

STAFFORDSHIRE MOORLANDS DISTRICT LOCAL DEVELOPMENT FRAMEWORK

AN ECOLOGICAL STUDY



Anna Maxwell, BSc (hons)
Victoria Brooks, BSc (hons), MSc
Sue Lawley MPhil, MIEEM, CEnv

January 2010



**Staffordshire Wildlife Trust
The Wolseley Centre
Stafford
ST17 0WT**

Executive summary

- A desktop study and field surveys were carried out to examine potential development areas in Staffordshire Moorlands District.
- Potential development areas were examined for known protected species records, habitats and geological features using data from Staffordshire Ecological Record.
- **All** potential development sites were surveyed in Summer 2009.
- For each area information is provided which sets out implications for protected sites and species, habitats and geology.
- Habitat data provided comprises 2009 survey data for the potential development sites, 2009 data or previous survey data is used where appropriate for other land.
- Previous habitat survey data used comprised: 2003 Sites of County Biological Importance (SBI) survey and the current rolling programme of SBI re-surveys.
- For species information, all species lists include a search area of 2 kilometres because the intention is for the species lists to be regarded as a guide to the likely key issues.
- All available species information from a wide range of dates is included in the Appendices; the most current / relevant information is noted within the text of the report.
- For each area, brief initial recommendations for mitigation and management are suggested. It is anticipated that these recommendations could be brought forward as reasonable biodiversity measures within any development scheme.
- All designated sites and protected and Biodiversity Action Plan species should be protected from development, where this is not possible adequate mitigation may be possible as a last resort.
- In the Leek EM1 area (Birchall), it is recommended that semi-improved grassland and scrub are protected from development, or compensatory habitat should be provided.
- In the Leek EM2 area (Leekbrook) it is strongly recommended that the area is protected from development, because the habitats present are of county importance.
- In the Leek 3 area (Ball Haye Green), it is strongly recommended that no development takes place because the habitats present are of county importance.
- In the Churnet Works area it is recommended that if the area is affected by development, surveys of protected species are likely to be required, and adequate compensatory habitat should be provided. The presence of protected species, particularly bats, in the buildings is likely.
- In the Leek 5 area it is recommended that protected or Biodiversity Action Plan species should be protected or mitigated as appropriate.
- In the Leek 6 area it is strongly recommended that there should be measures taken to prevent any negative effects of development on habitats nearby, including provision of adequate public space and planting.
- In the Ladydale Site of Biological Importance it is strongly recommended that the area is protected against development. Further consideration should be given to providing habitat links between this area and the south and east.
- In the Cheadle 1 area the watercourse should be protected and buffered with suitable habitat. Any development should also provide habitats for the species listed.

- In the Cheadle 2 area habitat features should be protected from development by incorporation into Green Infrastructure, and enhanced to provide habitat.
- In Cheadle EM1, additional habitat should be provided along the watercourse, with the provision of further habitat adjacent to the disused railway.
- In Cheadle 4 and 5 buffering habitat should be provided along the disused railway and the Mobberley Brook, and additional habitat considered for key species listed.
- In Biddulph 4, buffering habitat should be provided adjacent to the disused railway. If possible protect other habitats or create compensatory habitat adjoining the disused railway.
- In Biddulph 6, buffering habitat should be provided adjacent to the disused railway. If possible protect other habitats or create compensatory habitat adjoining the disused railway.
- In the Forge Colour Works site, if possible, retain woodland habitat around the edge of the site.
- Newpool (east of) was surveyed additionally to the 13 sites put forward by Moorlands District Council as it lies directly adjacent to the development site 'Biddulph 4'. It is recommended that the site be protected from development and designated a Biodiversity Alert Site.
- Brough Park Fields Site of Biological Importance was surveyed additionally to the 13 sites put forward by Moorlands District Council as it lies directly adjacent to the development site 'Leek 3'. It is strongly recommended that the site be protected from development.

Please note:

Data in the report is as up-to-date as possible, however information is continually updated. There are unavoidable delays in adding new species to the Staffordshire Ecological Record database. Publication of data about any area inevitably results in additional records being supplied by naturalists and the general public.

Contents

1	Introduction.....	6
1.1	Background.....	6
1.2	Protected and Biodiversity Action Plan Species.....	6
1.3	Site designations	8
1.4	General recommendations	8
2	Leek Sites Information.....	11
2.1	Leek EM1: Land adjacent to Birchall Playing Fields.....	12
2.2	Leek EM2: Leekbrook	16
2.3	Leek 3: Ball Haye Green.....	21
2.4	Churnet Works	25
2.5	Leek 5.....	28
2.6	Leek 6.....	32
2.7	Additional site Ladydale	36
3	Cheadle Sites Information.....	39
3.1	Cheadle 1	40
3.2	Cheadle 2	44
3.3	Cheadle EM1	48
3.4	Cheadle 4 and 5.....	50
4	Biddulph Sites Information.....	54
4.1	Biddulph 4.....	55
4.2	Biddulph 6.....	59
4.3	Additional Site Forge Colour Works	63
4.4	Additional site: Newpool (east of).....	66
	Appendices.....	68
	Appendix 1 – Species Lists for Leek EM1	69
	Appendix 2 – Species Lists for Leek EM2	72
	Appendix 3 – Species Lists for Leek 3	78
	Appendix 4 – Species Lists for Churnet Works.....	82
	Appendix 5 – Species Lists for Leek 5 and 6	85
	Appendix 6 – Species Lists for Ladydale	90
	Appendix 7 – Species Lists for Cheadle 1	91
	Appendix 8 – Species Lists for Cheadle 2	94
	Appendix 9 – Species Lists for Cheadle EM1	97
	Appendix 10 – Species Lists for Cheadle 4 & 5	101
	Appendix 11 – Species Lists for Biddulph 4	105
	Appendix 12 – Species Lists for Biddulph 6	110
	Appendix 13 – Species Lists for Forge Colour Works	113
	Appendix 14 – Staffordshire Requirements for Biodiversity and Geological Conservation.	114
	Appendix 15 – Site Descriptions for Sites of County Biological Importance.....	1

Table of figures

Figure 1: Colour coding for habitat maps	10
Figure 2: Leek Sites	11
Figure 3: Leek EM1 Designated Sites within 500m	12
Figure 4: Leek EM1 Habitats	13
Figure 5: Leek EM2 designated sites within 500m	16
Figure 6: Leek EM2 Habitats	17
Figure 7: Leek 3: Ball Haye Green Designated Sites within 500m	21
Figure 8: Leek 3 Ball Haye Habitats	22
Figure 9: Churnet Works Designated Sites within 500m	25
Figure 10: Churnet Works habitats	26
Figure 11: Leek 5: Designated Sites within 500m	28
Figure 12: Leek 5 Habitats	29
Figure 13: Leek 6 Designated Sites within 500m	32
Figure 14: Leek 6 Habitats	33
Figure 15: Ladydale Designated Sites within 500m	36
Figure 16: Ladydale Habitats	37
Figure 17: Cheadle Sites	39
Figure 18: Cheadle 1 Designated Sites within 500m	40
Figure 19: Cheadle 1 Habitats	41
Figure 20: Cheadle 2 Designated Sites within 500m	44
Figure 21: Cheadle 2 Habitats	45
Figure 22: Cheadle EM1 Designated Sites within 500m	48
Figure 23: Cheadle EM1 Habitats	49
Figure 24: Cheadle 4 and 5 Designated Sites within 500m	51
Figure 25: Cheadle 4 and 5 Habitats	52
Figure 26: Biddulph Sites	54
Figure 27: Biddulph 4 Designated Sites within 500m	55
Figure 28: Biddulph 4 Habitats	56
Figure 29: Biddulph 6 Designated Sites within 500m	59
Figure 30: Biddulph 6 Habitats	60
Figure 31: Forge Colour Works Designated Sites within 500m	63
Figure 32: Forge Colour Works Habitats	64
Figure 33: New Pool (east of) Habitats	66

1 Introduction

1.1 Background

The Staffordshire Wildlife Trust was commissioned by the Forward Plans Team of Staffordshire Moorlands District Council to carry out a comprehensive ecological desk top study, and phase 1 habitat survey of areas considered for development. All 13 areas in Staffordshire Moorlands (two in Biddulph, five in Cheadle and 6 in Leek), were visited and a phase one survey was conducted. Where appropriate, an extended phase one survey was carried out on sites that were suspected to reach Site of Biological Importance or Biological Alert Site criteria.

The study includes the identification of priority species and habitats which the planning authority have a duty to consider when determining planning applications. This includes Protected and Biodiversity Action Plan Species and habitats. Where an existing Site of Biological Importance or Biological Alert Site bordered one of the 13 survey areas, an extended phase 1 survey was conducted to ensure all designation information was current.

Maps were produced showing search areas, surveyed sites and habitats. These are collated in an annexe document “Staffordshire Moorlands District Local Development Framework – An Ecological Study – Maps”

1.2 Protected and Biodiversity Action Plan Species

Species lists are given for each site in the Appendices. These are based on existing data compiled in the Staffordshire Ecological Record database. For many areas species records are not comprehensive, and further survey work is usually required to inform the development process. All species lists include a search area of 2 kilometres around the LDF site boundary given. This is because most species are mobile and the intention is for the species lists to be regarded as a guide to the likely key issues only, and not absolute.

Detailed guidance on species conservation is given in Staffordshire County Council’s ‘Planning Application Validation: Staffordshire requirements for Biodiversity and Geological Conservation’, which can be found in Appendix 14. The following is a brief summary:

Protected Species¹

Relevant legislation

- European Protected Species (as listed on Schedules 2 and 4 of the Conservation (Natural Habitats &c.) Regulations 1994.
- UK Protected Species (Wildlife & Countryside Act 1981 (as amended))
- The Protection of Badgers Act 1992

Species which may be found in Staffordshire Moorlands District include:

Bats (all British species)

Great crested newt

Otter

Dormouse

¹ For a full species list see Defra’s European Protected Species guidance note and Natural England’s website
Staffordshire Moorlands Local Development Framework
Ecological Study

Adder
Grass snake
Slow worm
Common lizard

Water vole

Native white-clawed crayfish
Pine marten

A number of species of protected plants

A number of species of protected invertebrates

All wild birds are protected from killing and destruction of nests.

Schedule 1 birds (W&CA 1981), also receive further protection. They include Barn owl, Kingfisher, Little ringed plover, Peregrine falcon and many wetland birds. This is not a comprehensive list – for a full list see Natural England website. It is illegal to disturb these species while they are breeding.

Badgers

Broad guidelines for all the above species:

1. Note any existing records – these may be found using the Staffordshire Ecological Record database, which the District Council has access to. Protected species records are denoted by either a red dot in a red circle, or a red square. It is important to note any species on adjoining land as well.
2. State what appropriate surveys will be needed to inform potential development and mitigation proposals.
3. Produce a method statement for protection / avoidance
4. Decide what avoidance or mitigation will be needed
5. Where possible seek further enhancements
6. Highlighted species carry the strongest levels of protection and / or are most likely to be affected by development.

Biodiversity Action Plan (BAP) Species

Relevant legislation and guidance

- UK BAP species (updated as of 2007)
- Species of Principal Importance in England listed in Section 74 CRow Act 2000 (same as UK BAP in 2002)
- Staffordshire BAP species
- Any local / district BAP species
- PPS9, CRow Act 2000 and NERC Act 2006 give guidance / confer duty to conserve)

Species which may be found in Staffordshire Moorlands District include:

Mammals: Brown hare, noctule bat, otter, pipistrelle bat, water vole
Birds: Barn owl, farmland seed-eating birds, grey partridge, lapwing, nightjar, snipe, woodlark, skylark
Reptiles, Fish: Atlantic salmon, grass snake
Amphibians: Great crested newt, natterjack toad
Invertebrates: Bog-bush cricket, ground-nesting solitary bees and wasps, small pearl-bordered fritillary, white-faced darter, native white-clawed crayfish

Plants: Dyer's greenweed, hybrid bilberry, floating water plantain, grass wrack
pondweed, native black poplar, pink meadow cap

Broad guidelines for all the above species:

1. Note any existing records – these may be found using the Staffordshire Ecological Record database, which the District Council has access to. BAP species records are denoted by either a green dot in a green circle, or a green square
2. Where a population may be affected state that survey / s will be required.
3. Determine what protection, mitigation and enhancement will be needed to ensure there is no net loss of species. Secure enhancements where possible to achieve net gain.
4. Encourage other appropriate species on site - refer to UK, county or local BAP for targets.

1.3 Site designations

Several site designations may apply in the District, these include:

European designations – Special Area of Conservation, Special Protection Area, RAMSAR site.

National designations – Site of Special Scientific Interest, National Nature Reserve

The Government body - Natural England - will advise on the above.

County designations - Sites of County Biological Importance and Biodiversity Alert Sites. These are surveyed, monitored and designated by a panel of experts from across the county. Published guidelines describing how sites are selected are available²

1.4 General recommendations

Habitats such as woodlands, hedgerows, ponds, heathland and semi-natural grassland should be retained where possible.

Where possible links between habitats and existing features should be created and enhanced. Consideration will be required as to whether an area can provide links between blocks of existing habitats.

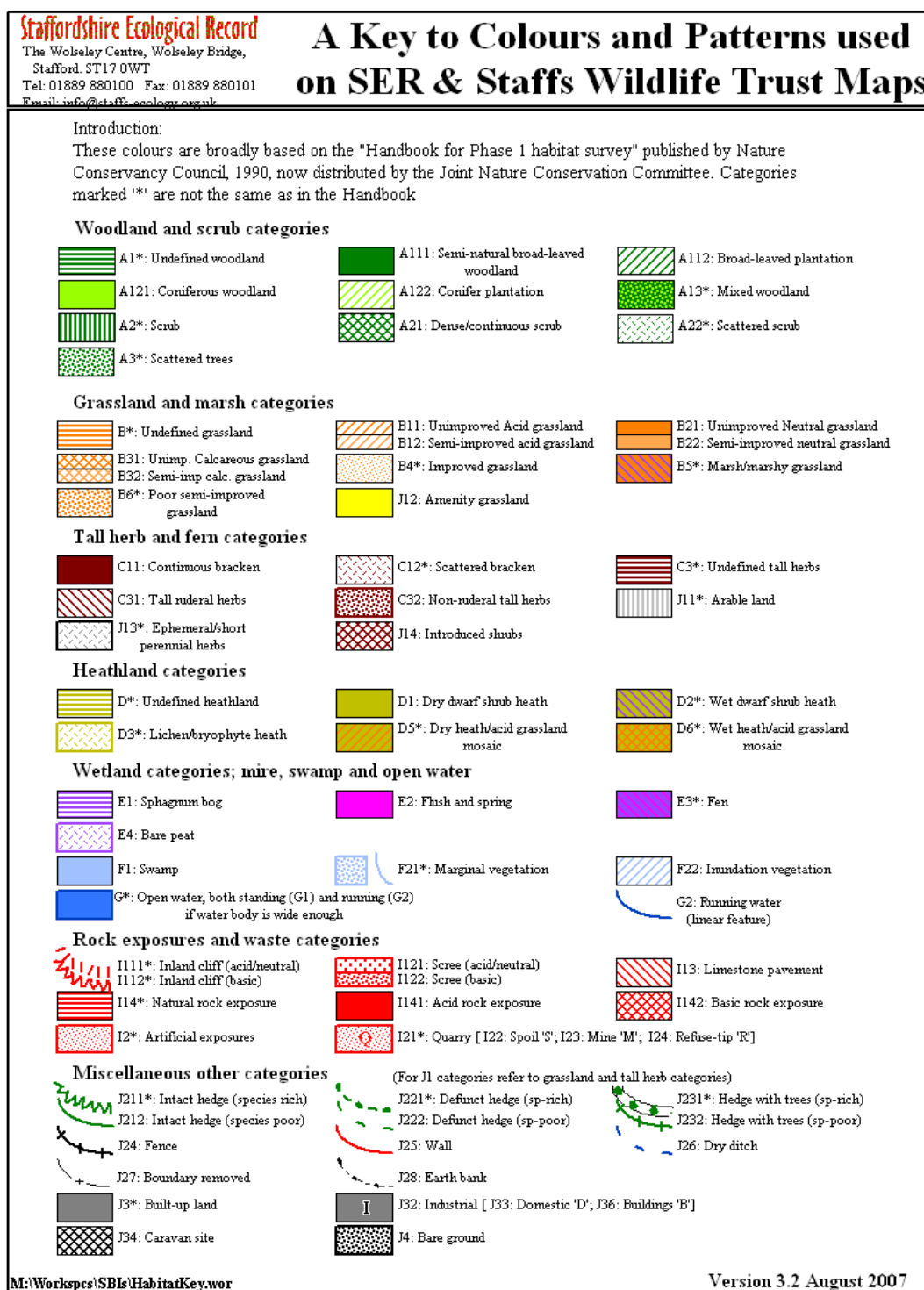
Size of habitat is also thought to be important because larger areas of habitat and larger populations of species are thought to be more resistant to change than smaller ones. Therefore reduction in individual blocks of habitat, or reduction in the overall hectareage are considered to be detrimental.

If it is not possible to retain these habitats then new areas of similar habitat should be created. Opportunitites for these may best be created within Green Infrastructure within development sites.

² Webb *et al* 'Guidelines for the Selection of Sites of County Biological Importance in Staffordshire', 2007, Staffordshire Wildlife Trust.

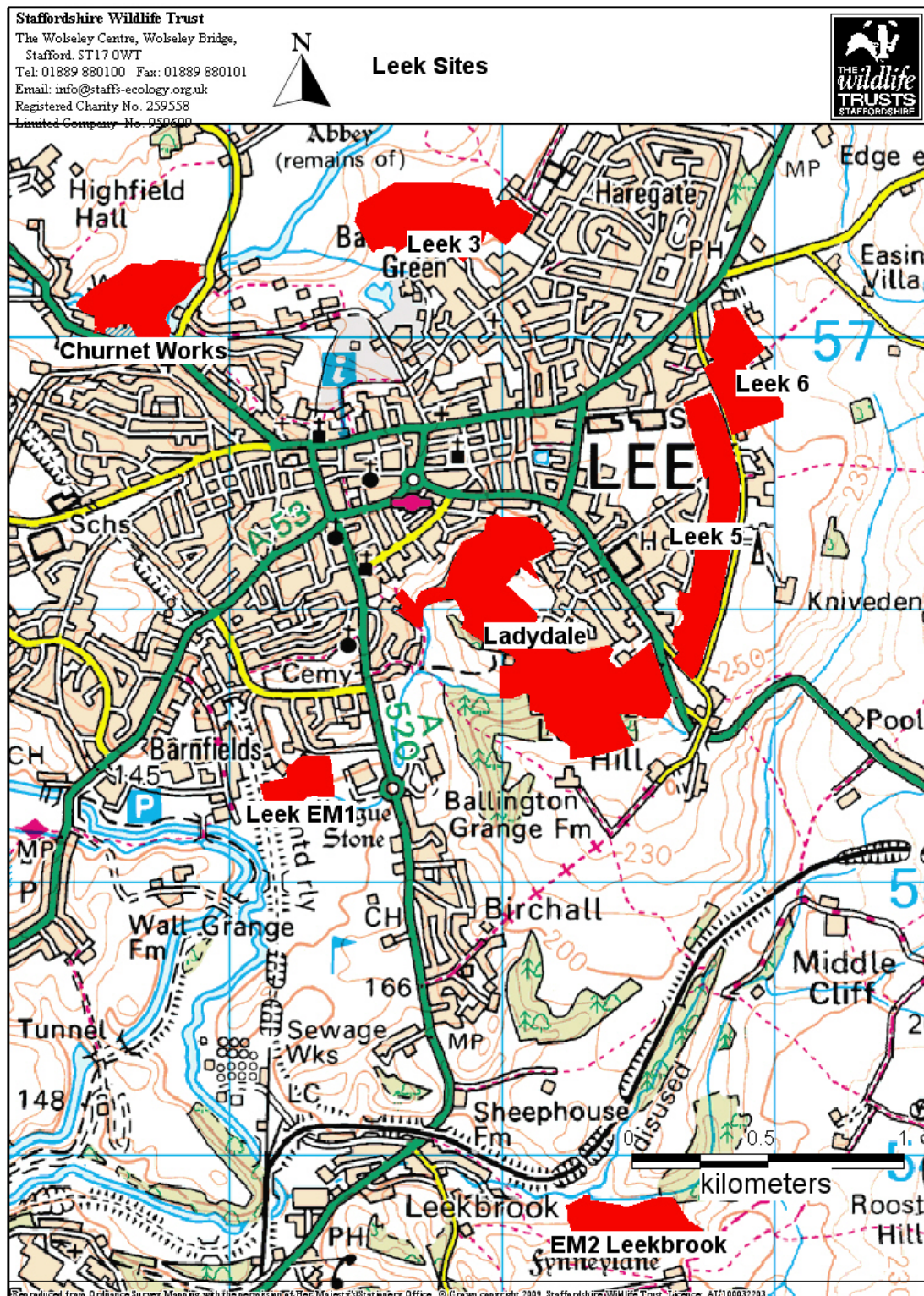
In general larger areas of habitat are best, and links should be provided between similar habitats. This is particularly important because it is considered that species will stand the best chance of being able to adapt to change (for example climate change) if they are able to move in response.

Figure 1: Colour coding for habitat maps



2 Leek Sites Information

Figure 2: Leek Sites



2.1 Leek EM1: Land adjacent to Birchall Playing Fields

2.1.1 Designated Sites

As a result of the current survey, the site was designated as a Biodiversity Alert Site for its grassland habitats. A site description is provided in Appendix 1.

There are two other designated SBI's within 500 metres of Leek EM1: Ladydale Wood Pasture and Ballington Wood. Both of these are Sites of County Biological Importance. However they both lie on the opposite side of the main A520, and as such are unlikely to be affected by any development within Leek EM1.

Figure 3: Leek EM1 Designated Sites within 500m

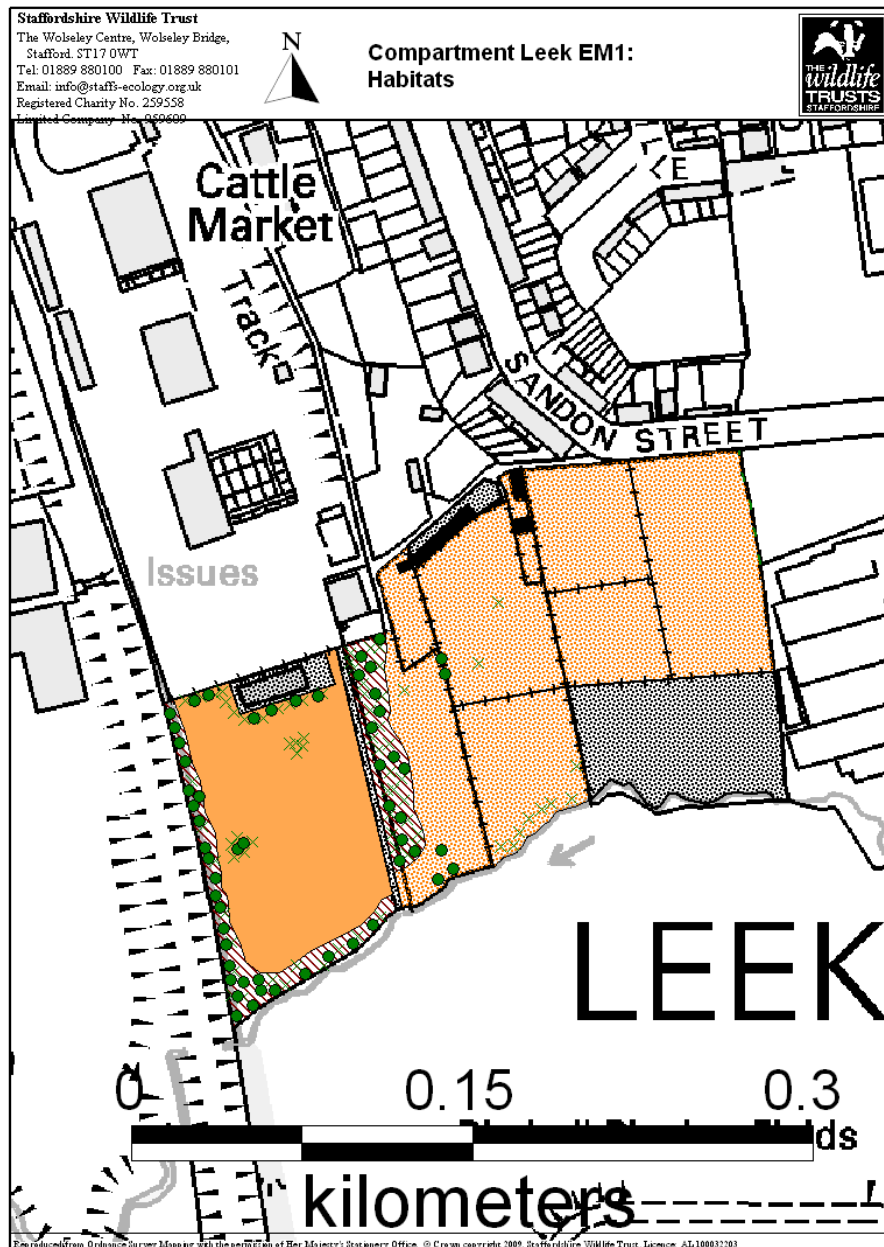


2.1.2 Habitats

The area was surveyed in 2009. Habitats in the Leek EM1 include mainly semi-improved grassland, with some scrub and poor semi-improved grassland. A watercourse forms the southern boundary.

Surrounding habitats include amenity grassland, industrial development and trees and scrub along the disused railway to the west.

Figure 4: Leek EM1 Habitats



2.1.3 Protected species

English Name	Further Comments	Recommendation
Barn Owl	Suitable habitat / Potential foraging on site	Barn owl survey of buildings. Retain grassland and scrub habitats.
Blunt-leaved Bog-moss	Potentially suitable habitat surrounding the stream area	Retain wetland habitats, particularly around stream
Brambling	Feeding potential	Protect hedge and scrub habitats.
Brown Long-eared Bat	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
Common Frog	Suitable habitat / Potential on site	Retain wetland habitats, particularly around stream
Common Kingfisher	Suitable habitat / Potential on site	Protect watercourses and provide buffering habitat
Common Lizard	No recent records / However potentially suitable habitat present	Retain grassland habitat Possible reptile survey
Common Pipistrelle	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
Daubenton's Bat	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
Eurasian Badger	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
European Otter	Suitable habitat - stream / Potential on site	Otter survey required Retain wetland habitats, particularly around stream
European Water Vole	Suitable habitat - stream / Potential on site	Water Vole survey Retain wetland habitats, particularly around stream
Freshwater White-clawed Crayfish	Suitable habitat - stream / Potential on site	Crayfish survey; protect watercourse from pollution
Grass Snake	Suitable grassland habitat / Potential on site	Retain wetland habitats, particularly around stream Possible reptile survey
Great Crested Newt	No standing water but potential habitat for hibernation	GCN survey and mitigation may be required
Natterer's Bat	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
Noctule Bat	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
Slow-worm	No recent records / However potentially suitable habitat present	Reptile survey required
Soprano Pipistrelle	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
Whiskered Bat	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats

2.1.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Common Bullfinch	Scrub within site is potentially suitable habitat	Protect hedge and scrub habitats.
Common Linnet	Grassland within site is potentially suitable habitat	Retain grassland and scrub habitats.
Common Toad	Wetland within site is potentially suitable habitat	Retain wetland habitats, particularly around stream
Dunnock	A range of habitats within site are suitable	Retain grassland and scrub habitats.
House Sparrow	A range of habitats within site are suitable	Retain grassland and scrub habitats.
Northern Lapwing	Wetland within site is potentially suitable habitat	Retain wetland habitats, particularly around stream
Pink Waxcap	Grassland within site is potentially suitable habitat	Retain grassland habitats.
Reed Bunting	Wetland within site is potentially suitable habitat	Retain wetland habitats, particularly around stream
Sky Lark	Grassland within site is potentially suitable habitat	Retain grassland habitats.
Small Heath	Grassland within site is potentially suitable habitat	Retain grassland and scrub habitats.
Spotted Flycatcher	Scrub within site is potentially suitable habitat	Protect hedge and scrub habitats.
Wall	Grassland within site is potentially suitable habitat	Retain grassland and scrub habitats.
West European Hedgehog	A range of habitats within site are suitable	Retain grassland and scrub habitats.

2.1.5 Summary recommendations for area

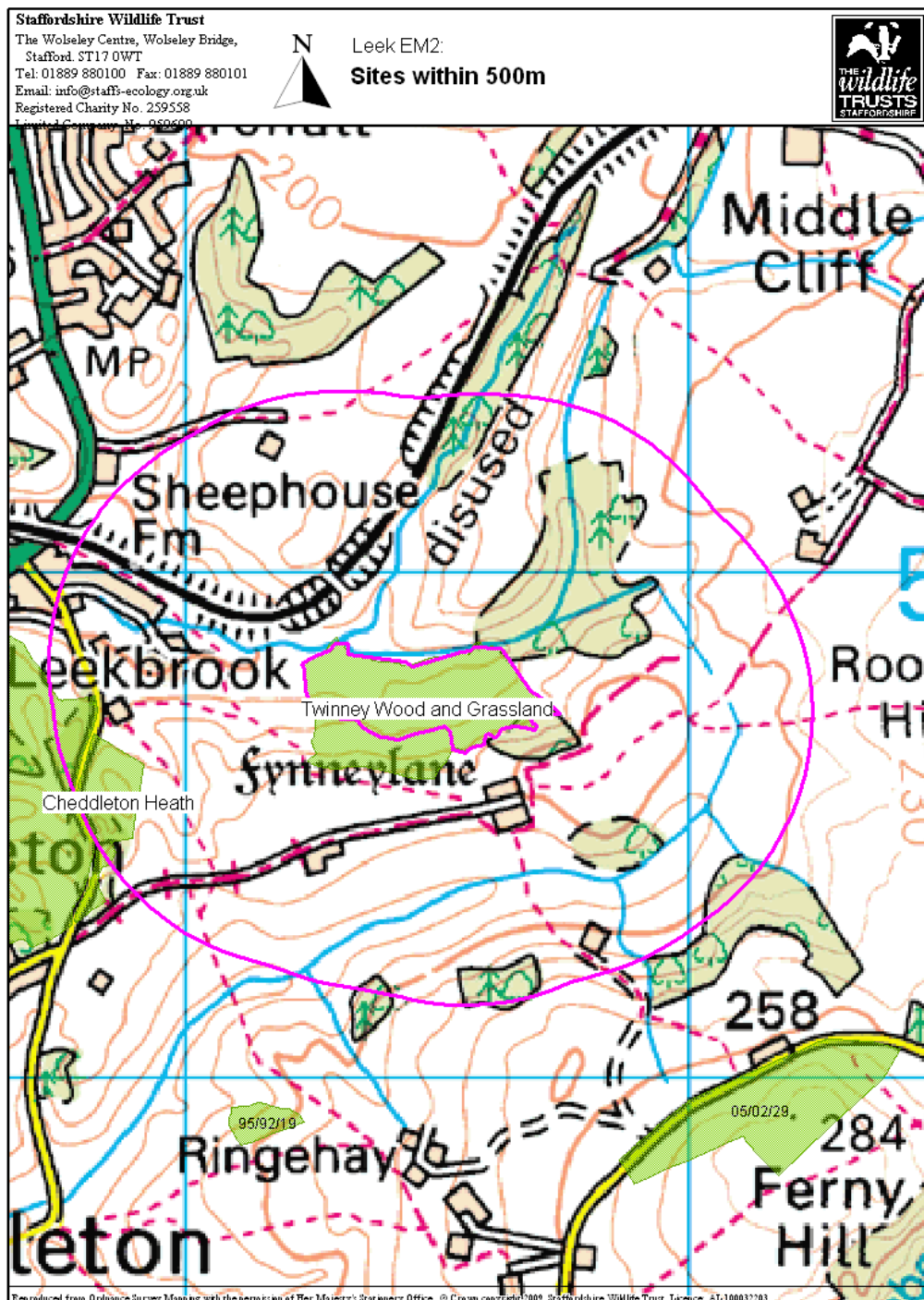
The area comprises grassland and scrub habitats, which either provide, or have the potential to provide for a range of protected and Biodiversity Action Plan species. The site has now been designated as a Biodiversity Alert Site, and development should be avoided on the site. If development is allowed, then adequate compensatory habitat should be provided nearby.

2.2 Leek EM2: Leekbrook

2.2.1 Designated Sites

Adjacent to the Leek EM2 there was an existing Site of County Biological Importance(SBI): Twinney Wood South (ref. 95 / 93 / 47). Grassland habitats in Leek EM2 are of county importance, and as a result of the 2009 survey, the woodland and grassland were designated as a single Site of County Biological Importance, Twinney Wood and Grassland. Cheddleton Heath SBI is situated to the west of Leek EM2.

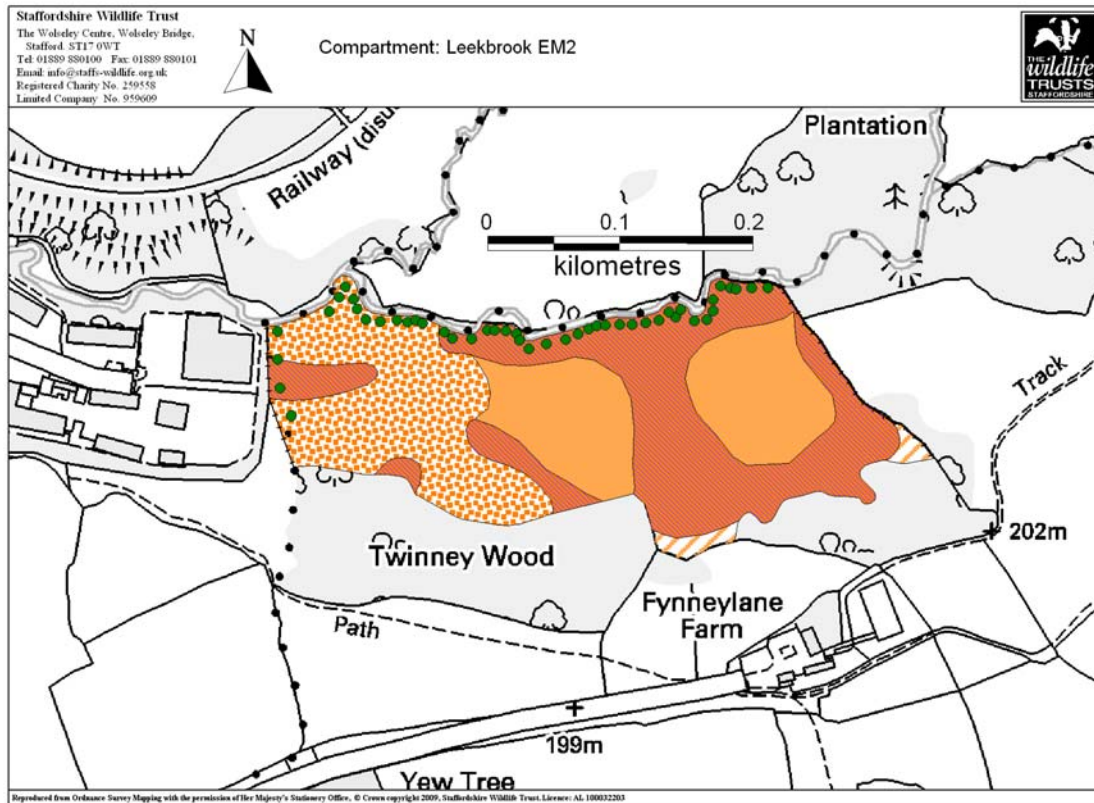
Figure 5: Leek EM2 designated sites within 500m



2.2.2 Habitats

Habitats in Leek EM2 include semi-improved grassland and marshy grassland. The site is bordered to the north by a stream. The surrounding area has woodland, heathland, semi-improved neutral grassland, marshy grassland, rough grassland and farmed land. Leek EM2 is in close proximity to Cheddleton Heath SBI, and to Rod Wood Nature Reserve, which contain significant examples of some of these habitats.

Figure 6: Leek EM2 Habitats



2.2.3 Protected species

English Name	Further Comments	Recommendation
Adder	No recent records / However potentially suitable habitat present	Possible reptile survey. Protect grassland and wetland habitats.
Barn Owl	Grassland on site is potentially suitable habitat for foraging	Barn owl survey of buildings. Retain grassland and scrub habitats
Blunt-leaved Bog-moss	Suitable habitat / Potential on site	Retain wetland habitats
Brown Long-eared Bat	Likely to forage within the Site / Species usually roosts in roof spaces.	Bat survey may be required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats.
Common Frog	Wetland within site is potentially suitable habitat	Retain wetland habitats
Common Kingfisher	Suitable habitat / Potential on site	Protect watercourses and provide buffering habitat
Common Lizard	No recent records / However grassland within site is potentially suitable habitat	Retain grassland habitats
Common Pipistrelle	Likely to forage over a range of habitats within the Site / Roosting potential	Bat survey required if buildings may be affected by development. Protect foraging habitats
Daubenton's Bat	Likely to forage within the Site / Roosting potential	Bat survey may be required if buildings or mature trees may be affected by development. Protect foraging habitats, especially along watercourse.
Eurasian Badger	Likely to forage within the Site / Potential for species to be resident on site	Badger survey required if site is affected by development. Mitigation where possible; this will depend on size and location of badger groups affected on any given site
European Otter	Suitable habitat - stream / Potential on site	Otter survey may be required. Protect watercourses and provide buffering habitat
European Water Vole	Suitable habitat - stream / Potential on site	Water Vole survey. Protect watercourses and provide buffering habitat
Freshwater White-clawed Crayfish	Suitable habitat - stream on site	Protect watercourses and provide buffering habitat
Grass Snake	Suitable grassland habitat / Potential on site	Protect habitats on site, particularly wetland
Great Crested Newt	No standing water on site but potential habitat for hibernation.	GCN survey likely to be necessary if site is developed.
Spagnum moss	Wetland within site is potentially suitable habitat	Protect site on which this species found, ensuring hydrology of the site is also protected.
Noctule Bat	Likely to forage within the Site / Roosting potential	Bat survey likely to be required, especially if trees or buildings likely to be affected.
Slow-worm	No recent records / However potentially suitable habitat present	Protect habitats, especially grassland
Whiskered / Brandt's Bat	Likely to forage within the Site / Roosting potential	As noctule bat

2.2.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Argent and Sable	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats, or provide adequate compensatory habitat
Brindled Beauty	Woodland is potentially suitable habitat	As above
Broom Moth	Open woodland and heathland	As above
Brown Hare	Grassland within site is potentially suitable habitat	Retain grassland habitat
Centre-barred Sallow	Woodland and scrub within site are potentially suitable habitat	Retain grassland and scrub habitats
Common Bullfinch	Feed on tree buds, woodlands, orchards and hedges	Retain woodland and scrub habitats
Common Cuckoo	Woodland and scrub within site are potentially suitable habitat	As above
Common Linnet	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Snipe	Marshy grassland within site is potentially suitable habitat	Retain marshy grassland habitat
Common Toad	Wetland within site is potentially suitable habitat	As above
Deep-brown Dart	Range of open habitats, feeding on grasses etc	Retain grassland habitat
Dusky Thorn	Woodland and scrub within site are potentially suitable habitats	Retain woodland and scrub habitats
Ear Moth	Damp habitats, feeds on grasses and other plants	Retain marshy grassland
Eurasian Tree Sparrow	Woodland within site is potentially suitable habitat	Retain woodland and scrub habitats
Feathered Gothic	Rough grassland, feed on grasses	Retain grassland habitat
Galium Carpet	Grassland species	As above
Ghost Moth	Grassland within site is potentially suitable habitat	As above
Grey Mountain Carpet	Feeds on bilberry which is on site	Retain woodland and grassland
Autumnal rustic	Woodland fringes, feeds on a variety of plants	Retain woodland and scrub habitats
Lesser Spotted Woodpecker	Woodland within site is potentially suitable habitat	As above
Marsh Tit	Species of woodland	As above
Minor Shoulder-knot	Species of damp woodland and wetland	Retain wetland
Northern Lapwing	Wetland within site is potentially suitable habitat	Retain marshy grassland habitat
Oak Hook-tip	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Pink Waxcap	Grassland within site is potentially suitable habitat	Retain grassland habitat
Powdered Quaker	Widespread, feeds on willow	Retain woodland and scrub habitats
Rosy Minor	Grassland, feeding on grasses	Retain grassland habitat
Rosy Rustic	Waste ground and marshy places, feeding mainly on docks	Retain marshy grassland habitat
September Thorn	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Shaded Broad-bar	Grassland within site is potentially suitable habitat	Retain grassland habitat
Shoulder-striped Wainscot	Grassland within site is potentially suitable habitat	As above
Sky Lark	Grassland within site is potentially suitable habitat	As above
Small Heath	Grassland within site is potentially suitable habitat	As above
Spotted Flycatcher	Prefers mature trees in open areas	Protect trees along watercourse
Tree Pipit	As spotted flycatcher	As above

Wall	Grassland within site is potentially suitable habitat	Retain grassland habitat
Willow Tit	Scrub within site is potentially suitable habitat	Retain woodland and scrub habitats
Wood Warbler	Woodland and scrub within site are potentially suitable habitats	As above
Yellowhammer	A range of habitats within site are suitable	No specific recommendation

2.2.5 Summary recommendations for area

The habitats present are of county importance. These habitats should also be considered in the wider context of neighbouring habitats where the loss of the site would be to the detriment of links between habitats. The site also supports, or has the potential to support, a range of protected and Biodiversity Action Plan species.

It is therefore strongly recommended that the Leek EM2 should be protected from development.

2.3 Leek 3: Ball Haye Green

2.3.1 Designated Sites

Within 500m of Leek 3 there are two existing Sites of County Biological Importance: Brough Park Fields, and Stare Wood. Brough Park is also a Local Nature Reserve.

Brough Park Fields is designated for grassland, scrub and woodland habitats. Stare Wood is a woodland with associated grassland. These are likely to be affected by development within the Ball Haye Green Tip site.

A further two sites are situated on the edge of the 500m search area, but are unlikely to be affected by any development within Leek 3, Back Hills and Abbey Woods to the north and Edge End Wood, beyond Stare Wood to the north east.

In 2009, the site itself was found to include a number of habitats of county importance, and the area was designated as a Site of County Biological Importance.

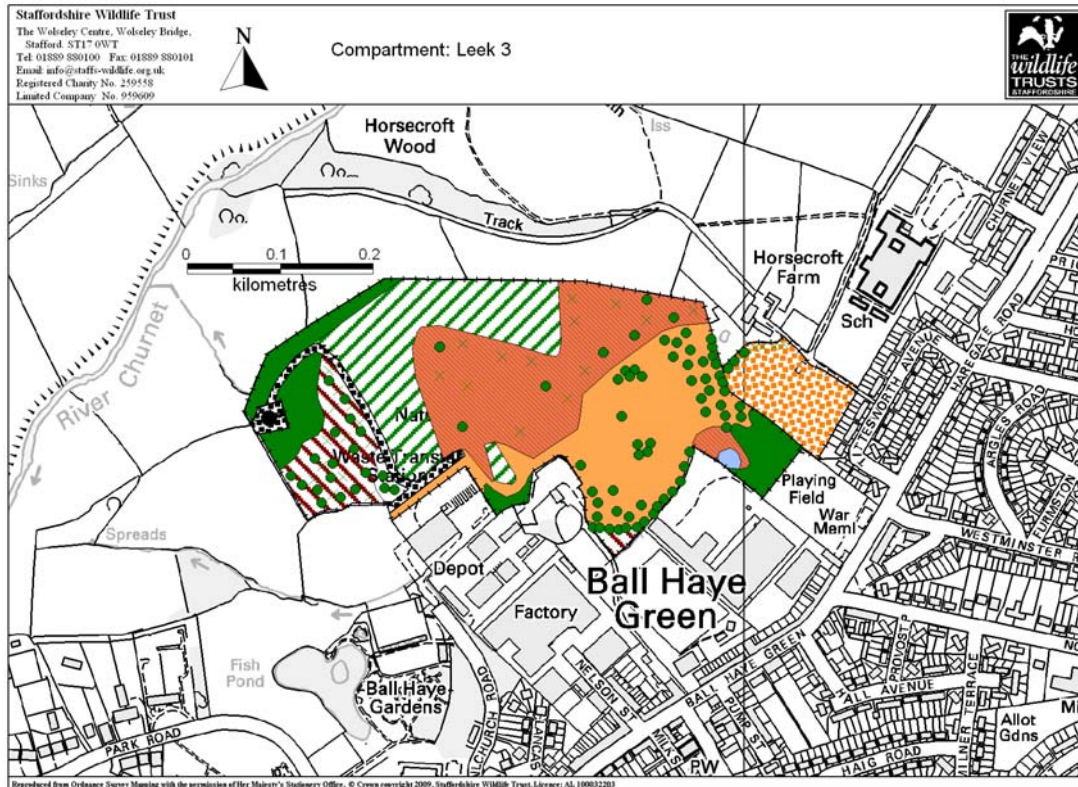
Figure 7: Leek 3: Ball Haye Green Designated Sites within 500m



2.3.2 Habitats

Leek 3 itself contains woodland, grassland, marsh and swamp. Grassland habitats on the site have a number of characteristics of the UK Biodiversity Action Plan habitat – Open Mosaic Habitat on Previously Developed Land. Surrounding habitat includes woodlands and grasslands, with the River Churnet to the north. To the south, the area is more urban, with housing, amenity grassland and an industrial estate.

Figure 8: Leek 3 Ball Hays Habitats



2.3.3 Protected species

English Name	Further Comments	Recommendation
Barn Owl	Suitable habitat / Potential foraging on site	Retain grassland and marshy grassland.
Brambling	Wintering species	Retain hedges and woodlands, or provide mitigatory habitat.
Brown Long-eared Bat	Likely to forage within the Site. Roosting less likely as there are no buildings in the site	Protect foraging habitat
Common Frog	Wetland on site provides potential habitat	Retain marshy grassland
Common Pipistrelle	Likely to forage within the Site / Roosting potential in trees	Bat survey may be required. New housing should ideally have a range of bat-friendly roof tiles and / or bricks. Natural habitat features for foraging should also be provided
Daubenton's Bat	Likely to forage within the Site / Roosting potential in trees	Bat survey required if mature trees may be affected by development. Protect foraging habitats.
Eurasian Badger	Likely to forage within the Site / Potential on site	Badger survey may be required if site likely to be affected by development. Mitigation where possible; this will depend on size and location of badger groups affected on any given site
European Otter	Potentially suitable habitat for territory - river nearby	Possible survey may be required; protect habitat, especially woodland at west end of site.
Grass Snake	Suitable habitat / Potential on site as recorded a few metres from site boundary	Retain marshy grassland
Whiskered Bat	Likely to forage within the Site / Roosting potential in trees	As common pipistrelle

2.3.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Potentially suitable habitat	Mammal Survey
Common Bullfinch	Woodland and scrub within site are potentially suitable habitat s	Protect woodland and scrub habitat
Common Grasshopper Warbler	Marshland and scrub. Potentially suitable habitat in and around	Retain hedges, scrub and grassland habitats, especially marshy grassland
Common Linnet	Grassland within site is potentially suitable habitat	Protect grassland habitat
Common Snipe	Marshy grassland is potentially suitable habitat	Retain marshy grassland
Common Starling	Woodland within site is potentially suitable habitat	Protect woodland and scrub habitat
Common Toad	Pond within site is potentially suitable habitat, and range of other habitats may be used outside the breeding season.	Retain pond and marshy grassland habitats
Dingy Skipper	Grassland within site is potentially suitable habitat	Protect grassland habitat
Eurasian Tree Sparrow	Woodland and scrub within site are potentially suitable habitat s	Protect woodland and scrub habitat
insect - hymenopteran	Grassland within site is potentially suitable habitat	Protect grassland habitat

Lesser Redpoll	Woodland species	Protect woodland and scrub habitat
Northern Lapwing	Grassland within site is potentially suitable habitat	Protect grassland habitat
Pink Waxcap	Grassland within site is potentially suitable habitat	Protect grassland habitat
Sky Lark	Found on the site	Protect grassland habitat
Small Heath	Grassland within site is potentially suitable habitat	Protect grassland habitat
Spotted Flycatcher	Requires mature trees, especially in open areas	Protect woodland and mature trees

2.3.5 Summary recommendations for area

It is strongly recommended that the site is protected from development, because the habitats are of county importance. It also supports, or has the potential to support, a range of protected and Biodiversity Action Plan species

2.4 Churnet Works

2.4.1 Designated Sites

The only designated site within 500 metres of the site is Brough Park Fields (see section 2.3.1 above), which is unlikely to be affected by development to Churnet Works as Abbey Green Road separates the two sites. The river flows from Brough Park Fields towards Churnet Works and therefore activities that affect the watercourse at Churnet Works will not affect Brough Park Fields.

Figure 9: Churnet Works Designated Sites within 500m

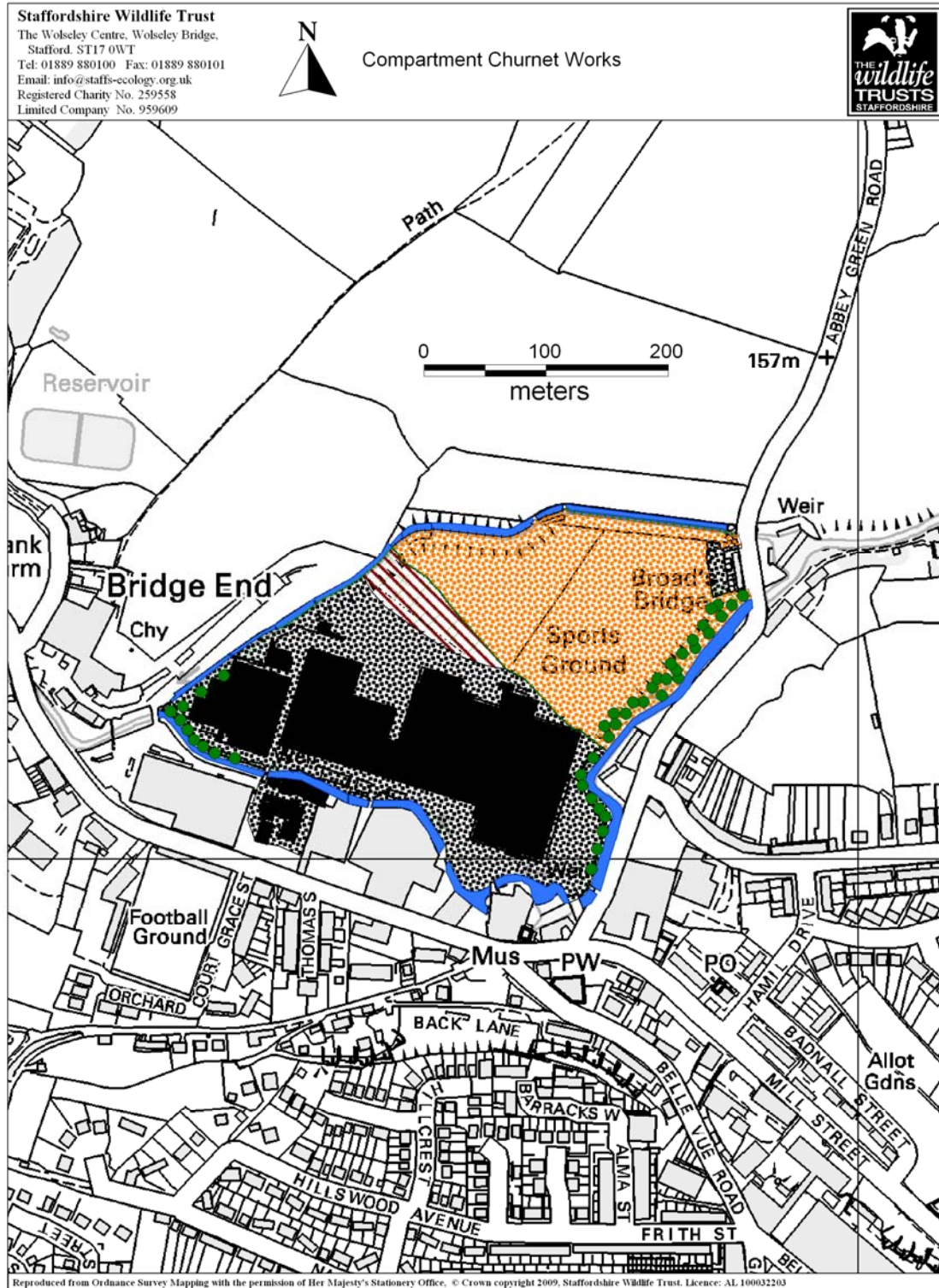


2.4.2 Habitats

The site was surveyed in 2009 and was not found to contain any habitats of county importance. The habitats present comprise: buildings, bare ground, poor semi-improved grassland and tall ruderals (plants of disturbed land).

Surrounding habitats include housing, industrial land and farmland.

Figure 10: Churnet Works habitats



2.4.3 Protected species

English Name	Further Comments	Recommendation
Barn Owl	Potentially suitable habitat / Potential foraging on site	If buildings are affected by development then a Barn owl survey is likely to be required. If grassland habitat is lost then adequate compensatory habitat should be provided.
Brown Long-eared Bat	Likely to forage within the Site / Roosting potential	Of particular concern where building alterations are proposed, in which case a Bat survey required. Provide compensatory foraging habitat.
Common Kingfisher	Potentially suitable habitat / Potential on site	Protect and buffer watercourse
Daubenton's Bat	Likely to forage within the Site / Roosting potential	As brown long-eared bat
European Otter	Potentially suitable habitat / Potential on site	Otter survey required
European Water Vole	Potentially suitable habitat / Present in site at time of survey	Water Vole survey required, Protect and buffer watercourse
Freshwater White-clawed Crayfish	Not recent record but potentially suitable habitat / Potential on site	Protect and buffer watercourse
Grass Snake	Potentially suitable habitat / Potential on site	Reptile survey advisable if developing site. Provide compensatory habitat.
Slow-worm	No recent records / However potentially suitable habitat present	Reptile survey recommended

2.4.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland within site may be potentially suitable habitat	If grassland is affected by development provide compensatory habitat.
Common Grasshopper Warbler	Potential potentially suitable habitat	If site is affected by development provide compensatory habitat
House Sparrow	Prefers human habitation, probably widespread around area	No specific recommendation
Northern Lapwing	Grassland within site is potentially suitable habitat	If grassland is affected by development provide compensatory habitat.
Sky Lark	Grassland within site is potentially suitable habitat	Retain grassland habitat or provide adequate compensatory habitat
Small Heath	Grassland within site is potentially suitable habitat	As above
Spotted Flycatcher	Potentially suitable habitat	
Willow Tit	Potentially suitable habitat	

2.4.5 Summary recommendations for area

The habitats present may provide opportunities for a range of the species listed above. Therefore, if the area is affected by development, surveys of protected species are likely to be required, and adequate compensatory habitat should be provided. The presence of protected species, particularly bats, in the buildings is likely.

2.5 Leek 5

2.5.1 Designated Sites

Two Sites of County Biological Importance (SBIs), Kniveden Hall (east of) and Ladydale are within a 500 metre range of Leek 5. Lowe Hill Biodiversity Alert Site is also within this area. None of the sites listed is likely to be detrimentally affected by development within Leek 5.

Figure 11: Leek 5: Designated Sites within 500m

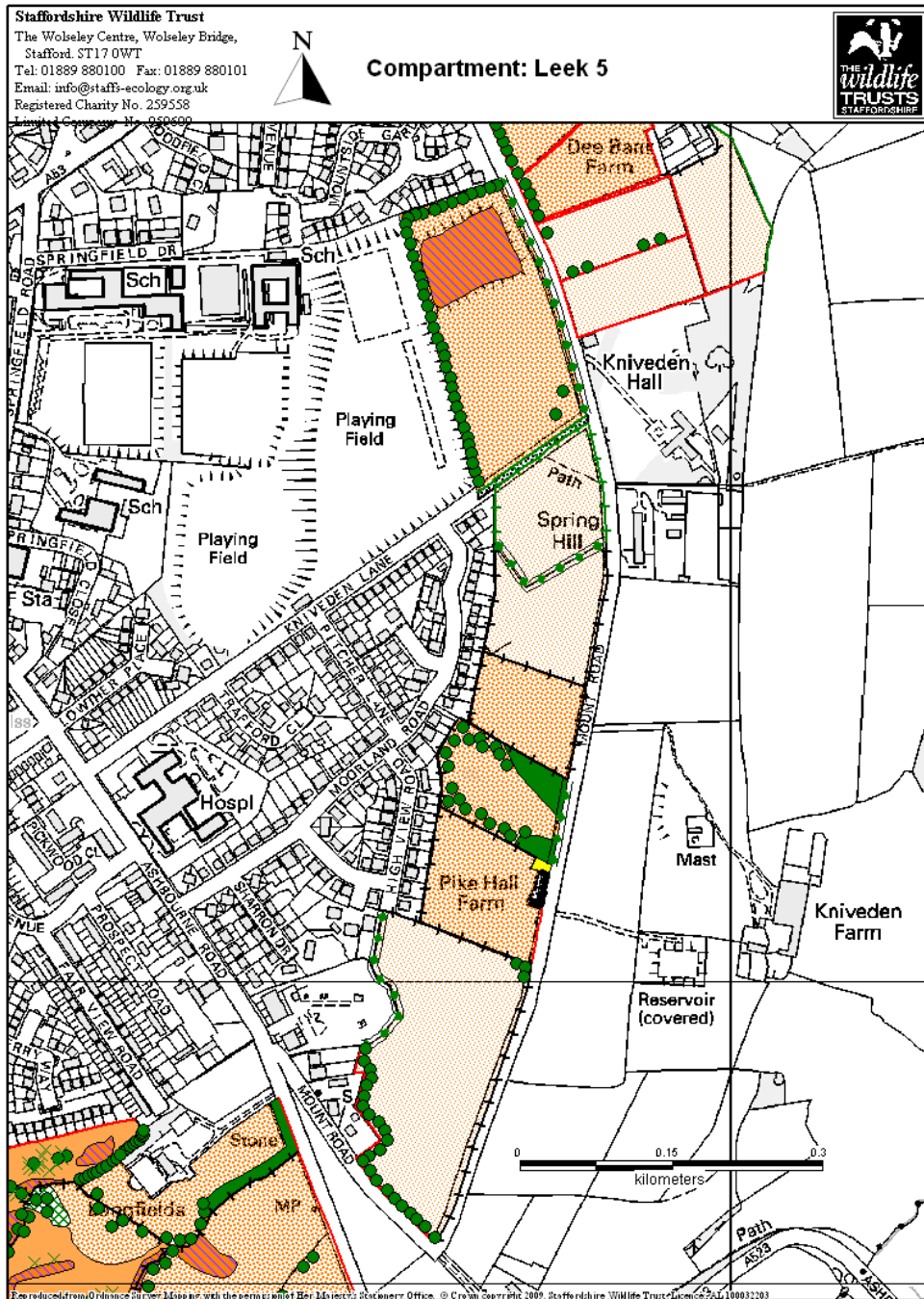


2.5.2 Habitats

The habitats within Leek 5 largely comprise poor semi-improved grassland, with mainly fenced boundaries. There are some hedges woodlands and scrub on the site. A small area of raised land at the north end of the site has impeded drainage; it is shown as marshy grassland on the habitat map.

Adjacent habitats include residential areas, playing fields, with a road to the east and farmland beyond. The southern end of the site is close to Ladydale SBI.

Figure 12: Leek 5 Habitats



2.5.3 Protected species

English Name	Further Comments	Recommendation
Barn Owl	Potentially suitable habitat / Present on site	Survey required, particularly if existing buildings are affected. Protect foraging habitats or provide replacements
Brambling	Feeding potential for wintering or visiting species	Retain hedges and woodlands, or provide compensatory habitat
Brown Long-eared Bat	Likely to forage within the Site. Pike Hall Farm may provide roosting space	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats
Common Frog	Area of impeded drainage at n end of site may provide potentially suitable habitat	Provide compensatory habitat, possibly as part of SUDS.
Common Lizard	No recent records / However potentially suitable habitat present	Possible reptile survey, retain suitable habitat or provide replacement
Eurasian Badger	Likely to forage within the Site / Potential on site	Badger survey may be needed, if found protect where possible; mitigation will depend on size and location of badger groups affected on any given site.
Slow-worm	No recent records / However potentially suitable habitat present	As common lizard

2.5.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland in site is potentially suitable habitat	If grassland is lost, then consideration should be given to improving nearby land for this species.
Centre-barred Sallow	Woodland and scrub within site are potentially suitable habitats	Retain habitats or provide compensatory habitats
Dusky Thorn	Woodland and scrub within site are potentially suitable habitats	Retain habitats or provide compensatory habitats
Eurasian Tree Sparrow	Woodland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Ghost Moth	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Lesser Redpoll	Woodland species	Retain woodland or provide compensatory habitat.
Oak Hook-tip	Woodland and scrub within site are potentially suitable habitats	Retain habitats or provide compensatory habitats
Pink Waxcap	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Rosy Minor	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
September Thorn	Woodland and scrub within site are potentially suitable habitats	Retain habitats or provide compensatory habitats
Shaded Broad-bar	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Sky Lark	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Small Heath	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Spotted Flycatcher	Mature trees, especially in open areas; mature trees on site may be suitable	Retain trees
Wall	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats

2.5.5 Summary recommendations for area

The habitats within the area may be suitable for protected and Biodiversity Action Plan species listed in the above tables from the wider search area. Surveys should be used to establish which species might be affected by development, and to determine the appropriate mitigation.

2.6 Leek 6

2.6.1 Designated Sites

As in Leek 5, two Sites of County Biological Importance (SBIs), Kniveden Hall (east of) and Ladydale are within a 500 metre range of Leek 6. Lowe Hill Biodiversity Alert Site is also within this area. With the exception of Kniveden SBI, none of the sites listed is likely to be detrimentally affected by development within Leek 6, however Kniveden SBI is closest to Leek 6 and has a higher likelihood of being affected by development on the site.

Figure 13: Leek 6 Designated Sites within 500m

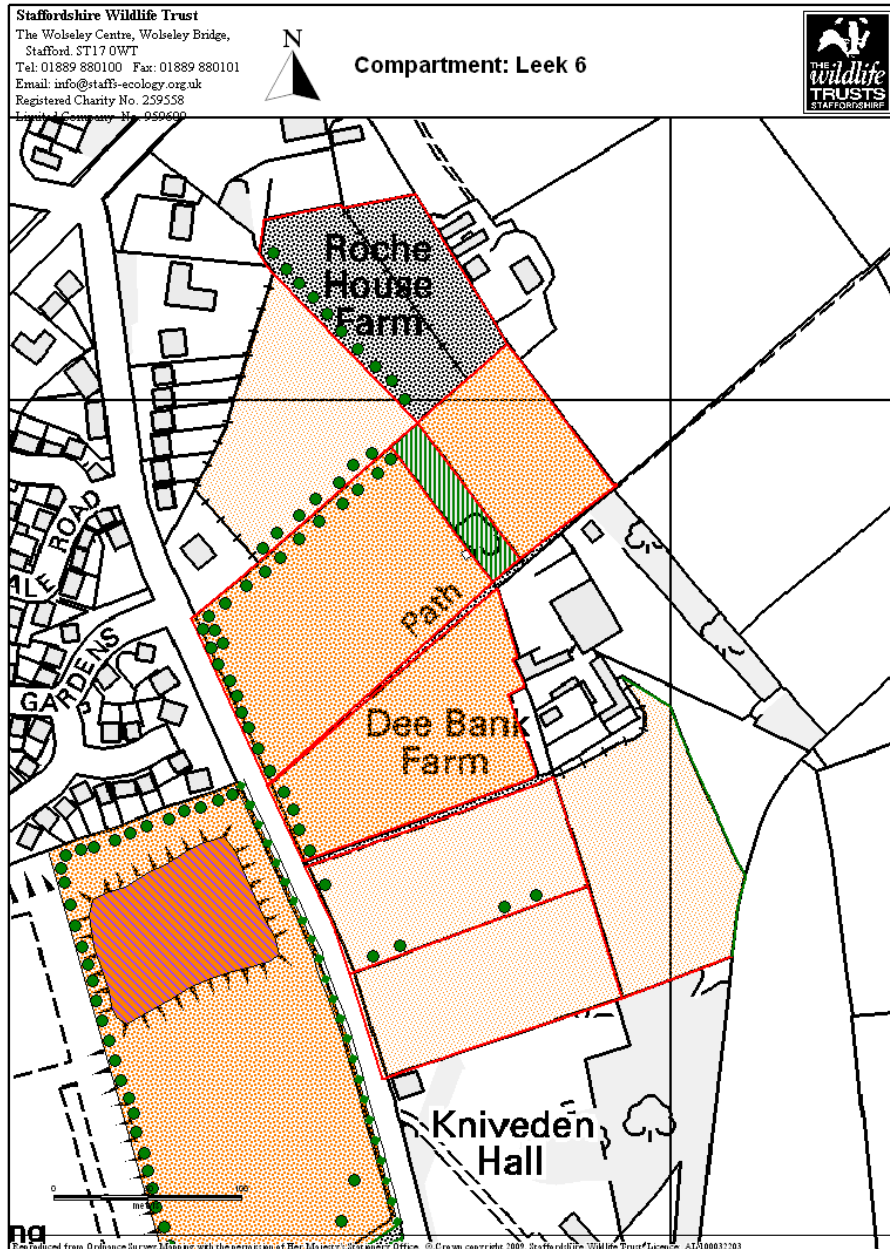


2.6.2 Habitats

The habitats were similar to those in Leek 5, largely comprising poor semi-improved grassland, with mainly fenced boundaries. There are some hedges and scrub on the site with the addition of a small area of plantation woodland between Roche House Farm and Dee Bank Farm.

Surrounding habitats include small blocks of woodland around the east and north of the site, farmland and housing.

Figure 14: Leek 6 Habitats



2.6.3 Protected species

English Name	Further Comments	Recommendation
Barn Owl	Potentially suitable habitat / Present on site	Survey required, particularly if existing buildings are affected. Protect foraging habitats or provide replacements
Brambling	Feeding potential for wintering or visiting species	Retain hedges and woodlands, or provide compensatory habitat
Brown Long-eared Bat	Likely to forage within the Site. Pike Hall Farm may provide roosting space	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats
Common Frog	Area of impeded drainage at n end of site may provide potentially suitable habitat	Provide compensatory habitat, possibly as part of SUDS.
Common Lizard	No recent records / However potentially suitable habitat present	Possible reptile survey, retain suitable habitat or provide replacement
Eurasian Badger	Likely to forage within the Site / Potential on site	Badger survey may be needed, if found protect where possible; mitigation will depend on size and location of badger groups affected on any given site.
Slow-worm	No recent records / However potentially suitable habitat present	As common lizard

2.6.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland in site is potentially suitable habitat	If grassland is lost, then consideration should be given to improving nearby land for this species.
Centre-barred Sallow	Woodland and scrub within site are potentially suitable habitats	Retain habitats or provide compensatory habitats
Dusky Thorn	Woodland and scrub within site are potentially suitable habitats	Retain habitats or provide compensatory habitats
Eurasian Tree Sparrow	Woodland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Ghost Moth	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Lesser Redpoll	Woodland species	Retain woodland or provide compensatory habitat.
Oak Hook-tip	Woodland and scrub within site are potentially suitable habitat s	Retain habitats or provide compensatory habitats
Pink Waxcap	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Rosy Minor	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
September Thorn	Woodland and scrub within site are potentially suitable habitat s	Retain habitats or provide compensatory habitats
Shaded Broad-bar	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Sky Lark	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Small Heath	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats
Spotted Flycatcher	Mature trees, especially in open areas; mature trees on site may be suitable	Retain trees
Wall	Grassland within site is potentially suitable habitat	Retain habitats or provide compensatory habitats

2.6.5 Summary recommendations for area

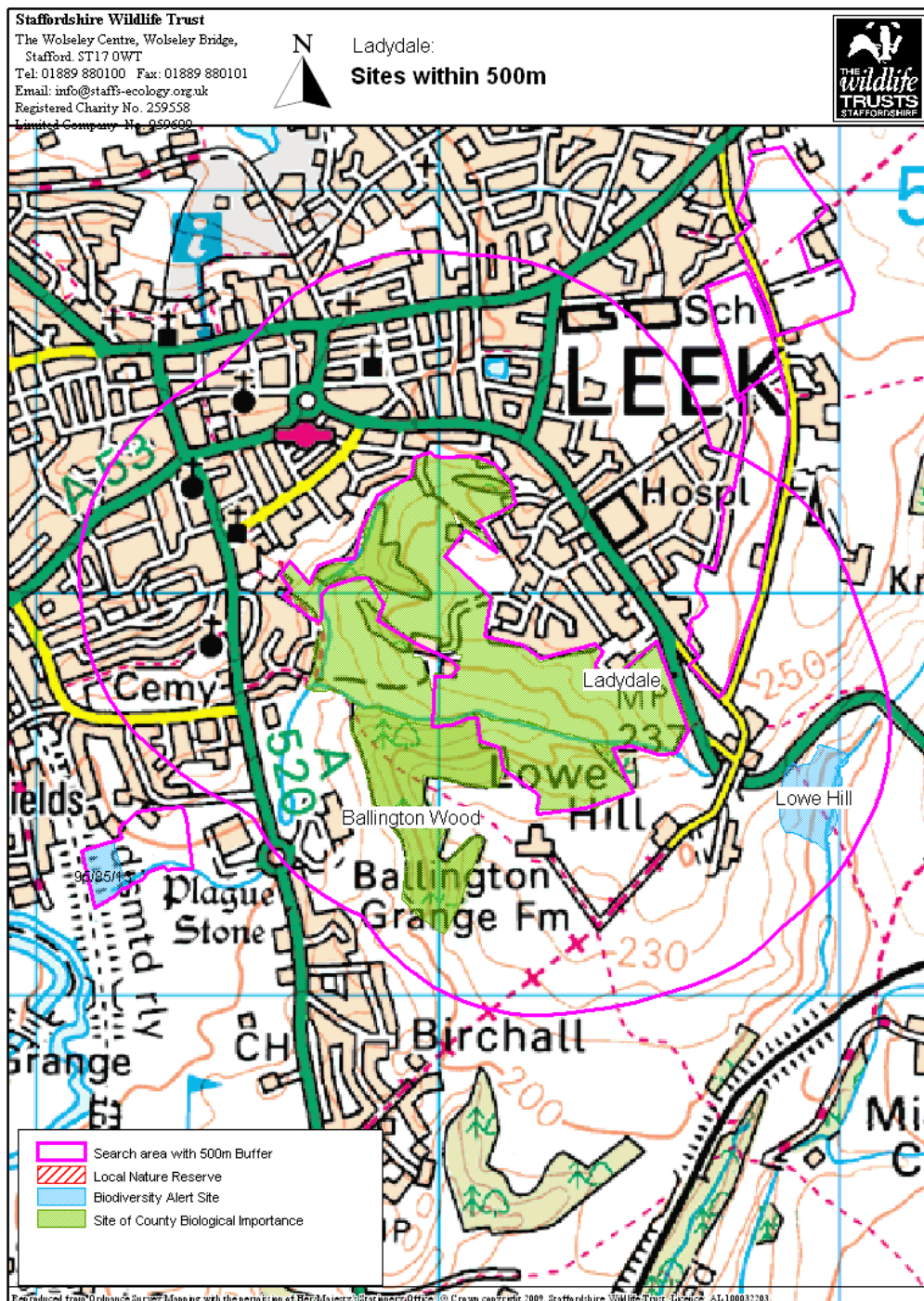
It is strongly recommended that if there is any development in this area there should be measures taken to prevent any negative effects on the Kniveden SBI. An increase in public access could be damaging to the SBI, and therefore mitigation should provide adequate public space and planting to screen the SBI.

2.7 Additional site Ladydale

2.7.1 Designated Sites

Ladydale is a currently designated Site of County Biological Importance (SBI). Alterations are proposed to the site boundary following survey in 2009, details of which are given in the site description in Appendix 5. Appendix 1 gives details of Ballington Wood and Ladydale Wood Pasture, which lie to the west side of Ladydale.

Figure 15: Ladydale Designated Sites within 500m

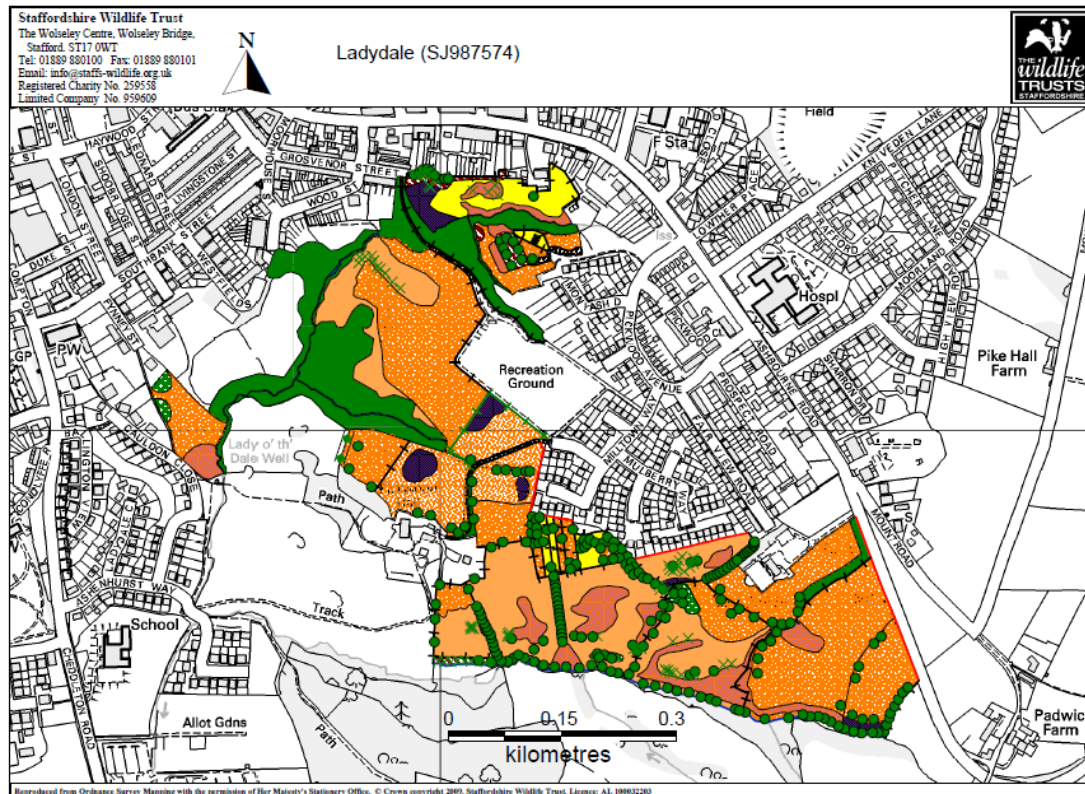


2.7.2 Habitats

Habitats within Ladydale include semi-natural broad-leaved woodland, species rich semi-improved neutral grassland, poor semi-improved neutral grassland and marshy grassland.

Surrounding habitats include parkland with veteran trees and a substantial area of broadleaved and coniferous woodland. There are also areas of housing, amenity grassland and farmland.

Figure 16: Ladydale Habitats



2.7.3 Protected species

No analysis of protected species is included for this area, as it not proposed for development

2.7.4 Biodiversity Action Plan species

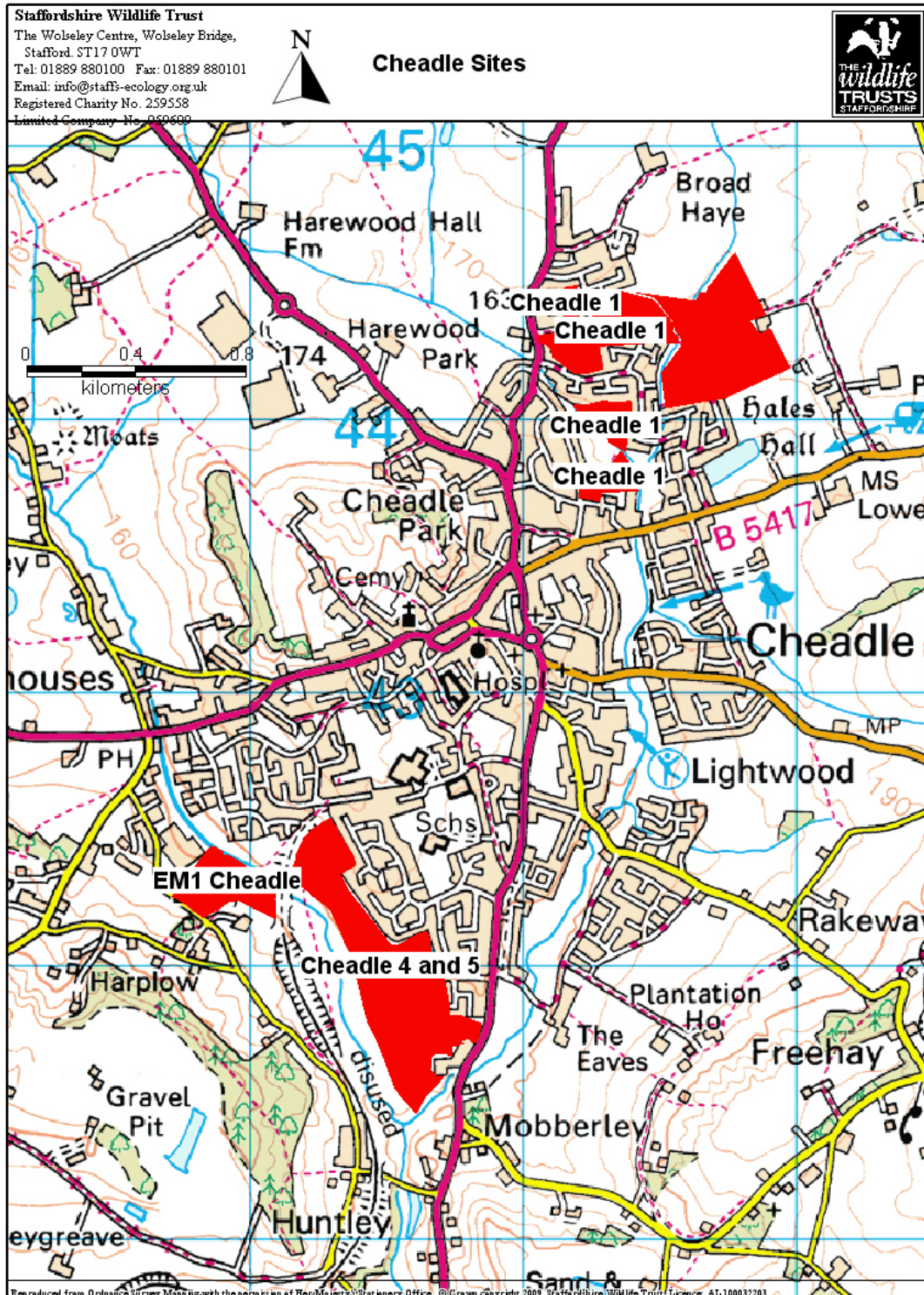
No analysis of Biodiversity Action Plan species is included for this area, as it not proposed for development

2.7.5 Summary recommendations for area

It is strongly recommended that the area be protected against development. Together with Ballington Wood and Ladydale Wood Pasture it forms an important biodiversity resource. Further consideration should be given to providing habitat links between this area and other sites to the south and east, such as Kniveden. This will be particularly important if Leek 5 is developed.

3 Cheadle Sites Information

Figure 17: Cheadle Sites

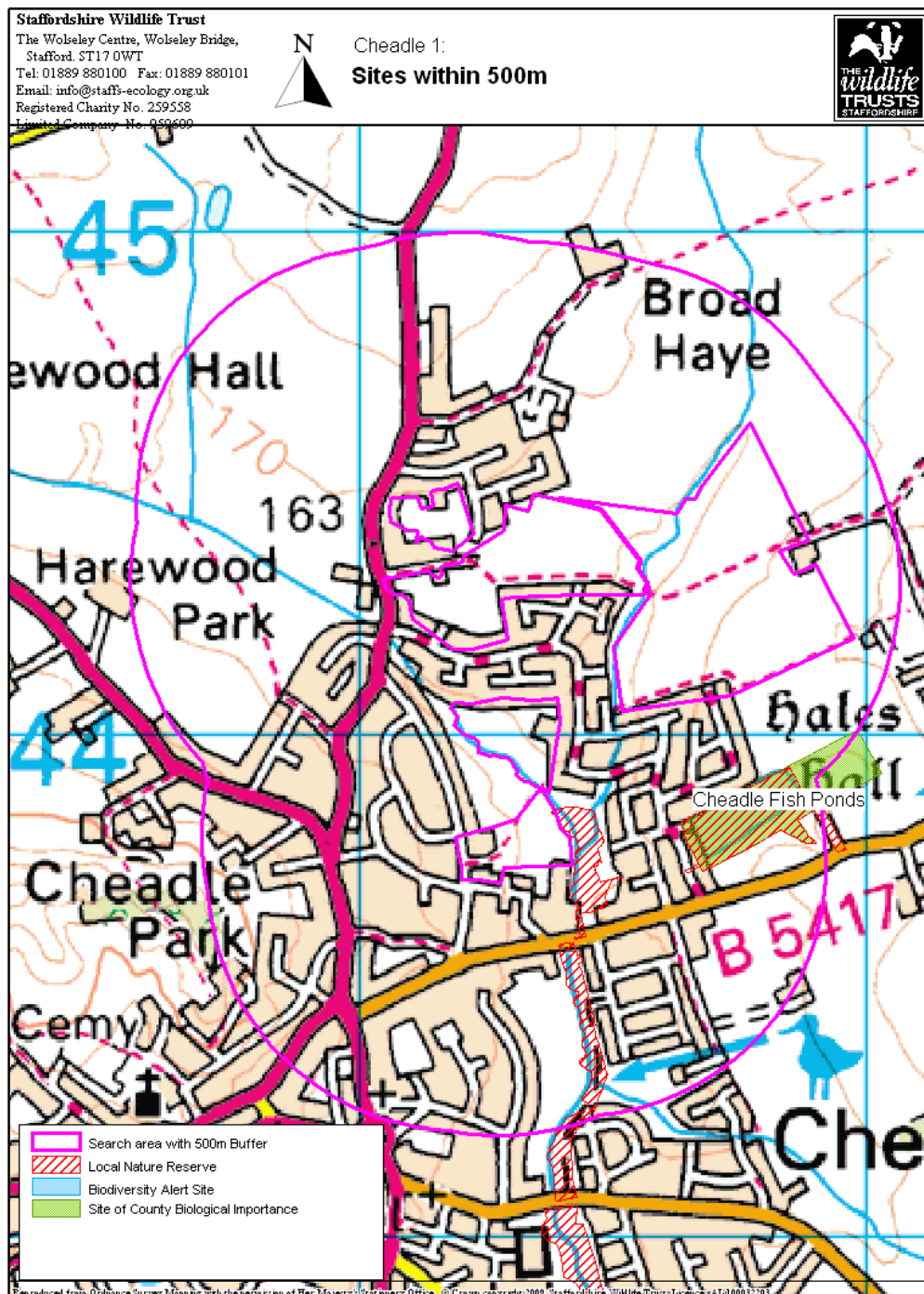


3.1 Cheadle 1

3.1.1 Designated Sites

Cheadle Fish Ponds Site of County Biological Importance and Local Nature Reserve (LNR) is situated to the east of Cheadle 1. The north end of the Cecilly Brook LNR adjoins part of Cheadle 1.

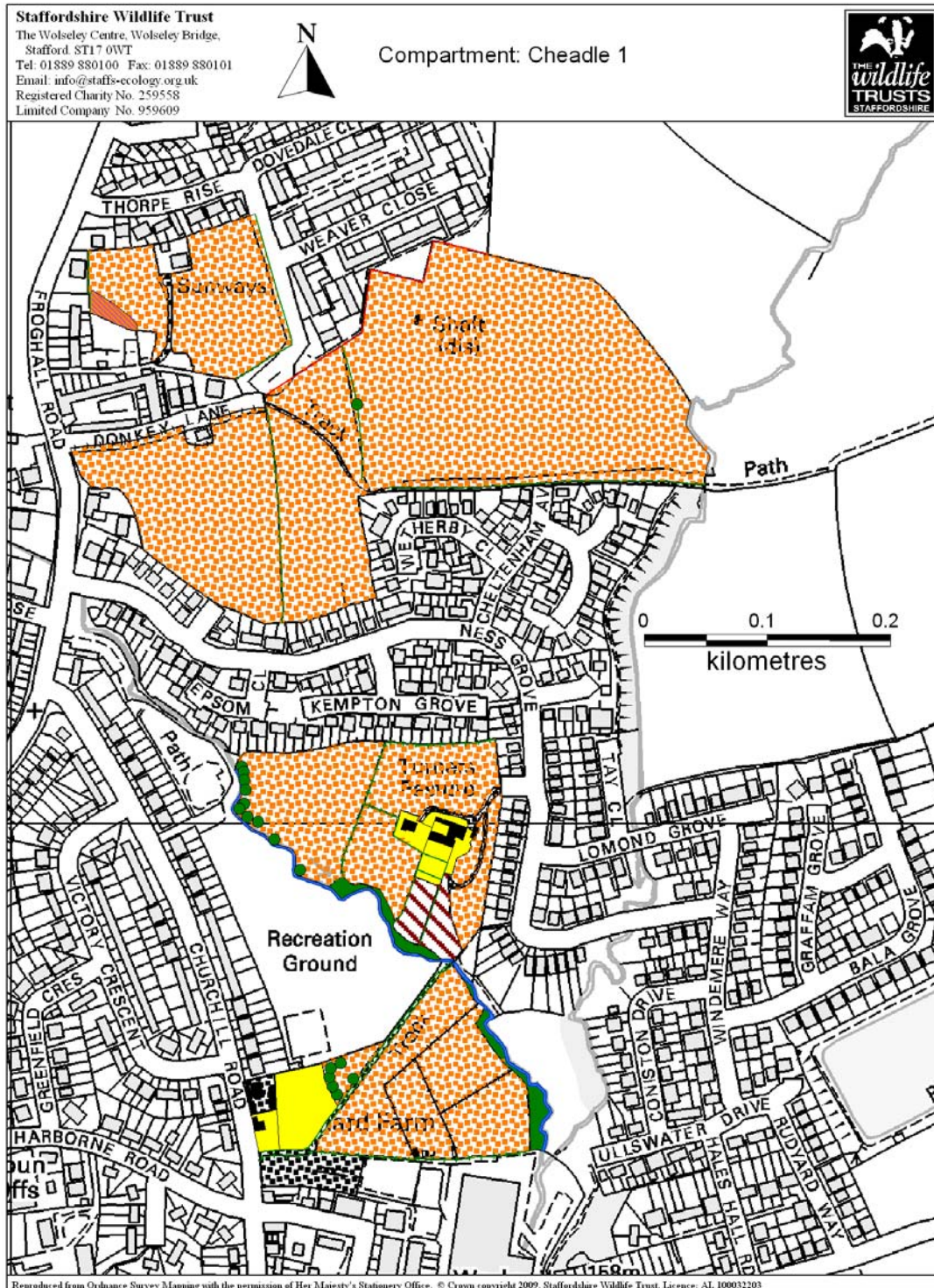
Figure 18: Cheadle 1 Designated Sites within 500m



3.1.2 Habitats

Habitats within Cheadle 1 consist mainly of poor semi-improved grassland of little botanical interest. Along the Brook there is a small area of woodland, which thins to scattered trees in places. There is an area of tall ruderals (plants of disturbed ground) to the south of Turner's Pasture, and a small area of marshy grassland near Sunways. Surrounding habitats include residential, farmland and amenity grassland.

Figure 19: Cheadle 1 Habitats



3.1.3 Protected species

English Name	Further Comments	Recommendation
European Water Vole	Watercourses in southern two parts of site may be suitable	Protect and buffer watercourse
Brambling	Feeding potential	Retain hedges and scrub, or provide mitigatory habitat
Eurasian Badger	Likely to forage within the Site / Potential on site	Protect where possible; mitigation will depend on size and location of badger groups affected on any given site.
Pipistrelle	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing buildings are affected. Protect foraging habitats
Barn Owl	Potentially suitable habitat / Potential foraging on site	Barn owl survey may be required. Provide compensatory habitat

3.1.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Bullfinch	Feed on tree buds, woodlands, orchards and hedges	Retain woodland and scrub habitats
Common Snipe	Marshy grassland within site is potentially suitable habitat	Retain marshy grassland habitat
Dunnock	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Feathered Gothic	Rough grassland, feed on grasses	Retain grassland habitat
House Sparrow	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Lesser Spotted Woodpecker	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Mouse Moth	Grassland within site is potentially suitable habitat	Retain grassland habitat
Northern Lapwing	Wetland within site is potentially suitable habitat	Retain marshy grassland habitat
Reed Bunting	Wetland within site is potentially suitable habitat	Retain marshy grassland habitat
Rosy Rustic	Waste ground and marshy places, feeding mainly on docks	Retain marshy grassland habitat
September Thorn	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Powdered Quaker	Widespread, feeds on willow	Retain woodland and scrub habitats
Rosy Minor	Grassland, feeding on grasses	Retain grassland habitat
Song Thrush	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Small Heath	Grassland within site is potentially suitable habitat	Retain grassland habitat
Spotted Flycatcher	Prefers mature trees in open areas	Protect trees along watercourse
Wall	Grassland within site is potentially suitable habitat	Retain grassland habitat
West European Hedgehog	Scrub within site is potentially suitable habitat, may forage on site	Retain woodland and scrub habitats
Willow Tit	Scrub within site is potentially suitable habitat	Retain woodland and scrub habitats

3.1.5 Summary recommendations for area

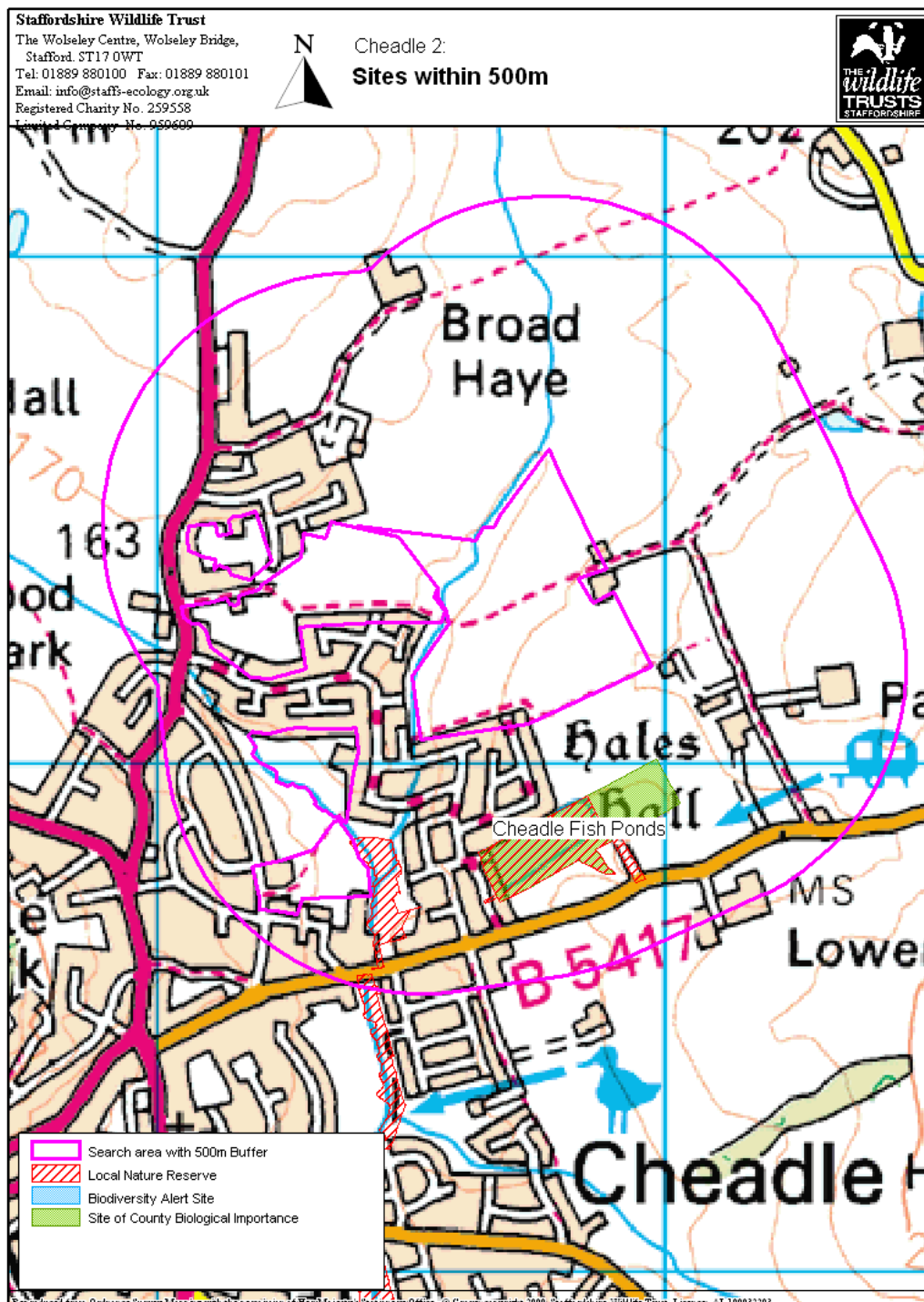
Protect the watercourse, and provide suitable buffering habitat alongside it. If possible also protect the marshy grassland. Ensure that any development provides habitats for the species listed. Habitats could be incorporated into Green Infrastructure.

3.2 Cheadle 2

3.2.1 Designated Sites

Cheadle Fish Ponds Site of County Biological Importance and Local Nature Reserve (LNR) is situated to the south of Cheadle 2. Cecily Brook LNR is situated to the south-west of the site.

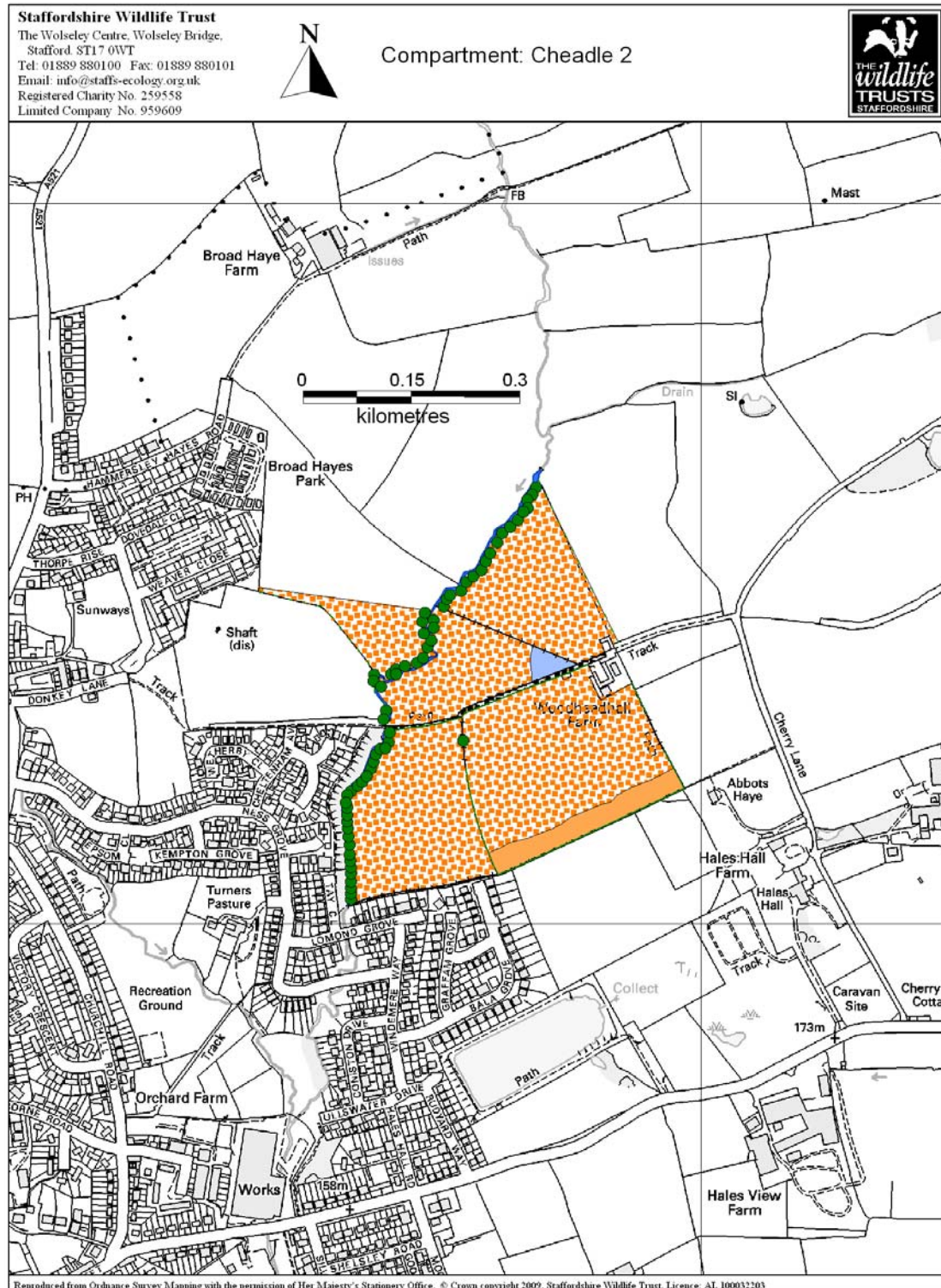
Figure 20: Cheadle 2 Designated Sites within 500m



3.2.2 Habitats

Habitats within Cheadle 2 mainly comprise poor semi-improved grassland, with trees lining the brook, and a small area of swamp near to Woodheadhall Farm. There is about one hectare of species rich semi-improved neutral grassland to the south of Cheadle 2.

Figure 21: Cheadle 2 Habitats



3.2.3 Protected species

English Name	Further Comments	Recommendation
--------------	------------------	----------------

Barn Owl	Suitable habitat for roosting at Woodheadhall Farm / Potential foraging within site	Survey recommended; foraging habitat should be provided within any development.
Brambling	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
Common Frog	Suitable habitat / Potential on site	Protect swamp area near farm and / or provide ponds, possibly within SUDS
Common Kingfisher	Watercourse within site is potentially suitable habitat / Potential on site	Protect watercourse and provide buffering habitat.
Common Pipistrelle	Likely to forage within the Site / Roosting potential in trees and buildings	Bat survey of trees and buildings will be required if these are likely to be affected by development.. Retain hedges and habitat along watercourse for foraging
Eurasian Badger	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
European Water Vole	Potentially suitable habitat - stream / Potential on site	Water Vole survey will be required. Protect watercourse and provide buffering habitat
Fieldfare	Winter visitor, feeding in a range of habitats	Protect hedges and scrub or provide other habitat
Grass Snake	No recent record but suitable habitat / Potential on site	Reptile survey required
Great Crested Newt	No standing water but potential habitat for hibernation and site is within 500 metres of ponds.	GCN survey recommended; there may be a need to provide compensatory habitat.

3.2.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Bullfinch	Feed on tree buds, woodlands, orchards and hedges	Retain woodland and scrub habitats
Common Snipe	Marshy grassland within site is potentially suitable habitat	Retain marshy grassland habitat
Common Starling	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Duncock	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Feathered Gothic	Rough grassland, feed on grasses	Retain grassland habitat
House Sparrow	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Lesser Spotted Woodpecker	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Mouse Moth	Grassland within site is potentially suitable habitat	Retain grassland habitat
Northern Lapwing	Wetland within site is potentially suitable habitat	Retain marshy grassland habitat
Reed Bunting	Wetland within site is potentially suitable habitat	Retain marshy grassland habitat
Rosy Rustic	Waste ground and marshy places, feeding mainly on docks	Retain marshy grassland habitat
September Thorn	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Powdered Quaker	Widespread, feeds on willow	Retain woodland and scrub habitats
Rosy Minor	Grassland, feeding on grasses	Retain grassland habitat
Sky Lark	Grassland within site is potentially suitable habitat	As above
Song Thrush	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Small Heath	Grassland within site is potentially suitable habitat	Retain grassland habitat
Spotted Flycatcher	Prefers mature trees in open areas	Protect trees along

		watercourse
Tree Pipit	As spotted flycatcher	As above
Wall	Grassland within site is potentially suitable habitat	Retain grassland habitat
West European Hedgehog	Scrub within site is potentially suitable habitat, may forage on site	Retain woodland and scrub habitats
Willow Tit	Scrub within site is potentially suitable habitat	Retain woodland and scrub habitats
Wood Warbler	Woodland and scrub within site are potentially suitable habitats	As above

3.2.5 Summary recommendations for area

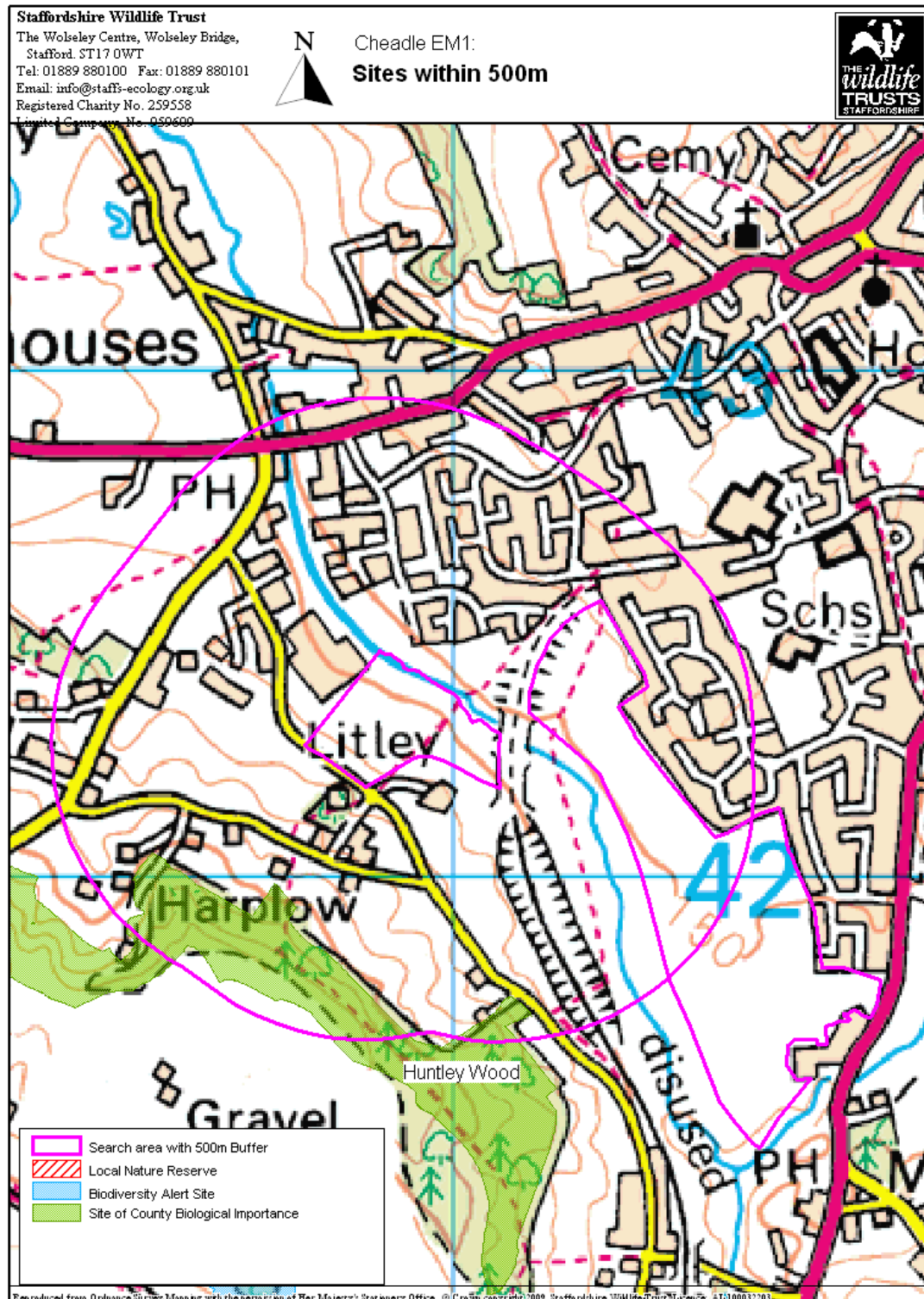
Three habitat features should be protected from development, the watercourse and associated trees, the swamp and the species rich semi-improved grassland. If Cheadle 2 is developed it is considered that these features can be incorporated into Green Infrastructure and enhanced to provide habitat for many of the species mentioned.

3.3 Cheadle EM1

3.3.1 Designated Sites

Huntley Wood Site of County Biological Importance is situated to the south of Cheadle EM1. It is unlikely to be affected by any development within Cheadle EM1.

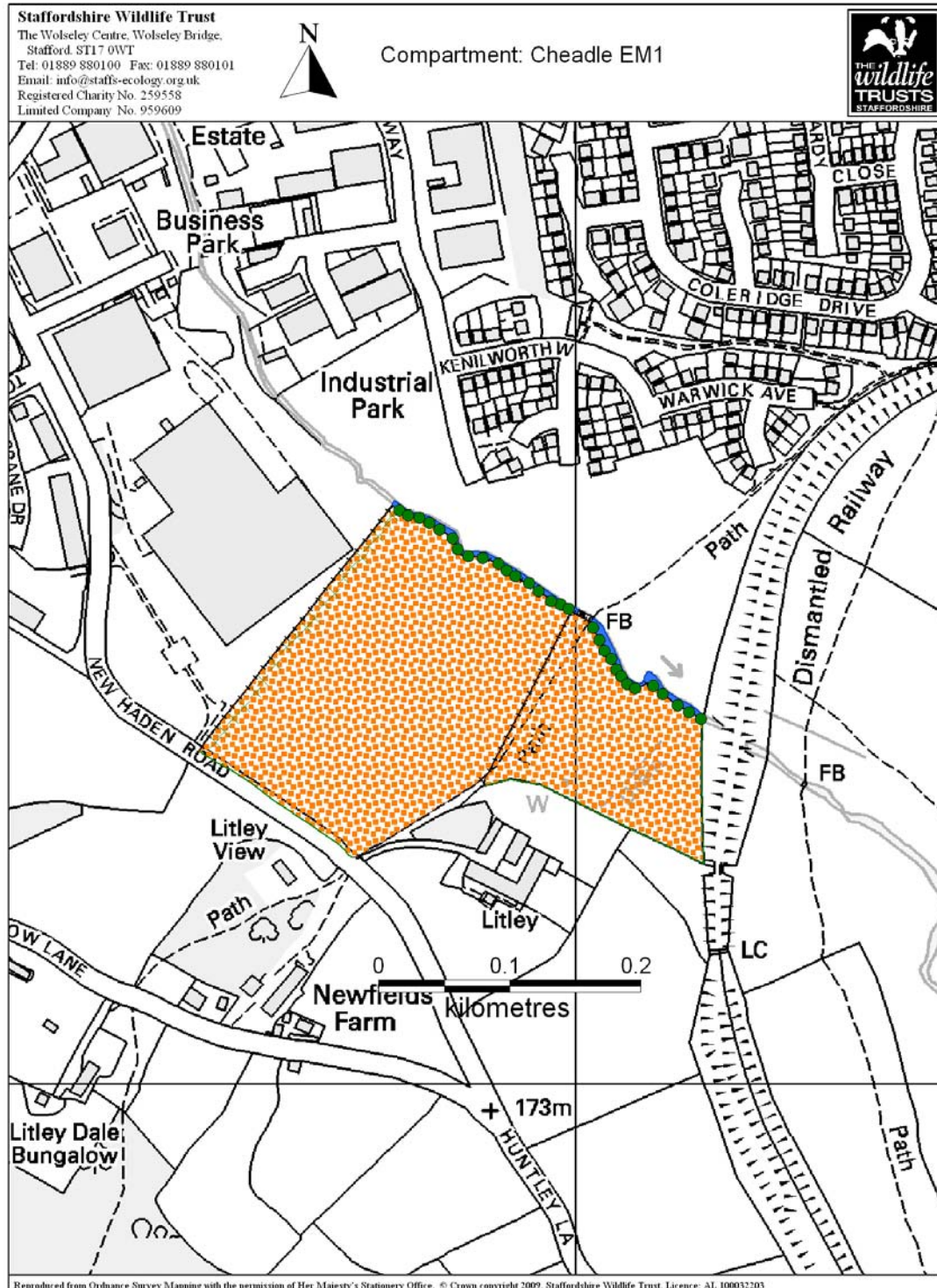
Figure 22: Cheadle EM1 Designated Sites within 500m



3.3.2 Habitats

Cheadle EM1 mainly comprises poor semi-improved grassland of low botanical interest. A watercourse forms the northern boundary of the site, which is lined with trees. Adjoining habitats include an industrial estate, agricultural land and trees and scrub along the disused railway to the east.

Figure 23: Cheadle EM1 Habitats



3.3.3 Protected species

English Name	Further Comments	Recommendation
Barn Owl	Potentially suitable habitat / Potential	Provide foraging habitat within site or

	foraging on site	elsewhere nearby.
Brambling	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
Common Kingfisher	Suitable habitat / Potential on site	Protect and buffer watercourse
Common Pipistrelle	Likely to forage within the Site / Roosting potential in trees	Bat survey required. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
Eurasian Badger	Likely to forage within the Site / Potential on site	Survey may be necessary. Mitigation will depend on size and location of badger groups affected on any given site
European Water Vole	Potentially suitable habitat - stream / Potential on site	As kingfisher, survey may be necessary

3.3.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland within site is potentially suitable habitat	Retain grassland habitat
Cinnabar	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Bullfinch	Feed on tree buds, woodlands, orchards and hedges	Retain woodland and scrub habitats along watercourse
Common Starling	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats along watercourse
Eurasian Tree Sparrow	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats along watercourse
Grey Partridge	Grassland within site is potentially suitable habitat	Retain grassland habitat
House Sparrow	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Lesser Spotted Woodpecker	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Northern Lapwing	May feed over habitats present on site	Retain grassland habitat
Reed Bunting	Grassland within site is potentially suitable habitat	Retain grassland habitat
Sky Lark	Grassland within site is potentially suitable habitat	As above
Song Thrush	Woodland and scrub within site are potentially suitable habitat	Retain woodland and scrub habitats
Small Heath	Grassland within site is potentially suitable habitat	Retain grassland habitat
Spotted Flycatcher	Prefers mature trees in open areas	Protect trees along watercourse
West European Hedgehog	Scrub within site is potentially suitable habitat, may forage on site	Retain woodland and scrub habitats
Willow Tit	Scrub within site is potentially suitable habitat	Retain woodland and scrub habitats

3.3.5 Summary recommendations for area

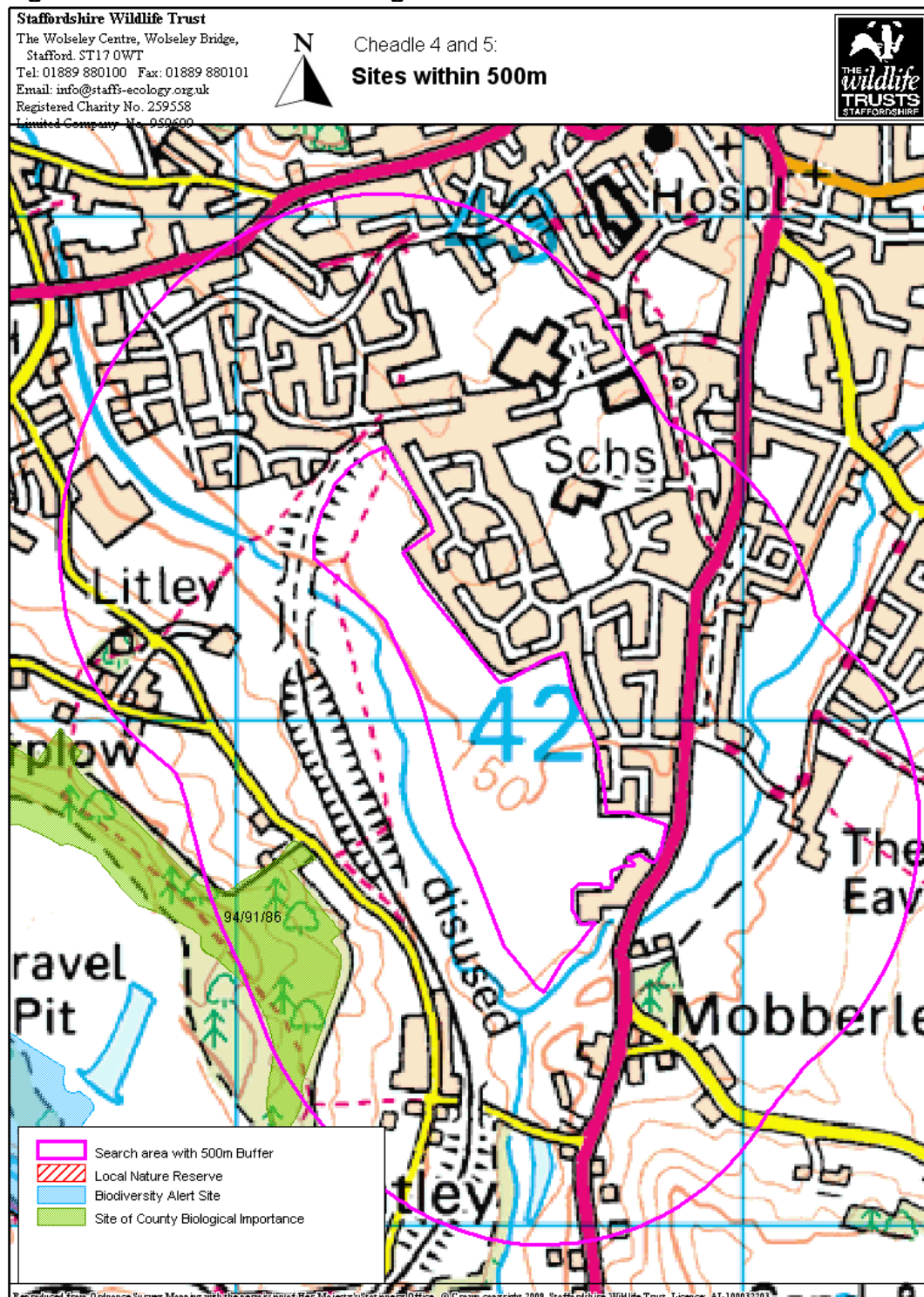
Buffering habitat should be provided along the watercourse, which is the most important habitat feature. It is also desirable to provide buffering habitat to the disused railway, as this is a linear habitat that would benefit from strengthening. Design of these features should consider the species recorded in the area and summarised above.

3.4 Cheadle 4 and 5

3.4.1 Designated Sites

Huntley Wood Site of County Biological Importance is situated to the south of Cheadle 4 and 5. It is unlikely to be affected by any development within Cheadle 4 and 5.

Figure 24: Cheadle 4 and 5 Designated Sites within 500m

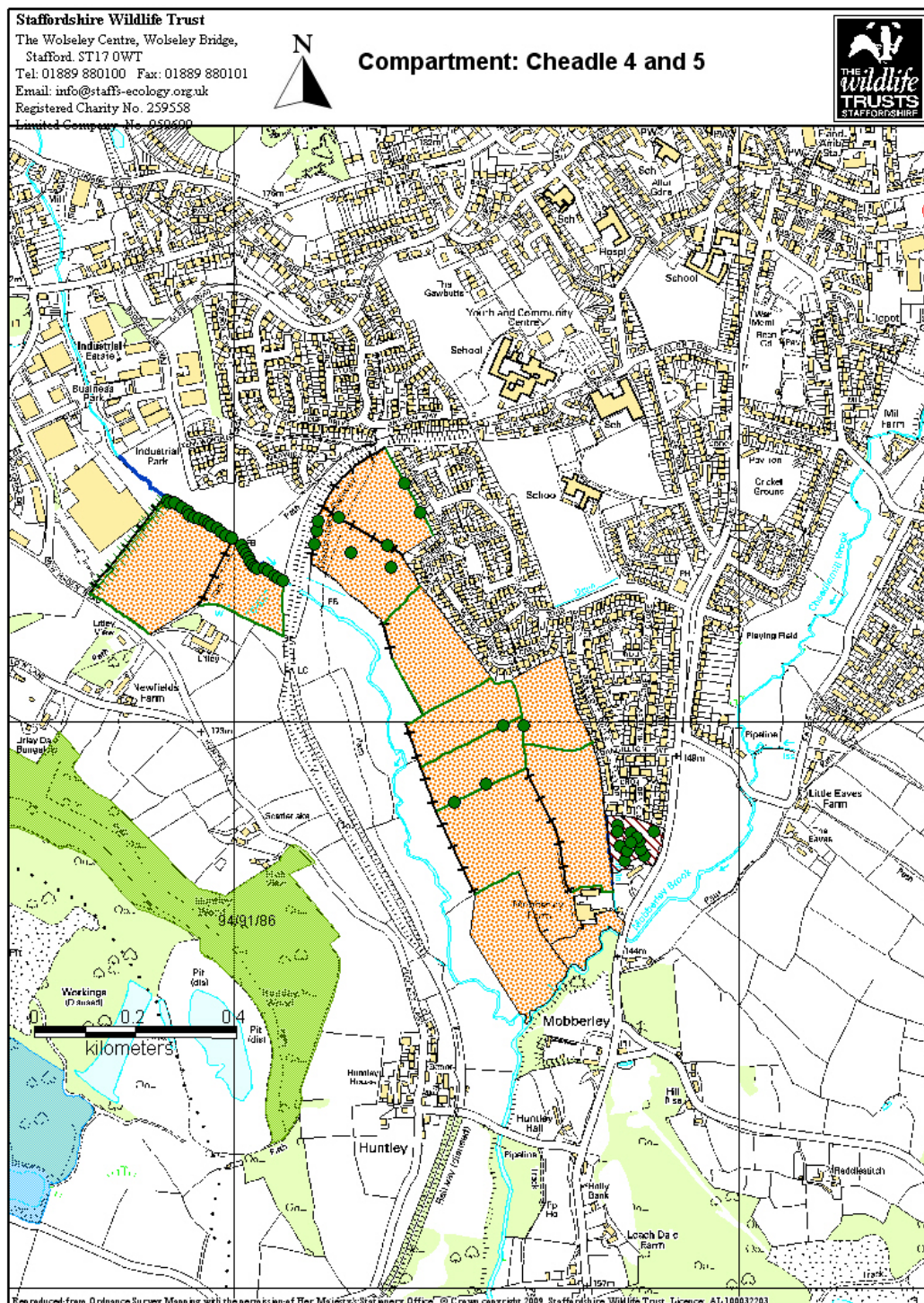


3.4.2 Habitats

The habitats within Cheadle 4 and 5 mainly comprise poor semi-improved grassland, with hedges and a few scattered trees. The Mobberley Brook forms the southern boundary of the site.

Surrounding habitats include farmland and residential land, with trees and scrub along the disused railway to the north.

Figure 25: Cheadle 4 and 5 Habitats



3.4.3 Protected species

English Name	Further Comments	Recommendation
Barn Owl	Potentially suitable habitat / Potential foraging on site	Provide foraging habitat within site or elsewhere nearby
Brambling	Feeding potential	Retain hedges and woodlands, or

		provide mitigatory habitat
Common Frog	The site is unlikely to support this species	No recommendation
Common Kingfisher	Potentially suitable habitat along Mobberley Brook to the south of the Site	Protect and buffer watercourse
Common Pipistrelle	Likely to forage within the Site / Roosting potential	Bat survey required. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
Eurasian Badger	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
European Water Vole	Suitable habitat - stream / Potential on site	Survey may be necessary. Protect and buffer watercourse

3.4.4 Biodiversity Action Plan species

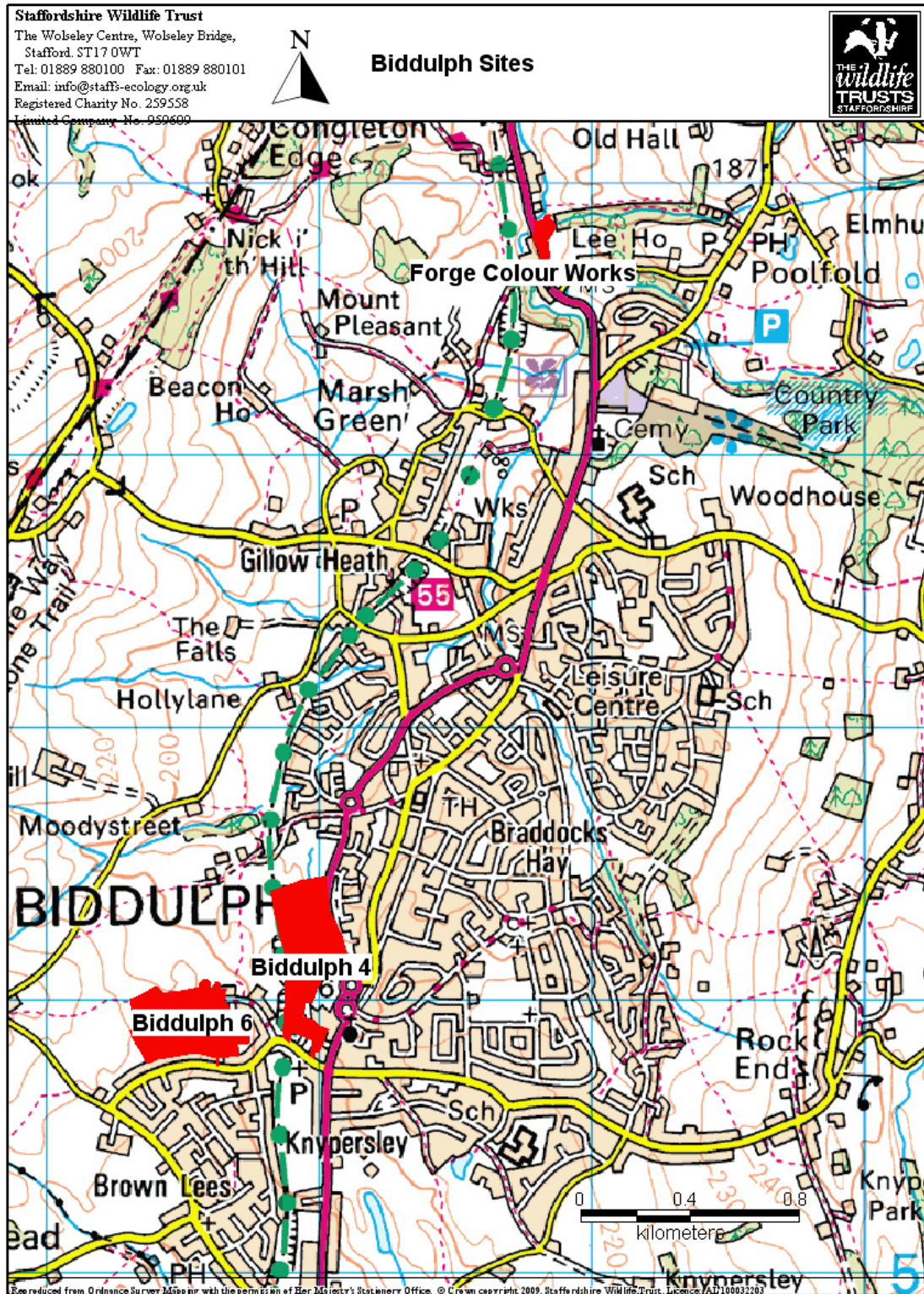
English Name	Further Comments	Recommendations
Brown Hare	Grassland within site is potentially suitable habitat	Retain grassland habitat
Cinnabar	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Bullfinch	Feed on tree buds, woodlands, orchards and hedges	Retain Hedgerows
Common Starling	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Eurasian Tree Sparrow	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Grey Partridge	Grassland within site is potentially suitable habitat	Retain grassland habitat
House Sparrow	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Northern Lapwing	May feed over habitats present on site	Retain grassland habitat
Reed Bunting	Grassland within site is potentially suitable habitat	Retain grassland habitat
Sky Lark	Grassland within site is potentially suitable habitat	As above
Song Thrush	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Small Heath	Grassland within site is potentially suitable habitat	Retain grassland habitat
Spotted Flycatcher	Prefers mature trees in open areas	Protect infield trees
West European Hedgehog	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Willow Tit	Hedgerows within site are potentially suitable habitat	Retain Hedgerows

3.4.5 Summary recommendations for area

Provide buffering habitat along the disused railway and the Mobberley Brook. Consider additional habitat provision within Green Infrastructure for protected and Biodiversity Action Plan species listed above.

4 Biddulph Sites Information

Figure 26: Biddulph Sites

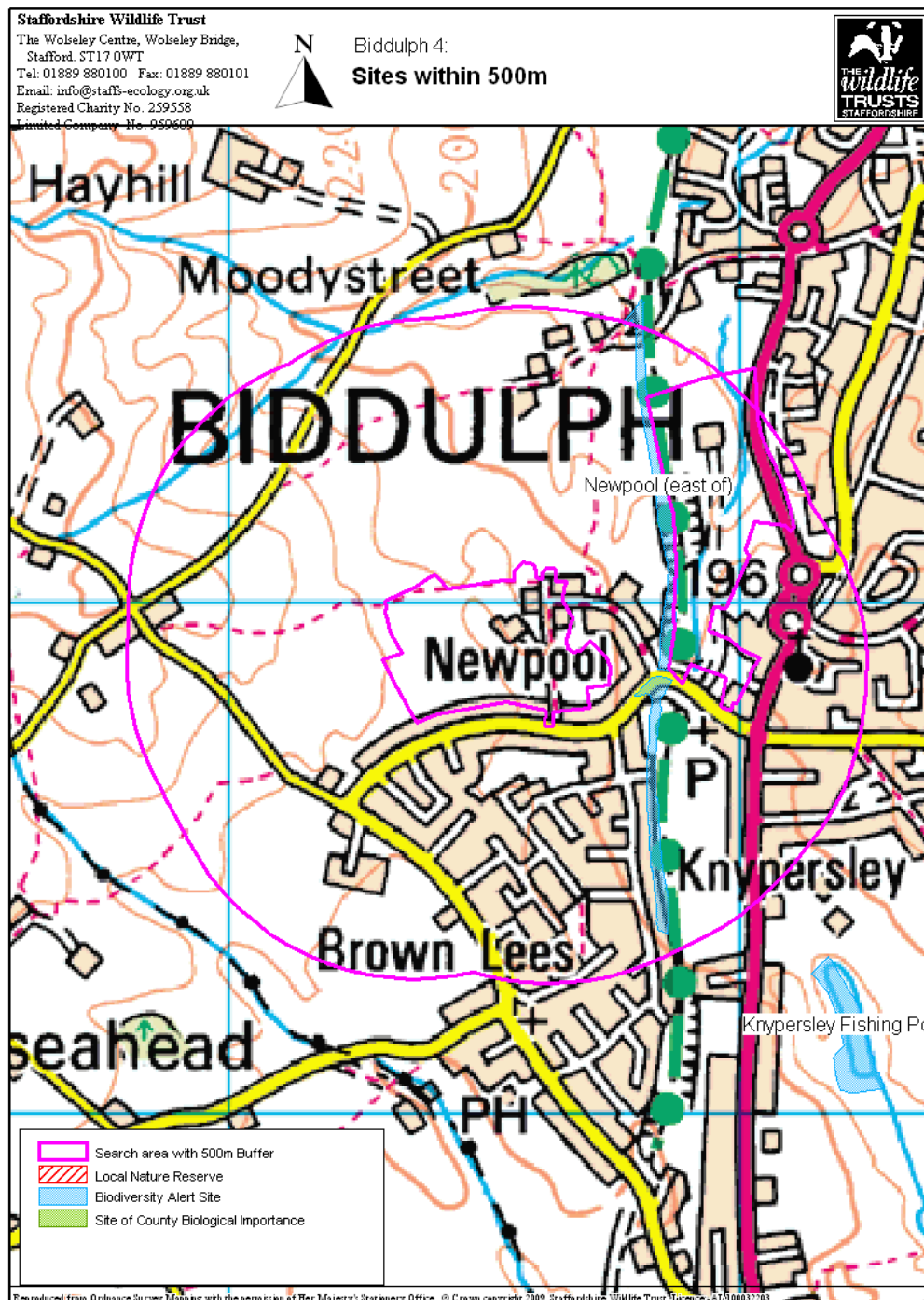


4.1 Biddulph 4

4.1.1 Designated Sites

The Biodiversity Alert Site (BAS) – Newpool (east of) - borders Biddulph 4 to the west. Newpool (east of) is likely to be affected by developments to Biddulph 4 as it lies directly adjacent to Biddulph 4.

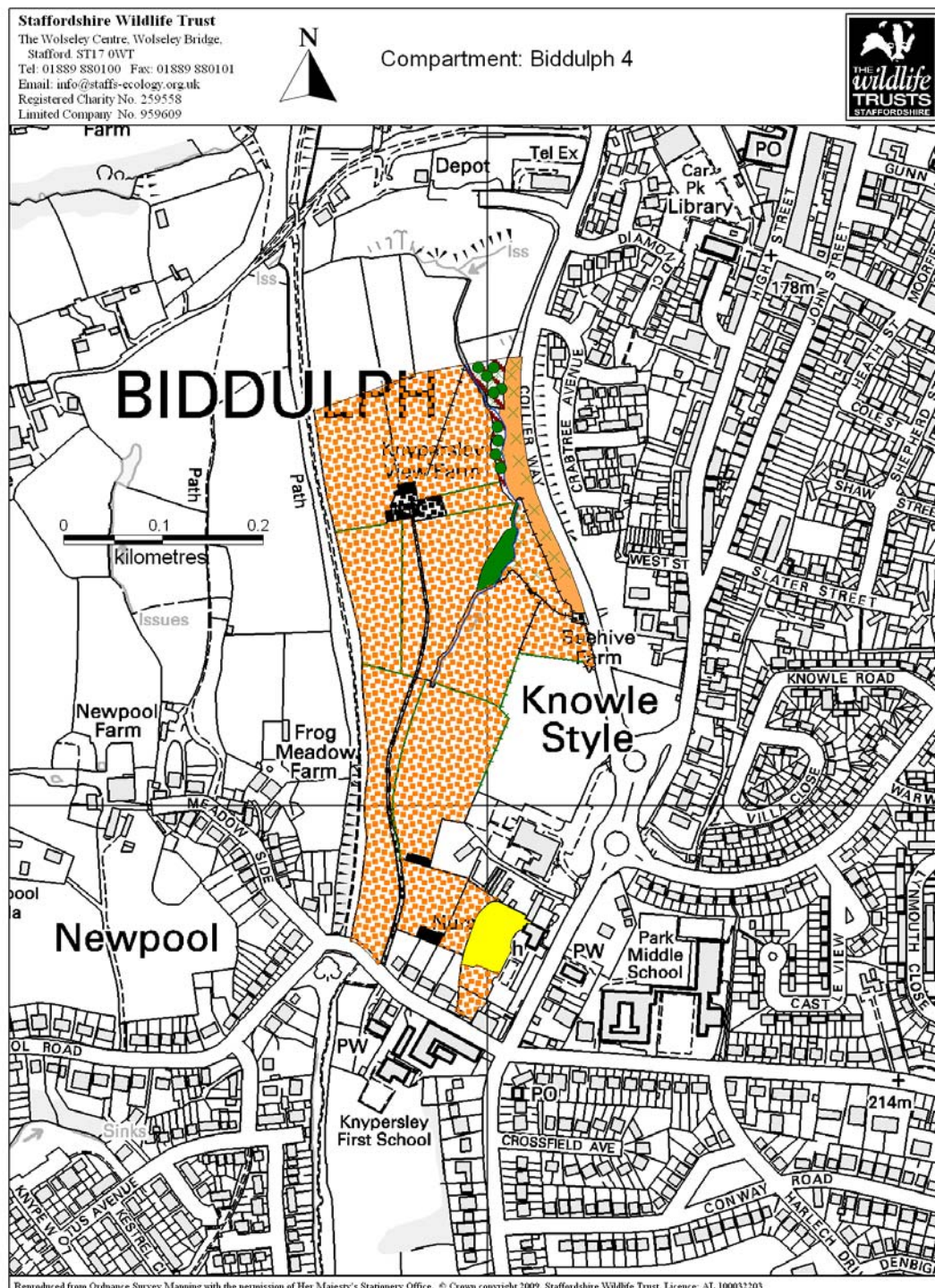
Figure 27: Biddulph 4 Designated Sites within 500m



4.1.2 Habitats

Habitats within Biddulph 4 comprise mainly poor semi-improved grassland. A small watercourse passes through the centre of the area, which is bordered by woodland and scrub in places. A small strip of semi-improved neutral grassland adjoins Collier Way. Outside the site there are woodland, scrub and semi-improved neutral grassland habitats within the BAS. Other habitats are farmland and residential areas.

Figure 28: Biddulph 4 Habitats



4.1.3 Protected species

English Name	Further Comments	Recommendation
--------------	------------------	----------------

Brambling	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
Brown Long-eared Bat	Usually roosting in loft spaces, forages over a range of habitats	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats, or provide other areas.
Common Kingfisher	Suitable habitat / Potential on site	Protect and buffer watercourses.
Common Pipistrelle	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing buildings are affected. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
Eurasian Badger	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
European Water Vole	Suitable habitat-watercourse on site / Potential on site	Water Vole survey, protect watercourse and provide buffering habitat
Pipistrelle	As common pipistrelle	As common pipistrelle
Redwing	Winter visitor, feeding in fields, hedges and orchards	As brambling
Soprano Pipistrelle	As common pipistrelle	As common pipistrelle
Whiskered / Brandt's Bat	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection

4.1.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Bullfinch	Feed on tree buds, woodlands, orchards and hedges	Retain woodland and scrub habitats
Common Cuckoo	Woodland and scrub within site are potentially suitable habitat	As above
Common Linnet	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Snipe	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Starling	Woodland and scrub within site are potentially suitable habitats	Retain woodland and scrub habitats
Common Toad	Grassland along the watercourse is suitable	Retain habitats adjacent to the stream
Duncock	Woodland and scrub within site are potentially suitable habitats	Retain woodland and scrub habitats
Eurasian Tree Sparrow	Woodland within site is potentially suitable habitat	Retain woodland and scrub habitats
Grey Partridge	Grassland within site is potentially suitable habitat	Retain grassland habitat
House Sparrow	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Lesser Spotted Woodpecker	Woodland within site is potentially suitable habitat	As above
Northern Lapwing	Grassland within site is potentially suitable habitat	Retain grassland habitat
Pink Waxcap	Grassland within site is potentially suitable habitat	Retain grassland habitat
Reed Bunting	Grassland within site is potentially suitable habitat	Retain grassland habitat
Sky Lark	Grassland within site is potentially suitable habitat	As above
Song Thrush	Woodland within site is potentially suitable habitat	Retain woodland and scrub habitats
Spotted Flycatcher	Prefers mature trees in open areas	Protect trees along the water course
Tree Pipit	As spotted flycatcher	As above

West European Hedgehog	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Willow Tit	Woodland within site is potentially suitable habitat	Retain woodland and scrub habitats

4.1.5 Summary recommendations for area

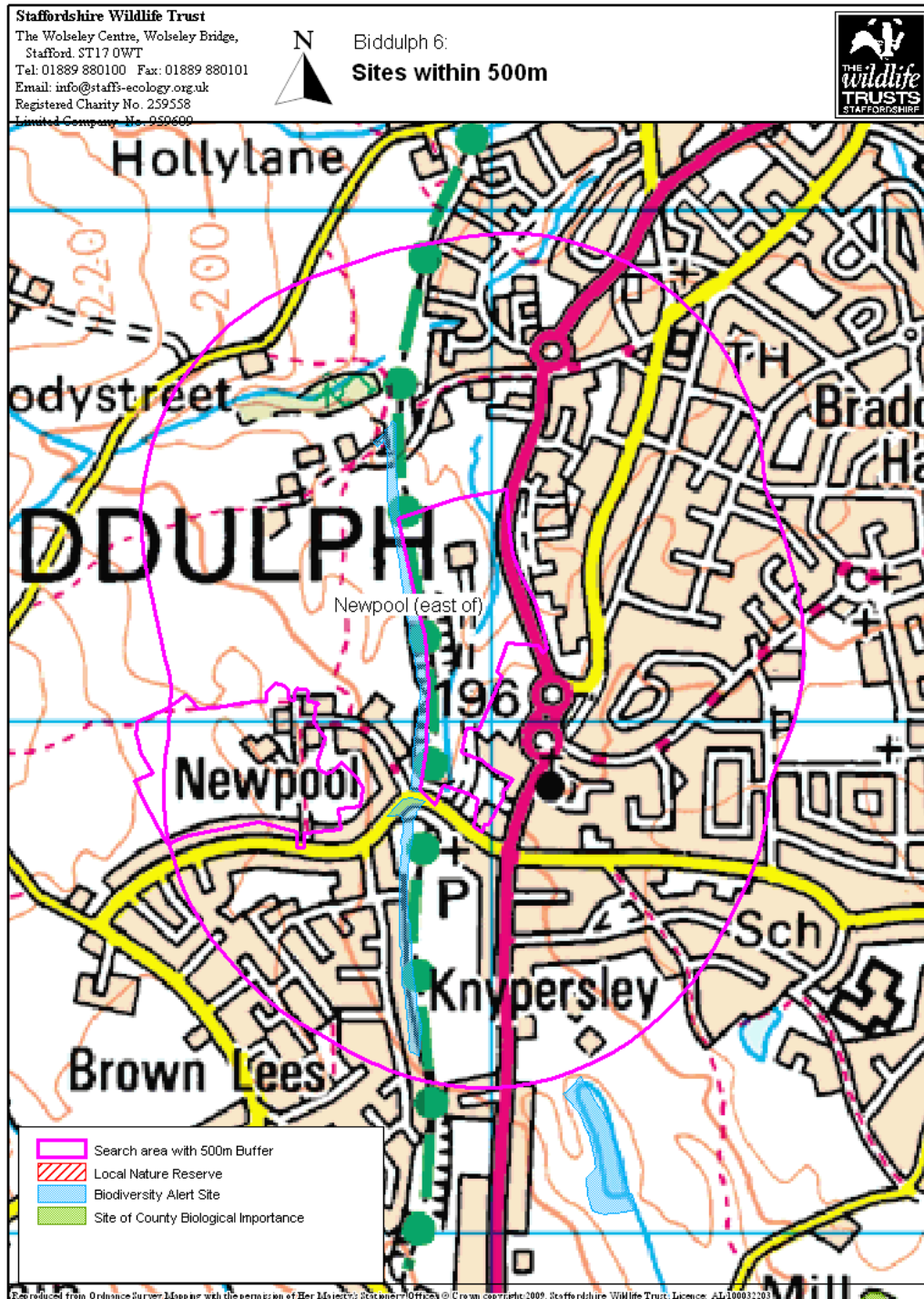
The most important habitat feature is the disused railway because it is a long linear habitat feature that links other areas. Buffering habitat should be provided adjacent to the BAS (disused railway). If possible protect habitats along the watercourse and the grassland adjacent to Collier Way, alternatively create compensatory habitat adjoining the disused railway.

4.2 Biddulph 6

4.2.1 Designated Sites

The Biodiversity Alert Site (BAS) – Newpool (east of) lies to the east within the 500m buffer zone. Development to the Biddulph 6 site is unlikely to affect the Newpool BAS as the housing between the Biddulph 6 Site and the Newpool (east of) site acts as a barrier.

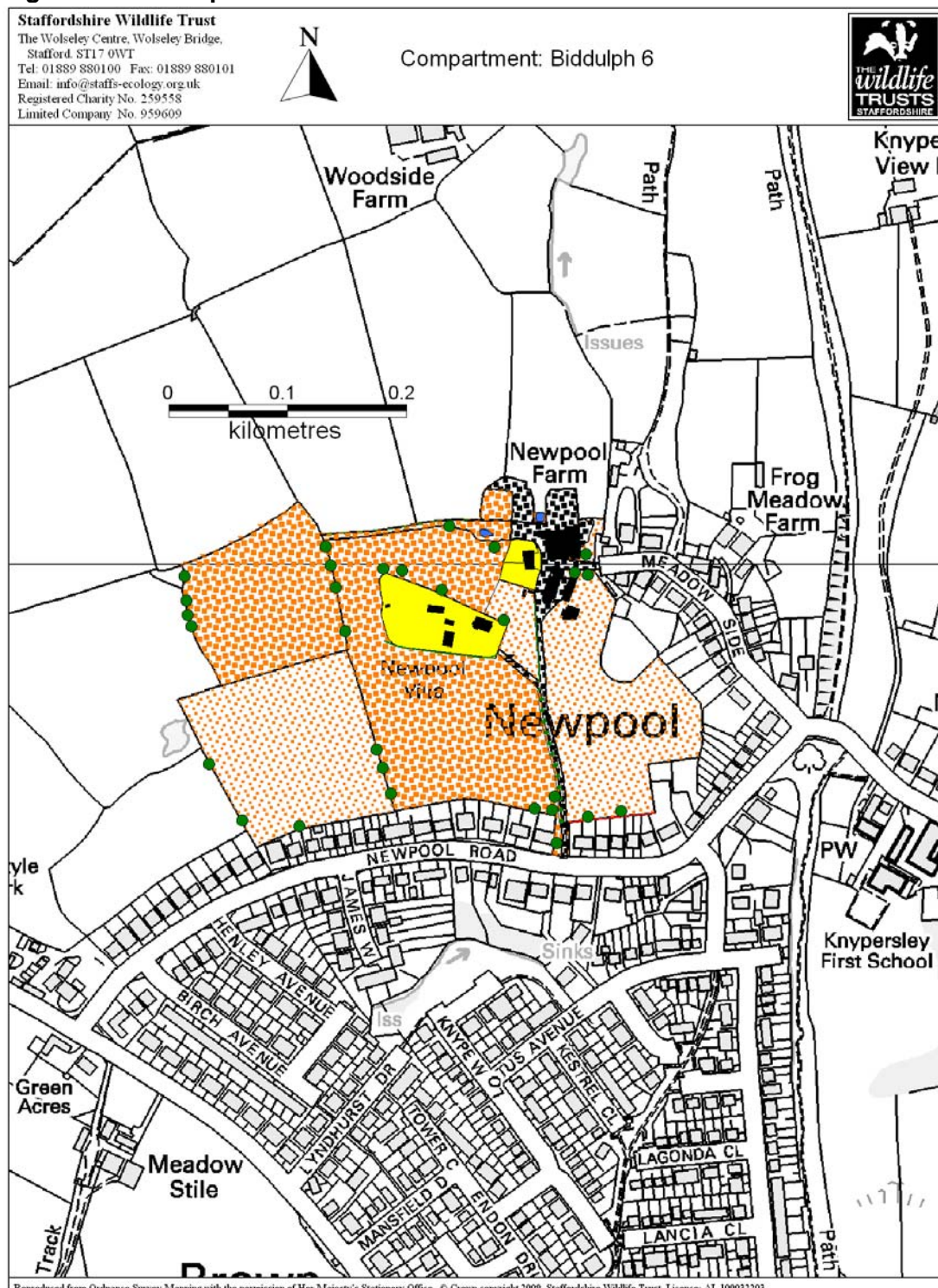
Figure 29: Biddulph 6 Designated Sites within 500m



4.2.2 Habitats

Habitats within Bidduph 6 include poor semi-improved grassland, improved grassland, amenity grassland, buildings, bare ground, with scattered trees and a small pond. Neighbouring habitats are mainly housing and agricultural land, with a few small ponds.

Figure 30: Biddulph 6 Habitats



4.2.3 Protected species

English Name	Further Comments	Recommendation
Brambling	Feeding potential	Retain hedges and trees, or provide

		mitigatory habitat
Brown Long-eared Bat	Foraging potential within Site / Roosting potential / Roost nearby	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats
Common Frog	Suitable habitat / Potential on site	Retain ponds and / or provide additional ponds, possibly within SUDS
Common Pipistrelle	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing buildings are affected. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
Eurasian Badger	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site

4.2.4 Biodiversity Action Plan species

English Name	Further Comments	Recommendations
Brown Hare	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Bullfinch	Feed on tree buds, woodlands, orchards and hedges	Retain woodland and scrub habitats
Common Cuckoo	Woodland and scrub within site are potentially suitable habitat	As above
Common Linnet	Grassland within site is potentially suitable habitat	Retain grassland habitat
Common Starling	Woodland and scrub within site are potentially suitable habitats	Retain woodland and scrub habitats
Common Toad	Grassland and pool is suitable	Retain pool and grassland
Duncock	Woodland and scrub within site are potentially suitable habitats	Retain woodland and scrub habitats
Eurasian Tree Sparrow	Woodland within site is potentially suitable habitat	Retain woodland and scrub habitats
Grey Partridge	Grassland within site is potentially suitable habitat	Retain grassland habitat
House Sparrow	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Lesser Spotted Woodpecker	Woodland within site is potentially suitable habitat	As above
Northern Lapwing	Grassland within site is potentially suitable habitat	Retain grassland habitat
Pink Waxcap	Grassland within site is potentially suitable habitat	Retain grassland habitat
Reed Bunting	Grassland within site is potentially suitable habitat	Retain grassland habitat
Sky Lark	Grassland within site is potentially suitable habitat	As above
Song Thrush	Woodland within site is potentially suitable habitat	Retain woodland and scrub habitats
Spotted Flycatcher	Prefers mature trees in open areas	Protect mature trees along the field boundaries
Tree Pipit	As spotted flycatcher	As above
West European Hedgehog	Hedgerows within site are potentially suitable habitat	Retain Hedgerows
Willow Tit	Woodland within site is potentially suitable habitat	Retain woodland and scrub habitats

4.2.5 Summary recommendations for area

As in species tables above. Consider creating additional habitats, such as species-rich grassland, within Green Infrastructure. This should link to open countryside including the

pond to the east (SJ872568) and as close as possible to the east end of the site where mature gardenes already form a link with the disused railway.

4.3 Additional Site Forge Colour Works

4.3.1 Designated Sites

Whitemore Farm (east of) is a steep sided broadleaved woodland situated on the Cheshire border south of Congleton. The woodland is listed on English Nature's ancient woodland inventory as ancient woodland.

Congleton Edge (south of) is Site of County Biological Importance comprising two small pockets of woodland situated on the Cheshire border. Both sections of woodland have steep slopes and uneven ground. They are both listed in English Nature's ancient woodland inventory as Ancient Woodland.

The Biddulph Valley Way is listed as a Local Nature Reserve, further information is not available through Staffordshire Ecological Record.

Figure 31: Forge Colour Works Designated Sites within 500m



4.3.2 Habitats

Forge Colour Works is previously developed land, which has been succeeded by a variety of ruderals and garden escapees. Habitats comprise mainly of concrete, which is being colonised by large areas of tall ruderal and scattered scrub. The whole site is bordered by woodland and the Biddulph Brook runs along its western edge.

Figure 32: Forge Colour Works Habitats



Protected species

English Name	Further Comments	Recommendation
Eurasian Badger	Likely to forage within the Site / Potential on site	Badger survey may be needed, if found protect where possible; mitigation will depend on size and location of badger groups affected on any given site.
European Otter	Suitable habitat - stream / Potential on site	Otter survey required Retain woodland habitats, particularly around Biddulph Brook
Common Pipistrelle	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing trees are affected. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection

4.3.4 Biodiversity Action Plan species

There were no BAP species thought to be affected by development on the Forge Colour Works Site.

4.3.5 Summary recommendations for area

If possible, retain woodland habitat around edge for screening, particularly in the area adjacent to the Brook..

4.4 Additional site: Newpool (east of)

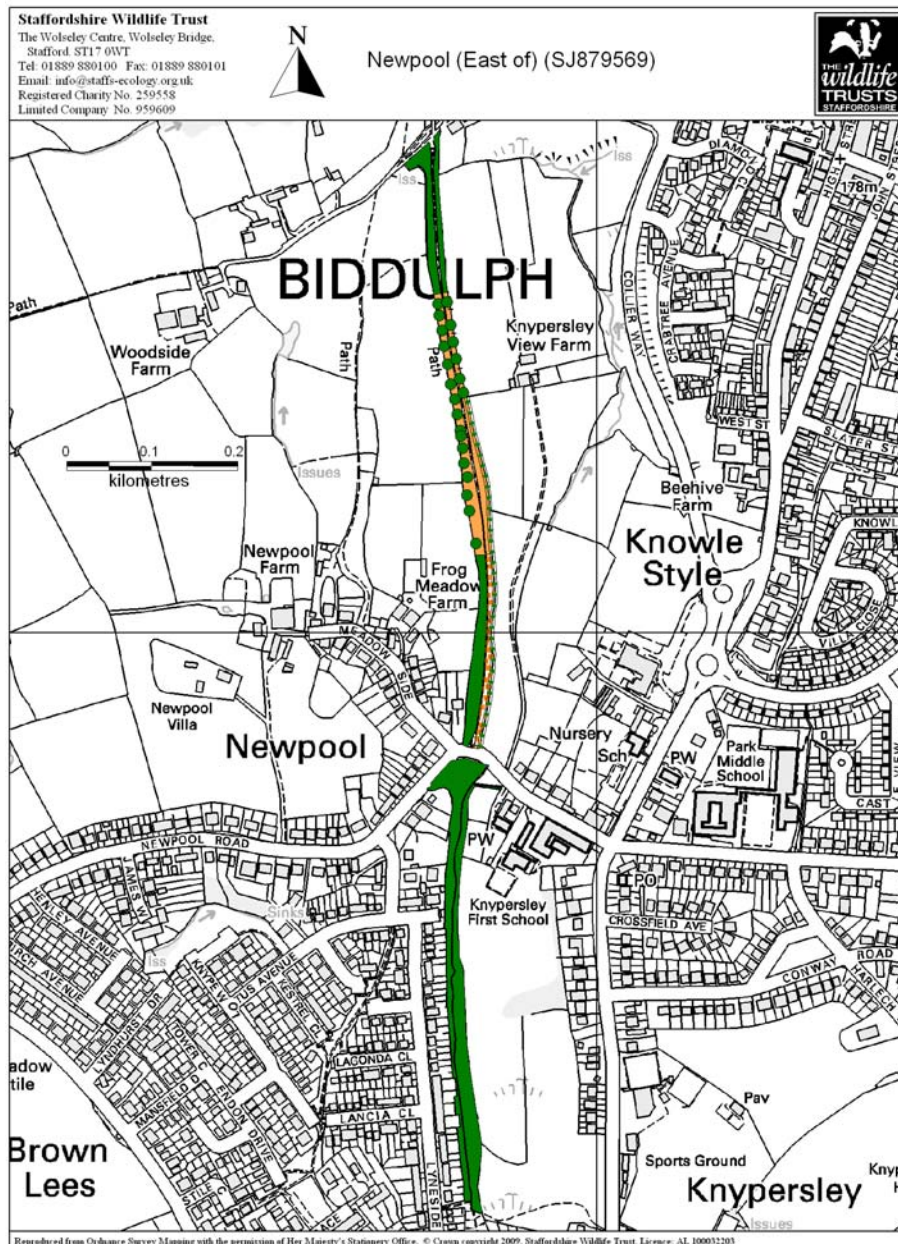
4.4.1 Designated Sites

Newpool (east of) was designated a Biodiversity Alert Site in 1983, and has not been surveyed since. It was re-surveyed in 2009 because of its proximity to the Biddulph 4 Site. It is recommended that the BAS designation continues to apply because the site meets the current criteria for designation.

4.4.2 Habitats

The southern part of the site comprises semi-natural broad-leaved woodland, the centre area has scrub and semi-improved neutral grassland habitats, while the northern part is wooded.

Figure 33: New Pool (east of) Habitats



4.4.3 Protected species

No analysis of protected species is included for this area, as it not proposed for development

4.4.4 Biodiversity Action Plan species

No analysis of Biodiversity Action Plan species is included for this area, as it not proposed for development

4.4.5 Summary recommendations for area

The disused railway is important because it has semi-natural habitats and because it is a long linear feature that links other areas of habitat. It is therefore recommended that the site be protected from development and designated a Biodiversity Alert Site.

Appendices

Key to all species tables	
No	Species unlikely to be affected by development on site
Yes	Species may be affected by development because habitats, etc., within the site are suitable. These species are also shown in the body of the report.
Yes	Species may be affected, but less likely, or covered by recommendations for other species
NB Most of the species records are for surrounding land rather than the site under discussion	

Appendix 1 – Species Lists for Leek EM1

Protected species

Latin Name	English Name	Grid ref	Recent date	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SJ993568	1996	No	Exact species not determined	No specific recommendation
<i>Tyto alba</i>	Barn Owl	SJ992563	2004	Yes	Suitable habitat / Potential foraging on site	Barn owl survey of buildings. Retain grassland and scrub habitats.
<i>Sphagnum palustre</i>	Blunt-leaved Bog-moss	SJ968538	1998	Yes	Suitable habitat surrounding the stream area	Retain wetland habitats, particularly around stream
<i>Fringilla montifringilla</i>	Brambling	SJ985565	2007	Yes	Nesting potential / Feeding potential	Protect hedge and scub habitats.
<i>Plecotus auritus</i>	Brown Long-eared Bat	SJ997556	2008	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
<i>Rana temporaria</i>	Common Frog	SJ981560	2004	Yes	Suitable habitat / Potential on site	Retain wetland habitats, particularly around stream
<i>Alcedo atthis</i>	Common Kingfisher	SJ975551	2003	Yes	Suitable habitat / Potential on site	Protect watercourses and provide buffering habitat
<i>Zootoca vivipara</i>	Common Lizard	SJ985535	1960	Yes	No recent records / However suitable habitat present	Retain grassland habitat Possible reptile survey
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SJ982562	2008	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
<i>Myotis daubentonii</i>	Daubenton's Bat	SJ974544	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
<i>Meles meles</i>	Eurasian Badger	SJ986550	2007	Yes	Likely to forage within the Site / Potential on site	Badger survey required. Mitigation where possible; this will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SJ985565	2007	No	Unsuitable habitat	No recommendation
<i>Lutra lutra</i>	European Otter	SJ979551	2002	Yes	Suitable habitat - stream / Potential on site	Otter survey required Retain wetland habitats, particularly around stream
<i>Arvicola terrestris</i>	European Water Vole	SJ977572	1997	Yes	Suitable habitat - stream / Potential on site	Water Vole survey Retain wetland habitats, particularly around stream
<i>Turdus pilaris</i>	Fieldfare	SJ985565	2002	No	Rare breeder in Britain	No recommendation
<i>Austropotamobius pallipes</i>	Freshwater White-clawed Crayfish	SJ974553	1985	Yes	Suitable habitat - stream / Potential on site	Crayfish survey; protect watercourse from pollution
<i>Natrix natrix</i>	Grass Snake	SJ978557	2006	Yes	Suitable grassland habitat / Potential on site	Retain wetland habitats, particularly around stream Possible reptile survey
<i>Triturus cristatus</i>	Great Crested Newt	SJ973551	2004	Yes	No standing water but potential habitat for hibernation	GCN survey and mitigation may be required

<i>Sphagnum recurvum</i>	moss	SJ968538	1998	Yes	Suitable habitat surrounding the stream area	As blunt-leaved bog-moss
<i>Myotis</i>	Myotis Bat species	SJ966564	2006	No	Exact species not determined	No recommendation
<i>Myotis nattereri</i>	Natterer's Bat	SJ975565	1993	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
<i>Nyctalus noctula</i>	Noctule Bat	SJ975543	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SJ989563	2006	Yes	As common pipistrelle	As common pipistrelle
<i>Milvus milvus</i>	Red Kite	SJ985565	1998	No	Unsuitable habitat	No recommendation
<i>Turdus iliacus</i>	Redwing	SJ985565	2007	No	Rare breeder in Britain	No recommendation
<i>Anguis fragilis</i>	Slow-worm	SJ985545	1975	Yes	No recent records / However suitable habitat present	Reptile survey required
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	SJ974544	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats
<i>Numenius phaeopus</i>	Whimbrel	SJ975535	2008	No	Unsuitable habitat	No recommendation
<i>Myotis mystacinus</i>	Whiskered Bat	SJ976555	1994	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Recent date	Likely Effect	Further Comments	Recommendations
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SJ976561	2007	Yes	Scrub within site is suitable habitat	Protect hedge and scrub habitats.
<i>Carduelis cannabina</i>	Common Linnet	SJ974544	2005	Yes	Grassland within site is suitable habitat	Retain grassland and scrub habitats.
<i>Bufo bufo</i>	Common Toad	SJ973551	2004	Yes	Wetland within site is suitable habitat	Retain wetland habitats, particularly around stream
<i>Prunella modularis</i>	Dunnock	SJ995555	2004	Yes	A range of habitats within site are suitable	Retain grassland and scrub habitats.
<i>Passer domesticus</i>	House Sparrow	SJ995555	2004	Yes	A range of habitats within site are suitable	Retain grassland and scrub habitats.
<i>Vanellus vanellus</i>	Northern Lapwing	SK010541	2006	Yes	Wetland within site is suitable habitat	Retain wetland habitats, particularly around stream
<i>Hygrocybe calyptriformis</i> <i>var. calyptriformis</i>	Pink Waxcap	SJ989557	2000	Yes	Grassland within site is suitable habitat	Retain grassland habitats.
<i>Emberiza schoeniclus</i>	Reed Bunting	SJ983574	1999	Yes	Wetland within site is suitable habitat	Retain wetland habitats, particularly around stream
<i>Alauda arvensis</i>	Sky Lark	SJ985565	2005	Yes	Grassland within site is suitable habitat	Retain grassland habitats.
<i>Coenonympha pamphilus</i>	Small Heath	SJ988559	2000	Yes	Grassland within site is suitable habitat	Retain grassland and scrub habitats.
<i>Muscicapa striata</i>	Spotted Flycatcher	SJ985565	2005	Yes	Scrub within site is suitable habitat	Protect hedge and scrub habitats.
<i>Lasiommata megera</i>	Wall	SJ968538	1998	Yes	Grassland within site is suitable habitat	Retain grassland and scrub habitats.

<i>Erinaceus europaeus</i>	West European Hedgehog	SJ975555	2006 Yes	A range of habitats within site are suitable	Retain grassland and scrub habitats.
----------------------------	---------------------------	----------	----------	--	--------------------------------------

Appendix 2 – Species Lists for Leek EM2

Protected species

Latin Name	English Name	Grid ref	Recent date	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SJ995527	2001	Yes	Exact species not determined	No recommendation
<i>Vipera berus</i>	Adder	SK005525	1977	Yes	No recent records / However suitable habitat present	Possible reptile survey. Protect grassland and wetland habitats.
<i>Tyto alba</i>	Barn Owl	SK005545	2006	Yes	Grassland on site is suitable habitat for foraging	Barn owl survey of buildings. Retain grassland and scrub habitats
<i>Ciconia nigra</i>	Black Stork	SK005525	1985	No	No recent records / Unsuitable habitat	No recommendation
<i>Sphagnum palustre</i>	Blunt-leaved Bog-moss	SK000531	2006	Yes	Suitable habitat / Potential on site	Retain wetland habitats
<i>Plecotus auritus</i>	Brown Long-eared Bat	SK007527	2006	Yes	Likely to forage within the Site / Species usually roosts in roof spaces.	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats.
<i>Loxia curvirostra</i>	Common Crossbill	SK005525	2003	No	Unsuitable habitat	No recommendation
<i>Rana temporaria</i>	Common Frog	SK006526	2006	Yes	Wetland within site is suitable habitat	Retain wetland habitats
<i>Alcedo atthis</i>	Common Kingfisher	SK005525	2003	Yes	Suitable habitat / Potential on site	Protect watercourses and provide buffering habitat
<i>Zootoca vivipara</i>	Common Lizard	SJ985535	1977	Yes	No recent records / However grassland within site is suitable habitat	Retain grassland habitats
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SJ988541	2006	Yes	Likely to forage over a range of habitats within the Site / Roosting potential	Bat survey required if buildings may be affected by development. Protect foraging habitats
<i>Myotis daubentonii</i>	Daubenton's Bat	SK005525	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required if buildings or mature trees may be affected by development. Protect foraging habitats, especially along watercourse.
<i>Meles meles</i>	Eurasian Badger	SJ992546	2008	Yes	Likely to forage within the Site / Potential for species to be resident on site	Badger survey required if site is affected by development. Mitigation where possible; this will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SK005525	2006	No	Unsuitable habitat	No recommendation
<i>Lutra lutra</i>	European Otter	SJ979551	2002	Yes	Suitable habitat - stream / Potential on site	Otter survey required. Protect watercourses and provide buffering habitat

<i>Arvicola terrestris</i>	European Water Vole	SJ983521	1997	Yes	Suitable habitat - stream / Potential on site	Water Vole survey. Protect watercourses and provide buffering habitat
<i>Turdus pilaris</i>	Fieldfare	SK005525	2007	No	Rare breeder in Britain	No recommendation
<i>Luronium natans</i>	Floating Water-plantain	SJ982520	1982	No	Possible in stream just out of the survey area	No specific recommendation
<i>Austroptamobius pallipes</i>	Freshwater White-clawed Crayfish	SJ981521	1995	Yes	Suitable habitat - stream / Potential on site	Crayfish survey required
<i>Natrix natrix</i>	Grass Snake	SJ985535	2006	Yes	Suitable grassland habitat / Potential on site	Protect habitats on site, particularly wetland
<i>Triturus cristatus</i>	Great Crested Newt	SK005525	1977	Yes	No standing water on site but potential habitat for hibernation.	GCN survey likely to be necessary if site is developed.
<i>Tringa ochropus</i>	Green Sandpiper	SK005525	2007	No	Unsuitable habitat	No recommendation
<i>Argynnis adippe</i>	High Brown Fritillary	SK000520	1960	No	No recent records / Unsuitable habitat	No recommendation
<i>Falco columbarius</i>	Merlin	SK005525	2003	No	Unsuitable habitat	No recommendation
<i>Sphagnum recurvum</i>	moss	SK000531	2006	Yes	Wetland within site is suitable habitat	Protect site on which this species found, ensuring hydrology of the site is also protected.
<i>Nyctalus noctula</i>	Noctule Bat	SJ976539	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required
<i>Accipiter gentilis</i>	Northern Goshawk	SK005525	2006	No	Unsuitable habitat	No recommendation
<i>Pandion haliaetus</i>	Osprey	SK005525	2008	No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SJ981538	2003	Yes	As common pipistrelle	As common pipistrelle
<i>Milvus milvus</i>	Red Kite	SK007527	2008	No	Unsuitable habitat	No recommendation
<i>Turdus iliacus</i>	Redwing	SK005525	2007	No	Feeds in winter on berries etc.	Retain scrub and hedges on site
<i>Anguis fragilis</i>	Slow-worm	SJ985545	1977	Yes	No recent records / However suitable habitat present	Reptile survey required
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	SJ974544	2006	Yes	As common pipistrelle	As common pipistrelle
<i>Numenius phaeopus</i>	Whimbrel	SJ975535	2008	No	Unsuitable habitat	No recommendation
<i>Myotis mystacinus / brandtii</i>	Whiskered / Brandt's Bat	SK005525	1993	Yes	Likely to forage within the Site / Roosting potential	Bat survey required

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Recent date	Likely Effect	Further Comments	Recommendations
<i>Rheumaptera hastata</i>	Argent and Sable	SK000520	1972	Yes	Woodland and scrub within site are suitable habitat	Retain woodland and scrub habitats, or provide adequate compensatory habitat
<i>Ennomos quercinaria</i>	August Thorn	SK000520	2005	Yes	Woodland and scrub within site are suitable habitat	Retain woodland and scrub habitats
<i>Agrochola lychnidis</i>	Beaded Chestnut	SK000520	1972	No	Too long ago	No recommendation
<i>Lycia hirtaria</i>	Brindled Beauty	SK009535	2005	Yes	Woodland is suitable habitat	Retain woodland and scrub habitats
<i>Dasypolia templi</i>	Brindled Ochre	SK011551	2005	Yes	Larvae feed on hogweed but mainly a coastal species	No specific recommendation
<i>Melanchra pisi</i>	Broom Moth	SK009535	2005	Yes	Open woodland and heathland	Retain woodland and scrub habitats
<i>Lepus europaeus</i>	Brown Hare	SJ995531	2007	Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Agrochola litura</i>	Brown-spot Pinion	SK000520	1972	No	Too long ago	No recommendation
<i>Spilosoma luteum</i>	Buff Ermine	SK009535	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Atethmia centrigo</i>	Centre-barred Sallow	SK009535	2005	Yes	Woodland and scrub within site are suitable habitat	Retain grassland and scrub habitats
<i>Scotopteryx bipunctaria</i> <i>subsp. cretata</i>	Chalk Carpet	SK000520	1972	No	Too long ago	No recommendation
<i>Tyria jacobaeae</i>	Cinnabar	SJ985525	2005	No	Feeds on Ragwort and related species	No specific recommendation
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SK005525	2007	Yes	Feed on tree buds, woodlands, orchards and hedges	Retain woodland and scrub habitats
<i>Cuculus canorus</i>	Common Cuckoo	SK005525	2007	Yes	Woodland and scrub within site are suitable habitat	Retain woodland and scrub habitats
<i>Carduelis cannabina</i>	Common Linnet	SK005525	2005	Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Gallinago gallinago</i>	Common Snipe	SK010540	2000	Yes	Marshy grassland within site is suitable habitat	Retain marshy grassland habitat
<i>Sturnus vulgaris</i>	Common Starling	SK005525	2007	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Bufo bufo</i>	Common Toad	SK005525	1988	Yes	Wetland within site is suitable habitat	Retain marshy grassland habitat
<i>Blepharita adusta</i>	Dark Brocade	SK000520	1972	No	Too long ago	No recommendation
<i>Aporophyla lutulenta</i>	Deep-brown Dart	SK000520	2005	Yes	Range of open habitats, feeding on grasses etc	Retain grassland habitat
<i>Erynnis tages</i>	Dingy Skipper	SK000520	1960	No	Too long ago	No recommendation

<i>Melanchra persicariae</i>	Dot Moth	SK009535	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Graphiphora augur</i>	Double Dart	SK000520	1972	No	Too long ago	No recommendation
<i>Prunella modularis</i>	Dunnock	SK005525	2007	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Apamea remissa</i>	Dusky Brocade	SK009535	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Ennomos fuscantaria</i>	Dusky Thorn	SK004525	2005	Yes	Woodland and scrub within site are suitable habitats	Retain woodland and scrub habitats
<i>Xanthia gilvago</i>	Dusky-lemon Sallow	SK000520	1971	No	Too long ago	No recommendation
<i>Amphipoea oculatea</i>	Ear Moth	SK000520	2005	Yes	Damp habitats, feeds on grasses and other plants	Retain marshy grassland
<i>Numenius arquata</i>	Eurasian Curlew	SK005525	2007	No	Unsuitable habitat	No recommendation
<i>Passer montanus</i>	Eurasian Tree Sparrow	SK005525	2003	Yes	Woodland within site is suitable habitat	Retain woodland and scrub habitats
<i>Tholera decimalis</i>	Feathered Gothic	SK005525	2006	Yes	Rough grassland, feed on grasses	Retain grassland habitat
<i>Agrochola helvola</i>	Flounced Chestnut	SK005520	1972	No	Too long ago	No recommendation
<i>Epirrhoe galiata</i>	Galium Carpet	SK009535	2001	Yes	Grassland species	Retain grassland habitat
<i>Euxoa nigricans</i>	Garden Dart	SK009535	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Arctia caja</i>	Garden Tiger	SJ999521	1972	No	Too long ago	No recommendation
<i>Hepialus humuli</i>	Ghost Moth	SK009535	2005	Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Allophytes oxyacanthae</i>	Green-brindled Crescent	SK000520	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Entephria caesiata</i>	Grey Mountain Carpet	SK000520	1972	Yes	Feeds on bilberry which is on site	Retain woodland and grassland
<i>Pyrgus malvae</i>	Grizzled Skipper	SK000520	1960	No	Too long ago	No recommendation
<i>Xestia agathina</i>	Heath Rustic	SK000520	2005	No	Unsuitable habitat	No recommendation
<i>Larus argentatus</i>	Herring Gull	SK005525	2007	No	Unsuitable habitat	No recommendation
<i>Passer domesticus</i>	House Sparrow	SK005525	2007	Yes	Prefers gardens and farmland	No specific recommendation
<i>Andrena (Taeniandrena) wilkella</i>	insect - hymenopteran	SJ997531	1998	No	Possible, but record is from Rod Wood Nature Reserve	No specific recommendation
<i>Andrena (Notandrena) chrysoseles</i>	insect - hymenopteran	SK004525	1998	No	Record from Churnet Valley NR	No specific recommendation
<i>Mimesa lutaria</i>	insect - hymenopteran	SJ997531	1979	No	Too long ago	No recommendation
<i>Eugnorisma glareosa</i>	Autumnal rustic	SK000520	2005	Yes	Woodland fringes, feeds on a variety of plants	Retain woodland and scrub habitats
<i>Acronicta rumicis</i>	Knot Grass	SK009535	2005	Yes	Widely distributed, feeds on a range of plants	No specific recommendation
<i>Chiasmia clathrata</i>	Latticed Heath	SK009535	2005	Yes	Found on a range of open habitats	No specific recommendation
<i>Dendrocopos minor</i>	Lesser Spotted	SK005525	2003	Yes	Woodland within site is suitable habitat	Retain woodland and scrub

	Woodpecker				habitats
<i>Poecile palustris</i>	Marsh Tit	SK005525	2007 Yes	Species of woodland	Retain woodland and scrub habitats
<i>Brachylomia viminalis</i>	Minor Shoulder-knot	SK009535	2004 Yes	Species of damp woodland and wetland	Retain wetland
<i>Caradrina morpheus</i>	Mottled Rustic	SK009535	2004 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Amphipyra tragopoginis</i>	Mouse Moth	SK000520	2005 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Xestia castanea</i>	Neglected Rustic	SK000520	2005 No	Unsuitable habitat	No recommendation
<i>Vanellus vanellus</i>	Northern Lapwing	SK010541	2006 Yes	Wetland within site is suitable habitat	Retain marshy grassland habitat
<i>Watsonalla binaria</i>	Oak Hook-tip	SK000520	2005 Yes	Woodland and scrub within site are suitable habitat	Retain woodland and scrub habitats
<i>Orthonama vittata</i>	Oblique Carpet	SK000520	1972 No	Too long ago	No recommendation
<i>Hygrocybe calyptriformis</i> var. <i>calyptriformis</i>	Pink Waxcap	SK004525	2006 Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Orthosia gracilis</i>	Powdered Quaker	SK009535	2004 Yes	Widespread, feeds on willow	Retain woodland and scrub habitats
<i>Mesoligia literosa</i>	Rosy Minor	SK000520	2004 Yes	Grassland, feeding on grasses	Retain grassland habitat
<i>Hydraecia micacea</i>	Rosy Rustic	SK009535	2006 Yes	Waste ground and marshy places, feeding mainly on docks	Retain marshy grassland habitat
<i>Hoplodrina blanda</i>	Rustic	SK009535	2006 Yes	Range of habitats, feeding on herbaceous plants.	No specific recommendation
<i>Xanthia ictertia</i>	Sallow	SK000520	2005 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Ennomos erosaria</i>	September Thorn	SK009535	2005 Yes	Woodland and scrub within site are suitable habitat	Retain woodland and scrub
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	SK000520	2004 Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Mythimna comma</i>	Shoulder-striped Wainscot	SK009535	2005 Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Alauda arvensis</i>	Sky Lark	SK005525	2007 Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Coenonympha pamphilus</i>	Small Heath	SJ995535	2006 Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Boloria selene</i>	Small Pearl-bordered Fritillary	SK000520	1960 No	Too long ago	No recommendation
<i>Ecliptopera silaceata</i>	Small Phoenix	SK009535	2005 Yes	Woodland and grassland within site are suitable habitat	No specific recommendation
<i>Diarsia rubi</i>	Small Square-spot	SK009535	2006 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Turdus philomelos</i>	Song Thrush	SK004525	2007 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Muscicapa striata</i>	Spotted Flycatcher	SK005525	2007 Yes	Prefers mature trees in open areas	Protect trees along watercourse
<i>Chesias legatella</i>	Streak	SK000520	1960 No	Too long ago	No recommendation

<i>Anthus trivialis</i>	Tree Pipit	SK005525	2007 Yes	As spotted flycatcher	Protect trees along watercourse
<i>Lasiommata megera</i>	Wall	SK009534	2004 Yes	Grassland within site is suitable habitat	Retain grassland habitat
<i>Erinaceus europaeus</i>	West European Hedgehog	SJ985535	1981 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Spilosoma lubricipeda</i>	White Ermine	SK009535	2005 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Satyrium w-album</i>	White-letter Hairstreak	SK000520	1960 No	Too long ago	No recommendation
<i>Poecile montanus</i>	Willow Tit	SK004525	2007 Yes	Scrub within site is suitable habitat	Retain woodland and scrub habitats
<i>Phylloscopus sibilatrix</i>	Wood Warbler	SK005525	2007 Yes	Woodland and scrub within site are suitable habitats	Retain woodland and scrub habitats
<i>Emberiza citrinella</i>	Yellowhammer	SJ995525	2006 Yes	A range of habitats within site are suitable	No specific recommendation

Appendix 3 – Species Lists for Leek 3

Protected species

Latin Name	English Name	Grid ref	Recent date	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SJ985575	1996	No	Exact species not determined	No specific recommendation
<i>Tyto alba</i>	Barn Owl	SJ992563	2004	Yes	Suitable habitat / Potential foraging on site	Retain grassland and marshy grassland.
<i>Sphagnum palustre</i>	Blunt-leaved Bog-moss	SJ996581	2006	Yes	Wetland within site is potentially suitable habitat, but the habitat has probably not been established long enough	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SJ985565	2007	Yes	Wintering species	Retain hedges and woodlands, or provide mitigatory habitat.
<i>Plecotus auritus</i>	Brown Long-eared Bat	SJ982578	2008	Yes	Likely to forage within the Site. Roosting less likely as there are no buildings in the site	Protect foraging habitat
<i>Rana temporaria</i>	Common Frog	SJ988579	2006	Yes	Wetland on site provides potential habitat	Retain marshy grassland
<i>Bucephala clangula</i>	Common Goldeneye	SJ993583	2007	No	Unsuitable habitat	No recommendation
<i>Alcedo atthis</i>	Common Kingfisher	SJ995575	2007	No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SJ991567	2008	Yes	Likely to forage within the Site / Roosting potential in trees	Bat survey may be required New housing should ideally have a range of bat-friendly roof tiles and / or bricks. Natural habitat features for foraging should also be provided
<i>Myotis daubentonii</i>	Daubenton's Bat	SJ993587	2003	Yes	Likely to forage within the Site / Roosting potential in trees	Bat survey required if mature trees may be affected by development. Protect foraging habitats.
<i>Meles meles</i>	Eurasian Badger	SJ985582	2008	Yes	Likely to forage within the Site / Potential on site	Badger survey may be required if site likely to be affected by development. Mitigation where possible; this will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SJ985565	2007	Yes	Suitable habitat / Potential on site in woodland, although species is rather rare	No specific recommendation
<i>Lutra lutra</i>	European Otter	SJ995585	2007	Yes	Suitable habitat for territory - river nearby	Possible survey may be required;

<i>Arvicola terrestris</i>	European Water Vole	SJ987579	2000	No	Unsuitable habitat	protect habitat, especially woodland at west end of site. No recommendation
<i>Turdus pilaris</i>	Fieldfare	SJ985565	2007	Yes	Winter visitor, feeding in a range of habitats	As brambling
<i>Natrix natrix</i>	Grass Snake	SJ989573	2006	Yes	Suitable habitat / Potential on site as recorded a few metres from site boundary	Retain marshy grassland
<i>Sphagnum recurvum</i>	Moss	SJ996581	2000	Yes	As blunt-leaved bog-moss	As blunt-leaved bog-moss
<i>Myotis nattereri</i>	Natterer's Bat	SJ975565	1993	Yes	Likely to forage within the Site / Roosting potential in trees	As common pipistrelle
<i>Nyctalus noctula</i>	Noctule Bat	SJ993587	2003	Yes	Likely to forage within the Site / Roosting potential in trees	As common pipistrelle
<i>Anas acuta</i>	Northern Pintail	SJ965575	2005	No	Unsuitable habitat	No recommendation
<i>Pandion haliaetus</i>	Osprey	SJ995585	1998	No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SJ995568	2006	Yes	As common pipistrelle	As common pipistrelle
<i>Mustela putorius</i>	Polecat	SJ985585	2007	Yes	usually found in farmland and near habitation. Feed on rabbits and rats.	No specific recommendation
<i>Milvus milvus</i>	Red Kite	SJ985565	1998	No	Unsuitable habitat	No recommendation
<i>Turdus iliacus</i>	Redwing	SJ985565	2007	yes	Winter visitor, feeding in fields, hedges and orchards	As brambling
<i>Anguis fragilis</i>	Slow-worm	SJ985565	1840	No	Very old record.	No recommendation
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	SJ995568	2003	Yes	As common pipistrelle	As common pipistrelle
<i>Sphagnum squarrosum</i>	Spiky Bog-moss	SJ985583	2005	Yes	As blunt-leaved bog-moss	As blunt-leaved bog-moss
<i>Myotis mystacinus</i>	Whiskered Bat	SJ976555	1994	Yes	Likely to forage within the Site / Roosting potential in trees	As common pipistrelle

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Recent date	Likely Effect	Further Comments	Recommendations
<i>Lepus europaeus</i>	Brown Hare	SJ985585	2007	Yes	Suitable Habitat	Mammal Survey
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SJ985575	2007	Yes	Woodland and scrub within site are suitable habitats	Protect woodland and scrub habitat
<i>Locustella naevia</i>	Common Grasshopper Warbler	SJ965575	2003	Yes	Marshland and scrub. Suitable habitat in and around	Retain hedges, scrub and grassland habitats, especially marshy grassland

<i>Carduelis cannabina</i>	Common Linnet	SJ965575	2005	Yes	Grassland within site is suitable habitat	Protect grassland habitat
<i>Gallinago gallinago</i>	Common Snipe	SJ993581	2007	Yes	Marshy grassland is suitable habitat	Retain marshy grassland habitat
<i>Sturnus vulgaris</i>	Common Starling	SJ985565	2007	Yes	Woodland within site is suitable habitat	Protect woodland and scrub habitat
<i>Bufo bufo</i>	Common Toad	SJ985572	1988	Yes	Pond within site is suitable habitat, and range of other habitats may be used outside the breeding season.	Retain pond and marshy grassland habitats
<i>Erynnis tages</i>	Dingy Skipper	SJ985585	1999	Yes	Grassland within site is suitable habitat	Protect grassland habitat
<i>Prunella modularis</i>	Dunnock	SJ985575	2007	Yes	Seen on site, A range of habitats within site are suitable	No specific recommendation
<i>Genista tinctoria</i>	Dyer's Greenweed	SK001580	1982	No	Too long ago	No recommendation
<i>Numenius arquata</i>	Eurasian Curlew	SK004565	2006	No	Unsuitable habitat	No recommendation
<i>Passer montanus</i>	Eurasian Tree Sparrow	SJ965575	2007	Yes	Woodland and scrub within site are suitable habitats	Protect woodland and scrub habitat
<i>Passer domesticus</i>	House Sparrow	SJ985575	2007	Yes	Species of gardens and farmland	No specific recommendation
<i>Andrena (Andrena) clarkella</i>	insect - hymenopteran	SJ992586	2007	Yes	Grassland within site is suitable habitat	Protect grassland habitat
<i>Carduelis cabaret</i>	Lesser Redpoll	SJ995585	2003	Yes	Woodland species	Protect woodland and scrub habitat
<i>Vanellus vanellus</i>	Northern Lapwing	SJ985565	2007	Yes	Grassland within site is suitable habitat	Protect grassland habitat
<i>Hygrocybe calyptriformis</i> var. <i>calyptriformis</i>	Pink Waxcap	SJ989557	1982	Yes	Grassland within site is suitable habitat	Protect grassland habitat
<i>Xanthorhoe decoloraria</i> subsp. <i>decoloraria</i>	Red Carpet	SJ985595	1898	No	Too long ago	No recommendation
<i>Emberiza schoeniclus</i>	Reed Bunting	SJ983574	2007	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Alauda arvensis</i>	Sky Lark	SJ986575	2006	Yes	Found on the site	Protect grassland habitat
<i>Coenonympha pamphilus</i>	Small Heath	SJ988559	2000	Yes	Grassland within site is suitable habitat	Protect grassland habitat
<i>Turdus philomelos</i>	Song Thrush	SJ985575	2007	Yes	Requires woodlands and well-established gardens	No specific recommendation
<i>Muscicapa striata</i>	Spotted Flycatcher	SJ995575	2007	Yes	Requires mature trees, especially in open areas	Protect woodland and mature trees

<i>Erinaceus europaeus</i>	West European Hedgehog	SJ993575	2006 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Motacilla flava</i>	Yellow Wagtail	SK002580	1982 No	Unsuitable habitat	No recommendation
<i>Emberiza citrinella</i>	Yellowhammer	SJ965575	2007 Yes	A range of habitats within site are suitable	No specific recommendation

Appendix 4 – Species Lists for Churnet Works

Protected species

Latin Name	English Name	Grid ref	Recent date	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SJ985575	1996	Yes	Exact species not determined	No specific recommendation
<i>Tyto alba</i>	Barn Owl	SJ992563	2004	Yes	Suitable habitat / Potential foraging on site	If buildings are affected by development then a Barn owl survey is likely to be required. If grassland habitat is lost then adequate compensatory habitat should be provided.
<i>Sphagnum palustre</i>	Blunt-leaved Bog-moss	SJ996581	2006	No	Unsuitable habitat	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SJ975575	2007	No	Site is probably of low potential	No recommendation
<i>Plecotus auritus</i>	Brown Long-eared Bat	SJ972576	2008	Yes	Likely to forage within the Site / Roosting potential	Of particular concern where building alterations are proposed, in which case a Bat survey required. Provide compensatory foraging habitat.
<i>Rana temporaria</i>	Common Frog	SJ975565	2006	No	Unsuitable habitat	No recommendation
<i>Bucephala clangula</i>	Common Goldeneye	SJ965575	2007	No	Unsuitable habitat	No recommendation
<i>Alcedo atthis</i>	Common Kingfisher	SJ975575	2009	Yes	Suitable habitat / Potential on site	Protect and buffer watercourse
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SJ968578	2008	Yes	Likely to forage within the Site / Roosting potential	As brown long-eared bat
<i>Myotis daubentonii</i>	Daubenton's Bat	SJ956577	2003	Yes	Likely to forage within the Site / Roosting potential	As brown long-eared bat
<i>Meles meles</i>	Eurasian Badger	SJ972566	2008	No	Site is probably of low potential	No recommendation
<i>Falco subbuteo</i>	Eurasian Hobby	SJ985565	2007	No	Unsuitable habitat	No recommendation
<i>Lutra lutra</i>	European Otter	SJ971572	2007	Yes	Suitable habitat / Potential on site	Otter survey required
<i>Arvicola terrestris</i>	European Water Vole	SJ977572	2000	Yes	Suitable habitat / Present in site at time of survey	Water Vole survey required, Protect and buffer watercourse
<i>Turdus pilaris</i>	Fieldfare	SJ985565	2007	No	Rare breeder in Britain	No recommendation
<i>Austroptamobius</i>	Freshwater White-	SJ974553	1985	Yes	Not recent record but suitable habitat / Potential on site	Protect and buffer

<i>pallipes</i>	clawed Crayfish					watercourse
<i>Natrix natrix</i>	Grass Snake	SJ982571	2006	Yes	Suitable habitat / Potential on site	Reptile survey advisable if developing site. Provide compensatory habitat.
<i>Triturus cristatus</i>	Great Crested Newt	SJ973551	2004	No	Site is probably of low potential because it is surrounded by running water	No recommendation
<i>Falco columbarius</i>	Merlin	SJ955575	2009	No	Unsuitable habitat	No recommendation
<i>Sphagnum recurvum</i>	moss	SJ996581	2000	No	Unsuitable habitat	No recommendation
<i>Myotis</i>	Myotis Bat species	SJ966564	2006	Yes	Exact species not determined	No specific recommendation
<i>Myotis nattereri</i>	Natterer's Bat	SJ975565	1993	Yes	Likely to forage within the Site / Roosting potential	As common pipistrelle
<i>Nyctalus noctula</i>	Noctule Bat	SJ956577	2003	Yes	Likely to forage within the Site	As common pipistrelle
<i>Anas acuta</i>	Northern Pintail	SJ965575	2005	No	Unsuitable habitat	No recommendation
<i>Pandion haliaetus</i>	Osprey	SJ995585	1998	No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SJ973571	2006	Yes	As common pipistrelle	As common pipistrelle
<i>Mustela putorius</i>	Polecat	SJ985585	2007	No	Site is probably of low potential	No specific recommendation
<i>Milvus milvus</i>	Red Kite	SJ985565	1998	No	Unsuitable habitat	No recommendation
<i>Turdus iliacus</i>	Redwing	SJ975575	2007	No	Rare breeder in Britain	No recommendation
<i>Anguis fragilis</i>	Slow-worm	SJ985565	1940	Yes	No recent records / However suitable habitat present	Reptile survey recommended
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	SJ995568	2003	Yes	As common pipistrelle	As common pipistrelle
<i>Sphagnum squarrosum</i>	Spiky Bog-moss	SJ985583	2005	No	Unsuitable habitat	No recommendation
<i>Myotis mystacinus</i>	Whiskered Bat	SJ976555	1994	Yes	Site is probably of low potential	As common pipistrelle

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Recent date	Likely Effect	Further Comments	Recommendations
<i>Lepus europaeus</i>	Brown Hare	SJ985585	2007	Yes	Grassland within site may be suitable habitat	If grassland is affected by development provide compensatory habitat.
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SJ985575	2007	No	Site is probably of low potential	No recommendation
<i>Locustella naevia</i>	Common Grasshopper Warbler	SJ965575	2003	Yes	Potential suitable habitat	If site is affected by development provide compensatory habitat
<i>Carduelis cannabina</i>	Common Linnet	SJ965575	2005	Yes	Suitable Habitat	As brown hare
<i>Gallinago gallinago</i>	Common Snipe	SJ965575	2008	No	Unsuitable habitat	No recommendation
<i>Sturnus vulgaris</i>	Common Starling	SJ985565	2007	Yes	Species uses a range of habitats	No specific recommendation

<i>Bufo bufo</i>	Common Toad	SJ985572	2004 No	Site is probably of low potential	No recommendation
<i>Erynnis tages</i>	Dingy Skipper	SJ985585	1999 Yes	Suitable Habitat	as brown hare
<i>Prunella modularis</i>	Dunnock	SJ985575	2007 Yes	Seen on site, uses a range of habitats	No specific recommendation
<i>Numerius arquata</i>	Eurasian Curlew	SJ965575	2006 No	Unsuitable habitat	No recommendation
<i>Passer montanus</i>	Eurasian Tree Sparrow	SJ965575	2007 Yes	Suitable Habitat, suburban species	No specific recommendation
<i>Micromys minutus</i>	Harvest Mouse	SJ955577	2005 Yes	Site is probably of low potential	No recommendation
<i>Passer domesticus</i>	House Sparrow	SJ985575	2007 Yes	Prefers human habitation, probably widespread around area	No specific recommendation
<i>Andrena (Andrena) clarkella</i>	insect - hymenopteran	SJ992586	2007 Yes	Site is probably of low potential	No recommendation
<i>Poecile palustris</i>	Marsh Tit	SJ955575	2008 No	Unsuitable habitat	No recommendation
<i>Populus nigra subsp. betulifolia</i>	Native Black Poplar	SJ955575	1901 No	Old record	No recommendation
<i>Vanellus vanellus</i>	Northern Lapwing	SJ965571	2007 Yes	Grassland within site is suitable habitat	Grassland within site is suitable habitat
<i>Hygrocybe calyptriformis var. calyptriformis</i>	Pink Waxcap	SJ989557	1982 No	Unsuitable habitat	No recommendation
<i>Emberiza schoeniclus</i>	Reed Bunting	SJ983574	2008 Yes	Site is probably of low potential	No recommendation
<i>Alauda arvensis</i>	Sky Lark	SJ986575	2005 Yes	Grassland within site is suitable habitat	Retain grassland habitat or provide adequate compensatory habitat
<i>Coenonympha pamphilus</i>	Small Heath	SJ988559	2000 Yes	Grassland within site is suitable habitat	As above
<i>Turdus philomelos</i>	Song Thrush	SJ985575	2007 Yes	Site is probably of low potential	No recommendation
<i>Muscicapa striata</i>	Spotted Flycatcher	SJ985575	2007 Yes	Suitable Habitat	
<i>Erinaceus europaeus</i>	West European Hedgehog	SJ983562	2006 Yes	A range of habitats within site are suitable	No specific recommendation
<i>Poecile montanus</i>	Willow Tit	SJ955575	2007 Yes	Suitable Habitat	
<i>Emberiza citrinella</i>	Yellowhammer	SJ965575	2007 Yes	A range of habitats within site are suitable	No specific recommendation

Appendix 5 – Species Lists for Leek 5 and 6

Protected species

Latin Name	English Name	Grid ref	Recent date	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SJ993568	1996	Yes	Exact species not determined	No specific recommendation
<i>Tyto alba</i>	Barn Owl	SJ996559	2006	Yes	Suitable habitat / Present on site	Survey required, particularly if existing buildings are affected. Protect foraging habitats or provide replacements
<i>Sphagnum palustre</i>	Blunt-leaved Bog-moss	SK001579	2006	No	Site is probably of low potential	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SJ985565	2007	Yes	Feeding potential	Retain hedges and woodlands, or provide compensatory habitat
<i>Plecotus auritus</i>	Brown Long-eared Bat	SJ995565	1992	Yes	Likely to forage within the Site. Pike Hall Farm may provide roosting space	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats
<i>Rana temporaria</i>	Common Frog	SJ996561	2006	Yes	Area of impeded drainage at north end of site may provide suitable habitat	Provide compensatory habitat, possibly as part of SUDS.
<i>Bucephala clangula</i>	Common Goldeneye	SJ993583	2003	No	Unsuitable habitat	No recommendation
<i>Alcedo atthis</i>	Common Kingfisher	SJ995575	2007	No	Unsuitable habitat	No recommendation
<i>Zootoca vivipara</i>	Common Lizard	SK005545	1977	Yes	No recent records / However suitable habitat present	Possible reptile survey, retain suitable habitat or provide replacement
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SJ991567	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing buildings are affected. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
<i>Myotis daubentonii</i>	Daubenton's Bat	SJ993587	2003	Yes	Likely to forage within the Site / Roosting potential	As common pipistrelle
<i>Meles meles</i>	Eurasian Badger	SJ994561	2007	Yes	Likely to forage within the Site / Potential on site	Badger survey may be needed, if found protect where possible; mitigation will depend on size and location of badger groups affected on any given site.
<i>Falco subbuteo</i>	Eurasian Hobby	SJ985565	2007	No	Unsuitable habitat	No recommendation
<i>Lutra lutra</i>	European Otter	SJ979551	2002	No	Unsuitable habitat	No recommendation
<i>Arvicola terrestris</i>	European Water Vole	SJ993581	1997	No	Unsuitable habitat	No recommendation
<i>Turdus pilaris</i>	Fieldfare	SJ985565	2002	No	Rare breeder in Britain	No recommendation

<i>Natrix natrix</i>	Grass Snake	SJ989573	2006	Yes	Site is probably of low potential	No recommendation
<i>Cladonia portentosa</i>	lichen	SK015572	1999	No	Unsuitable habitat	No recommendation
<i>Cladonia arbuscula subsp. arbuscula</i>	lichen	SK015572	1999	No	Unsuitable habitat	No recommendation
<i>Falco columbarius</i>	Merlin	SK015565	2003	No	Unsuitable habitat	No recommendation
<i>Sphagnum recurvum</i>	moss	SJ996581	2000	No	As blunt-leaved bog-moss	No recommendation
<i>Nyctalus noctula</i>	Noctule Bat	SJ993587	2003	Yes	Likely to forage within the Site / Roosting potential	As common pipistrelle; trees are favoured roosts.
<i>Pandion haliaetus</i>	Osprey	SJ995585	1998	No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SJ994567	2001	Yes	As Brown long-eared bat	As common pipistrelle
<i>Milvus milvus</i>	Red Kite	SJ985565	1998	No	Unsuitable habitat	No recommendation
<i>Turdus iliacus</i>	Redwing	SJ997571	2007	Yes	Rare breeder in Britain, but may feed on site in winter	As brambling
<i>Anguis fragilis</i>	Slow-worm	SK005555	1975	Yes	No recent records / However suitable habitat present	As common lizard
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	SJ995568	2003	Yes	As common pipistrelle	As common pipistrelle
<i>Sphagnum squarrosum</i>	Spiky Bog-moss	SJ996581	2005	Yes	As blunt-leaved bog-moss	As blunt-leaved bog-moss
<i>Myotis mystacinus</i>	Whiskered Bat	SJ976555	1994	Yes	Likely to forage within the Site / Roosting potential	As noctule bat

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Most recent record	Likely Effect	Further Comments	Recommendations
<i>Lycia hirtaria</i>	Brindled Beauty	SK001551	2005	Yes	Suitable Habitat - Woodland and suburban species, feeds on broad leaved trees.	No specific recommendation
<i>Dasypolia templi</i>	Brindled Ochre	SK011551	2005	Yes	Larvae feed on hogweed, which is found on road verges and in woodlands	No specific recommendation
<i>Melanchra pisi</i>	Broom Moth	SK011551	2005	No	Unsuitable habitat	No recommendation
<i>Lepus europaeus</i>	Brown Hare	SK002573	2007	Yes	Grassland in site is potentially suitable habitat	If grassland is lost, then consideration should be given to improving nearby land for this species.
<i>Spilosoma luteum</i>	Buff Ermine	SK011551	2005	Yes	Widespread, feeds on a range of plants	No specific recommendation
<i>Atethmia centrago</i>	Centre-barred Sallow	SK011551	2005	Yes	Woodland and scrub within site are suitable habitats	Retain habitats or provide compensatory

<i>Tyria jacobaeae</i>	Cinnabar	SK011551	2005	Yes	Feeds on Ragwort	habitats No specific recommendation
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SJ995555	2007	Yes	Species uses a wide range of habitat	No specific recommendation
<i>Gallinago gallinago</i>	Common Snipe	SJ993581	1997	No	Unsuitable habitat	No recommendation
<i>Sturnus vulgaris</i>	Common Starling	SJ985565	2005	Yes	Species uses a wide range of habitat	No specific recommendation
<i>Bufo bufo</i>	Common Toad	SJ985565	1988	Yes	Area unlikely to be suitable	No specific recommendation
<i>Melanchra persicariae</i>	Dot Moth	SK011551	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Prunella modularis</i>	Dunnock	SJ995555	2007	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Apamea remissa</i>	Dusky Brocade	SK011551	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Ennomos fuscantaria</i>	Dusky Thorn	SK011551	2005	Yes	Woodland and scrub within site are suitable habitats	Retain habitats or provide compensatory habitats
<i>Genista tinctoria</i>	Dyer's Greenweed	SK001580	1982	No	Area unlikely to be suitable	No recommendation
<i>Numenius arquata</i>	Eurasian Curlew	SK004565	2006	No	Unsuitable habitat	No recommendation
<i>Passer montanus</i>	Eurasian Tree Sparrow	SK015565	2004	Yes	Woodland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Hepialus humuli</i>	Ghost Moth	SK001551	2005	Yes	Grassland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Allophytes oxyacanthae</i>	Green-brindled Crescent	SK001551	2005	Yes	A range of habitats within site may be suitable	No specific recommendation
<i>Xestia agathina</i>	Heath Rustic	SK001551	2005	No	Unsuitable habitat	No recommendation
<i>Passer domesticus</i>	House Sparrow	SJ995555	2007	Yes	Species of gardens or farmland	No specific recommendation
<i>Andrena (Andrena) clarkella</i>	insect - hymenopteran	SJ992586	2007	Yes	A range of habitats within site may be suitable	No specific recommendation
<i>Eugnorisma glareosa subsp. glareosa</i>	insect - moth	SK001551	2005	Yes	Woodland species	Retain woodland, or provide other habitat.
<i>Acronicta rumicis</i>	Knot Grass	SK001551	2005	Yes	A range of habitats within site may be suitable	No specific recommendation
<i>Chiasmia clathrata</i>	Latticed Heath	SK001551	2005	Yes	A range of habitats within site may be	No specific

<i>Carduelis cabaret</i>	Lesser Redpoll	SJ995585	2003	Yes	suitable Woodland species	recommendation Retain woodland or provide compensatory habitat.
<i>Caradrina morpheus</i>	Mottled Rustic	SK001551	2004	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Amphipyra tragopoginis</i>	Mouse Moth	SK001551	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Vanellus vanellus</i>	Northern Lapwing	SJ985565	2006	No	Area unlikely to be suitable	No recommendation
<i>Watsonalla binaria</i>	Oak Hook-tip	SK001551	2005	Yes	Woodland and scrub within site are suitable habitats	Retain habitats or provide compensatory habitats
<i>Hygrocybe calyptriformis</i> var. <i>calyptriformis</i>	Pink Waxcap	SJ989557	1982	Yes	Grassland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Orthosia gracilis</i>	Powdered Quaker	SK001551	2004	Yes	Widespread species, feeds on willow. Area unlikely to be suitable	No recommendation
<i>Emberiza schoeniclus</i>	Reed Bunting	SJ993583	2005	Yes	Area unlikely to be suitable	No recommendation
<i>Mesoligia literosa</i>	Rosy Minor	SK001551	2004	Yes	Grassland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Hydraecia micacea</i>	Rosy Rustic	SK001551	2005	No	Area unlikely to be suitable	No recommendation
<i>Hoplodrina blanda</i>	Rustic	SK001551	2004	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Ennomos erosaria</i>	September Thorn	SK001551	2005	Yes	Woodland and scrub within site are suitable habitats	Retain habitats or provide compensatory habitats
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	SK001551	2004	Yes	Grassland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Mythimna comma</i>	Shoulder-striped Wainscot	SK001551	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Alauda arvensis</i>	Sky Lark	SJ985565	2006	Yes	Grassland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Coenonympha pamphilus</i>	Small Heath	SK001551	2004	Yes	Grassland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Ecliptopera silaceata</i>	Small Phoenix	SK001551	2005	Yes	Woodland and open habitats, feeds on willowherbs	No specific recommendation

<i>Diarsia rubi</i>	Small Square-spot	SK001551	2005	Yes	A range of habitats within and near site are suitable	No specific recommendation
<i>Turdus philomelos</i>	Song Thrush	SJ985575	2007	Yes	Woodland and scrub within site and adjacent gardens are suitable habitats	No specific recommendation
<i>Muscicapa striata</i>	Spotted Flycatcher	SJ995575	2007	Yes	Mature trees, especially in open areas; mature trees on site may be suitable	Retain trees
<i>Lasiommata megera</i>	Wall	SK001551	2004	Yes	Grassland within site is suitable habitat	Retain habitats or provide compensatory habitats
<i>Erinaceus europaeus</i>	West European Hedgehog	SJ995555	2006	Yes	Adjacent gardens are suitable habitat	No specific recommendation
<i>Spilosoma lubricipeda</i>	White Ermine	SK001551	2005	Yes	A range of habitats within site are suitable	No specific recommendation
<i>Motacilla flava</i>	Yellow Wagtail	SK002580	1982	Yes	Site unlikely to be suitable	No recommendation

Appendix 6 – Species Lists for Ladydale

NB: Protected species and Biodiversity Action Plan Species searches not carried out because the site is not being proposed for development.

Appendix 7 – Species Lists for Cheadle 1

Protected species

Latin Name	English Name	Grid ref	Most recent record	Likely Effect	Further Comments	Recommendation
<i>Alcedo atthis</i>	Common Kingfisher	SK014438	2007	Yes	Watercourses rather small and probably unsuitable habitat	No recommendation
<i>Arvicola terrestris</i>	European Water Vole	SK015436	2008	Yes	Watercourses in southern two parts of site may be suitable	Protect and buffer watercourse
<i>Chiroptera</i>	a bat	SK005435	1988	No	Exact species not determined	No recommendation
<i>Ciconia ciconia</i>	White Stork	SK015435	2002	No	Unsuitable habitat / Rare breeder in Britain	No recommendation
<i>Falco peregrinus</i>	Peregrine Falcon	SK015435	2006	No	Unsuitable habitat	No recommendation
<i>Falco subbuteo</i>	Eurasian Hobby	SK015435	2006	No	Unsuitable habitat	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SK015435	2009	Yes	Feeding potential	Retain hedges and scrub, or provide mitigatory habitat
<i>Limosa limosa</i>	Black-tailed Godwit	SK015435	2003	No	Unsuitable habitat	No recommendation
<i>Meles meles</i>	Eurasian Badger	SK016436	2008	Yes	Likely to forage within the Site / Potential on site	Protect where possible; mitigation will depend on size and location of badger groups affected on any given site.
<i>Natrix natrix</i>	Grass Snake	SK015435	2006	Yes	Site is probably of low potential	No recommendation
<i>Numenius phaeopus</i>	Whimbrel	SK015435	2006	No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SK011441	2008	Yes	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing buildings are affected. Protect foraging habitats
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SK011441 SK015437	2006	Yes	As pipistrelle	As pipistrelle
<i>Rana temporaria</i>	Common Frog	SK017438	1999	Yes	Site is probably of low potential	No recommendation
<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	SK035445	1927	No	Old record and species now considered extinct in Staffordshire	No recommendation
<i>Sterna hirundo</i>	Common Tern	SJ995435	2007	No	Unsuitable habitat	No recommendation
<i>Tadorna ferruginea</i>	Ruddy Shelduck	SJ995435	2007	No	Unsuitable habitat	No recommendation
<i>Triturus cristatus</i>	Great Crested Newt	SK022452	2006	Yes	Site is probably of low potential and any ponds within 500m appear to be the other side of	No recommendation

<i>Turdus iliacus</i>	Redwing	SK015435	2007 Yes	watercourses. Winter visitor, feeding in fields, hedges and orchards	As brambling
<i>Turdus pilaris</i>	Fieldfare	SK015435	2007 Yes	Winter visitor, feeding in a range of habitats	As brambling
<i>Tyto alba</i>	Barn Owl	SK015435	2007 Yes	Suitable habitat / Potential foraging on site	Barn owl survey may be required. Provide compensatory habitat

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Most recent record	Likely Effect	Further Comments	Recommendations
		SK007448				
<i>Alauda arvensis</i>	Sky Lark	SK015435	2007	Yes	Feeding and nesting	
<i>Amphipyra tragopoginis</i>	Mouse Moth	SK035445	1960	No	Out of date	No recommendation
<i>Anthus trivialis</i>	Tree Pipit	SK035445	2008	No	Unsuitable Habitat	No recommendation
<i>Bufo bufo</i>	Common Toad	SK005435	1892	Yes	Adjacent to stream	
<i>Chesias legatella</i>	Streak	SK035445	1960	No	Out of date	No recommendation
<i>Coenonympha pamphilus</i>	Small Heath	SK010432	2004	No	Feeds on finer grasses, which site lacks Mainly occupying rocky coastal habitats and moorland	No recommendation
<i>Dasypolia templi</i>	Brindled Ochre Lesser Spotted Woodpecker	SK015435	1908	No		No recommendation
<i>Dendrocopos minor</i>	Woodpecker	SK015435	2008	Yes	Suitable Habitat.	
<i>Diarsia rubi</i>	Small Square-spot	SK035445	1960	No	Out of date	No recommendation
<i>Ecliptopera silaceata</i>	Small Phoenix	SK035445	1960	No	Out of date Common in reedbeds and also breeds in drier open areas	No recommendation
<i>Emberiza schoeniclus</i>	Reed Bunting	SK015435	2007	Yes		
<i>Ennomos erosaria</i>	September Thorn	SK035445	1960	No	Out of date	No recommendation
<i>Epirrhoe galiana</i>	Galium Carpet	SK015435	1908	No	Record from too far back	No recommendation
<i>Erinaceus europaeus</i>	West European Hedgehog	SK011443	2007	Yes	Suitable Habitat	
<i>Gallinago gallinago</i>	Common Snipe	SJ995435	2007	Yes	Unsuitable Habitat	No recommendation
<i>Hydraecia micacea</i>	Rosy Rustic	SK035445	1960	No	Out of date	No recommendation
<i>Lasiommata megera</i>	Wall	SK002456	2003	Yes	Suitable Habitat	
<i>Lepus europaeus</i>	Brown Hare	SK015435	2006	Yes	Suitable habitat.	
<i>Muscicapa striata</i>	Spotted Flycatcher	SK015435	2006	Yes	Inhabits deciduous woodlands, parks and gardens, prefers open areas amongst trees	

<i>Numenius arquata</i>	Eurasian Curlew	SK013458	2007 No	Unsuitable Habitat	No recommendation
<i>Passer domesticus</i>	House Sparrow	SK015435	2008 Yes	It is most commonly found in agricultural, urban, or suburban areas	No specific recommendation
<i>Phylloscopus sibilatrix</i>	Wood Warbler	SK035445	2008 No	Unsuitable Habitat	No recommendation
<i>Poecile montanus</i>	Willow Tit	SK015425	2008 Yes	Suitable Habitat	
<i>Prunella modularis</i>	Dunnoek	SK015435	2007 Yes	Farmland Bird BAP	
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SK015435	2008 Yes	Farmland Bird BAP (1km away)	
<i>Sturnus vulgaris</i>	Common Starling	SK015435	2007 Yes	Farmland Bird BAP	
<i>Tholera decimalis</i>	Feathered Gothic	SK035445	1960 No	Out of date	No recommendation
<i>Turdus philomelos</i>	Song Thrush	SK015435	2007 Yes	Suitable Habitat.	
<i>Vanellus vanellus</i>	Northern Lapwing	SJ995435	2007 Yes	Suitable Habitat.	
<i>Xylena exsoleta</i>	Sword-grass	SK015435	1908 No	Unsuitable Habitat	No recommendation

Appendix 8 – Species Lists for Cheadle 2

Protected species

Latin Name	English Name	Grid ref	Most recent I	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SK005435	1997	No	Exact species not determined	No specific recommendation
<i>Tyto alba</i>	Barn Owl	SK015435	2007	Yes	Suitable habitat for roosting at Woodheadhall Farm / Potential foraging within site	Survey recommended; foraging habitat should be provided within any development.
<i>Limosa limosa</i>	Black-tailed Godwit	SK015435	2003	No	Unsuitable habitat	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SK015435	2009	Yes	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
<i>Rana temporaria</i>	Common Frog	SK017438	1999	Yes	Suitable habitat / Potential on site	Protect swamp area near farm and / or provide ponds, possibly within SUDS
<i>Alcedo atthis</i>	Common Kingfisher	SK014438	2007	Yes	Watercourse within site is suitable habitat / Potential on site	Protect watercourse and provide buffering habitat.
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SK015437	2006	Yes	Likely to forage within the Site / Roosting potential in trees and buildings	Bat survey of trees and buildings will be required if these are likely to be affected by development.. Retain hedges and habitat along watercourse for foraging
<i>Meles meles</i>	Eurasian Badger	SK016436	2008	Yes	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SK015435	2007	No	Unsuitable habitat	No recommendation
<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	SK035445	1927	No	Old record and species now considered extinct in Staffordshire	No recommendation
<i>Arvicola terrestris</i>	European Water Vole	SK015436	2008	Yes	Suitable habitat - stream / Potential on site	Water Vole survey will be required. Protect watercourse and provide buffering habitat
<i>Turdus pilaris</i>	Fieldfare	SK015435	2007	Yes	Winter visitor, feeding in a range of habitats	Protect hedges and scrub or provide other habitat

<i>Natrix natrix</i>	Grass Snake	SK015435	1987 Yes	No recent record but suitable habitat / Potential on site	Reptile survey required
<i>Triturus cristatus</i>	Great Crested Newt	SK022452	2006 Yes	No standing water but potential habitat for hibernation and site is within 500 metres of ponds.	GCN survey recommended; there may be a need to provide compensatory habitat.
<i>Falco peregrinus</i>	Peregrine Falcon	SK015435	2006 No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SK016438	2008 Yes	As common pipistrelle	As common pipistrelle
<i>Turdus iliacus</i>	Redwing	SK015435	2007 Yes	Winter visitor, feeding in fields, hedges and orchards	As fieldfare
<i>Numenius phaeopus</i>	Whimbrel	SK015435	2006 No	Unsuitable habitat	No recommendation
<i>Ciconia ciconia</i>	White Stork	SK015435	2002 No	Unsuitable habitat / Rare breeder in Britain	No recommendation

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Most recent record	Likely effect	Further Comments	Recommendations
<i>Dasyptolia templi</i>	Brindled Ochre	SK015435	1908 No		Mainly occupying rocky coastal habitats and moorland	No recommendation
<i>Lepus europaeus</i>	Brown Hare	SK015435	2006 Yes		Suitable habitat.	Mammal Survey
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SK015435	2008 Yes		Farmland Bird BAP (1km away)	Breeding Bird survey
<i>Gallinago gallinago</i>	Common Snipe	SK015425	2007 No		Unsuitable Habitat	
<i>Sturnus vulgaris</i>	Common Starling	SK015435	2007 Yes		Farmland Bird BAP	Breeding Bird survey
<i>Bufo bufo</i>	Common Toad	SK005435	1892 Yes		Adjacent to stream	Amphibian Survey
<i>Prunella modularis</i>	Dunnock	SK015435	2007 Yes		Farmland Bird BAP	Breeding Bird survey
<i>Numenius arquata</i>	Eurasian Curlew	SK011448	2007 No		Unsuitable Habitat	No recommendation
<i>Tholera decimalis</i>	Feathered Gothic	SK035445	1960 No		Out of date	No recommendation
<i>Epirrhoe galiata</i>	Galium Carpet	SK015435	1908 No		Record from too far back	No recommendation
<i>Passer domesticus</i>	House Sparrow	SK015435	2008 Yes		It is most commonly found in agricultural, urban, or suburban areas	Breeding Bird survey
	Lesser Spotted Woodpecker	SK015435	2008 Yes		Suitable Habitat.	Breeding Bird survey
<i>Dendrocopos minor</i>	Woodpecker	SK015435	2008 Yes		Suitable Habitat.	Breeding Bird survey
<i>Amphipyra tragopoginis</i>	Mouse Moth	SK035445	1960 No		Out of date	No recommendation
<i>Vanellus vanellus</i>	Northern Lapwing	SK025425	2007 Yes		Suitable Habitat.	Breeding Bird survey
<i>Emberiza schoeniclus</i>	Reed Bunting	SK015435	2007 Yes		It is common in reedbeds and also	Breeding Bird survey

				breeds in drier open areas	
<i>Hydraecia micacea</i>	Rosy Rustic	SK035445	1960 No	Out of date	No recommendation
<i>Ennomos erosaria</i>	September Thorn	SK035445	1960 No	Out of date	No recommendation
<i>Alauda arvensis</i>	Sky Lark	SK015435	2007 Yes	Feeding and nesting Feeds on finer grasses, which site lacks	Breeding Bird survey
<i>Coenonympha pamphilus</i>	Small Heath	SK010432	2004 No	Out of date	No specific recommendation
<i>Ecliptopera silaceata</i>	Small Phoenix	SK035445	1960 No	Out of date	No recommendation
<i>Diarsia rubi</i>	Small Square-spot	SK035445	1960 No	Out of date	No recommendation
<i>Turdus philomelos</i>	Song Thrush	SK015435	2007 Yes	Suitable Habitat. deciduous woodlands, parks and gardens, with a preference for open areas amongst trees	Breeding Bird survey
<i>Muscicapa striata</i>	Spotted Flycatcher	SK015435	2006 Yes	Out of date	Breeding Bird survey
<i>Chesias legatella</i>	Streak	SK035445	1960 No	Out of date	No recommendation
<i>Xylena exsoleta</i>	Sword-grass	SK015435	1908 No	Out of date	No recommendation
<i>Anthus trivialis</i>	Tree Pipit	SK035445	2008 No	Unsuitable Habitat	No recommendation
<i>Lasiommata megera</i>	Wall	SK002456	2003 Yes	Suitable Habitat	Butterfly survey
<i>Erinaceus europaeus</i>	West European Hedgehog	SK011443	2007 Yes	Suitable Habitat	Mammal Survey
<i>Poecile montanus</i>	Willow Tit	SK015425	2008 Yes	Suitable Habitat	Breeding Bird survey
<i>Phylloscopus sibilatrix</i>	Wood Warbler	SK035445	2008 No	Unsuitable Habitat	No recommendation

Appendix 9 – Species Lists for Cheadle EM1

Protected species

Latin Name	English Name	Grid ref	Most recent record	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SK005423	1997	Yes	Exact species not determined	No recommendation
<i>Vipera berus</i>	Adder	SK004404	2001	Yes	Site unlikely to support this species	No recommendation
<i>Tyto alba</i>	Barn Owl	SK015415	2007	Yes	Suitable habitat / Potential foraging on site	Provide foraging habitat within site or elsewhere nearby.
<i>Limosa limosa</i>	Black-tailed Godwit	SJ985435	2006	No	Unsuitable habitat	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SK015425	2009	Yes	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
<i>Rana temporaria</i>	Common Frog	SJ993416	2007	No	Site is probably of low potential	No recommendation
<i>Alcedo atthis</i>	Common Kingfisher	SK005415	2008	Yes	Suitable habitat / Potential on site	Protect and buffer watercourse
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SK005426	2006	Yes	Likely to forage within the Site / Roosting potential in trees	Bat survey required. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
<i>Sterna hirundo</i>	Common Tern	SJ995435	2007	No	Unsuitable habitat	No recommendation
<i>Meles meles</i>	Eurasian Badger	SJ990419	2006	Yes	Likely to forage within the Site / Potential on site	Survey may be necessary. Mitigation will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SK015435	2006	No	Unsuitable habitat	No recommendation
<i>Lutra lutra</i>	European Otter	SK005414	2002	Yes	Suitable habitat - stream / Potential on site	As kingfisher
<i>Arvicola terrestris</i>	European Water Vole	SJ997425	2008	Yes	Suitable habitat - stream / Potential on site	As kingfisher, survey may be necessary
<i>Turdus pilaris</i>	Fieldfare	SK015435	2007	Yes	Winter visitor, feeding in a range of habitats	As brambling
<i>Regulus ignicapilla</i>	Firecrest	SK005415	2001	No	Unsuitable habitat / Mainly found in the southeast of UK	No recommendation
<i>Anas querquedula</i>	Garganey	SJ985425	2001	No	Unsuitable habitat	No recommendation
<i>Natrix natrix</i>	Grass Snake	SK002419	2006	Yes	Site is probably of low potential	No recommendation

<i>Triturus cristatus</i>	Great Crested Newt	SK010406	2007	Yes	Site is probably of low potential because there are no apparent ponds within 500m.	No recommendation
<i>Falco peregrinus</i>	Peregrine Falcon	SK015435	2006	No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SK005415	2008	Yes	As common pipistrelle	As common pipistrelle
<i>Turdus iliacus</i>	Redwing	SJ995435	2007	Yes	Winter visitor, feeding in fields, hedges and orchards	As brambling
<i>Tadorna ferruginea</i>	Ruddy Shelduck	SJ995415	2008	No	Unsuitable habitat	No recommendation
<i>Lycopodium clavatum</i>	Stag's-horn Clubmoss	SK010408	1986	No	Unsuitable habitat	No recommendation
<i>Numenius phaeopus</i>	Whimbrel	SK015435	2006	No	Unsuitable habitat	No recommendation
<i>Ciconia ciconia</i>	White Stork	SK015435	2002	No	Unsuitable habitat / Rare breeder in Britain	No recommendation

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Most recent record	Likely Effect	Further Comments	Recommendations
<i>Dasypolia templi</i>	Brindled Ochre	SK015435	1908	No	Mainly occupying rocky coastal habitats and moorland	No recommendation
<i>Lepus europaeus</i>	Brown Hare	SK015435	2000	Yes	Suitable habitat. Recorded 1.75km away	Mammal Survey
<i>Tyria jacobaeae</i>	Cinnabar	SJ991416	2006	Yes	Feeds on Ragwort	No specific recommendation
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SK013426	2008	Yes	Farmland Bird BAP (1km away)	Breeding Bird survey
<i>Gallinago gallinago</i>	Common Snipe	SJ995435	2007	No	Unsuitable Habitat	No recommendation
<i>Sturnus vulgaris</i>	Common Starling	SJ995435	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Bufo bufo</i>	Common Toad	SJ993416	2007	Yes	Adjacent to stream	Amphibian Survey
<i>Erynnis tages</i>	Dingy Skipper	SJ991416	2007	No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Prunella modularis</i>	Dunnoek	SJ995435	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Andrena (Trachandrena) haemorrhoea</i>	Early Mining Bee	SJ993416	2006	No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Numenius arquata</i>	Eurasian Curlew	SJ995435	2007	No	Unsuitable Habitat	No recommendation
<i>Passer montanus</i>	Eurasian Tree Sparrow	SJ995425	2008	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Epiphrhoe galiata</i>	Galium Carpet	SK015435	1908	No	Unsuitable Habitat	No recommendation

<i>Nomada goodeniana</i>	Gooden's Nomad Bee	SJ995415	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Andrena (Melandrena) cineraria</i>	Grey Mining Bee	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Perdix perdix</i>	Grey Partridge	SJ995415	2008 Yes	Suitable Habitat.	Breeding Bird survey
<i>Andrena (Euandrena) bicolor</i>	Gwynne's Mining Bee	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Passer domesticus</i>	House Sparrow	SJ995435	2008 Yes	It is most commonly found in agricultural, urban, or suburban areas	Breeding Bird survey
<i>Andrena (Andrena) clarkella</i>	insect - hymenopteran	SK009409	2001 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Ammophila sabulosa</i>	insect - hymenopteran	SJ991416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Hoplitis (Alcidamea) claviventris</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Sphecodes gibbus</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Sphecodes pellucidus</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Andrena (Simandrena) dorsata</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Nomada leucophthalma</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Andrena (Melandrena) nigroaenea</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Pompilus cinereus</i>	Leaden Spider Wasp	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	SK005415	2008 Yes	Suitable Habitat.	Breeding Bird survey
<i>Vanellus vanellus</i>	Northern Lapwing	SK005415	2007 Yes	Suitable Habitat.	Breeding Bird survey
<i>Emberiza schoeniclus</i>	Reed Bunting	SJ995453	2007 Yes	It is common in reedbeds and also breeds in drier open areas such as moorland and cultivation	Breeding Bird survey
<i>Alauda arvensis</i>	Sky Lark	SK015425	2007 Yes	Feeding and nesting	Breeding Bird survey
<i>Coenonympha pamphilus</i>	Small Heath	SJ994415	2006 No	Feeds on finer grasses, which site lacks	No recommendation
<i>Turdus philomelos</i>	Song Thrush	SK015425	2007 Yes	Suitable Habitat.	Breeding Bird survey
<i>Muscicapa striata</i>	Spotted Flycatcher	SK015435	2006 Yes	deciduous woodlands, parks and	Breeding Bird survey

<i>Xylena exsoleta</i>	Sword-grass West European	SK015435	1908 No	gardens, prefers open areas amongst trees Unsuitable Habitat	No recommendation
<i>Erinaceus europaeus</i>	Hedgehog	SJ987434	2006 Yes	Suitable Habitat	Mammal Survey
<i>Poecile montanus</i>	Willow Tit	SK015425	2008 Yes	Suitable Habitat	Breeding Bird survey

Appendix 10 – Species Lists for Cheadle 4 & 5

Protected species

Latin Name	English Name	Grid ref	Most recent record	Likely Effect	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SK005423	1997	Yes	Exact species not determined	No recommendation
<i>Vipera berus</i>	Adder	SK004404	2001	Yes	The site is unlikely to support this species	No recommendation
<i>Tyto alba</i>	Barn Owl	SK015415	2007	Yes	Suitable habitat / Potential foraging on site	Provide foraging habitat within site or elsewhere nearby
<i>Limosa limosa</i>	Black-tailed Godwit	SJ985435	2006	No	Unsuitable habitat	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SK015425	2009	Yes	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
<i>Plecotus auritus</i>	Brown Long-eared Bat	SK027416	1999	No	Recorded 2km away from site / last record 10 yrs ago	No recommendation
<i>Rana temporaria</i>	Common Frog	SJ998414	2007	Yes	The site is unlikely to support this species	No recommendation
<i>Alcedo atthis</i>	Common Kingfisher	SK007415	2008	Yes	Suitable habitat along Mobberley Brook to the south of the Site	Protect and buffer watercourse
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SK008423	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
<i>Sterna hirundo</i>	Common Tern	SJ995435	2007	No	Unsuitable habitat	No recommendation
<i>Meles meles</i>	Eurasian Badger	SK001414	2007	Yes	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SK015435	2006	No	Unsuitable habitat	No recommendation
<i>Lutra lutra</i>	European Otter	SK005414	2002	Yes	As kingfisher	As kingfisher
<i>Arvicola terrestris</i>	European Water	SK005414	2008	Yes	Suitable habitat - stream / Potential	Survey may be

	Vole			on site	necessary. Protect and buffer watercourse
<i>Turdus pilaris</i>	Fieldfare	SK015425	2007 Yes	Winter visitor, feeding in a range of habitats	As brambling
<i>Regulus ignicapilla</i>	Firecrest	SK005415	2001 No	Unsuitable habitat / Mainly found in the southeast of UK	No recommendation
<i>Anas querquedula</i>	Garganey	SJ985425	2001 No	Unsuitable habitat	No recommendation
<i>Natrix natrix</i>	Grass Snake	SK002419	2006 Yes	The site is unlikely to support this species	No recommendation
<i>Triturus cristatus</i>	Great Crested Newt	SK015410	2007 Yes	Site is probably of low potential and any ponds within 500m appear to be the other side of watercourses.	No recommendation
<i>Falco peregrinus</i>	Peregrine Falcon	SK015435	2006 No	Unsuitable habitat	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SK005415	2008 Yes	As common pipistrelle	As common pipistrelle
<i>Turdus iliacus</i>	Redwing	SK015435	2007 Yes	Winter visitor, feeding in fields, hedges and orchards	As brambling
<i>Tadorna ferruginea</i>	Ruddy Shelduck	SK005415	2008 No	Unsuitable habitat	No recommendation
<i>Lycopodium clavatum</i>	Stag's-horn Clubmoss	SK010408	1986 No	Unsuitable habitat	No recommendation
<i>Numenius phaeopus</i>	Whimbrel	SK015435	2006 No	Unsuitable habitat	No recommendation
<i>Ciconia ciconia</i>	White Stork	SK015435	2002 No	Unsuitable habitat / Rare breeder in Britain	No recommendation

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Most recent	Likely Effect	Further Comments	Recommendations
<i>Dasypolia templi</i>	Brindled Ochre	SK015435	1908	No	Mainly occupying rocky coastal	No recommendation
<i>Lepus europaeus</i>	Brown Hare	SK015435	2000	Yes	Suitable habitat.	Mammal Survey
<i>Tyria jacobaeae</i>	Cinnabar	SJ991416	2006	Yes	Feeds on Ragwort	Day Flying Moth Survey
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SK013426	2008	Yes	Farmland Bird BAP (1km away)	Breeding Bird survey
<i>Gallinago gallinago</i>	Common Snipe	SJ995435	2007	No	Unsuitable Habitat	No recommendation
<i>Sturnus vulgaris</i>	Common Starling	SK015425	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Bufo bufo</i>	Common Toad	SJ998414	2006	Yes	Adjacent to stream	Amphibian Survey

<i>Erynnis tages</i>	Dingy Skipper	SJ991416	2007 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Prunella modularis</i>	Dunnock	SJ995435	2007 Yes	Farmland Bird BAP	Breeding Bird survey
<i>Andrena (Trachandrena) haemorrhoea</i>	Early Mining Bee	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Numenius arquata</i>	Eurasian Curlew	SJ995435	2007 No	Unsuitable Habitat	No recommendation
<i>Passer montanus</i>	Eurasian Tree Sparrow	SJ995425	2008 Yes	Farmland Bird BAP	Breeding Bird survey
<i>Epirrhoe galiata</i>	Galium Carpet	SK015435	1908 No	Unsuitable Habitat	No recommendation
<i>Nomada goodeniana</i>	Gooden's Nomad Bee	SJ995415	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Perdix perdix</i>	Grey Partridge	SJ995415	2008 Yes	Suitable Habitat.	Breeding Bird survey
<i>Andrena (Euandrena) bicolor</i>	Gwynne's Mining Bee	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Passer domesticus</i>	House Sparrow	SJ995435	2008 Yes	It is most commonly found in agricultural, urban, or suburban areas, and avoids unmodified areas	Breeding Bird survey
<i>Andrena (Andrena) clarkella</i>	insect - hymenopteran	SK009409	2001 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Ammophila sabulosa</i>	insect - hymenopteran	SJ991416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Hoplitis (Alcidamea) claviventris</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Sphecodes gibbus</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Sphecodes pellucidus</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Andrena (Simandrena) dorsata</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Nomada leucophthalma</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Andrena (Melandrena) nigroaenea</i>	insect - hymenopteran	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Pompilus cinereus</i>	Lead Spider Wasp	SJ993416	2006 No	Unsuitable Habitat (found on Huntley Quarry)	No recommendation
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	SK005415	2008 Yes	Suitable Habitat.	Breeding Bird survey
<i>Vanellus vanellus</i>	Northern Lapwing	SK005415	2007 Yes	Suitable Habitat.	Breeding Bird survey

<i>Emberiza schoeniclus</i>	Reed Bunting	SJ995453	2007	Yes	It is common in reedbeds and also breeds in drier open areas such as moorland and cultivation	Breeding Bird survey
<i>Alauda arvensis</i>	Sky Lark	SK015425	2007	Yes	Feeding and nesting	Breeding Bird survey
<i>Coenonympha pamphilus</i>	Small Heath	SJ994415	2006	No	Feeds on finer grasses, which site lacks	No recommendation
<i>Turdus philomelos</i>	Song Thrush	SK015425	2007	Yes	Suitable Habitat. deciduous woodlands, parks and gardens, prefers open areas amongst trees	Breeding Bird survey
<i>Muscicapa striata</i>	Spotted Flycatcher	SK015435	2006	Yes	Unsuitable Habitat	Breeding Bird survey
<i>Xylena exsoleta</i>	Sword-grass West European	SK015435	1908	No	A range of habitats within site are suitable	No recommendation
<i>Erinaceus europaeus</i>	Hedgehog	SJ987434	2006	Yes	Suitable Habitat	No specific recommendation
<i>Poecile montanus</i>	Willow Tit	SK015425	2008	Yes		Breeding Bird survey

Appendix 11 – Species Lists for Biddulph 4

Protected species

Latin Name	English Name	Grid ref	Most recent record	Likely to affect site?	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SJ882571	2007	Yes	Exact species not determined	No recommendation
<i>Tyto alba</i>	Barn Owl	SJ895555	1959	No	No recent records / Greenway Bank park	No recommendation
<i>Chlidonias niger</i>	Black Tern	SJ895555	2008	No	Unsuitable habitat	No recommendation
<i>Limosa limosa</i>	Black-tailed Godwit	SJ895555	2003	No	Unsuitable habitat / Passing by site, migrating	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SJ875565	2007	Yes	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
<i>Plecotus auritus</i>	Brown Long-eared Bat	SJ885565	1997	Yes	Usually roosting in loft spaces, forages over a range of habitats	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats, or provide other areas.
<i>Loxia curvirostra</i>	Common Crossbill	SJ895555	2008	No	Unsuitable habitat	No recommendation
<i>Rana temporaria</i>	Common Frog	SJ888583	1984	Yes	Site is probably of low potential	No recommendation
<i>Bucephala clangula</i>	Common Goldeneye	SJ895555	2007	No	Unsuitable habitat	No recommendation
<i>Tringa nebularia</i>	Common Greenshank	SJ895555	2007	No	Unsuitable habitat	No recommendation
<i>Alcedo atthis</i>	Common Kingfisher	SJ895555	2007	Yes	Suitable habitat / Potential on site	Protect and buffer watercourses.
<i>Zootoca vivipara</i>	Common Lizard	SJ895555	1983	No	Unsuitable habitat / Old record from Greenway Bank park	No recommendation
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SJ886567	2006	Yes	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing buildings are affected. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible

					protection
<i>Melanitta nigra</i>	Common Scoter	SJ895555	1959 No	Unsuitable habitat / No recent records	No recommendation
<i>Sterna hirundo</i>	Common Tern	SJ895555	1982 No	Unsuitable habitat / No recent records	No recommendation
<i>Meles meles</i>	Eurasian Badger	SJ880573	2007 Yes	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SJ895555	2008 No	Unsuitable habitat / Knypersley Reservoir	No recommendation
<i>Circus aeruginosus</i>	Eurasian Marsh Harrier	SJ895555	2008 No	Unsuitable habitat / Knypersley Reservoir	No recommendation~
<i>Pernis apivorus</i>	European Honey-buzzard	SJ885565	2006 No	Unsuitable habitat	No recommendation
<i>Serinus serinus</i>	European Serin	SJ895555	1995 No	Unsuitable habitat (rare sighting)	No recommendation
<i>Arvicola terrestris</i>	European Water Vole	SJ882562	2000 Yes	Suitable habitat-watercourse on site / Potential on site	Water Vole survey, protect watercourse and provide buffering habitat
<i>Turdus pilaris</i>	Fieldfare	SJ875565	2008 Yes	Winter visitor, feeding in a range of habitats	As brambling
<i>Austroptamobius pallipes</i>	Freshwater White-clawed Crayfish	SJ895555	1991 No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation
<i>Natrix natrix</i>	Grass Snake	SJ895555	1983 No	recorded from Greenway Bank park / No recent records	No recommendation
<i>Tringa ochropus</i>	Green Sandpiper	SJ895555	2005 No	Unsuitable habitat in site recorded from Knypersley Reservoir only	No recommendation
<i>Egretta garzetta</i>	Little Egret	SJ895555	2008 No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation
<i>Larus melanocephalus</i>	Mediterranean Gull	SJ895555	2006 No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation
<i>Nyctalus noctula</i>	Noctule Bat	SJ895555	1983 Yes	Recorded from Greenway Bank park only / No recent records	Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
<i>Pandion haliaetus</i>	Osprey	SJ895555	2007 No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation
<i>Falco peregrinus</i>	Peregrine Falcon	SJ895555	2007 No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SJ882573	1998 Yes	As common pipistrelle	As common pipistrelle

<i>Turdus iliacus</i>	Redwing	SJ875575	2007	Yes	Winter visitor, feeding in fields, hedges and orchards	As brambling
<i>Sterna sandvicensis</i>	Sandwich Tern	SJ895555	2008	No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation
<i>Podiceps auritus</i>	Slavonian Grebe	SJ895555	2007	No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation
<i>Galanthus nivalis</i>	Snowdrop	SJ895555	1983	No	Unsuitable habitat in site recorded from Greenway Bank park	No recommendation
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	SJ893586	2006	Yes	As common pipistrelle	As common pipistrelle
<i>Myotis mystacinus / brandtii</i>	Whiskered / Brandt's Bat	SJ885565	1997	Yes	Likely to forage within the Site / Roosting potential	Bat survey required Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
<i>Cygnus cygnus</i>	Whooper Swan	SJ895555	2007	No	Unsuitable habitat in site recorded from Knypersley Reservoir	No recommendation

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Most recent record	Likely Effect	Further Comments	Recommendations
<i>Lepus europaeus</i>	Brown Hare	SJ885575	1999	Yes	Use rough grassland	Mammal Survey
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SJ875575	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Cuculus canorus</i>	Common Cuckoo	SJ865565	2007	Yes	Lives in open land	Breeding Bird survey
<i>Carduelis cannabina</i>	Common Linnet	SJ875575	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Gallinago gallinago</i>	Common Snipe	SJ885565	2009	No	No large water bodies on site	No recommendation
<i>Sturnus vulgaris</i>	Common Starling	SJ875575	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Bufo bufo</i>	Common Toad	SJ875565	1999	Yes	1 small pool on site, may use for hibernation	Amphibian Survey inc GCN
<i>Prunella modularis</i>	Duncock	SJ875575	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Numenius arquata</i>	Eurasian Curlew	SJ875575	2007	No	Nest in bare scrape on meadow or similar habitat near to water source.	Breeding Bird survey
<i>Passer montanus</i>	Eurasian Tree Sparrow	SJ875565	2006	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Perdix perdix</i>	Grey Partridge	SJ875555	2007	Yes	Breeding habitat and feeding supplies, but prefers cereal fields	Breeding Bird survey

<i>Larus argentatus</i>	Herring Gull	SJ765555	1982 No	On Greenway Bank Country Park, not seen since 1983	No recommendation
<i>Passer domesticus</i>	House Sparrow	SJ875575	2007 Yes	It is most commonly found in agricultural, urban, or suburban areas, and avoids unmodified areas	Breeding Bird survey
<i>Juniperus communis</i>	Juniper	SJ895555	1983 No	On Greenway Bank Country Park	No recommendation
<i>Carduelis cabaret</i>	Lesser Redpoll	SJ895555	1982 No	On Greenway Bank Country Park	No recommendation
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	SJ895555	2007 No	Knypersley Reservoir	No recommendation
<i>Poecile palustris</i>	Marsh Tit	SJ875585	2007 No	Unsuitable site	No recommendation
<i>Populus nigra subsp. betulifolia</i>	Native Black Poplar	SJ895555	1983 No	On Greenway Bank Country Park	No recommendation
<i>Vanellus vanellus</i>	Northern Lapwing	SJ875575	2007 Yes	Nesting / feeding / roost nearby (1997)	Breeding Bird survey
<i>Hygrocybe calyptriformis var. calyptriformis</i>	Pink Waxcap	SJ895555	2002 No	On Greenway Bank Country Park	No recommendation
<i>Emberiza schoeniclus</i>	Reed Bunting	SJ875565	2007 Yes	It is common in reedbeds and also breeds in drier open areas such as moorland and cultivation	Breeding Bird survey
<i>Turdus torquatus</i>	Ring Ouzel	SJ865585	2007 No	Probably migrating (mountainous habitat)	No recommendation
<i>Alauda arvensis</i>	Sky Lark	SJ875575	2007 Yes	Feeding and nesting	Breeding Bird survey
<i>Turdus philomelos</i>	Song Thrush	SJ875575	2007 Yes	Farmland Bird BAP	Breeding Bird survey
<i>Muscicapa striata</i>	Spotted Flycatcher	SJ895555	2008 No	On Greenway Bank Country Park	No recommendation
<i>Anthus trivialis</i>	Tree Pipit	SJ895555	2007 No	On Greenway Bank Country Park	No recommendation
<i>Erinaceus europaeus</i>	West European Hedgehog	SJ888563	2006 Yes	lives in woodland, farmland, and suburban areas	Mammal Survey
<i>Poecile montanus</i>	Willow Tit	SJ895555	2007 No	Knypersley Reservoir	No recommendation
<i>Phylloscopus sibilatrix</i>	Wood Warbler	SJ895555	2007 No	On Greenway Bank Country Park	No recommendation

<i>Motacilla flava</i>	Yellow Wagtail	SJ895555	2005 No	On Greenway Bank Country Park	No recommendation
<i>Emberiza citrinella</i>	Yellowhammer	SJ895555	1982 No	On Greenway Bank Country Park	No recommendation

Appendix 12 – Species Lists for Biddulph 6

Protected species

Latin Name	English Name	Grid ref	Most recent record	Likely to affect site?	Further Comments	Recommendation
<i>Chiroptera</i>	a bat	SJ876570	2007	Yes	Exact species not determined	No recommendation
<i>Fringilla montifringilla</i>	Brambling	SJ875565	2007	Yes	Feeding potential	Retain hedges and woodlands, or provide mitigatory habitat
<i>Plecotus auritus</i>	Brown Long-eared Bat	SJ885565	1999	Yes	Foraging potential within Site / Roosting potential / Roost nearby	Bat survey required, particularly if existing buildings with open roof voids are affected. Protect foraging habitats
<i>Loxia curvirostra</i>	Common Crossbill	SJ855575	2003	No	Unsuitable habitat	No recommendation
<i>Rana temporaria</i>	Common Frog	SJ888583	1984	Yes	Suitable habitat / Potential on site	Retain ponds and / or provide additional ponds, possibly within SUDS
<i>Pipistrellus pipistrellus sensu stricto</i>	Common Pipistrelle	SJ886567	2003	Yes	Likely to forage within the Site / Roosting potential	Bat survey required, particularly if existing buildings are affected. Protect foraging habitats, mature trees may also be used for roosting and will need survey and possible protection
<i>Meles meles</i>	Eurasian Badger	SJ880573	2007	Yes	Likely to forage within the Site / Potential on site	Mitigation where possible; this will depend on size and location of badger groups affected on any given site
<i>Falco subbuteo</i>	Eurasian Hobby	SJ855575	2003	No	Unsuitable habitat	No recommendation
<i>Pernis apivorus</i>	European Honey-buzzard	SJ885565	1998	No	Unsuitable habitat	No recommendation
<i>Arvicola terrestris</i>	European Water Vole	SJ882562	2000	No	Unsuitable habitat	No recommendation
<i>Turdus pilaris</i>	Fieldfare	SJ875565	2007	Yes	Winter visitor, feeding in a range of habitats	As brambling
<i>Sphagnum recurvum</i>	Sphagnum moss species	SJ871549	1979	No	Unsuitable habitat	No recommendation

<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	SJ882573	1998	Yes	As common pipistrelle	As common pipistrelle
<i>Turdus iliacus</i>	Redwing	SJ875565	2007	Yes	Winter visitor, feeding in fields, hedges and orchards	As brambling
<i>Myotis mystacinus / brandtii</i>	Whiskered / Brandt's Bat	SJ885565	1997	Yes	Likely to forage within the Site / Roosting potential	As common pipistrelle

Biodiversity Action Plan Species

Latin Name	English Name	Grid Ref.	Most recent record	Likely Effect	Further Comments	Reccmmendations
<i>Lepus europaeus</i>	Brown Hare	SJ885575	1999	Yes	Use rough grassland	Mammal Survey
<i>Pyrrhula pyrrhula</i>	Common Bullfinch	SJ875565	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Cuculus canorus</i>	Common Cuckoo	SJ867567	2006	Yes	Lives in open land Open land with thick bushes is favoured for breeding, including heathland and garden	Breeding Bird survey
<i>Carduelis cannabina</i>	Common Linnet	SJ875565	2007	Yes	No large water bodies on site	Breeding Bird survey
<i>Gallinago gallinago</i>	Common Snipe	SJ884565	2009	No	No large water bodies on site	No recommendation
<i>Sturnus vulgaris</i>	Common Starling	SJ875565	2007	Yes	Farmland Bird BAP	Breeding Bird survey
<i>Bufo bufo</i>	Common Toad	SJ875565	1999	Yes	1 small pool on site, may use for hibernation	Amphibian Survey inc GCN
<i>Prunella modularis</i>	Dunnock	SJ875565	2007	Yes	Farmland Bird BAP Nest in bare scrape on meadow or similar habitat near to water source.	Breeding Bird survey
<i>Numenius arquata</i>	Eurasian Curlew	SJ875575	2007	No	Farmland Bird BAP	Breeding Bird survey
<i>Passer montanus</i>	Eurasian Tree Sparrow	SJ875565	2006	Yes	Breeding habitat and feeding supplies, but prefers cereal fields	Breeding Bird survey
<i>Perdix perdix</i>	Grey Partridge	SJ875555	2007	Yes	It is most commonly found in agricultural, urban, or suburban	Breeding Bird survey
<i>Passer domesticus</i>	House Sparrow	SJ875565	2007	Yes	Unsuitable habitat	No recommendation
<i>Poecile palustris</i>	Marsh Tit	SJ875585	2003	No	Nesting / feeding / roost nearby (1997)	Breeding Bird survey
<i>Vanellus vanellus</i>	Northern Lapwing	SJ875565	2007	Yes	It is common in reedbeds and also breeds in drier open areas	Breeding Bird survey
<i>Emberiza schoeniclus</i>	Reed Bunting	SJ875565	2007	Yes	Probably migrating (mountainous habitat)	No recommendation
<i>Turdus torquatus</i>	Ring Ouzel	SJ865585	2007	No	Feeding and nesting	Breeding Bird survey
<i>Alauda arvensis</i>	Sky Lark	SJ875565	2007	Yes		

<i>Turdus philomelos</i>	Song Thrush	SJ875565	2007 Yes	Farmland Bird BAP	Breeding Bird survey
<i>Muscicapa striata</i>	Spotted Flycatcher	SJ855575	2003 No	At Mow Cop not nearby	No recommendation
<i>Anthus trivialis</i>	Tree Pipit	SJ855575	2003 No	At Mow Cop not nearby	No recommendation
<i>Carduelis flavirostris</i>	Twite	SJ855575	1993 No	At Mow Cop not nearby	No recommendation
	West European			lives in woodland, farmland,	
<i>Erinaceus europaeus</i>	Hedgehog	SJ888563	2006 Yes	and suburban areas	Mammal Survey
<i>Motacilla flava</i>	Yellow Wagtail	SJ855575	2003 No	At Mow Cop not nearby	no

Appendix 13 – Species Lists for Forge Colour Works

Protected species

Latin Name	English Name	Grid Ref.	Most recent record	Likely Effect	Further Comments	Recommendations
Pipistrellus pipistrellus sensu lato	Pipistrelle	SJ8915951991		Yes	Likely to forage within the Site / Potential on site	Bat Group Records
Lutra lutra	European Otter	SJ8895951993		Yes	Suitable habitat - stream / Potential on site	Staffordshire BRC data
Lepus europaeus	Brown Hare	SJ8835962000		No	Unlikely to use site – not open enough	Staffordshire BAP Records
Pipistrellus pipistrellus sensu lato	Pipistrelle	SJ8915951994		Yes	Likely to forage within the Site / Roosting potential	Bat Group Records

Biodiversity Action Plan Species

No records found

Appendix 14 – Staffordshire Requirements for Biodiversity and Geological Conservation.

Appendix 15 – Site Descriptions for Sites of County Biological Importance