

# Nenthead Mine Water Treatment Scheme

Upland Breeding Bird Survey Report

Coal Authority

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# Executive Summary

AECOM was instructed by the Coal Authority to conduct an assessment of the use, made by upland breeding birds, of the land at Nenthead Mines, which will be impacted by works associated with the Water and Abandoned Metal Mines programme (WAMM) (hereafter referred to as the 'Scheme').

The assessment of upland breeding birds was considered necessary due to the proximity of the Scheme to the North Pennine Moors Special Protection Area (SPA), which is approximately 1.1 km north of the Scheme at its closest point. The species included within the SPA citation are hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*), peregrine (*Falco peregrinus*) and golden plover (*Pluvialis apricaria*); Montagu's harrier (*Circus pygargus*) and short-eared owl (*Asio flammeus*) are also included in the citation as non-qualifying species of interest. The primary aims of the assessment were to determine whether the land within the Survey Area regularly supports assemblages of SPA qualifying species in sufficient numbers to consider the land functionally linked to the SPA; and to obtain an understanding of the baseline breeding bird assemblage, including black grouse (*Lyrurus tetrix*), which is understood to be present within the wider landscape. Black grouse (*Lyrurus tetrix*) was targeted due to its inclusion on the Red List as a result of significant recent decline and particular upland habitat requirements. The surveys were intended to provide an update to those previously undertaken at Nenthead Mines in June and July 2018.

The field surveys comprised five walked transects within the Survey Area between April and June 2022, inclusive. The survey approach was initially aligned with those previously undertaken in June and July 2018, in accordance with the methodology described in Brown & Shepherd (1993). However, a possible sighting of black grouse within the Survey Area was reported in early April and, therefore, the remaining four surveys were amended to commence at sunrise, rather than commencing at or after 08:30 hrs, in order to identify any black grouse lekking behaviour, should the species be identified during the 2022 surveys.

A total of 40 bird species was recorded utilising (i.e. on the ground / in habitats, or feeding directly above (in the case of sand martin) the habitats within or immediately adjacent to the Survey Area across all surveys. However, no North Pennine Moors SPA qualifying species and no black grouse were observed. Of the 40 species recorded, nine species were assessed as confirmed breeding, 16 as probable breeding, 11 as possible breeding and four as non-breeding. A total of 28 species was assessed and holding at least one territory within or immediately adjacent to the Survey Area, with a total of 48 territories across all 28 species.

Based on the results of the surveys, specifically the observed absence of North Pennine Moors SPA qualifying species and black grouse utilising the site, it can be concluded that the Survey Area is not currently in use by these species, and the habitats within the Survey Area are not functionally linked to the SPA. Taking into account the presence of a number of Red and Amber List (including NERC S41) species, habitats present and what were generally low territory numbers, the Survey Area is considered to be of local importance with regards to its ecological importance within the wider landscape and beyond.

To ensure wildlife is protected, a Precautionary Working Method Statement (PWMS) for breeding birds will be prepared which will inform the Construction Environmental Management Plan (CEMP) that will be submitted with the planning application.

# 1. Introduction

## 1.1. Background and Aim

AECOM was instructed by the Coal Authority to conduct an assessment of the use made by upland breeding birds of the land associated with the proposed Nenthead Mines Waste and Abandoned Metal Mines programme (WAMM) (hereafter referred to as the 'Scheme'). The assessment of upland breeding birds was considered necessary due to the proximity of the Scheme to the North Pennine Moors Special Protection Area (SPA) which is approximately 1.1 km north of the Scheme, at its closest point. The species included within the SPA citation are hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*), peregrine (*Falco peregrinus*) and golden plover (*Pluvialis apricaria*); Montagu's harrier (*Circus pygargus*) and short-eared owl (*Asio flammeus*) are also included in the citation as non-qualifying species of interest. The breeding bird surveys were undertaken as part of a suite of ecological surveys to assist with the design stages of the Scheme, and to inform an ecological impact assessment.

The primary aims of the assessment were to determine whether the land within the Survey Area is utilised by SPA qualifying species (and thus whether the habitats within the Survey Area could be considered to be functionally linked to the SPA); and to obtain an understanding of the baseline breeding bird assemblage, including black grouse (*Lyrurus tetrix*), which is understood to be present within the wider landscape. The surveys were intended to build from those previously undertaken in June and July 2018.

## 1.2. Survey Area and Location

The Survey Area follows the Scheme boundary (Red Line Boundary), as shown on Figure 1 in Appendix A, and immediately surrounding land, where safely accessible. At the time of this assessment, it was understood that the Scheme would be located within the Scheme boundary, but not necessarily utilise all land within it.

The Scheme is located at Nenthead Mines, Nenthead, Cumbria at Ordnance Survey National Grid Reference NY 78395 43287. The village of Nenthead is situated immediately north-west of the Scheme and the town of Alston, Cumbria is located approximately 6.5 km north-west of the Scheme. The land within the Scheme comprises a disused mine (including adits and buildings), several ponds, a reservoir, the River Nent, upland flushes, fens, swamps, moorland, Calaminarian grassland and deciduous woodland. The wider surrounding landscape comprises upland flushes, fens, swamps, heathland and blanket bogs, deciduous woodland and good quality semi-improved grassland.

Part of the Survey Area is designated as a Site of Special Scientific Interest (SSSI) (Smallcleugh Mine SSSI); however this SSSI is designated for its geological interest only and has no designated ecological features.

## 1.3. Limitations

The aim of a desk study is to help characterise the baseline context of a proposed development and provide baseline information that might not be captured by surveys. Information obtained during the desk study is dependent upon people and organisations having collected and submitted records for the area of interest. As such, a lack of records for a particular species does not necessarily mean that the species does not occur in the area; conversely, the presence of records for a particular species does not automatically mean that it still occurs within the area of interest.

All land within the Survey Area was surveyed during the optimal times of year during suitable weather conditions. There were, therefore, no significant limitations, and the assessment is considered to be suitable with regards to the aims of the commissioned work as stated in paragraphs 1.1 and 1.2.

## 2. Relevant Legislation and Guidance

The following legislation and guidance are considered potentially relevant to the scope of this assessment:

- Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- The Conservation of Habitats and Species Regulations (Habitats Regulations) 2017 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006;
- Countryside Rights of Way (CRoW) Act 2000; and,
- Wildlife and Countryside Act (WCA) 1981 (as amended).

Prior to 31<sup>st</sup> December 2020, Annex 1 of the European Community (EC) Birds Directive listed rare and vulnerable species of regularly occurring or migratory wild birds that were subject to special conservation measures. The Directive also provided for the designation of SPAs for the protection of these species, which formed part of the Natura 2000 network of sites protected by European wildlife legislation. European Union (EU) legislation as it applied to the UK on 31<sup>st</sup> December 2020 is now a part of UK domestic legislation as 'retained EU legislation'. Changes have been made to parts of the Habitats Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 so that they effectively continue the legislation which implemented the EU Habitats and Species Directive and parts of the Wild Birds Directive through the provisions of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England and Wales (separate EU Exit Regulations apply to other parts of the UK). All other processes or terms of the 2017 Regulations remain unchanged. Internationally designated wetlands 'Ramsar Sites' are protected under the CRoW Act 2000 and are not affected by the exit from the EU.

Part 1 of the WCA affords general protection to all species of wild bird, and specific protection to certain species of bird in Schedule 1 (birds protected by special penalties). It is an offence (subject to exceptions) to:

- Kill, injure, or take any wild bird;
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built;
- Take or destroy an egg of any wild bird; and,
- Disturb any wild bird listed on Schedule 1 of the WCA while nesting, or disturb the dependent young of such a bird.

The WCA requires the prosecuting authority to prove that an offence was intentional, however the Countryside and Rights of Way (CRoW) Act 2000 strengthens the provisions of the WCA by introducing an additional offence of "reckless" disturbance, which means that ignorance of the presence of a protected species cannot be used as a reliable defence should a breach of the WCA be committed. The NERC Act 2006 strengthens the WCA further with respect to the protection of the nests of certain birds listed on Schedule Z1A, even when they are not in use.

Through the National Planning Policy Framework and Section 40 of the NERC Act 2006, local planning authorities also have a duty to consider species listed on Section 41 (S41) of the Act as being of principal importance for nature conservation in England when considering a planning application (also referred to as 'NERC S41' species).

The UK Biodiversity Action Plan (BAP) was withdrawn in March 2011, the lists of Priority Species and Habitats being superseded by those within Section 41 of the NERC Act (2006). Local Biodiversity Action Plans (LBAPs) are no longer used as a formal expression of delivery of biodiversity targets but identify sub-regional priorities for nature conservation and propose agreed actions to conserve, maintain, enhance and increase local Priority Species and Habitats. The Zero Carbon Eden publication details Priority Habitats and Species relevant to the Survey Area<sup>1</sup>.

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<sup>1</sup> Eden District Council. Zero Carbon Eden. Accessed 10<sup>th</sup> August 2022 at: [https://www.eden.gov.uk/media/6142/zcandb\\_final\\_version\\_final\\_accessible.pdf](https://www.eden.gov.uk/media/6142/zcandb_final_version_final_accessible.pdf)  
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Stanbury *et al.* (2021) have published lists of Birds of Conservation Concern (BoCC)<sup>2</sup>. Red List species are those whose breeding population or range is rapidly declining (50% or more in the last 25 years), recently or historically, and those of global conservation concern. Amber List species are those whose breeding population is in moderate decline (25 – 49% in the last 25 years), rare breeders, internationally important and localised species and those of unfavourable conservation status in Europe. Green List species are those not of immediate conservation concern. Non-native species are classified as Not Assessed. These lists confer no legal status; however, they are useful when assessing the significance of predicted impacts and determining the level of mitigation that may be required when birds are affected by development or any other activity. Furthermore, inclusion on the Red List was a factor in determining the species for which BAPs were developed.

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<sup>2</sup> Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win, I. (2021). The status of our bird populations: *the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. *British Birds* 114: 723-747.

## 3. Methodology

### 3.1. Desk Study

Details of the North Pennine Moors SPA were obtained from the Multi-Agency Geographic Information System for the Countryside (MAGIC)<sup>3</sup>, Joint Nature Conservation Committee (JNCC)<sup>4</sup> and Natural England<sup>5</sup> websites.

Contemporary (no more than 10 years old) biological records were obtained from the Environmental Records Information Centre Northeast (ERICN) on 30<sup>th</sup> May 2022 as part of the preliminary ecological appraisal undertaken for the Scheme; this included records of bird species within 2 km of the Scheme.

### 3.2. Field Surveys

The field surveys comprised five walked transects within the Survey Area between April and June 2022, inclusive. The survey approach was initially aligned to those previously undertaken in June and July 2018, in accordance with the methodology described in Brown and Shepherd (1993)<sup>6</sup>. However, a possible sighting (during a habitat survey) of black grouse within the Survey Area was reported and, therefore, the remaining four surveys were amended to commence at sunrise, rather than commencing at or after 08:30, in order to identify any lekking behaviour (if present) and coincide with the dawn chorus of other bird species (notably passerines). Therefore, the survey approach comprised an amalgamation of the Brown and Shepherd methodology for upland waders, and the Common Birds Census (CBC) methodology described in Marchant (1983)<sup>7</sup>.

All bird species observed (by sight or sound) within or immediately adjacent to the Survey Area were recorded, including details of any observed behaviour, onto a digital mobile mapping device using British Trust for Ornithology (BTO) species codes<sup>8</sup>, and behaviour notations described in Marchant (1983). Survey metadata, including the date and times of the survey, sunrise time and weather conditions, were also recorded.

Approximate bird territories within and immediately adjacent to the Survey Area were determined using standard territory mapping techniques to identify and isolate areas within which birds displayed consistent breeding behaviours. The territory mapping method is based on the observation that many species during the breeding season are territorial. This is most marked in passerines where territories are often determined by conspicuous song, display and territorial disputes with neighbouring conspecifics. The expected outcome of this technique is that mapped registrations fall into clusters, approximately coinciding with territories. Repeated sightings within a localised area, alarm calling, feigning injury or observations of nesting or juveniles were looked for when determining potential territories for non-passerine species (e.g. waders or game birds). For the purposes of the assessment, and habitats present within the Survey Area, sufficient data could be obtained for analysis by undertaking five visits.

The following definitions have been used to identify the breeding status of the species recorded:

- Possible Breeding: species observed in breeding season in suitable nesting habitats but with no indication of breeding;
- Probable Breeding: species for which territories were positively identified as a result of the number of registrations across all surveys. Male(s) singing or breeding calls, courtship/display, an individual visiting a probable nest site, a pair observed in suitable nesting habitat in breeding season or an individual bird seen carrying nesting material;
- Confirmed Breeding: agitated behaviours or calls from adults indicating a nest or young close by, a nest containing birds or eggs (or recent eggshells), soliciting calls from young birds, either from a nest or recently fledged young, adults seen removing faecal sacs from a nest, presence of recently fledged young or adults seen carrying food for young; and,

<sup>3</sup> Multi-Agency Geographic Information System for the Countryside, accessed 10<sup>th</sup> August 2022 from: <https://magic.defra.gov.uk/>

<sup>4</sup> Joint Nature Conservation Committee, accessed 10<sup>th</sup> August 2022 from: <https://jncc.gov.uk/>

<sup>5</sup> Natural England. Designated Sites View, accessed 10<sup>th</sup> August 2022 from: <https://designatedsites.naturalengland.org.uk/>

<sup>6</sup> Brown, A. F. and Shepherd, K. B. (1993). *A method for censusing upland breeding waders*. Bird Study, 40, pp. 189-195.

<sup>7</sup> Marchant, J. H. (1983). *Common Birds Census Instructions*. BTO, Tring. 12pp.

<sup>8</sup> British Trust for Ornithology. Species Codes, accessed 10<sup>th</sup> August 2022 from: [https://www.bto.org/sites/default/files/u16/downloads/forms\\_instructions/bto\\_bird\\_species\\_codes.pdf](https://www.bto.org/sites/default/files/u16/downloads/forms_instructions/bto_bird_species_codes.pdf)

- Non-Breeding: species seen only flying over the Survey Area, species observed but suspected to be on migration, species observed but suspected to be summering non-breeder or species present in unsuitable breeding habitat.

## 4. Results and Discussion

### 4.1. Desk Study

The North Pennine Moors SPA consists of a number of discrete parcels of varying size which cover large areas of upland habitat on either side of the A689 and the upper reaches of the River Wear valley meaning the Scheme is effectively surrounded on all sides to varying distances. The closest point of the SPA to the Survey Area is situated approximately 1.1 km north. The SPA has numerous component SSSIs, the nearest of which to the Survey Area is Allendale Moors SSSI, which is also 1.1 km north. Details of the qualifying features for both designations are provided in Table 1.

**Table 1 Designated Site Details**

Designation	Reason for Designation
North Pennine Moors Special Protection Area (SPA)	<p><b>Article 4.1 Qualification (79/409/EEC)</b></p> <p>During the breeding season the area regularly supports the following Annex 1 species:</p> <ul style="list-style-type: none"> <li>• Hen harrier (<i>Circus cyaneus</i>) 11 pairs – breeding (count as at 1993/4) representing 2.4% of the GB population</li> <li>• Merlin (<i>Falco columbarius</i>) 136 pairs – breeding (count as at 1993/4) representing 10.5% of the GB population</li> <li>• Peregrine (<i>Falco peregrinus</i>) 15 pairs – breeding (count as at 1991) representing 1.3% of the GB population</li> <li>• Golden plover (<i>Pluvialis apricaria</i>) 1,400 pairs – breeding (based on densities recorded 1960 - 1993) representing 6.2% of the GB population</li> </ul> <p><b>Non-qualifying species of interest</b></p> <p>Within the North Pennine Moors SPA, two pairs of Montagu's Harriers (<i>Circus pygargus</i>) are known to have bred, while numbers of breeding Short-eared Owls (<i>Asio flammeus</i>) have still to be ascertained. Both species are listed in Annex I</p>
Allendale Moors SSSI	<p>Large SSSI comprising 5,282 ha of moorland between East and West Allen Dales, Nent Dale and Upper Weardale.</p> <p>Nationally important assemblage of moorland breeding birds; red grouse (<i>Lagopus lagopus</i>), black grouse, short-eared owl and dunlin (<i>Calidris alpina</i>) (on open moorland) and curlew (<i>Numenius arquata</i>), snipe (<i>Gallinago gallinago</i>), lapwing (<i>Vanellus vanellus</i>) and redshank (<i>Tringa totanus</i>) (on moorland and enclosed grasslands) .</p>

The biological records obtained from ERIC North East included records for 30 bird species; the most notable of these included records of black grouse at Alston, common crossbill (*Loxia curvirostra*), breeding curlew (*Numenius arquata*) within the Nenthead area, golden plover within the Nenthead area, lapwing (*Vanellus vanellus*), oystercatcher (*Haematopus ostralegus*), ringed plover (*Charadrius hiaticula*), skylark (*Alauda arvensis*), snipe (*Gallinago gallinago*) and spotted flycatcher (*Muscicapa striata*). The records of golden plover, which was the only species associated with the North Pennine Moors SPA to be returned during the desk study, comprised nine observations between 2012 and 2014 of no more than four birds associated with any observation.

### 4.2. Field Surveys

#### 4.2.1. Overview

The date, time and weather conditions for each survey are presented in Table 2.

**Table 2 Survey Details**

Visit Number	Date	Survey Times	Sunrise Times	Conditions
1	8 <sup>th</sup> April 2022	08:50 – 10:26	06:25	-1 °C, dry, good visibility, cloud: 0/8*, wind: 2** from north
2	29 <sup>th</sup> April 2022	05:39 – 07:17	05:36	-1 °C, dry, good visibility, cloud: 0/8, wind: 1 from northeast
3	12 <sup>th</sup> May 2022	05:10 – 06:51	05:09	5 °C, dry, good visibility, cloud: 7/8, wind: 3 from east
4	16 <sup>th</sup> June 2022	04:34 – 06:24	04:30	8 °C, dry, good visibility, cloud: 0/8, wind: 1 from south
5	30 <sup>th</sup> June 2022	04:42 – 06:17	04:35	10 °C, intermittent light rain for approximately 1/3 of survey, good visibility, cloud: 8/8, wind: 1 from west

\*Cloud cover is reported in oktas (eighths), based on the World Meteorological Organisation criteria: <https://worldweather.wmo.int/oktas.htm>

\*\*Wind speed is reported in accordance with the Beaufort wind force scale (1 – 12): <https://www.rmets.org/resource/beaufort-scale>

The habitats within the Survey Area were dominated by large expanses of moorland comprising upland flushes, fen, swamp and Calaminarian grassland between the River Nent and the A689, with Handsome Mea reservoir in the central area. There were areas of loose stone and hardstanding associated with the disused mine (including spoil heaps, adits, buildings and gravel tracks) as well as several small ponds. Areas of semi-natural broad-leaved woodland were present around the car park in the north-western part of the Survey Area and around the disused mine buildings. The River Nent, a tributary of the River South Tyne, runs in a northerly direction in the southern part of the Survey Area. Photographs of habitats within the Survey Area are provided in Appendix B.

The moorland, woodland and reservoir habitats are considered to represent the most attractive habitat for bird species, with the moorland offering the most suitable potential nesting habitat for birds associated with the North Pennine Moors SPA, due to its open expanse and presence of mixed height sward/vegetation, which may provide foraging and/or nesting opportunities for raptors.

A total of 40 bird species was recorded utilising (i.e. on the ground/ in habitats, or feeding directly above (in the case of sand martin (*Riparia riparia*)) the habitats within or immediately adjacent to the Survey Area across all surveys. However, no North Pennine Moors SPA qualifying species, and no black grouse were observed. Of the 40 species recorded, nine species were assessed as confirmed breeding, 16 as probable breeding, 11 as possible breeding and four as non-breeding. A total of 28 species was assessed and holding at least one territory within or immediately adjacent to the Survey Area, with a total of 48 territories across all 28 species.

## 4.2.2. Woodland

The woodland habitats within and adjacent to the west of the Survey Area provided opportunities for a number of bird species, particularly passerines. Of these, 16 species were considered to hold territories associated with woodland habitat, this included the Red List mistle thrush (*Turdus viscivorus*), and Amber List song thrush (*Turdus philomelos*), wren (*Troglodytes troglodytes*), dunnoek (*Prunella modularis*), willow warbler (*Phylloscopus trochilus*), rook (*Corvus frugilegus*), robin (*Erithacus rubecula*) and woodpigeon (*Columba palumbus*).

## 4.2.3. River Nent

The River Nent (including riparian habitats) was considered to provide territories for the Amber List grey wagtail (*Motacilla cinerea*) and dipper (*Cinclus cinclus*), in addition to the Green List pied wagtail (*Motacilla alba*). Furthermore, nesting habitat for sand martin, in the form of artificial nesting tubes built into the riverbank along the eastern section of the River Nent, was present within the northwest of the Survey Area. The artificial nesting habitat was implemented as part of a scheme to reinforce the River Nent riverbank; with the aim to provide

nesting opportunities for a pre-existing colony of sand martins<sup>9</sup>. Although evidence of this species breeding within or immediately adjacent to the Survey Area was not obtained, foraging birds were present within the Survey Area, which suggests there may be a nesting colony present within the wider landscape.

#### 4.2.4. Handsome Mea Reservoir

The reservoir within the approximate centre of the Survey Area was considered to support territories for the Amber List oystercatcher, redshank (*Tringa totanus*) and black-headed gull (*Chroicocephalus ridibundus*).

#### 4.2.5. Moorland

The upland habitats (i.e. moorland, disused mine spoil, ponds, Calaminarian grassland and upland flushes), which comprise the majority of the Survey Area, east of the aforementioned woodland, provided habitat for a number of species, including passerines, waders, gulls, gamebirds and hirundines. Of these, a total of five species were considered to hold territories, this included the Red List curlew and skylark, and Amber List meadow pipit (*Anthus pratensis*), wheatear (*Oenanthe oenanthe*), in addition to the Green List red grouse (*Lagopus lagopus*).

#### 4.2.6. Summary of Results

Table 3 provides a summary of all species (in the order in accordance with the British Ornithologists' Union) seen utilising habitats within (and adjacent to) the Survey Area across all five survey visits; species observed only flying over are not included. The highest breeding status per species is provided, alongside the approximate number of territories within the Survey Area (where relevant) and conservation status. The results provided in Table 3 should be read in conjunction with Figure 1 in Appendix A, which provides the approximate central points for all territories.

**Table 3 Summary of Survey Results (excluding birds only flying over)**

Species	Breeding Status	Approximate Number of Territories (see Figure 1, Appendix A for locations)	2018 Breeding Status (- indicates species not recorded)	Conservation Status
Canada goose ( <i>Branta canadensis</i> )	Possible	-	-	Non-native
Wigeon ( <i>Mareca penelope</i> )	Probable	-	-	Amber List
Mallard ( <i>Anas platyrhynchos</i> )	Probable	-	-	Amber List
Red grouse ( <i>Lagopus lagopus</i> )	Confirmed	6	Confirmed	Green List; NERC S41
Pheasant ( <i>Phasianus colchicus</i> )	Possible	1	-	Non-native
Cuckoo ( <i>Cuculus canorus</i> )	Non-breeding (on migration)	-	-	Red List; NERC S41
Woodpigeon ( <i>Columba palumbus</i> )	Probable	2	-	Amber List

<sup>9</sup> AECOM. (2018). *Nenthead Carpark Embankment Stabilisation Works*. Coal Authority.  
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Collared dove ( <i>Streptopelia decaocto</i> )	Probable	-	-	Green List
Oystercatcher ( <i>Haematopus ostralegus</i> )	Confirmed	1	Probable	Amber List
Lapwing ( <i>Vanellus vanellus</i> )	Non-breeding	-	Non-breeding (flying over only)	Red List; NERC S41
Curllew ( <i>Numenius arquata</i> )	Confirmed	1	Probable	Red List; NERC S41
Common sandpiper ( <i>Actitis hypoleucos</i> )	Non-breeding	-	Probable	Amber List
Redshank ( <i>Tringa totanus</i> )	Possible	1	-	Amber List
Black-headed gull ( <i>Chroicocephalus ridibundus</i> )	Possible	1	Possible	Amber List
Jackdaw ( <i>Coloeus monedula</i> )	Possible	1	-	Green List
Rook ( <i>Corvus frugilegus</i> )	Possible	1	-	Amber List
Coal tit ( <i>Pariparis ater</i> )	Probable	1	-	Green List
Blue tit ( <i>Cyanistes caeruleus</i> )	Possible	2	-	Green List
Great tit ( <i>Parus major</i> )	Confirmed	1	-	Green List
Skylark ( <i>Alauda arvensis</i> )	Probable	1	Probable	Red List; NERC S41
Sand martin ( <i>Riparia riparia</i> )	Non-breeding (flying / feeding above Survey Area only)	-	Confirmed	Green List
Willow warbler ( <i>Phylloscopus trochilus</i> )	Confirmed	1	-	Amber List
Goldcrest ( <i>Regulus regulus</i> )	Probable	1	-	Green List
Wren ( <i>Troglodytes troglodytes</i> )	Probable	3	-	Amber List
Treecreeper ( <i>Certhia familiaris</i> )	Possible	-	-	Green List
Starling ( <i>Sturnus vulgaris</i> )	Possible	-	-	Red List; NERC S41
Song thrush ( <i>Turdus philomelos</i> )	Probable	1	-	Amber List

Mistle thrush ( <i>Turdus viscivorus</i> )	Probable	1	-	Red List
Blackbird ( <i>Turdus merula</i> )	Confirmed	1	-	Green List
Spotted flycatcher ( <i>Muscicapa striata</i> )	Possible	-	-	Red List
Robin ( <i>Erithacus rubecula</i> )	Confirmed	1	-	Green List
Wheatear ( <i>Oenanthe oenanthe</i> )	Probable	1	-	Amber List
Dipper ( <i>Cinclus cinclus</i> )	Confirmed	1	-	Amber List
Dunnock ( <i>Prunella modularis</i> )	Probable	1	-	Amber List; NERC S41
Grey wagtail ( <i>Motacilla cinerea</i> )	Probable	1	Possible	Amber List
Pied wagtail ( <i>Motacilla alba</i> )	Possible	1	-	Green List
Meadow pipit ( <i>Anthus pratensis</i> )	Confirmed	7	Confirmed	Amber List
Chaffinch ( <i>Fringilla coelebs</i> )	Probable	5	-	Green List
Goldfinch ( <i>Carduelis carduelis</i> )	Probable	-	-	Green List
Siskin ( <i>Spinus spinus</i> )	Probable	2	-	Green List

## 5. Summary and Conclusion

AECOM carried out five breeding bird surveys within the Survey Area between April 2022 and June 2022, inclusive. The surveys were aimed to determine whether the Survey Area could be considered to be utilised by bird species included as part of the citation for the North Pennine Moors SPA, which is situated approximately 1.1 km north of the Scheme at its closest point.

The habitats within the Survey Area included the disused mine (including adits and buildings) and associated loose stone, hardstanding (car park and gravel tracks), several small ponds, a reservoir, the River Nent, upland flushes, fens, swamps, moorland, Calaminarian grassland and semi-natural broadleaved woodland.

The 2018 surveys recorded the presence of confirmed breeding red grouse, sand martin and meadow pipit; whilst probable breeding species recorded comprised oystercatcher, curlew, common sandpiper and skylark. Black-headed gull and grey wagtail were considered to be possible breeders, whilst lapwing was observed flying over only and therefore categorised as a non-breeding species.

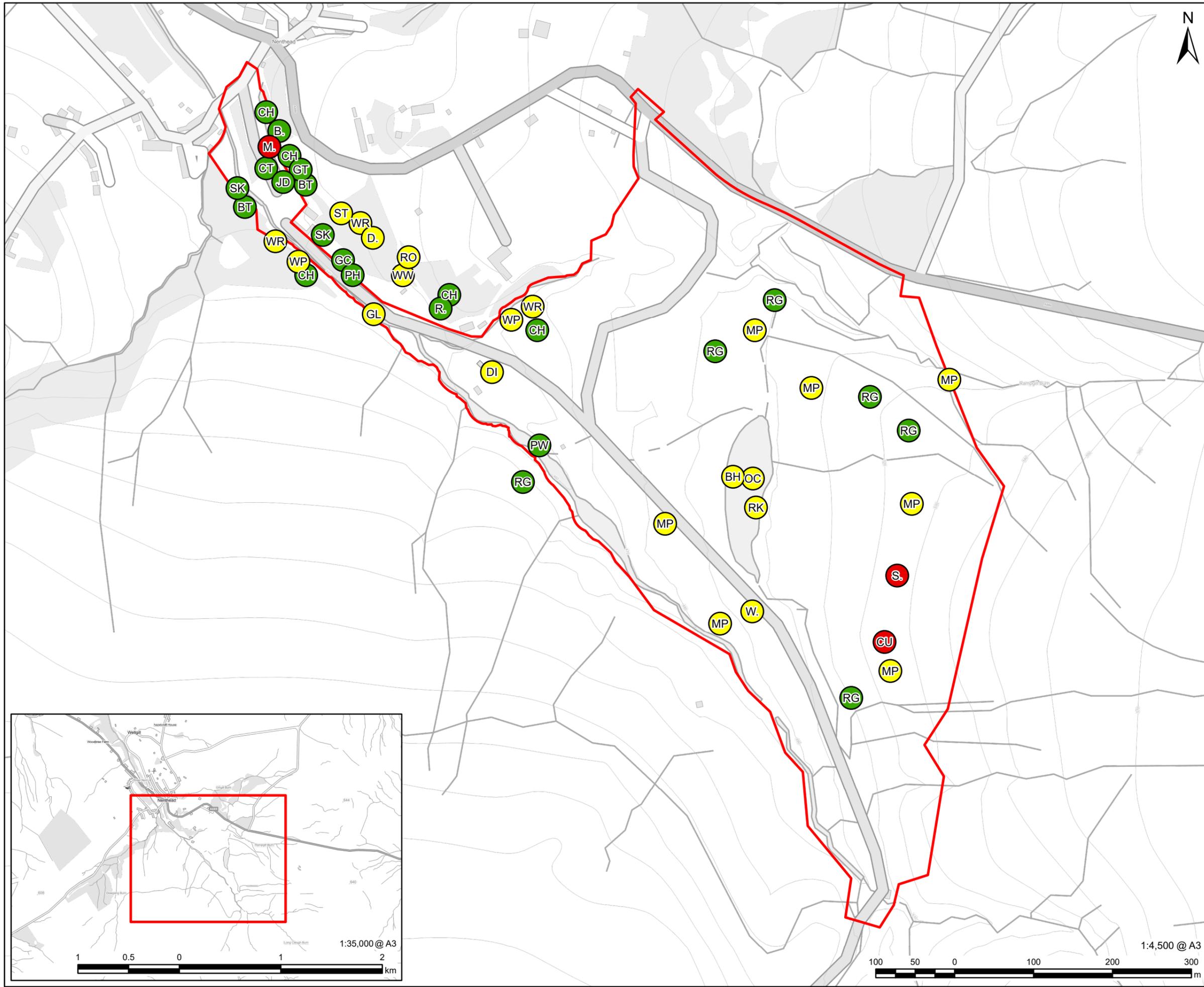
In 2022, a total of 40 bird species was recorded across all surveys. No North Pennine Moors SPA qualifying species, and no black grouse were observed. Of the 40 species recorded, nine species were assessed as confirmed breeding, 16 as probable breeding, 11 as possible breeding and four as non-breeding. A total of 28 species was assessed as holding at least one territory within or immediately adjacent to the Survey Area; a total of 48 territories were recorded across all 28 species.

The presence of seven Red List species (five of which are NERC S41) and 16 Amber List species (one of which is a NERC S41 species), in addition to red grouse (Green List), which is a NERC S41 species, indicates that the Survey Area provides nesting and / or foraging opportunities to species which have experienced national declines in recent years.

However, due to the heavily modified nature of the habitats within and immediately surrounding the Survey Area (with the exception of the moorland towards the east / southeast), such as the former mine workings, reservoir and car park, the habitats available to breeding birds are generally small in extent and therefore limit breeding numbers. For example, only four species, red grouse, chaffinch, wren and meadow pipit, were considered to hold more than two territories, and the majority of other species were assessed as holding just one. Furthermore, the majority of the breeding bird species observed within and immediately adjacent to the Survey Area are considered likely to utilise similar habitats within the wider surrounding landscape. The habitats within the Survey Area are therefore considered to be of local importance, with respect to the habitats within the wider surrounding landscape. This is also evident by an observed absence of North Pennine Moors SPA qualifying species; indicating that the Survey Area is not functionally linked to the SPA.

Based on the results of the surveys, specifically the observed absence of North Pennine Moors SPA species and black grouse utilising the site, it can be concluded that the Survey Area is not currently utilised by these species. The habitats are therefore concluded to be not functionally linked to the North Pennines SPA, and as such a Habitats Regulations Assessment (HRA) would not be required for the Scheme.

# Appendix A Figure 1 - Breeding Bird Territory Locations



Red Line Boundary

Conservation Status (RSPB, 2021)

Green

Amber

Red

Species Code

- B - Blackbird (*Turdus merula*)
- BH - Black-headed Gull (*Chroicocephalus ridibundus*)
- BT - Blue Tit (*Cyanistes caeruleus*)
- CH - Chaffinch (*Fringilla coelebs*)
- CT - Coal Tit (*Periparus ater*)
- CU - Curlew (*Numenius arquata*)
- D - Dunnock (*Prunella modularis*)
- DI - Dipper (*Cinclus cinclus*)
- GC - Goldcrest (*Regulus regulus*)
- GL - Grey Wagtail (*Motacilla cinerea*)
- GT - Great Tit (*Parus major*)
- JD - Jackdaw (*Coloeus monedula*)
- M - Mistle Thrush (*Turdus viscivorus*)
- MP - Meadow Pipit (*Anthus pratensis*)
- OC - Oystercatcher (*Haematopus ostralegus*)
- PH - Pheasant (*Phasianus colchicus*)
- PW - Pied Wagtail (*Motacilla alba*)
- R - Robin (*Erithacus rubecula*)
- RG - Red Grouse (*Lagopus lagopus*)
- RK - Redshank (*Tringa totanus*)
- RO - Rook (*Corvus frugilegus*)
- S - Skylark (*Alauda arvensis*)
- SK - Siskin (*Spinus spinus*)
- ST - Song Thrush (*Turdus philomelos*)
- W - Wheatear (*Oenanthe oenanthe*)
- WP - Woodpigeon (*Columba palumbus*)
- WR - Wren (*Troglodytes troglodytes*)
- WW - Willow Warbler (*Phylloscopus trochilus*)

**NOTES**

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**ISSUE PURPOSE**

PRELIMINARY

**PROJECT NUMBER**

60596575

**FIGURE TITLE**

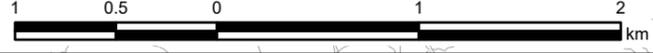
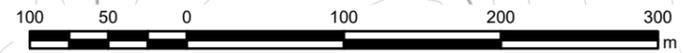
Breeding Bird Territory Locations

**FIGURE NUMBER**

Figure 1

1:4,500 @ A3

1:35,000 @ A3



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# Appendix B Survey Area Habitat Photographs

Table 4 Survey Area Habitat Photographs

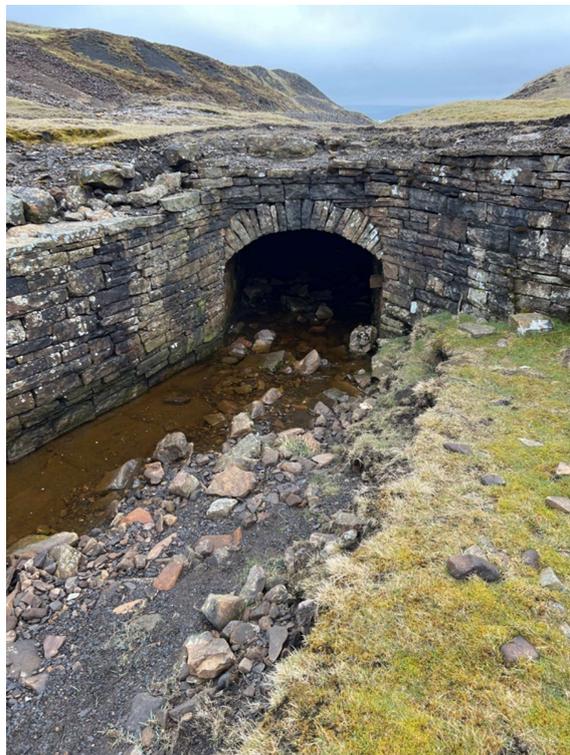
Habitat

Photograph(s)

Woodland



River Nent



Handsome Mea Reservoir





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Moorland / Upland Grassland



Former Mine Workings / Spoil



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