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Preliminary Ecological Appraisal (PEA)

Land at:

South View Road, East Bierley,
Birkenshaw, Bradford, BD4 6PH



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16th February 2020

Report Reference: PEA_20-002a_v1.0

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Preliminary Ecological Appraisal (PEA)

Land at:

South View Road
East Bierley
Birkenshaw
Bradford
BD4 6PH

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EXECUTIVE SUMMARY

ADK Environmental Management Ltd has been commissioned by '*The Client*' to carry out a Preliminary Ecological Appraisal (PEA), formerly referred to as an 'Extended' Phase 1 Habitat Survey, at land situated off South View Road, East Bierley, Birkenshaw, Bradford, BD4 6PH, in order to satisfy the Local Planning Authority (LPA) in respect of a proposed Planning Application.

The survey site consists of a triangular plot of land of approximately 0.8 acres of improved grassland with bounded by a traditionally built stone wall approximately 4 ft (1m 20cm) in height.

A site walk-over survey was carried out on Saturday 8th February 2020 by the author accompanied by an experienced field worker.

The walk-over survey produced no evidence of any mammal, nesting birds, reptile or invertebrate presence of any European Protected Species (EPS) or any alien non-native invasive species such as Japanese Knotweed (*Fallopia japonica*). Additional desk top data from West Yorkshire Joint Services (WYJS) - Ecology Division, the Local Biological Records Centre serving the Bradford area, was also requested to check EPS activity and habitats within a radius of 500 metres of the site mid-point.

It is considered that the proposed development of the survey site by the client would have no deleterious impact on any European Protected Species (EPS) or their habitat, either currently, or in the future of any surrounding statutory or non-statutory sites.

PART 1: INTRODUCTION

Reason for the study

ADK Environmental Management Ltd has been commissioned by 'The Client' to carry out a site survey by way of a Preliminary Ecological Appraisal (PEA), (formerly known as an Extended Phase 1 Habitat Survey, required by the Local Planning Authority in support of a potential Planning Application to be submitted by the client.

Aims of the Survey

The aims and objectives of the survey, and therefore this report, are to:

- undertake a site walkover survey of the site
- obtain additional desk top data from 'WYJS'
- report the findings of the site walkover relative to the current ecological value of the site.
- to determine the potential of any protected species and/or habitats on the site;
- document the methodologies and findings of the surveys;
- inform the development proposals of the ecological significance of the site and highlight any ecological constraints to development.
- make recommendations considered appropriate, together with any precautionary measures to be undertaken prior to the commencement of any development works taking place.
- Identify opportunities for ecological enhancement.

PART 2: INFORMATION

Qualifications of Author, Andrew King (Principal Ecologist)

Andrew King obtained a BSc (Hons) Environmental Management in June 2003 and has been employed as the full time Principal Ecologist and Managing Director of ADK Environmental Management Ltd. for the past fifteen years. He is a full member of The Chartered Institute of Ecology and Environmental Management (MCIEEM) and an associate member of the Institute of Environmental Management & Assessment (AIEMA). In addition, he is a full member of the Royal Society of Biology (MRSB) and is a qualified ECoW as a full member of the Association of Environmental & Ecological Clerk of Works (MEECW).

He is a full Member of the Institute of Clerks of Works and Construction Inspectorate GB (Environmental) (MICWCI). In addition to his ecological qualifications, he is a Fellow of the Institute of Leadership and Management (FInstLM), a Fellow of the Chartered Management Institute (FCMI) and a Graduate Member of the City & Guilds Institution of London (GCGI). He is also a full member of the Royal Entomological Society Mem.R.E.S. He is an experienced and well qualified ecologist having undertaken numerous Preliminary Ecological Appraisals (PEA's), (formerly known as Extended Phase 1 Habitat Surveys), including species specific surveys for European Protected Species (EPS). He is registered to use Class Licence CL08 (Great Crested Newt Survey Level 2).

As a member of these professional institutions he is obliged to follow strict Codes of Practice and demonstrate a standard of knowledge and experience monitored annually through peer review and documentary confirmation of Continuing Professional Development (CPD).

PART 3: SITE LOCATION & DESCRIPTION

The survey site is a parcel of triangular shaped land of approximately 0.8 acres situated off South View Road adjacent to Bierley Marsh, East Bierley, Bradford, BD4 6PH. The area is semi-rural in character lying approximately 2.3 miles (3.7 km) southwest of Bradford centre. The (British National) Grid Reference for the survey site mid-point is located at SE 198(8) 291(5).

Access to the site off South View Road is via an 'unadopted' road and a galvanised metal gate. The site is bounded on all sides by a traditionally built stone wall approximately 4ft. (1m 20cm) in height. Internally, the site supports improved grassland.

PART 4: SURVEY METHODOLOGIES

The site was surveyed by the author assisted by one field worker on the 8th February 2020 by undertaking a walk-over survey broadly in accordance with the JNCC methodology (2010) and CIEEM 'Guidelines for Preliminary Ecological Appraisal' (2017), in order to produce a survey report. Target notes (if applicable) together with supplementary information for identifying the potential for protected or notable species or habitats are also given where appropriate. Weather was fine and dry with a daytime temperature of 8 deg. C. Conditions were optimal for survey work with 25% cloud cover.

The desk-based assessment focused on the proposed development area (and those immediately adjacent areas that may potentially, either directly or indirectly, be affected by the consequence of the proposed development) and its broader ecological context.

'WYJS' was requested to undertake a 'Baseline Search' and supply any and all relevant data pertinent to the site within a 2km 'buffer zone' of the survey site mid-point.

The value of the site for protected flora and fauna and their habitats (actual or potential) was assessed together with a search for any notable invasive non-native plant species such as Japanese Knotweed (*Fallopia japonica*), Himalayan Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*) listed in Schedule 9 (Section 14) of the Wildlife & Countryside Act 1981 (as amended).

Whilst this PEA Survey does not constitute a full protected species-specific survey it will enable experienced ecologists to obtain an understanding of the site such that it is possible to confirm the conservation significance of the site and assess the potential for impacts on habitats/species likely to represent a material consideration in planning terms.

The purpose of the PEA field walkover survey of the land, was to carry out an assessment survey of the site, noting and recording any and all ecological features and habitats of importance relating to the actual or potential presence of European Protected Species (EPS) and their habitat and any (ecological) impacts the potential development may have.

PART 5: SURVEY RESULTS

Site walkover (Preliminary Ecological Appraisal)

The Preliminary Ecological Appraisal field walkover was conducted on the 8th February 2020, by the author assisted by one experienced field worker. It was a dry morning with a temperature of 8°C. sunny and 25% cloud cover providing optimum conditions for carrying out survey work. Access to the site was via an unadopted road off South View Road and a galvanised metal gate. The 100 metre (British National) Grid Reference for the site mid-point is SE 198(8) 291(5).

The site walkover of this triangular shaped survey site plot consisted of a systematic walk over of the delineated site survey area of approximately 0.8 acres by a qualified and experienced ecologist, designed to determine the overall characteristics of the site and its potential value for all habitats and for the presence (actual or potential) of any EPS (European Protected Species).

The entire site was bounded by a traditionally built stone wall approximate 4ft. (1m 20cm) in height. The central areas of the site consisted of improved grassland with areas of the remains of bramble. Whilst it was early in the growing season there was evidence of plant early growth including ragwort, plantain, ivy, thistle, and dock.

Other wild plants noted in and around the improved grassland area consisted mainly of nettle, dandelion and various grasses. Holly, Laurel and Conifers were noted within the site boundary.

There were no built structures on site and no incidental observations of any birds, mammals, amphibians or reptiles. No incidental field sign observations were recorded in respect of invasive alien species such as Japanese Knotweed (*Fallopia japonica*). There were no bodies of water, ditches, drains or streams within the survey site.

Assessment of Desk Top Data

Reference to Google Earth and Magic indicated no topographical features of importance within a 500m radius of the survey site mid-point.

Assessment of Desk Top Data ('WYJS') 2km (site mid-point) Buffer-Zone

The desk-top data supplied by 'WYJS' highlighted the following;

67 Total number of records were returned for the 2km buffer zone. The breakdown is as follows:

BIRDS	17 (nearest record to centroid 192 m away)
FLOWERING PLANTS	16 (nearest record to centroid 442 m away)
INSECT	3 (nearest record to centroid 540 m away)
MAMMAL	31 (30 bats) (nearest record to centroid 134m away)

3 Non-Statutory sites (Local Wildlife Sites - LWS) were noted, namely:

- Cockleshaw Wood LWS (Approx. 2km away to the South West)
- Park Wood LWS (Approx. 2km away to the North East)
- Tong Moor LWS/LNR (Approx. 1km away to the South West)

PART 6: EVALUATION & CONCLUSION

The survey used standard, 'best-practice' methods and techniques in respect of conducting surveys for protected species and their habitat, together with a list of recommendations for any future or additional surveys to be conducted prior to any final evaluation or conclusion on the site's importance, or any future mitigation in respect of protected species.

The survey broadly followed the JNCC and CIEEM methodologies. Incidental observations of protected and/or Biodiversity Action Plan (BAP) priority species and the potential for such species to occur on site (and in the surrounding landscape where relevant) were also noted where relevant. There were no survey constraints.

In the event that no existing ecology or statutory & non-statutory sites are to be affected, the proposed development by the client would have no deleterious impact on the existing ecology of the site or on any conservation population status of any protected species.

Overall, having regard to the distances away of the three LWS, and the distances of the species records from the sites' centroid, it is considered that there would be no deleterious impact on any LWS or any European Protected Species (EPS) or their habitat, either currently, or in the future.

PART 7: RECOMMENDATIONS

“Consideration for further enhancing the ecology of the site however would enhance, enrich and increase the biodiversity ‘net gain’ and habitat of the site in line with the governments’ vision of promoting sustainable development, conserving, enhancing and restoring the diversity of England’s wildlife and geology and contributing to rural renewal and urban renaissance (ODPM).”

The emphasis of the design would be based on the use of native species of plants and trees, or those known to be of wildlife value. This would create new habitat for the bird, insect and mammal population and also soften any visual impact.

In terms of enhancing the ecology and biodiversity of the site, the choice of native wildflower, shrub and tree planting would ensure that this requirement would be fully met.

It is considered that the proposed development of the survey site by the client would have no deleterious impact on any European Protected Species (EPS) or their habitat, either currently, or in the future of any surrounding statutory or non-statutory sites.

No further ecology surveys are required or recommended.

It is further recommended that all works are undertaken under the Precautionary Principle Working Method Statement, and all construction workers should be subject to ‘tool box talks’ (both prior to and during any construction activities) to identify potential species which may be encountered, and what action to take should that event arise.

PART 8: REFERENCES AND INFORMATION SOURCES

Conservation (Natural Habitats, &c.) Regulations 1994. Statutory Instrument 1994 No. 2716 Wildlife, Countryside. HMSO

Handbook for Phase 1 Habitat Surveys (2010), Joint Nature Conservation Committee 'Guidelines for Preliminary Ecological Appraisal, 2nd. Edition Chartered Institute of Ecology and Environmental Management, CIEEM Winchester.

The Wildlife and Countryside Act 1981 (as amended) and Regulation 39 of The Conservation (Natural Habitats & c.) Regulations 1994. HMSO.

Chartered Institute of Ecology and Environmental Management. (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom*.

Chartered Institute of Ecology and Environmental Management. (2006). *Developing Best Practice in Survey and Reporting*.

'WYES' (the Local Biological Records Centre serving the Bradford area)

Electronic References

Google Earth

'Magic': Multi-Agency Geographic Information for the Countryside

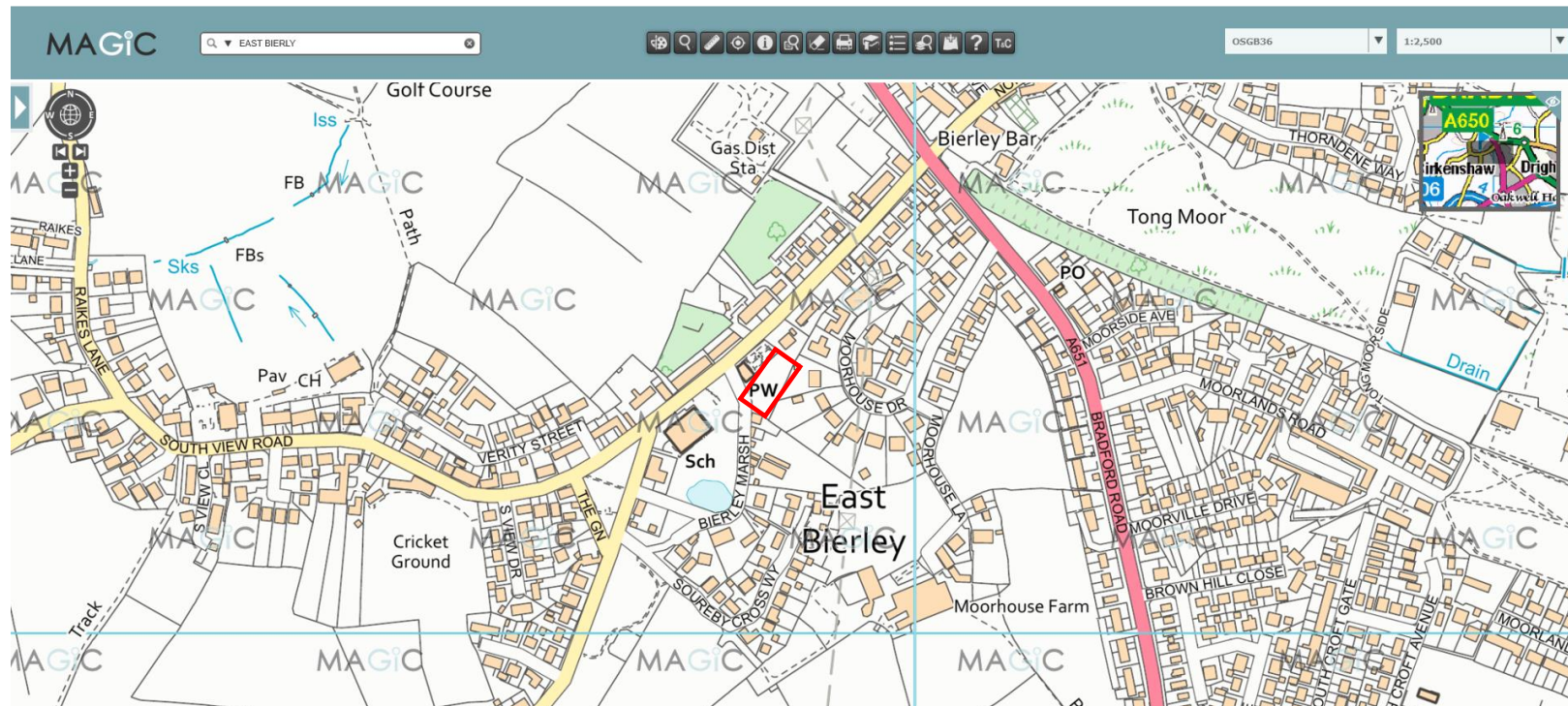
National Biodiversity Network (NBN) <https://nbn.org.uk/>, <https://nbnatlas.org/>, <https://spatial.nbnatlas.org>

Ordnance Survey Mapping (Bing Maps)

<http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx>

PART 9: APPENDICES

Appendix 1- Survey Site Location Map [SE 1986 2922] (survey area outlined in red)



Source: magic.gov.uk (accessed February 2020)

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Appendix 2 – Aerial Site Location Map (survey area in white)



Source: Google Earth (accessed February 2020)

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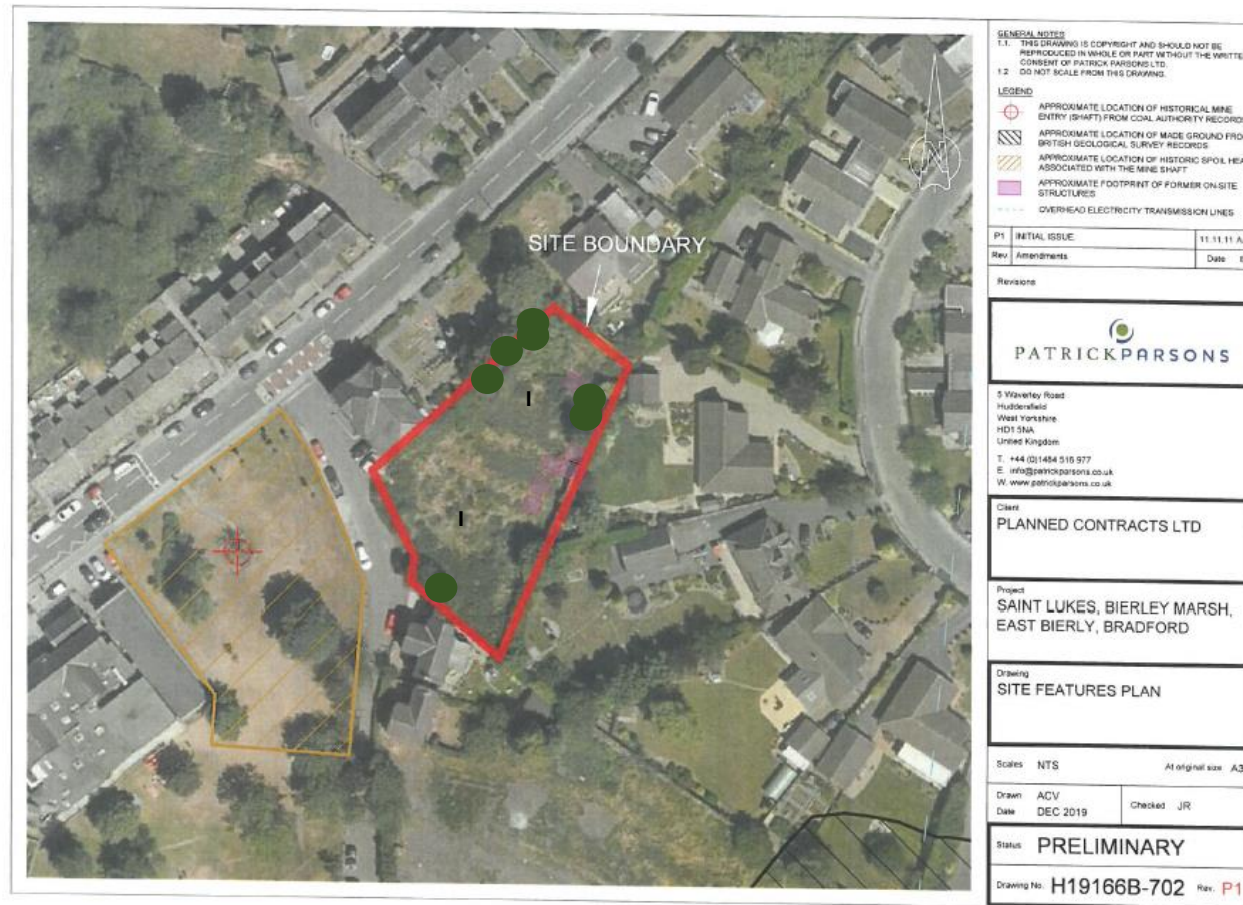
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Appendix 3 – Phase 1 Habitat Map (survey boundary outlined in red)**KEY**

I
Improved grassland

●
Scattered trees



Source: Outline map supplied by client

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Appendix 4i – Site photographs: General (all photographs taken by author 08/02/2020)



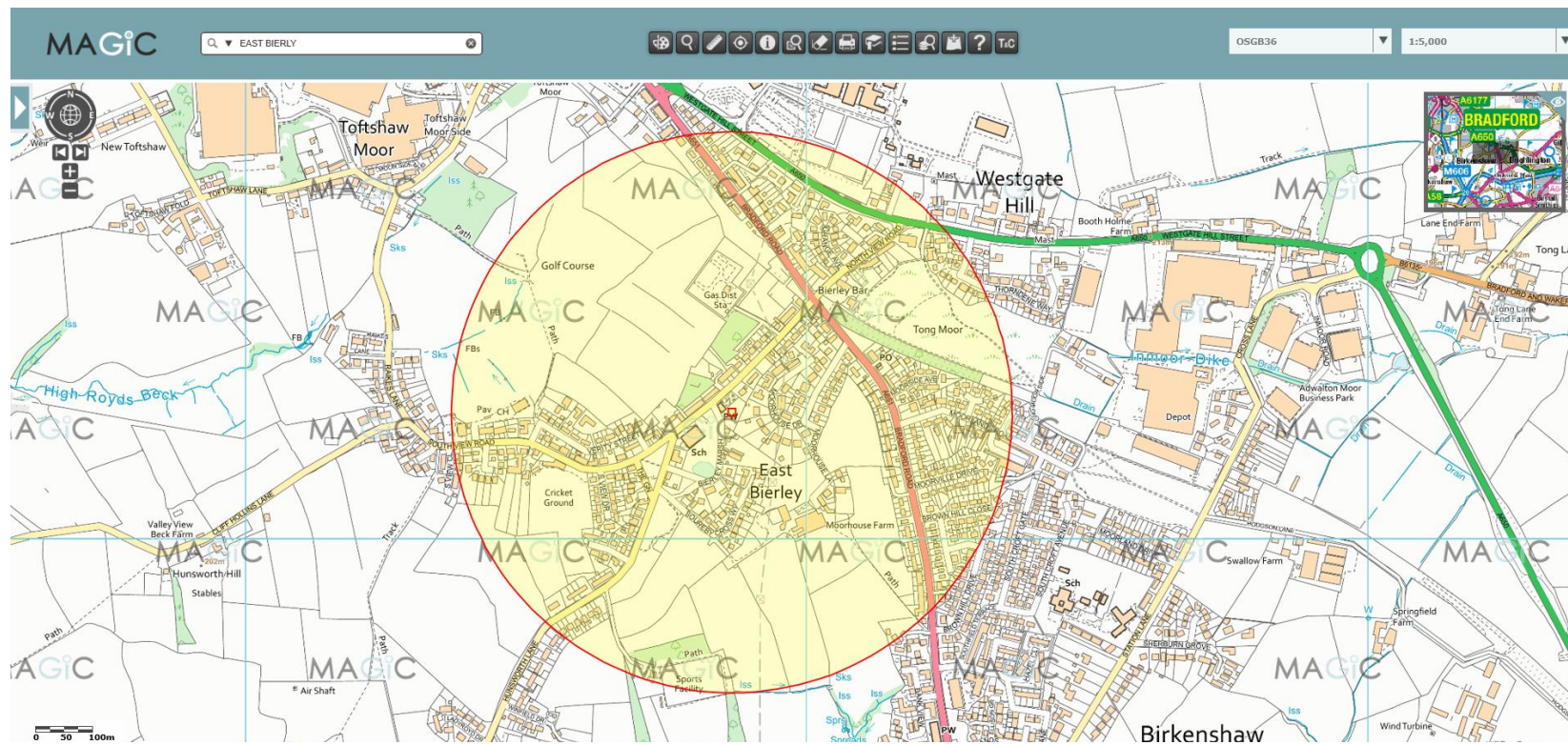
Appendix 4ii – Site photographs: General (all photographs taken by author 08/02/2020)



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Appendix 5 – MAGIC Desk-top data search: 500m buffer zone site check for protected species (from site mid-point)



Source: magic.gov.uk (accessed February 2020)

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Appendix 6: 'WYJS' 2km Desk-top data

*** Please see complete document set contained at the end of this report ***

Source: 'WYJS' received 13th February 2020

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A full compendium of site photos is available to view on CDROM by written request to ADK Environmental Management

SIGNED


[For and on behalf of ADK Environmental Management Limited]

PRINT NAME: Andrew D. King

DESIGNATION: Principal Ecologist & Principal Environmental Advisor

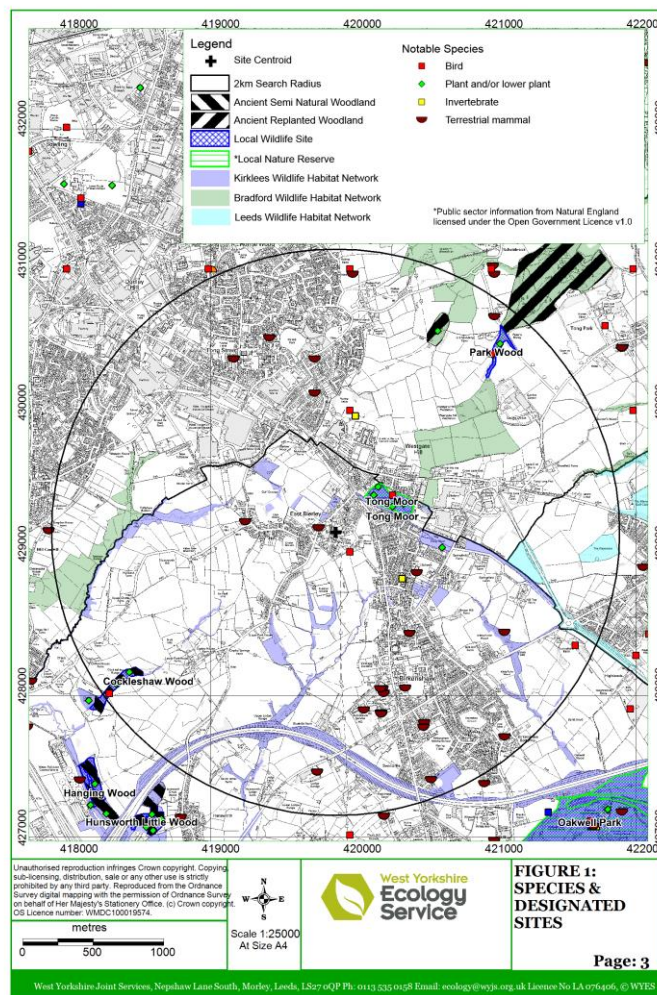
DATED: th February 2020



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WYJS Desk-top data (2km buffer zone) – Species and Designated Sites



1 Introduction

This report provides a summary of the protected and notable species, habitats a designated sites information held by West Yorkshire Ecology Service (WYES) within 21 of grid reference SE 1988 2915.

The information within this report is supplied subject to WYES's Terms and Condition which can be viewed on the WYES website (<http://wyjs.org.uk/ecology-service/>).

2 Species

Please see Appendix E for records held by WYES within your defined search area.

2.1 SENSITIVE SPECIES RECORDS

2.1.1 Badgers

West Yorkshire Ecology Service hold no badger information within 200m of your site. However please see separate excel spreadsheet for additional information such as close sett records and increased probability of badger activity within your search area.

See Appendix D for an explanation to the supply of badger data

3 Designated sites

3.1 INTERNATIONALLY/NATIONALLY DESIGNATED SITES

There are no internationally/nationally designated sites within your search area.

3.2 LOCALLY DESIGNATED SITES

The following Non-Statutory sites were found within the search area, and are shown on Fig 1.

Name of Site	Designation
Cockleshaw Wood	Local Wildlife Site
Park Wood	Local Wildlife Site
Tong Moor	Local Wildlife Site

Explanations for designated sites are provided in Appendix B.

Citations for locally designated sites are provided in Appendix C.

The following Statutory local sites was found within the search area, and is shown on Fig 1.

Name of Site	Designation
Tong Moor	Local Nature Reserve

Explanations for designated sites are provided in Appendix B.

4 Habitats

4.1 WILDLIFE HABITAT NETWORK

Your site centroid does not lie within the Kirklees Wildlife Habitat Network. See Figure 1 for Wildlife Habitat Network data.

4.2 ANCIENT WOODLAND

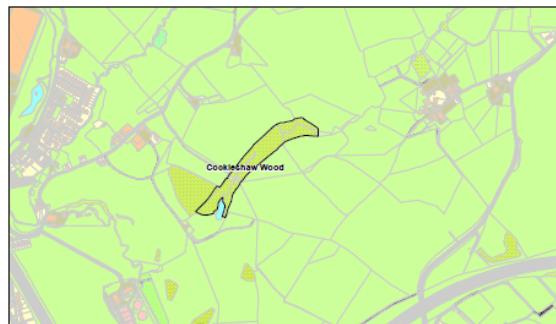
There is no Ancient Semi-natural Woodland/Ancient Replanted Woodland within 100m of your site centroid.

WYJS Desk-top data (2km buffer zone) – Local Wildlife Sites (location maps)

West Yorkshire Local Sites Partnership

Local Wildlife Site

Site name: Cockleshaw Wood
 Planning authority: Kirklees
 Grid reference: SE183280
 Date of review: 01/05/2015
 Date approved by LS Partnership: 21/01/2016
 Site boundary:



Qualifying criteria:

Wd1 - part ancient semi-natural woodland
 Wd3 - species rich acid woodland
 Wd5 - native bluebell cover

Criteria version: 21/01/16

This designation does not confer any rights of public access

West Yorkshire Local Sites Partnership

Local Wildlife Site

Site name: Park Wood
 Planning authority: Kirklees
 Grid reference: SE138132
 Date of review: 24/04/2015
 Date approved by LS Partnership: 21/01/2016
 Site boundary:



Qualifying criteria:

Wd3 - species rich acid woodland

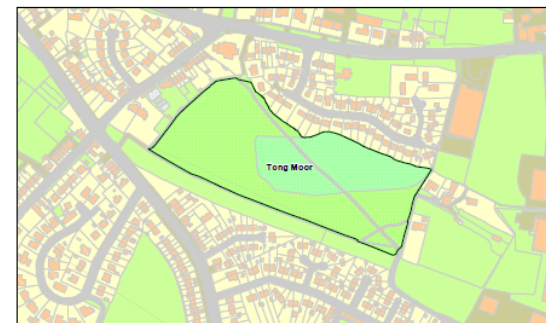
Criteria version: 21/01/16

This designation does not confer any rights of public access

West Yorkshire Local Sites Partnership

Local Wildlife Site

Site name: Tong Moor
 Planning authority: Kirklees
 Grid reference: SE203294
 Date of review: 13/07/2015
 Date approved by LS Partnership: 21/01/2016
 Site boundary:



Qualifying criteria:

Gr4 - Species rich acid grassland
 Van12 - Local Nature Reserve

Criteria version: 21/01/16

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 Morley, Leeds, LS237 0QP | LS27 7JQ (Sat Nav) ecology@wyls.org.uk

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WYJS Desk-top data (2km buffer zone) – Local Wildlife Sites (site descriptions)

West Yorkshire Local Wildlife Site

Site Name/ Code: Cockleshaw Wood	Location: Oakenshaw, Kirklees
Date of Survey: 01/05/2015	Surveyor: A. Jukes, West Yorkshire Ecology
Grid Reference: SE183280	Site Area (Ha): 2.31
Natural Area: Coal Measures	Public Access: public footpaths through part of site
NVC Communities: W10a, W10e	

Site Description

Cockleshaw wood is located between Oakenshaw and Birkenshaw. Surrounding land is mainly improved and semi-improved neutral grassland, some cattle grazed, and there are stone walls and fences along most of the boundaries. Part of the woodland is open to adjacent fields, with signs of cattle disturbance in the woodland to the north. There is a public footpath crossing the site. Hanging Wood and Hunsworth Great Wood and Little Wood are present to the south.

The area to the north east mapped as W10a appears to be semi-natural, with frequent *Quercus robur*, occasional *Quercus petraea*, *Betula pubescens* and *Acer pseudoplatanus* and rarely occurring *Acer campestre* in the canopy. The understorey has occasional *Sambucus nigra*, *Crataegus monogyna* and *Corylus avellana*, and the ground flora has frequent *Holcus mollis*, *Hyacinthoides non-scripta* and occasional *Hedera helix*.

Most of the woodland is closest to W10e. To the south, there is an open area with little understorey and abundant *Quercus* spp. and occasional *Acer pseudoplatanus* in the canopy. The ground flora has abundant *Holcus mollis* and occasional *Rubus fruticosus* agg. To the north *Acer pseudoplatanus* is more frequent with occasional *Quercus* spp. and *Betula pubescens*. The ground flora has abundant *Holcus mollis*, occasional *Dryopteris dilatata*, *Hyacinthoides non-scripta*, *Viola riviniana* and *Allium ursinum*, with rarely occurring species including *Oxalis acetosella*, *Anemone nemorosa* and *Blechnum spicant*.

The area of woodland to the south west outside the site boundary is mapped as W10, but is very open with no understorey and therefore not a good match. *Quercus robur* is abundant in the canopy with frequent *Quercus petraea*. The ground flora is species-poor with frequent *Holcus mollis* and *Holcus lanatus* and occasionally occurring *Lolium perenne*, *Dactylis glomerata* and *Urtica dioica*.

There is a stream running through the middle of the wood, flowing into the pond to the south. Occasional species include *Veronica beccabunga*, *Ranunculus ficaria*, *Juncus effusus* and *Chrysosplenium oppositifolium*. The pond had very little vegetation and high turbidity when surveyed. Mallards were present on the stream.

Ecological Evaluation

The section of W10a woodland to the north east appears to be semi-natural and is 0.57ha in size, therefore it meets Criteria Wd1 for ancient semi-natural woodland greater than 0.5ha in size. The areas of W10e appear to have had some replanting, therefore do not meet Wd1. The ground flora is

West Yorkshire Local Wildlife Site

Site Name/ Code: Park Wood	Location: Honley, Kirklees
Date of Survey: 24/04/2015	Surveyor: A. Jukes, West Yorkshire Ecology
Grid Reference: SE138132	Site Area (Ha): 4.62ha
Natural Area: Coal Measures	Public Access: footpaths
NVC Communities: W10, W16	

Site Description

Park Wood is an ancient woodland site between Hanging Stone Road and Woodhead Road, south of Huddersfield. There are houses and gardens to the east and improved grassland to the west, and stone walls along most of the boundaries. There are well-used footpaths through the wood.

W10 areas have abundant *Quercus petraea* and occasional *Acer pseudoplatanus* and *Fagus sylvatica* in the canopy, with frequent *Ilex aquifolium* and occasional *Betula pubescens* in the understorey. The ground flora has locally abundant *Rubus fruticosus* agg., *Hedera helix* and *Hyacinthoides non-scripta*, with frequent *Holcus mollis* and occasional *Luzula sylvatica* and *Pteridium aquilinum*.

W16 areas have abundant *Betula* spp. in the canopy with frequent *Quercus petraea* and occasional *Fagus sylvatica*, and occasional *Ilex aquifolium* and *Acer pseudoplatanus* in the understorey. Frequent *Deschampsia flexuosa*, *Hypnum cupressiforme* and *Pteridium aquilinum* are present in the ground flora, with occasional *Luzula sylvatica*, *Melampyrum pratense* and *Holcus mollis*.

An area of more open woodland outside the boundary to the east is closest to W10, with frequent *Acer pseudoplatanus*, *Quercus petraea* and *Ilex aquifolium*, and occasional *Betula* spp., *Salix* sp. and *Fagus sylvatica*. The ground flora has locally abundant *Hedera helix*, *Rubus fruticosus* agg., and *Pteridium aquilinum*, and occasional *Urtica dioica*, *Dactylis glomerata* and *Arrhenatherum elatius*. Outside the boundary to the north and south of the woodland are more disturbed areas with younger *Quercus petraea* and *Acer pseudoplatanus* trees and a species-poor ground flora with abundant *Hedera helix*.

Blackbird, Blue Tit and Small White were recorded.

Ecological Evaluation

The woodland does not meet Criteria Wd1 as it appears to have been replanted, with trees mostly similar ages and fairly widely spaced. The ground flora is reasonably species-rich, scoring 8 for acid species richness, therefore the woodland meets Criteria Wd3 for acid species diversity with the threshold being 8. Native Bluebells are locally abundant in the W10 areas, but less than 10% of the woodland has dense cover therefore it does not meet Criteria Wd5.

West Yorkshire Local Wildlife Site

Site Name/ Code: Tong Moor	Location: Birkenshaw, Kirklees
Date of Survey: 13/07/2015	Surveyor: A. Jukes, West Yorkshire Ecology
Grid Reference: SE203294	Site Area (Ha): 3.98
Natural Area: Coal Measures	Public Access: Footpaths throughout site
NVC Communities: MG1, U1e, M25, W23	

Site Description

Tong Moor is a Local Nature Reserve to the north of Birkenshaw. Surrounding land use is mainly housing and gardens, with a dismantled railway line running along the southern boundary with *Acer pseudoplatanus* woodland. The site is publically accessible with footpaths throughout the site.

The acid grassland is a mosaic of U1e in drier areas and M25 in wetter patches. U1e grassland has abundant *Agrostis capillaris*, frequent *Festuca ovina*, *Holcus lanatus* and *Plantago lanceolata*, and occasionally occurring species including *Anthoxanthum odoratum*, *Festuca rubra*, *Cynosurus cristatus*, *Trisetum flavescens*, *Nardus stricta*, *Deschampsia flexuosa*, *Lotus corniculatus*, *Rumex acetosella*, *Galium saxatile* and *Potentilla erecta*. M25 patches have abundant *Molinia caerulea* and *Holcus lanatus*, with locally abundant *Juncus effusus*, frequent *Deschampsia cespitosa* and locally frequent *Holcus mollis*. Occasionally occurring species include *Festuca ovina*, *Carex nigra*, *Juncus squarrosus*, *Ranunculus repens*, *Potentilla erecta* and *Lathyrus pratensis*.

There are areas of MG1 with tall ruderal patches and scattered scrub and trees along the edges of the site, with frequent *Arrhenatherum elatius*, *Dactylis glomerata* and *Urtica dioica* and occasional *Holcus lanatus*, *Phleum pratense*, *Elytrigia repens*, *Equisetum arvense* and *Heracleum sphondylium*. There is locally abundant *Chamerion angustifolium*, *Epilobium hirsutum*, *Aegopodium podagraria* and *Symphytum x uplandicum*. Scrub and tree species include *Rubus fruticosus* agg., *Salix cinerea* and *S. caprea*, *Acer pseudoplatanus* and *Sambucus nigra*.

W23 scrub has abundant *Ulex europaeus*, frequent *Rubus fruticosus* agg. and *Chamerion angustifolium*, and occasionally occurring species including *Quercus* spp., *Crataegus monogyna*, *Sambucus nigra* and *Arrhenatherum elatius*.

The small pond in the south east corner of the site has little open water and is mainly overgrown with emergent vegetation, including abundant *Juncus effusus*, locally abundant *Ranunculus flammula* and frequent *Iris pseudacorus* and *Sphagnum palustre*. Occasionally occurring species are *Molinia caerulea*, *Agrostis stolonifera*, *Deschampsia cespitosa*, *Carex nigra*, *Juncus articulatus*, *Juncus inflexus* and *Eriophorum angustifolium*, with rarely occurring *Polytrichum commune*.

Invertebrates recorded were Ringlet, Meadow Brown, Small Skipper, moths and bumble bees. Blackbird, Chaffinch and Linnet were seen.

WYJS Desk-top data (2km buffer zone) – Species records

Appendix E. Species Records

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE183280	Mallard	<i>Anas platyrhynchos</i>	bird	01/05/2015	field observation		BoCC:Amber	1,950
SE2159028340	Mallard	<i>Anas platyrhynchos</i>	bird	02/09/2008	field record	200 Count of Adult	BoCC:Amber	1,888
SE2030	Meadow Pipit	<i>Anthus pratensis</i>	bird	1970 - 1988	field record		BoCC:Amber	858
SE2031	Meadow Pipit	<i>Anthus pratensis</i>	bird	1970 - 1988	field record		BoCC:Amber	1,853
SE2159028340	Swift	<i>Apus apus</i>	bird	02/09/2008	field record	2 Count of Adult	BoCC:Amber; WYBAP	1,888
SE203294	Linnet	<i>Carduelis cannabina</i>	bird	13/07/2015	field observation		BoCC:Red; UKBAP; WYBAP; Kirklees BAP	488
SE2030	Yellowhammer	<i>Emberiza citrinella</i>	bird	1970 - 1988	field record		BoCC:Red; UKBAP; WYBAP; Bradford BAP	858
SE2029	Kestrel	<i>Falco tinnunculus</i>	bird	1970 - 1988	field record		BoCC:Amber; WYBAP; Kirklees BAP	192
SE210304	Kestrel	<i>Falco tinnunculus</i>	bird	20/04/2017	field observation		BoCC:Amber; WYBAP	1,676
SE2029	Black-Headed Gull	<i>Larus ridibundus</i>	bird	1970 - 1988	field record		BoCC:Amber	192
SE210304	Willow Warbler	<i>Phylloscopus trochilus</i>	bird	20/04/2017	field observation		BoCC:Amber	1,676

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Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE210304	Tawny Owl	<i>Strix aluco</i>	bird	20/04/2017	field observation		BoCC:Amber	1,676
SE2029	Starling	<i>Sturnus vulgaris</i>	bird	1970 - 1988	field record		BoCC:Red; UKBAP; WYBAP; Kirklees BAP	192
SE2031	Song Thrush	<i>Turdus philomelos</i>	bird	1970 - 1988	field record		BoCC:Red; UKBAP; WYBAP	1,853
SE210304	Mistle Thrush	<i>Turdus viscivorus</i>	bird	20/04/2017	field observation		BoCC:Red	1,676
SE2030	Lapwing	<i>Vanellus vanellus</i>	bird	1970 - 1988	field record		BoCC:Red; UKBAP; WYBAP; Bradford BAP	858
SE20282934	Crested Buckler-Fern	<i>Dryopteris cristata</i>	fern	Jun-08	field record	1 Count of o	RDB:post2001: CR; UKBAP	442
SE20362936	Crested Buckler-Fern	<i>Dryopteris cristata</i>	fern	Jun-08	field record	1 Count of r	RDB:post2001: CR; UKBAP	523
SE20362936	Pheasant's Eye	<i>Adonis annua</i>	flowering plant	Jun-08	field record	1 Count of r	Sch9_part1; RDB:post2001:E N; UKBAP	523
SE2063029050	Montbretia	<i>Crocsmia x crocosmiiflora</i>	flowering plant	02/09/2008	field record	R Range of DAFOR	Sch9_part2	755
SE20152942	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	Jun-08	field record	1 Count of la	Sch9_part2	381
SE2018029480	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	13/07/2015	field observation	O Count of DAFOR	Sch9_part2	445
SE20362936	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	Jun-08	field record	1 Count of la	Sch9_part2	523
SE2063029050	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	02/09/2008	field record	R/LA Range of DAFOR	Sch9_part2	755

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Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE1833028087	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	01/05/2015	field observation	O Count of DAFOR	Sch8_sect 13.2; Kirklees BAP	1,876
SE1842228170	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	01/05/2015	field observation	F Count of DAFOR	Sch8_sect 13.2; Kirklees BAP	1,753
SE20603058	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	04/05/2012	field observation	O Range of DAFOR	Sch8_sect 13.2; Bradford BAP	1,599
SE20993041	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	20/04/2017	field observation	R Count of DAFOR	Sch8_sect 13.2; Bradford BAP	1,677
SE21043049	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	20/04/2017	field observation	LD-O Count of DAFOR	Sch8_sect 13.2; Bradford BAP	1,770
SE1833028087	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	01/05/2015	field observation	O Count of DAFOR	Sch9_part2	1,876
SE20993041	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	20/04/2017	field observation	O Count of DAFOR	Sch9_part2	1,677
SE21043049	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	20/04/2017	field observation	LA-O Count of DAFOR	Sch9_part2	1,770
SE23	Bast bark beetle	<i>Ernoporus tiliae</i>	insect - beetle (Coleoptera)	1921	field record		RDB:Pre94:EN	858
SE20332885	Ghost Moth	<i>Hepialus humuli</i>	insect - moth	03/07/2018	field observation	1 Count	UKBAP	540
SE20332885	Volucella inanis	<i>Volucella inanis</i>	insect - true fly (Diptera)	14/08/2016	field record	1 Count	Notable	540
SE2031	Brown Hare	<i>Lepus europaeus</i>	terrestrial mammal	22/03/1981	field record	1 Count of Adult	UKBAP; WYBAP; Bradford BAP	1,853
SE2019528070	Lesser Noctule Bat	<i>Nyctalus leisleri</i>	terrestrial mammal	2006	Roost		Sch5; WYBAP; Kirklees BAP	1,124
SE2020027893	Lesser Noctule Bat	<i>Nyctalus leisleri</i>	terrestrial mammal	19/05/2006	Roost		Sch5; WYBAP; Kirklees BAP	1,296

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Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE1974727483	Noctule	<i>Nyctalus noctula</i>	terrestrial mammal	Jul-14	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,672
SE1975929209	Noctule	<i>Nyctalus noctula</i>	terrestrial mammal	June 2014 - August 2014	foraging		Sch5; UKBAP; WYBAP; Kirklees BAP	134
SE2007827921	Noctule	<i>Nyctalus noctula</i>	terrestrial mammal	07/12/2009	Roost		Sch5; UKBAP; WYBAP; Kirklees BAP	1,244
SE2021028071	Noctule	<i>Nyctalus noctula</i>	terrestrial mammal	11/05/2008	Roost	8 Count of Adult	Sch5; UKBAP; WYBAP; Kirklees BAP	1,128
SE2021828037	Noctule	<i>Nyctalus noctula</i>	terrestrial mammal	Aug-14	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,162
SE202279	Noctule	<i>Nyctalus noctula</i>	terrestrial mammal	30/07/2014	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,290
SE210307	Noctule	<i>Nyctalus noctula</i>	terrestrial mammal	30/05/2006	field record		Sch5; UKBAP; WYBAP	1,910
SE1974727483	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	Jul-14	Roost		Sch5; WYBAP; Kirklees BAP	1,672
SE1975929209	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	June 2014 - August 2014	foraging		Sch5; WYBAP; Kirklees BAP	134
SE2020227893	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	21/10/2010	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	1,297
SE2021828037	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	Aug-14	foraging		Sch5; WYBAP; Kirklees BAP	1,162
SE202279	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	13/08/2014	field record		Sch5; WYBAP; Kirklees BAP	1,290

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Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE202279	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	30/07/2014	field record		Sch5; WYBAP; Kirklees BAP	1,290
SE2037028076	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/08/2015	Roost	2 Count	Sch5; WYBAP; Kirklees BAP	1,179
SE2040028463	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	Unknown	foraging		Sch5; WYBAP; Kirklees BAP	861
SE21072847	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	18/09/2012	field record	1 Count	Sch5; WYBAP; Kirklees BAP	1,368
SE1974727483	55 Khz Pipistrelle	<i>Pipistrellus pipistrellus</i> 55kHz	terrestrial mammal	Jul-14	foraging		Sch5; UKBAP; WYBAP; Kirklees BAP	1,672
SE2050527830	Pipistrelle Bat species	<i>Pipistrellus</i> sp.	terrestrial mammal	23/05/2007	Roost		Sch5	1,459
SE210307	Pipistrelle Bat species	<i>Pipistrellus</i> sp.	terrestrial mammal	30/05/2006	field record		Sch5	1,910
SE19413055	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	07/10/2005	Grounded	1 Count of Adult	Sch5; UKBAP; WYBAP	1,476
SE19163040	Vesper Bat species	<i>Vespertilionidae</i>	terrestrial mammal	13/06/2005	in building	1 Count of Adult	Sch5	1,441
SE1923929252	Vesper Bat species	<i>Vespertilionidae</i>	terrestrial mammal	15/05/2000	Roost	18 Count of Adult	Sch5	647
SE19733016	Vesper Bat species	<i>Vespertilionidae</i>	terrestrial mammal	08/08/2007	field record		Sch5	1,021
SE19733040	Vesper Bat species	<i>Vespertilionidae</i>	terrestrial mammal	08/09/2004	Grounded	1 Count of Adult	Sch5	1,258
SE20452889	Vesper Bat species	<i>Vespertilionidae</i>	terrestrial mammal	1996	in building		Sch5	625
SE205278	Bats	<i>Vespertilionidae</i>	terrestrial mammal	05/08/2009	Roost		Sch5	1,484
SE2055227430	Vesper Bat species	<i>Vespertilionidae</i>	terrestrial mammal	14/07/2005	Roost	35 Count of Adult	Sch5	1,845

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Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE21072773	Vesper Bat species	Vespertilionidae	terrestrial mammal	30/06/2005	in building	1 Count of Adult	Sch5	1,850

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