

South Yorkshire
Passenger Transport
Executive

Elsecar Park and Ride

Phase 1 Habitat Survey
and Faunal Species
Scoping

ISSUE 1

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Contents

	Page
1 Introduction	1
1.1 Report Aim	1
1.2 Report Structure	1
2 Methodology	2
2.1 Desk Study	2
2.2 Field Survey	2
2.3 Limitations and Assumptions	3
3 Results	4
3.1 Desk study	4
3.2 Field Survey	6
4 Evaluation	10
5 Recommendations	14

References

Appendices

Appendix A

Phase 1 Habitat Survey Map

Appendix B

Phase 1 Habitat Survey and Faunal Species Scoping Target Note Descriptions

Appendix C

Phase 1 Habitat Survey and Faunal Species Scoping Species Lists

1 Introduction

South Yorkshire Passenger Transport has commissioned Arup to undertake a Phase 1 Habitat Survey and faunal species scoping survey of land adjacent to Elsecar Station NGR:SE3802100324. This land is identified for a proposed car park area for a park and ride scheme and will be referred to as 'the site' within this report.

1.1 Report Aim

The aim of this study to identify whether any valued habitats or species are present, including those of nature conservation importance, or those that are afforded legal protection either within the site boundary or immediate area surrounding the site.

1.2 Report Structure

Chapter 2 describes the methodology for the desk study undertaken using publically available sources and field survey methodology for the site and immediate environs. Chapter 3 presents the results of the desk study and field survey. Together these chapters will identify the presence or likely absence of protected or otherwise notable habitats and species that occur either within or adjacent to the site and identify statutory and non-statutory designated sites in the vicinity of / or connected to the site. Chapter 4 will assess the findings of the results in relation to national and local evaluation methods. Chapter 5 provides recommendations for further survey should the scheme progress. References are provided at the end of this report. Appendix A holds the Phase 1 Habitat Survey Map and Appendix B the target notes for the map. Appendix C will hold the species lists for the habitats encountered.

2 Methodology

2.1 Desk Study

A number of publically available sources were used to obtain baseline information within the site boundary and its environs (study area). These are described below:

- National Biodiversity Network website for details of the local distribution of protected or notable species.
- Multi-agency Geographical Information for the Countryside (MAGIC) website to identify statutory designated sites within 2km of the site.
- Barnsley Metropolitan Borough Council website for the Unitary Development Plan proposals maps for Hoyland and Wombwell Community Areas, to identify locally designated nature conservation sites.
- UK Biodiversity Action Plan website for information on UK BAP species and habitats likely present.
- Barnsley Local BAP for information on local BAP species and habitats in Barnsley.

2.2 Field Survey

2.2.1 Phase 1 Habitat Survey

A Phase 1 Habitat Survey was undertaken in accordance with standard methodology (JNCC, 1993) by an ecologist on the 9th February 2010, to identify and map the different habitats present, both within and immediately adjacent to the site boundary. The extent of each area of homogenous vegetation (habitat) was described and mapped. In addition the survey was extended to provide a species list of the dominant and defining plant species within each habitat, and details of their abundance on the DAFOR scale. The DAFOR scale prescribes species abundance as being Dominant, Abundant, Frequent, Occasional or Rare. This scale was used along with the terms locally abundant or locally frequent to describe variation on a local scale.

The habitats present have been described according to the species present, and an indication of the ecological value has been made, based on the rarity or scarcity of the species or habitats within a given geographical scale. The plant species recorded, are referred to using the nomenclature of Stace (1997).

2.2.2 Faunal Survey

During the site survey habitats present within and adjacent to the site were assessed for their potential to support faunal species of nature conservation importance (including those that are afforded legal protection¹), on the basis of professional judgement. Where the presence of notable species could be expected (time dependant), searches for the species or signs of the species or for suitable habitats/habitat structures that may support these species were undertaken as follows:

Badger – Searches for signs of foraging activity, footprints, dung pits, latrines, setts, or mammal pathways potentially made by badger.

Bat species – Searches for potential roost sites, such as buildings, structures or trees and with opportunities for bats to be present, such as crevices or gaps and assessment of habitats for foraging and corridors providing commuting areas to other valued habitats for bat species.

¹ Many species of animal and plant receive some degree of legal protection. For the purposes of this study, legal protection refers to: species included on Schedules 2 and 4 of The Conservation (Natural Habitats, &c.) Regulations 2007, Schedules 1, 5, 8 and 9 of the Wildlife and Countryside Act 1981 (as amended), Protection of Badgers Act 1992, and additional protection afforded by the Countryside Rights of Way (CROW) Act 2000 and the Natural Environment and Rural Communities Act (NERC) 2006.

Brown Hare – Searches for suitable habitats – in terms of food provision and connectivity, and also for signs of footprints and/ or droppings.

Hedgehog – Searches for suitable refuge areas for Hedgehog and habitats providing suitable prey items.

Bird species – In addition to recording evidence of bird species present, searches for nests and breeding activity were undertaken of suitable areas.

Reptile species – Searches for suitable refuge (including hibernation and egg-laying² sites) and basking areas for reptile species and review of habitats present providing suitable prey items.

Amphibian species – Searches for suitable breeding (ponds and waterbodies), foraging and hibernation areas.

Invertebrate species – Evaluation of habitats present, and their potential provision for invertebrate species.

2.3 Limitations and Assumptions

It is possible that because of the timing of the survey that spring or summer flowering species may have been overlooked in the field. Habitats known to be associated with particularly interesting spring flowering flora (such as ancient woodlands) were not present on the site. However, it is recommended that a later visit to the site is made to check for summer flowering species that have been overlooked, because they were not evident. The findings of a summer survey are not thought to have the potential to significantly alter the value of the habitats encountered, and described in this but may potentially identify important plant species that may have been overlooked.

No account can be taken of the presence or absence of a particular species on a particular day, particularly as this is a snapshot survey at what is potentially a sub-optimal time of year for detection of faunal species. Therefore it is possible that protected or otherwise notable species or species groups not recorded during the survey could occur from time to time within and adjacent to the site boundary.

Within the desk study using information from the NBN gateway, only distribution maps were viewed, no effort was made to obtain specific records or to obtain exhaustive distribution maps for all plant, bird or invertebrate species likely present.

No efforts were made to map gardens within urban areas or the working area of the allotment present.

² Egg-laying sites refers to potential presence of grass-snake only.

3 Results

3.1 Desk study

3.1.1 Statutory Designated Sites

There is one statutorily designated site within 2km of the site boundary. This is shown in Table 1 below. Note: connective distance, mentioned in the table, refers to the distance that the designated site is from the site, relevant for terrestrial non-flying species.

Table 1: Statutory Designated Sites within 2km of the site boundary.

Site Name / Location and Information	Designation	Direct Distance from Site and Direction	Connective Distance and Connectivity to Site	Community Area
Elsecar Reservoir Valued habitats include open water, marginal, carr and acid grassland.	Local Nature Reserve (LNR)	696m South	696m South Rail corridor and field network.	Hoyland

3.1.2 Non-statutory Designated Sites

There are 6 non-statutory designated sites within 2km of the site boundary these are described in table 2 below.

Table 2: Non-statutory Designated Sites within 2km of the site boundary.

Site Name / Location	Designation	Direct Distance from Site, Direction and Potential Barrers (if present)	Connective Distance and Connectivity to Site	Community Area
Land at Elsecar Reservoir	Unknown - identified in UDP proposals map for Hoyland, but also included in LNR boundary for Elsecar Reservoir	696m South No barriers	696m South Rail corridor and field network.	Hoyland
Canal and Disused Railway	Unknown - identified in UDP proposals map for Hoyland and Wombwell	698m East Housing development and road between.	1500m East Rail corridor, two minor roads and field network.	Hoyland and Wombwell

Table 2: Non-statutory Designated Sites within 2km of the site boundary (cont...)

Site Name / Location	Designation	Direct Distance from Site, Direction and Potential Barriers (if present)	Connective Distance and Connectivity to Site	Community Area
Land at Wentworth workings (disused)	Unknown - identified in UDP proposals map for Hoyland	1482m South-west No barriers	1482m South-west Rail corridor	Hoyland
Railway Embankment near Hemingfield	Unknown - identified in UDP proposals map for Wombwell	1541m North-east No barriers	1541m North-east Rail corridor	Wombwell
Wombwell Wood between A6195 and B6095	Unknown - identified in UDP proposals map for Wombwell	1491m North-east Housing development and A6195	2051m North-east Rail corridor	Wombwell
Wombwell Wood north of B6095	Unknown - identified in UDP proposals map for Wombwell	1731m North-north-east Housing development, A6195 and B6095	2570m North-north-east Rail corridor	Wombwell

3.1.3 Faunal and Plant Species

Searches of the NBN gateway website identified the potential for the following protected and or notable species to be present based on local distribution data. Note this is non-exhaustive.

Mammals: Bat species - Pipistrelle sp. *Pipistrellus pipistrellus sensu lato.*, Noctule *Nyctalus noctula*, Daubenton's *Myotis daubentonii*, Natterer's Bat *Myotis natteri*, Brown long-eared Bat *plecotus auritus*, Whiskered / Brandt's *Myotis mystacinus/brandtii*; Badger *Meles meles*, Hedgehog *Erinaceus europaeus*, Otter *Lutra lutra*, Polecat *Mustela putorius*, Pine Marten *Martes martes*, Brown Hare *Lepus europaeus*, Water Vole *Arvicola terrestris*, Dormouse *Muscardinus avellanarius*, Harvest Mouse *Micromys minutus*.

Reptiles: Adder *Vipera berus*, Common lizard *Zootoca vivipara*, Slow-worm *Anguis fragilis*, Grass Snake *Natrix natrix*.

Bird species: Barn Owl *Tyto alba* amongst other species.

Plant species: Japanese Knotweed *Fallopia japonica* amongst other species.

3.1.4 Review of UK and Local BAP Habitats and Species

Note: in the following lists, those species and habitats least likely to be present in the site or immediate environs 2km are shown in grey text.

Local BAP species listed within the Barnsley BAP:

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

Additional UK BAP species may include:

Noctule, Daubenton's, Natterer's Bat, Brown long-eared Bat, Whiskered / Brandt's Bats, Otter, Brown Hare, Hedgehog, Dormouse, Harvest Mouse, Adder, Common Lizard, Grass Snake, Slow-worm, Common Toad and potentially invertebrate species.

Local BAP habitats listed within the Barnsley BAP include:

Upland Oak Woodland, Upland Mixed Ash Woodland, Wet Woodland, Parkland, Ancient & Species-Rich Hedgerows, Cereal Field Margins, Floodplain Grazing Marsh, Lowland Meadows, Lowland Dry Acidic Grassland, Lowland Heathland, Upland Heathland, Rush Pasture, Reedbeds, Ponds & Canals, Running Water, Standing Water, Urban Built-Up Areas and Post-Industrial Derelict Degraded Land. Note, no additional UK BAP habitats are identified as likely present within 2km of the site.

3.2 Field Survey

The Phase 1 Habitat Survey Map is provided in Appendix A with the Target Notes referred to on the plan provided in Appendix B. Plant species lists for each habitat are presented in Appendix C. The habitats present are described below with details of characteristic and/or constant plant species. The value of these habitats is appraised based on their suitability for faunal species likely present is presented in section 3.2.3.

3.2.1 Site Description

The site lies at the base of a valley due south of Hoyland and on the east side of Elsecar, sited immediately northwest of Elsecar Station (at the railway between Leeds and Sheffield). South of the railway is farmland used for arable crops and horse grazing with a few scattered dwellings. This area links with Elsecar Reservoir LNR and beyond are further areas of farmland and scattered woodlands. Due west of the site are allotment gardens and a recreational area, beyond which are current or proposed areas of housing, woodland, disused workings, fields and the A6135 Sheffield Road.

The site itself mainly comprises areas of dense and scattered scrub, with areas of tall ruderal vegetation and open grassland between. It has a slightly undulating topography and a southern aspect. This habitat matrix is replicated to the south of the site on the other side of the railway.

3.2.2 Habitats

3.2.2.1 Scattered Broad-leaved Trees

Mainly young trees occurred within the site, with some larger specimens within the old school grounds, disused bowling green grounds, the recreational area and adjacent gardens. This habitat is dominated by Sycamore *Acer pseudoplatanus*, with occasional Horse-chestnut *Aesculus hippocastaneum*, Large-leaved Lime *Tilia x platyphyllos*, Ash *Fraxinus excelsior* and Pedunculate Oak *Quercus robur*. The recreation ground had more mixed tree species and included occasional Red Oak *Quercus rubra*, Norway Maple *Acer platanoides* and Alder *Alder glutinosa*.

3.2.2.2 Scattered Coniferous Trees

Scattered coniferous trees were associated with garden habitats only. Two examples were identified of occasional Leyland Cypress x *Cupressocyparis leylandii* and a spruce *Picea* sp.

3.2.2.3 Intact Species-poor Hedge

Intact species-poor hedge habitat was poorly represented within the study area and was either a short stand of Hawthorn or a garden hedge of Wild Privet *Ligustrum vulgare*.

3.2.2.4 Dense Scrub

Dense scrub habitats were found both within the site and immediate environs, particularly the area south of the site boundary. This habitat comprised low growth and locally dominant Bramble agg. *Rubus fruticosus* agg. and by taller growth of locally dominant Hawthorn *Crataegus monogyna* stands. Sycamore *Acer pseudoplatanus* is locally abundant and Elder *Sambucus nigra* is frequent. Blackthorn is locally frequent where it occurs.

3.2.2.5 Scattered Scrub

Scattered scrub is found adjacent to and encroaching from dense scrub habitat both within the site area and the adjacent areas. Both Bramble and Hawthorn are locally dominant, with frequent Elder and Dog-rose agg. *Rosa canina* agg. Gorse sp. *Ulex* sp. is occasional and Holly *Ilex aquifolium* and Butterfly-bush *Buddleja davidii* are rare.

3.2.2.6 Introduced Shrubs

Areas of introduced scrub are present within landscaped areas at Elsecar and Hoyland Station and at the disused bowling green, with a few specimens encroaching from these areas into adjacent habitats. Cotoneaster species *Cotoneaster* spp. are locally abundant, with locally frequent Snowberry *Symphoricarpus albus* and Pheasant Berry *Leycesteria formosa*. Dogwood species *Cornus* sp. is frequent with occasional *Pyracantha* spp. and Wild Privet *Ligustrum ovalifolium*. Escallonia *Escallonia* sp., and Berberis species *Berberis* spp. are rare.

3.2.2.7 Tall Ruderal

Tall ruderal habitat is present within the neutral and acid grassland habitats and at the peripheries of scrub habitats across the site and study area. Rosebay Willowherb *Chamerion angustifolium* is locally dominant in the *acidic* areas and Common Nettle *Urtica dioica* is dominant within neutral and/or damp areas. Creeping Thistle *Cirsium arvense* is locally frequent and Mugwort *Artemisia vulgaris* is occasional.

3.2.2.8 Semi-improved Neutral Grassland

This habitat is present within the old school ground immediately north of the site, this grassland has a southern aspect and is becoming rank and tussocky with the lack of management.

Red Fescue agg. *Festuca rubra* agg. is the dominant grass species with abundant Cock's-foot *Dactylis glomerata* and Creeping Bent *Agrostis stolonifera*. False Oat-grass *Arrhenatherum elatius* and Yorkshire-fog *Holcus lanatus* are occasional.

Amongst the forbs, Common Sorrel *Rumex acetosa* is locally abundant, with frequent Hogweed *Heracleum sphondylium*, Bedstraw species *Galium* sp. and Cow Parsley *Anthriscus sylvestris*. Locally frequent are Meadow Vetchling *Lathyrus pratensis*, Yarrow *Achillea millefolium* and Michaelmas Daisy *Aster* sp. Common Vetch *Vicia sativa* and Broad-leaved Dock *Rumex obtusifolius* are occasional.

3.2.2.9 Semi-improved Acid Grassland

Semi-improved acid grassland is present within the site, this habitat has an open aspect to the south, is gently undulating and has areas of rank tussocky growth.

Sheep's Fescue is the dominant grass species with occasional Cock's-foot, Creeping Bent and Yorkshire-fog. Tufted Hair-grass *Deschampsia cespitosa* is rare.

Amongst the forbs, Hogweed *Heracleum sphondylium*, Bedstraw species *Gallium* sp. and Mugwort are frequent, with locally frequent are Meadow Vetchling *Lathyrus pratensis*, Common Knapweed *Centaurea nigra* and Michaelmas Daisy. Broad-leaved Dock, Dandelion agg. *Taraxacum officinale* agg. and Common Cat's-ear *Hypochaeris radicata* are occasional.

3.2.2.10 Improved Grassland

This habitat comprises horse grazed fields due south of the site and rail corridor. No species list can be provided for this habitat as it is in an inaccessible part of the study area.

3.2.2.11 Amenity Grassland

Amenity grassland habitats are found within urban habitats as lawns. These are dominated by Perennial Rye-grass *Lolium perenne*, with abundant Smooth Meadow-grass *Poa pratensis* and frequent Annual Meadow-grass *Poa annua*. Dandelion is occasional.

3.2.2.12 Running Water

Running water is found in a short (2.5m) canalised channel, west of the site. It flows in a north to south direction from the recreation ground and under the railway in a brick lined culvert. The sides of the channel are covered with lower plant species such as moss and algae species.

3.2.2.13 Wall

Both brick and stone walls are found within the study area. The stone wall is within the disused bowling green area and brick walls define the boundary of the old school immediately north of the study area and the planted areas at the rail station.

3.2.2.14 Buildings

There are no buildings within the site boundary, but many within the urban areas around the site some of these adjacent to the site were observed to be in various states of disrepair and had obvious gaps and crevices, such as at the cinema building north-east of the site.

3.2.2.15 Fences

The fences in the study area are of various construction which include: metal palisade fencing to rail boundaries, wooden fencing, pig mesh fencing and concrete post and slat fencing.

3.2.3 Notable Plant Species

Japanese Knotweed *Fallopia japonica* – this species was found outside the site boundary, at the southern periphery of the recreation ground and on land south of the site and railway corridor (Target Notes 11 and 12)

Japanese Rose *Rosa rugosa* – a single stand of this species was found within the site boundary, immediately adjacent to the northernmost shelter at the rail station (Target Note no. 18)

Cotoneaster species – Stands of these species are present within planted areas of the rail station (Target Notes 16, 17 and 18) and within the disused bowling green and tennis courts.

3.2.4 Faunal Species

The bird species recorded during the survey, include Bullfinch *Pyrrula pyrrula*, Goldfinch *Carduelis carduelis* and Chaffinch *Fringilla coelebs*, Blackbird *Turdus merula*, Great Tit *Parus major*, Blue Tit *Parus caeruleus*, Long-tailed Tit *Aegithalos caudatus*, Magpie *Pica pica*, Wood Pigeon *Columba palumbus* and Collared Dove *Streptopelia decaocto*.

Fox scent marked areas were recorded during the survey.

Bat species – there are no trees or structures suitable for bats to roost within the site boundary. Outside the site boundary and adjacent to the site is an old cinema building (Target Note 1) and the old rail station building (Target Note 15) with suitable features for bat occupation.

Badger – no evidence of Badger activity was recorded within the site boundary or within 30m of the site boundary. However, the habitats present within the site boundary are suitable for providing cover and foraging resource for badger.

Brown Hare - no evidence of Brown Hare activity was recorded within the site boundary, but the habitats present within the site boundary are suitable for providing cover and foraging habitat for Brown Hare.

Hedgehog - the habitats present within the site boundary and adjacent area are suitable for providing cover and foraging habitat for Hedgehog.

Reptile species – suitable basking, foraging, and hibernation habitats were recorded both within the site boundary and in adjacent areas.

Invertebrate species- habitats within and adjacent to the site boundary have a suitable matrix to support invertebrate species.

4 Evaluation

The habitats provided within the site boundary appear to be contiguous with those provided south of the rail line and appear to provide locally important habitat for a number of species, and contain the UK BAP habitat of lowland acid grassland. Whilst the site is not designated itself it is likely to be of at least local value, based on the current information and the extent and provision of the habitats present. This value may increase based on the species present, which can only be deduced from further survey.

The nearest locally designated site Elsecar Reservoir is situated approximately 600m south of the site, which is valued for its open water, marginal vegetation, carr and acid grassland habitats. The site is connected to this area across terrestrial habitats of farmland, hedgerows and minor roads. Other locally designated habitats are present but are situated over 100m from the site.

The habitats present within the site are thought to potentially provide habitat for the following faunal species: Bird species, bat species, Badger, Hedgehog, Fox, Brown Hare, reptile species, amphibian species and invertebrate species. These are discussed in relation to the site boundary and environs below.

The habitats within the wider area are likely to be of greater potential to support Otter, Bat, Badger, Brown Hare, Hedgehog, Dormouse, Harvest Mouse, birds and protected or notable invertebrates.

Birds

All breeding birds are afforded protection whilst on or at the nest through the provisions of the Wildlife and Countryside Act 1981 (as amended), certain bird species are afforded additional protection at all times through this Act. The Natural Environment and Rural Communities (NERC) Act 2006 places a duty through the planning process to consider impacts to these species.

Most of the species recorded during the survey are commonly encountered in urban fringe habitats, but Bullfinch are listed as an amber list species within the Birds of Conservation Concern 3 and are UK BAP species as the UK populations are noted to be in decline by >25 and <50%.

Much of the habitats both within and adjacent to the site appear to provide suitable foraging and nesting habitats for a range of bird species. The scrub and rough grassland habitats being of particular value. It is possible for the areas of farmland outside the site to provide habitat for bird species associated with these habitats.

Bats

All bat species are afforded protection through the provisions of the Conservation (Natural habitats, etc) Regulations 1994 (as amended) and the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way (CROW) Act 2000. This legislation affords protection to all bat species from intentional /deliberate killing and injury, intentional or reckless disturbance or disturbance of places used as shelters, or to obstruct access to a place of shelter, to damage or destroy a breeding place, to possess a bat or to sell, barter, exchange, transport or sell bat species. In addition all bat species with the exception of Common Pipistrelle are listed on the UK Biodiversity Action Plan, and are noted to be in decline in the UK. The NERC Act 2006 places a duty through the planning process to consider impacts to these species.

There was no suitable places of shelter for roosting bats within the site boundary. However, buildings and structures in the vicinity of the site (particularly the adjacent cinema building) may support bat roosts and that they may utilise the habitats within the site for foraging over the grassland, tall ruderal vegetation, scrub and trees within the site boundary, or may use this area to commute to other suitable foraging habitats.

Badger

Badger are protected from deliberate killing, injury and disturbance through the Protection of Badgers Act 1992.

Habitats within the site could potentially support badger if present. The site is bound at its southern side by palisade fencing and is crossed in places by footpaths, so disturbance here may be a factor contributing to the absence of any signs of badger within the site boundary or immediate environs during the survey. Badger may be present in the wider local area (particularly within farm land, hedgerow and woodland habitats) and may use the site at other times for activities such as foraging.

Brown Hare

Brown Hare are listed on the UK BAP as a species noted to be in decline in the UK. The NERC Act places a duty through the planning process to consider impacts to this species.

Whilst no signs of Brown Hare were recorded during the survey, the site does offer a small area of suitable habitats for cover and foraging, if this species present within the wider area. However, local disturbance may be a deterrent to their presence within the site boundary. It is thought the wider area outside the site boundary offers more habitats suitable for this species.

Hedgehog

Hedgehog is listed on the UK BAP as a species noted to be in decline in the UK. The NERC Act places a duty through the planning process to consider impacts to this species.

Whilst no signs of Hedgehog were recorded during the survey, the grassland and scrub habitats present within the site boundary and the adjacent habitats of woodland, scrub, grassland, hedgerow, gardens, allotments are all good in terms of cover and prey provision for hedgehog. This species is thought to be likely present within the site.

Dormouse

Dormice are afforded protection through the provisions of the Conservation (Natural habitats, etc) Regulations 1994 (as amended) and the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way (CROW) Act 2000. This legislation affords protection to Dormice from intentional /deliberate killing and injury, intentional or reckless disturbance or disturbance of places used as shelters, or to obstruct access to a place of shelter, to damage or destroy a breeding place, to possess a Dormouse or to sell, barter, exchange, transport or sell Dormice. In addition Dormouse is listed on the UK Biodiversity Action Plan, as a species noted to be in decline in the UK. The NERC Act 2006 places a duty through the planning process to consider impacts to this species.

Local records for Dormouse were recorded through desk study. It is unlikely the habitats within the site provide permanent habitat for Dormouse, particularly considering its links to wider areas of more suitable habitat such as woodland habitats. This species is more likely to be present in the more contiguous wooded habitats in the surrounding area. This may need to be reviewed should further desk review yield otherwise.

Harvest Mouse

Harvest Mouse is listed on the UK BAP as a species noted to be in decline in the UK. The NERC Act places a duty through the planning process to consider impacts to this species.

Harvest Mouse were recorded in the local area from desk study. The habitats within the site could sustain harvest mice if present, but it is thought more suitable areas are present in the wider areas outside the site boundary, particularly the wetland habitats provided at Elsecar Reservoir.

Water Vole

Water Vole are afforded protection through the provisions of the Conservation (Natural habitats, etc) Regulations 1994 (as amended) and the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way (CROW) Act 2000. This legislation affords protection to Water Vole from intentional /deliberate killing and injury, intentional or reckless disturbance or disturbance of places used as shelters, or to obstruct access to a place of shelter, to damage or destroy a breeding place, to possess a Water Vole or to sell, barter, exchange, transport or sell Water Vole. In addition Water Vole is listed on the UK Biodiversity Action Plan, as a species noted to be in decline in the UK. The NERC Act 2006 places a duty through the planning process to consider impacts to this species.

Water Vole were recorded in the immediate vicinity of the site through desk study. The site appears to offer little valuable habitat for this species and is not viably connected to an area of watercourse suitable for occupation by Water Vole. The watercourse west of the site boundary being under 2.5m long, <1m wide and concrete sided. It is likely these records may be connected to ditch and wetland systems in the fields south of the railway or with the watercourse at Elsecar Reservoir, which lies some 600m from the site. This may need to be reviewed should further desk review yield otherwise.

Otter

Otter are afforded protection through the provisions of the Conservation (Natural habitats, etc) Regulations 1994 (as amended) and the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way (CROW) Act 2000. This legislation affords protection to Otter from intentional /deliberate killing and injury, intentional or reckless disturbance or disturbance of places used as shelters, or to obstruct access to a place of shelter, to damage or destroy a breeding place, to possess a Otter or to sell, barter, exchange, transport or sell Otter. In addition Otter is listed on the UK Biodiversity Action Plan, as a species noted to be in decline in the UK. The NERC Act 2006 places a duty through the planning process to consider impacts to this species.

Otter were recorded in the wider area and are likely to be associated with land and connective wetland habitat at Elsecar Reservoir. The site receives some human disturbance, is fairly small and open and is situated over 600m from more suitable habitats, which mean it is unlikely for the site to be of value for Otter.

Reptiles

The four common reptile species likely present at the site, namely Grass Snake, Adder, Common Lizard and Slow-worm are protected from deliberate, intentional or reckless killing or injury and sale through the provisions of the Wildlife and Countryside Act 1981 (as amended). These species are also listed on the UK BAP as a species noted to be in decline in the UK. The NERC Act places a duty through the planning process to consider impacts to this species. Adder are also listed as a dangerous wild animal under the Dangerous Wild Animals Act 1976 (as amended).

The site contained areas of rough grassland and has a southern aspect, meaning it provides good potential basking habitat for reptile species if present. The connectivity of the site with the surrounding landscape, particularly to more extensive areas of rough grassland and scrub habitat south of the site may mean the site is used either permanently by reptile species, or on a temporary basis by transient individuals moving along the rail corridor. The site provides a potential prey source for Adder, Common Lizard and Slow-worm. It is thought Grass Snake may use the site's habitats occasionally whilst moving through the wider area or for foraging, although suitable areas for egg-laying were encountered within the site at its western end and within the adjacent allotments, gardens and damper areas near the small watercourse.

Amphibians

The Great Crested Newt *Triturus cristatus* is afforded protection through the provisions of the Conservation (Natural habitats, etc) Regulations 1994 (as amended) and the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way (CROW) Act 2000. This legislation affords protection to Great Crested Newt from intentional /deliberate killing and injury, intentional or reckless disturbance or disturbance of places used as shelters, or to obstruct access to a place of shelter, to damage or destroy a breeding place, to possess a Great Crested Newt or to sell, barter, exchange, transport or sell Great Crested Newt.

The four common amphibian species, namely Common Frog *Rana temporaria*, Common Toad *Bufo bufo*, Smooth Newt *Lissotriton vulgaris* and Palmate Newt *Lissotriton helveticus* are protected from sale only through the provisions of the Wildlife and Countryside Act 1981 (as amended). Great Crested Newt and Common Toad are also listed on the UK BAP as a species noted to be in decline in the UK. The NERC Act places a duty through the planning process to consider impacts to this species.

There are no pond habitats within the site boundary or in the immediate vicinity of the site. It is unlikely therefore that the site provides any permanent habitat for amphibian species, but may provide foraging opportunities if local populations are present.

Invertebrates

The grassland and scrub habitats present within the site and the adjacent habitats are likely to support a number of invertebrate species, none were evident during the survey.

Plants

None of the plants recorded during the survey are identified as important in terms of their scarcity on a local, regional or national scale. However, one species encountered during the survey is currently listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), under this law it is illegal to further the spread of this species in the wild. In addition, a few species were identified that are listed in the Government Response to the Consultation for Review of Schedule 9 (Defra, Jan 2010), as proposed species for inclusion on Schedule 9 (which will come into force in April 2010).

Current species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)

Japanese Knotweed

Proposed Species to be added to Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)

Japanese Rose and Cotoneaster species.

It is not currently known if these species will definitely be included in the Schedule 9 revision, or how they should be dealt with during proposed site activities.

It is noted that the Phase 1 Habitat Survey was undertaken at a sub-optimal time of year to record all plant species and hence some species may have been overlooked as they were not evident. Further survey is recommended.

5 Recommendations

As the proposed development at the site is a car park, which will inevitably result in the permanent loss of the current habitats at the site. For this reason further desk study and field surveys are recommended. These further studies will help gain a full value of the habitats and species present at the site. It is likely an ecological appraisal will be required to identify potential impacts, identify and guide mitigation options / obligations and to detail measures to ensure legal compliance.

Further desk study and consultation with local nature conservation organisations is recommended to identify where notable or otherwise important species and habitats are present. In addition it would be prudent to review at desk study any ecological reports (if undertaken) associated with the adjacent recent housing developments due north of the site boundary. As this may identify additional species that should be considered within the future ecological appraisal of the site area and may reduce survey effort if certain ecological surveys or activities have been undertaken in this area.

The further field surveys recommended include surveys for breeding birds, reptiles, bats and potentially invertebrate species. It should also include a further plant species survey in mid to late summer, to identify any plant species that may have been overlooked, to increase species lists and to identify any species-rich habitats that are not currently obvious. Searches for pond habitats within 500m of the site boundary using aerial photography sources and/or field access is also advisable to ensure the site does not hold any value as terrestrial habitat for Great Crested Newts.

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- [1] Barnsley Metropolitan Borough Council website:
[http://www.barnsley.gov.uk/bguk/Development/Planning/Planning_Policy/Unitary_Development_Plan/What%20is%20The%20Unitary%20Development%20Plan\(UDP\).htm](http://www.barnsley.gov.uk/bguk/Development/Planning/Planning_Policy/Unitary_Development_Plan/What%20is%20The%20Unitary%20Development%20Plan(UDP).htm) Accessed to view proposals maps for Hoyland and Wombwell areas [02:10]
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http://www.barnsley.gov.uk/bguk/Development/Countryside/Biodiversity_Action_Plan Accessed to view local Biodiversity Action Plan species and habitats [02:10]
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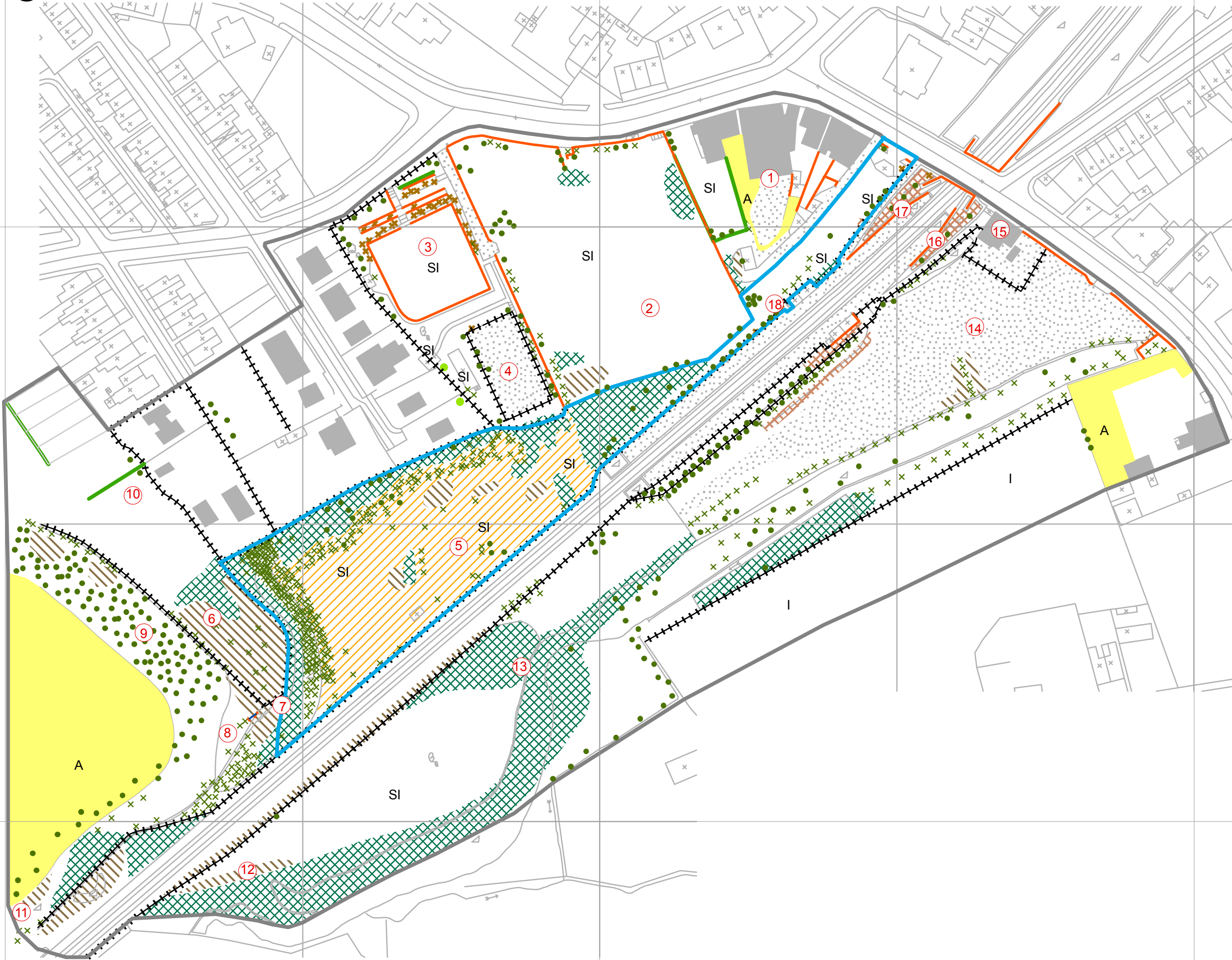
Appendix A

**Phase 1 Habitat Survey
Map**



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400200

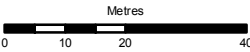


Legend

- ① Target Note
- ➡ Running Water
- Broad-leaved Trees
- Site Boundary
- Study Area
- Wall
- Intact Species poor hedge
- Fence
- Amenity Grassland
- × Scattered Scrub
- × Introduced Shrub
- × Introduced shrubs
- Scattered Coniferous trees
- Species-poor Defunct Hedge
- Species-poor Hedge and Trees
- Semi Improved Acid Grassland
- Semi Improved Neutral Grassland
- Building
- Tall Ruderal
- Dense Scrub
- Acid Grassland
- Bare Ground

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Client

South Yorkshire
Passenger Transport Executive

Job Title

Elsacar Park and Ride

Drawing Title

Phase 1 Habitat Survey Map

Scale at A3

1:1,250

Drawing Status

Draft

Job No	Drawing No	Issue
120788-47	ENV-001	P1

Appendix B

**Phase 1 Habitat Survey
and Faunal Species
Scoping Target Note
Descriptions**

B1 Target Notes

1. Cinema, brick building with obvious voids and gaps with potential to support a bat roost.
2. Neutral semi-improved grassland, likely to be a good MG1 grassland with dominant Red Fescue, and abundant Cock's-foot.
3. Disused bowling green that has become rank, one grass species is dominant for much of the bowling area, with ranker grasses encroaching. Area has raised beds of introduced shrubs (Cotoneaster species present), with rockery style wall in places, thought to provide potential reptile habitat.
4. Disused tennis court almost completely covered with moss species and encroaching Bramble scrub. One Cotoneaster species present at northern end.
5. Area of dense and scattered scrub with patches and expanses of acid grassland between dominated by Sheep's-fescue. Area is south facing and is thought to provide good habitat for breeding bird species, reptiles and invertebrates.
6. Disused area of allotments with dense and scattered scrub habitat. Scrub was noted to be used by mixed flock of Bullfinch (4 individuals), Goldfinch and Chaffinch during field survey.
7. Low lying damp area, situated approximately 3m below the site ground level and is dominated by tall ruderal vegetation.
8. Small watercourse which flows south and under the railway. This is culverted to the north under the recreational area and to the south under the railway. The southernmost culvert has the potential to be used by bat species as it is brick lined.
9. Scattered trees planted at edge of recreational area, these are semi-mature with no obvious gaps or crevices for potential bat occupation.
10. Allotment area currently in use.
11. Area of Japanese Knotweed, within boundary of recreational area.
12. Areas of Japanese Knotweed in this location, viewed from the site using binoculars.
13. This area was viewed with binoculars from the site and had mixed habitats including dense scrub, scattered trees and grassland habitats.
14. Inaccessible area viewed with binoculars from the site and main road, containing goods storage yard, with areas of scrub, scattered trees, grassland and tall ruderal vegetation.
15. Station building, with potential to support bat species at the north-eastern corner and on the north-eastern side of the building.
- 16, 17 and 19. Areas of introduced shrub with at least 6 different Cotoneaster species.
18. Area of rough semi-improved grassland, with scattered scrub and trees and one specimen of Japanese Rose.

Appendix C

**Phase 1 Habitat Survey
and Faunal Species
Scoping Species Lists**

C1 Plant Species List

Scattered Broad-leaved Trees		
Common Name	Scientific Name	DAFOR
Alder	<i>Alnus glutinosa</i>	LF
Ash	<i>Fraxinus excelsior</i>	O
Beech	<i>Fagus sylvatica</i>	R
Cherry	<i>Prunus</i> sp.	R
Goat Willow	<i>Salix caprea</i>	R
Hawthorn	<i>Crataegus monogyna</i>	O
Holly	<i>Ilex aquifolium</i>	R
Horse-chestnut	<i>Castanea sativa</i>	O
Large-leaved Lime	<i>Tilia x platyphyllos</i>	O
Norway Maple	<i>Acer platanoides</i>	LF
Pedunculate Oak	<i>Quercus robur</i>	O
Red Oak	<i>Quercus rubra</i>	LF
Sycamore	<i>Acer pseudoplatanus</i>	D

Scattered Coniferous Trees		
Common Name	Scientific Name	DAFOR
Leylandii Cypress	<i>X Cupressocyparis leylandii</i>	O
Spruce	<i>Picea</i> sp.	R

Intact Species-poor Hedge		
Common Name	Scientific Name	DAFOR
Shrubs		
Hawthorn	<i>Crataegus monogyna</i>	LD
Wild Privet	<i>Ligustrum vulgare</i>	LD

Dense Scrub		
Common Name	Scientific Name	DAFOR
Blackthorn	<i>Prunus spinosa</i>	LF
Bramble	<i>Rubus fruticosus</i> agg.	LD
Elder	<i>Sambucus nigra</i>	F
Hawthorn	<i>Crataegus monogyna</i>	LD
Sycamore	<i>Acer pseudoplatanus</i>	LA

Scattered Scrub		
Common Name	Scientific Name	DAFOR
Bramble	<i>Rubus fruticosus</i> agg.	LD
Butterfly-bush	<i>Buddleja davidii</i>	R
Dog-rose	<i>Rosa canina</i> agg.	F
Elder	<i>Sambucus nigra</i>	F
Gorse	<i>Ulex</i> sp.	O
Hawthorn	<i>Crataegus monogyna</i>	LD
Holly	<i>Ilex aquifolium</i>	R

Introduced Scrub		
Common Name	Scientific Name	DAFOR
Berberis	<i>Berberis</i> spp.	R
Broom	<i>Cytisus scoparius</i>	R
Butterfly-bush	<i>Buddleja davidii</i>	R
Cotoneaster	<i>Cotoneaster</i> spp.	LA
Dogwood sp.	<i>Cornus</i> sp.	F
Escalonia sp.	<i>Escallonia</i> sp.	R
Forsythia sp.	<i>Forsythia</i> sp.	R
Garden Privet	<i>Ligustrum ovalifolium</i>	R
Japanese Rose	<i>Rosa rugosa</i>	R
Mahonia	<i>Mahonia</i> sp.	O
Oleaster	<i>Eleagnus</i> sp.	R
Pheasant Berry	<i>Leycesteria formosa</i>	LF
Pyracantha	<i>Pyracantha</i> spp.	O
Rose	<i>Rosa</i> spp.	R
Snowberry	<i>Symphoricarpos albus</i>	LF
Wild Privet	<i>Ligustrum vulgare</i>	O

Tall Ruderal		
Common Name	Scientific Name	DAFOR
Herbs		
Common Nettle	<i>Urtica dioica</i>	LD
Creeping Thistle	<i>Cirsium arvense</i>	LF
Mugwort	<i>Artemisia vulgaris</i>	O
Rosebay Willowherb	<i>Chamerion angustifolium</i>	LD

Semi-improved Neutral Grassland		
Common Name	Scientific Name	DAFOR
Grasses		
Cock's-foot	<i>Dactylis glomerata</i>	A
Common Bent	<i>Agrostis capillaris</i>	O
Creeping Bent	<i>Agrostis stolonifera</i>	A
False Oat-grass	<i>Arrhenatherum elatius</i>	O
Red Fescue agg.	<i>Festuca rubra</i> agg.	D
Smooth Meadow-grass	<i>Poa pratensis</i>	O
Yorkshire-fog	<i>Holcus lanatus</i>	O
Herbs		
Bedstraw sp.	<i>Galium</i> sp.	F
Broad-leaved Dock	<i>Rumex obtusifolius</i>	O
Common Nettle	<i>Urtica dioica</i>	R
Common Sorrel	<i>Rumex acetosa</i>	A
Common Vetch	<i>Vicia sativa</i>	O
Cow Parsley	<i>Anthriscus sylvestris</i>	F
Creeping Buttercup	<i>Ranunculus repens</i>	O
Dandelion	<i>Taraxacum officinale</i> agg.	O
Hogweed	<i>Heracleum sphondylium</i>	F
Meadow Vetchling	<i>Lathyrus pratensis</i>	LF
Michaelmas Daisy	<i>Aster</i> sp.	LF
Mugwort	<i>Artemisia vulgaris</i>	F
Rosebay Willowherb	<i>Chamerion angustifolium</i>	R
Teasel	<i>Dipsacus fullonum</i>	R
Yarrow	<i>Achillea millefolium</i>	A

Semi-improved Acid Grassland		
Common Name	Scientific Name	DAFOR
Grasses		
Cock's-foot	<i>Dactylis glomerata</i>	O
Common Bent	<i>Agrostis capillaris</i>	O
Creeping Bent	<i>Agrostis stolonifera</i>	O
Sheep's-fescue	<i>Festuca ovina</i> agg.	D
Smooth Meadow-grass	<i>Poa pratensis</i>	O
Tufted Hair-grass	<i>Deschampsia cespitosa</i>	R
Yorkshire-fog	<i>Holcus lanatus</i>	O
Herbs		
Bedstraw	<i>Galium</i> sp.	F
Broad-leaved Dock	<i>Rumex obtusifolius</i>	O
Common Cat's-ear	<i>Hypochaeris radicata</i>	O
Common Knapweed	<i>Centaurea nigra</i>	LF
Dandelion	<i>Taraxacum officinale</i> agg.	O
Hogweed	<i>Heracleum sphondylium</i>	F
Meadow Vetchling	<i>Lathyrus pratensis</i>	LF
Michaelmas Daisy	<i>Aster</i> sp.	LF
Mugwort	<i>Artemisia vulgaris</i>	F
Rosebay Willowherb	<i>Chamerion angustifolium</i>	R

Amenity Grassland		
Common Name	Scientific Name	DAFOR
Grasses		
Annual Meadow-grass	<i>Poa annua</i>	F
Perennial Rye-grass	<i>Lolium perenne</i>	D
Smooth Meadow-grass	<i>Poa pratensis</i>	A
Herbs		
Dandelion	<i>Taraxacum officinale</i> agg.	O

Improved Grassland
(No species list provided as within inaccessible area)

Short/Ephemeral Perennial (areas too small to map)		
Common Name	Scientific Name	DAFOR
Grasses		
Annual Meadow-grass	<i>Poa annua</i>	A
Herbs		
Bittercress	<i>Cardamine</i> sp.	R

Running Water
(No species list provided but noted to contain abundant lower plant species)