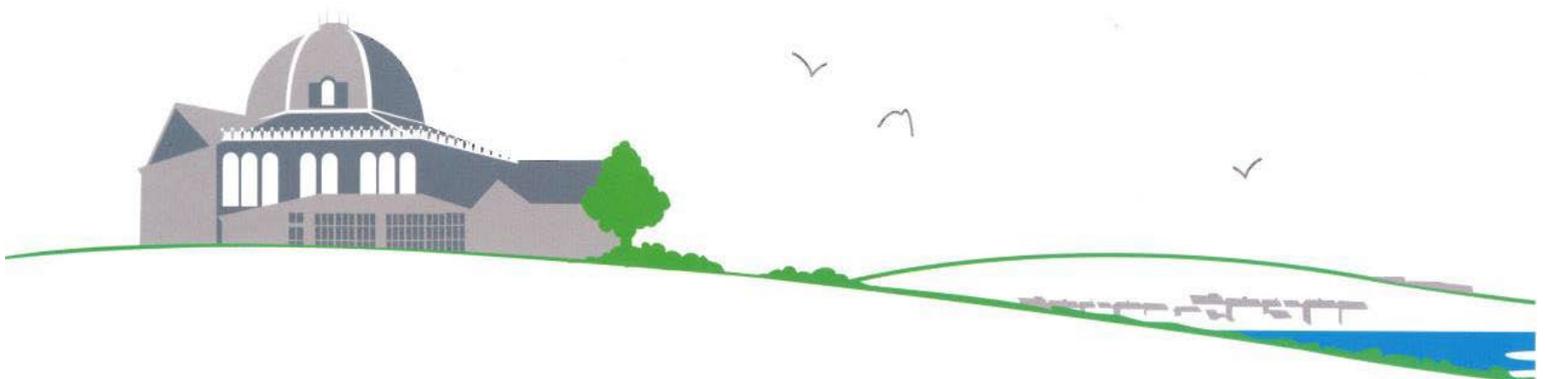




CANAL & RIVER TRUST
HOLME MOOR (ROUND HILL)
BASELINE BREEDING BIRD SURVEY REPORT



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HOLME MOOR (ROUND HILL)

BASELINE BREEDING BIRD SURVEY REPORT

Penny Anderson Associates Limited
'Park Lea'
60 Park Road
Buxton
Derbyshire
SK17 6SN

Project Manager and Author
Sarah Ross BSc (Hons), PhD, MCIEEM, CEnv

June 2023

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed:

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1. INTRODUCTION

Background

- 1.1 Canal & River Trust (CRT) are in discussions with The National Trust to undertake works on an area of land at Holme Moor, Marsden as compensation for the permanent loss of habitat associated with a proposed permanent access track to March Haigh Reservoir and resulting impacts on assemblages of breeding birds including those species associated with the South Pennine Moors (Phase 2) Special Protection Area (SPA).
- 1.2 The National Trust Volunteer Survey Group (VSG), Marsden Moor, had previously undertaken a survey of the land at Holme Moor and its potential for wetland improvement. (Volunteer Survey Group 2020). The report concluded that there was potential to diversify the purple moor-grass¹-dominated vegetation.
- 1.3 Penny Anderson Associates Ltd (PAA) was commissioned by the CRT to consider the suitability of Holme Moor as a compensatory site where habitat enhancements to increase the suitability of the area for breeding birds could be applied.
- 1.4 An initial site visit took place on 7th March 2023, with the National Trust Land Outdoors and Nature Project Manager (Rosie Holdsworth), the CRT Project Manager (Heather Ritchie) and PAA Associate Director (Sarah Ross).
- 1.5 This was followed by a baseline breeding bird survey on site to ensure any habitat enhancement proposals did not conflict with the existing breeding bird assemblage. This report presents the methods and results of the surveys undertaken by PAA in spring and early summer 2023. Three of the four survey visits are presented in this report, with a fourth site visit scheduled for the end of June (and this report to be subsequently updated).

Site Description

- 1.6 Key habitat types were identified across the breeding bird survey area (Figures 1a to 1c) and assessed for their suitability for habitat enhancement works as follows:
 - Area north-west of Blackmoorfoot Conduit - Mixed acid grassland and heather (*Calluna vulgaris*) developed over thin mineral and peaty podsol soils. Associated with areas of disturbed ground forming low hummocks of spoil (possibly from former quarrying works) often on steep slopes. Rushes (*Juncus*) and purple moor-grass are frequent in damper areas but the ground is sloping with dips and hummocks making access for machinery problematic. Unsuitable as a habitat enhancement/compensation area;
 - Area around Piper Stones - Variable habitat largely comprising steeper heather-dominated slopes on mineral soils leading down to the Colne Valley Circular Walk National Trail. Dry acid grassland, rocky outcrops and bracken (*Pteridium aquilinum*) are also present in this area. Associated with former quarry workings. Unsuitable as a habitat enhancement/compensation area.
 - Area east of Ellen Clough and north of Deer Hill Conduit - Flatter area of purple moor-grass-dominated habitat readily accessible from adjacent access tracks. Purple moor-grass is over 80% dominant across the area with few other plant species present. Habitat

¹ *Molinia caerulea*. Plant species names follow Stace 2019

likely to be developed over peat of variable thickness depending on underlying topography. Identified as suitable for habitat enhancement/compensation area.

- 1.7 Further details of the baseline habitat and peat depth surveys are presented in a separate report (PAA 2023) along with details of the proposed restoration/enhancement measures. Appendix 1 presents some illustrative photographs of the area.

2. METHODS

Breeding Bird Survey

- 2.1 The breeding bird survey was undertaken by Andrew Keen. Andrew is an experienced and competent ornithologist who has previously carried out many breeding bird surveys on moorland habitats.
- 2.2 The survey methodology followed the breeding bird survey methodology devised jointly by the British Trust for Ornithology (BTO), the Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservancy Council (JNCC) (Gilbert *et al.* 1998). This methodology requires three visits to be made between late March and early July, with each visit being approximately four weeks apart. The start and finish dates for a particular site will vary depending upon latitude and altitude. The first of these visits is required to scope the site, record the habitats and set up a route and survey approach, with the subsequent two visits following the same route.
- 2.3 On each of the survey visits the following details were recorded:
- bird numbers, species, age and sex;
 - habitats being used; and
 - bird behaviour, e.g. singing, feeding, paying particular attention to evidence of breeding.
- 2.4 In keeping with the methodology, surveys began early in the morning, avoiding heavy rain, poor visibility and strong winds which can reduce visibility and suppress bird activity.
- 2.5 The area was surveyed using a combination of a walked transect and point observations. This involved following a pre-determined route along the proposed track alignment at a slow walking pace with longer periods of observations made at strategic points. Sightings were registered on a suitably scaled base map using standard BTO codes.
- 2.6 The results are shown in Figures 1a to 1c, each Figure covering a separate site visit and encompass all land within the survey area plus an area of approximately 50m outside of the boundary.
- 2.7 The dates, survey times and weather conditions during each survey visit are presented in Table 1.

Table 1 Survey Dates and Conditions

Visit No.	Date	Weather Conditions
1	27 th April 2023	sunny, cool, gentle breeze
2	17 th May 2023	overcast, mild, gentle breeze
3	2 nd June 2023	Warm, partly cloudy, light breeze

Constraints

- 2.8 No significant constraints on the survey were identified. All parts of the survey area land within approximately 50m were visible from the walked transect. The dates of the visits were chosen to avoid unsuitable conditions, such as heavy rain and high winds.

Evaluation Approach

- 2.9 Evaluation of the breeding bird survey results was undertaken in accordance with the following criteria.

Determination of Breeding Status

- 2.10 The breeding status of each species can be classified into four categories: confirmed breeder, probable breeder, possible breeder and non-breeder. The behaviour, sex, age and location of individual birds allow conclusions to be drawn about breeding status, based on categories devised by the European Ornithology Atlas Committee (EOAC 1979) and BTO (see Appendix 2). The four categories: confirmed, probable, possible and non-breeders, are used to indicate the likely breeding status within the survey area.

Schedule 1 Species

- 2.11 Schedule 1 species are protected under the Wildlife and Countryside Act (WCA), 1981 (as amended). It is an offence to disturb any of these species during the breeding season without a valid licence. See Appendix 3 for a summary of the legislation afforded to breeding birds.

Birds of Conservation Concern 4 (Stanbury et al. 2021)

- 2.12 Under this approach bird populations have been assessed using quantitative criteria to determine the population status of each species, and then placed on one of three lists: Red, Amber or Green. Red list species are of high conservation concern, having declined by 50% or more in population or breeding range in the last 25 years. Amber listed species are of medium conservation concern, having suffered between 25% and 49% reduction in breeding or non-breeding populations, breeding or wintering ranges. Green list species have a favourable conservation status.

Section 41 Species of Principal Importance (Priority Species)

- 2.13 Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 lists certain species, also referred to as Priority Species, for which actions and targets have been devised to help safeguard the most threatened species, including bird species. This list relates to England only.
- 2.14 Kirklees Council Local Biodiversity Action Plan (LBAP) species list is included in Appendix 4 for reference, showing LBAP bird species for the region.

3. RESULTS

Breeding Bird Assemblage

- 3.1 An assemblage of 24 species was recorded from within or immediately adjacent to the site over the three survey visits. The full survey results are presented in Appendix 5 and the locations of all bird registrations are presented in Figures 1a to 1c (survey visits 1 to 3, respectively).

Breeding Status

- 3.2 The species assemblage contained species typical of the habitats surveyed. Of the total assemblage of 24 species, one species was confirmed breeding with many of the other species also suspected as breeding within the survey area, although this could not be definitively confirmed (Appendix 5).
- 3.3 The breeding status is given below:
- Confirmed breeding (one species) – meadow pipit²;
 - Probable breeding (eight species) – golden plover (off site), linnet, mallard, reed bunting, red grouse, skylark, stonechat and wheatear;
 - Possible breeding (nine species) – buzzard, curlew, grasshopper warbler, mistle thrush, pheasant, short-eared owl (off site), snipe, wood pigeon and wren.
- 3.4 Confirmed and probable breeding species represent 37.5% of the total number of bird species recorded.
- 3.5 Determination of breeding status is dependent upon particular behaviour being observed. It is likely that a greater proportion of the recorded assemblage are breeding within the site, but that the behaviour that would confirm this was not displayed or recorded during the survey period.
- 3.6 Species recorded on site but categorised as non-breeding are carrion crow, heron, jackdaw, magpie, barn swallow and willow warbler.

Conservation Status

- 3.7 Of the 24 species recorded across the site, 14 (58.3%) are in general decline and listed as Amber or Red Birds of Conservation Concern (BoCC, Stanbury *et al.* 2021).
- 3.8 The Red listed species include curlew, grasshopper warbler, linnet, mistle thrush and skylark. All are categorised as probable or possible species.
- 3.9 The Amber listed species comprise mallard, meadow pipit, reed bunting, short-eared owl (off site), snipe, wheatear, willow warbler, wood pigeon and wren. Meadow pipit is the only confirmed breeding species on the site, with other species being probable or possible breeding species except for willow warbler which is categorised as non-breeding.
- 3.10 Curlew, grasshopper warbler, linnet, red grouse, reed bunting and skylark are all Section 41 Priority Species recorded from the survey area, although curlew was recorded only off site.
- 3.11 Curlew, red grouse, reed bunting, skylark and willow warbler are also listed on the Kirklees LBAP³ (see Appendix 4).

² Common names of species observed on site are used in the text; see Appendix 5 for scientific names.

³ <https://www.kirklees.gov.uk/beta/delivering-services/pdf/biodiversity-species.pdf> (Accessed 15/06/2023)

4. DISCUSSION

Summary

- 4.1 The surveyed route comprises two distinctly different habitats, with slightly differing breeding bird assemblages.
- 4.2 The section north-west of Blackmoorfoot Conduit is dominated by heathland habitat interspersed with acid grassland and bracken patches. Much of this area is former quarry workings with resulting rocky outcrops, steep slopes and undulating topography. Soils are largely mineral or peaty podsols. The area also forms part of the Colne Valley Circular Walk. Species recorded here included linnet, willow warbler, reed bunting, stonechat and mistle thrush, along with magpie, jackdaw and carrion crow.
- 4.3 The section north of Deer Hill Conduit and east of Ellen Clough is a generally flatter area of purple moor-grass-dominated vegetation with localised areas of heather and bilberry (*Vaccinium myrtillus*). Soils are oligotrophic peat deposits with depths of around 30 to 50cm. Within this area the bird species recorded included a number of meadow pipit (confirmed as breeding) along with smaller numbers of wheatear, snipe, red grouse, curlew and skylark. Species such as stonechat, wren and linnet were observed around the edges of this area, often where bracken or scrub occurred.
- 4.4 Snipe, curlew, wheatear and red grouse are all listed as features of interest on the South Pennine Moors (Phase 2) SPA citation. These species are present in low numbers on the purple moor-grass-dominated areas and categorised as probable/possible breeding species.
- 4.5 Golder plover and short-eared owl are also listed as features of interest on the South Pennine Moors (Phase 2) SPA citation⁴, as probable and possible breeding species respectively. These species were recorded as single birds on visit 2 only and present on the adjacent moorland areas. Both species are, however, likely to occasionally use the purple moor-grass-dominated areas at times.
- 4.6 A number of the bird species recorded across the site are also listed as features of interest in the South Pennine Moors Site of Special Scientific Interest (SSSI) citation⁵ forming an important breeding bird assemblage.
- 4.7 To compensate for the unavoidable permanent habitat loss within the South Pennine Moors Phase 2 SPA, SAC and SSSI as part of the proposed March Haigh Reservoir Access Track scheme, it is proposed to provide compensatory habitat enhancement measures on the purple moor-grass-dominated habitat at this site (Holme Moor (Round Hill)). The proposed habitat enhancement measures will increase floristic and structural diversity for key species such as golden plover, curlew, snipe and wheatear.
- 4.8 The land is currently dominated by purple moor-grass and the proposed flailing and addition of *Sphagnum*, cottongrass and dwarf shrub plants will restore a habitat mosaic that will be in close proximity to the wider moorland areas that are within the exiting Special Area of Conservation (SAC) and SSSI designations, thus extending the amount of higher quality habitat available for local populations of breeding birds.

⁴ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9007022.pdf>

⁵ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1007196.pdf>

- 4.9 All birds are afforded protection when breeding including when outside of protected areas, therefore, the presence of all nesting birds should be considered when designing enhancement measures for the area, and avoidance/protection measures implemented commensurate with the level of protection afforded to each species. In this case, the enhancement measures will be timed to avoid the bird nesting season.

5. REFERENCES

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6. ABBREVIATIONS

BoCC	Birds of Conservation Concern
BTO	British Trust for Ornithology
CRT	Canal and River Trust
EOAC	European Ornithological Atlas Committee
JNCC	Joint Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
NERC	Natural Environment and Rural Communities
PAA	Penny Anderson Associates Ltd
RSPB	Royal Society for the Protection of Birds
SAC	Special Area(s) of Conservation
SPA	Special Protection Area(s)
SSSI	Site(s) of Special Scientific Interest
VSG	Volunteer Survey Group
WCA	Wildlife and Countryside Act

FIGURES

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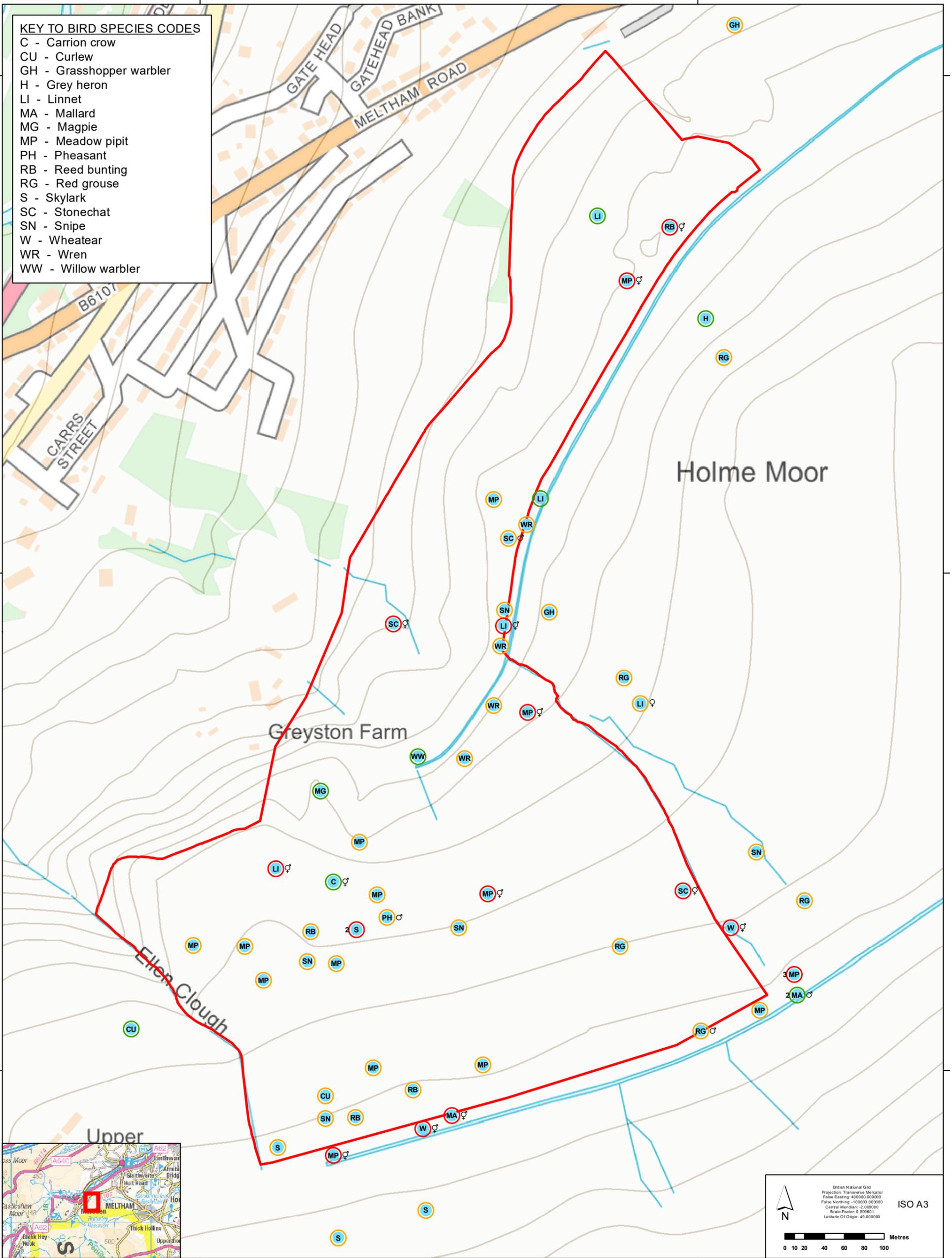
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- KEY TO BIRD SPECIES CODES**
- C - Carrion crow
 - CU - Curlew
 - GH - Grasshopper warbler
 - H - Grey heron
 - LI - Linnet
 - MA - Mallard
 - MG - Magpie
 - MP - Meadow pipit
 - PH - Pheasant
 - RB - Reed bunting
 - RG - Red grouse
 - S - Skylark
 - SC - Stonechat
 - SN - Snipe
 - W - Wheatear
 - WR - Wren
 - WW - Willow warbler



British National Grid
 Projection: Transverse Mercator
 False Easting: 400000.000000
 False Northing: -100000.000000
 Central Meridian: -2.000000
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 Latitude Of Origin: 49.000000

ISO A3

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Penny Anderson Associates Ltd.
 Parklea, 60 Park Road,
 Buxton, Derbyshire SK17 6SN.

Legend:

- Bird registration
- ♀ Female
- ♂ Male
- ♀♂ Pair

Breeding Status

- Non-breeding
- Possible breeder
- Probable breeding
- Confirmed breeding

Title:

**Holme Moor
 Breeding Bird Survey
 Visit 1 - 27/04/2023**

Project: March Haigh Reservoir

Scale: 1:3,500	Drawing No: Figure 1a
Drawn By: CC	Originator: AK
	Date: 09/06/2023
PAA Ref:	Revision: A

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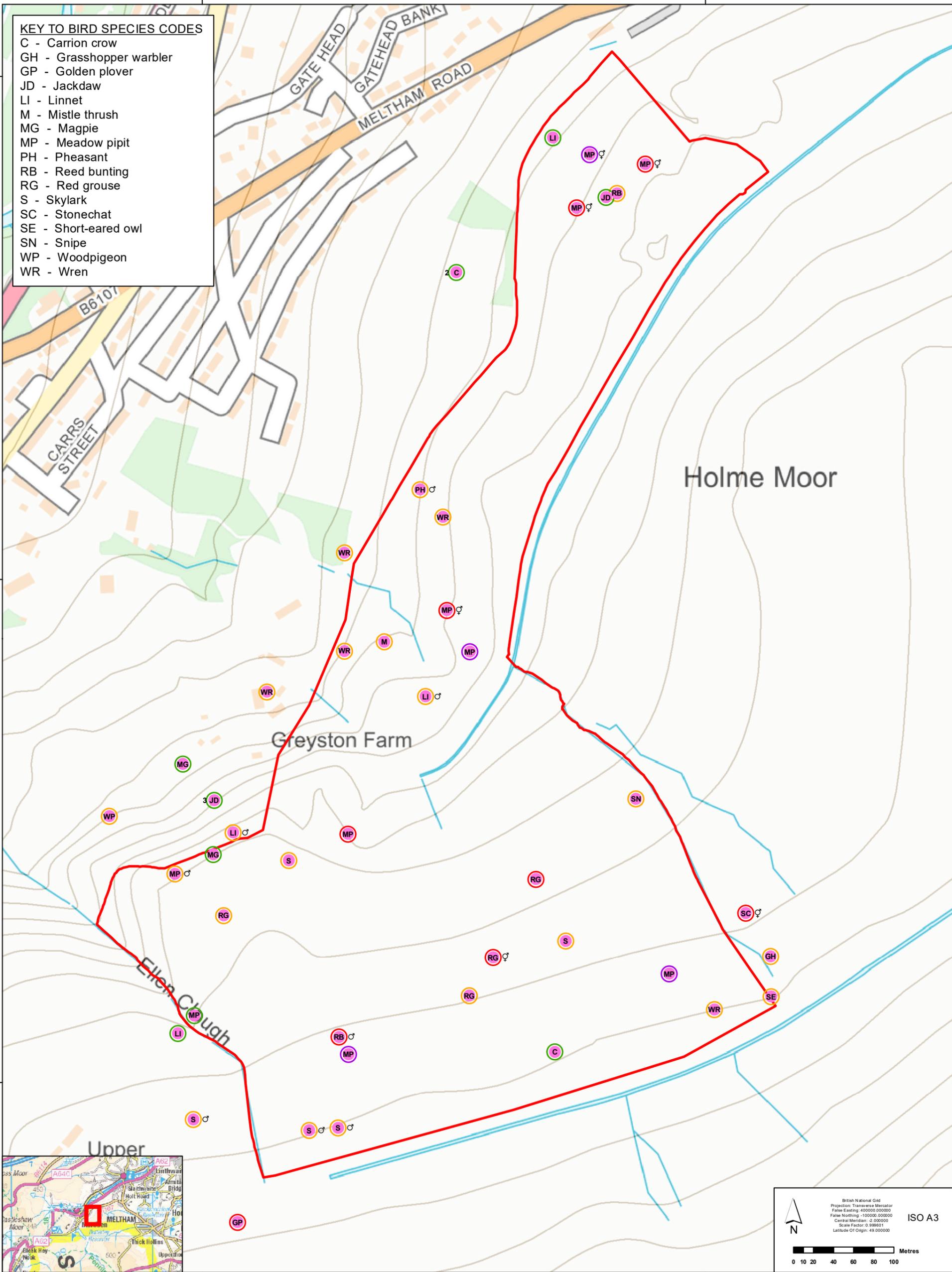
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- KEY TO BIRD SPECIES CODES**
- C - Carrion crow
 - GH - Grasshopper warbler
 - GP - Golden plover
 - JD - Jackdaw
 - LI - Linnet
 - M - Mistle thrush
 - MG - Magpie
 - MP - Meadow pipit
 - PH - Pheasant
 - RB - Reed bunting
 - RG - Red grouse
 - S - Skylark
 - SC - Stonechat
 - SE - Short-eared owl
 - SN - Snipe
 - WP - Woodpigeon
 - WR - Wren



British National Grid
 Projection: Transverse Mercator
 False Easting: 400000.000000
 False Northing: -100000.000000
 Central Meridian: -2.000000
 Scale Factor: 0.999601
 Latitude Of Origin: 49.000000

ISO A3

0 10 20 40 60 80 100 Metres

Penny Anderson Associates Ltd.
 Parklea, 60 Park Road,
 Buxton, Derbyshire SK17 6SN.

Legend:

- Bird registration
- ♂ Male
- ♀ Female
- ♀ Pair

Breeding Status

- Non-breeding
- Possible breeder
- Probable breeding
- Confirmed breeding

Holme Moor Breeding Bird Survey Visit 2 - 17/05/2023

Project: March Haigh Reservoir			
Scale: 1:3,500	Drawing No: Figure 1b		
Drawn By: CC	Originator: AK	Date: 09/06/2023	
PAA Ref:	Revision: A		

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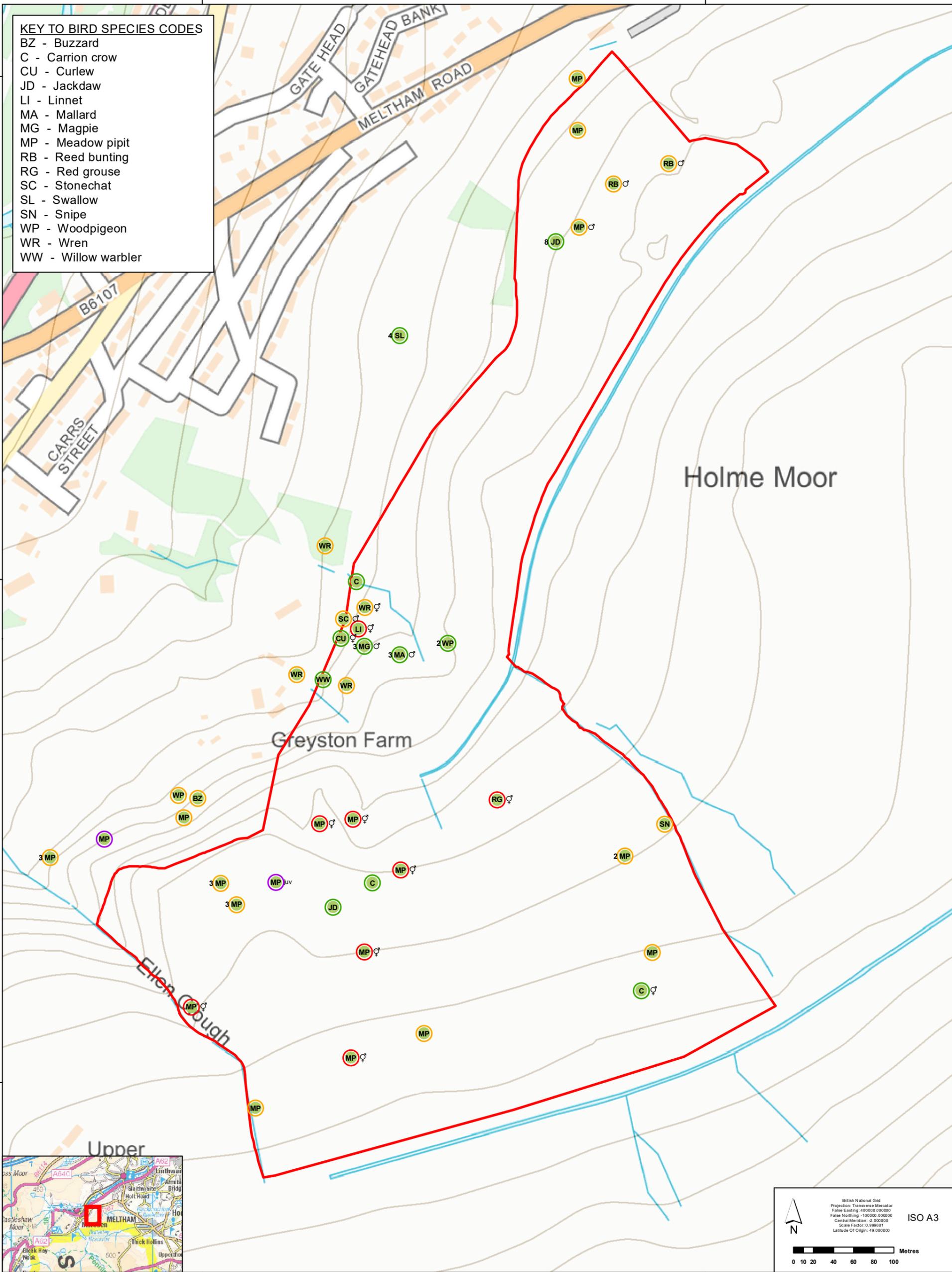
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KEY TO BIRD SPECIES CODES

- BZ - Buzzard
- C - Carrion crow
- CU - Curlew
- JD - Jackdaw
- LI - Linnet
- MA - Mallard
- MG - Magpie
- MP - Meadow pipit
- RB - Reed bunting
- RG - Red grouse
- SC - Stonechat
- SL - Swallow
- SN - Snipe
- WP - Woodpigeon
- WR - Wren
- WW - Willow warbler



British National Grid
 Projection: Transverse Mercator
 False Easting: 400000.000000
 False Northing: -100000.000000
 Central Meridian: -2.000000
 Scale Factor: 0.999601
 Latitude Of Origin: 49.000000

ISO A3

0 10 20 40 60 80 100 Metres

Penny Anderson Associates Ltd.
 Parklea, 60 Park Road,
 Buxton, Derbyshire SK17 6SN.

● Bird registration	○ Breeding Status
♀ Female	○ Non-breeding
♂ Male	○ Possible breeder
♀ Pair	○ Probable breeding
juv Juvenile	○ Confirmed breeding

Holme Moor Breeding Bird Survey Visit 3 - 02/06/2023

Project: March Haigh Reservoir	
Scale: 1:3,500	Drawing No: Figure 1c
Drawn By: CC	Originator: AK
	Date: 09/06/2023
PAA Ref:	Revision: A

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APPENDICES

APPENDIX 1

Photographs



Photo 1 Heather-dominated slopes with acid grassland and bracken typical of northern area of site



Photo 2 Heather slopes around Piper Stones / Greyston Farm area



Photo 3 Purple moor-grass-dominated areas north of Deer Hill Conduit



Photo 4 Mixed heather and acid grassland habitat north-east of Ellen Clough

APPENDIX 2

Categories of Breeding Bird Evidence

Appendix 2 Categories of Breeding Bird Evidence

Class	Category of Evidence
Non-breeding	Flying over
	Species observed but suspected to be still on migration
	Species observed but suspected to be summering non-breeder
Possible Breeding	Species observed in breeding season in possible nesting habitat
	Singing male present (or breeding calls heard) in breeding season in suitable breeding habitat
Probable Breeding	Pairs observed in suitable nesting habitat in breeding season
	Permanent territory presumed through registration of territorial behaviour (song etc) on at least two different days, a week apart, at the same place, or many individuals on one day.
	Display and courtship (judged to be near potential breeding habitat).
	Visiting probable nest site
	Agitated behaviour or anxiety calls from adults, suggesting probably presence of nest or young nearby
	Brood patch on adult examined in the hand, suggesting incubation
	Building nest or excavating nest-hole
Confirmed Breeding	Distraction display or injury feigning
	Used nest or egg shells found (occupied or laid within the survey period)
	Recently fledged young (nidicolous species) or downy young (nidifugous species). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful.
	Adults entering or leaving nest site in circumstances indicating occupied nest or adult sitting on nest
	Adults carrying food for young or faecal sacs
	Nests containing eggs
	Nest with young seen or heard

APPENDIX 3

Breeding Bird Legislation Summary

SUMMARY OF THE LEGISLATION RELATING TO BREEDING BIRDS

All wild species of breeding birds and their nests and eggs are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CRoW) Act 2000. This legislation applies in England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CRoW Act 2000) refers to specific birds listed on Schedule 1 of the WCA, and states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Schedule 1 includes birds such as Western barn owl (*Tyto alba*), black redstart (*Phoenicurus ochruros*), woodlark (*Lullula arborea*) and Cetti's warbler (*Cettia cetti*). Please refer to the WCA for a complete list of Schedule 1 species¹.

Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- Birds listed on Schedule 2 (Part 1) of the Act may be taken or killed outside of the 'close season' for each individual species (the 'close season' is defined by the Act). This includes various wild duck and geese species.
- Birds listed on Schedule 2 (Part 2) of the Act may be killed or taken by authorised persons at all times. This includes species such as carrion crow (*Corvus corone*), Eurasian magpie (*Pica pica*), feral pigeon² (*Columba livia*) and greater Canada goose (*Branta canadensis*). An 'authorised person' is defined as a person who has written authorisation to undertake the act from the relevant statutory authority. The written authority is in the form of a licence, either a general licence which covers a number of the more typical 'pest' species, or an individual licence for other individual species. In England these licences are issued by Natural England and in Wales by the Welsh Assembly Government.

Please note: the above text provides a brief summary of the legislation in relation to breeding birds in England and Wales and the original Act and any amendments should be referred to for the precise wording.

¹ <https://www.legislation.gov.uk/ukpga/1981/69/schedule/1>

² Also known as rock dove

SUMMARY OF LEGISLATION RELATING TO BIRDS LISTED ON SCHEDULE 1 OF THE WILDLIFE AND COUNTRYSIDE ACT

All wild species of breeding birds and their nests and eggs are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CRoW) Act 2000. Certain species are additionally protected as they are listed on Schedule 1 of the WCA. These Schedule 1 birds, their nests, eggs and young are protected by special penalties.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CRoW Act 2000) states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Some of the species included on Schedule 1 are listed below (*please note this list is not exhaustive*):

Common Name	Scientific Name
Western barn owl	<i>Tyto alba</i>
Black redstart	<i>Phoenicurus ochruros</i>
Brambling	<i>Fringilla montifringilla</i>
Cetti's warbler	<i>Cettia cetti</i>
Cirl bunting	<i>Emberiza cirlus</i>
Corncrake	<i>Crex crex</i>
Dartford warbler	<i>Sylvia undata</i>
Dotterel	<i>Charadrius morinellus</i>
Fieldfare	<i>Turdus pilaris</i>
Greenshank	<i>Tringa nebularia</i>
Kingfisher	<i>Alcedo atthis</i>
Little ringed plover	<i>Charadrius dubius</i>
Merlin	<i>Falco columbarius</i>
Western osprey	<i>Pandion haliaetus</i>
Peregrin	<i>Falco peregrinus</i>
Quail	<i>Coturnix coturnix</i>
Red kite	<i>Milvus milvus</i>
Red-backed shrike	<i>Lanius collurio</i>
Red-billed chough	<i>Pyrrhocorax pyrrhocorax</i>
Redwing	<i>Turdus iliacus</i>
Savi's warbler	<i>Locustella luscinioides</i>
Stone curlew	<i>Burhinus oedicephalus</i>
Whooper swan	<i>Cygnus cygnus</i>
Woodlark	<i>Lullula arborea</i>

Please note: the above text provides a brief summary of the legislation in relation to Schedule 1 birds for England and Wales and the original Act and any amendments should be referred to for the precise wording.

APPENDIX 4

Kirklees Local Biodiversity Action Plan

Kirklees Species of Principal Importance

Note:

- These species are subject to 5 year review undertaken at a national level.
- Species which are probably extinct in Kirklees are highlighted (shaded) or not present but with potential to colonise.

Birds

Preferred Name	Common Name	Grouping	Kirklees Status
<i>Tetrao tetrix subsp. britannicus</i>	Black Grouse	bird	Not included in current plan. Species of Upland Heath. Unlikely breeder in short term - introduction required.
<i>Pyrrhula pyrrhula subsp. pileata</i>	Common Bullfinch	bird	Included in Kirklees Habitat Action Plan. Widespread.
<i>Cuculus canorus</i>	Common Cuckoo	bird	Not included in current plan. Scarce but widespread.
<i>Locustella naevia</i>	Common Grasshopper Warbler	bird	Included in Kirklees Habitat Action Plan. Scarce breeder.
<i>Carduelis cannabina subsp. autochthona/cannabina</i>	Common Linnet	bird	Included in current Kirklees Habitat Action Plan. Widespread.
<i>Sturnus vulgaris subsp. vulgaris</i>	Common Starling	bird	Included in Kirklees Habitat Action Plan. Widespread.
<i>Miliaria calandra subsp. calandra/clanceyi</i>	Corn Bunting	bird	Included in Kirklees Habitat Action Plan. Probably extinct.
<i>Crex crex</i>	Corn Crake	bird	Not included in current plan. Species of Hay Meadows. Unlikely breeder in short term.
<i>Numenius arquata</i>	Eurasian Curlew	bird	Included in Kirklees Habitat Action Plan. Now scarce in lowland areas.
<i>Passer montanus</i>	Eurasian Tree Sparrow	bird	Included in Kirklees Habitat Action Plan. Local distribution. Not in uplands.
<i>Caprimulgus europaeus</i>	European Nightjar	bird	Not included in current plan. Not present but probable that suitable habitat exists in areas of upland heath.
<i>Streptopelia turtur</i>	European Turtle Dove	bird	Included in Kirklees Habitat Action Plan. Probably extinct.

<i>Botaurus stellaris</i>	Great Bittern	bird	Not included in current plan. Unlikely breeder in short term. May winter if sufficient habitat present.
<i>Perdix perdix</i>	Grey Partridge	bird	Included in Kirklees Habitat Action Plan. Scarce.
<i>Coccothraustes coccothraustes</i>	Hawfinch	bird	Included in Kirklees Habitat Action Plan. Probably extinct.
<i>Prunella modularis subsp. occidentalis</i>	Hedge Accentor	bird	Included in Kirklees Habitat Action Plan. Widespread.
<i>Passer domesticus</i>	House Sparrow	bird	Included in Kirklees Habitat Action Plan. Species associated with human settlement. Widespread.
<i>Carduelis cabaret</i>	Lesser Redpoll	bird	Not included in current plan. Scarce but widespread.
<i>Vanellus vanellus</i>	Northern Lapwing	bird	Included in Kirklees Habitat Action Plan. Increasingly uncommon as breeding species.
<i>Lagopus lagopus subsp. scotica</i>	Red Grouse	bird	Included in Kirklees Habitat Action Plan. Common on upland heath.
<i>Emberiza schoeniclus</i>	Reed Bunting	bird	Included in Kirklees Habitat Action Plan. Local distribution in lowland areas, widespread in uplands.
<i>Turdus torquatus</i>	Ring Ouzel	bird	Included in Kirklees Habitat Action Plan. Scarce breeder (uplands only).
<i>Alauda arvensis subsp. arvensis/scotica</i>	Sky Lark	bird	Included in current Kirklees Habitat Action Plan. Widespread.
<i>Turdus philomelos subsp. clarkei</i>	Song Thrush	bird	Included in Kirklees Habitat Action Plan. Widespread.
<i>Muscicapa striata</i>	Spotted Flycatcher	bird	Included in Kirklees Habitat Action Plan. Scarce breeder.
<i>Anthus trivialis</i>	Tree Pipit	bird	Included in Kirklees Habitat Action Plan. Scarce breeder.
<i>Carduelis flavirostris subsp. bensonorum/pipilans</i>	Twite	bird	Kirklees Species Action Plan. Increasingly scarce breeder in uplands.
<i>Parus montanus subsp. kleinschmidti</i>	Willow Tit	bird	Included in Kirklees Habitat Action Plan. Increasingly scarce.
<i>Phylloscopus sibilatrix</i>	Wood Warbler	bird	Included in Kirklees Habitat Action Plan. Very scarce breeder.

<i>Motacilla flava subsp. flavissima</i>	Yellow Wagtail	bird	Included in Kirklees Habitat Action Plan. Very scarce breeder.
<i>Emberiza citrinella</i>	Yellowhammer	bird	Included in Kirklees Habitat Action Plan. Widespread.

Invertebrates

Preferred Name	Common Name	Grouping	Kirklees Status
<i>Formica lugubris</i>	Northern Wood Ant	ant	Kirklees Species Action Plan. Occurs at one site.
<i>Coenonympha pamphilus</i>	Small Heath	butterfly	Not included in current plan. Found in some acid grasslands across the district.
<i>Lasiommata megera</i>	Wall Brown	butterfly	Not included in current plan. Species of rough grassy habitats - thought to be fairly widespread in district.
<i>Satyrrium w-album</i>	White-letter Hairstreak	Butterfly	Associated with woodland edge and hedgerow habitats. Localised and scarce

Fish

Preferred Name	Common Name	Grouping	Kirklees Status
<i>Salmo salar</i>	Atlantic salmon	bony fish	Included in Kirklees habitat Action Plan. Salmon and sea trout not recorded but were present in past. Potential for recolonisation with improved water quality. Weirs are a barrier to migration. Uncertainty about native stock of brown trout exists.
	Brook Lamprey		
<i>Salmo trutta</i>	Brown/Sea trout	bony fish	
<i>Anguilla anguilla</i>	European eel	bony fish	Included in Kirklees habitat Action Plan. Not recorded but is likely to have been present in past. Potential for recolonisation with improved water quality. Weirs are a barrier to migration.
<i>Lampetra fluviatilis</i>	River lamprey	jawless fish	

Reptiles and Amphibians

Preferred Name	Common Name	Grouping	Kirklees Status
<i>Vipera berus</i>	Adder	reptile	Not included in current plan. Not recorded – status uncertain.
<i>Lacerta vivipara</i>	Common Lizard	reptile	Included in Kirklees Habitat Action Plan. Upland distribution.
<i>Bufo bufo</i>	Common Toad	amphibian	Included in Kirklees Habitat Action Plan. Fairly widespread but partial information about distribution.
<i>Natrix natrix</i>	Grass Snake	reptile	Not included in current plan. Unconfirmed record (KWLAF meeting 15/10/2007) – status uncertain.
<i>Triturus cristatus</i>	Great Crested Newt	amphibian	Kirklees Species Action Plan. 9 recorded sites.
<i>Anguis fragilis</i>	Slow-worm	reptile	Not included in current plan. Not recorded – status uncertain but probably not present.

Terrestrial Mammals

Note: The Common Pipistrelle bat has been delisted as a UK priority species

Preferred Name	Common Name	Grouping	Kirklees Status
<i>Lepus europaeus</i>	Brown Hare	terrestrial mammal	Included in Kirklees Habitat Action Plan. Widespread.
<i>Plecotus auritus</i>	Brown long-eared bat	terrestrial mammal	Included in Kirklees Habitat Action Plan. Recorded but status unknown.
<i>Lepus timidus</i>	Mountain Hare	terrestrial mammal	Included in Kirklees Habitat Action Plan. Widespread in uplands.
<i>Nyctalus noctula</i>	Noctule	terrestrial mammal	Included in Kirklees Habitat Action Plan. Recorded but status unknown.
<i>Lutra lutra</i>	Otter	terrestrial mammal	Included in Kirklees Habitat Action Plan. Status uncertain but recorded in district and neighbouring areas.
<i>Mustela putorius</i>	Polecat	terrestrial	Not included in current plan.

		mammal	Appear to spreading across country and may colonise naturally.
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	terrestrial mammal	Included in Kirklees Habitat Action Plan. Recorded but status unknown.
<i>Arvicola terrestris</i>	Water Vole	terrestrial mammal	Kirklees Species Action Plan. 3 recorded populations.
<i>Erinaceus europaeus</i>	West European Hedgehog	terrestrial mammal	Included in Kirklees Habitat Action Plan. Widespread.

Kirklees Local Species of Principal Importance

Note: these species are selected to differing criteria as indicated and based upon the best available information. The list will be subject to ongoing review.

Species showing a decline of between 25 and 50%

Species	Occurrence (breeding or resident)
Birds	
House Martin	Widespread
Kestrel	Widespread
Snipe	Local (some wet grasslands and bogs)
Swallow	Widespread
Swift	Widespread
Water Rail	Scarce (wetland)
Woodcock	Local (some woodlands)
Mammals	
Weasel	Widespread

Species for which Kirklees holds a significant part of the West Yorkshire Population

Species	Occurrence in Kirklees	Occurrence in West Yorkshire
Plants		
Changing Forget-me-not	Restricted to one site	Less than four sites
Early Marsh Orchid	Restricted to one site	?
Flowering Rush	Restricted to two sites	Four sites only
Fragrant Agrimony	Restricted to one site	Two sites only
Ivy Leaved Bellflower	Restricted to two sites	Two sites only
Marsh Helleborine	Restricted to one site	One site only
Slender Cudweed	Restricted to one site	One site only

Fungi		
<i>Strobilomyces floccopus</i>	Lower Stones Wood and Farnley Tyas area	Two sites only

Species scarce within Kirklees but more common elsewhere

Species	Occurrence in Kirklees
Plants	
Bog Asphodel	Ten sites
Broad Helleborine	One site
Common Centaury	Seven sites
Cowberry	Four sites
Dyer's Greenweed	Eight sites
Goldilocks	One site
Moscahatel	One site
Narrow-leaved Water Plantain	One site
Pyramidal Orchid	One site
Round-leaved Sundew	Three sites
Royal Fern	One site
Spindle Tree	One site
Twayblade	Two sites

Sites important for scarce (notable/Red Data Book (RDB) status) invertebrate species in Kirklees

Site	Site Co-ordinates (SE)	Number of recorded Notable/RDB species
Almondbury	160150	1
Beaumont Park	130146	1
Blackmoorfoot Reservoir	030130	28
Boothroyd Wood	080120	4
Bottoms Mill Wood	133074	2
Bradley Mills	155175	1
Crosland Hill	115145	1
Crosland Moor	115146	1
Dean Head Wood	155059	2
Dean Wood	120134	5
Deer Hill	070115	4
Deffer Wood	260090	7
Denby Dale	230080	3
Digley	110070	2
Dobb Dike	125063	1
Drop Clough	046133	11
Farnley Tyas	165125	2
Fenay Beck	185145	1

Green Wood (New House)	213083	2
Hade Edge	147053	1
Hagg Wood	150105	1
Hall Dike	115120	9
Hay Wood	153127	1
Holmfirth	150080	1
Honley	130120	2
Honley Wood	120115	8
Huddersfield	140160	1
Lepton Great Wood	195145	1
Lindley	115180	1
Lockwood	131150	1
Lockwood Brewer Dam	135150	1
Mag Dale	130122	4
Mag Wood	135130	2
March River Reservoir	015130	2
Marsh	125170	1
Mellor Wood	158143	1
Meltham Mills	115105	1
Meltham Moor	080090	1
Milnsbridge	115158	1
Molly Carr Wood	160137	1
Morton Wood	157067	4
Netherton	123132	3
New Mill	164088	2
Orange Wood	101123	1
Ramsden Clough	121053	4
Ravensknowle Park	163166	5
Royd Edge Clough	095097	4
Royd House Wood	160130	2
Scammonden	050160	1
Skelmanthorpe	235105	2
South Crosland	111130	1
Storthes Hall	185128	4
Tunnel End Reservoir	039121	2
Waterloo	181170	1
Wessenden Head	075075	1
West Wood	152075	1
Woodsome Lees	185135	2

Note: In part, this list reflects the survey effort. However, many other sites have not yet been surveyed.

Specially protected species occurring within Kirklees

Note: these species are afforded statutory legal protection.

Species	Occurrence (breeding)	Habitat
Birds		
Barn Owl	Intermittent in Kirklees	Lowland eastern areas

Golden Plover	Widespread in uplands	Blanket Bog and Upland Heath
Merlin	Scarce breeder	Blanket Bog and Upland Heath
Peregrine Falcon	Scarce breeder	Blanket Bog and Upland Heath
Short-eared Owl	Absent from most areas. Population fluctuates naturally	Blanket Bog, Upland Heath and large areas of rough grassland
Bats		
Common Pipistrelle (Pipistrellus pipistrellus)	Widespread	Various
Daubenton's Bat (Myotis daubentonii)	Widespread	Around waterbodies and wooded areas
Leisler's Bat (Nyctalus leisleri)	Local	Woodland and grassland
Natterer's Bat (Myotis nattereri)	Widespread?	Wooded areas
Whiskered Bat (Myotis mystacinus)	Widespread?	Wooded areas
Plants		
Bluebell (protection against removal and selling)	Widespread and common	Ancient and semi-natural woodlands

APPENDIX 5

Breeding Bird Survey Results

Appendix 5 Summary of Breeding Bird Survey Results 2023

Common Name	Scientific Name	UK Conservation Status (BOCC5)	S41 Priority Species	Kirkees LBAP	Survey Dates 2023			Breeding Status	Comments
					27 April	17 May	2 June		
Barn swallow	<i>Hirundo rustica</i>	Green			0	0	4	NB	4 seen feeding
Buzzard	<i>Buteo buteo</i>	Green			0	0	1	PO	On quarry face
Carrion crow	<i>Corvus corone</i>	Green			2	3	3	NB	Flying over site and feeding
Curlew	<i>Numenius arquata</i>	Red	X	X	2	0	1	PO	Single bird, probably male. Other flew over site. On visit 3 - pair seen flying from a distance
Golden plover	<i>Pluvialis apricaria</i>	Green			0	1	0	PR (SSSI)	Alarm calling south of survey area in the SSSI
Grasshopper warbler	<i>Locustella naevia</i>	Red	X		2	1	0	PO	Calling or alarm calling
Heron	<i>Ardea cinerea</i>	Green			1	0	0	NB	Flew away from area above leat.
Jackdaw	<i>Corvus monedula</i>	Green			0	4	>8	NB	4 feeding on ground, many more flying across area all day from SSSI. Visit 3 - at least 8 birds flying and feeding around site
Linnet	<i>Carduelis cannabina</i>	Red	X		8	4	2	PR	Many individuals flying over lower area of site around quarries. A couple of territories with males singing. Visit 3 - a pair seen
Magpie	<i>Pica pica</i>	Green			1	2	3	NB	
Mallard	<i>Anas platyrhynchos</i>	Amber			4	0	3	PR	
Meadow pipit	<i>Anthus pratensis</i>	Amber			21	14	24	C	Individuals seen with insects and obvious nest sites seen. Visit 3 - 4 pairs seen, plus chicks and 1 adult carrying food, alongside individual sightings
Mistle thrush	<i>Turdus viscivorus</i>	Red			0	1	0	PO	Single bird singing in small rowan tree. Not seen again
Pheasant	<i>Phasianus colchicus</i>	Introduced			1	1	0	PO	Single male only
Red grouse	<i>Lagopus lagopus</i>	Green	X	X	0	5	2	PR	At least one pair
Reed bunting	<i>Emberiza schoeniclus</i>	Amber	X	X	5	2	2	PR	Pairs seen on first visit. Afterwards only males on sentry duty
Short-eared owl	<i>Asio flammeus</i>	Amber			0	1	0	PO (SSSI)	Heard not seen south in the SSSI only
Skylark	<i>Alauda arvensis</i>	Red	X	X	5	5	0	PR	Only individuals singing observed so far
Snipe	<i>Gallinago gallinago</i>	Amber			5	1	1	PO (SSSI)	Chipping adults heard in the <i>Juncus</i> areas of the area on first visit. Other visits, only 1 outside of search area heard
Stonechat	<i>Saxicola rubicola</i>	Green			5	2	1	PR	Pairs seen in territories
Wheatear	<i>Oenanthe oenanthe</i>	Amber			4	0	0	PR	2 pairs observed regularly on short grazed turf around leeat in south of area. Not present on second visit
Willow warbler	<i>Phylloscopus trochilus</i>	Amber		X	1	0	1	NB	In willow trees around the quarries
Wood pigeon	<i>Columba palumbus</i>	Amber			0	1	3	PO	Several flying around and feeding. One possibly nesting in quarries
Wren	<i>Troglodytes troglodytes</i>	Amber			4	5	4	PO	Several individual territories in scattered trees north of the leat
			6	5					

KEY

C = Confirmed Breeding Species

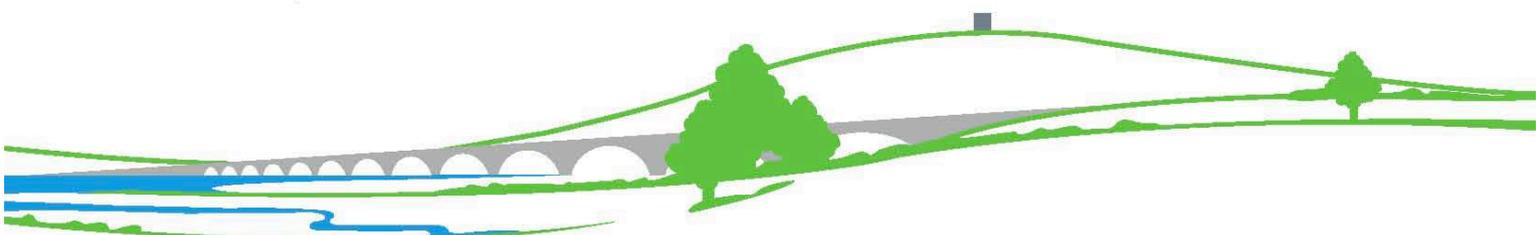
PR = Probable Breeding Species

PO = Possible Breeding Species

NB = Non-Breeding Species

(SSSI) = Outside of Survey Area in the SSSI

Penny Anderson
Associates Ltd
CONSULTANT ECOLOGISTS



Park Lea, 60 Park Road, Buxton, Derbyshire SK17 6SN