the act is extended to cover reckless damage or disturbance.</i></p>		

C.3 INVASIVE SPECIES LEGISLATION

The table below details the legislation in relation to invasive species and lists those invasive species most likely to be found in this region.

Relevant Legislation	Description of Offence	Species <i>(Covered by the Legislation and most likely to be found in this Region)</i>
Listed on Part II of Schedule 9 of the Wildlife and Countryside Act (1981 as amended)	<p>Section 14 of the WCA (1981) states:</p> <ul style="list-style-type: none"> if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence. 	<p>Himalayan balsam Cotoneaster Montbretia Japanese knotweed Giant hogweed Rhododendron</p>

C.4 PROTECTED SITE LEGISLATION

Details of the legislation surrounding protected sites are provided in the appendices.

C.5 PRIORITY SPECIES

Although not afforded any legal protection, national priority species (species of principal importance, as listed in Section 41 of the NERC Act (2006)), and local and regional priority species, as detailed within the relevant biodiversity action plans, are material considerations in the planning process and as such have been assessed accordingly within this report.

The table below details the local biodiversity action plan relevant to the area within which this site lies, and the species/species groups and habitats listed as priorities within the plan.

TABLE 4: BIODIVERSITY ACTION PLAN					
Northumberland Biodiversity Action Plan					
Species			Habitats		
Barn Owl	Bats	Black Grouse	Blanket Bog	Built Environment	Brownfield Land
Coastal Birds	Common Seal	Dingy Skipper	Calaminarian Grassland	Coastal heathland	Fen, Marsh & Swamp
Dormouse	Farmland Birds	Freshwater Fish	Gardens & Allotments	Heather Moorland	Lowland Heathland
Freshwater Pearl Mussel	Garden Birds	Great Crested Newt	Lowland Meadows & Pastures	Maritime Cliffs & Slopes	Native Woodland
Grey Seal	Hedgehog	Otter	Ponds, Lakes & Reservoirs	Recreational & Amenity Space	Reedbed
Red Squirrel	River Jelly Lichen	Upland Waders	Rivers & Streams	Rocky Shore, Reefs & Islands	Saline Lagoons
Violet Crystalwort	Water Rock- bristle	Water Vole	Saltmarsh & Mudflat	Sand Dunes	Transport Corridors
White-Clawed Crayfish			Trees & Hedgerows	Upland Hay Meadows	Whin Grassland

D. METHODOLOGY

D.1 SCOPE OF STUDY

The scope of the study, in terms of the survey area and the desk study area, is based on professional judgement. The likely zone of influence has been considered, including both potential direct effects such as habitat loss and potential indirect effects such as disturbance.

For this site the survey area comprised the green line boundary as defined within the figure below with, in addition, a 50m buffer around the periphery appraised where access was available. The desk study included an assessment of land-use in the surrounding area and a data search covering a 2km buffer zone (see below for further detail).

The following types of ecological receptors have been considered:

- Statutorily designated sites for nature conservation
- Non-statutorily designated sites for nature conservation
- Species protected by law
- Species and/or habitats listed under the NERC Act (2009) as being of principal importance for conservation of biodiversity
- Species and/or habitats listed in relevant local biodiversity action plans

The figures below illustrate firstly the site boundary and secondly the broad habitats present on site and within an approximate 500m buffer zone.



FIGURE 2: SITE BOUNDARY
(Reproduced under licence from Google Earth Pro.)



FIGURE 3: SITE AND SETTING
(Reproduced under licence from Google Earth Pro.)

D.2 DESK STUDY

Initially, the site was assessed from aerial photographs and 1:25,000 Ordnance Survey maps. Following this, a data search was submitted to the Local Records Centre in November 2018, requesting data relating to protected or otherwise notable species and non-statutory sites for

nature conservation within 2km of the survey area. In addition, a search was made of the MAGIC website¹¹ for all statutorily protected sites for nature conservation within 2km of the survey area.

D.3 PRELIMINARY FIELD SURVEY METHODOLOGY

D.3.1 PHASE 1 HABITAT SURVEY

D.3.1.1 SURVEY METHODS

The field survey of the proposed site was conducted using the methodology of the Joint Nature Conservation Committee's Phase 1 Habitat Survey, as outlined in their habitat-mapping manual¹². Each parcel of land was assessed by a trained surveyor and classified as one of ninety habitat types. These were then mapped and the habitat information supplemented by dominant and indicator species codes and target notes where appropriate. Where areas within the study area do not fall into the Phase 1 Habitat Survey classification, alternative methods of classification have been used.

D.3.1.2 SURVEY EQUIPMENT

The following equipment was used during the phase 1 habitat survey:

- Binoculars
- High intensity LED torch
- Digital Camera

D.3.2 PRELIMINARY PROTECTED AND PRIORITY SPECIES APPRAISAL

D.3.2.1 SURVEY METHODS

Where there is a risk of legally protected species and/or otherwise notable species¹³ being present, an initial appraisal was completed to inform the proposals. This appraisal included the following key elements:

- Structures and trees were assessed for the risk of supporting roosting bats (see below).
- Wetlands, where present, were reviewed for their potential use by great crested newt, otter and water voles,
- If present, any trackways regularly used by badger were noted and any badger sett usage assessed by the presence of freshly dug earth or bedding at the entrance.
- The suitability of the suite of habitats present for use by reptiles was assessed.
- Likely use of the site by birds was assessed from the species seen during the survey, and the habitats present.
- Potential use by otherwise notable species was determined based on the broad habitat types present on site, any recent records obtained through the desk study and the geographical distribution of the species. Where specific habitat requirements for notable species have been recorded on site these have been noted, and used as part of this appraisal. The species groups assessed are limited to birds, freshwater fish, amphibians, reptiles, terrestrial mammals, butterflies and dragonflies.

¹¹ MAGIC Website: www.magic.gov.uk

¹² Handbook for Phase 1 habitat survey, A Technique For Environmental Audit, JNCC, 2010

¹³ To include national priority species as listed in Section 41 of the NERC Act (2006) and local or regional priority species as listed within the relevant Biodiversity Action Plan

Where it is considered likely that there is a significant risk of protected or otherwise notable species being affected or where habitats are of particularly high value additional specialist survey work has been recommended. Further survey work may also be recommended where development proposals have the potential to affect statutorily designated sites in the vicinity.

D.3.3 ENVIRONMENTAL CONDITIONS

The table below details the environmental conditions during the preliminary ecological appraisal.

TABLE 5: SURVEY CONDITIONS				
Date	Temperature	Cloud Cover	Precipitation	Wind Conditions
2 nd November	12c	100%	0	0

D.3.4 SURVEY CONSTRAINTS

The survey was undertaken late in the season when many plants will be dying back, and when bat droppings are likely to have been washed away from the outsides of buildings. No internal or detailed external building survey was undertaken. Adjacent land was generally in private ownership and without access.

D.4 PERSONNEL

The table below details the personnel who undertook the survey work.

Name	Position	Professional Qualifications	Natural England Survey Licence Numbers
Dr Tony Martin	Director	BSc PhD CMLI MCIEEM	2015-10138 CLS-CLS (Bats)
Mary Martin	Director	BSc MCIEEM	2015-12822-CLS-CLS (Bats)

Further details of experience and qualifications are available at www.e3ecology.co.uk.

D.5 ASSESSMENT METHODOLOGY

The relative value of the ecological receptors (habitats, species and designated sites) was assessed using a geographical frame of reference. For designated sites this is generally a straightforward process with the assigned designation generally being indicative of a particular value, e.g. Sites of Special Scientific Interest are designated under national legislation and are therefore generally considered to be receptors of national value. The assignment of value to non-designated receptors is less straightforward and as recognised by the Guidelines for Ecological Impact Assessment produced by the Chartered Institute of Ecology and Environmental Management¹⁴, is a complex and subjective process and requires the application of professional judgement.

When assessing the value of species and habitats, relevant documents and legislation are considered including the lists of species and habitat of principal importance annexed to the NERC Act (2006) and those provided within relevant local Biodiversity Action Plans. Data provided through consultation is also considered. These data sources can provide context at a local, regional and national scale.

The table below provides examples of receptors of value at different geographical scales.

Level of Value	Examples
International	An internationally designated site or candidate site.
	A site meeting criteria for international designation.
	A substantial* area of a habitat listed on Annex I of the EC Habitats Directive or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population with internationally important numbers (i.e. >1% of the biogeographic population)
National	A nationally designated site.
	A substantial* area of a habitat listed as a Habitat of Principal Importance within Section 41 of the NERC Act (2006) or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population with nationally important numbers (i.e. >1% of the national population)
Regional	An area of habitat that falls slightly below the criteria necessary for designation as a SSSI but is considered of greater than county value.
	The site is of functional importance** to a species population with regionally important numbers (i.e. >1% of the regional population)
County	A Local Wildlife Site (LWS) or equivalent, designated at a County level

14 Chartered Institute for Ecology and Environmental Management (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater and Coastal

TABLE 7: ECOLOGICAL RECEPTOR VALUATION	
Level of Value	Examples
	A substantial* area of a habitat listed within the relevant County Biodiversity Action plan or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole. The site is of functional importance** to a species population of county value (i.e. >1% of the county population)
District	A Local Wildlife Site (LWS) or equivalent, designated at a District level
	A substantial* area of a habitat listed within the relevant District Biodiversity Action plan or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population of district value (i.e. >1% of the district population)
Parish	Area of habitat or species population considered to appreciably enrich the habitat resource within the context of the parish.
	Local Nature Reserves
Local	Habitats and species that contribute to local biodiversity but are not exceptional in the context of the parish.
Low	Habitats that are unexceptional and common to the local area.

*Substantial defined as 'of considerable size or value within that area based on professional judgement, rather than a small, inconsequential area'
 ** Functional importance defined as 'a feature which, based on professional judgement, is of importance to the day to day functioning of the population, the loss of which would have a detectable adverse effect on that population'

E. RESULTS

E.1 DESK STUDY

E.1.1 PRE-EXISTING INFORMATION

ORDNANCE SURVEY MAPPING AND AERIAL PHOTOGRAPHY

The figures in Section B and D show that the general land use in the surrounding area is urban fringe development, largely of larger houses with mature gardens, pasture and woodland belts.

Aerial photographs of the site indicates that there has been no major recent changes in land use since at least 2002.

MAGIC WEBSITE¹⁵

The table below details the internationally and nationally statutorily designated sites within 2km of the survey area.

TABLE 8: DESIGNATED SITES			
Designation	Site Name	Brief Reason for Designation	Distance from Survey Area
Site of Special Scientific Interest	Tyne Waters meet	Important and diverse invertebrate assemblages, in particular ground beetles	1.3km

The school lies within the SSSI impact risk zone for larger scale developments over 1ha.

Sections of woodland within the school are identified as priority habitat broadleaved woodland, and there is an area of parkland on the site boundary to the west.

¹⁵ Multi Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk



PREVIOUS SURVEY WORK BY E3

Work during the summer of 2018 recorded common and soprano pipistrelle bats, in small numbers, roosting behind wooden cladding in various locations around the older (1970's) school buildings.

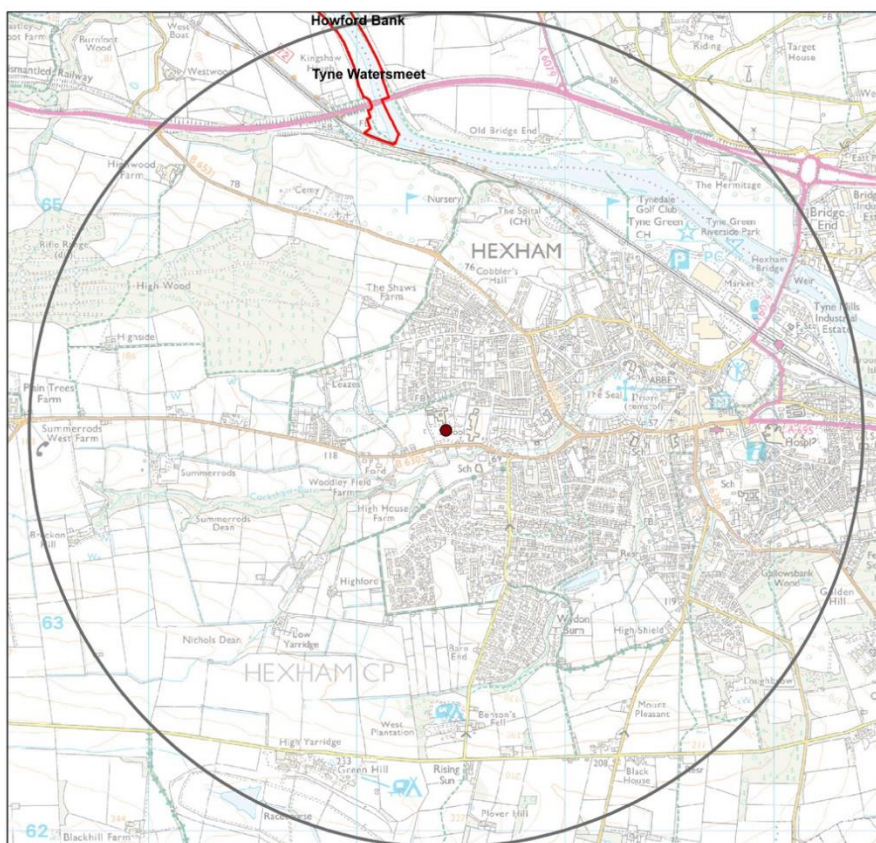
E.1.2 CONSULTATION

LOCAL RECORD CENTRE

The table below summarises the notable records provided by the local records centre. The full data search results can be provided on request.

Taxon	Species	No. of Records within Search Area	Records of Particular Note
Amphibian	Smooth newt	3	
	Common Frog	3	
Bird	Wide range of bird species		
Reptiles	Common lizard	4	All over 1.5km away
Terrestrial Mammal	Badger	Numerous	
	Otter	8	
	Brown Hare	1	
	Hedgehog	26	
	Range of bat species	Numerous	Common pipistrelle on site (see also bat group data)

In addition, the records centre provided information relating to the following non-statutory designated sites which lie within the search area:



ECOLOGICAL DATA SEARCH - STATUTORY & NON STATUTORY SITES

QEHS HEXHAM

E3 ECOLOGY

PLOT PRODUCED: 16 November 2018

- NY92436392
- 2000m Search Area
- SSSI
- Northumberland Local Wildlife Sites

Produced by



Environmental Records Information Centre North East

Great North Museum: Hancock
Barras Bridge
Newcastle upon Tyne
Tyne & Wear
NE2 4PT

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LOCAL BAT GROUP

The Northumberland Bat Group supplied the following records:

Roost Records

Latin name	Common name	Location	Date	Grid reference	Abundance
Chiroptera	Bats	Hexham	1997	NY9463	1 Count
<i>Pipistrellus sp.</i>	Pipistrelle Bat species	Hexham	1999	NY937633	
<i>Plecotus auritus</i>	Brown Long-eared Bat	Acomb	2001	NY935658	
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Hexham	14/10/2000	NY935631	1 Count
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Acomb	11/08/2009	NY9366	
Chiroptera	Bats	Hexham	20/07/2010	NY925639*	1 Count
Chiroptera	Bats	Hexham	14/10/2010	NY930640	
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	25/09/2014	NY927641	1 Count
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	2006	NY925639*	
<i>Pipistrellus sp.</i>	Pipistrelle Bat species	Hexham	2006	NY928643	5 Count
<i>Nyctalus noctula</i>	Noctule	Acomb	01/06/1992	NY936654	31 Count
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	05/08/2003	NY921630	19 Count
<i>Myotis mystacinus/brandtii</i>	Whiskered/Brandt's Bat	Hexham	2003	NY9363	6 Count
<i>Myotis nattereri</i>	Natterer's Bat	Hexham	2005	NY9163	5 Count
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	2009	NY9164	10 Count
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Hexham	2009	NY9164	10 Count
<i>Myotis nattereri</i>	Natterer's Bat	Warden	2009	NY9166	4 Count

<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Warden	2009	NY9166	4 Count
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Warden	2009	NY9166	4 Count
<i>Plecotus auritus</i>	Brown Long-eared Bat	Warden	2009	NY9166	4 Count
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	2009	NY944638	
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	2009	NY9463	6 Count
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Oakwood	2009	NY9465	6 Count
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Oakwood	2009	NY9465	6 Count
<i>Plecotus auritus</i>	Brown Long-eared Bat	Oakwood	2009	NY9465	3 Count
<i>Myotis nattereri</i>	Natterer's Bat	St John Lee Dipton Mill Road	2001	NY935658	
Chiroptera	Bats		2004	NY935629	
Chiroptera	Bats	Warden	30/06/1998	NY912658	200 Count
Chiroptera	Bats	Warden	06/07/1998	NY912658	
Chiroptera	Bats	Hexham	29/07/1998	NY942636	
Chiroptera	Bats	Hexham	1985	NY924643	2 Count
Chiroptera	Bats	Hexham	11/07/1996	NY935632	
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	01/07/2011	NY926643	3 Count
<i>Pipistrellus sp.</i>	Pipistrelle Bat species	Hexham	30/07/2014	NY911639	
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hexham	24/06/2011	NY931644	180-200 Count

There is a good range of bat species in the wider local area, and the two highlighted records were from the Hydro buildings.

E.2 FIELD SURVEY

E.2.1 HABITATS

The study area comprises the school grounds with extensive areas of hard standing and amenity grassland and smaller areas of old lawns that are likely to be of greater diversity and naturalness. The grounds include areas of parkland landscape associated with the Hydro, and younger areas of woodland at the boundaries. A small area is of former nursery land.

The habitats present within the survey area are illustrated in Figure 5 and described in more detail below.



FIGURE 4: HABITAT MAP

(OS mapping © Crown copyright and database rights 2016/2017 OS 0100039392)

GRASSLAND

The majority of grasslands are regularly mown amenity grasslands of low nature conservation value. Areas of old lawn have the potential to be more species rich. Unmanaged areas have generally reverted to coarse mesotrophic grassland, though localised areas can be more species rich where soils are of lower fertility. There is a small area of former agricultural grassland to the north west corner of the survey area



HEDGES

Hedges are generally absent from within the study area. There are beech hedges associated with the public footpath, and a diverse hedge with mature oak trees on the northern boundary



WOODLAND

True woodland is generally only present on the boundaries, with treed areas within the site being more parkland in nature with planting likely to date from the 1850's onwards. Rhododendron, a Schedule 9 invasive weed species, is present in the grounds.



WETLAND

A small burn runs along parts of the northern boundary. Early OS maps suggest that pools were present with sluices, but no evidence was recorded.

E.2.2 SPECIES

BATS

Buildings were not examined in detail, as the presence of bat roosts and hence the likely need for emergence surveys was already known. Only brief building descriptions are provided below.

The pavilion is described in target note 6



Building 1

- 3-5 storey
- Flat roof
- Large windows
- Modern cladding to main elevation, rear elevations still have old timber cladding
- **Proven roost behind southern timber cladding on 5 storey section from summer 2018 survey**



Building 2

- 1.5 storey with series of single storey extensions to rear
- Flat roof
- Large double height windows
- Modern cladding above windows
- Stone facing to one side, generally appeared well sealed but not closely examined
- Low suitability



Building 3

- 2 storey
- Flat roof
- Large window runs on each storey
- Original timber cladding
- Occasional stone faced sections
- **Known roosts from 2018 survey common and soprano pipistrelle/Moderate suitability**



Building 4

- 2 storey, connected to building 5 and 6 by a series of single storey flat roofed structures
- Brick, appeared well sealed
- Flat roof
- Weather boarding around top
- **Possible roost from 2018 summer survey in narrow gap between buildings**
- **Moderate suitability**



Building 5

- More modern 2 storey
- Brick construction
- Pitched roof, with catslide to rear
- Concrete roof tiles with dry verge
- Boxed eaves
- Low suitability



Building 6

- Large metal structure
- Flat roof
- Negligible suitability



Building 7

- Large metal clad structure on brick base
- Flat roof
- Metal overhang
- Negligible suitability



Building 8

- Single storey portacabin style
- Flat roof
- Slight roof overhang



Negligible suitability

Building 9

- 2 storey
- Brick built
- Weather boarding



Low suitability

Building 10

- More modern brick structure
- Wide metal overhang to roof
- Flat roof
- Low – Negligible suitability



Building 11

- Single storey caretakers house
- Rendered walls
- Pitch roof, overhanging walls
- Stone chimney
- Concrete tile roof
- Surrounded by trees, increasing risk of features being used
- Metal garage attached
- Low-Moderate suitability



Building 12

- Portacabin in wooded amenity area
- Raised from ground
- Slight overhang to roof
- Negligible suitability



Building 13/ target note 6

- Brick pavilion
- Timber cladding with gaps
- Boxed in eaves
- Boarded up windows create potential roost cavities
- High Suitability



Stone Wall

- Localised crevices provide roosting opportunities.



GREAT CRESTED NEWT

From the lack of local records and the apparent lack of ponds nearby this species is considered to be most likely absent.

BIRDS

The grounds provide good conditions for a range of woodland edge, garden and urban bird species, and so full breeding bird survey is recommended. Disturbance levels are likely to be too high for ground nesting birds over the majority of the site. There is a residual risk of the playing fields being used as a roost site when disturbance levels are low.

BADGER

Potential field signs of badger were recorded, so survey in late winter, when vegetation is fully died back, is recommended to better assess the presence of this species. Potential badger trails linked to off-site pastures which would provide suitable foraging opportunities.

OTTER

Otter are present on the River Tyne, but within the site no water courses are present that are likely to provide either a significant food source or movement corridor for the species.

WATER VOLE

From the lack of local records and lack of suitable habitat the species is considered most likely to be absent.

REPTILES

From the lack of local records and given the nature of the habitats within the site reptiles are considered most likely to be absent.

RED SQUIRREL

There are no recent records for red squirrel, and habitats are of good quality for grey squirrel, for which there are many local records. Therefore red squirrel are considered most likely to be absent.

NATIONAL PRIORITY AND LOCAL BAP SPECIES

Brown hare may use the site at times, but disturbance is generally likely to be too high for regular use by the species. Hedgehog are likely to be present, and habitats are considered to be very suitable for the species in parts.

E.2.3 TARGET NOTES

Target note locations are illustrated in red in the plan below.



TARGET NOTE 1

An area of unmanaged grassland with potential to be semi-improved neutral grassland or neutral grassland from the species evident which include *Centaurea nigra*, *Achillea millefolium*, *Plantago lanceolata*, *Cruciata laevipes*, *Achillea spp.*, *Rumex acetosa*, *Lathyrus pratensis*, *Juncus effusus*, and *Hypericum perforatum*. June survey would be required to accurately assess the conservation value

At the western end this grades into tall ruderal vegetation wrapping around the boundaries with BAP priority habitat broadleaved woodland beyond. The northern boundary is a post and wire fence. To the south is a fenced area which appears to be a former nursery site with an unusual mix of habitats probably closest to ephemeral short perennial and semi-improved neutral grassland. Again this area would warrant summer survey.

The field to the north appears to be poor semi-improved grassland but may have potential to be semi-improved neutral grassland. The localised area is likely to provide good habitat for foraging bats, and there is evidence of mammal trails, possibly including badger, through the site. The eastern boundary is a mature and unmanaged hedgeline with mature and late maturity oak trees together with ash, hazel, holly, ivy, and tree saplings.

Land to the east of the hedge appears unmanaged and supports developing tree cover, developing oak, tall ruderal vegetation and grassland.



TARGET NOTE 2

A tarmac public footpath with beech hedging to 2m to either side which together with adjacent tree cover creates a strong shady area of green infrastructure. To the north is a small shallow stream flowing eastwards parallel with the footpath. A number of oak trees along the stream corridor are approaching veteran status and these areas are likely to be of good quality for bats and foraging and breeding birds. To the north east is an area of housing, probably dating from the 1970s and with a high risk of supporting maternity pipistrelle bat roosts.



TARGET NOTE 3

A large level area of sports pitches supporting amenity grassland. The treeline described in target note 12 forms the northern boundary. To the west is a mature belt of broadleaved woodland associated with ornamental shrub planting and located on a bank. To the east are the buildings and parkland trees, together with more recent planting, of the Hydro. To the south there are mature trees and gardens lining the adjacent road.



TARGET NOTE 4

Mature ash tree with potential bat roost features and burrows beneath, possibly investigated by badger; further assessment required.



TARGET NOTE 5

An area of unmanaged grassland dominated by coarse mesotrophic MG1 type habitats but with areas that appear to have a higher species diversity than typical including *Carex flacca*, *Achillea millefolium*, *Plantago lanceolata*, *Cerastium sp*, *Centaurea nigra*, *Tussilago farfara* and *Vicia sepium*. Summer survey is recommended to better assess conservation value. To the west it grades into tall ruderal vegetation. To the south well grown *Salix* scrub to 8m and broadleaved woodland with scattered young and mature trees to the east.



TARGET NOTE 6

The pavilion is a brick structure with timber cladding mounted on batons, in poor condition. The risk of roosts being present is considered to be high, and summer emergence surveys and internal survey are recommended. It is flat roofed with fascia boards and boxed in eaves providing potential access points. Boarded up windows provide opportunities for bat roosts between the boarding and the glass behind.



TARGET NOTE 7

A paved driveway with a stone wall to 1m on the western side and a high walled garden wall to the east. This contains numerous cavities with potential for bat roosts



TARGET NOTE 8

Mature parkland area with mature and late maturity trees including conifers and broadleaved with abundant potential bat roost features. There is a modern portacabin and grassland herb layer which appears moderately diverse and would warrant summer survey. The habitat will provide good opportunities for foraging bats including woodland species, and to support a range of nesting birds. At the southern boundary the land slopes steeply towards the road and ivy is locally dominant in the herb layer. Tree management is likely to have limited the quantity of aerial deadwood features to a level lower than would be anticipated for this type of habitat.



TARGET NOTE 9

A sunken grass area, not shown on the 1895 OS map, previously used as a tennis court. It appears to support old grassland, also present in the wider local area, with the potential to support a more diverse range of plant species given its likely age and continuity of management.



TARGET NOTE 10

Area of mature parkland trees with a mix of broadleaved and conifers. Snowberry present, together with holly, yew, hawthorn. Some have moderate suitability for roosting bats



TARGET NOTE 11

Ivy clad tree with low bat risk



F. SITE ASSESSMENT

F.1 HABITATS

The main habitat constraints are likely to be the mature parkland features, which will have both a landscape and nature conservation value, with the mature trees providing habitats for bats and birds, and good green corridors. Areas are identified as broadleaved woodland priority habitat on MAGIC Maps. The very old lawns within the parkland areas have potential habitat value and would need summer survey, ideally after being left un-cut for a month before survey, to accurately assess species composition. They are considered to potentially be of parish conservation value.

The wider tree and shrub areas contribute to the character of the area and will again be of value to bats and birds in particular, with the older, slower growing tree species being a more significant constraint. The north west area, which appears to be a former nursery, has quite a nice mix of habitats and plant species which will contribute to local biodiversity, but summer survey is required to accurately assess value. The main constraints are again at the boundaries where mature oaks and hedge are present.

Overall, the mature tree features including boundary woodland are considered to be of parish value, with the potential for higher conservation value if spring survey indicated that any areas may have ancient woodland origins.

Sports pitches and areas of amenity grassland are generally of low conservation value.

Rhododendron, a Schedule 9 invasive weed species, is present in the grounds.

F.2 NOTABLE SPECIES

There is evidence that badger may use the north-western area for foraging, but no confirmed setts were recorded. Badger, if present, would be a feature of parish conservation value.

No wetlands that appeared suitable for great crested newts were recorded, or were evident from aerial photographs or OS maps, though garden ponds may be present in adjacent properties. A small stream runs through part of the site, and along the northern boundary, but is small and shallow and unlikely to support otter or water vole. Overall, the site is not considered to be of conservation value for any of these species.

The school buildings vary in bat roost suitability, with some having known roosts, others potential and some being well sealed and of negligible suitability. Summer survey would be required to assess conservation value, but areas with mature trees are likely to be of parish value for bats.

Breeding bird surveys would be required to assess the conservation value for birds, but this is considered to be unlikely to be higher than parish value. A wintering bird risk assessment is recommended at a time when the school is not in use, to assess potential use of the sports pitches for roosting birds including waders.

Areas of cover within the school grounds will provide good habitat for hedgehog, and may be of up to parish value for the species.

F.3 LIMITATIONS

Survey was undertaken late in the year, so findings are provisional and require additional detailed surveys to confirm values and potential impacts

G. ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

Based on the preliminary appraisal completed to date, the following ecological constraints have been identified:

- Areas of mature tree cover creating parkland and woodland habitats.
- Bat roosts within existing buildings and potential roosts within trees.
- Old lawns with potential habitat value.
- Grassland habitats of potential conservation value.

Bat roosts are present in buildings and will require additional survey work. Roosts are likely to result in licensing issues rather than being a major constraint to development design, unless large maternity roosts of scarcer species are present when there would be a presumption to retain the roost in-situ.

The following opportunities for proposals to result in a biodiversity gain, contributing to national and/or local conservation objectives, have been identified:

- Reinforce green corridors through and around the margins of the site.
- Increase nesting opportunities for birds and roosting opportunities for bats.
- Incorporate new species-rich hedgerows.

H. RECOMMENDATIONS

Recommendations are based on the preliminary appraisal completed to date and may evolve once further survey work is completed and/or as development plans are available.

SITE DESIGN

- Retain all areas of parkland landscape and mature trees.
- Use sports pitches for built development.
- Strengthen biodiversity value of edge habitats.
- Incorporate bat roosting opportunities into new build, or into retained trees through boxes.
- To meet national planning guidance site design should deliver a measurable net benefit for biodiversity.

H.1 FURTHER SURVEY

The following additional surveys are likely to be required, depending on proposals, to inform development design and will need to be undertaken prior to a planning application. Surveys generally have a two year shelf life.

- Wintering bird risk assessment, December to March.
- Breeding bird surveys April to June, including nocturnal.
- Monthly bat surveys and remote monitoring May to September.
- Emergence surveys of any buildings with a risk of supporting bat roosts, May to September (number of surveys will depend on building suitability, one survey for low suitability, three for high. Additional work may be required to characterise the roost). At least one survey in late June.
- Survey of any trees that may be expected to be lost for potential bat roost features, ideally with the first survey in the winter whilst leaf cover is minimal.

- Winter badger checking survey before spring growth in vegetation.
- Botanical survey in May and late June to include woodland vernal herbs and survey of old lawns just before they are due to be cut.

Where features are not being affected by any development proposals it may be possible to avoid or reduce additional survey work in consultation with the LPA ecologists.

I. CONCLUSIONS

The proposed development has the potential to have significant adverse effects on a number of notable species and/or habitats and additional surveys are required. The level of survey could be reduced if new development is largely confined to the large sports pitch areas. Once surveys are completed and development proposals finalised, a detailed ecological impact assessment can be undertaken and mitigation proposals finalised along with any requirement for further compensation. Proposals provide an opportunity for ecological benefit through the protection and enhancement of existing woodland cover and linkages, contributing to local and national conservation targets.

APPENDIX 1. STATUTORILY AND NON-STATUTORILY DESIGNATED SITES

A1.i Statutorily Designated Sites

Ramsar Sites

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention recognizes wetlands as important ecosystems and includes a range of wetland types from marsh to both fresh and salt water habitats. The wetlands can also include additional areas adjacent to the main water-bodies such as river banks or coastal areas where appropriate.

Special Protection Areas (SPAs)

SPAs are classified by the UK Government under the EC Birds Directive and comprise areas which are important for both rare and migratory birds.

Special Areas of Conservation

SACs are designated under the EC Habitats Directive and are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the Conservation of Habitats and Species Regulations 2017 unless they are offshore.

Sites of Special Scientific Interest

SSSIs are designated as sites which are examples of important flora, fauna, or geological or physiographical features. They are notified under the Wildlife and Countryside Act 1981 with improved provisions introduced by the Countryside and Rights of Way Act 2000.

National Nature Reserves (NNRs)

NNRs are designated by Natural England under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 and support important ecosystems which are managed for conservation. They may also provide important opportunities for recreation and scientific study.

Country Parks

Country Parks are statutorily designated and managed by local authorities in England and Wales under the Countryside Act 1968. They do not necessarily have any nature conservation importance, but provide opportunities for recreation and leisure near urban areas.

A1.ii Non-Statutorily Designated Sites

Local Nature Reserves (LNRs)

LNRs are designated under the National Parks and Access to the Countryside Act 1949 by local authorities in consultation with Natural England. They are managed for nature conservation and used as a recreational and educational resource.

Non-Governmental Organisation Property

These are sites of biodiversity importance which are managed as reserves by a range of NGOs. Examples include sites owned by the RSPB, the Woodland Trust and the Wildlife Trusts.

Local Wildlife Sites (LWSs)

These are sites defined within the local plans under the Town and Country Planning system and are material considerations of any planning application determination. They are designated by the local authority although criteria for designation can vary between authorities.