

**M54 to M6 Link Road**

**TR010054**

**Volume 6**

**6.3 Environmental Statement**

**Appendices**

**Appendix 8.9 Wintering Birds**

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

January 2020

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009**

**M54 to M6 Link Road  
Development Consent Order 202[ ]**

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**6.3 Environmental Statement Appendices  
Appendix 8.9 Wintering Birds**

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# 1 Introduction

- 1.1.1 Highways England are developing a link road between the M54 and M6 to provide a link between Junction 1 of the M54, M6 North and the A460 to Cannock. The M54 to M6 Link Road (herein referred to as ‘the Scheme’) aims to reduce congestion on local / regional routes, particularly the A449 and A460 and deliver improved transport links to encourage the development of the surrounding area.
- 1.1.2 This appendix has been prepared in respect of wintering birds relating to the Scheme.
- 1.1.3 This appendix includes the following information:
- relevant legislation and policy;
  - methodologies for desk and field-based assessments undertaken in 2017 and 2018;
  - competencies of the ecologists involved in undertaking the above surveys;
  - limitations to the surveys undertaken and any assumptions made as a result of incomplete data;
  - survey results; and
  - the approach for determining the nature conservation importance of wintering bird populations recorded during the assessments.
- 1.1.4 The objective of the wintering bird survey, reported in this appendix, is to determine the presence, assemblage and distribution of wintering bird species within the Scheme boundary and surrounding areas.
- 1.1.5 This appendix should be read in conjunction with Chapter 8: Biodiversity of the Environmental Statement (ES) [TR010054/APP/6.1] and Appendix 8.6 Barn Owl and Appendix 8.8 Breeding birds [TR010054/APP/6.3].

## 2 Relevant Legislation and Policy

### 2.1 Legislation

- 2.1.1 Appendix 8.1 Legislation and Policy Framework [TR010054/APP/6.3] provides detail on the legislation that is of direct relevance to the assessment of biodiversity.
- 2.1.2 A number of bird species recorded within the UK (including those that are resident, overwintering and migratory) are listed on Annex I of the 'Birds Directive' which requires the UK Government to take special measures, including the designation of Special Protection Areas (SPAs), to ensure the survival and reproduction of these species throughout their area of distribution.
- 2.1.3 Reference is not made in this appendix to species afforded special protection under Schedule 1 of the Wildlife and Countryside Act as the protection measures in this Act only apply to bird species within the breeding season.

### 2.2 Planning policy

- 2.2.1 Full detail of relevant national and local planning policy relevant to nature conservation is provided in Appendix 8.1 Legislation and Planning Policy [TR010054/APP/6.3] and a summary is provided in detail in Chapter 8: Biodiversity of the ES [TR010054/APP/6.1].

### 2.3 Priority species

- 2.3.1 There are 49 species of bird that are listed on the Natural Environment and Rural Communities Act (NERC) 2006 (refer to Appendix 8.1) whose conservation is therefore a material planning concern.
- 2.3.2 The Staffordshire Biodiversity Action Plan (SBAP) 3rd edition (Ref 1) works at a landscape scale and replaces previous habitat and species action plans with Ecosystem Action Plans (EAP) and a River Action Plan for the county. The Scheme falls within the 'Central Farmland' EAP, which targets hedgerows, arable field margin, rivers, lowland acid grassland, heathland and meadows, native woodland, wood pasture and parkland, floodplain grazing marsh, eutrophic standing water, fens, ponds, purple moor grass and rush pasture and reedbeds, several of which are important habitats for wintering birds..
- 2.3.3 The SBAP (Ref 1) lists the following species of birds relevant to the Scheme:
- Barn Owl *Tyto alba*;
  - farmland seed-eating birds:
    - Bullfinch *Pyrrhula pyrrhula*;
    - Corn Bunting *Emberiza calandra*;
    - House Sparrow *Passer domesticus*;
    - Linnet *Linaria cannabina*;
    - Reed Bunting *Emberiza schoeniclus*;
    - Tree Sparrow *Passer montanus*; and
    - Yellowhammer *Emberiza citrinella*.

- Grey Partridge *Perdix perdix*;
- Lapwing *Vanellus vanellus*;
- Nightjar *Caprimulgus europaeus*;
- Skylark *Alauda arvensis*;
- Snipe *Gallinago gallinago*; and
- Woodlark *Lullula arborea*.

## 2.4 Birds of conservation concern

2.4.1 The Birds of Conservation Concern (BoCC) (Ref 2) is an assessment of the conservation status of all regularly occurring British birds. The lists (Red, Amber and Green), that indicate the level of conservation importance for each species, are derived from quantitative assessments from standardised criteria. The assessment is based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. The lists are drawn together by the UKs leading bird conservation organisations, including the Royal Society for the Protection of Birds (RSPB) and British Trust for Ornithology (BTO).

2.4.2 The criteria for birds being included in the BoCC lists is as follows.

### **Red List:**

- globally threatened;
- historical population decline in UK during 1800–1995; and
- 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.

### **Amber List:**

- species with unfavourable conservation status in Europe (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;
- 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 10 or fewer sites, but not applied to rare breeders or non-breeders; and

- internationally important; at least 20% of European breeding or non-breeding population in UK (NW European and East Atlantic Flyway populations used for non-breeding wildfowl and waders respectively).

***Green List:***

- species that occur regularly in the UK but do not qualify under any or the above criteria.

2.4.3 Although the lists confer no legal status in themselves, they are useful in evaluating the conservation significance of bird assemblages, and for assessing the potential significance of impacts and informing appropriate levels of mitigation with respect to bird populations.

## 3 Methodology

### 3.1 Desk study

3.1.1 Records for protected and notable<sup>1</sup> bird species, occurring within 2 km of the Scheme boundary, were obtained from the Staffordshire Ecological Records Centre (SERC) and the Ecological records centre for Birmingham and the Black Country (EcoRecord) in 2017.

3.1.1 Only records up to ten years old were considered within the assessment, as any records older than ten years are unlikely to be still representative of bird species in the local area.

### 3.2 Field survey

3.2.1 All surveys were led by experienced ornithologists with over six years of experience and all full members of the Chartered Institute for Ecology and Environmental Management (CIEEM).

3.2.2 Field surveys were undertaken using a walkover survey, which was based on the transect methodology as detailed in Bibby *et al*, Bird Census Techniques (Ref 3) and Gilbert *et al*, Bird Monitoring Methods (Ref 4).

3.2.3 The area that was subject to surveys for wintering birds is shown in Figure 8.22 [TR010054/APP/6.2]. The survey area did not include the M54 corridor; the area to the west of the A460 (south of Shareshill); the M6 corridor, north of the A460; or habitat south of the M54. Any construction along the existing road network of these areas would include minor modifications to existing habitat where species assemblages in these areas are considered to be already habituated to levels of noise and disturbance from the existing M6 and M54.

3.2.4 Standardised survey buffers for assessing the impacts of road schemes on bird populations do not exist, however, the survey area used provides information on the wintering birds within the area immediately surrounding the Scheme and includes areas contiguous with the Scheme boundary, where birds may potentially be adversely affected. Depending on the sensitivity of the species, birds occurring outside of the survey area may also be adversely affected. However, the survey area is sufficient to determine the likely impacts of the Scheme on the majority of wintering bird species occurring or likely to occur in the area.

3.2.5 Five visits, each taking 2-4 days to complete, were made to the survey area, on the following dates:

- Visit 1: between 6 and 9 November 2017;
- Visit 2: between 4 and 7 December 2017;
- Visit 3: between 23 and 24 January 2018;
- Visit 4: between 13 and 16 February 2018; and
- Visit 5: between 20 and 23 March 2018.

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<sup>1</sup> A notable species is a species with a conservation designation, but no legal protection.

3.2.6 Observed bird behaviour is affected by weather conditions at the time of the survey. Surveys were carried out in suitable weather conditions (*i.e.* not in conditions of poor visibility, continuous rain or winds greater than Beaufort Force 5). Table 3.1 details the survey conditions.

**Table 3.1: Survey details**

Date	Cloud cover	Wind (Beaufort)	Temp (°C)	Visibility	Rain	Notes
<b>Visit 1</b>						
06/11/2017	80%	F1-2 E	9	Good	Dry	
07/11/2017	100%	F2-3 S	9	Good	Dry	
08/11/2017	0	0	2-5	Good	Dry	
09/11/2017	Not recorded					
<b>Visit 2</b>						
04/12/2017	100	0	10	Good	Occ. drizzle	Light
05/12/2017	100	0	10	Good	Dry	
06/12/2017	100	F3 S	10	Good	Dry	
07/12/2017	80	F2 W	8	Good	Dry	
<b>Visit 3</b>						
23/01/2018	100	F1-3	12	Good	Dry	
24/01/2018	50	W1	7	Good	Dry	
<b>Visit 4</b>						
13/02/2018	70-90	F3 W	6	Good	Dry	Heavy rain before survey
14/02/2018	100	F4 W	5	Good	Light rain turning heavier towards end of survey	
15/02/2018	60-70	F2-3 SW	6	Good	Dry	
16/02/2018	80	F1 W	4-5	Good	Dry	
<b>Visit 5</b>						
20/03/2018	100	0	9	Good	Dry	
21/03/2018	80	F1 W	11	Good	Dry	
22/03/2018	100	F1-2 W	9	Good	Dry	

Date	Cloud cover	Wind (Beaufort)	Temp (°C)	Visibility	Rain	Notes
23/03/2018	100	F1-2	11	Good	Dry	

3.2.7 The survey route followed the length of all hedgerows, fence-lines and field margins (including paths, tracks and roads) within the survey area, with deviations into areas of set-aside, stubble fields, scrub, woodland and other uncultivated habitats where possible. The transect route approached all areas of the survey area to within 50 m, where possible, but did not include ploughed or cultivated fields, due to the possibility of trampling and crop damage. Fields which contained livestock were also avoided for health and safety reasons.

3.2.8 Surveys were undertaken in the morning, commencing just after sunrise and finishing before midday. The transect was walked at a steady pace with brief pauses as necessary to listen for bird song/calls and to scan for birds. Binoculars were used throughout to scan the open habitats (including cultivated and ploughed fields), scrub, hedgerows and perches for the presence of birds.

3.2.9 The survey was undertaken by suitably experienced ornithologists and involved recording all birds encountered, their locations and activity/behaviour. Contacts with birds (by song, call or sighting) were marked on the survey map using BTO two letter species codes and standard symbols to record behaviour. Birds over-flying the survey area were identified and recorded to establish their presence, but they were not included in the assessment of survey area importance unless it was clear that they were moving between different parts of the survey area, or were moving into and out of the survey area for the purposes of feeding or roosting.

### 3.3 Evaluation of ornithological importance

3.3.1 The assessment of the ornithological importance of the survey area during the non-breeding (wintering) season was made by evaluating any species afforded special statutory protection or those included on one, or more, of the lists of species of conservation interest, as detailed in Section 2 of this report. These include:

- species listed on Annex 1 of the EU Birds Directive;
- UK Biodiversity Action Plan (BAP), succeeded by the 'UK Post-2010 Biodiversity Framework', priority bird species (appendices to the NERC Act 2006) (Refer to Appendix 8.1);
- NERC Act (2006) Species of Principal Importance;
- SBAP Species (Ref 1); and
- species included in the Birds of Conservation Concern Red and Amber Lists (Ref 2).

#### Species abundance

3.3.2 In addition to evaluating a site based on its populations of wintering birds in relation to legal status, rarity and biodiversity importance, consideration has to be given to the value of the survey area for the population of individual species that it supports. This is done by comparing the population present within the survey area with the national and county wintering population for certain species. National estimates for

non-breeding birds are published in a paper ‘Population estimates of birds in Great Britain and the United Kingdom’ (Ref 5). The BTO Bird Atlas 2007-2011 (Ref 6) was also reviewed for species information on a national level.

- 3.3.3 Current county-level estimates on the wintering bird populations of most species in Staffordshire were sourced from county avifauna reports.

### Species diversity

- 3.3.4 The number of species recorded in an area is a simple measure of diversity that can indicate its importance at each season of the year.

- 3.3.5 In Staffordshire, there is no criteria for non-breeding bird diversity within the Guidelines for the selection of Local Wildlife Sites (LWS) in Staffordshire (Ref 7) (historically referred to as Sites of Biological Importance (SBIs)). Therefore, species diversity has been measured using professional judgement, considering species presence within distinct habitat types within the Scheme boundary, e.g. farmland passerines.

### Importance of the wintering bird population

- 3.3.6 To support a focussed assessment of the population of wintering birds within the survey area, their biodiversity value has been defined with reference to the geographical level at which it matters. The frames of reference used in this appendix were made using the values presented in The Design Manual for Roads and Bridges (DMRB) LA 108 Biodiversity LA 108 Biodiversity (Ref 8); CIEEM ‘Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater, Coastal and Marine’ (Ref 9), hereafter referred to as the CIEEM Guidelines<sup>2</sup>; and professional judgement.

- 3.3.7 The evaluation uses a framework, linked to a geographical scale at which the receptor has been valued (international, national, regional, county, local or site) and this method represents best practice guidance. This assessment criteria, set out in Table 3.2, has been used in conjunction with species rarity, abundance and diversity within the survey area, to assess the biodiversity importance of the wintering bird populations recorded during the field surveys.

**Table 3.2: Importance of ornithological features**

Importance <sup>1</sup> of ornithological features	Descriptors and examples of criteria from DMRB
International or European	<p>An internationally designated site or candidate site including SPA, potential SPAs (pSPAs)<sup>2</sup>; and Ramsar sites (wetlands of international importance). Areas which meet the published selection criteria for those sites listed above but which are not themselves designated as such. Resident or regularly occurring populations of species which may be considered at an international or European level<sup>2</sup> where:</p> <ul style="list-style-type: none"> <li>the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale;</li> </ul>

<sup>2</sup> It is acknowledged that ‘Importance’ is used rather than ‘Value’ in the CIEEM 2018 guidance for ecological features compared to DMRB; however, the geographical frames of reference and method of determination used in the assessment is similar. ‘Importance’ and/ or ‘Value’ for ecological features is comparable. Importance has been used within the assessment reported herein

Importance <sup>1</sup> of ornithological features	Descriptors and examples of criteria from DMRB
	<ul style="list-style-type: none"> <li>the population forms a critical part<sup>3</sup> of a wider population at this scale; or the species is at a critical phase<sup>4</sup> of its life cycle at this scale.</li> </ul>
UK or National	<p>Sites designated at UK or national level e.g. Site of Special Scientific Interest (SSSI).</p> <p>Areas which meet the published selection criteria for those sites listed above but which are not themselves designated as such.</p> <p>Areas of key or priority species identified in the UK Post-2010 Biodiversity Framework <i>i.e.</i> UK BAP, including those published in accordance with Section 41 of the NERC Act (2006) and those considered to be of principal importance for the conservation of biodiversity.</p> <p>Resident or regularly occurring populations of species which may be considered at a UK or a national level<sup>5</sup> where:</p> <ul style="list-style-type: none"> <li>the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale;</li> <li>the population forms a critical part of a wider population at this scale; or</li> <li>the species is at a critical phase<sup>4</sup> of its life cycle at this scale.</li> </ul>
Regional	<p>Habitat or populations of species of importance at a regional level (<i>i.e.</i> West Midlands).</p> <p>Resident or regularly occurring populations of species which may be considered at a regional level<sup>6</sup> where:</p> <ul style="list-style-type: none"> <li>the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale;</li> <li>the population forms a critical part of a wider population at this scale;</li> <li>the species is at a critical phase of its life cycle at this scale; or</li> <li>species identified in regional plans or strategies.</li> </ul>
County or Unitary Authority or District	<p>Populations of species of importance at a County (<i>i.e.</i> Staffordshire) level or District (<i>i.e.</i> South Staffordshire District Council, and City of Wolverhampton Council).</p> <p>Designated sites, such as County Wildlife Site (CWS), LWS or Local Nature Conservation Sites (LNCS), Sites of Importance for Nature Conservation (SINC), Sites of Nature Conservation Importance (SNCI) and Local Nature Reserve (LNR) designated in the county or unitary authority area <i>i.e.</i> District context.</p> <p>Areas which meet the published selection criteria for those sites listed above but which are not themselves designated as such.</p> <p>Resident or regularly occurring populations of species which may be considered at a County (or District) level<sup>7</sup> where:</p> <ul style="list-style-type: none"> <li>the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale;</li> <li>the population forms a critical part of a wider population at this scale; or</li> <li>the species is at a critical phase of its life cycle at this scale.</li> </ul>
Local	<ul style="list-style-type: none"> <li>Designated sites, such as CWS, LWS, LNCS, SINC, SNCI and LNR designated at a local level. populations and, or communities of species considered to appreciably enrich the habitat resource within the local</li> </ul>

Importance <sup>1</sup> of ornithological features	Descriptors and examples of criteria from DMRB
	context (such as veteran trees), including features of value for migration, dispersal or genetic exchange.
Site	(Not defined in DMRB) Habitats and associated species that is of value in the context of the site only. Populations of common and widespread species.
<ol style="list-style-type: none"> <li>1. pSPAs are sites which UK Government has been formally advised of but have not yet been submitted to the European Commission. These sites should be valued at an international (European) level on the basis that they meet the relevant selection criteria for a SPA but are not yet designated as such.</li> <li>2. Such species include those listed within the Directive 2009/147/EC on the Conservation of Wild Birds (<i>i.e.</i> EC Birds Directive) (codified version of Council Directive 79/409/EEC as amended).</li> <li>3. Such populations include sub-populations that are essential to maintenance of meta-population dynamics, <i>e.g.</i> critical emigration and, or immigration links between otherwise discrete populations.</li> <li>4. Seasonal activity or behaviour upon which survival or reproduction depends.</li> <li>5. Species which may be considered at the UK or national level mean: birds, which receive legal protection on the basis of their conservation interest (those listed within Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); species listed for their principal importance for biodiversity (in accordance with the NERC Act 2006 Section 41 England), priority species listed within the UK Post 2010 Biodiversity Framework (<i>i.e.</i> UK BAP), or species listed within the BoCC.</li> <li>6. Such species include those listed in the appropriate Natural Character Area description</li> <li>7. Such species include those at county level (<i>i.e.</i> Staffordshire) including unitary authority area <i>i.e.</i> District level (<i>i.e.</i> South Staffordshire District Council and City of Wolverhampton Council); as listed on the LBAPs; and listed as a county designated site.</li> </ol> <p>*As well as assigning importance there is also a need to identify all legally protected species that could be affected by the Scheme in order that measures can be taken to ensure that adherence to the relevant legislation is observed. This may include the adoption of mitigation and appropriate licensing which are acceptable to Natural England.</p>	

### 3.4 Assumptions and limitations

#### Desk study

- 3.4.1 The information collected from the desk study background record search represents only those records submitted to records centres and is therefore not considered to be a definitive list of breeding birds identified within the study area. If records have not been provided, this does not confirm absence from the Scheme boundary.
- 3.4.2 The following are inherent limitations of a desk study which includes obtaining data from a Biological Records Centre (BRC):
- Recorder bias - biological records are not a representation of the distribution of species within the search area, only records of those species, so the dataset provided by a BRC may be biased towards the favoured locations / 'patches' of taxonomic preference of local recorders (and the locations / favoured 'patches' of those recorders) and the presence (or absence) of specialist bird recording groups within that county or vice county;

- Incomplete data – the current dataset held by a BRC is considered to be the most accurate and most up-to-date representation of species within each BRC boundary although records are largely random. Where atlases which have systematically surveyed monads, tetrads, or hectads for taxonomic groups within a given area are available these records therein are a more accurate picture of species assemblage and distribution;
- Data availability lag - Resources at BRCs can be limited, which can lead to a lag between the time that records are submitted by recorders and the time that they are verified and entered into the database for that county. Additionally, special interest recording groups (which often hold their own datasets) may only submit their records annually (if at all) which causes further lag in dataset accuracy; and
- Changes in data due to the verification process –Where new information or specialist knowledge sheds light on the validity of recent or historical submitted records, the verification process may add or remove which may alter the results of a data search over time with same parameters.

### **Field survey**

- 3.4.3 Due to access restrictions, some sections of the Scheme were not surveyed. However, every effort was made to approach these areas to record wintering birds from outside of these areas. Using this method, any birds that were observed from outside of any area with access restrictions were recorded. As a result, information on species presence and assemblage was not fully recorded in areas without access. Whilst it is accepted that individual species of note may have been missed, for the purposes of the assessment of effects of the Scheme on wintering bird populations, extrapolation of results from broadly similar habitats elsewhere along the Scheme provides an adequate prediction of the likely species and assemblages present within any un-surveyed areas. Therefore, this limitation does not affect the assessment of the wintering bird populations.
- 3.4.4 Despite the limitations detailed above, it is considered that sufficient information has been gathered during the assessment to provide a representative sample of the wintering bird habitats present within the Scheme boundary and the survey area and therefore a representative sample of the wintering bird assemblage present.

## 4 Results

### 4.1 Desk study

4.1.1 Records of 86 protected or notable bird species recorded within 2 km of the Scheme boundary and from within the last ten years, were returned from the desk study and are shown on Figure 8.23 [TR010054/APP/6.2]. A full list of species recorded is provided in Table 4.1.

**Table 4.1: Data search results from SERC**

Common name	Scientific name	Designation*
Arctic Tern	<i>Sterna paradisaea</i>	BD1, UKBAP, BAmb
Bee-eater	<i>Merops apiaster</i>	WCA1i
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	BAmb
Bar-tailed Godwit	<i>Limosa lapponica</i>	BAmb
Black-tailed Godwit	<i>Limosa limosa</i>	WCA1i, BRed
Black-necked Grebe	<i>Podiceps nigricollis</i>	WCA1i, BAmb
Brambling	<i>Fringilla montifringilla</i>	WCA1i
Bullfinch	<i>Pyrrhula pyrrhula</i>	Sect.41, UKBAP, BAmb, LBAP
Cetti's Warbler	<i>Cettia cetti</i>	WCA1i
Common Gull	<i>Larus canus</i>	BAmb
Common Tern	<i>Sterna hirundo</i>	BD1, BAmb
Corn Bunting	<i>Emberiza calandra</i>	Sect.41, UKBAP, Bred, LBAP
Crossbill	<i>Loxia curvirostra</i>	WCA1i
Cuckoo	<i>Cuculus canorus</i>	Sect.41, UKBAP, BRed
Curlew	<i>Numenius arquata</i>	Sect.41, UKBAP, BRed
Dunnock	<i>Prunella modularis</i>	Sect.41, UKBAP, BAmb
Fieldfare	<i>Turdus pilaris</i>	WCA1i, BRed
Gadwall	<i>Anas strepera</i>	BAmb
Goldeneye	<i>Bucephala clangula</i>	WCA1i, BAmb
Golden Plover	<i>Pluvialis apricaria</i>	BD1
Goshawk	<i>Accipiter gentilis</i>	WCA1i
Grasshopper Warbler	<i>Locustella naevia</i>	Sect.41, UKBAP, BRed
Great Black-backed Gull	<i>Larus marinus</i>	BAmb
Green Sandpiper	<i>Tringa ochropus</i>	WCA1i, BAmb
Grey Partridge	<i>Perdix perdix</i>	Sect.41, UKBAP, BRed, LBAP
Grey Wagtail	<i>Motacilla cinerea</i>	BRed
Greenshank	<i>Tringa nebularia</i>	WCA1i, BAmb
Greylag Goose	<i>Anser anser</i>	BAmb
Hen Harrier	<i>Circus cyaneus</i>	BD1, Sect.41, UKBAP, WCA1i, BRed
Herring Gull	<i>Larus argentatus</i>	BRed

Common name	Scientific name	Designation*
Hobby	<i>Falco subbuteo</i>	WCA1i
House Martin	<i>Delichon urbicum</i>	BAmb
House Sparrow	<i>Passer domesticus</i>	Sect.41, UKBAP, Bred, LBAP
Kingfisher	<i>Alcedo atthis</i>	BD1, WCA1i
Kittiwake	<i>Rissa tridactyla</i>	BRed
Lapwing	<i>Vanellus vanellus</i>	Sect.41, UKBAP, Bred, LBAP
Lesser Black-backed Gull	<i>Larus fuscus</i>	BAmb
Lesser Redpoll	<i>Acanthis cabaret</i>	Sect.41, UKBAP, BRed
Lesser Spotted Woodpecker	<i>Dendrocopos minor</i>	Sect.41, UKBAP, BRed
Linnet	<i>Linaria cannabina</i>	Sect.41, UKBAP, Bred, LBAP
Little Egret	<i>Egretta garzetta</i>	BD1
Little Ringed Plover	<i>Charadrius dubius</i>	WCA1i
Mallard	<i>Anas platyrhynchos</i>	BAmb
Marsh Tit	<i>Poecile palustris</i>	Sect.41, UKBAP, BRed
Meadow Pipit	<i>Anthus pratensis</i>	BAmb
Mediterranean Gull	<i>Larus melanocephalus</i>	BD1, WCA1i, BAmb
Merlin	<i>Falco columbarius</i>	BD1, WCA1i, BRed
Mistle Thrush	<i>Turdus viscivorus</i>	BRed
Mute Swan	<i>Cygnus olor</i>	BAmb
Oystercatcher	<i>Haematopus ostralegus</i>	BAmb
Peregrine Falcon	<i>Falco peregrinus</i>	BD1, WCA1i
Pied Flycatcher	<i>Ficedula hypoleuca</i>	BRed
Pink-footed Goose	<i>Anser brachyrhynchus</i>	BAmb
Pintail	<i>Anas acuta</i>	BAmb
Pochard	<i>Aythya ferina</i>	BRed
Quail	<i>Coturnix coturnix</i>	WCA1i, BAmb
Redstart	<i>Phoenicurus phoenicurus</i>	BAmb
Red Kite	<i>Milvus milvus</i>	BD1, WCA1i
Redwing	<i>Turdus iliacus</i>	WCA1i, BRed
Reed Bunting	<i>Emberiza schoeniclus</i>	Sect.41, UKBAP, BAmb, LBAP
Ring Ouzel	<i>Turdus torquatus</i>	Sect.41, UKBAP, BRed
Ringed Plover	<i>Charadrius hiaticula</i>	BRed
Ruddy Shelduck	<i>Tadorna ferruginea</i>	BD1
Short-eared Owl	<i>Asio flammeus</i>	BD1, BAmb
Shoveler	<i>Anas clypeata</i>	BAmb
Skylark	<i>Alauda arvensis</i>	Sect.41, UKBAP, Bred, LBAP
Snipe	<i>Gallinago gallinago</i>	BAmb, LBAP
Song Thrush	<i>Turdus philomelos</i>	Sect.41, UKBAP, BRed

Common name	Scientific name	Designation*
Spotted Flycatcher	<i>Muscicapa striata</i>	Sect.41, UKBAP, BRed
Stock Dove	<i>Columba oenas</i>	BAmb
Starling	<i>Sturnus vulgaris</i>	Sect.41, UKBAP, BRed
Swift	<i>Apus apus</i>	BAmb
Tawny Owl	<i>Strix aluco</i>	BAmb
Teal	<i>Anas crecca</i>	BAmb
Tree Sparrow	<i>Passer montanus</i>	Sect.41, UKBAP, Bred, LBAP
Whimbrel	<i>Numenius phaeopus</i>	WCA1i, BRed
Whinchat	<i>Saxicola rubetra</i>	BRed
Whooper Swan	<i>Cygnus cygnus</i>	BD1, WCA1i, BAmb
Wigeon	<i>Anas penelope</i>	BAmb
Willow Tit	<i>Poecile montana</i>	Sect.41, UKBAP, BRed
Willow Warbler	<i>Phylloscopus trochilus</i>	BAmb
Woodcock	<i>Scolopax rusticola</i>	BRed
Woodlark	<i>Lullula arborea</i>	BD1, WCA1i, Sect.41, UKBAP, LBAP
Yellow Wagtail	<i>Motacilla flava</i>	Sect.41, UKBAP, BRed
Yellowhammer	<i>Emberiza citrinella</i>	Sect.41, UKBAP, Bred, LBAP
Yellow-legged Gull	<i>Larus michahellis</i>	BAmb
*BD = Birds Directive, WCA = Wildlife and Countryside Act 1981, Sect 41 = Listed on the NERC Act, UKBAP = UK Biodiversity Action Plan, LBAP = Local Biodiversity Action Plan, BRed = Red listed on the birds of conservation concern, BAmb = Amber listed on the birds of conservation concern. Refer to Appendix 8.1 and Section 2 above for further details.		

#### 4.1.2 Of these 86 species:

- 14 are listed on Annex I of the EU Birds Directive;
- 27 are listed as a priority species on the UKBAP and/ or as a species of principal importance under Section 41 of the NERC Act;
- 33 species are included on the BoCC Red List;
- 37 species are included on the BoCC Amber List; and
- 12 species are included as a priority species in Staffordshire.

## 4.2 Field survey

4.2.1 A total of 59 species were recorded within the survey area during the survey of wintering birds between November 2017 and March 2018. The 59 species recorded and their relevant list of conservation importance, are shown below in Table 4.2.

**Table 4.2: Conservation status of birds recorded within the survey area, November 2017 to March 2018**

Species (English Name) and Scientific Name	Peak count	Conservation Status				
		Annex I EU Birds Directive	Priority Species	NERC Species of Principal Importance	Birds of Conservation Concern Species	Staffordshire Biodiversity Action Plan Species
Canada Goose <i>Branta canadensis</i>	10	-	-	-	-	-
Greylag Goose <i>Anser anser</i>	38	-	-	-	Amber	-
Mallard <i>Anas platyrhynchos</i>	18	-	-	-	Amber	-
Moorhen <i>Gallinula chloropus</i>	4	-	-	-	-	-
Coot <i>Fulica atra</i>	3	-	-	-	-	-
Pheasant <i>Phasianus colchicus</i>	4	-	-	-	-	-
Red-legged Partridge <i>Alectoris rufa</i>	9	-	-	-	-	-
Buzzard <i>Buteo buteo</i>	10	-	-	-	-	-
Lapwing <i>Vanellus vanellus</i>	137	-	✓	✓	Red	✓
Grey Heron <i>Ardea cinerea</i>	8	-	-	-	-	-
Cormorant <i>Phalacrocorax carbo</i>	6	-	-	-	-	-
Lesser Black- backed Gull <i>Larus fuscus</i>	3	-	-	-	Amber	-
Herring Gull <i>Larus argentatus</i>	50	-	✓	✓	Red	-

Species (English Name) and Scientific Name	Peak count	Conservation Status				
		Annex I EU Birds Directive	Priority Species	NERC Species of Principal Importance	Birds of Conservation Concern Species	Staffordshire Biodiversity Action Plan Species
Black-headed Gull <i>Chroicocephalus ridibundus</i>	132	-	-	-	Amber	-
Kingfisher <i>Alcedo atthis</i>	1	-	-	-	Amber	-
Stock Dove <i>Columba oenas</i>	37	-	-	-	Amber	-
Wood Pigeon <i>Columba palumbus</i>	104	-	-	-	-	-
Collared Dove <i>Streptopelia decaocto</i>	1	-	-	-	-	-
Kestrel <i>Falco tinnunculus</i>	2	-	-	-	Amber	-
Sparrowhawk <i>Accipiter nisus</i>	2	-	-	-	-	-
Great Spotted Woodpecker <i>Dendrocopos major</i>	4	-	-	-	-	-
Green Woodpecker <i>Picus viridis</i>	2	-	-	-	-	-
Magpie <i>Pica pica</i>	33	-	-	-	-	-
Jackdaw <i>Coloeus monedula</i>	42	-	-	-	-	-
Jay <i>Garrulus glandarius</i>	4	-	-	-	-	-
Carrion Crow <i>Corvus corone</i>	33	-	-	-	-	-
Rook <i>Corvus frugilegus</i>	48	-	-	-	-	-

Species (English Name) and Scientific Name	Peak count	Conservation Status				
		Annex I EU Birds Directive	Priority Species	NERC Species of Principal Importance	Birds of Conservation Concern Species	Staffordshire Biodiversity Action Plan Species
Raven <i>Corvus corax</i>	1	-	-	-	-	-
Coal Tit <i>Periparus ater</i>	1	-	-	-	-	-
Blue Tit <i>Cyanistes caeruleus</i>	42	-	-	-	-	-
Great Tit <i>Parus major</i>	32	-	-	-	-	-
Skylark <i>Alauda arvensis</i>	13	-	✓	✓	Red	✓
Long-tailed Tit <i>Aegithalos caudatus</i>	32	-	-	-	-	-
Goldcrest <i>Regulus regulus</i>	4	-	-	-	-	-
Wren <i>Troglodytes troglodytes</i>	16	-	-	-	-	-
Nuthatch <i>Sitta europea</i>	3	-	-	-	-	-
Treecreeper <i>Certhia familiaris</i>	1	-	-	-	-	-
Starling <i>Sturnus vulgaris</i>	270	-	✓	✓	Red	-
Fieldfare <i>Turdus pilaris</i>	11	-	-	-	Red	-
Blackbird <i>Turdus merula</i>	33	-	-	-	-	-
Redwing <i>Turdus iliacus</i>	41	-	-	-	Red	-
Song Thrush <i>Turdus philomelos</i>	11	-	✓	✓	Red	-

Species (English Name) and Scientific Name	Peak count	Conservation Status				
		Annex I EU Birds Directive	Priority Species	NERC Species of Principal Importance	Birds of Conservation Concern Species	Staffordshire Biodiversity Action Plan Species
Mistle Thrush <i>Turdus viscivorus</i>	4	-	-	-	Red	-
Robin <i>Erithacus rubecula</i>	33	-	-	-	-	-
House Sparrow <i>Passer domesticus</i>	6	-	✓	✓	Red	✓
Dunnock <i>Prunella modularis</i>	39	-	✓	✓	Amber	-
Grey Wagtail <i>Motacilla cinerea</i>	1	-	-	-	Red	-
Pied Wagtail <i>Motacilla alba</i>	4	-	-	-	-	-
Meadow Pipit <i>Anthus pratensis</i>	4	-	-	-	Amber	-
Chaffinch <i>Fringilla coelebs</i>	23	-	-	-	-	-
Brambling <i>Fringilla montifringilla</i>	1	-	-	-	-	-
Bullfinch <i>Pyrrhula pyrrhula</i>	4	-	✓	✓	Amber	✓
Greenfinch <i>Chloris chloris</i>	6	-	-	-	-	-
Goldfinch <i>Carduelis carduelis</i>	57	-	-	-	-	-
Siskin <i>Spinus spinus</i>	46	-	-	-	-	-
Linnet <i>Linaria cannabina</i>	6	-	✓	✓	Red	✓

Species (English Name) and Scientific Name	Peak count	Conservation Status				
		Annex I EU Birds Directive	Priority Species	NERC Species of Principal Importance	Birds of Conservation Concern Species	Staffordshire Biodiversity Action Plan Species
Yellowhammer <i>Emberiza citrinella</i>	30	-	✓	✓	Red	✓
Reed Bunting <i>Emberiza schoeniclus</i>	1	-	✓	✓	Amber	✓
Feral Pigeon <i>Columba livia domestica</i>	10	-	-	-	-	

4.2.2 A total of 59 bird species were recorded during the wintering bird surveys. Of these 59 bird species, 23 species recorded during the survey met at least one of a range of criteria relating to conservation importance, as listed in Section 2 of this report and shown in Table 4.2.

4.2.3 In summary:

- None of the species recorded within the survey area are listed on Annex I of the EC Birds Directive.
- A total of 11 priority species, included as Species of Principal Importance on the NERC list, were recorded within the survey area.
- Twelve species, included on the BoCC Red List and 11 species, included on the BoCC Amber list, were recorded within the survey area.
- Seven species, listed as action plan species in Staffordshire, were recorded within the survey area.

### Species abundance

4.2.4 In addition to evaluating a site based on its populations of wintering birds in relation to legal status, rarity and conservation value, consideration has to be given to the value of the site for the population of individual species that it supports. This can be done by comparing the population present within the survey area with the national and county wintering population for certain species

4.2.5 Most of the wintering bird species were recorded within the survey area in low numbers during wintering bird surveys and no counts of any species form a significant proportion (*i.e.* 1% or more) of the national wintering population estimates as detailed in Musgrove *et al.* (2013) (Ref 5). or county population. Therefore, species' populations across the survey area are considered to be of no more than local importance in winter.

### Species diversity

- 4.2.6 Professional judgement was used to evaluate the number of species recorded within the survey area and in each discrete habitat type (as described in Section 4.3) to measure species diversity.
- 4.2.7 As such, the species diversity is of no more than local importance, based on the number of species recorded across the survey area and of those species occurring, or likely to occur, within each habitat type.

### Species distribution

- 4.2.8 The location of BoCC red and amber-listed bird species, (see Table 4.1) are shown in Figure 8.24 [TR010054/APP/6.2]. A summary of the distribution of protected / notable species is provided in the following text.
- 4.2.9 In general, concentrations of wintering birds are associated with the hedgerow, scrub, isolated trees and woodland habitats adjacent to Featherstone (Lower Belt), Hilton Park and the riparian woodland associated with Latherford Brook within Brookfield Farm SBI dissecting the A460 to the east of Shareshill. There is also a concentration of wintering bird records from the hedgerows that dissect the grassland to the west of Mill Lane.
- 4.2.10 Several species of high conservation concern that appear on the RSPB Red List have been recorded during the survey visits. The Red List criterion common to these species is that they have undergone a rapid ( $\geq 50$  %) decline in their UK breeding populations. A summary of the distribution of BoCC Red List species recorded during wintering bird surveys is included below:
- Lapwing foraging and overflying a large arable field to the north of Mill Lane (peak count of 45 on Visit 3). A flock of 25 from a grassland field to the south of Mill Lane on Visit 3. A peak count of 137 overflying birds recorded during Visit 4.
  - A flock of 50 Herring Gull to the north of Mill Lane during Visit 1, with a further six seen on Visit 3.
  - Skylark recorded on Visits 1, 4 and 5, with a peak count of 13 on Visit 4 with a distribution across the survey area (north of Hilton, in a field east of Shareshill and north-west of Laney Green).
  - Grey Wagtail recorded on Visits 2, 4 and 5 in the southern areas of Hilton Park and once on the final visit further north near Junction 11 of the M6.
  - Song Thrush frequently encountered during the survey visits, more commonly recorded during visits 4 and 5 with 11 observed during the fourth visit and 8 recorded during Visit 5. A singing male was recorded in woodland to the north of Hilton Park during Visit 4. Song Thrushes usually seen as individuals or small groups of birds, often associated with hedgerows and woodland.
  - Mistle Thrush occasionally encountered during visits 1, 2 and 4, with a peak count of four recorded during Visit 2 (including a group of three associated with a flock of Fieldfare and Redwing to the west of Tower House Farm).
  - Fieldfare recorded in small numbers during visits 1, 2 and 3. The largest counts of fieldfares during the visits 2 and 3 when five were observed to the west of Tower House Farm and M6 Toll/Laney Green respectively.

- Redwing recorded in small numbers, with three individuals recorded at Mill Lane. During Visit 2, greater numbers of redwing were observed across the survey area; five near Mill Lane, eight adjacent to the M6 Toll and 13 to the west of Tower House Farm. A flock of 19 birds recorded to the south of M6 Toll/north of Laney Green during Visit 3 and 20 recorded to the west of Tower House Farm during Visit 4. Redwing also recorded within woodland/scrub habitat during Visit 5, with 15 near Mill Lane and eight and five to the south and north of the M6 Toll respectively. Redwing most abundant during Visit 4 (41 individuals recorded).
- Starling recorded on all visits except the final one, with a large flock of 270 seen on Visit 3 near the ponds at Brookfields farm, east of Shareshill.
- House Sparrow present on Visit 2, with six individuals present at Hadcroft Farm, north-east of Shareshill.
- Linnets present on Visit 1 only, with a peak count of six individuals seen north-east of Hadcroft farm (Five together and one further south along the stream corridor).
- Yellowhammer seen on all five visits, closely associated with hedgerow habitats between arable fields across the survey area. Thirty seen on Visit 4 in arable fields north-west of junction 11 of the M6.

### 4.3 Evaluation of key habitat types for wintering birds

4.3.1 A summary of the broad habitat types present in the survey area and their key ornithological features, are presented in Table 4.3.

**Table 4.3: Key ornithological features of habitat within the survey area**

Broad habitat type	Key ornithological features
Waterbodies	Small waterbodies, predominantly in the northern section of the Scheme. Supports wintering species associated with wetland features, such as Mallard and Greylag Goose.
Arable farmland	The predominant habitat type occurring across the survey area and wider landscape. Supports wintering species of conservation concern, including Skylark and Yellowhammer found throughout. Individual species of conservation interest, but limited species abundance and diversity.
Scrub / hedgerows	Frequently occurring habitat across the survey area of varying quality. Supports wintering species such as Yellowhammer, Linnet, Dunnock and Song Thrush. Individual species of conservation interest, but limited species abundance and diversity.
Mature trees / woodland	Restricted parcels of woodland and individual trees scattered throughout the study area. Supports wintering species such as Green Woodpecker, as well as species often found in scrub / hedgerows. Individual species of conservation interest, but limited species abundance and diversity.

## 5 Summary

- 5.1.1 The results of the wintering bird surveys, undertaken in 2017/2018 are taken into account to define appropriate mitigation measures and these are reported in the ES [TR010054/APP/6.1] and the Outline Environmental Management Plan [TR010054/APP/6.11].
- 5.1.2 A total of 59 species were recorded during the survey. A total of 15 species of conservation concern (Red listed and/or Species of Principal Importance and/or SBAP priority species) utilise habitats within the survey area during the winter: Lapwing, Herring Gull, Skylark, Grey Wagtail, Dunnock, Song Thrush, Mistle Thrush, Fieldfare, Redwing, Starling, House Sparrow, Bullfinch, Linnet, Reed Bunting and Yellowhammer. Inclusion on the Red List or as a Species of Principal Importance does not mean that these species are particularly rare, rather that they have been demonstrated to have undergone declines in numbers and/or range in recent years.
- 5.1.3 None of the species recorded within the survey area are present in significant numbers, approaching 1% of the UK or Staffordshire population.

## 6 References

- Ref 1 Staffordshire Biodiversity Action Plan, (2001). Available online at: <http://www.sbap.org.uk/> [Accessed September 2019].
- Ref 2 Eaton *et al.*, (2015). Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* 108, 708-746.
- Ref 3 Bibbey *et al.*, (2000). *Bird Census Techniques* 2nd Edition.
- Ref 4 Gilbert *et al.*, (1998). *Bird Monitoring Methods: A Manual of Techniques for Key UK Species*.
- Ref 5 Musgrove *et al.*, (2013), Population estimates of birds in Great Britain and the United Kingdom. *British Birds* 106 February 2013. 64-100.
- Ref 6 Balmer *et al.*, (2013). *Bird Atlas 2007-2011* The British Trust for Ornithology.
- Ref 7 Bunter *et al.*, (2017), *Guidelines for the selection of Local Wildlife Sites in Staffordshire*. Version 6.
- Ref 8 Highways England (2019) *Design Manual for Roads and Bridges LA 108 Biodiversity*. Available online at: <http://www.standardsforhighways.co.uk/ha/standards/ians/index.htm>
- Ref 9 CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*, CIEEM, Winchester