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Barrow Primary School
(NGR: 373872, 438546)

**PROTECTED SPECIES INVESTIGATION
SURVEY REPORT
(BATS)**

For

Lancashire County Council
PO Box 26
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October 2012
Amended November 2012

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CONTENTS	PAGE No
1.0 INTRODUCTION	2
2.0 STATUTORY AND PLANNING CONTEXT	2
3.0 SURVEY METHODOLOGY	4
4.0 CONSTRAINTS	4
5.0 SURVEY RESULTS	4
6.0 CONCLUSION	5
7.0 IMPLICATIONS AND RECOMMENDATIONS	5

MAPS**Map 1:** Site Location Plan**Map 2:** *Proposed Development Plan***APPENDICES****Appendix 1:** Site Photographs

1.0 INTRODUCTION

- 1.1 Ecology Services Limited was commissioned by Lancashire County Council in October 2012, to carry out a bat investigation and assessment at Barrow Primary School, Old Row, Whalley, Barrow, Clitheroe, Lancashire, BB7 9AZ. National Grid Reference (NGR) 373872, 438546.
- 1.2 The aim of the inspection was to;
- initially ascertain if the building is of value to bats;
 - if it was found to be suitable for bats or signs of use were located then more detailed surveys would be recommended i.e. dusk emergence or/and dawn re-entry surveys during the main active season of bats which is May to August.
 - If bats or their roost will be affected by the work then a European Protected Species Mitigation Licence would be required to legally proceed with the development.
- 1.3 It is understood that the proposals for the site involve the extension of one specific section of the school. See Map 1: Site Location Plan and Map 2: Proposed Development Plan.
- 1.4 As part of the Local Authority's Planning Policies ecological surveys are generally required, particularly where a specially protected species is or may be present and could be affected by the proposals for which the Application seeks consent.
- 1.5 Where more detailed bat surveys are recommended, following an initial investigation, then Local Authorities on the advice of their ecological advisors, are unlikely to determine a Planning Application until such time that all relevant information is gathered, i.e. by conducting dusk/dawn surveys. The advice that is provided by the ecological advisors is also in accordance with the obligations placed upon Local Authorities by way of its duties under the Conservation of Habitats & Species Regulations 2010 (as amended). Therefore, it would be prudent to make enquiries to the relevant departmental Planning Officer before submitting a Planning Application which includes an ecological survey report that recommends more detailed surveys.
- 1.6 All daytime survey works were undertaken by experienced bat ecologist Mr. J. Thompson.

2.0 STATUTORY AND PLANNING CONTEXT

Bats and their Requirements

- 2.1 All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2010 (as amended).
- 2.2 When dealing with cases where a European Protected Species (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the Conservation of Habitats & Species Regulations 2010 (as amended) and therefore has a statutory duty to have due regard to the provisions of the Regulations in the exercise of its functions. Therefore the provisions are clearly relevant in reaching planning decisions and these should be made in a manner which takes them fully into account.
- 2.3 The National Planning Policy Framework (NPPF) has replaced the Planning Policy Guidelines (PPG's). In relation to wildlife PPG 9 was one of the documents to which Planning Authorities referred to, particularly where a specially protected species is or

may be present and will be affected by a development for which a Planning application seeks consent.

- 2.4 The National Planning Policy Framework (NPPF) places a clear responsibility on Local Planning Authorities to conserve and enhance biodiversity and to encourage on the consideration that should be given to Protected Species where they may be affected by development. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation. This is supported by a guide to good practice entitled 'Planning for Biodiversity and Geological Conservation: Building in Biodiversity' in which paragraphs 5.34 and 5.35 identify that species such as bats are highly dependant upon built structures for survival and that roosts can be easily incorporated into existing and new developments/conversions to benefit these species.
- 2.5 When determining planning applications, Local Planning Authorities should aim to conserve and enhance biodiversity by applying the following principles:
- "If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused".*
- 2.6 Furthermore where a European Protected Species will be affected by development then a licence to derogate from the Conservation of Habitats & Species Regulations 2010 (as amended) would be required. Licence applications are processed and issued by Natural England subject to three tests being met one of which is that the action proposed 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status within their natural range'.
- 2.7 Natural England may grant an EPS mitigation licence for the purpose specified in paragraphs 2 of the Regulation. The purposes are:-
- 53(2)e preserving public health or safety or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment.
 - 53(2)f preventing the spread of disease.
 - 53(9)a that there is no satisfactory alternative.
 - 53(9)b that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable status in their natural range.
- 2.8 A bat roost may be defined in several ways:
- a) Summer breeding roost.
 - b) Hibernation roost.
 - c) Transitional or temporary roost.
- 2.9 Roost selection is often closely correlated, to suitable foraging habitat within a reasonable commuting distance from the roost. Different sites are used throughout their active season which is dependent upon insect densities and abundance. Climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.
- Bat Species in Lancashire**
- 2.10 Up to nine bat species have been recorded in Lancashire most of which use built structures, notably occupied residential properties, for roosting. The most frequently

encountered species is the Common Pipistrelle bat (*Pipistrellus pipistrellus*) and its abundant status in Lancashire is reflected throughout the UK.

3.0 SURVEY METHODOLOGY

- 3.1 The survey was conducted on the 10th October 2012 by Mr. Jamie Thomson BSc an experienced bat Ecologist. The report contents, conclusions and recommendations have been checked and verified by Mr S. Irwin who is an experienced and Natural England bat licensed ecologist.
- 3.2 The daytime survey was conducted at a time when bats will have completed their breeding season and be close to entering their hibernation period.
- 3.3 Following the survey the results, conclusions and recommendations are based upon surveyor experience and knowledge of bat ecology.
- Knowledge of bat species relevant to the site location
 - Nature of the immediate and surrounding habitat in relation to foraging opportunities
 - Condition of the building
 - Presence/absence of roost potential
 - Value of roost potential – if present
- 3.4 During the survey the surrounding habitat was evaluated in relation to bats as very often roost selection is closely correlated with the surrounding habitat.

4.0 CONSTRAINTS

- 4.1 Although the survey was conducted at the end of the breeding season of bats a full appraisal and inspection of the building was achievable in relation to assessing the level of bat roost potential that may exist.
- 4.2 Taking into consideration the above it is considered that there were no significant survey constraints that would prevent the gathering of information on which to base conclusions and recommendations.

5.0 SURVEY RESULTS

- 5.1 Barrow Primary School is a fully operational school and consequently is occupied at least during school term time periods. It is located in the centre of Barrow Village approximately 3.2 km south of Clitheroe town centre. Common Pipistrelle (*Pipistrellus pipistrellus*) bats have been recorded 300 metres south of the site. (Source: Mr S. Irwin).
- 5.2 The school is located within rural landscape that is both relatively diverse in topography and land-use. The surrounding wider landscape contains pasture land and is interconnected by a myriad of semi-natural features such as hedgerows, tree lines, woodland and watercourses, which be considered as being of high value for the species for which the survey was undertaken, i.e. bats.
- 5.3 Where such habitat is present in close proximity to buildings then the percentage use of those buildings, by bats, increases given that roost opportunities are available and vice versa.
- 5.4 Within the immediate environs of the school are a number of residential properties and a chapel. Intact and defunct tree lines and a hedgerow are also present and link the site to the wider survey area. However, the building itself is isolated from the

woodland area which makes the immediate habitat less productive for the specific foraging requirements of the loft dwelling Brown Long-eared bat (*Plecotus auritus*).

- 5.5 Notwithstanding the lack of woodland within close proximity to the school, the general area around the building can be considered suitable for bat species such as the crevice dwelling Pipistrelle species (*Pipistrellus sp.*), which are the most frequently occurring species in the UK. The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.
- 5.6 The section of the school that is to be extended is used primarily for classroom purposes with a relatively small first floor section dedicated to the teaching staff. The building is of a brick construction and forms a large rectangular shape with approximate dimensions of 18 metres long by 7 metres wide. A loft space is present and the roof is of a hipped design, which is covered in modern concrete roof tiles.
- 5.7 Whilst investigating the loft space, which is segregated into three separate voids, it was noted that it was moderately warm and clean with an insulating layer of membrane applied internally against the underside of the roof tiles. Materials such as insulating and weather proofing products such as underfelt, when present beneath the roof tiles, will increase roost opportunities for crevice dwelling bats such as Pipistrelle, whereby they are often found roosting between the two materials, provided that external opportunities for access are present.
- 5.8 No evidence was identified that would suggest current or historic use by loft dwelling bats and due to the restrictive nature of the voids the loft space is not considered to be productive as a roost for loft dwelling species such as Brown Long-eared bats.
- 5.9 Externally all of the roof tiles, ridge tiles and soffit boards were tight fitting and well maintained and no opportunities that would allow ingress by bats were observed.

6.0 CONCLUSIONS

- 6.1 From the results of the survey, which used the methodology as outlined in section 3.0, it can be concluded that no evidence of use by bats was identified at the building.
- 6.2 Furthermore there is a lack of any significant potential for bat roosting purposes as features present were well maintained and tight fitting. The area that is to be extended is therefore considered to be of no value for bat species.

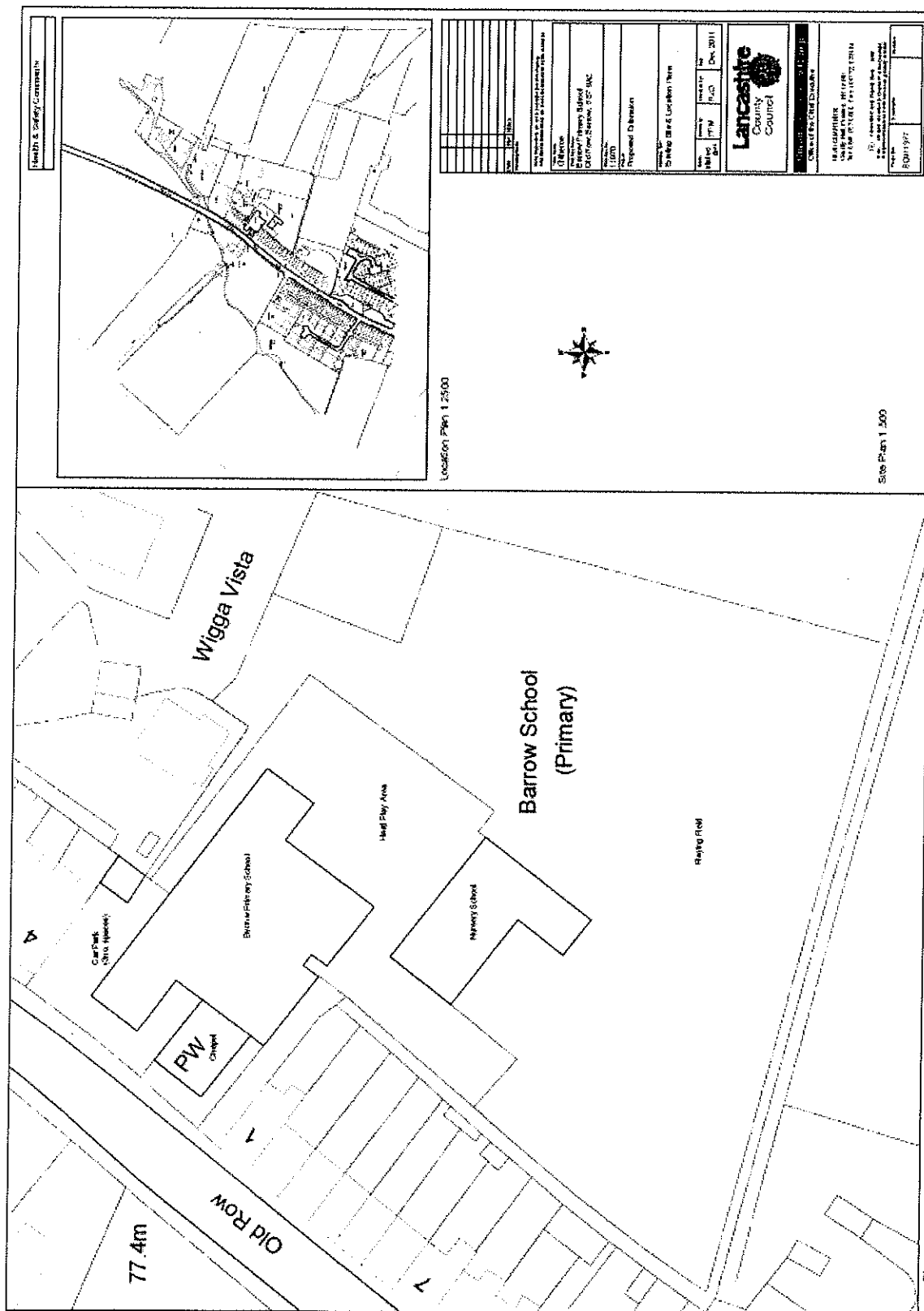
7.0 IMPLICATIONS AND RECOMMENDATIONS

- 7.1 Therefore, based on the survey results, there are no apparent implications, further recommendations or additional surveys required in relation to bats and the proposed development work.
- 7.2 However, as generic advice if at anytime a bat/s is/are located then as a legal requirement work should immediately cease and a bat ecologist contacted for advice.

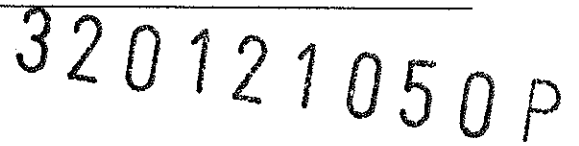
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MAPS

Map 1: Site Location Plan



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APPENDICES**Appendix 1: Site Photographs**

South and west elevations



North and west elevations

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Barrow Primary School, Barrow

EXTENDED PHASE 1 HABITAT SURVEY REPORT

For

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**June 2012
*Amended November 2012***

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CONTENTS

	Page No
1.0 INTRODUCTION	3
2.0 METHODOLOGY	3
3.0 SURVEY RESULTS	5
4.0 EVALUATION	11
5.0 IMPACTS & RECOMMENDATIONS	16
6.0 REFERENCES	22

APPENDICES

Appendix 1: Overview of Statutory Legislation & Planning Policy

Appendix 2: Target Notes

DRAWINGS

Drawing 1: Extended Phase 1 Habitat Survey

Drawing 2: Proposed Development

1.0 INTRODUCTION

- 1.1 Ecology Services Limited was commissioned by Lancashire County Council Property Group in late May 2012 to carry out an Extended Phase 1 Habitat Survey for the proposed development at Barrow Primary School, Barrow, Lancashire, National Grid Reference (NGR) 373889, 438511.
- 1.2 The survey is required to assess the ecological value of the area of land being used for the development and of wildlife habitat bordering this development area.
- 1.3 The proposed development includes an extension to the existing school building, a *new car park* and extending the hard play area, see Drawing 2.
- 1.4 To conduct an ecological assessment at this site, the aims of the survey were to:
 - Undertake a Desktop Study up to 1km of the site.
 - Undertake a Walkover Survey of land up to 250m of the development site.
 - Where land access is not available, undertake a Data Base Assessment (DBA) using existing maps of the area up to 250m of the development site.
 - Undertake an Extended Phase 1 Habitat Survey of the development site and up to 30m from the development site;
 - Identify any further detailed survey requirements.
- 1.5 The sites ecological values will be assessed in context with current UK planning and legislative policy, including:
 - Statutory Protected Species
 - UK Biodiversity Action Plan Species
 - Local Biodiversity Action Plan Species
 - Statutory Protected Sites
 - Non-Statutory Protected Sites or Species of Conservation Concern
- 1.6 This report states the survey methodology, presents the results of the survey, evaluates the findings, assesses the impacts and makes recommendations concerning the protection of existing ecological features within and bordering the development plot. Further surveys will be recommended, where required.
- 1.7 A brief summary of the ecological planning and legislative context generally applying to England is provided within Appendix 1, but specific advice is provided in the main body of the report.

2.0 METHODOLOGY

Desktop Study

- 2.1 Ecological data and historic records of protected species and sites was collated from the following sources; listed in Table 1 overleaf.

Table 1: Desktop Study Results and Record Centres Consulted

Source of information	Information supplied
Natural England	Nature on the map to identify Nature Reserves, Sites of Special Scientific Interest and BAP Priority Habitats within 1km of the site.
UK Biodiversity Action Plan	Identification of national priority species and habitats known to occur in the region.
Local Biodiversity Action Plan	Identification of national priority species and habitats known to occur in the region.
Multi Agency Geographical Information Centre www.magic.gov.uk	To identify protected sites or features of interest within 1km of the site.
Mario Map	To view aerial photographs of the site and the surrounding area to check for pond locations and features of interest.
Lancashire Environment Record Network LeRN (Local Records Centre)	To identify protected sites and species within 1km of the site.

- 2.2 The aim of the desktop study was to assist the surveyor undertaking the Extended Phase 1 Habitat Survey by providing background information on the likely habitats and species that occur within the local area.

Walkover Survey and Data Base Assessment

- 2.3 The Walkover Survey involves an ecologist walking over land up to 250m from the development site to identify any features of ecological interest, for example; a pond that may support amphibian species such as great crested newts (*Triturus cristatus*) or common toad (*Bufo bufo*).

- 2.4 Where access is not available a Data Base Assessment (DBA) is undertaken using existing maps of the area (up to 250m of the development site) to identify any features of ecological interest.

Extended Phase 1 Habitat Survey

- 2.5 Habitats were assessed by using Phase 1 Habitat Survey techniques, which is a system for environmental audit widely used within the environmental consultancy field.
- 2.6 The Extended Phase 1 Habitat Survey followed Phase 1 Habitat Survey Methodology (JNCC, 2010). This involves walking over the site, mapping and target noting any semi-natural habitats. The survey area includes the footprint of the proposed development and up to 30 metres from the development site.
- 2.7 A habitat map will be prepared to show the locations and extent of habitats and detailed descriptions of the principal and important plant communities will be provided as Target Notes.
- 2.8 Plant species abundances were recorded within the target notes, using DAFOR ratings, as Dominant, Abundant, Frequent, Occasional or Rare (Rare in the sense of having a very low abundance). Species recorded as Locally Abundant

are abundant only in certain parts of the target noted habitat, rather than being abundant throughout. The ratings have no precise definition and are affected by plant size and season of survey however they have been shown to correlate with more quantitative measures.

- 2.9 The Extended Phase 1 Habitat Survey is a modified approach to the Phase 1 Habitat Survey, extended for use in environmental assessment (Institute of Environmental Assessment, 1995). The survey will record any signs of protected species or other valuable ecological components of the site.

- 2.10 The locations of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 and others were also mapped.

Timing

- 2.11 The Extended Phase 1 Habitat Survey was undertaken on the 29th of May 2012 which is an optimal time of year to undertake such a survey.

Weather Conditions

- 2.12 Weather conditions during the survey were reasonable, with no appreciable rain or wind affecting survey.

Personnel

- 2.13 All survey works were carried out by experienced Ecologist Mrs J. Shaw BSc (Hons).

Constraints

- 2.14 Surveys only provide a snapshot of habitats and species that are there at that time. Further surveys at additional times of the year are likely to find additional species. The surveys were based on the information provided.

3.0 SURVEY RESULTS

Desktop Study

Protected Sites

- 3.1 The desktop study found two records of protected sites within 1 kilometre of the proposed development. This includes:
- Barrow Brook Field Biological Heritage Site (BHS)
 - Hard Hill Common BHS

Protected Species

- 3.2 Desktop searches revealed no records of protected species, within 1km of the site.

Local Records Centre Results

- 3.3 Lancashire Environment Record Network (LeRN) also had records of the following UK and Local BAP species within 1km of the development site:
- Common frog
 - Common starling, house sparrow, dunnock, song thrush & linnet
 - Brown hare
 - European eel

- 3.4 Further records of invasive species were also identified within 1km of the site as below;
- Giant hogweed
 - Himalayan balsam
- UK Biodiversity Action Plan (UKBAP) & Priority Habitats**
- 3.5 The United Kingdom Biodiversity Action Plan lists priority habitats which might potentially be located within the site, based upon the information gathered from the sources listed in Table 1, habitats are listed below:
- Hedgerows
 - Ponds
- UK Biodiversity Action Plan (UKBAP) & Priority Species**
- 3.6 The United Kingdom Biodiversity Action Plan lists priority species which might potentially use the site, based upon information gathered from the sources listed in Table 1, species are listed below:
- Mammals – bats*, brown hare & West European hedgehog
 - Birds – skylark, song thrush, common bullfinch, tree sparrow, house sparrow, dunnoek, linnet, yellowhammer & common starling
 - Amphibians – great crested newts* & common toad
- NB: Those listed with an asterisk (*) are also statutorily protected*
- Local Biodiversity Action Plan**
- 3.7 Local Biodiversity Action Plan (LBAP) lists key local species/habitats considered to be rare or declining in the area. Some may be of national concern, while others may only be locally rare. Some are statutorily protected, although the great majority are not.
- 3.8 While local BAP documents have no legal status, the Local Planning Authority and Natural England will expect account to be taken of these species/habitats in the overall layout and landscape strategy for the development.
- 3.9 The species of local concern which might potentially use the site, based upon information gathered from the sources listed in Table 1 are as follows:
- Mammals – bats* & brown hare
 - Birds – skylark & song thrush
 - Amphibians – great crested newts*
- NB: Those listed with an asterisk (*) are statutorily protected*
Species of biodiversity significance on the Lancashire Long List have been reviewed but are generally covered under an associated Habitat Action Plan.
- 3.10 Habitats listed within Local BAP which the site may be classified under are as follows;
- Species-rich Neutral Grassland
 - Amenity Grassland & Sports Fields – Urban Habitat Plan
 - School Grounds – Urban Habitat Plan
 - Gardens & Backyards – Urban Habitat Plan

- 3.11 Based on information gathered from the sources listed in Table 1 and the surveyors knowledge, the following protected species were taken into account when the site assessment was carried out:

- Amphibians
- Badgers
- Bats (all species)
- Birds

Extended Phase 1 Habitat Survey

- 3.12 An Extended Phase 1 Habitat Survey of the site was undertaken during May 2012. Descriptions of the principle habitats are provided below and are illustrated on Drawing 1. In brief the site contained the following habitats.
- 3.13 The footprint of the development site, which includes all habitats affected by the development works, consists of:
- Scrub (Scattered)
 - Scattered Trees
 - Poor Semi-improved Grassland
 - Amenity Grassland
 - Introduced Shrub
 - Boundaries (Hedgerows, Fencing & Walls)
 - Buildings
 - Bare Ground
- 3.14 The wider survey area, includes habitats within 30m of the development site and features of ecological interest located up to 250m from the development site contains:
- Scrub (Dense & Scattered)
 - Scattered Trees
 - Neutral Semi-improved Grassland
 - Marshy Grassland
 - Poor Semi-improved Grassland
 - Tall Ruderal
 - Standing Water
 - Running Water
 - Amenity Grassland
 - Ephemeral/Short Perennial
 - Introduced Shrub
 - Boundaries (Hedgerows/Fencing/Walls)
 - Buildings
 - Bare Ground
- 3.15 Descriptions of the principle habitats types that are to be impacted by the development found within the Extended Phase 1 Habitat Survey are reviewed within the following sections. This will also cover habitats that may support protected species. Features of ecological interest located within the wider survey area that are affected by the development works are also described. Features separated from the site that are unaffected by the development have been omitted.

- 3.16 Target Notes have been provided for all semi-natural habitats that are deemed either ecologically important or have the potential to support protected species; see Appendix 2 for Target Notes.

Scrub

- 3.17 Scrub is a relatively common habitat throughout the local vicinity and is found at several locations within the wider survey area and proposed development site.

- 3.18 Scrub species recorded within the wider survey area included dominant common hawthorn (*Crataegus monogyna*), abundant bramble (*Rubus fruticosus*), frequent elder (*Sambucus nigra*), occasional willow sp (*Salix sp*), holly (*Ilex aquifolium*) with rare Swedish whitebeam (*Sorbus intermedia*) and hazel (*Corylus avellana*).

- 3.19 Scrub species recorded within the proposed development site included dominant common hawthorn, abundant rose sp, frequent garden privet (*Ligustrum ovalifolium*), common beech (*Fagus sylvatica*), occasional cherry sp (*Prunus sp*), bramble, birch sp (*Betula sp*), field maple (*Acer campestre*) and hazel with rare maple sp (*Acer sp*), holly and elder.

Scattered Trees

- 3.20 Scattered trees are present within the wider survey area and the proposed development site.

- 3.21 Species recorded within the wider survey area included occasional cherry sp. They are generally semi-mature in age and were located within residential gardens.

- 3.22 Species recorded within the proposed development site included frequent cherry sp, common ash (*Fraxinus excelsior*) with occasional birch sp., leylandii sp, field maple, rowan (*Sorbus aucuparia*), oak sp (*Quercus sp*), rare whych elm (*Ulmus glabra*), Swedish whitebeam and aspen (*Populus tremula*). The trees located within the proposed development site were generally young to semi-mature in age.

Neutral Semi-improved Grassland and Poor Semi-improved Grassland

- 3.23 Neutral semi-improved grassland is present within the wider survey area. Poor semi-improved grassland is present within the wider survey area and the proposed development site.

- 3.24 Neutral semi-improved grasslands recorded within the wider survey area included abundant meadow foxtail (*Alopecurus pratensis*) and sweet vernal-grass (*Anthoxanthum odoratum*), with frequent annual meadow-grass (*Poa annua*) cock's-foot (*Dactylis glomerata*), rough meadow-grass (*Poa trivialis*), false oat-grass (*Arrhenatherum elatius*) and red fescue (*Festuca rubra*). Associated species include locally abundant common nettle (*Urtica dioica*), ivy (*Hedera helix*) and cleavers (*Galium aparine*), with frequent creeping buttercup (*Ranunculus repens*) and ribwort plantain (*Plantago lanceolata*). Locally frequent species included rosebay willowherb (*Chamaenrion angustifolium*), great willowherb (*Epilobium hirsutum*) and wild garlic (*Allium ursinum*). Occasional species included wood avens (*Geum rivale*), dandelion (*Taraxacum officinale*).

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agg), creeping thistle (*Cirsium arvense*) meadow buttercup (*Ranunculus acris*), dandelion (*Taraxacum officinale*) fern sp, field horsetail (*Equisetum arvense*) and broad-leaved dock (*Rumex obtusifolius*) with rare spear thistle (*Cirsium vulgare*) and cuckooflower (*Cardamine pratensis*).

- 3.25 Poor semi-improved grassland recorded within the development site contained abundant cock's-foot and false oat-grass, with frequent meadow foxtail, rough meadow-grass, locally frequent annual meadow-grass and occasional perennial rye-grass (*Lolium perenne*) and sweet vernal-grass. Associated species include abundant herb-Robert (*Geranium robertianum*), creeping buttercup and common nettle with locally frequent ivy, garlic mustard (*Alliaria petiolata*), silverweed (*Potentilla anserina*) and lesser celandine (*Ranunculus ficaria*). Occasional species include Solomon's seal (*Polygonatum x hybridum*), cleavers, dandelion, broad-leaved dock and curled dock (*Rumex crispus*) with rare lords and ladies (*Arum maculatum*), poppy sp (*Papaver sp*) and bluebell sp (*Hyacinthoides non-scriptus sp*).
- Standing Water**
- 3.26 One ornamental garden pond and one dry pond were identified within 250m of the proposed development, where access was granted. Where access was not granted the Data Base Assessment did not identify any further areas of standing water.
- 3.27 The ornamental pond was located within a residential garden, access was not granted to complete a full assessment. It appears to be constructed of concrete and it is raised up of the ground. There also appears to be a fountain within the pond. It is located adjacent to a stream and private road. It was viewed from a public footpath. It is considered to have a perimeter of upto 8m and is oval in shape. Water depth appears to be less than 0.5m with relatively clear water quality. The banks are shallow but engineered and raised off the ground by approximately 0.5m. The pond appeared to be shaded 50% by trees and 40% by scrub. Habitats within 10m of the pond included running water, amenity grassland, scrub and scattered trees. No aquatic plants were observed.
- 3.28 The dry pond has become vegetated with poor semi-improved grassland and yellow flag iris was present. The dry pond was also recorded dry in Spring 2010.
- 3.29 Within the proposed development site at TN3 there is an area that used to have a small pond. The school secretary informed the surveyor that this pond was drained over 10 years ago due to health and safety reasons. Parts of the liner and stones still remain along with some remnant aquatic vegetation. Species recorded included locally frequent water avens (*Geum rivale*), yellow flag iris, with rare soft rush (*Juncus effusus*) pendulous sedge (*Carex pendula*) and water mint (*Mentha aquatica*). This remnant pond area is becoming overgrown with common nettle tall ruderal.
- 3.30 Located within the 30m boundary to the south at TN12 is an old dry drainage ditch. This appears to have been dry for a period of time and no aquatic vegetation is present.

Amenity Grassland

- 3.31 Amenity grassland is present within the wider survey area mainly in association with residential gardens. Amenity grassland is also present within the proposed development site associated with the school playing fields.
- 3.32 Amenity grasslands are of short sward and were being cut at the time of the survey. Species recorded included abundant annual meadow-grass, perennial rye-grass, frequent daisy (*Bellis perennis*), white clover (*Trifolium repens*), greater plantain, occasional Yorkshire-fog (*Holcus lanatus*), dandelion, creeping buttercup with rare crested dogs-tail (*Cynosurus cristatus*) and sweet vernal-grass.

Hedgerows

- 3.33 Hedgerows are present within the wider survey area and the proposed development site.
- 3.34 Hedgerows present within the wider survey area are associated with residential gardens and boundaries.
- 3.35 The hedgerows present within the proposed development site are associated with the school boundaries. These hedgerows are managed and range in height upto 2m in height and 1.8m wide. Some of the hedgerows had occasional scattered trees present including standing deadwood and Swedish whitebeam.
- 3.36 Woody species recorded included dominant common hawthorn, with locally abundant common beech and frequent garden privet and field maple. Occasional species include; dog rose (*Rosa canina*), bramble, blackthorn (*Prunus spinosa*) and elder with rare rose sp (*Rosa* sp), rowan and copper beech (*Fagus sylvatica Purpurea*).
- 3.37 Groundflora species included frequent common nettle, cleavers, rough meadow-grass, creeping buttercup, annual meadow-grass, honeysuckle (*Lonicera periclymenum*) and herb-Robert, with locally frequent wild garlic, comfry (*Symphytum officinalis*), yellow flag. Occasional species include; cock's-foot, hedge woundwort (*Stachys sylvatica*), ivy, wood avens (*Geum urbanum*), cleavers, horsetail and bluebell sp., with rare forget-me-not (*Myosotis sylvatica*) and poppy sp.

Invasive Species

- 3.38 The desktop study identified giant hogweed (*Heracleum mantegazzianum*) and Himalayan balsam (*Impatiens glandulifera*) to be present within 1km of the proposed development site. Neither of these species were identified within the proposed development site or surrounding 30m boundary where access was granted. However Japanese knotweed (*Fallopia japonica*) was identified within the 30m boundary of the proposed development site near TN10.

Buildings

- 3.39 Buildings are present within the wider survey area and mainly consist of residential housing, shops and industrial units. Buildings within the wider survey area are not impacted by the proposed development.

- 3.40 Within the proposed development site there are a number of school buildings. The nursery building appears to be a relatively new build with a flat roof. The main school building is joined to the Chapel. The rear of the school building is constructed of brick and stone with pitched tiled roofs. The front of the school building appears to have a slate roof and chimneys.
- 3.41 The following section evaluates habitats and their suitability to support species that are affected by the proposed development works.

4.0 EVALUATION

Habitat Evaluation

Protected Sites & Priority Habitats

- 4.1 The desktop study found two protected sites located within 1 kilometre of the proposed development. The development is considered to not directly or indirectly impact upon either of these protected sites or habitats.
- 4.2 The following UK BAP and Local BAP were found within the wider survey area and the development site:-
- Hedgerows UK BAP Priority Habitat
 - Ponds are UK BAP Priority Habitats.
 - Species-rich Neutral Grassland is a Lancashire BAP Priority Habitat.
- 4.3 The following Lancashire Urban Habitat Plans were located within the wider survey area and the development site:-
- Amenity Grassland & Sports Field Lancashire Urban Habitat Plans
 - School Grounds Lancashire Urban Habitat Plans
 - Gardens & Backyards are Lancashire Urban Habitat Plans.
- 4.4 Amenity Grasslands & Sports Fields are a Lancashire Urban Habitat Plan. They are defined as improved grassland which is closely mown. It has some value to a limited number of invertebrate species. Amenity grasslands and sports fields provide areas of open green space within urban areas. Often along the boundaries of these habitats are other semi-natural habitats such as scattered scrub, trees and hedgerows which provide wildlife corridors.
- 4.5 School Grounds is a Lancashire BAP Urban Habitat Plan. They are valued spaces used primarily for learning and recreation. School grounds are variable and can contain features such as flowerbeds, ornamental trees and shrubs, vegetable/fruit pots and wildlife areas etc. Many of these features provide suitable wildlife habitat. School grounds can act as wildlife corridors within the wider survey area.
- 4.6 Gardens & Backyards are a Lancashire BAP Urban Habitat Plan. Gardens can provide suitable wildlife habitat for birds, bats, small mammals, amphibians and invertebrates etc and are often used as stepping stones or wildlife corridors between larger areas of suitable habitat.

- 4.7 The survey found the wider survey area to contain Ponds, Hedgerows, Gardens & Backyards which will not be affected by the development. The survey found and the proposed development site to contain Hedgerows, Amenity Grasslands & Sports Fields and School Grounds, the latter two will be affected by the development.
- Scrub**
- 4.8 Scrub was scattered throughout the wider survey area and proposed development site. Scrub habitats can be valuable for birds (breeding and foraging), amphibians (forage, refuge & hibernation), small mammals (hedgehog & foraging bats) and invertebrates.
- Scattered Trees**
- 4.9 Scattered trees are located throughout the wider survey area and within the proposed development site. They are important features within the landscape. Trees support a wide range of terrestrial invertebrates which in turn support foraging bats and birds. They are also important for breeding birds and can provide suitable bat roost habitat if they contain crevices.
- Neutral Semi-improved Grassland & Poor Semi-improved Grassland**
- 4.10 The neutral semi-improved grasslands located within the wider survey area are not considered to fall within the species-rich Neutral Grassland Lancashire BAP Priority Habitat. The grasslands are relatively diverse in flora species and will provide suitable habitat for a wide range of fauna species including birds (breeding & foraging), amphibians (forage & refuge), small mammals (hedgehog & foraging bats) and invertebrates.
- 4.11 The poor semi-improved grassland areas located within the development site are not considered to fall into the Lancashire BAP Priority Habitat species-rich neutral grassland. The poor semi-improved grassland is small in size and not particularly diverse in flora species. However grasslands can be important for birds (foraging) mammals (foraging bats and hedgehog), amphibians (foraging) and terrestrial invertebrates.
- Standing Water**
- 4.12 Natural or manmade, ponds, lakes, reservoirs and canals are UK Broad Habitats 'Standing water and Canals' as they can create ecological hotspots within the wider countryside. Several BAP species are intimately associated with them (e.g. otter and water vole). In July 2008 a new UK Pond Habitat Action Plan (PondHAP) was introduced, which aims to identify 'Priority ponds' as part of the Million Ponds Project, led by Pond Conservation. Not all ponds will fall under the criteria and it is estimated that around 40% of all UK ponds will meet this. Ponds are a UK BAP Priority Habitat.
- 4.13 The wider survey area contains one dry pond and one garden ornamental pond. Neither will be impacted directly or indirectly by the proposed development.
- 4.14 The ornamental pond is considered to be suitable for common amphibians such as common frog. It is considered to be of low value for common toad due to the shallow water depth, as common toads generally prefer deeper waterbodies.

The ornamental pond is raised off the ground which will and is considered to be of limited value to newt species.

- 4.15 The proposed development site contains an area that historically held water, over 10 years ago. This pond was purposefully removed due to health and safety reasons.
- 4.16 Dry drainage ditches fall under the UK Broad Habitat of Boundaries and Linear features for their conservation value within the landscape. Drainage ditches are generally ecological hotspots that form part of a network of corridors throughout the wider survey area.
- 4.17 The dry drainage ditch at TN12 falls under the UK BAP Broad Habitat of Boundary and Linear Features for their conservation value within the landscape. This ditch is not considered to fall under any UK BAP Priority Habitats.
- 4.18 Despite the ditch being dry it is still considered suitable for birds (foraging and breeding), mammals (foraging bats, hedgehogs & brown hares), amphibians (foraging and hibernating) and terrestrial invertebrates.

Amenity Grassland

- 4.19 The amenity grassland is considered to be of low ecological value, although some are of value to a limited number of invertebrate species. The grassland floristic diversity is low. The amenity grassland present is considered to fall under the Lancashire BAP Urban Habitat Plan Amenity Grasslands & Sports Fields.

Hedgerows

- 4.20 Hedgerows fall under the UK Broad Habitat of Boundaries and Linear features for their conservation value within the landscape and are a Habitat of Principle Importance. Certain hedgerows are protected under the Hedgerow Regulations 1997.
- 4.21 The hedgerows within the development site are not considered to fall under the Hedgerow Regulations 1997. Hedgerows at TN4 and TN9 are considered to fall under the UK BAP Priority Habitat hedgerow as they are over 20m in length and consist of 80% or more of at least one native woody species.
- 4.22 Hedgerows are important valuable habitat for birds (breeding and foraging), mammals (foraging bats and hedgehog), amphibians (foraging and hibernating) and invertebrates.

Buildings

- 4.23 Buildings are present within the wider survey area and the proposed development site.
- 4.24 Buildings can offer suitable habitat for breeding birds and roosting bats. The buildings within the proposed development site (TN8) has some features present such as gaps under ridge tiles, roof liner, roof tiles and within the stonework, that could provide suitable habitat for roosting bats.

Other

- 4.25 All wild plant species in Britain are protected from intentional uprooting by unauthorised persons. However, no plant species specifically protected under Schedule 8 of the Wildlife and Countryside Act 1981 were found on the site.

Protected Species Evaluation

- 4.26 As part of the extended phase 1 habitat survey, surveyors also recorded any wildlife observed. Particular emphasis was placed upon sightings of protected species or species of conservation interest. Direct observations of the species were noted. Furthermore, sites/habitats with potential to support the species were also noted, even if direct signs of presence were not apparent. This was done in order to scope the potential for protected species being present so that the Client could be advised on the basis of a precautionary principle before undertaking works.

Amphibians

- 4.27 The desktop study found one record of amphibians within 1km of the proposed development; common frog.
- 4.28 The wider survey area contains suitable terrestrial habitat to support amphibians. The wider survey contains one ornamental pond that may provide suitable breeding habitat for common amphibians. It is considered unlikely to be suitable for common toad and great crested newts, mainly due to its construction, being an ornamental pond that is raised off the ground by approximately 0.5m, small size and relative shallow water depth. Suitable terrestrial and aquatic habitats within the wider survey area will not be affected by the proposed development works.
- 4.29 The proposed development site mainly contained terrestrial habitats of low value to amphibians which included large areas of amenity grassland and hard standing. There is a small area of suitable terrestrial habitat that provides ideal refuge and hibernation habitat in the form of a small area of dense scrub vegetation and rank poor semi-improved grassland. The proposed development site did not contain any waterbodies suitable for amphibian breeding.
- 4.30 Great crested newts and the habitat they use for protection and shelter are protected under Conservation of Habitats & Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended).
- 4.31 Common toad is a species of Principle Importance and a material consideration for planning.

Badgers

- 4.32 The desktop study found no records of badger (*Meles meles*) within 1km of the proposed development.
- 4.33 The wider survey area and the proposed development site contain habitats of varying suitability to suitable to support badger.

- 4.34 Badgers and their setts are protected under the Protection of Badgers Act (1992). Sett interference includes: disturbing badgers whilst they are occupying a sett, as well as destroying a sett or obstructing it.

- 4.35 A guideline distance of 30m from any active sett provides an indication of the potential for disturbance to badgers. No badger setts were found within 30m of the proposed development site. Therefore potential for disturbance to setts by development does not exist. No badger pathways or any other signs were observed throughout the survey area.

Bats

- 4.36 The desktop study found no records of bats within 1km of the proposed development.
- 4.37 The wider survey area contains buildings and scattered trees that are considered to be suitable for roosting bats. Linear features within the wider landscape such as hedgerows and associated waterbodies (including standing water) are likely to be those associated with greatest bat activity and disturbance should be minimised where possible. Habitats within the local area are considered ideal for foraging bats and it is highly likely that bats are present in the survey area.
- 4.38 The development site contains buildings that may provide suitable bat roost habitat. Foraging habitats take the form of scrub, scattered trees and hedgerows.
- 4.39 All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed under Annex IV of the Habitats Directive as in need of protection.
- 4.40 The buildings affected by proposed development require a further detailed inspection survey surveys to determine their potential as bat roost habitat before a full evaluation can be made.

Birds

- 4.41 The wider survey area provides a range of habitats suitable for birds such as scrub, scattered trees, poor semi-improved grasslands, hedgerows and residential gardens.
- 4.42 The proposed development site provides a range of habitats suitable for birds such as scrub, scattered trees, hedgerows and buildings.
- 4.43 The Wildlife and Countryside Act (WCA) 1981, states that all wild birds are protected. Under the WCA, it is an offence to kill, injure or take any wild bird, to take damage or destroy the nest of any wild bird, or to take or destroy the egg of any wild bird. It is good practice to carry out any works outside the breeding season (March to August inclusive) that might affect nests of those species and result in an offence being committed.

Invasive Species

- 4.44 The desktop study found records of giant hogweed and Himalayan balsam within 1km of the proposed development site. Neither of these two species was

identified within the proposed development site or surrounding 30m boundary where access was granted.

- 4.45 Japanese knotweed was identified within the surrounding 30m boundary. This plant was not identified within the proposed development site; however it is in very close proximity to the site boundary.
- 4.46 Japanese knotweed is classed as invasive weeds under the *Wildlife and Countryside Act 1981* (as amended). Under provisions made within the Act, it is an offence to spread this plant. Any waste containing Japanese knotweed is classed as controlled waste under the *Environmental Protection Act (Duty of Care) Regulations 1991*, which requires all producers, carriers and disposers of waste to follow a code of practise and keep records.
- 4.47 There are therefore implications for development with the regard to Japanese knotweed.

5.0 IMPACTS & RECOMMENDATIONS

Habitats Impacts and Recommendations

Habitat Overview

- 5.1 Overall, the development site contains habitats of general low ecological value as the site mainly comprises of amenity grassland and hard standing.
- 5.2 The site also contains habitats of higher ecological value, these are scrub, scattered trees, poor semi-improved grassland, hedgerows and buildings. These habitats are located within the site and may be affected by the proposed development.
- 5.3 Assuming the adoption of appropriate working practices, the potential for medium and long-term negative ecological impact is likely to be low providing that mitigation and compensation is offered within the proposed development design, where required.
- 5.4 The development does not impacts either Biological Heritage Sites or UK or Lancashire BAP Priority Habitats located within the wider survey area.
- 5.5 The development site contains Hedgerows UK BAP, after reviewing the proposed development in Drawing 2, hedgerows do not appear to be impacted.
- 5.6 The development site contains Amenity Grassland & Sports Fields and School Grounds which are all Local BAP Priority Habitats and there will be a small loss of these LBAP to development. Although the ecological value of Amenity Grassland and the Urban Habitat Plan Amenity Grassland & Sports Field is considered to be low mitigation has been proposed in Section 5.49.
- 5.7 An area of planted beds located along the northern section of the site along with an area containing scattered trees, scrub, poor semi-improved grassland (TN3) which was previously used as a nature reserve will be impacted by the proposed development to create a new access road and staff car park.

- 5.8 Mitigation has been proposed below for the loss of scrub, scattered trees and poor semi-improved grassland.
- 5.9 Ideally the planted beds should also be mitigated for as they fall under this BAP Urban Habitat Plan. There is scope within the remaining playing field to mitigate for this.
- 5.10 It is best practice to avoid disturbance to habitats of ecological interest and although there are no legal requirements upon UK and Local BAP priority habitats, the planning authority has to take into consideration loss of overall biodiversity to development.
- 5.11 The following sections briefly evaluate each habitat, provides advice upon each habitat and the species it is considered suitable to support.
- Scrub**
- 5.12 Scrub areas are relatively common throughout the wider survey area. The development will result in the loss of small areas of scattered scrub, this loss is considered to be negligible. This can be a valuable wildlife habitat, particularly for breeding birds. It is recommended that scrub is retained where possible.
- 5.13 In general scrub habitats are suitable to support a number of species including breeding birds. It is advised that works affecting scrub areas may need to take into account the above listed species prior to works.
- 5.14 Any loss of scrub habitat should be replaced on a minimum like for like basis using native species of local provenance or mitigated for by the creation of hedgerows.
- Scattered Trees**
- 5.15 The development work impacts semi-mature and young trees within the proposed development site and the following points need to be taken into consideration.
- Impacts to trees should be minimised where possible and trees to be retained will require adequate provision for root protection prior to any works.
 - There is a loss of scattered trees to development and mitigation works should be undertaken to replace trees on a minimum like for like basis to ensure that there is no net loss of biodiversity at the site. Tree species should be native and of local provenance.
 - Any trees that are affected by development should be checked prior to any works, to see if they fall under any Tree Preservation Order's (TPO).
- 5.16 Consideration for tree dwelling species such as breeding birds will also need to be taken into consideration as trees are impacted by the proposed development.
- Neutral Semi-improved Grassland & Poor Semi-improved Grassland**
- 5.17 Neutral semi-improved grassland located within the wider survey area will not be affected by the proposed development.

- 5.18 Poor semi-improved grassland can be classified as poor and containing relatively low ecological value. These habitats do not require any particular conservation measures. However taking into account no net loss of biodiversity, for the combined loss of poor semi-improved grassland and amenity grassland, mitigation has been recommended in Section 5.50.

Standing Water

- 5.19 The proposed development will not directly or indirectly impact standing water habitat located within the wider survey area.
- 5.20 The two historically dry ponds, one within the proposed development site and one located within the wider survey area, are considered to be of low ecological value, due to their current condition.
- 5.21 The dry ditch and associated riparian habitats are of ecological value and provide suitable habitats for breeding birds, mammals, amphibians and terrestrial invertebrates. The development does not appear to impact the dry ditch and its associated habitats.

Amenity Grassland

- 5.22 The amenity grassland on site is of low ecological value. However it does fall under the Lancashire Urban Habitat Plan Amenity Grassland & Sports fields.
- 5.23 An area of the amenity grassland will be lost to the proposed development for the proposed building extension, new staff car park and extended hard play area. No mitigation has been proposed specifically for the loss of this amenity grassland as it is of low ecological value.

Hedgerows

- 5.24 The development does not appear to impact hedgerows located around the site boundary and at TN4 and TN9. Any works near to hedgerows that are to be retained should be carried out with adequate provision for root protection.
- 5.25 It is considered that there is scope to enhance hedgerow habitat at the site.

Buildings

- 5.26 There are a number of buildings within the proposed development site. Buildings that are affected by the development should be subject to a further bat inspection and assessment to further determine their potential to support roosting bats, see Sections 5.38 to 5.42.
- 5.27 Buildings may provide suitable habitat for nesting birds and consideration for these species will need to be given before any works at the proposed development site may proceed.

Species Impacts & Recommendations

Amphibians

- 5.28 The desktop study found records of common frog within the wider survey area.

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- 5.29 Suitable terrestrial habitat exists within 250m of the proposed development. The proposed development will not impact any suitable terrestrial habitat located within the wider survey area.
- 5.30 One small ornamental garden pond was identified within the wider survey area. This pond is considered to be of low value to amphibians due to its design, raised off the ground, but it may support low numbers of common frog. It is considered to be of low value to common toad and of little value to newt species including great crested newts, due to its design and engineered sides that are raised off the ground.
- 5.31 The proposed development site mainly contains terrestrial habitats of low ecological value with smaller areas of more suitable habitat. There are no suitable waterbodies located within the site.
- 5.32 Amphibians require both suitable terrestrial and aquatic habitat to survive. It is considered unlikely that amphibians, including common toad and great crested newts will be affected by the development.
- 5.33 The wider survey area and the proposed development site contained former ponds. A remnant population of great crested newts can survive for several years in the wild following the succession or infilling of a breeding pond. It is recommended that a precautionary approach is adopted and the following measures are to be implemented:-
- All contractors shall be subject to a toolbox talk and made aware of the possible presence of great crested newts and their legal requirements.
 - All materials and equipment shall be stored on areas of hard standing or are to be raised off the ground. The use of a small section of newt exclusion fencing to create a compound area could be considered.
 - All holes/trenches are to be covered over at night or have a ramp providing a means of escape.
 - Strimming and hand searching sensitive habitats prior to works which includes the small area of scrub and rank poor semi-improved grassland.
 - Undertaking works at a sensitive time of year, i.e. avoiding peak migration periods or during the hibernation periods.
- 5.34 In the unlikely event that a great crested newt is discovered on site, at any time during the development works, all works must cease immediately and either Natural England or the acting Ecologist should be contacted for advice.
- Badgers**
- 5.35 The desktop study found no records of badger within 1km of the proposed development site.
- 5.36 No signs of badger were found during the Extended Phase 1 Habitat Survey within the 30m boundary, where access was granted, or within the proposed development site. Where access was not granted habitats consisted of residential gardens which are considered to offer low potential to support badgers.
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- 5.37 Therefore it is considered that there are no apparent implications with regards to the proposed development and badgers at the time of survey.

Bats

- 5.38 The desktop study found no records of bats within 1km of the proposed development.
- 5.39 The wider survey area contains habitats that are considered ideal for bat species including roosting and foraging habitats. Therefore, it is highly likely that bats are within the survey area and features such as hedgerows and scattered trees should be retained if possible, works kept to a minimum and habitats reinstated on completion of works.
- 5.40 Potential bat roost habitat has been identified within the buildings at TN8. The proposed development joins onto the existing building. An inspection and assessment survey shall be undertaken by a suitably licensed bat ecologist to check level of roosting potential within the affected buildings, before impacts and recommendations can be determined upon bats.
- 5.41 If the inspection and assessment finds the buildings to contain medium to high potential, a bat roost is present or the inspection is inconclusive, then there will be a requirement for further nocturnal and dawn surveys to be undertaken a suitable time of year (May to August).
- 5.42 If the investigation and surveys find a bat roost that is impacted by development works, the Planning Authority will need to agree and approve a method statement for the protection of bat species prior to the granting of planning permission. A European Protected Species (EPS) development licence will be required prior to any works commencing, which can only be applied for once planning permission has been granted.

Breeding Birds

- 5.43 The development has the potential to cause disturbance to breeding birds in buildings, scrub and scattered trees. It is recommended that:
- All suitable breeding bird habitats are to be removed outside the breeding bird season, which is from March to August inclusive.
 - If working during the bird breeding season is unavoidable, then a further survey for ground nesting birds and other breeding birds is carried out prior to working in all areas.
 - If breeding birds are identified, a species assessment should be made and options to minimise the likelihood of any nest being damaged or destroyed.

Invasive Plant Species

Japanese knotweed

- 5.44 Japanese knotweed was located at TN10 within the 30m boundary. The current proposed development, see Drawing 2, does not appear to impact this area and is located over 40m away from the strand. Therefore there are no current implications with regards to the proposed development and Japanese knotweed. Contractors shall be made aware of its presence.

- 5.45 The desktop study found records of giant hogweed and Himalayan balsam within 1km of the proposed development. Neither of these species was found within the 30m boundary where access was granted or within the proposed development site. Contractors shall be made aware of the presence of these species within the wider survey area.

Other Recommendations**Tree Protection Measures**

- 5.46 Tree root protection measures need to be considered in order to avoid damage to the trees. The works should be carried out according to BS 5837: 2012 Trees in relation to construction recommendations.

Planting Schemes

- 5.47 It is further recommended that any planting schemes within the development should adhere to local planning policy and use native species of local provenance. Planting schemes should aim to meet Local Biodiversity Action Plan targets.

Biodiversity Gain Recommendations

- 5.48 In line with current planning policy new developments should ensure that there is a minimum of no net loss of biodiversity at a site and result in an overall biodiversity gain.
- 5.49 Landscape proposals should ensure that there is no net loss of habitats of ecological value, including scrub and scattered trees. There is scope to enhance existing ecological features but all loss should be replaced on a like for like basis.
- 5.50 It is recommended that the latter recommendations are implemented and that three of the following points listed below are implemented into the development design to ensure overall biodiversity gains:
- Installation of bat boxes on trees to be retained and within any new build works at the site. Bat boxes should be placed away from well lit areas, at suitable locations.
 - Installation of nesting bird boxes.
 - The creation of log piles for species that rely upon dying and dead wood and for hibernating and foraging amphibians and invertebrates.
 - The installation of a bird feeding area for schools.
 - The creation and installation of insect boxes.
 - Creation of species-rich hedgerows or enhancement of existing hedgerows.
 - Creation of 2m buffer along the base of the hedgerows at TN4 and TN7 by over seeding with a native wildflower mix of local provenance. This buffer should then allowed to develop into rank grassland and is to be cut once every 2 years and the cuttings removed. This rank grassland buffer will improve the existing wildlife corridor around the boundary of the amenity grassland and will also provide additional suitable habitat and food source for terrestrial invertebrates and the species they support.

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APPENDIX 1

Overview of Statutory Legislation & Planning Policy

This is a brief summary of the ecological planning and legislative context generally applying to England. It is not a comprehensive view and does not purport to advise in relation to any specific site, species or habitat. Specific advice is provided by Ecology Services in the main body of the report.

BIODIVERSITY ACTION PLANS

The United Kingdom Biodiversity Action Plan (UKBAP) was published in response to Article 6 of the Rio Biodiversity Convention in 1992. The UKBAP is a set of national strategies for the conservation of biological diversity and the sustainable use of biological resources.

Biodiversity Action Plans (BAPs) are a series of documents setting out targets and actions for species of conservation concern. BAPs are divided into three main categories: National Habitats, National Species and Local Plans. The UKBAP contains action plans for 1150 'UK Priority Species' and 65 'UK Priority Habitats', considered of national conservation concern. In 2007 the UK Government endorsed a review of the UK list of priority species and habitats, and there has been dramatic increases priority species and priority habitats.

The listing of a species or habitat in the UKBAP does not necessarily provide it with any statutory or planning policy protection. Some of the UK Priority species are statutorily protected, while others receive partial or no protection. However, the client is advised that many planning authorities have policies that provide protection to UKBAP species and habitats, in line with Planning Policy Statement 9.

The 'UK Biodiversity Group Tranche 2 Action Plans' (HMSO, 1998) defines 'UK Priority Species' as either globally threatened or rapidly declining in the UK, i.e. by greater than 50% in the last 25 years.

In addition to the UKBAP, many Local Authorities have prepared Local Biodiversity Action Plans (LBAP). These LBAPs highlight species and habitat types that are of national concern (UKBAP species and habitats) and may also include non UKBAP species that are of local concern. LBAPs will be prepared for these species and habitats. As with the UKBAP, listing of a habitat type, a site or a species in a LBAP does not confer any new statutory or planning policy protection. However, impacts upon sites, habitats or species prioritised in LBAPs may be a material consideration in a planning application.

Natural England has mapped England and designated areas as Natural Areas each with its own ecological identity such as Cheshire Meres and Mosses, characterised by water bodies in boulder clay or peat. Conservation priorities are then identified for each individual natural area. For Cheshire Meres and Mosses this includes retaining and enhancing field hedgerow connections and water bodies. Natural areas have no legislative power but they do indicate which habitats are valued locally.

Natural England is a non-departmental public body of the United Kingdom Government. It was formed in 2006 and the NERC Act sets out Natural England's purpose "to ensure

that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development". Natural England is responsible for ensuring that all England's natural environment is protected and improved. This includes land, freshwater and marine environments, geology, soils, flora and fauna. Another responsibility is to help people have access to, educate, enjoy and understand their natural environment.

NATIONAL PLANNING POLICY FRAMEWORK

The National Planning Policy Framework (NPPF) places a clear responsibility on Local Planning Authorities to conserve and enhance biodiversity and to encourage on the consideration that should be given to Protected Species where they may be affected by development. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation. This is supported by a guide to good practice entitled 'Planning for Biodiversity and Geological Conservation: Building in Biodiversity' in which paragraphs 5.34 and 5.35 identify that species such as bats are highly dependant upon built structures for survival and that roosts can be easily incorporated into existing and new developments/conversions to benefit these species.

The aim of the NPPF in relation to biodiversity is that a healthy and diverse natural environment is crucial to our sense of wellbeing. The Framework underlines that the planning system should seek not just to protect, but, where possible, to enhance biodiversity – making sure we don't just have isolated pockets of wildlife, but rich and connected green spaces for all kinds of species to thrive. Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland.

When a planning authority is considering a development proposal, which includes a statutorily protected species or a species of principal importance (i.e. prioritised in the UKBAP), that may cause harm to the species or its habitat, this is taken into consideration.

Local Planning Authorities are obliged to maximise opportunities for development within areas of biodiversity and geological features as part of good design. Where significant harm is unavoidable to biodiversity and geological features, adequate mitigation and/or compensation measures must be implemented otherwise planning permission will be refused.

In accordance with **The North West of England Regional Spatial Strategy Policy EM1** (Integrated Enhancement and Protection of the Region's Environmental Assets) Local Planning Authorities must also:-

- Give priority to conserving and enhancing habitats and species which are of local, regional, national and international importance
- Apply the principle of no net loss of resources as a minimum requirement by avoiding loss of or damage to natural assets, mitigate any unavoidable damage and compensate for loss/damage through offsetting actions
- Ensure schemes result in an increase in biodiversity by contributing to the delivery of local, regional and national biodiversity objectives and targets, and deal with any issues of habitat fragmentation and species isolation.

Natural England will also expect detailed surveys to have been carried out on site before any licences for species handling or habitat works are to be granted. It must be taken into account that many protected species have wide habitat ranges and their presence outside the proposed development must always be considered. Many planning applications have failed because inadequate consideration was given to protected amphibian species terrestrial habitats that were present some distance from the proposed development.

COUNTY, DISTRICT AND UNITARY DEVELOPMENT PLANS

District, County and Unitary Development Plans provide protection, both to sites and to certain species. This degree of protection varies according to different types of site and/or different species. Policies will always be very heavily weighted against development which might affect statutory wildlife sites.

The development plan will allow for the designation and policy protection of non-statutory wildlife sites, (sometimes generically called second-tier sites, to distinguish them from statutory sites). There are many names for these non-statutory wildlife sites which include; Site of Biological Importance (SBI), Site of Importance for Nature Conservation (SINC) and Biological Heritage Site (BHS). Often geological sites are grouped with ecological sites, for example Regionally Important Geological / Geomorphological Sites (RIGS) and Geological Heritage Sites (GHS).

Non-statutory sites are usually identified by a fairly rigorous system of criteria which are adopted as supplementary planning guidance. The development plan usually also provides protection for any identified 'Wildlife Corridors' or 'Greenways'. Usually the extent of protection to non-statutory sites is not conclusive. However where development is considered to outweigh ecological interests, a mitigation strategy is usually required as a condition of a planning consent.

STATUTORY LEGISLATION

Statutory protection is afforded to specific species and wildlife sites by European Union Directives, several international conventions which the United Kingdom (UK) adheres to and various UK Acts and Parliament Regulations. The main Acts are

- Wildlife and Countryside Act (WCA), 1981 (as amended)
- Conservation of Habitats & Species Regulations 2010

The Natural Environment & Rural Communities Act 2006 (NERC) establishes statutory obligations for public bodies to have regard for biodiversity in the exercise of their operations. For planning conditions this includes decisions taken by Local Planning Authorities.

STATUTORY WILDLIFE SITES

Within the UK there are many designations for giving protection to sites of national or international importance. The most frequent designations to come across are summarised below:

- **Special Area of Conservation (SAC):** An area of land or water of international (European) conservation importance which has been designated by European Union Member States under the EU Habitats Directive (Directive 92/43/EEC). In England, the legal requirements for the designation of and management of SACs are specified within the Conservation of Habitats & Species Regulations 2010. In the UK, all SACs are also designated Sites of Special Scientific Interest (SSSI).

- **Special Protection Area (SPA):** A site of international (European) conservation importance for birdlife which has been designated by European Union Member States under the Birds Directive (Directive 79/409/EEC). The site is designated because of its regularly occurring migratory species and its rare and vulnerable birds, listed in Annex I to the Birds Directive. In the UK, all SPAs are also designated SSSIs.
- **Ramsar site:** A wetland of recognised international importance designated under the Ramsar Convention 1971. Large numbers of animals and plants depend on Ramsar sites for their survival. In the UK, all Ramsar sites are also designated as SSSIs.
- **National Nature Reserve (NNR):** A nationally important nature reserve designated by Natural England under the WCA for its important wildlife habitat, geological formation and for scientific research. They are managed by either Natural England or an approved body. Many NNRs are also designated as SSSIs.
- **Local Nature Reserve (LNR):** A nature reserve on public land, established by a Local Authority under s21 of the *National Parks and Access to the Countryside Act, 1949*. They are designated for their wildlife or geological features that are of special local interest. LNRs may or may not be Sites of Special Scientific Interest.
- **Site of Special Scientific Interest (SSSI):** An area of land or water notified by Natural England under the WCA or the *National Parks and Access to the Countryside Act, 1949* as being of special nature conservation interest for its biological and geological features. SSSIs are important as they support many animals and plants that would not survive in the wider countryside.

EUROPEAN PROTECTED SPECIES:

European protected species include; **great crested newts, natterjack toads, bats and otters** etc. The full list of European species is in the Conservation of Habitats & Species 2010. The extent of legal protection covers both the species and its habitat.

European Protected Species are protected under the Conservation of Habitats and Species Regulations 2010 and it is an offence, with certain exceptions, to:

- deliberately capture or kill any wild animal of a European Protected Species;
- deliberately disturb any such animal;
- deliberately take or destroy eggs of any such wild animal;
- damage or destroy a breeding site or resting place of such a wild animal;
- deliberately pick, collect, cut, uproot or destroy a wild plant of a European Protected Species;
- keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a European Protected Species, or any part of, or anything derived from such a wild animal or plant.

Any development or other activity that would result in a contravention of the above legislation would require a licence to avoid committing an offence.

Natural England has powers to grant a licence for the following purposes;

- Regulation 53(2)(e) - preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;

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- Regulation 53(2)(f) - preventing the spread of disease;
- Regulation 53(2)(g) - preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property or to fisheries.

Natural England can only issue a licence if it is satisfied that the activity meets one of the above purposes and is also satisfied of the following;

- Regulation 53(9)(a) - that there is no satisfactory alternative, and
- Regulation 53(9)(b) - that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favorable conservation status in their natural range.

Natural England requires Local Planning Authorities to consider the size and significance of impact of the proposed development on the European species and their habitat. As well as the need for the development and consideration of possible development alternatives, before determining planning applications that could affect European protected species.

STATUTORILY PROTECTED SPECIES & THEIR HABITATS

In most cases relevant to planning applications, protected species are those listed in

- Schedule 1, 5 and 8 of the WCA (as amended). The Wildlife and Countryside Act 1981 is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000.
- The *Protection of Badgers Act, 1992* (PBA);
- The *Conservation (Natural Habitats &c) Regulations, 1994* now the Conservation of Habitats and Species Regulation 2010.

The extent of legal protection varies between species and also the protocols for development which affects such species.

When considering development and how it impacts protected species it is vital to obtain site-specific advice before formulating an action plan. The following paragraphs are outlines of legal protection afforded to some of the species most frequently encountered.

Badgers and their setts are protected under the Protection of Badgers Act (1992). The Protection of Badgers Act 1992 was designed to protect badgers from baiting and deliberate harm or injury. It also contains restrictions that apply more widely. It is an offence to:

- Wilfully kill, injure or take, or attempt to kill, injure or take a badger.
- Cruelly ill-treat a badger, dig for badgers, use badger tongs, using a firearm other than the type specified under the exceptions within the Act.
- Interfere with a badger sett by damaging, destroying, obstructing, causing a dog to enter a sett, disturbing an occupied sett - either by intent or by negligence.
- Sell or offer for sale a live badger, have possession or control of a live badger.
- Mark a badger or attach any ring, tag, or other marking device to a badger.

Sett interference includes: disturbing badgers whilst they are occupying a sett, as well as destroying a sett or obstructing it.

Developments within 30 metres of a badger sett require a licence from Natural England, which permits the following work to be undertaken near a sett, even if there is no direct damage to the sett -

- Using very heavy machinery (generally tracked vehicles) within 30m of any entrance to an active sett;
- Using lighter machinery (generally wheeled vehicles), particularly for any digging operation, within 20m;
- Light work such as hand digging or scrub clearance within 10m.

In terms of development, a licence is required from Natural England if the scheme involves the destruction of a recently active sett (even if an outlier). Adequate protection of the animals is required by Natural England. This means alternative conditions will be needed and disturbance will not be permitted during hibernation or early spring, when badgers are gestating or have dependent young. Natural England will tend to object to the loss of a main sett.

Great crested newts and the habitat they use for protection and shelter are protected under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats & Species Regulations 2010. This legislation applies to all life forms of a great crested newt. It is an offence to:

- Intentionally kill, injure or take a great crested newt
- Deliberately capture or kill a great crested newt
- Possess or control any live or dead specimen or anything derived from a great crested newt
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for breeding, shelter or protection by a great crested newt
- Deliberately, intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose
- Deliberately take or destroy the eggs of a great crested newt

Any potential development on a great crested newt site will depend on the size of the great crested newt population, the locality and the potential impact from the development. If great crested newts are likely to be or are present then an extended period of time for alternative habitat creation, trapping, mitigation, site management and monitoring will have to be accounted for.

Common reptiles all receive some degree of protection through the Wildlife and Countryside Act 1981 (as amended). There are two different levels of protection afforded to reptiles through the Wildlife and Countryside Act 1981; this results from different parts of Section 9 of the Act applying to the different species (as specified in Schedule 5).

Full protection applies to the sand lizard and smooth snake as they are European Protected Species. All parts of Section 9 of the WCA apply. In addition, these species are afforded protection under the Conservation of Habitats and Species Regulation 2010, see European Protected Species section above.

Partial protection against killing, injuring and sale applies to the four widespread species of reptile, namely the common lizard, slow-worm, grass snake and adder. Only part of sub-section 9(1) and all of sub-section 9(5) of the WCA apply. These prohibit the intentional killing and injuring and trade (i.e. sale, barter, exchange, transporting for sale and advertising to sell or to buy). The habitats for these widespread species are not

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protected. Therefore, in practice this requires a reptile protection scheme before implementing a planning permission. No specific licence is required. It is not an offence under the Wildlife and Countryside Act 1981 to possess these animals.

The rarer reptiles require a protection and conservation scheme, and Natural England may not grant such licences unless they are assured that protection and conservation is guaranteed.

Water voles are one of the priority species identified in the UK Biodiversity Plans. Since 1998 the water vole has received legal protection through being added to Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 9 (4). The water vole has recently gained additional protection through the amendment of Schedule 5 by Statutory Instrument 2008 No. 431. The water vole and its habitat now receive full protection. Prior to this the water vole only had limited protection. It is now an offence to:

- Intentionally kill, injure, or take a water vole from the wild
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection.
- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.
- Possess or sell any part of the live or dead water vole
- Publish or cause to be published any advertisement which conveys the buying or selling of water voles.

In certain cases, listed below, licenses may be granted by Natural England to permit activities outlawed by the Act:-

- Scientific or educational purposes
- Purposes of ringing or marking
- Conserving wild animals or introducing them into a particular area
- Preserving public health or public safety
- Preventing the spread of disease
- Preventing serious damage to any form of property or to fisheries

It is essential that water vole surveys, mitigation design and implementation are taken into account at an early stage to avoid significant costs and delays.

Wild birds - The Wildlife and Countryside Act (WCA) 1981, states that all wild birds are protected. Under the WCA, it is an offence to kill, injure or take any wild bird, to take damage or destroy the nest of any wild bird, or to take or destroy the egg of any wild bird. A special penalty is levied to any of the above offences being committed in conjunction with a bird listed on Schedule 1 of the WCA. It is also an offence if a person disturbs any bird listed on Schedule 1 while it is building a nest, is on or near a nest containing young, or disturbs dependent young of such a bird.

The recent Countryside and Rights of Way Act 2000, has made it an offence to intentionally or recklessly disturb Schedule 1 species as above, and also an offence to intentionally or recklessly take, damage or destroy the nest of any wild bird or its eggs or dependent young.

BAP (Biodiversity Action Plan) species - These are bird species of conservation concern (see below for definitions), which are selected as priority species under one or more of

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the following criteria: species which are globally threatened and species which are rapidly declining in the UK, i.e. by more than 50% in the last 25 years.

An action plan for each of these species has been developed to set specific, measurable, achievable, realistic and time-bounded targets for the species concerned. Each plan has been costed and then finalised by consensus across the full range of statutory and non-statutory organisations represented on the UK Biodiversity Group. The BAP identifies the work that is necessary to improve the adverse status of these species.

Birds of conservation concern: 2002 - 2007: The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of the birds that are regularly found here. Three lists have been produced that comprise of the following

Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and have not shown a substantial recovery.

Amber list species are those with an unfavourable conservation status in Europe; whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders and those with internationally important or localised populations.

Green list species are species that fulfil none of the above criteria. These species are not included in the evaluation.

The lists update earlier assessments, Birds of conservation concern and Birds of conservation importance, which were published in 1996. The population status of birds is reviewed every five years to keep track of changes in abundance and range. The new lists are based on the most up-to-date information available.

Invertebrates – there are few species which are listed in the UKBAP or that have statutory protection. Many species are thought to be rare and/or vulnerable. These species are known as Red Data Book (RDB) species. Red Data Book Species are often listed within LBAPs. Within this classification there are various grades of ecological sensitivity based on the frequency of occurrence within 10km squares of the National Grid:

- Rare/Vulnerable Species - occurs in 15 or fewer 10km squares
- Nationally Notable (Scarce) – occurs in 16 to 100 10km squares
- Nationally Notable (Scarce) Category A - occurs in 30 or less 10km squares
- Nationally Notable (Scarce) Category B - occurs between 31 and 100, 10km squares

PROTECTION OF ANIMALS

All animals are protected by the Animal Welfare Act 2006, which prohibits unnecessary suffering, cruelty and mistreatment. For example releasing a great crested newt in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960. In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare.

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PLANT PROTECTION

Statutorily protected plants are listed in Schedule 8 of the WCA. With reference to development these plants do tend to be very rare and not frequently encountered, for example the bluebell statutorily protected, but this prohibits commercial bulb picking from the wild rather than to prohibit development.

INVASIVE PLANT SPECIES

There is a category of plants whereby if they were introduced or caused to spread into the wild it would be deemed an offence under the WCA. Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and Giant hogweed (*Heracleum mantegazzianum*) are listed under the WCA as invasive non-native species (part 2, Section 14), including a large list of additional species added to Schedule 9 in April 2010. These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

Japanese knotweed has an extensive root system and new plants can regenerate rapidly from the smallest fragments of rhizome. Himalayan balsam is a prolific seed producer and may sow up to 500 seed per plant which are catapulted up to 7metres from the parent plant. Giant hogweed poses health issues through the production of toxic sap which may irritate human skin and cause painful burs and blistering which may become more aggravated after exposure to light, in some cases long-term photo-sensitivity may be diagnosed. Material containing these species is classed as controlled waste under the *Environmental Protection Act (Duty of Care) Regulations 1991*. The disposal of such waste requires that all parties follow a strict code of practice and maintain adequate records regarding their conduct.

HEDGEROWS

The Hedgerow Regulations are made under Section 97 of the Environment Act 1995 and came into operation on 1st of June 1997. They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to the Local Planning Authority. A hedgerow can only be considered for classification as "important" if it, or the hedgerow of which the section belongs to is over 20m in length (or which meets a hedgerow at either end) and has existed for 30 years or more.

WATERCOURSES

Works that may have an impact upon water courses are covered by the Environment Act 1995. The broad remit of the Act covers all aspects of water bodies, and includes water quality, conservation, fisheries and navigation amongst others. In addition to the Environment Act there are locally relevant Land Drainage Byelaws. The Environment Agency North West Region Land Drainage Byelaws 1979 covers issues such as issuance of Consents for carrying out works on or nearby to a water course. The client needs to be aware that the Environment Agency should be consulted as they have a statutory interest in works affecting water bodies. The Environment Agency has a duty to promote the conservation of flora and fauna that are dependent upon water bodies.

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APPENDIX 2 TARGET NOTES

TN1 - Hedgerow

A residential garden boundary hedgerow located along the northern boundary of the school. It is managed upto 1.8m in height and 1m wide and was viewed from within the school grounds. Species present included dominant common beech, occasional dog rose with rare bramble. Groundflora species included frequent herb-Robert, occasional wood avens and common nettle.

TN2 - Scattered Trees

Scattered trees are present within the 30m boundary. No access was granted to the trees. Some of the tree canopies overhang into the school grounds.

TN3 - Habitat Mosaic

Along the northern boundary of the school are a number of small manmade beds containing planted flowers, herbs and fruit bushes. In the north east corner of the school grounds there is a fenced area containing scrub, scattered trees and poor semi-improved grassland. Scrub species present include dominant common hawthorn, frequent garden privet, occasional cherry sp, bramble and birch sp with rare maple sp, holly and elder. Scattered tree species present include frequent cherry sp, common ash with occasional birch sp, leylandii sp, rare whych elm and aspen. The groundflora contained poor semi-improved grassland. Species recorded included abundant cock's-foot and false oat-grass, with frequent meadow foxtail, rough meadow-grass, herb-Robert, creeping buttercup, common nettle with locally frequent annual meadow-grass, ivy, garlic mustard, silverweed and lesser celandine. Occasional species include perennial rye-grass, sweet vernal-grass, Solomon's seal, cleavers, dandelion, broad-leaved dock, curled dock and rare lords and ladies, poppy sp, strawberry and bluebell sp. Garden plant species are also present. Within this area there is a remnant pond. It was dry at the time of the survey but some parts of liner and stones were still present along with aquatic vegetation. Species recorded included locally frequent water avens, yellow flag iris, with rare soft rush, pendulous sedge and water mint. This remnant pond area is becoming overgrown with common nettle tall ruderal. A compost bin, bird table and bird boxes are also present within this fenced area. The school informed the surveyor that this was the schools nature area and that the pond last held water over 10 years ago, which was drained for health and safety reasons.

TN4 - Hedgerow

Along the eastern boundary of the school is a managed hedgerow. It is approximately 2m high and 1.5m wide. Species recorded included abundant common hawthorn, common beech, frequent garden privet, field maple and occasional blackthorn, elder with rare rose sp, rowan and copper beech. Groundflora contained amenity grassland species listed in TN5, along with occasional ivy, cleavers and cock's-foot. One common hawthorn and Swedish whitebeam tree are present within the hedgerow. No obvious features suitable for roosting bats.

TN5 - Amenity Grassland

The school playing grounds consisted of amenity grassland which was being cut at the time of the survey. Species recorded included abundant annual meadow-grass and

perennial rye-grass, frequent daisy, white clover, greater plantain, occasional Yorkshire fog, dandelion, creeping buttercup with rare crested dogs-tail and sweet vernal-grass.

TN6 - Scattered Trees

Scattered trees are present within the school grounds. Species recorded included frequent cherry sp, occasional silver birch, field maple, rowan and oak sp. The trees are young to semi-mature in age with no features suitable for bats.

TN7 - Scattered Scrub

Scattered scrub is present along the southern boundary. Species recorded included abundant rose sp, frequent common hawthorn, common beech, occasional holly, field maple and hazel.

TN8 - Buildings

Within the school grounds there are a number of buildings. The nursery building appears to be a relatively new build. It has a flat roof with no obvious features for roosting bats. The main school building is also joined to the Chapel. The rear of the school building is constructed of brick and stone with pitched tiled roofs. There are gaps under the ridge tiles, under the roof liner and under roof tiles. The front of the school building appears to have slate roof and chimneys. There are gaps in the stonework and under the slate tile and ridge tiles. House sparrows are nesting in the front of the school building. The chapel is joined to the school and can be accessed internally through the school.

TN9 - Hedgerow

Along the western boundary of the school is a managed hedgerow. It is approximately 2m in height and 1.5m wide. It is fenced to the west and east in places. Species recorded included dominant common hawthorn, occasional elder, field maple and rose sp. Groundflora species recorded included frequent common nettle, cleavers, rough meadow-grass, creeping buttercup, annual meadow-grass, honeysuckle with locally frequent wild garlic, occasional herb-Robert, hedge woundwort, bittercress, ivy, wood avens with rare forget-me-not and poppy sp. To the southern end locally frequent comfrey, yellow flag iris, occasional horsetail and bluebell are present. One dead tree is present within the hedge.

TN10 - Habitat Mosaic

Located within the 30m boundary to the south west there is an area containing scrub, poor semi-improved grassland, introduced shrub, amenity grassland and buildings. Scrub species recorded included dominant common hawthorn, frequent elder, occasional willow sp, bramble, holly with rare Swedish whitebeam and hazel. Introduced shrub is present containing locally abundant Japanese knotweed. The buildings are residential garages. These were not assessed for their bat potential as they will not be impacted by the proposed works. The poor semi-improved grassland contained abundant common nettle, ivy, locally abundant cleavers, frequent creeping buttercup, meadow foxtail, annual meadow-grass, cock's-foot, rough meadow-grass, false oat-grass, locally frequent rosebay willowherb, great willowherb and wild garlic. Occasional species included wood avens, dandelion, creeping thistle with rare spear thistle, sweet vernal-grass and cuckooflower. Some fly tipping is present within the area of dense scrub to the east.

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TN11 - Poor Semi-improved Grassland

Poor semi-improved grassland is present within the 30m boundary. Some of the fields were grazed by sheep. These fields were viewed from the public footpath. Species recorded included abundant meadow foxtail and sweet vernal-grass, frequent cock's-foot, red fescue, ribwort plantain, occasional common nettle, meadow buttercup and dandelion.

TN12 - Dry Ditch, Scrub & Tall Ruderal

Located within the 30m boundary to the south of the school and to the south of the public footpath is a dry ditch which is becoming overgrown with scrub and tall ruderal. Scrub species recorded included dominant common hawthorn and abundant bramble. Tall ruderal species present include frequent common nettle, locally frequent great willowherb and rosebay willowherb. Poor semi-improved grassland is also present. Species recorded included abundant meadow foxtail, frequent false oat-grass, rough meadow-grass, honeysuckle, occasional fern sp, field horsetail and broad-leaved dock. The ditch appears to have been dry for a period of time and no remnant aquatic vegetation was apparent.

TN13 - Standing Water

One ornamental garden pond and one dry pond were identified within 250m of the proposed development, where access was granted. The ornamental pond was located within a residential garden. It appears to be constructed of concrete and is raised up of the ground. There also appears to be a fountain within the pond. It is located adjacent to a stream and private road. It was viewed from a public footpath. It is considered to have a perimeter of upto 8m and is oval in shape. Water depth appears to be less than 0.5m with relatively clear water quality. The banks are shallow but engineered and raised off the ground. The pond appeared to be shaded 50% by trees and 40% by scrub. Habitats within 10m of the pond included running water, amenity grassland, scrub and scattered trees. No aquatic plants were observed. The dry pond has become vegetated with poor semi-improved grassland and remnant yellow flag iris was present.

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**Drawing 1:
Extended Phase 1 Habitat Survey**

Barrow Primary School,
Barrow

KEY:

	30m Boundary		Development Site Boundary
	Target Note		Dense Scrub
	Scattered Scrub		Scattered Broad-leaved Tree
	Scattered Conifer Tree		Neutral Semi-improved Grassland
	Poor Semi-improved Grassland		Tail Ruderal
	Ornamental Pond		Dry Pond
	Amenity Grassland		Introduced Shrub
	Hedgerow		Dry Ditch
	Fence		Wall
	Building		Hard Standing
	Planted Beds		No Access
	Japanese knotweed		Map not to scale

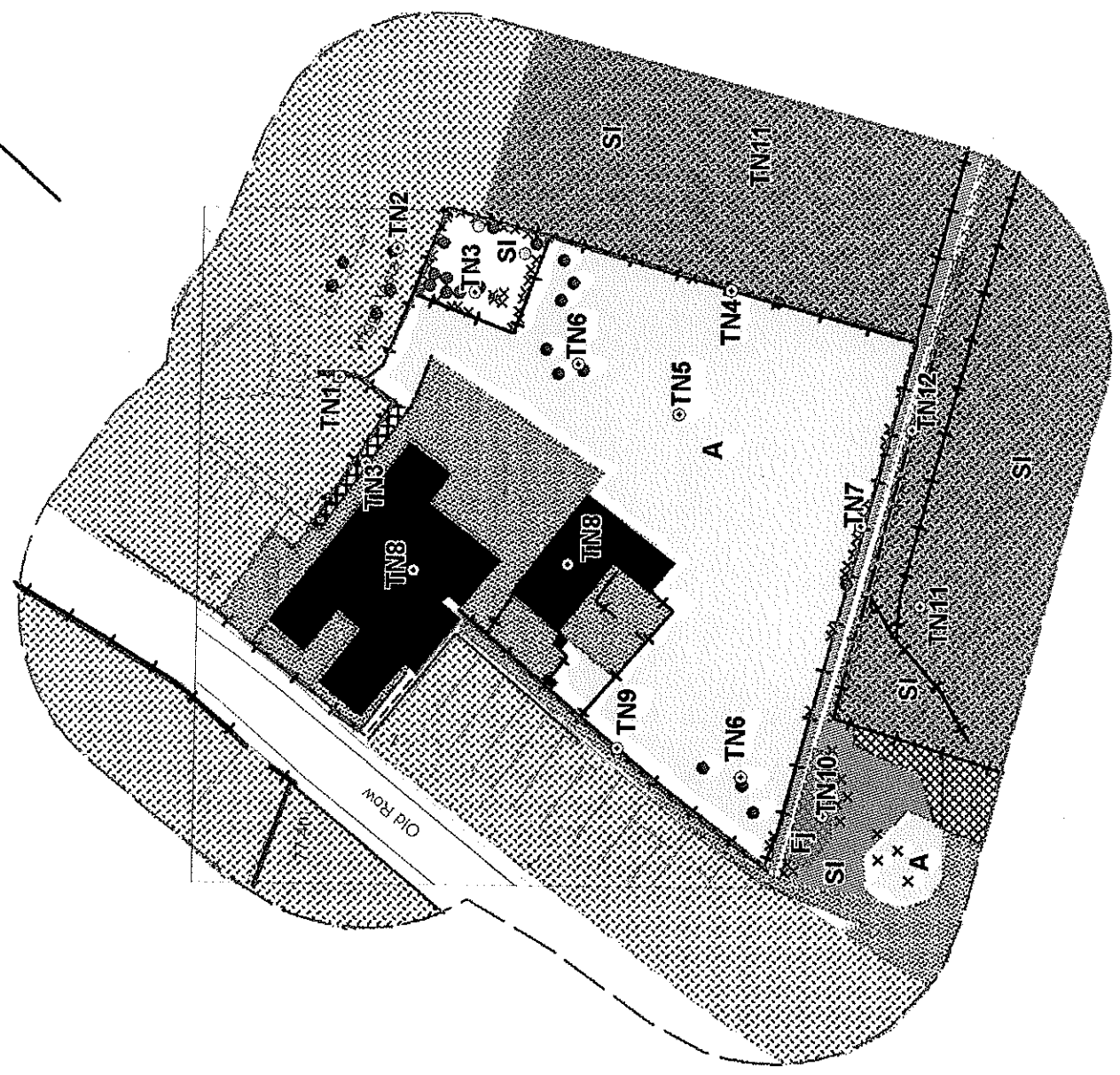


ECOLOGY
SERVICES

TN13
 Ornamental Pond
 Approx 190m from Site

TN13
 Dry Pond

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**Drawing 2:
Proposed Development**



Doc 12	4	Local road layout shown, cycle route removed from boundary to Wigga Vista.
Doc 13	1	Proposed Extension
Doc 14	1	Proposed Extension
Doc 15	1	Proposed Extension
Doc 16	1	Proposed Extension
Doc 17	1	Proposed Extension
Doc 18	1	Proposed Extension
Doc 19	1	Proposed Extension
Doc 20	1	Proposed Extension
Doc 21	1	Proposed Extension
Doc 22	1	Proposed Extension
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Doc 96	1	Proposed Extension
Doc 97	1	Proposed Extension
Doc 98	1	Proposed Extension
Doc 99	1	Proposed Extension
Doc 100	1	Proposed Extension

Notes: Dimensions are not to be scaled from this drawing. All within measurements are to be included on the site by the contractor.

Project Name	Cliffhenge
Project Number	Barrow Primary School
Project Address	Old Row, Barrow, B97 9AZ
Project Date	11/07/10
Project Status	Proposed Extension
Project Title	Proposed Site Plan
Scale	1:500
Drawn by	RJD
Checked by	MB
Date	Jun 2012



Corporate Property Group
Office of the Chief Executive

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Project No.	EE000699
Drawing No.	A-06
Version	A

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Wigga Vista

Barrow School (Primary)

Playing Field

Nursery School

Nursery Play Area

Old Row

Barrow Primary School

Chapel

Original 1975 Chapel and School Building
The Chapel and School Building
were demolished in 1975 and replaced
by the present building.

Developer Car Park
(170 spaces)

Existing Vehicle Site Access

Penthyne

