

A66 Northern Trans-Pennine Project TR010062

3.4 Environmental Statement Appendix 6.13 Breeding Birds

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3.4 ENVIRONMENTAL STATEMENT APPENDIX 6.13 BREEDING BIRDS

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6.13 Breeding Birds

6.13.1 Introduction

Project background

- 6.13.1.1 The A66 Northern Trans-Pennine Project is a programme of works to improve the A66 between the M6 at Penrith and A1 at Scotch Corner.
- 6.13.1.2 Between the M6 and the A1(M) the existing A66 is approximately 80km in length. Along this length it is intermittently dualled, with approximately 30km of single carriageway, in six separate sections, making the route accident prone and unreliable.
- 6.13.1.3 The route carries high levels of freight traffic and is an important route for tourism and connectivity to local communities. The variable road standards, together with the lack of available diversionary routes when incidents occur, affects road safety, reliability, resilience and attractiveness of the route. For a full project description see Chapter 2: The Project (Application Document 3.2).

Scope of the document

- 6.13.1.4 This report presents desk study data and baseline survey results for breeding birds. Baseline surveys were conducted from April to July 2021. It is intended that the information in this report will be used in conjunction with data from other surveys to identify and assess potential implications of the project in relation to breeding birds and inform any mitigation and compensation required. This baseline report can be used to accompany any future planning application and associated Environmental Impact Assessment (EIA) for the Project.
- 6.13.1.5 This Appendix should be read in conjunction with ES Appendix 6.14: Wintering Birds and ES Appendix 6.15: Barn Owls (Application Document 3.4)).

6.13.2 Legislation and Policy Framework

Legislation

- 6.13.2.1 The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010 (as amended) encompass the main legislative protection for species and habitats in England and Wales. In the UK, all wild birds, their nests and their eggs are protected by The Wildlife and Countryside Act 1981. Offences under this Act include:
 - intentionally killing, injuring or taking any wild bird
 - intentionally taking, damaging or destroying the nest of any wild bird whilst it is in use or being built
 - intentionally taking or destroying the egg of any wild bird
- 6.13.2.2 Birds listed on Schedule 1 of The Wildlife and Countryside Act 1981 have further protection making it an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 whilst it is nest building, or at



or near a nest containing eggs or young, or to disturb the dependent young of such a bird.

National level policy

Status of breeding birds at the national level

- 6.13.2.3 The UK Biodiversity Action Plan (UK BAP) 1994 2010 has been superseded by the UK Post-2010 Biodiversity Framework covering the period 2011-2020 (Joint Nature Conservation Committee, 2012)¹. UK BAP priority habitats and species were used to form the basis for the statutory list of habitats and species of 'Principal Importance for the conservation of biodiversity in England' under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
- 6.13.2.4 The Birds of Conservation Concern (BoCC) (Stanbury et al., 2022)² lists are based on an assessment of the conservation status of all regularly occurring British birds. The Red, Amber and Green Lists indicate the level of conservation importance for each species. This measure is derived from quantitative assessments from standardised criteria. The assessment is based on the most up-to-date evidence available and considers the historical decline, trends in population and range, rarity, localised distribution and international importance.
- 6.13.2.5 The lists are compiled by leading UK bird conservation organisations, including the Royal Society for the Protection of Birds (RSPB) and British Trust for Ornithology (BTO). The criteria for birds being included in the lists are as follows:
- 6.13.2.6 Red List:
 - Globally threatened
 - Historical population decline in UK during 1800–1995
 - Severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period (the entire period used for assessments since the first BoCC review, starting in 1969). Severe (at least 50%) contraction of UK breeding range over last 25 years, or the longer-term period
- 6.13.2.7 Amber List:
 - Species with unfavourable conservation status in Europe (SPEC (Species of European Conservation Concern))
 - Historical population decline during 1800–1995 but recovering; population size has more than doubled over last 25 years
 - Moderate (25-49%) decline in UK breeding population over last 25 years, or the longer-term period
 - Moderate (25-49%) contraction of UK breeding range over last 25 years, or the longer-term period

¹ Joint Nature Conservation Committee (2012) The UK Post-2010 Biodiversity Framework [online]

² Stanbury, A., Eaton, M., Aebischer, N.,Balmer, D., Brown, A., Douse, A., Lindley, N., McCulloch, N., Noble, D and Win, L (2022) 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



- Moderate (25-49%) decline in UK non-breeding population over last 25 years, or the longer-term period
- Rare breeder; 1–300 breeding pairs in UK
- Rare non-breeders; less than 900 individuals
- Localised; at least 50% of UK breeding or non-breeding population in ten or fewer sites, but not applied to rare breeders or non-breeders
- Internationally important; at least 20% of European breeding or nonbreeding population in UK (NW European and East Atlantic Flyway populations used for non-breeding wildfowl and waders respectively)
- 6.13.2.8 Green List:
 - Species that occur regularly in the UK but do not qualify under any of the criteria for Red or Amber listed birds
- 6.13.2.9 The BoCC lists are a useful measure for evaluating the conservation significance of differing bird assemblages and are used to assist with the assessment of the potential significance of impacts of proposed developments. The lists are also useful in targeting types and locations of mitigation with respect to the bird community present in an area.

Regional and local level policy

- 6.13.2.10 Section 40 of the NERC Act requires public bodies, including Local Planning Authorities (LPAs) 'to have regard to the conservation of biodiversity in England' when carrying out their normal functions. The list of species of 'Principal Importance for the conservation of biodiversity in England' (Section 41) guides public bodies in implementing their duty. The LPA therefore must consider the impact on biodiversity of the proposed development. The recommendations section of this report illustrates ways in which this biodiversity duty can be met.
- 6.13.2.11 The LPA must also have regard to the conservation of biodiversity when carrying out their normal functions and ensure the potential impacts on protected species and habitats as a result of the Project have been fully assessed and appropriate mitigations proposed. Section 118 of the National Planning Policy Framework (NPPF)³ which relates to conserving and enhancing the natural environment, requires LPAs in England to apply the following principles:
 - If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or at last resort, compensated for, then the planning permission should be refused
 - Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted
 - Opportunities to incorporate biodiversity in and around developments should be encouraged
 - Planning permission should be refused for developments resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of ages or veteran trees found outside ancient

³ Department for Communities and Local Government (2012) National Planning Policy Framework [online]



woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss. The assessment of the potential impacts on protected species and habitats therefore must be finalised prior to planning permission and must be submitted with the planning application

- 6.13.2.12 Although the UK Biodiversity Action Plan (BAP) has been superseded, BAPs are still widely used at county level to support biodiversity. Several breeding bird species recorded within the survey area of this Project are included within the relevant BAPs for the specific counties within the development area (See Table 0-2 - Bird species recorded on local BAPs in Annex 1).
- 6.13.2.13 The following local planning policies are also relevant to this report:
 - Eden Local Plan (2014-2032) (Eden District Council, 2014)⁴ Policy ENV1 and Policy ENV4
 - *County Durham Plan (Adopted 2020)* (Durham County Council, 2020)⁵ Policy 26, Policy 40, Policy 41, Policy 42 and Policy 43
 - Richmondshire Local Plan (2012-2028) adopted 2014 (Richmondshire District Council, 2014)⁶ Core Policy CP12

Other relevant policy and guidance

- 6.13.2.14 In addition to compliance with the National Policy Statement for National Networks (NPSNN) (Department for Transport, 2014)⁷ and National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2021)⁸, this report has been written in accordance with professional standards and guidance. The standards and guidance which relate to the assessment are:
 - Guidance for Ecological Impact Assessment in the United Kingdom Third Edition (Chartered Institute of Ecology and Environmental Management, 2018)⁹
 - Design Manual for Roads and Bridges (DMRB) LA 108 Biodiversity (DMRB LA 108), Revision 1, March 2020
 - DMRB LD 118 Biodiversity Design (DMRB LD 118), Revision 1, March 2020 (Highways England, 2020c)¹⁰

⁴ Eden District Council (2014) Eden Local Plan 2014 to 2032

⁵ Durham Council (2020) County Durham Plan – Adopted 2020,

⁶ Richmond County Council (2014) Richmondshire Local Plan 2012 - 2028 Core Strategy (Adopted 9 December 2014),

⁷ Department for Transport (2014) National Policy Statement for National Networks

⁸ Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework

⁹ Chartered Institute of Ecology and Environmental Management (2018) Guidance for Ecological Impact Assessment in the United Kingdom Third Edition

¹⁰ Highways England (2020c) Design Manual for Roads and Bridges LD 118 Biodiversity Design, Revision 1, March 2020,



6.13.3 Methodology

Desk study

6.13.3.1 In September 2021, bird data from within 2km of the Order Limits of the Project (hereafter referred to as the 'study area') for the last ten years was requested from the Cumbria Biodiversity Data Centre (CBDC), Environmental Records Information Centre (ERIC) North East, Environmental Records Centre and North and East Yorkshire Ecological Data Centre (NEYEDC). This information was used to contextualise and add to the data obtained during field surveys.

Field survey

- 6.13.3.2 The 'survey area' has been defined as the land within the 250m of the Order Limits of the Project. *Field survey*
- 6.13.3.3 Field survey methods for breeding birds were based on the British Trust for Ornithology's (BTO) Common Bird Census (Marchant, 1983)¹¹.
- 6.13.3.4 Abundance and peak counts were recorded for notable species. Species were considered notable if they met at least one of the following criteria. A North Pennine Moors Special Protection Area (SPA) citation species, a species listed on Schedule 1 of the Wildlife and Countryside Act, a NERC S41 species or a BoCC Red and Amber species. For all other species only presence was noted.
- 6.13.3.5 Three repeat visits to each breeding bird survey transect were undertaken, with surveys evenly spread across the peak breeding bird season (1 April to 31 July inclusive), as shown in Table 1: Breeding bird survey parameters.

¹¹ Marchant, J.H. (1983) Common Birds Census Instructions. Tring: British Trust for Ornithology.



Table 1: Breeding bird survey parameters

| Month | Parameter | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple So Appleby (2 days) | owerby to | Appleby to (2 days) |) Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|-------|--------------------|--|---------------------------------|----------------------------------|----------------|------------------------|----------------|-----------------|-----------------------------|--------------------------------------|--|
| April | Date | 15/04/202 1 | 16/04/202 1 | 19/04/20 21 | 20/04/202 1 | 20/04/202 1 | 21/04/202 1 | 22/04/202 1 | 23/04/202 1 | 27/04/202 1 | 28/04/2021 |
| | Start Temp (°C) | -1 | 1 | 4 | 2 | 11 | 6 | -2 | 1 | 5 | 6 |
| | Precipitation | No rain | No rain | No rain | No rain | No rain | No rain | No rain | No rain | light rain from 11am | Periodic light rain |
| | Cloud | 0% | 0% | 15% | 20% | 10% | 100% | 20% | 15% | 90% | 100% |
| | Rain | 5 mph SE | 6 mph SE | 6 mph SE | 2 mph SE | 2 mph NW | 16 mph NE | 3 mph SW | 6 mph NW | 5 mph SE | 10 mph NE |
| | Start time | 07:00 | 07:10 | 06:50 | 06:45 | 11:00 | 06:40 | 06:30 | 06:40 | 06:30 | 06:30 |
| | Finish time | 12:45 | 13:30 | 13:30 | 10:45 | 13:30 | 12:00 | 13:00 | 11:30 | 12:30 | 10:50 |
| May | Date | 17/05/202 1 | 21/05/202 1 | 20/05/20 21 | 18/05/202 1 | 18/05/202 1 | 19/05/202 1 | 25/05/202 1 | 26/05/202 1 | 27/05/202 1 | 28/05/2021 |
| | Start Temp (°C) | 7 | 9 | 7 | 9 | 5 | 5 | 8 | 7 | 7 | 9 |
| | Precipitation | No rain | Light rain | No rain | No rain | Light rain | No rain | No rain | Drizzle | No rain | No rain |
| | Cloud | 100% | 100% | 70% | 60% | 100% | 30% | 100% | 100% | 100% | 100% |
| | Rain | 4 mph SE | 8 mph SE | 8 mph SE | 2 mph N | 4 mph NW | 1 mph SW | 5 mph NW | 9 mph NW | 4 mph NW | 5 mph SW |
| | Start time | 06:35 | 06:00 | 06:00 | 09:30 | 06:05 | 06:05 | 06:00 | 06:10 | 06:20 | 06:20 |
| | Finish time | 12:35 | 11:45 | 12:30 | 13:30 | 09:00 | 13:00 | 11:30 | 11:20 | 13:00 | 11:25 |



| Month | Parameter | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby (2 days) | | Appleby to Brough (2 days) | | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|-------|--------------------|--|---------------------------------|--|----------------|-------------------------------|----------------|-----------------|-----------------------------|--------------------------------------|--|
| June | Date | 14/06/202 1 | 15/06/202 1 | 18/06/20 21 | 16/06/202 1 | 16/06/202 1 | 17/06/202 1 | 22/06/202 1 | 25/06/202 1 | 24/06/202 1 | 23/06/2021 |
| | Start Temp (°C) | 12 | 9 | 7 | 13 | 14 | 11 | 5 | 10 | 14 | 8 |
| | Precipitation | Light showers | No rain | No rain | No rain | No rain | No rain | No rain | Moderate rain | No rain | No rain |
| | Cloud | 100% | 90% | 25% | 100% | 100% | 100% | 0% | 100% | 100% | 40% |
| | Rain | 14 mph NW | 1 mph W | 4 mph NW | 6 mph SE | 9 mph SW | 4 mph W | 6 mph NW | 11 mph NW | 2 mph SW | 3 mph SW |
| | Start time | 06:00 | 06:40 | 06:30 | 06:45 | 10:45 | 06:15 | 06:00 | 06:15 | 06:30 | 07:10 |
| | Finish time | 11:40 | 13:00 | 12:20 | 10:30 | 13:20 | 12:30 | 12:00 | 11:10 | 12:05 | 11:00 |



- 6.13.3.6 The breeding bird survey transect routes were devised to enable the surveyors to access representative samples of the habitats present within the survey area.
- 6.13.3.7 Each transect was walked slowly during the three visits, with the starting points and direction reversed on alternate visits to reduce potential temporal bias.
- 6.13.3.8 The surveys were conducted by an appropriately qualified and experienced surveyor during suitable weather conditions for bird surveys. The first hour after sunrise was avoided as generally this is the time where most bird activity takes place and this increases the possibility that rapid changes in the detection of birds may lead to uneven coverage.
- 6.13.3.9 All birds encountered during the breeding bird surveys were identified by sight or sound and were recorded electronically using a handheld device. Breeding behaviours or evidence of breeding were recorded. These were based on the standard list of conventions described in the BTO Breeding Evidence document¹² and as summarised in Table 2: Summary of breeding evidence codes.

Table 2: Summary of breeding evidence codes

| Breeding evidence codes and categories |
|---|
| Non-breeding: |
| F - Flying over |
| M - Species observed but suspected to be still on migration |
| S - Species observed but suspected to be summering non-breeder |
| Possible breeder: |
| H - Species observed in breeding season in suitable nesting habitat |
| S - Singing male present (or breeding calls heard) in breeding season in suitable breeding habitat |
| Probable breeding: |
| P - Pair observed in suitable nesting habitat in breeding season |
| T - Permanent territory presumed through territorial behaviour (song etc) on at least two different |
| days a week or more apart at the same place or many individuals on one day |
| D - Courtship and Display (judged to be in or near potential breeding habitat, be cautious with wildfowl) |
| N - Visiting probable Nest site |
| A - Agitated behaviour or anxiety calls from adults, suggesting probable presence of nest or |
| young nearby |
| I - Brood patch on adult examined in the hand, suggesting Incubation |
| B - Nest Building or excavating nest-hole |
| Confirmed breeding: |
| DD - Distraction-Display or injury feigning |
| UN - Used Nest or eggshells found (occupied or laid within period of survey) |
| FL - 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 |
| |

¹² British Trust for Ornithology (2022) Breeding Evidence Codes,

Planning Inspectorate Scheme Reference: TR010062 Application Document Reference: TR010062/APP/3.4



Breeding evidence codes and categories

significant geographical movement. Evidence of dependency on adults (for example feeding) is helpful. Be cautious, even if the record comes from suitable habitat.

ON - Adults entering/leaving nest-site in circumstances indicating Occupied Nest (including high nests/nest holes, contents of which cannot be seen) or adults seen incubating

FF - Adult carrying Faecal sac or Food for young

- NE Nest containing Eggs
- NY Nest with Young seen or heard
- 6.13.3.10 In addition, targeted sand martin *Riparia riparia* surveys were undertaken to assess if any breeding colonies were present within the survey area. These surveys followed standard best practice guidelines¹³ and involved a scoping visit to identify watercourses with suitable nesting banks in May 2021 followed by observations to count occupied breeding burrows in June 2021. All data was recorded digitally in the same way as described for breeding bird surveys.

Mapping and data analysis

- 6.13.3.11 Data was spatially analysed using ArcGIS 10.3. Individual maps were produced illustrating breeding bird territories across the survey area Figure X.X Breeding Bird Territory map Title (ES Volume 2, Application Document Number 3.3).
- 6.13.3.12 An assessment of the breeding bird community has been undertaken on the basis of species richness and abundance to provide baseline data about the breeding bird assemblage value. The conservation importance of the survey areas with respect to species richness and abundance is considered and discussed further in section 1.6: Discussion.
- 6.13.3.13 An assessment of the species diversity, abundance and breeding territories of notable species has been used to quantify the breeding bird community value for each individual scheme and for the Project as a whole. The analysis of the survey data enabled the territories of any North Pennine Moors Special Protection Area (SPA) citation species, Schedule 1 species, NERC S41 species and Red and Amber species of bird to be quantified and mapped. These figures are provided in Annex 1.

6.13.4 Assumptions and Limitations

- 6.13.4.1 The findings presented in this report represent those at the time of survey and reporting. Variations in these conditions will occur as a result of seasonal factors, and with the general passage of time.
- 6.13.4.2 It should also be noted that fauna may travel over wide areas and can have large home ranges and so can be overlooked during surveys. Species which are absent at the time of survey may also return to or colonise a site at any future time.
- 6.13.4.3 The fifth edition of the BoCC species was released during the writing of this report. The Red, Amber and Green List species discussed in this

¹³ Gilbert, G., Gibbons, D.W., & Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.



report are in line with this latest update. However, when the field surveys were undertaken, only records associated with the Red and Amber List species from the previous BoCC report were collected and analysed. This means that the following species which have moved from the Green to Amber or Red List in the latest update and are relevant to the survey area were not considered in the assessment:

- woodpigeon Columba palumbus
- moorhen Gallinula chloropus
- sparrowhawk Accipiter nisus
- rook Corvus frugilegus
- common whitethroat Curruca communis
- wren Troglodytes troglodytes
- sedge warbler Acrocephalus schoenobaenus
- wheatear Oenanthe oenanthe
- greenfinch Chloris chloris.
- 6.13.4.4 This is not considered to be a significant limitation because all of these species are still common and widespread and no significant impact on any of these species is considered likely through the development of the Project.
- 6.13.4.5 The English common names and the scientific bird species names used in the report will follow that of the 9th Edition of the British Ornithologists' Union official list of species recorded in Great Britain¹⁴.

6.13.5 Results

Routewide

Desk study

- 6.13.5.1 One hundred and seventy-one bird species have been recorded within 2km of the Order Limits of the Project between 2010 and 2021. This included 47 Red List BoCC and 58 Amber List BoCC protected or notable species. Thirty of these species are listed as Schedule 1 species on The Wildlife and Countryside Act 1981.
- 6.13.5.2 Seven species were recorded that are mentioned under the Richmondshire LBAP, one under the Cumbria Biodiversity Action Plan, 45 under the Durham Priority Species List and 29 under the Northumberland Priority Species List.

Field survey

- 6.13.5.3 Surveys were undertaken throughout April, May and June in clear conditions. Full survey details are provided in section 6.13.3: Methodology and in each scheme specific results section
- 6.13.5.4 A total of 91 species were recorded during the surveys within the survey area. The following sections describe the confirmed, probable and possible notable breeding species recorded within the survey area. A

¹⁴ McInery, C. J., Musgrove, A. J., Stoddart, A., Harrop, A.H.J., and Dudley, S.P. (2017) The British List: A Checklist of Birds of Britain (9th Edition). The British Ornithologists' Union Records Committee.



summary of the protected and notable species is given in Table 3: Protected and notable species recorded within the survey area. A full species list is provided in Annex 1.

Table 3: Protected and notable species recorded within the survey area

| Species | Scientific name | BoCC | Schedule 1 | S41 | SPA citation species | Confirmed / probable territories |
|------------------------------|--------------------------|-------|------------|-----|----------------------------|--|
| Black-headed Gull | (Larus ridibundus) | Amber | | | | 0 |
| Barn owl | Tyto alba | Green | Yes | | | 5 |
| Bullfinch | (Pyrrhula pyrrhula) | Amber | | Yes | | 3 |
| Common Gull | (Larus canus) | Amber | | | | 0 |
| Common Sandpiper | (Actitis hypoleucos) | Amber | | | | 0 |
| Common Snipe | (Gallinago gallinago) | Amber | | | | 1 |
| Curlew | (Numenius arquata) | Red | | Yes | | 26 |
| Dipper | (Cinclus cinclus) | Amber | | | | 1 |
| Dunnock | (Prunella modularis) | Amber | | Yes | | 15 |
| Fieldfare | (Turdus pilaris) | Red | Yes | | | 0 |
| Golden Plover | (Pluvialis apricaria) | Green | | | Yes | 0 |
| Green finch | Chloris chloris | Red | | | | 0 |
| Grey Wagtail | (Motacilla cinerea) | Amber | | | | 2 |
| Greylag Goose | (Anser anser) | Amber | | | | 1 |
| Herring Gull | (Larus argentatus) | Red | | Yes | | 0 |
| House Martin | (Delichon urbica) | Red | | | | 8 |
| House Sparrow | (Passer domesticus) | Red | | Yes | | 19 |
| Kestrel | (Falco tinnunculus) | Amber | | | | 1 |
| Kingfisher | (Alcedo atthis) | Amber | Yes | | | 1 |
| Lapwing | (Vanellus vanellus) | Red | | Yes | | 35 |
| Lesser Black- backed Gull | (Larus fuscus) | Amber | | | | 0 |



| Species | Scientific name | BoCC | Schedule 1 | S41 | SPA citation species | Confirmed / probable territories |
|-----------------------|-----------------------------------|-------|------------|-----|----------------------------|--|
| Lesser Redpoll | (Carduelis flammea cabaret) | Red | | Yes | | 0 |
| Linnet | (Carduelis cannabina) | Red | | Yes | | 3 |
| Mallard | (Anas platyrhynchos) | Amber | | | | 3 |
| Marsh Tit | (Parus palustris) | Red | | Yes | | 0 |
| Meadow Pipit | (Anthus pratensis) | Amber | | | | 4 |
| Mistle Thrush | (Turdus viscivorus) | Red | | | | 9 |
| Moorhen | (Gallinula chloropus) | Amber | | | | 0 |
| Mute Swan | (Cygnus olor) | Amber | | | | 1 |
| Oystercatcher | (Haematopus ostralegus) | Amber | | | | 28 |
| Redshank | (Tringa totanus) | Amber | | | | 1 |
| Redstart | (Phoenicurus phoenicurus) | Amber | | | | 5 |
| Reed Bunting | (Emberiza schoeniclus) | Amber | | Yes | | 6 |
| Sedge warbler | (Acrocephalus schoenobaenus) | Amber | | | | 0 |
| Shelduck | (Tadorna tadorna) | Amber | | | | 0 |
| Skylark | (Alauda arvensis) | Red | | Yes | | 24 |
| Song Thrush | (Turdus philomelos) | Amber | | Yes | | 29 |
| Sparrowhawk | (Accipiter nisus) | Amber | | | | 0 |
| Spotted Flycatcher | (Muscicapa striata) | Red | | Yes | | 1 |
| Starling | (Sturnus vulgaris) | Red | | Yes | | 18 |
| Stock Dove | (Columba oenas) | Amber | | | | 4 |
| Swift | (Apus apus) | Red | | | | 0 |
| Tawny Owl | (Strix aluco) | Amber | | | | 0 |
| Teal | (Anas crecca) | Amber | | | | 0 |
| Tree Pipit | (Anthus trivialis) | Red | | Yes | | 0 |



| Species | Scientific name | BoCC | Schedule 1 | S41 | SPA citation species | Confirmed / probable territories |
|-----------------------|---------------------------------|-------|------------|-----|----------------------------|--|
| Tree Sparrow | (Passer montanus) | Red | | Yes | | 8 |
| Common whitethroat | (Curruca curruca) | Amber | | | | 0 |
| Wigeon | (Anas penelope) | Amber | | | | 0 |
| Willow Warbler | (Phylloscopus trochilus) | Amber | | | | 44 |
| Woodpigeon | (Columba palumbus) | Amber | | | | 0 |
| Wren | (Troglodytes troglodytes) | Amber | | | | 0 |
| Yellow Wagtail | (Motacilla flava flavissima) | Red | | Yes | | 3 |
| Yellowhammer | (Emberiza citrinella) | Red | | Yes | | 15 |

SPA species

6.13.5.5 No SPA citation species were recorded as breeding either within the Project Order Limits or within the survey area. A single record of golden plover was observed to the south of the SPA boundary, north-west of Bowes. This record did not relate to any breeding behaviour and the individual was recorded as 'loafing'. No records of the other SPA citation species (hen harrier *Circus cyaneus*, merlin *Falco columbarius* and peregrine *Falco peregrinus*) were returned during any of the breeding bird surveys.

Schedule 1 species

- 6.13.5.6 Barn owl were the only schedule 1 species recorded breeding within the Project survey area. Five occupied barn owl breeding sites were identified during the barn owl nest verification surveys undertaken in 2021. Two breeding sites were within the Project Order Limits. Full details are provided in ES Appendix 6.15: Barn Owls (ES Volume 3, Application Document 3.4) and therefore this is not discussed further within this report.
- 6.13.5.7 Low numbers of kingfisher observations were noted within the survey, and whilst it is considered possible that this species breeds along suitable watercourses within the survey area, no evidence of breeding was recorded.
- 6.13.5.8 Fieldfare was recorded within the survey area but no evidence of breeding was recorded.
 BoCC and NERC species
- 6.13.5.9 A total of 18 species which are listed on Section 41 of the NERC Act 2006 were recorded within the survey area. These include skylark, tree pipit, lesser redpoll, marsh tit, yellow wagtail and spotted flycatcher. Of



these 18 species, 14 were confirmed as breeding within the Order Limits of the Project.

6.13.5.10 A total of 18 Red List and 31 Amber List BoCC species were recorded across the study area. Further details are provided for those BoCC species which were confirmed as breeding within, or directly adjacent to, the Order Limits of the Project.

Confirmed breeding species

- 6.13.5.11 Notable species which were confirmed as breeding within, or directly adjacent to, the Order Limits of the Project are discussed in further detail within this report. Table 4 provides full details of confirmed and probable territories.
- 6.13.5.12 Curlew (BoCC Red List): there were estimated to be 25 curlew territories within the survey area. Of these, the majority were located in, or adjacent to, the Appleby to Brough and Bowes Bypass schemes. Most of the records were associated with the improved grassland fields to the north and south of the Project.
- 6.13.5.13 House martin (BoCC Red List): an estimated eight house martin territories were recorded, with only the A1(M) Junction 53 Scotch Corner scheme having no territory records for house martin associated with it. The majority of records were centred around residential properties and farm buildings.
- 6.13.5.14 House sparrow (BoCC Red List): there were an estimated 19 territories relating to house sparrow across the entire survey area. House sparrows are generally considered to be colonial nesters and are not strongly territorial, so for this species the records generally indicate areas where birds were observed nesting during the surveys. The records were evenly spread across the survey area, with the Stephen Bank to Carkin Moor scheme being the only one with no records.
- 6.13.5.15 Lapwing (BoCC Red List): 35 lapwing territories were estimated to be present within the survey area. The majority of these records were from the Temple Sowerby to Appleby scheme (17), followed by the Appleby to Brough scheme (seven). Most activity was associated with improved grassland to the north and south of the scheme and other damp grassland areas.
- 6.13.5.16 Linnet (BoCC Red List): three linnet territories were recorded, one each in Bowes Bypass, Cross Lanes to Rokeby and Stephen Bank to Carkin Moor. Linnets are generally associated with habitats such as heathland, farmland hedges, scrub, parks and rough grassland. Field boundaries with hedges and rough grassland are particularly important for this species within the survey area.
- 6.13.5.17 Mistle thrush (BoCC Red List): reasonable numbers of mistle thrush were observed within the survey area, with an estimated nine territories recorded. Mistle thrush are birds which often forage in open areas such as pastures and playing fields. They prefer to nest in woodland or tall hedges and these habitats will be key for this species within the survey area.



- 6.13.5.18 Skylark (BoCC Red List): this species is most often associated with open ground such as heathland, moorland, rough pasture and arable habitats. Within the survey area, a total of 24 estimated territories were recorded. The key schemes for this species were Temple Sowerby to Appleby, Stephen Bank to Carkin Moor and A1(M) Junction 53 Scotch Corner.
- 6.13.5.19 Starling (BoCC Red List): there were an estimated 18 territories relating to starling within the survey area. The records were fairly evenly spread across the survey area, with most being associated with buildings where nearby foraging habitats were present, for example open grassland.
- 6.13.5.20 Tree sparrow (BoCC Red List): there were an estimated eight tree sparrow territories within the survey area. Most of these related to farm buildings with associated foraging opportunities nearby, for example arable land, scrub and pasture.
- 6.13.5.21 Yellow wagtail (BoCC Red List): three yellow wagtail territories were recorded within the survey area of the Project. These records were from Temple Sowerby to Appleby, Cross Lanes to Rokeby and Stephen Bank to Carkin Moor. These schemes and adjacent areas are all close to arable fields which this species commonly breeds in.
- 6.13.5.22 Yellowhammer (BoCC Red List): a total of 15 yellowhammer territories were mapped across the survey area of the Project. The majority of these were recorded along the Temple Sowerby to Appleby scheme (six) and the A1(M) Junction 53 Scotch Corner scheme (five). Most records related to arable and pasture habitats, particularly where hedgerows and scrub are close by.
- 6.13.5.23 Bullfinch (BoCC Amber List): three bullfinch territories were recorded during the breeding bird surveys. Two of these were in the M6 Junction 40 to Kemplay Bank scheme and one was identified in the A1(M) Junction 53 Scotch Corner scheme. Important habitats for this species within the survey area include woodland and scrub, which provide both nesting and foraging opportunities.
- 6.13.5.24 Dunnock (BoCC Amber List): there were an estimated 15 dunnock territories spread evenly across the survey area of the Project, with only Cross Lanes to Rokeby not supporting any territories. This species is most often associated with scrub, gardens and hedgerows and prefers dense vegetation to forage and nest in.
- 6.13.5.25 Reed bunting (BoCC Amber List): a total of six reed bunting territories were mapped across the survey area of the Project. The majority of these (five) were recorded within the Appleby to Brough scheme, the wetland areas in this scheme being key. The remaining territories were recorded in the Temple Sowerby to Appleby scheme. This species is strongly associated with reedbeds and wetlands as well as with wet ditches containing reeds or other tall vegetation.
- 6.13.5.26 Oystercatcher (BoCC Amber List): an estimated 28 oystercatcher territories were recorded within the survey area. The vast majority of these were present in the Appleby to Brough scheme (eight) and Bowes



Bypass scheme (nine). Records were strongly correlated to damp grassland habitats and areas with wetland habitats nearby.

- 6.13.5.27 Common redstart (BoCC Amber List): A total of five common redstart territories were recorded, two in each of the Temple Sowerby to Appleby scheme and Appleby to Brough scheme, and one in the Bowes Bypass scheme. During the breeding season, this species is generally associated with woodland, scrub, heathland, moorland and pasture with hedgerows or trees.
- 6.13.5.28 Song thrush (BoCC Amber List): this species held an estimated 29 territories across the survey area of the Project, with all of the individual schemes supporting at least one pair. Song thrush use a range of habitats but are most strongly associated with woodland, scrub and gardens where they have a wide range of foraging and nesting opportunities available.
- 6.13.5.29 Willow warbler (BoCC Amber List): an estimated 44 willow warbler territories were recorded within the survey area. The vast majority of these were present in the Temple Sowerby to Appleby scheme and the Appleby to Brough scheme. Willow warbler use a range of habitats but are most strongly associated with woodland, grassland and heathland where they have a wide range of foraging and nesting opportunities available
- 6.13.5.30 In addition, the sand martin surveys confirmed the presence of one active sand martin breeding site within the Order Limits of the Project and two within the survey area. All sand martin breeding sites were recorded along banks of the River Eden associated with M6 Junction 40 to Kemplay Bank scheme.

Probable breeding species

6.13.5.31 Two notable species 'probably' breeding within the survey area of the Project were mallard *Anas platyrhynchos* (three territories) and dipper *Cinclus cinclus* (one territory), both BoCC Amber List. These two species were both associated with wetland and riverine habitats towards the western end of the Project.

Possible breeding species

- 6.13.5.32 The following species were considered to be 'possibly' breeding within the survey area of the Project:
 - kingfisher (Schedule 1 and BoCC Amber List)
 - lesser redpoll (BoCC Red List)
 - marsh tit (BoCC Red List)
 - tree pipit (BoCC Red List)
 - swift Apus apus (BoCC Red List)
 - snipe *Gallinago gallinago* (BoCC Amber List)
 - greylag goose Anser anser (BoCC Amber List)
 - kestrel *Falco tinnunculus* (BoCC Amber List)
 - mute swan Cygnus olor (BoCC Amber List)
 - tawny owl Strix aluco (BoCC Amber List)
 - teal Anas crecca (BoCC Amber List)



Table 4: Estimated number of territories within the survey area of the Project

| Species | Breeding status (survey area) | Breeding status (Order Limits) | Estimated number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|---------------------|--|---|---------------------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Bullfinch | Confirmed | Confirmed | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Common sandpiper | Non- breeding | Non- breeding | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Curlew | Confirmed | Confirmed | 26 | 0 | 0 | 4 | 8 | 10 | 3 | 1 | 0 |
| Dipper | Probable | Probable | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Dunnock | Confirmed | Confirmed | 15 | 3 | 1 | 2 | 3 | 2 | 0 | 3 | 1 |
| Grey wagtail | Confirmed | Non- breeding | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Greylag goose | Possible | Non- breeding | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| House martin | Confirmed | Confirmed | 8 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 0 |
| House sparrow | Confirmed | Confirmed | 19 | 3 | 2 | 4 | 2 | 3 | 1 | 0 | 4 |
| Kestrel | Possible | Non- breeding | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Kingfisher | Possible | Possible | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Lapwing | Confirmed | Confirmed | 35 | 0 | 0 | 4 | 7 | 17 | 4 | 3 | 0 |
| Lesser redpoll | Non- breeding | Non- breeding | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Linnet | Confirmed | Confirmed | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Mallard | Probable | Probable | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |



| Species | Breeding status (survey area) | Breeding status (Order Limits) | Estimated number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|-----------------------|--|---|---------------------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Meadow pipit | Confirmed | Possible | 4 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 |
| Mistle thrush | Confirmed | Confirmed | 9 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 0 |
| Mute swan | Possible | Possible | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Oystercat cher | Confirmed | Confirmed | 28 | 3 | 1 | 3 | 8 | 9 | 2 | 1 | 1 |
| Redshank | Confirmed | Possible | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Redstart | Confirmed | Confirmed | 5 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 |
| Reed bunting | Confirmed | Confirmed | 6 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 |
| Shelduck | Non- breeding | Non- breeding | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Skylark | Confirmed | Confirmed | 24 | 0 | 3 | 4 | 3 | 1 | 1 | 7 | 5 |
| Snipe | Possible | Non- breeding | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Song thrush | Confirmed | Confirmed | 29 | 5 | 4 | 5 | 4 | 5 | 4 | 1 | 1 |
| Spotted flycatcher | Probable | Non- breeding | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Starling | Confirmed | Confirmed | 18 | 3 | 5 | 4 | 2 | 4 | 0 | 0 | 0 |
| Stock dove | Confirmed | Possible | 4 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |



| Species | Breeding status (survey area) | Breeding status (Order Limits) | Estimated number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|-------------------|--|---|---------------------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Swift | Probable | Possible | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Willow warbler | Confirmed | Confirmed | 44 | 0 | 3 | 15 | 20 | 5 | 0 | 1 | 0 |



Species richness and abundance

- 6.13.5.33 The species richness (total number of breeding species present) within the survey area was 39. This total includes barn owl which is detailed in a separate report (ES Appendix 6.15: Barn Owls (Application Document 3.4)). The schemes with the highest diversity (number of species) of birds were Temple Sowerby to Appleby (65), Appleby to Brough (64) and Bowes Bypass (59). In addition, these schemes also supported the highest number of breeding territories, 47, 54 and 61 respectively.
- 6.13.5.34 Overall, the abundance of birds across the survey area was considered to be in-line with the type of habitats present. The schemes with the highest abundance of notable bird species were Temple Sowerby to Appleby (1268) and Bowes Bypass (1297). A total of 275 territories were recorded across the survey area of the Project, with further details for each scheme provided in their respective sections within this report.
- 6.13.5.35 The schemes listed above, which were associated with the highest abundance and diversity of birds, generally contained more diverse habitats or were closer to important habitats for birds than the other schemes. The habitats within these schemes which supported the largest numbers and diversity of birds were damp grassland and pasture, waterbodies, hedgerows, farm buildings, scrub and woodland. All of the schemes and their importance in terms of breeding birds are described in further detail in their respective sections within this report.

M6 Junction 40 to Kemplay Bank

- 6.13.5.36 This scheme had a total abundance of 406 birds (notable bird species only) and a total species diversity of 19. Twenty-two estimated territories, which relate to nine confirmed notable breeding species, were recorded. The confirmed breeding species included bullfinch, dunnock, grey wagtail, house martin, house sparrow, mallard oystercatcher, song thrush and starling.
- 6.13.5.37 The habitats within this scheme which were associated with higher numbers of bird records included riverine areas, grassland, scattered trees, buildings, woodland and scrub. The numbers and diversity of bird species recorded were consistent with the types of habitats present.

Penrith to Temple Sowerby

- 6.13.5.38 This scheme had a total abundance of 518 birds (notable bird species only) and a total species diversity of 49. Twenty-one estimated territories were recorded, associated with 10 confirmed notable breeding species. The confirmed breeding species included dunnock, house martin, house sparrow, mallard, mistle thrush, oystercatcher, skylark, song thrush, starling and stock dove. rush.
- 6.13.5.39 The habitats within this scheme which were associated with higher numbers of bird records included waterbodies, arable fields, grassland, scattered trees, buildings, woodland and scrub. The numbers and diversity of bird species recorded were consistent with the types of habitats present.



Temple Sowerby to Appleby

- 6.13.5.40 This scheme had a total abundance of 1,269 birds (notable bird species only) and a total species diversity of 65. A total of 38 estimated territories, associated with 15 confirmed notable breeding species, were recorded. The confirmed breeding species included curlew, dipper, dunnock, house sparrow, kingfisher, lapwing, mallard, oystercatcher, redstart, reed bunting, skylark, song thrush, starling and stock dove.
- 6.13.5.41 The habitats in this scheme which were associated with higher numbers of bird records included waterbodies, arable fields, wet grassland, scattered trees, buildings, riparian woodland and scrub. With a varied mosaic of habitats in this area, the numbers and diversity of birds were higher than for some less habitat diverse schemes. The wetland, woodland and scrub habitats in particular were associated with higher numbers and diversity of species.

Appleby to Brough

- 6.13.5.42 This scheme had a total abundance of 998 birds (notable bird species only) and a total species diversity of 64.A total of 53 estimated territories were recorded, with 17 confirmed notable breeding species recorded. The confirmed breeding species included curlew, dunnock, greylag goose, house martin, house sparrow, lapwing, meadow pipit, mistle thrush, mute swan, oystercatcher, redstart, reed bunting, skylark, snipe, song thrush, starling and stock dove.
- 6.13.5.43 The habitats in this scheme which were associated with higher numbers of bird records included hedgerows, waterbodies, grassland, arable fields, scattered trees, woodland and scrub. The numbers and diversity of bird species recorded are consistent with the types of habitats present, with many records, particularly those for curlew, lapwing and oystercatcher, relating to the arable fields and improved grassland within this scheme.

Bowes Bypass

- 6.13.5.44 This scheme had a total abundance of 1,297 birds (notable bird species only) and a total species diversity of 59. A total of 61 estimated territories with 15 confirmed notable breeding species were recorded. The confirmed breeding species included curlew, dunnock, house martin, house sparrow, lapwing, linnet, meadow pipit, mistle thrush, oystercatcher, redshank, redstart, skylark, song thrush, starling and stock dove.
- 6.13.5.45 The habitats in this scheme which were associated with higher numbers of bird records included hedgerows, grassland, buildings, scattered trees, woodland and scrub. The numbers and diversity of bird species recorded are consistent with the types of habitats present.
- 6.13.5.46 This scheme supported the highest numbers of territories for three species, curlew, lapwing and oystercatcher (10, 17 and 9 respectively). This is likely due to the proximity of the scheme to the North Pennine Moors SPA (approximately 0.5km to the north-west) and the large



numbers of semi-improved and improved grassland fields which these species are often associated with during the breeding season.

6.13.5.47 The only record of a SPA citation species, golden plover, was recorded when surveying for this scheme, however this record was noted approximately 0.5km to the north-west of the Order Limits of this scheme. This single bird was not displaying any behaviour typically associated with breeding.

Cross Lanes to Rokeby

- 6.13.5.48 This scheme had a total abundance of 359 birds (notable bird species only) and a total species diversity of 48. Eighteen estimated territories, with nine confirmed notable breeding species, were recorded. The confirmed breeding species included curlew, house martin, house sparrow, lapwing, linnet, mistle thrush, oystercatcher, skylark and song thrush.
- 6.13.5.49 The habitats within this scheme which were associated with higher numbers of bird records included hedgerows, grassland, arable fields, improved grassland, scattered trees, woodland and scrub. The numbers and diversity of bird species recorded are consistent with the types of habitats present. Many of the records related to woodland, field boundaries and open agricultural land.

Stephen Bank to Carkin Moor

- 6.13.5.50 This scheme had a total abundance of 359 birds (notable bird species only) and a total species diversity of 48. Twenty-two estimated territories were mapped, with 11 confirmed notable breeding species being recorded. The confirmed breeding species included curlew, dunnock, house martin, kestrel, lapwing, linnet, mistle thrush, oysterctacher, skylark, song thrush and spotted flycatcher.
- 6.13.5.51 The habitats within this scheme which were associated with higher numbers of bird records included hedgerows, arable fields, improved grassland, scattered trees, buildings, woodland and scrub. The numbers and diversity of bird species recorded are consistent with the types of habitats present. Many records were associated with field boundaries, woodland and scattered trees within this scheme.

A1(M) Junction 53 Scotch Corner

- 6.13.5.52 This scheme had a total abundance of 217 birds (notable bird species only) and a total species diversity of 51. Thirteen estimated territories, with six confirmed notable breeding species, were recorded. The confirmed breeding species included bullfinch, dunnock, house sparrow, oystercatcher, skylark and song thrush.
- 6.13.5.53 The habitats within this scheme which were associated with higher numbers of bird records included arable fields, improved grassland, scattered trees, woodland and scrub. The numbers and diversity of bird species recorded are consistent with the types of habitats present. In general terms, this scheme contained a lower diversity of habitats within it and was smaller in area than the other schemes, therefore, the



abundance and diversity of birds are both lower in comparison to the other schemes.

Future baseline

- 6.13.5.54 The ecological baseline conditions described within this report represent those which exist in the absence of the Project and at the time of survey. As stated in Section 3 of CIEEM's *Guidelines for Ecological Impact Assessment in the UK and Ireland*, potential changes in baseline conditions also need to be identified in order to assess impacts.
- 6.13.5.55 Based on the survey data collected and land use at the time of survey, the future baseline in the absence of the Project is unlikely to change significantly. Subtle changes are expected due to climate change, such as localised movement of certain species and local population changes. There may be a negligible reduction in opportunities to nest and roost in ash trees due to ash dieback disease. However, the overall habitats and species composition in the survey area are expected to be broadly similar to that of the existing baseline. Therefore, the future baseline would remain the same as set out in the existing baseline.

6.13.6 Discussion

- 6.13.6.1 The surveys confirmed that breeding birds are abundant and are using habitats present within the survey area of the Project.
- 6.13.6.2 With the exception of the A1(M) Junction 53 Scotch Corner scheme, breeding bird territories were recorded within the Order Limits of every scheme. Whilst no breeding bird territories were recorded within the Order Limits of the A1(M) Junction 53 Scotch Corner scheme, territories were present within the survey area.
- 6.13.6.3 No SPA qualifying species were recorded breeding.
- 6.13.6.4 Habitats within and adjacent to the Order Limits of every scheme provide foraging opportunities for a range of bird species as noted by the diversity of species recorded during the breeding bird surveys. The abundance of woodland, scrub and hedgerow habitats supported a number of passerine species. Large expanses of grassland are also abundant throughout the Project and supported a number of ground nesting bird species such as lapwing. Areas of flooded and wet short grazed grassland supported waders, gulls and geese.

6.13.7 References

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6.13 Annex 1

Table 1: Presence of species per scheme and total number of territories.

| Species | Scientific name | Notable | Number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|----------------------|--------------------------|---------|-----------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Blackbird | Turdus merula | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Blackcap | Sylvia atricapilla | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Black-headed Gull | (Larus ridibundus) | Yes | 0 | Y | Y | Y | Y | Y | Y | Y | |
| Blue tit | Cyanistes caeruleus | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Bullfinch | (Pyrrhula pyrrhula) | Yes | 3 | Y | Y | Y | | Y | | | Y |
| Buzzard | Buteo buteo | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Carrion crow | Corvus corone | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Chaffinch | Fringilla coelebs | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Chiffchaff | Phylloscopus collybita | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Coal tit | Periparus ater | No | N/A | Y | Y | Y | Y | | Y | Y | Y |
| Collared dove | Streptopelia decaocto | No | N/A | Y | Y | Y | Y | Y | | Y | Y |
| Common Gull | (Larus canus) | Yes | 0 | | Y | | | Y | Y | | |



| Species | Scientific name | Notable | Number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|---------------------|--------------------------|---------|-----------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Common Sandpiper | (Actitis hypoleucos) | Yes | 0 | | Y | | | | | | |
| Common Snipe | (Gallinago gallinago) | Yes | 1 | | | | Y | Y | | | |
| Coot | Fulica atra | No | N/A | | Y | | | | | | |
| Cormorant | Phalacrocorax carbo | No | N/A | | | | | | | | Y |
| Curlew | (Numenius arquata) | Yes | 26 | | | Y | Y | Y | Y | Y | |
| Dipper | (Cinclus cinclus) | Yes | 1 | Y | Y | Y | | | | | |
| Dunnock | (Prunella modularis) | Yes | 15 | Y | Y | Y | Y | Y | Y | Y | Y |
| Feral pigeon | Columba livia | No | N/A | | Y | Y | Y | Y | Y | | Y |
| Fieldfare | (Turdus pilaris) | Yes | 0 | | Y | Y | Y | Y | Y | | |
| Garden warbler | Sylvia borin | No | N/A | Y | Y | Y | Y | | | Y | |
| Goldcrest | Regulus regulus | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Golden Plover | (Pluvialis apricaria) | Yes | 0 | | | | | Y | | | |
| Goldfinch | Carduelis carduelis | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |



| Species | Scientific name | Notable | Number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|--------------------------|------------------------|---------|-----------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Goosander | Mergus merganser | No | N/A | | | | | | | | |
| Great spotted woodpecker | Dendrocopos major | No | N/A | Y | Y | Y | Y | Y | Y | | Y |
| Great tit | Parus major | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Green woodpecker | Picus viridis | No | N/A | Y | Y | | | | | | |
| Greenfinch | Chloris chloris | No | N/A | Y | Y | Y | Y | Y | | Y | Y |
| Grey heron | Ardea cinerea | No | N/A | Y | Y | Y | Y | | | | |
| Grey Wagtail | (Motacilla cinerea) | Yes | 2 | Y | Y | Y | | Y | | | |
| Greylag Goose | (Anser anser) | Yes | 1 | | Y | Y | Y | Y | Y | Y | Y |
| Herring Gull | (Larus argentatus) | Yes | 0 | Y | Y | Y | | Y | Y | | |
| House Martin | (Delichon urbica) | Yes | 8 | Y | Y | Y | Y | Y | Y | Y | Y |
| House Sparrow | (Passer domesticus) | Yes | 19 | Y | Y | Y | Y | Y | Y | Y | Y |
| Jackdaw | Corvus monedula | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Jay | Garrulus glandarius | No | N/A | Y | Y | | | | | | Y |
| Kestrel | (Falco tinnunculus) | Yes | 1 | | | | Y | Y | | Y | Y |



| Species | Scientific name | Notable | Number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|------------------------------|-----------------------------------|---------|-----------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Kingfisher | (Alcedo atthis) | Yes | 1 | Y | | Y | | | | | |
| Lapwing | (Vanellus vanellus) | Yes | 35 | | | Y | Y | Y | Y | Y | Y |
| Lesser Black- backed Gull | (Larus fuscus) | Yes | 0 | Y | Y | Y | Y | Y | Y | | Y |
| Lesser Redpoll | (Carduelis flammea cabaret) | Yes | 0 | | Y | Y | Y | Y | Y | | Y |
| Linnet | (Carduelis cannabina) | Yes | 3 | | Y | Y | Y | Y | Y | Y | Y |
| Long-tailed tit | Aegithalos caudatus | No | N/A | Y | Y | Y | | | | Y | Y |
| Magpie | Pica pica | No | N/A | Y | | Y | Y | | | Y | Y |
| Mallard | (Anas platyrhynchos) | Yes | 3 | Y | Y | Y | Y | Y | Y | Y | Y |
| Marsh Tit | (Parus palustris) | Yes | 0 | | | | | Y | | | |
| Meadow Pipit | (Anthus pratensis) | Yes | 4 | Y | Y | Y | Y | Y | | Y | Y |
| Mistle Thrush | (Turdus viscivorus) | Yes | 9 | | Y | Y | Y | Y | Y | Y | Y |
| Moorhen | (Gallinula chloropus) | Yes | N/A | | Y | Y | Y | Y | Y | Y | |



| Species | Scientific name | Notable | Number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|---------------|-----------------------------------|---------|-----------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Mute Swan | (Cygnus olor) | Yes | 1 | | | | Y | | | | |
| Nuthatch | Sitta europaea | No | N/A | Y | Y | Y | | Y | Y | | |
| Oystercatcher | (Haematopus ostralegus) | Yes | 28 | Y | Y | Y | Y | Y | Y | Y | Y |
| Pied wagtail | Motacilla alba | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Raven | Corvus corax | No | N/A | | Y | | Y | | | | |
| Redshank | (Tringa totanus) | Yes | 1 | | | | | Y | | | |
| Redstart | (Phoenicurus phoenicurus) | Yes | 5 | | | Y | Y | Y | | | |
| Reed Bunting | (Emberiza schoeniclus) | Yes | 6 | | Y | Y | Y | | | Y | Y |
| Robin | Erithacus rubecula | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Rook | (Corvus frugilegus) | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Sand Martin | (Riparia riparia) | Yes | N/A | Y | Y | Y | Y | Y | | Y | |
| Sedge warbler | Acrocephalus schoenobaen us | No | N/A | | | | Y | | | | |
| Shelduck | (Tadorna tadorna) | Yes | 0 | | | Y | | | Y | Y | |



| Species | Scientific name | Notable | Number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|-----------------------|------------------------|---------|-----------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Siskin | Carduelis spinus | No | N/A | Y | Y | | Y | Y | Y | | Y |
| Skylark | (Alauda arvensis) | Yes | 24 | | Y | Y | Y | Y | Y | Y | Y |
| Song Thrush | (Turdus philomelos) | Yes | 29 | Y | Y | Y | Y | Y | Y | Y | Y |
| Sparrowhawk | (Accipiter nisus) | Yes | N/A | Y | | Y | Y | Y | | Y | |
| Spotted Flycatcher | (Muscicapa striata) | Yes | 1 | | | | | Y | Y | Y | |
| Starling | (Sturnus vulgaris) | Yes | 18 | Y | Y | Y | Y | Y | Y | Y | Y |
| Stock Dove | (Columba oenas) | Yes | 4 | Y | Y | Y | Y | Y | Y | Y | Y |
| Stonechat | Saxicola rubicola | No | N/A | | | | | | | | |
| Swallow | Hirundo rustica | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Swift | (Apus apus) | Yes | 0 | Y | Y | Y | Y | Y | | Y | Y |
| Tawny Owl | (Strix aluco) | Yes | 0 | | | | Y | | | | |
| Teal | Anas crecca | Yes | 0 | | | | Y | | | | |
| Tree pipit | Anthus trivialis | Yes | 0 | | | | Y | | | | |
| Tree sparrow | Passer montanus | Yes | 8 | | Y | Y | Y | | Y | Y | Y |

Planning Inspectorate Scheme Reference: TR010062 Application Document Reference: TR010062/APP/3.4



| Species | Scientific name | Notable | Number of territories | M6 Junction 40 to Kemplay Bank | Penrith to Temple Sowerby | Temple Sowerby to Appleby | Appleby to Brough | Bowes Bypass | Cross Lanes to Rokeby | Stephen Bank to Carkin Moor | A1(M) Junction 53 Scotch Corner |
|----------------|----------------------------|---------|-----------------------------|--|---------------------------------|------------------------------------|-------------------------|-----------------|-----------------------------|--------------------------------------|--|
| Treecreeper | Certhia familiaris | No | 0 | Y | Y | Y | Y | | Y | | |
| Wheatear | Oenanthe oenanthe | Yes | 0 | | | | Y | | | | |
| Whitethroat | Curruca communis | No | 0 | | | Y | | | Y | Y | Y |
| Wigeon | Anas penelope | Yes | 0 | | | | | Y | | | |
| Willow warbler | Phylloscopus trochilus | Yes | 44 | Y | Y | Y | Y | Y | | Y | Y |
| Woodpigeon | Columba palumbus | Yes | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Wren | Troglodytes troglodytes | No | N/A | Y | Y | Y | Y | Y | Y | Y | Y |
| Yellow wagtail | Motacilla flava | Yes | 3 | | Y | Y | | | Y | Y | |
| Yellowhammer | Emberiza citrinella | Yes | 15 | | Y | Y | Y | | | Y | Y |



Table 0-2 - Bird species recorded on local BAPs

| Common Name | Scientific Name | Cumbria BAP ¹⁵ , | Durham BAP ¹⁶ | Richmondshire BAP ¹⁷ . |
|----------------|----------------------|-----------------------------|--------------------------|-----------------------------------|
| Cormorant | Phalacrocorax carbo | | D | |
| Fulmar | Fulmarus | | D | |
| Golden Plover | Pluvialis apricaria | | D | R |
| Kittiwake | Rissa tridactyla | | D | |
| Razorbill | Alca torda | | D | |
| Ringed Plover | Charadrius hiaticula | | D | |
| Shelduck | Tadorna tadorna | | D | |
| Turnstone | Arenaria | | D | |
| Corn Bunting | Emberiza calandra | | D | R |
| Linnet | Linaria cannabina | | D | R |
| Tree Sparrow | Passer montanus | | D | R |
| Skylark | Alauda arvensis | | D | R |
| Reed Bunting | Emberiza schoeniclus | | D | R |
| Yellow Wagtail | Motacilla flava | | D | R |
| Lapwing | Vanellus vanellus | | D | R |
| Curlew | Numenius arquata | С | D | R |
| Common snipe | Gallinago gallinago | | D | R |
| Redshank | Tringa totanus | | D | R |
| Peregrine | Falco peregrinus | | D | |
| Common Cuckoo | Cuculus canorus | | D | R |

¹⁵ Cumbria Biodiversity Partnership (2001) The Cumbria Biodiversity Action Plan, available at: <u>https://www.cumbria.gov.uk/planning-</u> environment/conservation/biodiversity/bio_bap.asp ¹⁶ North East England Nature Partnership (2013) Biodiversity Priorities, available at:

¹⁷ Richmond County Council (2014) Richmondshire Biodiversity Action Plan, available at: https://www.richmondshire.gov.uk/media/5114/richmondshirebiodiversity-action-plan.pdf

Planning Inspectorate Scheme Reference: TR010062 Application Document Reference: TR010062/APP/3.4



| Common Name | Scientific Name | Cumbria BAP ¹⁵ , | Durham BAP ¹⁶ | Richmondshire BAP ¹⁷ . |
|----------------------|-----------------------|-----------------------------|--------------------------|-----------------------------------|
| Grasshopper Warbler | Locustella naevia | | D | |
| Grey Partridge | Perdix perdix | | D | R |
| Kestrel | Falco tinnunculus | | D | |
| Mistle Thrush | Turdus viscivorus | | D | |
| Swallow | Hirundo rustica | | D | |
| Yellowhammer | Emberiza citrinella | | D | |
| Nightjar | Caprimulgus europaeus | | D | R |
| Spotted flycatcher | Muscicapa striata | | D | R |
| Black Grouse | Lyrurus tetrix | С | D | R |
| Hen Harrier | Circus cyaneus | | D | R |
| Merlin | Falco columbarius | | D | |
| House Sparrow | Passer domesticus | | D | R |
| Starling | Sturnidae vulgaris | | D | R |
| Song Thrush | Turdus philomelos | | D | R |
| House Martin | Delichon urbica | | D | |
| Swift | Apus apus | | D | |
| Black-necked Grebe | Podiceps nigricollis | | D | |
| Little Ringed Plover | Charadrius dubius | | D | |
| Common pochard | Aythya ferina | | D | |
| Bittern | Botaurus stellaris | | D | R |
| Grey Wagtail | Motacilla cinerea | | D | |
| Marsh Tit | Poecile palustris | | D | R |
| Lesser Redpoll | Acanthis cabare | | D | R |
| Pied Flycatcher | Ficedula hypoleuca | | D | |



| Common Name | Scientific Name | Cumbria BAP ¹⁵ , | Durham BAP ¹⁶ | Richmondshire BAP ¹⁷ . |
|---------------------------|----------------------------------|-----------------------------|--------------------------|-----------------------------------|
| Red Kite | Milvus milvus | | D | |
| Tree Pipit | Anthus trivialis | | D | R |
| Willow Warbler | Phylloscopus trochilus | | D | |
| Willow Tit | Poecile montanus | | D | R |
| Woodcock | Scolopax rusticola | | D | |
| Black-throated Diver | Gavia arctica | | | R |
| Tundra Swan | Cygnus columbianus | | | R |
| Greater Scaup | Aythya marila | | | R |
| Common Scoter | Melanitta nigra | | | R |
| Red Grouse | Lagopus lagopus scotica | | | R |
| Black-tailed Godwit | Limosa limosa | | | R |
| Arctic Skua | Stercorarius parasiticus | | | R |
| Herring Gull | Larus argentatus | | | R |
| Barn Owl | Tyto alba | | | R |
| Lesser Spotted Woodpecker | Dryobates minor | | | R |
| Dunnock | Prunella modularis | | | R |
| Ring Ouzel | Turdus torquatus | | | R |
| Wood Warbler | Phylloscopus sibilatrix | | | R |
| Twite | Linaria flavirostris | | | R |
| Bullfinch | Pyrrhula pyrrhula | | | R |
| Hawfinch | Coccothraustes coccothraustes | | | R |
| Yellowhammer | Emberiza citrinella | | | R |