



Cottam Parkway Railway Station

Breeding Bird Survey Report

B2327FEF-JAC-EBD-00-RP-ENV-0002 | P01.2

24/09/2020

Lancashire County Council



Cottam Parkway Railway Station

Project No: B2327FEF
Document Title: Breeding Bird Survey Report
Document No.: B2327FEF-JAC-EBD-00-RP-ENV-0002
Revision: P01.2.
Date: 24/09/2020
Client Name: Lancashire County Council
Project Manager: Dan Teasdale
Author: Stuart Macpherson

Jacobs U.K. Limited

5 First Street
Manchester M15 4GU
United Kingdom
T +44 (0)161 235 6000
F +44 (0)161 235 6001
www.jacobs.com

© Copyright 2020 Jacobs U.K. Limited. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This document has been prepared on behalf of, and for the exclusive use of Jacobs' client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this document by any third party.

Document history and status

Revision	Date	Description	Author	Checked	Reviewed	Approved
P01.1	31/07/2020	Breeding Bird Survey Report. Draft for client information / comments.	Stuart Macpherson	Lucy Day	Kris Long	Tom McClure
P01.2	24/09/2020	Clients comments addressed	Stuart Macpherson	Ryan Knight	Ryan Knight	Dan Teasdale

Contents

Executive Summary.....	v
1. Introduction.....	1
1.1 Background	1
1.2 Site Context.....	1
1.3 Aims and Objectives.....	1
1.4 Legislative, Planning Policy and Biodiversity Framework Background	2
1.4.1 Legislation	2
1.4.2 Biodiversity Framework	2
1.4.3 Conservation Status	3
2. Methodology.....	4
2.1 Desk Study	4
2.1.1 Statutory and Non-Statutory Designated Sites	4
2.1.2 LERN Bird Species Data	4
2.1.3 Preston Western Distributor / East West Link Road Bird Species Data	4
2.2 Field Survey	4
2.2.1 Survey Area	4
2.2.2 Survey Methodology.....	5
2.3 Evaluation	6
2.4 Limitations.....	7
3. Results	8
3.1 Desk Study	8
3.1.1 Statutory and Non- Statutory Designated Sites	8
3.1.3 LERN Bird Species Data	10
3.1.4 PWD / EWLR Bird Species Data	10
3.2 Field Survey.....	11
4. Evaluation	18
4.1 Overall Evaluation.....	19
5. References	21

Appendix A. Figures

Appendix B. Legislation, Planning Policy and Biodiversity Background

Appendix C. Jacobs Field Survey Metadata

Appendix D. BTO Bird Species Codes

Appendix E. Ribble and Alt Estuaries Special Protection Area (SPA) Qualifying Species Information

Appendix F. Ribble and Alt Estuary Ramsar Qualifying Species Information

Appendix G. Ribble Estuary Site of Special Scientific Interest (SSSI) Information

Appendix H. Newton Marsh Site of Special Scientific Interest (SSSI) Information

Appendix I. Jacobs Breeding Bird Survey Results Table – April, May and June 2020 Surveys

Appendix J. Population Status of Breeding Bird Species of Conservation Concern in Lancashire

Page not used

Executive Summary

Jacobs UK Ltd (Jacobs) was commissioned by Lancashire County Council (LCC) to undertake a range of ecological surveys to inform the Cottam Parkway Railway Station scheme (hereafter referred to as the 'scheme'). The scheme will serve the North West Preston Strategic Housing Location. It will comprise a new road to the proposed railway station connecting from Cottam Link Road with a bridge over the Lancaster Canal and a car park to serve the railway station.

As part of the ecological support to inform the scheme, Jacobs have completed surveys for breeding birds. The primary purpose of the survey was to establish an ecological baseline for breeding birds. This baseline information is to be used to inform scheme design options, an assessment of potential impacts on breeding birds and to develop appropriate mitigation requirements and opportunities for enhancement where possible. This information is to be included within the Environmental Statement (ES) which will be submitted for planning consideration in the summer of 2021.

A desk study exercise was undertaken in March 2020. This included a request to Lancashire Environmental Records Network (LERN) for existing breeding bird records within a 1km radius of the scheme. For breeding bird species, a total of 656 records of 40 bird species were identified. These bird records included;

- Three qualifying species for the Ribble and Alt Estuaries Special Protection Area (SPA);
- There were no qualifying species for the Ribble and Alt Estuaries Ramsar site but two were identified as being noteworthy;
- Four qualifying species for the Ribble Estuary Site of Special Scientific Interest (SSSI);
- Five qualifying species for Newton Marsh SSSI;
- Thirteen species of principal importance (NERC, 2006);
- Six species listed in the Lancashire LBAP;
- Fifteen Red listed species in the BoCC 4 (2015); and,
- Twenty Amber listed species in the BoCC 4 (2015).

No non-statutory designated sites where breeding birds were listed as a notable / qualifying feature were identified within 1km of the scheme. A search for statutory designated sites relevant to birds, particularly breeding birds revealed the presence of seven statutory site designations within 5km of the scheme. Five sites have been designated wholly or partly due to the bird assemblages they support, these were; the Ribble and Alt Estuaries SPA, Ribble and Alt Estuaries Ramsar site, Ribble Estuary SSSI, Newton Marsh SSSI and Ribble Estuary National Nature Reserve (NNR).

Additionally, a review of the Preston Western Distributor / East West Link Road (PWD / EWLR) field survey records for breeding bird species, as summarised in the ES produced by Jacobs in 2017, was also undertaken. The PWD / EWLR scheme is located adjacent to and within the scheme's breeding bird field survey area.

All field surveys were carried out in accordance with current good practice guidance: Breeding Bird Survey (BBS) and the Common Bird Census (CBC) methods. Field surveys were conducted over three, monthly visits between and including April and June 2020. Surveyors walked a transect route in areas of suitable wintering bird habitat e.g. open farmland, hedgerows, woodland and waterbodies, within and up to approximately 500m from the scheme (i.e. the survey area).

A total of 65 bird species were recorded within the scheme survey area and included:

- Three qualifying species for the Ribble and Alt Estuaries SPA;

- No qualifying species for the Ribble and Alt Estuaries Ramsar site (although two 'noteworthy' species included in the citation were identified during the surveys, but not breeding);
- Three qualifying species for the Ribble Estuary SSSI;
- Nine qualifying species for Newton Marsh SSSI; one species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
- 11 species of principal importance (Section 41 listed species);
- 11 Red listed species on the BoCC 4 (2015);
- 17 Amber listed of the BoCC 4: 2015; and,
- Six Lancashire BAP species.

Generally, the bird species recorded within the survey area are considered to be a typical assemblage for the county and local area given the habitats present. Only a limited number of common bird species were recorded displaying breeding activity. The species recorded were not considered to be reliant exclusively on habitats within the study area. The larger species (waders, wildfowl and gulls) are likely to roam over a much larger area, and the passerines are likely to utilise other similar habitats outside the scheme, for foraging, roosting and breeding opportunities. Analysis of the field survey data revealed three species that exceeded the 1% threshold used to assess the value of bird populations at a particular geographical range (e.g. local, county, regional, national, etc.). These were hobby (*Falco subbuteo*), great black-backed gull (*Larus fuscus*) and mute swan (*Cygnus olor*), the latter of which was the only breeding species of the three. The remaining bird species recorded during the surveys were all significantly below the 1% threshold at county (Lancashire) level. The breeding bird populations within the survey area are therefore assessed as being of **County Importance** (due to the presence and number of breeding mute swan).

A robust assessment of the potential impacts on breeding birds associated with the scheme will be detailed within Volume 2 Chapter 6 of an ES, along with any prescribed avoidance, mitigation and compensation measures, opportunities for enhancement, requirements for pre and / or post construction monitoring and an assessment of residual impacts (where appropriate).

1. Introduction

1.1 Background

Jacobs UK Ltd. (Jacobs) was commissioned by Lancashire County Council (LCC) to provide ecological services to inform the proposed Cottam Parkway Railway Station scheme (hereafter referred to as the 'scheme').

The scheme comprises (but not exhaustively): a road connecting to Cottam Link Road at the Sidgreaves junction roundabout; a bridge over the Lancaster Canal connecting to the railway station; station platforms; buildings and associated structures; a footbridge over the railway; a 250 / 500 space car park; and bridge approach embankments and earthworks. This development is related to the permitted road schemes of Preston Western Distributor (PWD) and the East West Link Road (EWLR) including Cottam Link Road.

A range of ecological surveys was required in order to establish an accurate baseline for the scheme. This information is to be used for the scheme design options appraisal and to facilitate the completion of an Ecological Impact Assessment in line with the Chartered Institute of Ecology and Environmental Management guidelines for Ecological Impact Assessment (CIEEM, 2018). This report presents the results of a survey for breeding birds undertaken by Jacobs' ecologists between and including April and June 2020.

The surveys were undertaken in consideration of the land within the scheme boundary, a 500m buffer area (LCC Drawing CLM07-DEV-010-01; Dated 10-01-2020) and the walkover notice area / survey exclusion area drawing provided by LCC (LCC Drawing CLM07-DEV-010-03; Dated 16-12-2019). This survey area is shown in Figure 1 and subsequent figures presented in Appendix A. Further, detailed information on the scheme design was not available at the time of survey / writing.

1.2 Site Context

The scheme is located within a semi-rural area approximately 4km north-west of central Preston and to the immediate south-west of the largely residential area of Cottam. The central grid reference for the site is SD 48714 31645¹. Land use within the scheme and wider survey area largely comprises pasture land used for grazing and / or fodder production. This land is bound by a network of hedgerows and tree lines with occasional woodlands, small watercourses, waterbodies, farmsteads and dwellings. Both the Lancaster Canal and the Preston to Blackpool rail line run east to west through the scheme. Sidgreaves Lane leading to Darkinson Lane runs north to south through the centre of the scheme.

Pasture land dominates much of the wider area, particularly to the west of the scheme. The east boundary of the scheme is bordered by Lea Road with Westleigh Conference Centre and sports pitches further eastwards; to the south is pasture land with Ashton and Lea Golf Club further southwards. To the north is pasture land with both existing and new housing developments. In addition, the construction of the PWD scheme was also underway along the west and north boundaries of the main scheme area at the time of surveys (April – June 2020).

1.3 Aims and Objectives

The primary aim of this report is to provide baseline ecological information for breeding birds within the scheme's survey area and to assess the collated data in conjunction with the relevant good practice survey guidance, planning policies and legislative framework. The key objectives of the assessment were to:

- Identify statutory designated sites for nature conservation for breeding birds within 5km (as birds are a highly mobile species, 5km is the chosen distance at which to identify sites designated for their bird populations as birds using the designated sites may either forage / commute / migrate over the scheme);

¹ Ordnance Survey National Grid reference system used throughout the report.

- Identify non-statutory designated sites for nature conservation for breeding birds within 1km of the scheme;
- Characterise the breeding bird communities in terms of the species assemblage, use and distribution of the survey area, and the status of breeding birds;
- Provide an evaluation of the breeding bird species and communities based on the guidance from the CIEEM (2018) and Design Manual for Roads and Bridges (Highways England, 2020);
- Provide sufficient field data to inform the scheme design options appraisal and facilitate the completion of an impact assessment and the development of appropriate mitigation where required; and,
- Provide baseline data to inform an impact assessment for the breeding bird communities associated with the scheme for inclusion with the ES.

1.4 Legislative, Planning Policy and Biodiversity Framework Background

A summary of the legislation and policy framework for bird species is given below. Further details, along with information regarding the nature conservation status for bird species is provided in Appendix B.

1.4.1 Legislation

Many UK bird species and their habitats are protected by legislation. The key articles of relevance to this scheme include:

- The Conservation of Habitats and Species Regulations 2017 (as amended)²;
- Council Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive');
- Wildlife and Countryside Act (WCA) 1981 (as amended);
- Countryside and Rights of Way (CROW) Act 2000; and,
- Natural Environment and Rural Communities (NERC) Act 2006.

1.4.2 Biodiversity Framework

a) Habitats and Species of Principal Importance

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. There are 56 habitats and 943 species of principal importance which were initially identified as requiring conservation action under the UK Biodiversity Action Plan (BAP) and which continue to be regarded as priorities under the UK Post-2010 Biodiversity Framework (JNCC and Defra, 2012). The Section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities Act 2006 "to have regard" to the conservation of biodiversity in England, when carrying out their normal functions. Several bird species are listed under Section 41 and are likely to be present within the survey area and / or wider area.

² Until Implementation Period Completion day (31st December 2020) the Conservation of Habitats and Species Regulations 2017 (as amended) will remain in force without any of the amendments relating to Brexit made by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

b) Lancashire Biodiversity Action Plan

The Lancashire BAP contains 11 habitat and 39 species action plans and includes species specific action plans for eight species of birds, these are:

- Black-tailed godwit (*Limosa limosa islandica*);
- Hen harrier (*Circus cyaneus*);
- House sparrow (*Passer domesticus*);
- Lapwing (*Vanellus vanellus*);
- Reed bunting (*Emberiza schoeniclus*);
- Skylark (*Alauda arvensis*);
- Song thrush (*Turdus philomelos*); and,
- Twite (*Carduelis flavirostris*).

Additionally, due to significant declines since the 1970's a 'farmland birds' action plan includes the following six species (additionally reed bunting is included in this list but has its own species action plan (as above) so is not listed below):

- Corn bunting (*Emberiza calandra*);
- Grey partridge (*Perdix perdix*);
- Linnet (*Carduelis cannabina*);
- Tree sparrow (*Passer montanus*);
- Yellowhammer (*Emberiza citrinella*); and,
- Yellow wagtail (*Motacilla flava*).

1.4.3 Conservation Status

A widely adopted review of the status of UK birds: The Population Status of Birds in the UK, Birds of Conservation Concern (BoCC) 4: 2015 (Eaton *et al.*, 2015) is followed within this report in relation to conservation status of UK bird species. Birds are assessed against criteria to place each species on one of three alert lists; Red, Amber or Green. Red List species are considered to be of high conservation concern and Amber List species are considered to be of medium conservation concern. Green List species are considered to be of low conservation concern and as such, are not dealt with in this report unless they are listed in a separate list for a sites' designation e.g. qualifying feature for a Special Protection Area (SPA) etc. Hereafter, BoCC listed species shall be referred to by their status alone i.e. Red or Amber.

2. Methodology

2.1 Desk Study

2.1.1 Statutory and Non-Statutory Designated Sites

A search was carried out using the Multi-Agency Geographic Information for the Countryside (MAGIC) website (accessed July 2020) to identify the presence of statutory protected nature conservation sites for breeding birds within 5km of the scheme. In addition, information of Biological Heritage Sites (BHS) or other non-statutory designated nature reserves also within 1km of the scheme were obtained from Lancashire Environmental Records Network (LERN), (this data was received on the 31st March 2020).

2.1.2 LERN Bird Species Data

The data request to LERN also included a search for protected and / or notable species within 1km of the scheme. Legally protected and notable bird species were of interest, particularly those listed in the citation sheets (for breeding species) of the Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSI), Ramsar, National Nature Reserve (NNR) sites within 5km of the scheme, species of principal importance listed in the NERC Act 2006, in the fourth edition of the Birds of Conservation Concern (Red and Amber species) (BoCC 4 Eaton *et al.*, 2015) and the Lancashire Biodiversity Action Plan.

Where no specific sighting date was provided, professional judgement and knowledge of species' ecology i.e. migration patterns were used to determine whether the species was likely to be breeding within the 1km search area. Records more than 10 years old i.e. 2009 or earlier were considered to be historical and were discarded from the analysis.

2.1.3 Preston Western Distributor / East West Link Road Bird Species Data

The *Preston Western Distributor and East West Link Road Environmental Statement*. Volume 2, Chapter 6 (Jacobs, 2017) and its Appendices was also reviewed. This includes a full suite of ecological surveys of which, breeding bird surveys were completed between and including April and June 2015. The PWD / EWLR scheme is located adjacent to and within the scheme's survey area. A summary of the number of species recorded during the PWD / EWLR field surveys and any notably large populations is provided later in this report.

2.1.4 Field Survey Transect Design

The breeding bird survey transects (Figure 1, Appendix A), of which there were two (Transect 1 and 2) were designed based on the knowledge gained by Jacobs ecologists who had previously undertaken wintering bird surveys (Jacobs, 2020a) for the scheme from October 2019 to March 2020 inclusive. Additionally, Jacobs completed both breeding and wintering bird surveys for the PWD / EWLR road schemes in 2014 and 2015 so an element of local knowledge of the surrounding area already existed within the Jacobs ecology team. Freely available online resources were also used to identify suitable transect routes that would encompass habitats representative of the wider landscape i.e. to include hedgerows, woodlands and waterbodies etc. The resources used were:

- MAGIC (<https://magic.defra.gov.uk/>) (accessed April 2020); and,
- Google Maps (<https://www.google.com/maps>) (accessed April 2020).

2.2 Field Survey

2.2.1 Survey Area

Suitable habitats for breeding birds were identified within the buffer area provided by LCC in October 2019 (LCC's Drawing CLM07-DEV-010; Dated 10-01-2020). As identified by LCC (LCC Drawing CLM07-DEV-010-03: Dated 16-12-2019), several areas within the survey area were not accessible due to proposed developments or

construction sites. The PWD / EWLR scheme in particular was in its construction phase whilst the scheme's breeding (and wintering) bird surveys were being completed. The PWD / EWLR scheme bisected the scheme's survey area.

The transects were designed to avoid crossing construction areas due to health and safety concerns (see section 2.4). The transect routes included a variety of habitats including open farmland, hedgerows, woodland and waterbodies up to approximately 500m from the scheme, known as the 'buffer area' on LCC's Drawing CLM07-DEV-010; Dated 10-01-2020. However, at three locations the transects extended beyond the 500m buffer to cover the entire survey area. The transect routes are shown on Figure 1 (Appendix A) and subsequent survey visit figures (Figure 3, Figure 4, and Figure 5 in Appendix A).

2.2.2 Survey Methodology

A bespoke survey method, tailored to the survey area, was used. This was based on a combination of the Common Bird Census (CBC) method, devised jointly by the British Trust for Ornithology (BTO) and Joint Nature Conservation Committee (JNCC) and the Breeding Bird Survey (BBS) method devised jointly by BTO, the Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservancy Council (JNCC) (Gilbert *et al.*, 1998).

Three survey visits were carried out once a month from April to June 2020 inclusive. Where possible, an equal period of time between each survey was applied. Survey dates are provided in Table 2.1. Surveys commenced no later than one hour after sunrise to avoid confusion and reduce survey bias in areas with high densities of birds. Surveys would be completed preferably before 11a.m. and no later than midday, after which birdsong generally reduces. Visits were planned to avoid adverse weather conditions such as heavy precipitation, strong winds etc. as this can reduce bird activity. Appendix C provides the survey metadata.

Table 2.1 Cottam Parkway Railway Station breeding bird field survey dates

Visit Number	Transect Number	Date	Time
1	1	28 th April	06:30 – 10:45
	2	29 th April	06:30 – 10:30
2	1	14 th May	06:00 – 10:00
	2	15 th May	06:00 – 10:00
3	1	11 th June	05:30 – 09:55
	2	12 th June	05:30 – 10:15

On each visit, two experienced ornithologists walked slowly along the pre-determined transect routes. A distance of 500m from the scheme boundary was chosen to take account of potential impacts to birds from the construction and operational phases of the scheme. The transect where possible aimed to be within 100m of all parts of the survey area in order to account for all habitats and species (the Breeding Bird Survey methodology records species at distances beyond 100m and the Common Bird Census aims to cover the survey area as even as possible, but more time should be allowed for areas where bird density is higher). The starting point and the route direction were varied throughout the visits in order to reduce survey bias. Surveyors identified and recorded all birds via audible and / or visual means. Figures 3 to 5 (Appendix A) present the survey transects and the bird registrations. Each record was transcribed on field maps using the BTO codes (Appendix D). Care was taken to avoid double counting of birds either visually or aurally by tracking birds' movements within the survey area. Longer periods of observations were made in areas of higher bird activity.

On each of the survey visits, the following details recorded (for an exhaustive list of bird behaviours refer to UK Environmental Change Network, 2020):

- Bird numbers and species; and,
- Bird behaviour (paying particular attention to evidence of breeding such as singing and alarm calling).

Using this data breeding status was categorised as confirmed, probable, or possible breeding, or as non-breeding in accordance with the BTO's Bird Atlas 2007-2011 (Balmer *et al.*, 2013) criteria. Birds in suitable breeding habitat were considered to represent breeding birds if:

- A nest, eggs or young were located;
- They were observed displaying or singing in suitable breeding habitat;
- Birds were observed in territory disputes; and / or
- Birds were recorded in the same location on at least two survey visits.

2.3 Evaluation

Ecological Impact Assessment (EclA) uses a hierarchical geographic framework to assign importance to ecological features. This is based on an understanding of how the ecological feature may contribute to the conservation status or distribution of the species or habitat at a particular geographic scale. It involves an assessment of the biodiversity importance of ecological features and also involves consideration of other factors that can be attached to ecological features including ecosystem services and natural capital (CIEEM, 2018).

The new Design Manual for Roads and Bridges (DMRB) LA 108 Biodiversity (formerly Volume 11, Section 3, Part 4 Ecology and Nature Conservation and IAN 130/10) guidance (Highways England, 2020) and the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland; Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018) recommends that the value / importance of a biodiversity resource / ecological feature be considered within a defined geographical context. The geographic categories stated in the two sets of guidance differ slightly but are largely comparable (see below). Therefore, the value / importance of biodiversity resources within the survey area was assessed according to the following defined geographical framework as per current CIEEM (2018) and Highways England (2020) guidance³.

- International and European (International or European).
- National (UK or National).
- Regional (Regional) e.g. North-West England.
- Metropolitan, County, Vice County or other local authority-wide area (County or equivalent authority) e.g. Lancashire.
- River Basin District (CIEEM only). District is used herein as a geographic frame of reference e.g. Preston.
- Estuary System / Coastal cell (CIEEM only).
- Local (Local) (e.g. within 2km of the scheme).
- Less than local.

In international and UK bird conservation, it has become an established practice to regard 1% of a species' total population, at the range under consideration e.g. national, international, biogeographic, as a threshold when assessing whether sites should be designated (Bainbridge *et al.*, 2013). In addition, the RSPB in conjunction with Wildlife Trust for Lancashire, Manchester & North Merseyside (LWT), LCC, Natural England (NE) and the Merseyside Environmental Advisory Service (MEAS), issued guidance for biomass planting in the vicinity of sensitive bird populations in the North West in 2008 (RSPB *et al.*, 2008) (accessed July 2020). This document, called *Biomass*

³ The CIEEM (2018) value is given first with the corresponding Highways England (2019b) value given in brackets where applicable.

planting and Sensitive Bird Populations: A Spatial Planning Guide for Biomass Energy Crop Planting in North West England defines an 'important population' as '1% of the relevant SPA population'. Therefore, this assessment has used a 1% threshold in relation to numbers specified in designated site citations, national populations records found in Population Estimates of Birds in Great Britain and the United Kingdom, (Musgrove *et al.*, 2013) and county records found in The State of Lancashire's Birds: An Atlas of the Breeding and Wintering Birds of Lancashire and North Merseyside 2007-2011 (White *et al.*, 2013). Regarding the evaluation of the population estimates within Lancashire, the breeding pairs total included within White *et al.*, (2013) were multiplied by two to produce an estimated population of breeding individuals i.e. a breeding population estimate. To enable an assessment of whether the breeding bird populations recorded during the field surveys were of importance at a certain geographical level the peak individual counts recorded during the field surveys were used.

2.4 Limitations

With regards to the desk study data, although the data provided by the consultees is the most complete set of species data available, the absence of records should not be taken as an indication of absence of species.

As discussed in Section 2.2, the field survey transects were designed to account for any proposed developments and / or construction sites within the 500m survey area. Notable construction sites relate to the PWD / EWLR scheme which bisected the scheme's survey area. During the surveys, construction was in progress and the extent of the works progressed steadily with each month. It is probable that the bird populations would have been displaced to the wider area and as such the more sensitive bird species may have already moved out of the survey area prior to the breeding bird surveys beginning. Such impacts will persist throughout the construction phase and also during operation until birds have become habituated to the new levels of disturbance and / or new planting becomes established. The data provided by these winter bird surveys represents an accurate baseline of the breeding bird population and this is not considered to be significant constraint to the objectives of the survey.

The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited in this document.

3. Results

3.1 Desk Study

3.1.1 Statutory and Non- Statutory Designated Sites

Seven statutory designated sites were identified within 5km of the scheme (Figure 2, Appendix A), these were:

- Ribble and Alt Estuaries SPA;
- Ribble and Alt Estuaries Ramsar site;
- Ribble Estuary SSSI;
- Newton Marsh SSSI;
- Ribble Estuary NNR;
- Haslam Park LNR; and
- Preston Junction LNR.

The two LNRs listed above have not been designated due to their breeding bird populations and as such they will not be discussed any further in this report. However, all five of the remaining statutory designated sites have been designated either wholly, or in part due to their assemblages of bird species, these are summarised below.

With reference to the text below a 'qualifying species' is one that is listed as being noteworthy on the designated sites' citation sheet.

Ribble and Alt Estuaries SPA

The Ribble and Alt Estuaries SPA is located approximately 3.7km south west of the scheme and covers an area of 12.412ha. The vast majority of the SPA comprises the Ribble and Alt Estuaries Ramsar, Ribble Estuary SSSI and the Ribble Estuary NNR respectively (see below). It is primarily designated for supporting bird assemblages of European importance and wetlands of international importance. It qualifies as a SPA under Articles 4.1 and 4.2 of the EEC Directive 2009/147/EC, for its internationally important assemblage of birds. There are four qualifying breeding bird species for the SPA, these are black-headed gull (*Chroicocephalus ridibundus*), common tern (*Sterna hirundo*), lesser black-backed gull (*Larus fuscus*) and ruff (*Philomachus pugnax*).

The Jacobs survey data peak counts were assessed against the SPA selection criteria which are available via the JNCC (JNCC, 2020) and Natural England (Natural England, 2019) websites. Refer to Appendix E for a full list of bird species included within the Ribble and Alt Estuaries SPA citation.

Ribble and Alt Estuaries Ramsar

The Ribble and Alt Estuaries Ramsar site is located approximately 3.7km south west of the scheme and covers an area of 13,464ha. The Ribble and Alt Estuaries SPA, Ribble Estuary SSSI and NNR respectively with much of the area also covered by the Ramsar designation (refer to Figure 2, Appendix A). It is primarily designated for supporting bird assemblages of European importance and wetlands of international importance and occupies much of the same area as the Ribble and Alt Estuaries SPA. The site qualifies as a Ramsar site under Ramsar criterion 2 (vulnerable, endangered or critically endangered species, or threatened ecological communities), Ramsar criterion 5 (assemblage of international importance) for its water-bird population, and Ramsar criterion 6 (species / populations occurring at levels of international importance). For further site details including a list of qualifying species, refer to Appendix F. Qualifying breeding species for the Ramsar site are as follows (note; none were recorded during the breeding bird surveys for scheme); black-tailed godwit (*Limosa limosa*) dunlin (*Calidris*

alpina), grey plover (*Pluvialis squatarola*), red knot (*Calidris canutus*), redshank (*Tringa totanus*), ringed plover (*Charadrius hiaticula*), and sanderling (*Calidris alba*).

Ribble Estuary SSSI

The Ribble Estuary SSSI is located approximately 3.7km south west of the scheme. The SSSI is approximately 9.226ha in size and forms part of the SPA, Ramsar site and Ribble Estuary NNR (see above and refer to Figure 2, Appendix A). The SSSI estuary supports internationally important numbers of the wintering waterfowl, however, it also supports significant breeding bird communities including nationally important breeding populations of black-headed gull, common tern and redshank (*Tringa totanus*). For the purpose of this assessment, populations of these individual species are considered to be qualifying species of the SSSI. For full site details refer to Appendix G.

The Jacobs survey data was assessed against the nationally important Ribble Estuary SSSI selection criteria which are available via the Natural England website:

<https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1004299&SiteName=&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=> (accessed July 2020).

Newton Marsh SSSI

Newton Marsh SSSI is located approximately 3.1km south west of the scheme. The site covers an area of 65.6ha and is comprised of grazed, improved pasture reclaimed from former saltmarsh but retaining a number of pools and ditches. These features, the relative lack of disturbance, its size and proximity to the Ribble Estuary and its position along a major migration route down the west coast of Britain account for the importance of the site for over-wintering and migrant birds. Over 100 bird species have been recorded from Newton Marsh, the majority being spring and winter visitors. The proximity of Newton Marsh to the Ribble Estuary allows an interchange of birds between the two sites. Regular breeding species include lapwing, redshank, mallard (*Anas platyrhynchos*), moorhen (*Gallinula chloropus*), coot (*Fulica atra*), skylark, yellow wagtail and meadow pipit (*Anthus pratensis*), with less frequent breeding records for snipe (*Gallinago gallinago*), little grebe (*Tachybaptus ruficollis*), mute swan (*Cygnus olor*), shelduck (*Tadorna tadorna*), reed bunting, oystercatcher (*Haematopus ostralegus*) and corn bunting. For the purpose of this assessment, populations of these individual species are considered to be qualifying species of the SSSI. For further site details refer to Appendix H.

The Jacobs survey data was assessed against the nationally important Newton Marsh SSSI selection criteria which are available via the Natural England website:

<https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001819.pdf> (accessed July 2020).

Ribble Estuary NNR

The Ribble Estuary NNR is approximately 3.9km south west of the scheme boundary. The Ribble Estuary NNR is comprised of the SPA, Ramsar and SSSI sites discussed above. It has extensive intertidal sand-silt flats with one of the largest areas of grazed marsh in Britain and includes small areas of recently reclaimed saltmarsh. The estuary is of international importance for the passage and wintering waterfowl it supports. It is a key site in the chain of wetlands which make up the east Atlantic flyway or migration route for wintering wildfowl and waders and also forms part of the SPA and Ramsar site with an area of 4.587ha. During the winter months the site supports thousands of waterfowl. Specific numbers are not provided for the breeding species mentioned (nor the wintering), however black-headed gull, common tern and Redshank are the breeding species referred to in the Ribble Estuary SSSI as discussed above.

There are no detailed species records for the NNR, consequently, the evaluation of the scheme does not take into account the populations of individual species for NNRs. However, the RSPB in conjunction with LWT, LCC, NE and MEAS, issued guidance for biomass planting in the vicinity of sensitive bird populations in the North West in 2008 (RSPB *et al.*, 2008). This document (discussed in section 2), defines an 'important population' as '1% of the

relevant SPA population'. As such the evaluation for the NNR has been completed in relation to the Ribble and Alt Estuaries SPA. For further site details refer to Appendix G or via the Natural England website:

<https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=1006123&SiteName=ribble%20estuary&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=> (accessed July 2020).

3.1.2 Non-statutory Designated Sites

Four non-statutory designated nature reserves or BHS were identified within 1km of the scheme. These have not been designated because of their breeding bird populations and as such will not be discussed further in this report but are listed below and included on Figure 2 (Appendix A).

- **Lancaster Canal Whole Length in Lancashire Including Glasson Branch BHS** – Lancaster Canal runs through the scheme area. The canal is the largest and most species rich waterbody in the county, supporting a large assemblage of plant and animals associated with slow flowing water.
- **BNFL Springfield's Works Ponds BHS** – 25m west of the scheme area. The site comprises an area of undeveloped land, the main feature is a narrow 'L-shaped' water-filled trench that supports a large number of frogs (*Rana temporaria*), toads (*Bufo bufo*), smooth newt (*Lissotriton vulgaris*) and great crested newt (*Triturus cristatus*). The site is also of botanical interest.
- **Deepdale Wood BHS** – 580m west of the scheme area. The site comprises two neighbouring parcels of semi-natural broad-leaved woodland.

In addition, LCC have revealed the presence of a new non-statutory designated wildlife site known as Dobcroft Nature Reserve. This site is located just over 1km east of the scheme.

3.1.3 LERN Bird Species Data

For breeding bird species, a total of 656 records of 40 bird species within 1km of the scheme were returned on 31st March 2020. It is plausible all species could breed within 1km of the scheme. Of these species there were;

- Three qualifying species for the Ribble and Alt Estuaries SPA;
- No qualifying species for the Ribble and Alt Estuaries Ramsar site;
- Four notable species for the Ribble Estuary SSSI;
- Five qualifying species Newton Marsh SSSI;
- Thirteen species of principal importance (NERC, 2006);
- Six species listed in the Lancashire LBAP;
- Fifteen Red listed species in the BoCC 4 (2015); and
- Twenty Amber listed species in the BoCC 4 (2015).

3.1.4 PWD / EWLR Bird Species Data

A review of the PWD / EWLR scheme, for which Jacobs completed a full suite of ecology surveys and submitted an ES (Jacobs, 2017), was undertaken. A total of 74 bird species were recorded during field surveys within the PWD / EWLR survey area in 2015 (Jacobs, 2017). Of the 74, 27 species were likely to be breeding including 16 of conservation importance. The utilisation of the PWD / EWLR field survey area (of which there is some crossover with the scheme's survey area) by the 27 breeding bird species was considered to be typical of the habitats present

i.e. intensively managed improved pasture bounded by hedgerows with ponds and small woodlands scattered throughout.

However, there were records of some species that warrant further discussion in this report, although for further detailed information on other species refer to the PWD / EWLR ES (Jacobs, 2017).

A single Ribble and Alt Estuaries SPA and Ramsar site qualifying breeding species was recorded during the breeding bird surveys: lesser black-backed gull, which were recorded in small numbers during April (12), May (13) and June (5) 2015. This species is not considered to have attempted to breed in the vicinity of the study area due to the largely unsuitable habitat and lack of breeding activity observed during surveys.

Five species mentioned in the Ribble Estuary SSSI citation were recorded within the study areas of PWD and EWLR: black-headed gull, skylark, teal (*Anas crecca*) and oystercatcher. Four of these species were not considered to be breeding within the study area due to a lack of signs of breeding behaviour. Lapwing were noted to be probable breeders as they were recorded in suitable breeding habitat, though breeding could not be confirmed as definite at the time of survey.

Three Schedule 1 bird species (WCA, 1981) were recorded in the PWD study area: Mediterranean gull (*Larus melanocephalus*), kingfisher (*Alcedo atthis*) and fieldfare (*Turdus pilaris*). None of which were confirmed to be breeding within the study area. The Schedule 1 species barn owl (*Tyto alba*) was also recorded, but this species is considered in a separate report (Jacobs, 2020b).

3.2 Field Survey

A total of 65 bird species were recorded within the scheme survey area and included:

- Three qualifying species for the Ribble and Alt Estuaries SPA;
- No qualifying species for the Ribble and Alt Estuaries Ramsar site (although two 'noteworthy' species included in the citation were identified during the surveys, but were not breeding);
- Three qualifying species for the Ribble Estuary SSSI;
- Nine qualifying species for the Newton Marsh SSSI;
- One species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
- 11 species of principal importance (Section 41 listed species);
- 11 Red listed species on the BoCC 4 2015;
- 17 Amber listed of the BoCC 4 2015; and,
- Six Lancashire BAP species.

All birds recorded during each of the three survey visits, their numbers and conservation status are presented in Appendix I. The locations of their registrations for all of the survey visits are presented in Figures 3, 4 and 5 in Appendix A.

The following sections describe in further detail the likely breeding status of species of conservation concern recorded during the three survey visits in April, May and June 2020.

Wader Species

Three out of four recorded wader species present during surveys were observed loafing and feeding in the fields during the breeding bird survey visits. 'Loafing' when referring to bird behaviour describes a general state of immobility, involving several heterogeneous behaviours that are not connected to feeding or breeding, such as:

sleeping, sitting, standing, resting and defecating. The loafing wader species recorded were: snipe (Amber listed and qualifying species of Newton Marsh SSSI), curlew (*Numenius arquata*) (Red and Section 41 listed) and oystercatcher (Amber listed) and were scattered throughout the survey area. Refer to Table 3.1 for numbers of these birds recorded and during which survey visit.

Of note however was a fourth wader species, lapwing (Red listed, Section 41, Lancashire BAP species and qualifying species of Newton Marsh SSSI) which were thought to be breeding on a potato crop field in the west of the survey area and approximately 750m from the central point of the scheme. Recorded during Transect 1, the species was seen on all three occasions with birds seen remaining strictly to certain areas of the field strongly suggesting the birds were sitting on eggs. No young lapwing was recorded during the surveys. The field was located immediately to the north of a compound being used at the time for PWD / EWLR construction traffic and site offices.

Table 3.1 Peak counts of wader species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Curlew	<i>Numenius arquata</i>	2	1	-
Lapwing	<i>Vanellus vanellus</i>	9	1	13
Oystercatcher	<i>Haematopus ostralegus</i>	2	-	-
Snipe	<i>Gallinago gallinago</i>	-	2	-

Wildfowl Species

Species and numbers of wildfowl typical of the area were recorded during the field surveys (refer to Table 3.2 for numbers recorded during the three survey visits). Relatively high, yet stable numbers, when compared to other bird species recorded in the survey area, for mallard (Amber listed and qualifying species of Newton Marsh SSSI) were recorded on all three surveys. This was to be expected following the results of the wintering bird survey undertaken by Jacobs for the scheme (Jacobs, 2020a) and also the habitats available i.e. ponds and canal which are found throughout the survey area. Numbers of mute swan (Amber listed and qualifying species of the Newton Marsh SSSI) increased as the breeding season progressed and on the third visit a probable breeding family of six were recorded in the extreme far west of the survey area on the Lancaster Canal.

Table 3.2 Peaks counts of wildfowl by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Mallard	<i>Anas platyrhynchos</i>	26	13	18
Mute swan	<i>Cygnus olor</i>	-	1	6

Thrush Species

Two species of thrush were recorded; song thrush and mistle thrush (*Turdus viscivorus*) both of which are Red and Section 41 listed species. The former is also a Lancashire BAP species, and it was heard singing during the surveys strongly suggesting the bird was breeding within the survey area. Furthermore, the numbers recorded for song thrush steadily increased during the breeding season. Mistle thrush were only ever recorded flying over the site and whilst it is possible the species was breeding in the survey area there was no evidence to suggest as much. Refer to Table 3.3 for numbers recorded during the three survey visits.

Table 3.3 Peak counts of thrush species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Mistle thrush	<i>Turdus viscivorus</i>	1	2	4
Song thrush	<i>Turdus philomelos</i>	6	10	17

Small passerines and other species

An assemblage of farmland passerines was present during the breeding bird surveys (refer to Table 3.4 for field survey results), including:

- bullfinch (*Pyrrhula pyrrhula*) (Amber and Section 41 listed);
- dunnock (*Prunella modularis*) (Amber and Section 41 listed);
- grey wagtail (*Motacilla cinerea*) (Red listed);
- grey partridge (Red and Section 41 listed, also included in the Lancashire BAP);
- house sparrow (Red, Section 41 listed and included in the Lancashire BAP);
- house martin (*Delichon urbicum*) (Amber listed);
- reed bunting (Amber, Section 41 listed and a Lancashire BAP species as well as being a qualifying species of Newton Marsh SSSI);
- skylark (Red, Section 41 listed, included in Lancashire BAP and qualifying species of Newton Marsh SSSI);
- stock dove (*Columba oenas*) (Amber listed); and
- starling (*Sturnus vulgaris*) (Red and Section 41 listed).

The small passerines and other species recorded comprised a typical assemblage expected for such habitats. Of the species recorded, numbers of house martin and particularly starling were higher. House martin were generally seen feeding over waterbodies throughout the survey area. During the third survey visit 196 starlings were recorded in separate groups, the largest of which totalled 60 birds. No starling roosts or breeding sites were recorded during the surveys. However, foraging was recorded during both the breeding and wintering surveys (Jacobs, 2020a). Large numbers of starling were recorded using a harvested maize crop field immediately south of the scheme, railway line and access track to the PWD / EWLR construction site.

Table 3.4 Peak counts of passerines and other species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Bullfinch	<i>Pyrrhula pyrrhula</i>	-	-	2
Dunnock	<i>Prunella modularis</i>	5	4	14
Grey wagtail	<i>Motacilla cinerea</i>	-	-	1
Grey partridge	<i>Perdix perdix</i>	-	1	-
House martin	<i>Delichon urbicum</i>	7	4	28
House sparrow	<i>Passer domesticus</i>	10	6	12
Reed bunting	<i>Emberiza schoeniclus</i>	1	-	2

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Skylark	<i>Alauda arvensis</i>	-	2	-
Starling	<i>Sturnus vulgaris</i>	36	113	196
Stock dove	<i>Columba oenas</i>	3	2	3
Swift	<i>Apus apus</i>	-	-	16

Gull Species

Five species of gull were recorded during the survey visits with 17 (the highest record for all five species) lesser black-backed gulls (Amber listed and qualifying species for the Ribble and Alt Estuaries SPA and Ribble Estuary SSSI) being recorded on the third visit. Black-headed (Amber listed and qualifying species for the Ribble and Alt Estuaries SPA and Ribble Estuary SSSI), common (*Larus canus*) and great black-backed (*Larus marinus*) and herring gulls (*Larus argentatus*) were the other three species, and all were recorded in particularly low numbers with the vast majority either loafing or flying over the survey area (refer to Table 3.5).

Table 3.5 Peak counts of gull species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Black-headed gull	<i>Chroicocephalus</i>	2	2	1
Common gull	<i>Larus canus</i>	-	-	1
Great black-backed gull	<i>Larus marinus</i>	-	-	5
Herring gull	<i>Larus argentatus</i>	1	-	-
Lesser black-backed gull	<i>Larus fuscus</i>	6	4	17

Raptor Species

Four species of raptor were recorded, these included hobby (*Falco subbuteo*) (listed on Schedule 1 of the Wildlife and Countryside Act 1981) and kestrel (*Falco tinnunculus*) (Amber listed). Buzzard (*Buteo buteo*) and sparrowhawk (*Accipiter nisus*) were also recorded (refer to Appendix J for survey results for these species).

Hobby is listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and a single bird was recorded on Transect 2 of the third and final survey in June 2020 (refer to Table 3.6). The bird was seen flying from a large oak (*Quercus* sp.) tree to the east of Ashton and Lea Golf Club and approximately 400m south of the scheme. The tree did not contain a nest and as the species hadn't been seen in the survey area either during the breeding bird surveys or other ecology surveys being undertaken for the scheme, it was deemed that the bird was not breeding in the survey area.

Kestrel were often seen during the wintering bird surveys completed by Jacobs for the scheme (Jacobs, 2020a). Despite, a nest not being identified during the breeding bird surveys it is presumed, given the regularity of which they were observed within the survey area, that the species was breeding.

Table 3.6 Peak counts of raptors by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Hobby	<i>Falco subbuteo</i>	-	-	1
Kestrel	<i>Falco tinnunculus</i>	3	1	3

Ribble and Alt Estuaries SPA and Ribble Estuary NNR Qualifying Species

Table 3.7 summarises, as included in Table 3.5, the three species; common tern (Amber listed), black-headed gull (Amber listed) and lesser black-backed gull (Amber listed) recorded during the field survey that qualify under the SPA breeding bird criteria. All are species that are noted in the species list of the assemblage qualification under Articles 4.1 and / or 4.2.

Table 3.7 Peak counts of all Ribble and Alt Estuaries SPA and Ribble Estuary NNR qualifying species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Black-headed gull	<i>Chroicocephalus ridibundus</i>	2	2	1
Common tern	<i>Sterna hirundo</i>	-	1	1
Lesser black-backed gull	<i>Larus fuscus</i>	6	4	17

Ribble and Alt Estuaries Ramsar Qualifying Species

Table 3.8 summarises the two species recorded during the field survey that qualify under the Ramsar noteworthy fauna criteria, these species were black-headed gull and common tern, both of which are Amber listed and qualifying species for the Ribble and Alt Estuaries SPA and Ribble Estuary SSSI. Both are species are noteworthy as cited in section 20 of the Ribble and Alt Estuaries citation sheet ('regularly occurring during the breeding season'). Refer to Table 3.8 below for the records observed during the surveys.

Table 3.8 Peak counts of all Ramsar qualifying species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Black-headed gull	<i>Chroicocephalus ridibundus</i>	2	2	1
Common tern	<i>Sterna hirundo</i>	-	1	1

Ribble Estuary SSSI and NNR Qualifying Species

Table 3.9 includes those SPA Qualifying species that apply to the Ribble Estuary and NNR as listed in Tables 3.5 (Gull Species) and 3.7 (SPA Qualifying Species).

Table 3.9 Peak counts of Ribble Estuary SSSI qualifying species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Black-headed gull	<i>Chroicocephalus ridibundus</i>	2	2	1
Common tern	<i>Sterna hirundo</i>	-	1	1
Lesser black-backed gull	<i>Larus fuscus</i>	6	4	17

Newton Marsh SSSI Qualifying Species

Nine species mentioned in citation for the Newton Marsh SSSI were recorded during the surveys, these were coot, lapwing, mallard, moorhen, mute swan, oystercatcher, reed bunting and skylark. Refer to the above sections of 'waders', 'wildfowl' and 'gulls' for detailed descriptions of the species listed in Table 3.10. Coot and moorhen are exceptions here as both species are widespread and as such are green listed with no known threats to their populations. No population data exists for the SSSI but given both species are referred to in the citation, this suggests relatively large populations are present within the site.

Table 3.10 Peak counts of Newton Marsh SSSI qualifying species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Coot	<i>Fulica atra</i>	3	3	-
Lapwing	<i>Vanellus vanellus</i>	9	1	13
Mallard	<i>Anas platyrhynchos</i>	26	13	18
Moorhen	<i>Gallinula chloropus</i>	3	4	1
Mute swan	<i>Cygnus olor</i>	-	2	6
Oystercatcher	<i>Haematopus ostralegus</i>	2	-	-
Reed bunting	<i>Emberiza schoeniclus</i>	1	-	2
Skylark	<i>Alauda arvensis</i>	-	2	-
Snipe	<i>Gallinago gallinago</i>	-	2	-

NERC Act 2006 Section 41 Species

11 section 41 listed species were recorded during the surveys (Table 3.11). Refer to description and tables above for further details regarding those species recorded.

Table 3.11 Peak counts of Lancashire BAP species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Bullfinch	<i>Pyrrhula pyrrhula</i>	-	-	2
Curlew	<i>Numenius arquata</i>	2	1	-
Duncock	<i>Prunella modularis</i>	5	4	14
Grey partridge	<i>Perdix perdix</i>	-	1	-
Herring gull	<i>Larus argentatus</i>	1	-	-
House sparrow	<i>Passer domesticus</i>	10	6	12
Lapwing	<i>Vanellus vanellus</i>	9	1	13
Reed bunting	<i>Emberiza schoeniclus</i>	1	-	2
Skylark	<i>Alauda arvensis</i>	-	2	-
Song thrush	<i>Turdus philomelos</i>	6	10	17
Starling	<i>Sturnus vulgaris</i>	36	113	196

Lancashire BAP Species

Refer to previous descriptions and tables for further details regarding those species listed in the Lancashire BAP (Table 3.12).

Table 3.12 Peak counts of Lancashire BAP species by visit

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Grey partridge	<i>Perdix perdix</i>	-	1	-
House sparrow	<i>Passer domesticus</i>	10	6	12
Lapwing	<i>Vanellus vanellus</i>	9	1	13
Reed bunting	<i>Emberiza schoeniclus</i>	1	-	2
Skylark	<i>Alauda arvensis</i>	-	2	-

Species	Scientific name	Visit 1	Visit 2	Visit 3
		April	May	June
Song thrush	<i>Turdus philomelos</i>	6	10	17

4. Evaluation

Based on the professional judgement of Jacobs ornithologists and following a review of the bird species data for the PWD / EWLR scheme which is adjacent to and within the scheme survey area, the utilisation of the survey area specifically as a breeding resource by all recorded species is considered to be normal in the context of the habitats available (predominantly intensively managed improved pasture). This evaluation is supported by the review of the PWD / EWLR survey results which recorded very similar data (Jacobs, 2017). For further species population levels and distributions refer to White et al., (2013) and Musgrove et al., (2013). The peak counts from the field survey records for species of conservation concern and how they compare to Lancashire's peak breeding bird populations are presented in Appendix J. Only three species exceeded the 1% threshold. The remaining species were all significantly below 1%, as such no further reference, other than to those above the threshold, will be made.

However, in total, 65 bird species were recorded within the Cottam Parkway Railway Station survey area. This included 31 species listed within a sites designation or included within legislation or in species conservation concern list such as the BoCC 4 (Eaton et al., 2015). This included:

- Three qualifying species for the Ribble and Alt Estuaries SPA;
- No qualifying species for the Ribble and Alt Estuaries Ramsar site (two 'noteworthy' species included in citation);
- Three qualifying species for the Ribble Estuary SSSI;
- Nine qualifying species Newton Marsh SSSI;
- One species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
- 11 species of principal importance (Section 41 listed species);
- 11 Red listed species on the BoCC 4 (2015);
- 17 Amber listed of the BoCC 4: 2015; and
- Six Lancashire BAP species.

A summary of the species included in those listed above are outlined below.

Ribble and Alt Estuaries SPA and NNR and Ribble Estuary Qualifying Species

The three breeding qualifying species of the Ribble and Alt Estuaries SPA and Ribble Estuary SSSI; black-headed gull, common tern and lesser black-backed gull were not considered to be breeding within the survey area due to lack of suitable breeding habitat. The species were likely using the survey area to forage or by those birds not yet at breeding age i.e. first year adults etc.

Ribble and Alt Estuaries Ramsar Qualifying Species

Black-headed gull and common tern are cited as 'noteworthy' species in section 20 of the Ramsar information sheet. These occurred in low numbers (peak of 1 or 2) and were not considered to be breeding within the survey area due to lack of suitable breeding habitat. The species were likely using the survey area to forage or were commuting through.

Ribble Estuary SSSI Species Qualifying Species

It is considered that of the three qualifying species for the Ribble Estuary SSSI (black-headed gull, common tern and lesser black-backed gull) none were breeding as the numbers recorded were particularly low throughout all three surveys (refer to Appendix J).

Newton Marsh SSSI Qualifying Species

It is considered that of the nine qualifying species for the Newton Marsh SSSI (coot, lapwing, mallard, moorhen, mute swan, oystercatcher, reed bunting, skylark, and snipe) five are probable breeding species within the survey area. These species are coot, lapwing, mallard, moorhen and mute swan and all were seen on at least two of the three surveys and / or numbers were either of levels that would suggest breeding pairs or bird numbers generally increased throughout the survey season. Given the breeding nature and distribution of these birds within the scheme survey area, it is considered unlikely that these birds formed part of the populations for which Newton Marsh SSSI was designated. None of the species were recorded in notably high numbers when compared to the Lancashire breeding populations (refer to Appendix J).

Priority Species (Section 41) and Lancashire BAP Species

Of the 11 Section 41 species (bullfinch, curlew, dunnoek, grey partridge, herring gull, house sparrow, lapwing, reed bunting, skylark, song thrush and starling) five are probable breeding species due to the regularity on which they were recorded during the surveys or locations they were recorded in. These five species are: dunnoek, house sparrow, lapwing, song thrush and starling. House sparrow, lapwing and song thrush are also listed in the Lancashire BAP.

4.1 Overall Evaluation

Numbers of breeding species recorded throughout the survey period were generally not considered to represent a significant proportion of the UK or local population and / or were considered to be using the survey area on an occasional and transitory basis. However, it should be noted three species exceeded the 1% threshold as described in Section 2.3. These species are great black-backed gull, for which the population recorded within the survey area is 10% of the entire Lancashire breeding population; hobby where a single non-breeding bird was recorded during the third visit and so accounts for 3.3% of the entire Lancashire breeding population; and mute swan where a record of 6 birds accounts for 1.57% of Lancashire's breeding population. Only mute swan was presumed to have bred within the survey area. No suitable habitat was identified within the survey area that could support breeding great black-backed gull and no nests identified to be used by hobby. Generally, the bird species recorded within the survey area are considered to be a typical assemblage for the county and local area given the habitats present (refer to breeding bird population estimates in Appendix J). However, due to mute swan exceeding the 1% threshold, the breeding bird assemblage recorded within the survey area is considered to be of importance at **County Level**.

5. Conclusions and Recommendations

A data search and surveys for breeding birds were undertaken during the 2020 survey season. A total of 65 bird species were recorded within the survey area and included: Three qualifying species for the Ribble and Alt Estuaries SPA; no qualifying species for the Ribble and Alt Estuaries Ramsar site (two 'noteworthy' species included in citation); three qualifying species for the Ribble Estuary SSSI; nine qualifying species for Newton Marsh SSSI; one species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); 11 species of principal importance (Section 41 listed species); 11 Red listed species on the BoCC 4 (2015); 17 Amber listed of the BoCC 4: 2015; and six Lancashire BAP species.

The bird species recorded within the survey area are considered to be a typical assemblage for the county and local area given the habitats present. There are three exceptions however, these being hobby, great black-backed gulls and mute swan, with the latter a likely breeding species. Therefore, breeding birds within the survey area are considered to be of importance at **County Level**.

A robust assessment of the potential effects on breeding birds associated with the scheme is to be detailed within Volume 2, Chapter 6 of the ES, along with any prescribed avoidance, mitigation and compensation measures, opportunities for enhancement, requirements for pre and / or post construction monitoring and an assessment of residual impacts (where appropriate).

Given the possibility of future changes in breeding bird distribution within the survey area (including presence at locations where breeding birds have not been recorded to date), due consideration will be given to the potential presence of breeding birds across the survey area, both prior to construction and in the longer term.

6. References

Bainbridge, I., Brown, A., Burnett, N., Corbett, P., Cork, C., Ferris, R., Howe, M., Maddock, A., Mountford, E. and Pritchard, S. 2013. *Guidelines for the Selection of Biological SSSIs. Part 1: Rationale, Operational Approach and Criteria for Site Selection*. Joint Nature Conservation Committee, Peterborough.

Balmer, D., Gillings, S., Caffrey, B., Swann, B., Downie, I., Fuller, R., The Breeding and Wintering Birds of Britain and Ireland. British Trust for Ornithology, 2013

CIEEM. 2018. *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater Coastal and Marine* version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn, R., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A. and Gregory, R.D. 2015. Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 108, pp708-746296–341.

Gilbert G., Gibbons D.W., and Evans J. 1998. *Bird Monitoring Methods*. RSPB

Highways England. 2020. LA108 Biodiversity: (formerly Volume 11, Section 3, Part 4 Ecology and Nature Conservation and IAN 130/10)

Jacobs, 2017, *Preston Western Distributor and East West Link Road Environmental Statement*. Chapter 6, Volume 2. For Lancashire County Council.

Jacobs, 2020a, *Cottam Parkway Wintering Bird Survey Report*.

Jacobs, 2020b, *Cottam Parkway Barn Owl Survey Report*

JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). 2012. *UK Post-2010 Biodiversity Framework*. July 2012.

Musgrove, A., Aebischer, N., Eaton, M., Hear, R., Newson, S., Noble, D., Parsons, M., Risley, K., and Stroud, D., 2013. Population Estimates of birds in Great Britain and the United Kingdom 2013. *British Birds*, 106, 64–100.

White, S., McCarthy, B., Dunstan, S., Martin, S., Harris, B., Hulme, G., and Marsh, P., 2013. *The State of Lancashire's Birds: An Atlas of the Breeding and Wintering Birds of Lancashire and North Merseyside, 2007-2011*. Lancashire and Cheshire Fauna Society.

Websites

Biodiversity The UK Action Plan (UKBAP) JNCC, 1994, <http://data.jncc.gov.uk/data/cb0ef1c9-2325-4d17-9f87-a5c84fe400bd/UKBAP-BiodiversityActionPlan-1994.pdf> [accessed July 2020]

Council Directive 2009/147/EC on the Conservation of Wild Birds (the 'Birds Directive'), https://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm

Countryside and Rights of Way (CROW) Act 2000, <https://www.legislation.gov.uk/ukpga/2000/37/contents>

Google Maps, 2020 (<https://www.google.com/maps>). [accessed July 2020]

JNCC, 2020. Special Protection Areas – overview <http://jncc.defra.gov.uk/page-1405#s1> [accessed July 2020]

Multi-Agency Geographic Information for the Countryside (MAGIC), 2020. <https://magic.defra.gov.uk/> [accessed April 2020]

Natural England 2019. Irish Sea marine area site packages, <https://www.gov.uk/government/publications/irish-sea-marine-area-index-map-and-site-packages> [accessed July 2020]

Natural Environment and Rural Communities (NERC) Act 2006,
<https://www.legislation.gov.uk/ukpga/2006/16/contents>

RSPB, Wildlife Trust for Lancashire, Manchester & North Merseyside, Lancashire County Council, Natural England and the Merseyside Environmental Advisory Service 2008. Biomass planting and Sensitive Bird Populations: A Spatial Planning Guide for biomass energy crop planting in North West England,
<http://programmeofficers.co.uk/Preston/CoRedocuments/LCC353.pdf> [accessed July 2020]

The Conservation of Habitats and Species Regulations 2017 (as amended),
<https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

UK Environmental Change Network, 2020. Birds, The ECN Birds Protocol (BI),
<http://www.ecn.ac.uk/measurements/terrestrial/b/bi> [accessed July 2020]

Wildlife and Countryside Act (WCA) 1981 (as amended), <https://www.legislation.gov.uk/ukpga/1981/69>.

Appendix A. Figures

Figure 1 - Breeding Bird Survey Area

Figure 2 – Statutory and Non-Statutory Designated Sites (of potential relevance for breeding birds)

Figure 3 – Breeding Bird Survey Results Visit 1

Figure 4 – Breeding Bird Survey Results Visit 2

Figure 5 – Breeding Bird Survey Results Visit 3

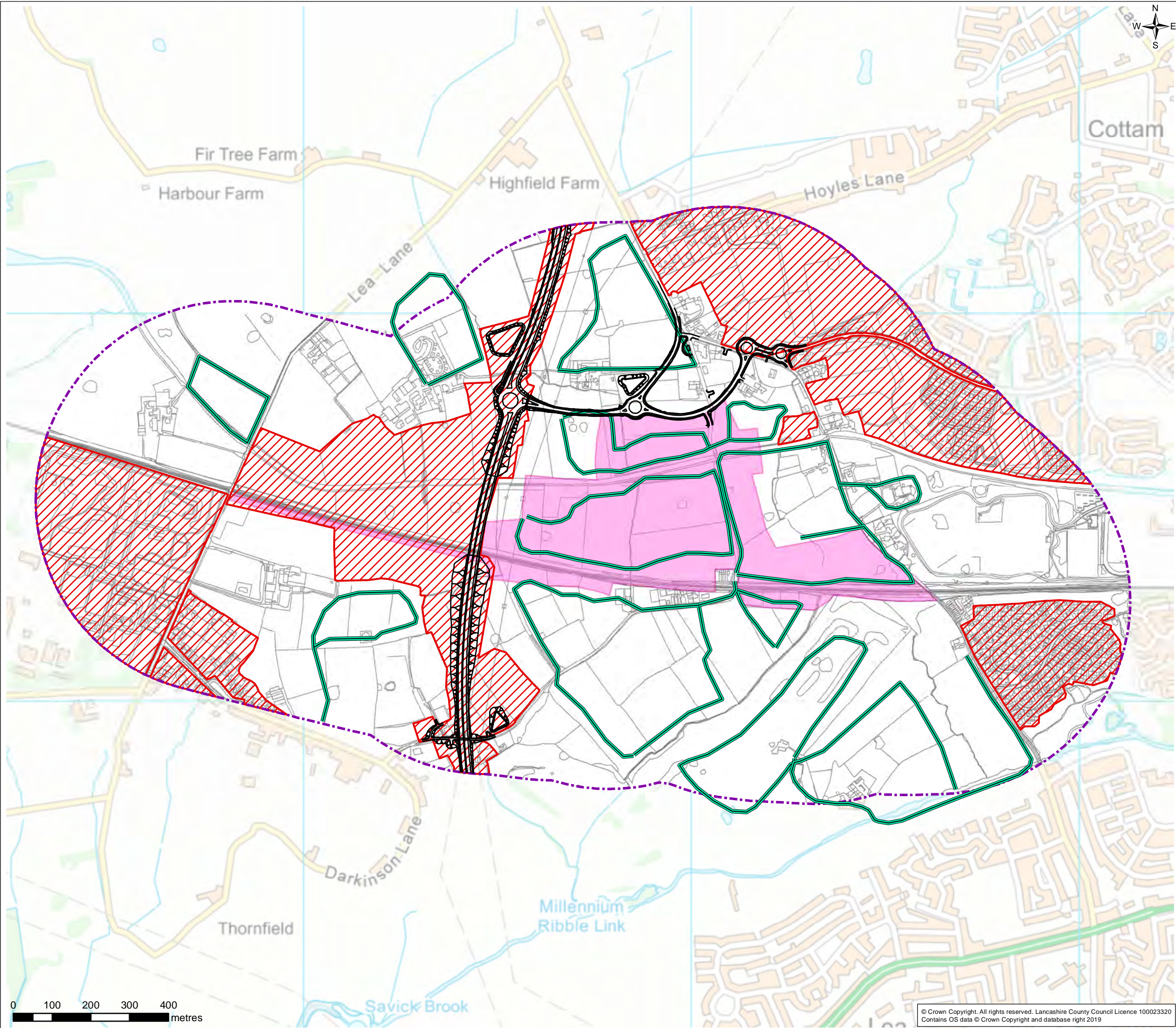


FIGURE 1

- Legend
- Known Cottam Parkway Site Area (January 2020)
 - 500m Survey Area and Buffer from Known Site Area (January 2020)
 - Breeding Bird Survey Transect
 - PWD Scheme
 - Exclusion Area January



0	30/07/2020	Initial Issue	BP	SM	KL	DT	
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd	
<div><div>Jacobs</div><div>5 First Street, Manchester, M15 4GU, UK Tel: +44(0)161 235 6000 Fax: +44(0)161 235 6001 www.jacobs.com</div></div>							
<div><div>Client</div><div><div>Lancashire</div><div>County Council</div><div></div></div></div>							
<div><div>Project</div><div>Cottam Parkway Railway Station</div></div>							
<div><div>Drawing Title</div><div>BREEDING BIRD SURVEY AREA</div></div>							
FINAL							
Scale @ A3	1:9,500					DO NOT SCALE	
Jacobs No.	B2327FEF						
B2327FEF-JAC-EBD-00-DR-ENV-0012							
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.							

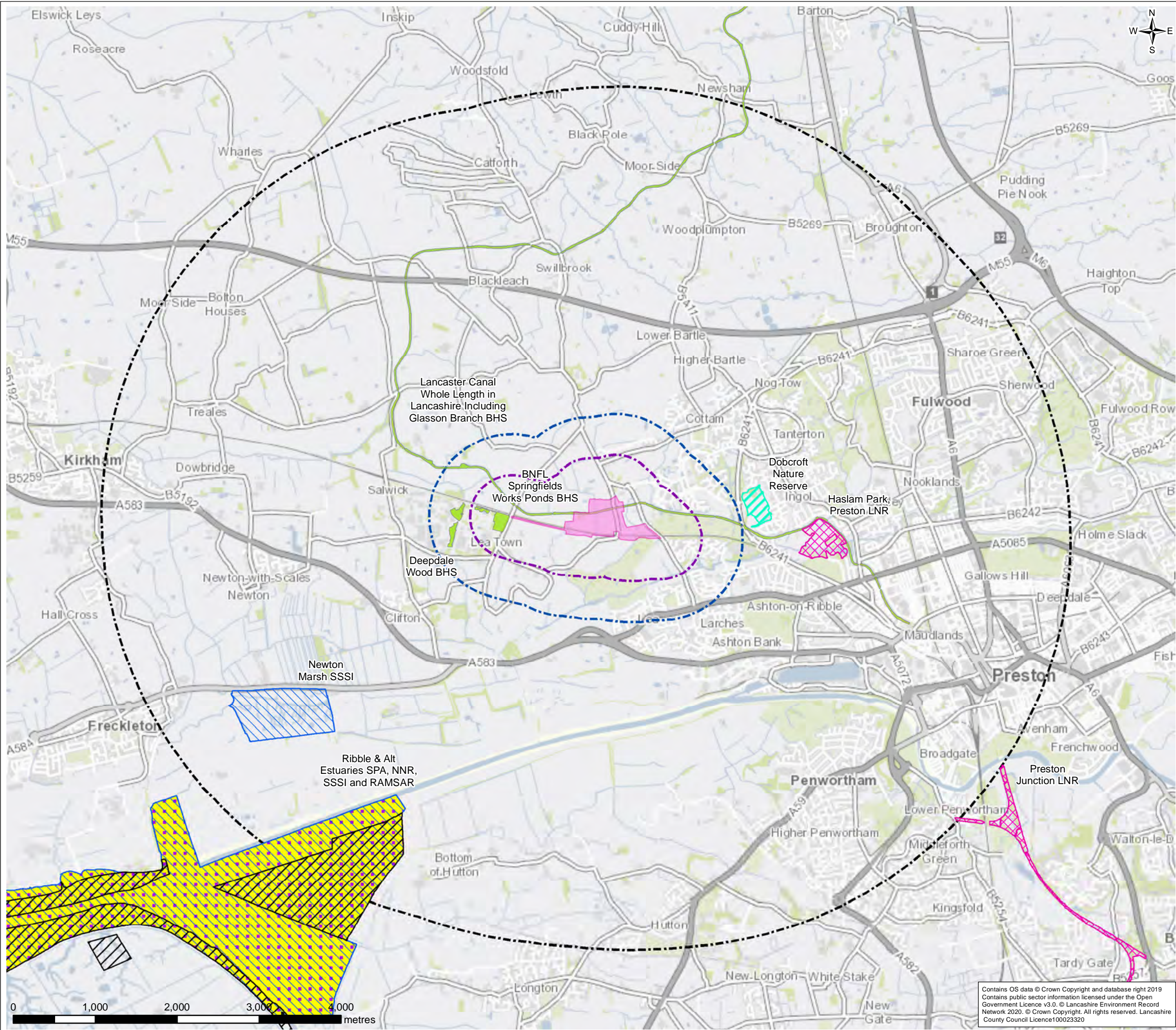
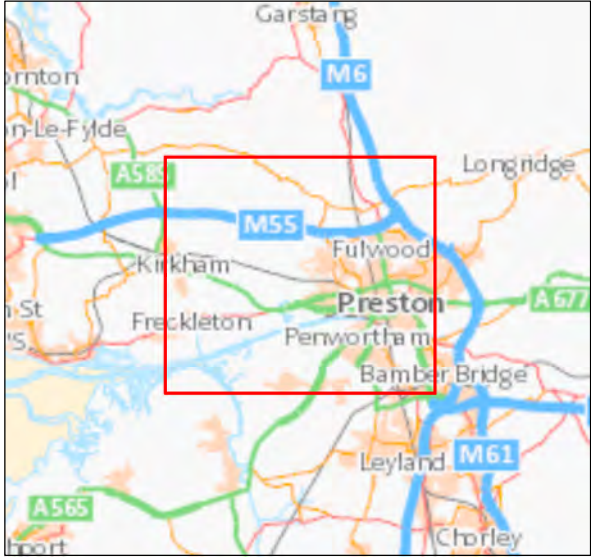


FIGURE 2

- Legend**
- Known Cottam Parkway Site Area (January 2020)
 - 500m Survey Area and Buffer from Known Site Area (January 2020)
 - 1km Buffer from January 2020 Site Area
 - 5km Buffer from January 2020 Site Area
- Statutory Designated Sites**
- Special Protection Area (SPA)
 - Ramsar
 - Site of Special Scientific Interest (SSSI)
 - Local Nature Reserve (LNR)
 - National Nature Reserve (NNR)
- Non Statutory Designated Sites**
- Biological Heritage Sites
 - Non-statutory Nature Reserve



0	31/07/2020	Initial Issue	BP	SM	KL	DT	
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd	
<div><div><div>Jacobs</div><div>5 First Street, Manchester, M15 4GU, UK Tel: +44(0)161 235 6000 Fax: +44(0)161 235 6001 www.jacobs.com</div></div></div>							
<div><div>Client</div><div><div>Lancashire</div><div>County Council</div><div></div></div></div>							
<div><div>Project</div><div>Cottam Parkway Railway Station</div></div>							
<div><div>Drawing Title</div><div>STATUTORY AND NON-STATUTORY DESIGNATED SITES (OF POTENTIAL RELEVANCE FOR BREEDING BIRDS)</div></div>							
<div><div>FINAL</div></div>							
<div>Scale @ A3</div>		<div>1:45,000</div>			<div>DO NOT SCALE</div>		
<div>Jacobs No.</div>		<div>B2327FEF</div>					
<div><div>B2327FEF-JAC-EBD-00-DR-ENV-0013</div></div>							
<div><div>This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.</div></div>							

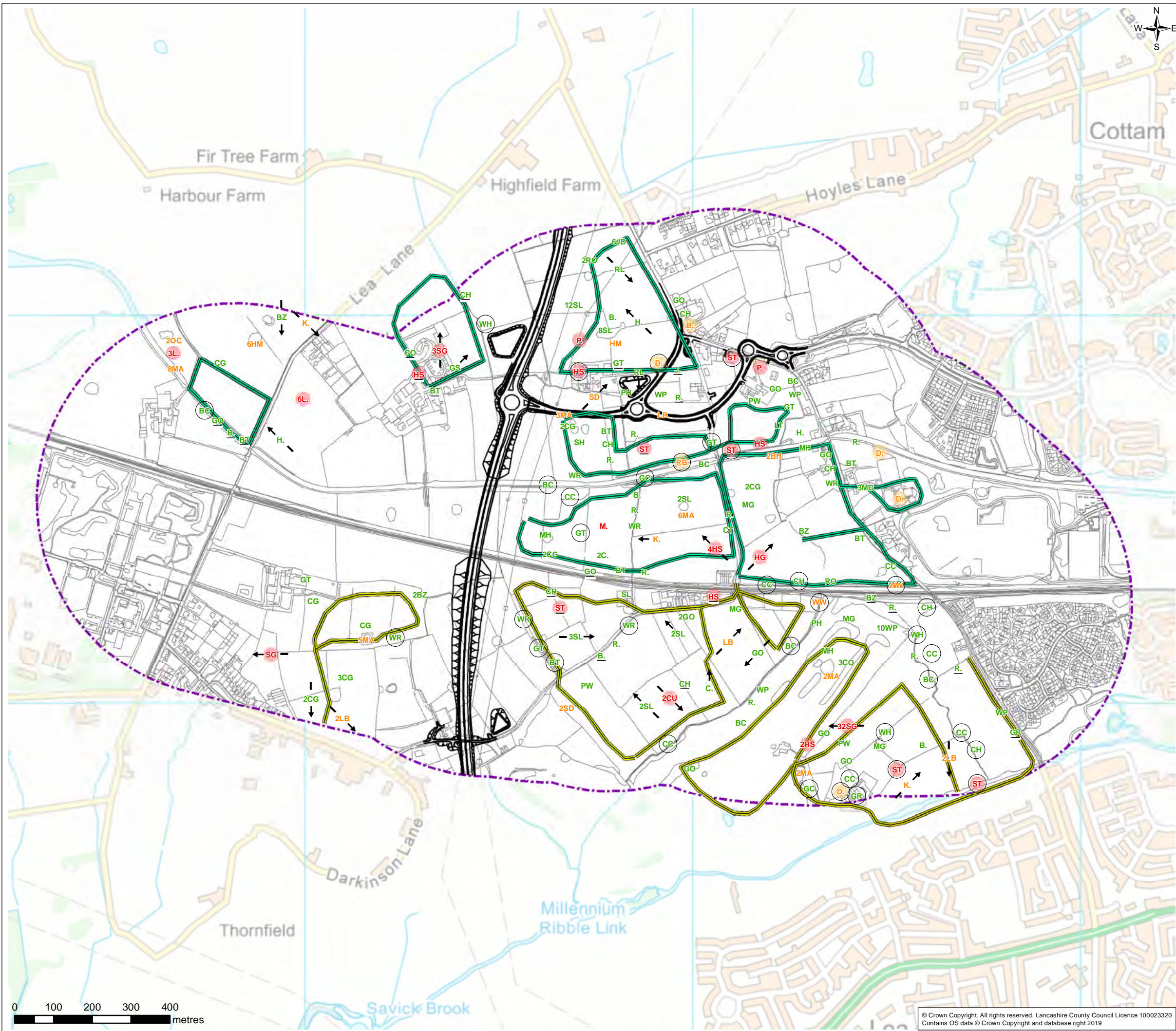


FIGURE 3

Legend

— PWD Route

500m Survey Area and Buffer from Known Site Area (January 2020)

Breeding Bird Survey Transect

Transect 1

Transect 2

Breeding Bird Survey Results - Species

Number of birds recorded

Amber List Species (medium conservation concern)

Amber List Species (medium conservation concern). Species listed on Schedule 1 of Wildlife and Countryside Act 1981

Amber List Species (medium conservation concern). Species of Principal Importance

Green List Species

Red List Species (high conservation concern)

Red List Species (high conservation concern). Species listed on Schedule 1 of Wildlife and Countryside Act 1981

Red List Species (high conservation concern). Species of Principal Importance

Breeding Bird Survey Results - Behaviour

A - Agitated

F - Flying (Away)

F - Flying (Circling)

F - Flying (in and Landing)

F - Flying (Over)

H - Calling/feeding in suitable habitat

S - Singing Male

Please refer to Appendix D in the report for BTO species codes.



0	30/07/2020	Initial Issue	BP	SM	KL	DT	
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd	
<div><div><div>Jacobs</div><div>5 First Street, Manchester, M15 4GU, UK Tel: +44(0)161 235 6000 Fax: +44(0)161 235 6001 www.jacobs.com</div></div><div><div>Client</div><div>Lancashire County Council</div></div><div><div>Project</div><div>Cottam Parkway Railway Station</div></div><div><div>Drawing Title</div><div>BREEDING BIRD SURVEY RESULTS VISIT 1 (APRIL 2020)</div></div><div><div>Scale @ A3</div><div>1:9,500</div><div>DO NOT SCALE</div></div><div><div>Jacobs No.</div><div>B2327FEF</div></div><div><div>B2327FEF-JAC-EBD-00-DR-ENV-0014</div></div><div><div>This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.</div></div></div>							

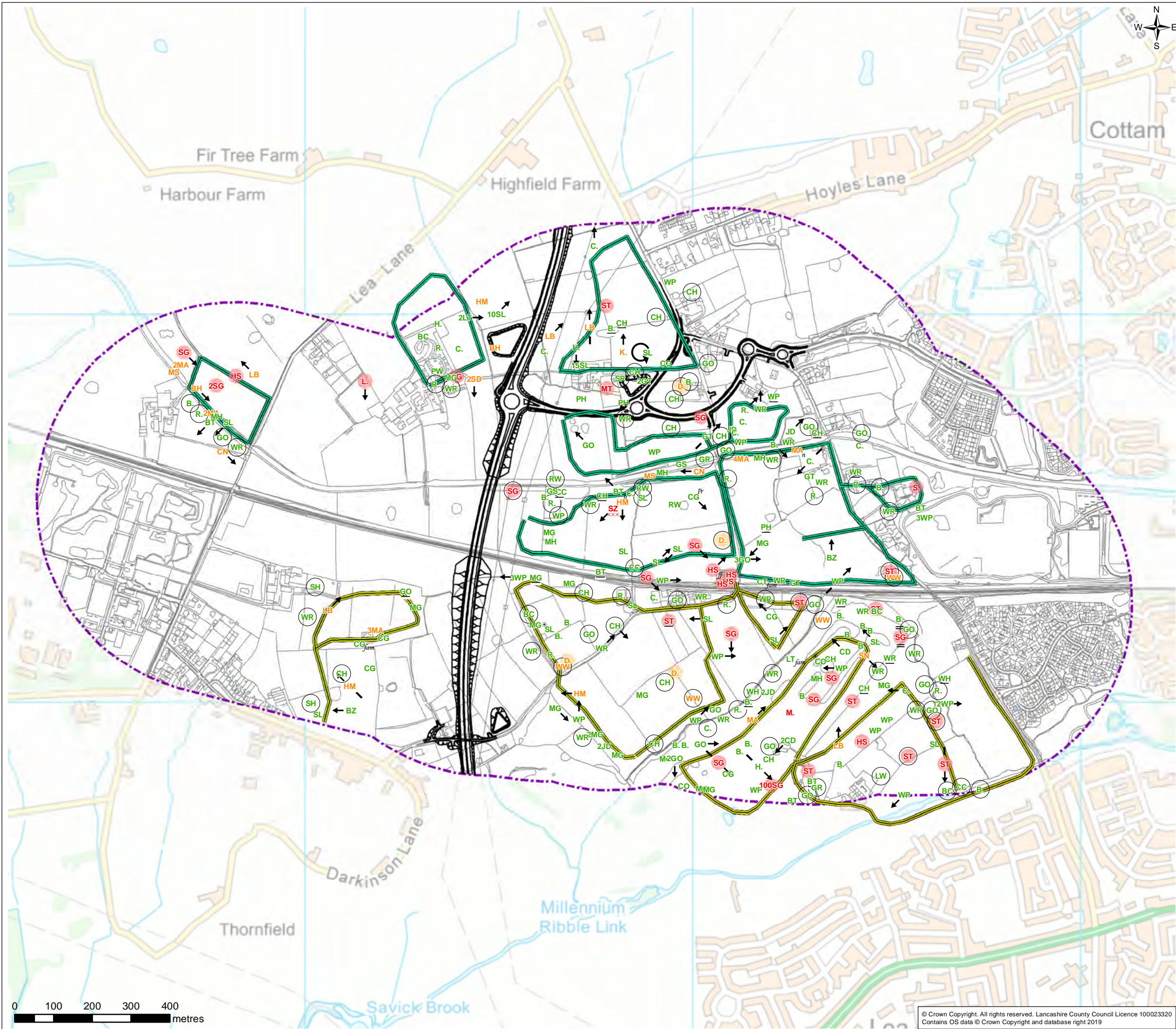


FIGURE 4

Legend

— PWD Route

500m Survey Area and Buffer from Known Site Area (January 2020)

Breeding Bird Survey Transect

Transect 1

Transect 2

Breeding Bird Survey Results - Species

Number of birds recorded

Amber List Species (medium conservation concern)

Amber List Species (medium conservation concern). Species listed on Schedule 1 of Wildlife and Countryside Act 1981

Amber List Species (medium conservation concern). Species of Principal Importance

Green List Species

Red List Species (high conservation concern)

Red List Species (high conservation concern). Species listed on Schedule 1 of Wildlife and Countryside Act 1981

Red List Species (high conservation concern). Species of Principal Importance

Breeding Bird Survey Results - Behaviour

A - Agitated

AC - A warning calling

Fam - Family

FF - Faecal sac or food

F - Flying (Away)

F - Flying (Circling)

F - Flying (in and Landing)

F - Flying (Over)

H - Calling/feeding in suitable habitat

P - Pair


S - Singing Male

N - Nest

NY - Nest with Young

Please refer to Appendix D in the report for BTO species codes.



0	30/07/2020	Initial Issue	BP	SM	JK	DT	
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'd	
<div><div><div>Jacobs</div><div>5 First Street, Manchester, M15 4GU, UK Tel: +44(0)161 235 6000 Fax: +44(0)161 235 6001 www.jacobs.com</div></div></div>							
<div><div>Client</div><div><div>Lancashire</div><div>County Council</div><div></div></div></div>							
<div><div>Project</div><div>Cottam Parkway Railway Station</div></div>							
<div><div>Drawing Title</div><div>BREEDING BIRD SURVEY RESULTS VISIT 2 (MAY 2020)</div></div>							
FINAL							
Scale @ A3		1:9,500				DO NOT SCALE	
Jacobs No.		B2327FEF					
B2327FEF-JAC-EBD-00-DR-ENV-0015							
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.							

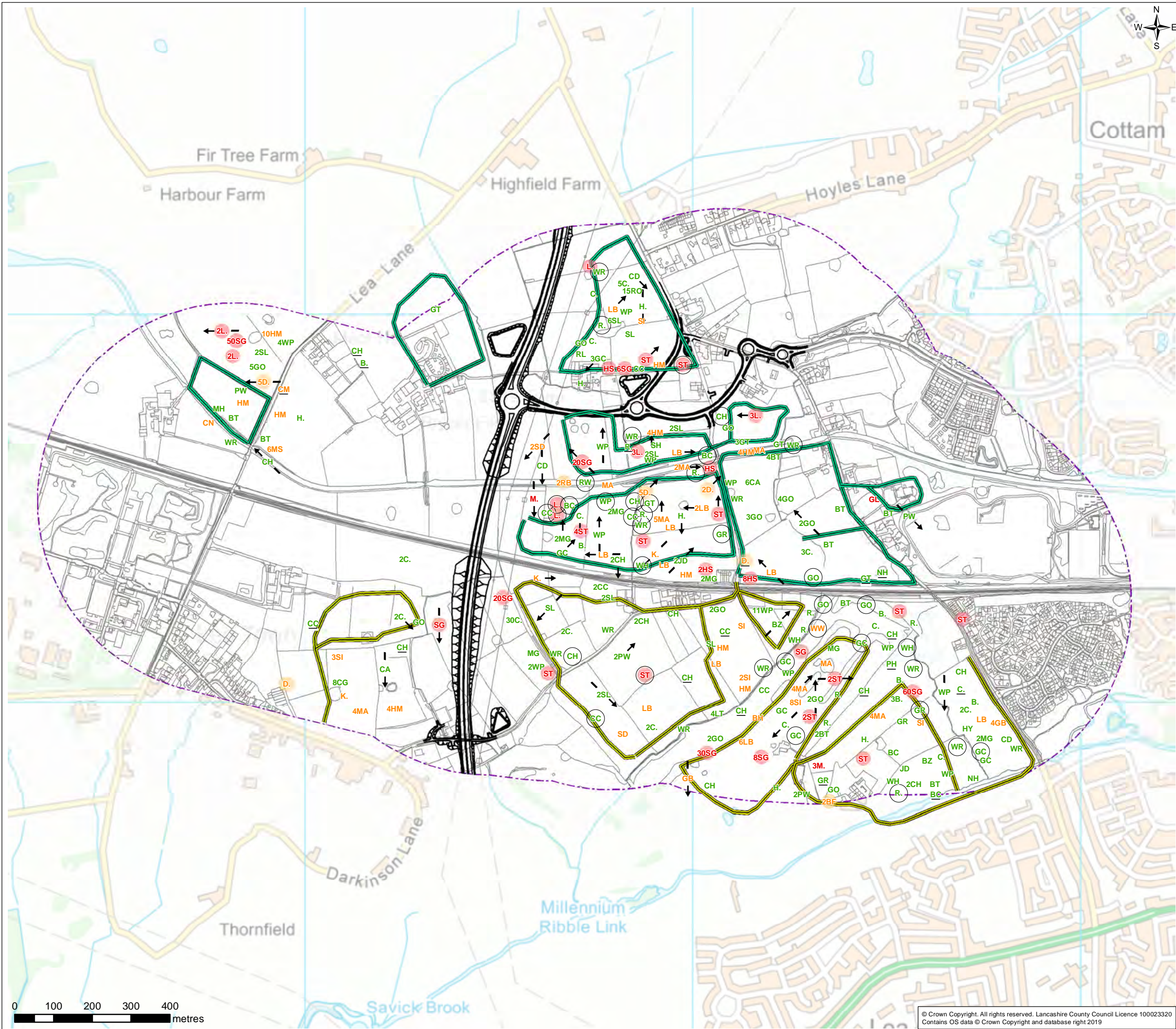


FIGURE 5

Legend

— PWD Route

500m Survey Area and Buffer from Known Site Area (January 2020)

Breeding Bird Survey Transect

Transect 1

Transect 2


Breeding Bird Survey Results - Species

- Number of birds recorded
- Amber List Species (medium conservation concern)
- Amber List Species (medium conservation concern). Species listed on Schedule 1 of Wildlife and Countryside Act 1981
- Amber List Species (medium conservation concern). Species of Principal Importance
- Green List Species
- Red List Species (high conservation concern)
- Red List Species (high conservation concern). Species listed on Schedule 1 of Wildlife and Countryside Act 1981
- Red List Species (high conservation concern). Species of Principal Importance

Breeding Bird Survey Results - Behaviour

- A - Agitated
- F - Flying (Away)
- F - Flying (Circling)
- F - Flying (in and Landing)
- F - Flying (Over)
- H - Calling/feeding in suitable habitat
- S - Singing Male



0	30/07/2020	Initial Issue	BP	SM	KL	DT	
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	App'd	
<div><div>Jacobs</div><div>5 First Street, Manchester, M15 4GU, UK Tel: +44(0)161 235 6000 Fax: +44(0)161 235 6001 www.jacobs.com</div></div>							
Client							
<div><div>Lancashire</div><div>County Council</div><div></div></div>							
Project							
Cottam Parkway Railway Station							
Drawing Title							
BREEDING BIRD SURVEY RESULTS VISIT 3 (JUNE 2020)							
FINAL							
Scale @ A3		1:9,500			DO NOT SCALE		
Jacobs No.		B2327FEF					
B2327FEF-JAC-EBD-00-DR-ENV-0016							
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.							

Appendix B. Legislation, Planning Policy and Biodiversity Background

The Birds Directive

Many bird populations within the UK, including those that are resident or breeding are protected under European legislation.

The EC Directive on the conservation of wild birds 2009/147/EC (as amended) (the 'Birds Directive') requires the designation of Special Protection Areas (SPAs) for rare or vulnerable species, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance. Annex I of the Directive lists bird species to be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.

The Conservation of Habitats and Species Regulations 2017 (as amended) place additional duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the Birds Directive (Regulation 10(1) & (3) requires that 'in the exercise of their functions as they consider appropriate' these authorities must take steps to contribute to the 'preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat...').

The Bonn Convention

The Bonn Convention on Conservation of Migratory Species of Wild Animals, 1979, aims to achieve effective management of migratory species across national or jurisdictional boundaries. It is implemented in the UK by the Environmental Protection Act 1990.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principal mechanism for the legislative protection of wildlife in Great Britain.

All bird species are protected under elements of Section 1 of the WCA, with special provision for species listed on Schedule 1. Under the WCA it is an offence if:

- any person intentionally—
 - kills, injures or takes any wild bird;
 - takes, damages or destroys the nest of a wild bird included in Schedule ZA1;
 - takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
 - takes or destroys an egg of any wild bird.
- any person has in his possession or control—
 - any live or dead wild bird or any part of, or anything derived from, such a bird; or
 - an egg of a wild bird or any part of such an egg.
- any person intentionally or recklessly—
 - disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
 - disturbs dependent young of such a bird.

Conservation status - Birds of Conservation Concern (Eaton *et al.*, 2015)

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2009. The status of birds within the UK have been regularly monitored through a series of surveys, including the national Breeding Bird Survey, Common Bird Census, sea bird monitoring programs and wetland monitoring programs. The result of this review and continued monitoring is The Population Status of Birds in the UK, Birds of Conservation Concern 4: 2015.

Birds are assessed against criteria to place each species on one of three alert lists, Red, Amber or green. Red list species are considered to be of high conservation concern, being either globally threatened, having historical UK population declines, having a rapid population decline or breeding range contraction of 50% or more in the last 25-years.

Amber list species are considered to be of medium conservation concern as they meet one or more of the following criteria (but none of the Red list criteria): Red listed for historical decline in a previous review but with substantial recent recovery (more than doubled in the last 25-years), a UK breeding range contraction of between 25% and 49%, a Reduction of breeding or non-breeding population of 25-49% in the last 25-years, a 5-year mean of 1-300 breeding pairs in the UK, an unfavourable European conservation status, at least 50% of the UK breeding population found in 10 or fewer sites, or where the breeding population in the UK represents 20% or more of the European breeding populations.

Green list species are considered to be of low conservation concern. They include all regularly occurring species that do not qualify under any of the Red or Amber criteria. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

National Planning Policy Framework 2019 (NPPF)

National Planning Policy Framework 2019 and Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, places a duty on all public bodies including local planning authorities to consider habitats and species of principal importance when considering a planning application.

It is recognised by the NPPF that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, recognising the benefits of ecosystem services, minimising impacts on biodiversity and providing net gain where possible by establishing coherent and resilient wildlife networks.

Section 41 of the NERC Act 2006 – Habitats and Species of Principal Importance in England

The England Biodiversity List has been developed to meet the requirements of Section 41 of the NERC Act (2006). This legislation requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity.

The Section 41 list will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 "to have regard" to the conservation of biodiversity in England, when carrying out their normal functions. In particular:

- National Planning Bodies and Local Planning Authorities will use it to identify the species and habitats that should be afforded priority when applying the requirements of the NPPF to maintain, restore and enhance species and habitats.

- Local Planning Authorities will use it to identify the species and habitats that require specific consideration in dealing with planning and development control, recognising that under NPPF the aim of planning decisions should be to avoid harm to all biodiversity.
- All Public Bodies will use it to identify species or habitats that should be given priority when implementing the NERC Section 40 duty.

Lancashire Biodiversity Action Plan (BAP)

The UK BAP was published in January 1994 in response to the Convention on Biological Diversity which was signed by the UK at the 1992 Rio Earth Summit. In common with much of the rest of the country, the biodiversity of Lancashire has undergone a significant decline. Large tracts of the County have now lost much of their former interest, what remains tends to be concentrated on relict habitats which are often fragmented. The conservation of these areas is frequently best achieved by their identification as statutory or non-statutory wildlife site which should receive appropriate management. These sites are seen as key features in the delivery of biodiversity objectives. Lancashire County Council is one of the organisations playing a key role in the development and implementation of the local BAP for Lancashire.

References for Appendix B

Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn, R., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A. and Gregory, R.D. 2015. Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 108, pp708-746296–341.

Appendix C. Jacobs Field Survey Metadata

Visit Number	Transect Number	Date	Time	Observers	Cloud cover (oktas)	Wind direction	Wind speed (Beaufort scale)	Temperature (°C)	Precipitation
1	1	28 th April	06:30 – 10:45	Ryan Knight and Stuart Macpherson	8/8	Westerly	1	9	None
	2	29 th April	06:30 – 10:30	Ryan Knight and Katy Duff	8/8	Westerly	1	11	None
2	1	14 th May	06:00 – 10:00	Jack Kellett and Robyn Walton	5/8	Westerly	2	13	None
	2	15 th May	06:00 – 10:00	Jack Kellett and Robyn Walton	5/8	Westerly	1	14	None
3	1	11 th June	05:30 – 09:55	Stuart Macpherson and Huw Morgan	8/8	Westerly	2	14	None
	2	12 th June	05:30 – 10:15	Stuart Macpherson and Huw Morgan	8/8	Westerly	2	14	None

Appendix D. BTO Bird Species Codes

BTO Species Codes					
AC	Arctic Skua	G.	Green Woodpecker	NK	Red-necked Phalarope
AE	Arctic Tern	GR	Greenfinch	RH	Red-throated Diver
AV	Avocet	GK	Greenshank	LR	Redpoll
BY	Barnacle Goose	H.	Grey Heron	RK	Redshank
BO	Barn Owl	GJ	Greylag Goose	RT	Redstart
BA	Bar-tailed Godwit	P.	Grey Partridge	RE	Redwing
BR	Bearded Tit	GV	Grey Plover	RB	Reed Bunting
BS	Bewick's Swan	GL	Grey Wagtail	RW	Reed Warbler
BI	Battens	GU	Guillemot	RZ	Ring Ouzel
BK	Black Grouse	HF	Hawfinch	RI	Ring-necked Parakeet
BH	Black-headed Gull	HH	Hen Harrier	RP	Ringed Plover
BW	Black-tailed Godwit	HG	Herring Gull	R.	Robin
DV	Black-throated Diver	HY	Hobby	DV	Rock Dove
BX	Black Redstart	HZ	Honey Buzzard	RC	Rock Pipit
B.	Blackbird	HC	Hooded Crow	RO	Rook
BC	Blackcap	HP	Hoopoe	RS	Roseate Tern
TY	Black Guillemot	HM	House Martin	RY	Ruddy Duck
BN	Black-necked Grebe	HS	House Sparrow	RU	Ruff
BJ	Black Tern	JD	Jackdaw	SM	Sand Martin
BU	Bluethroat	J.	Jay	SS	Sanderling
BT	Blue Tit	K.	Kestrel	TE	Sandwich Tern
BL	Brambling	KF	Kingfisher	VI	Savi's Warbler
BG	Brent Goose	KI	Kittiwake	SQ	Scarlet Rosefinch
BF	Bullfinch	KN	Knot	SP	Scaup
BZ	Buzzard	LM	Lady Amherst's Pheasant	CY	Scottish Crossbill
C.	Carrion Crow	LA	Lapland Bunting	SW	Sedge Warbler
CG	Canada Goose	L.	Lapwing	NS	Serin
CP	Capercaillie	TL	Leach's Petrel	SA	Shag
CW	Cetti's Warbler	LB	Lesser Black-backed Gull	SU	Shelduck
CH	Chaffinch	IS	Lesser Spotted Woodpecker	SX	Shorelark
CC	Chiffchaff	LW	Lesser Whitethroat	SF	Short-eared Owl
CI	Chough	LI	Linnet	SV	Shoveler
CL	Cirl Bunting	ET	Little Egret	SK	Siskin
CT	Coat Tit	LG	Little Grebe	S.	Skylark
CD	Collared Dove	LU	Little Gull	SZ	Slavonian Grebe
CM	Common Gull	LO	Little Owl	SN	Snipe
CS	Common Sandpiper	LP	Little Ringed Plover	SB	Snow Bunting
CX	Common Scoter	AF	Little Tern	ST	Song Thrush
CN	Common Tern	LE	Long-eared Owl	SH	Sparrowhawk
CE	Corncrake	IT	Long-tailed Tit	AK	Spotted Crane
CO	Coot	MG	Magpie	SF	Spotted Flycatcher
CA	Cormorant	MA	Mallard	SG	Starling
CB	Corn Bunting	MN	Mandarin	SD	Stock Dove
CT	Crested Tit	MX	Manx Shearwater	SC	Stonechat
CR	Crossbill	MR	Marsh Harrier	TN	Stone-curlew
CK	Cuckoo	MT	Marsh Tit	TM	Storm Petrel

BTO Species Codes					
CU	Curlew	MW	Marsh Warbler	SL	Swallow
DW	Dartford Warbler	MP	Meadow Pipit	SI	Swift
DI	Dipper	MU	Mediterranean Gull	TO	Tawny Owl
DO	Dotterel	ML	Merlin	T.	Teal
DN	Dunlin	M.	Mistle Thrush	TK	Temminck's Stint
D.	Dunnock	MH	Moorhen	TP	Tree Pipit
EG	Egyptian Goose	MO	Montagu's Harrier	TS	Tree Sparrow
E.	Eider	MS	Mute Swan	TC	Treecreeper
FP	Feral Pigeon	N.	Nightingale	TU	Tufted Duck
FF	Fieldfare	NJ	Nightjar	TT	Turnstone
FC	Firecrest	NH	Nuthatch	TD	Turtle Dove
F.	Fulmar	OP	Osprey	TW	Twite
GA	Gadwall	OC	Oystercatcher	WA	Water Rail
GX	Gannet	PE	Peregrine	W.	Wheatear
GW	Garden Warbler	PH	Pheasant	WM	Whimbrel
GY	Garganey	PF	Pied Flycatcher	WC	Whinchat
GC	Goldcrest	Par	Pied Wagtail	WO	White-fronted Goose
EA	Golden Eagle	PT	Pintail	WH	Whitethroat
OL	Golden Oriole	PO	Pochard	WS	Whooper Swan
GF	Golden Pheasant	PG	Pink-footed Goose	WN	Wigeon
GP	Golden Plover	PM	Ptarmigan	WT	Willow Tit
GN	Goldeneye	PU	Puffin	WW	Willow Warbler
GO	Goldfinch	PS	Purple Sandpiper	WO	Wood Warbler
GD	Goosander	Q.	Quail	WK	Woodcock
GI	Goshawk	RN	Raven	WL	Woodlark
GH	Grasshopper Warbler	RA	Razorbill	WP	Woodpigeon
GB	Great Black-backed Gull	RG	Red Grouse	OD	Wood Sandpiper
GG	Great Crested Grebe	ED	Red-backed Shrike	WR	Wren
ND	Great Northern Diver	RM	Red-breasted Merganser	WY	Wryneck
GS	Great Spotted Woodpecker	RQ	Red-crested Pochard	YW	Yellow Wagtail
NX	Great Skua	FV	Red-footed Falcon	Y.	Yellowhammer
GT	Great Tit	KT	Red Kite		
GE	Green Sandpiper	RL	Red-legged Partridge		

Appendix E. Ribble and Alt Estuaries Special Protection Area (SPA) Qualifying Species Information

Council Directive 79/409/EEC has been codified (*i.e.* superseded) by Council Directive 2009/147/EC. However, the Ribble and Alt Estuaries SPA designations have not been updated since the new Directive was adopted; consequently, this citation makes reference to Council Directive 79/409/EEC in relation to SPA qualifying criteria.

This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the directive:

During the breeding season:

Common Tern (*Sterna hirundo*), 182 pairs representing at least 1.5% of the breeding population in Great Britain (Count, as at 1996)

Ruff (*Philomachus pugnax*), 1 pair representing at least 9.1% of the breeding population in Great Britain (Count as at late 1980's)

This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

During the breeding season:

Lesser Black-backed Gull (*Larus fuscus*), 1,800 pairs representing at least 1.5% of the breeding Western Europe/Mediterranean/Western Africa population (Count, as at 1993)

Assemblage qualification: A wetland of international importance.

The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl.

During the breeding season, the area regularly supports 29,236 individual seabirds including: Black-headed Gull (*Chroicocephalus ridibundus*), Lesser Black-backed Gull (*Larus fuscus*), Common Tern (*Sterna hirundo*).

The selection process is in two stages which are given as follows:

Stage 1

An area is used regularly by 1% or more of the Great Britain (or in Northern Ireland, the all-Ireland) population of a species listed in Annex I of the Birds Directive (79/409/EEC as amended) in any season.

1. An area is used regularly by 1% or more of the biogeographical population of a regularly occurring migratory species (other than those listed in Annex I) in any season.
2. An area is used regularly by over 20,000 waterfowl (waterfowl as defined by the Ramsar Convention) or 20,000 seabirds in any season.
3. An area which meets the requirements of one or more of the Stage 2 guidelines in any season, where the application of Stage 1 guidelines 1, 2 or 3 for a species does not identify an adequate suite of most suitable sites for the conservation of that species.

Stage 2

1. *Population size and density*

Areas holding or supporting more birds than others and/or holding or supporting birds at higher concentrations are favoured for selection.

2. *Species range*

Areas selected for a given species provide as wide a geographic coverage across the species' range as possible.

3. *Breeding success*

Areas of higher breeding success than others are favoured for selection.

4. *History of occupancy*

Areas known to have a longer history of occupation or use by the relevant species are favoured for selection.

5. *Multi-species areas*

Areas holding or supporting the larger number of qualifying species under Article 4 of the Directive are favoured for selection.

6. *Naturalness*

Areas comprising natural or semi-natural habitats are favoured for selection over those which do not.

7. *Severe weather refuges*

Areas used at least once a decade by significant proportions of the biogeographical population of a species in periods of severe weather in any season, and which are vital to the survival of a viable population, are favoured for selection.

Appendix F. Ribble and Alt Estuary Ramsar Qualifying Species Information

Ramsar Criterion 2

A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Ramsar criterion 5

Species with peak counts in winter:

222.038 waterfowl (5-year peak mean 1998/99-2002/2003).

Ramsar criterion 6 – species/populations occurring at levels of international importance

Species regularly supported during the breeding season:

Qualifying bird species	Species population information
Black-tailed godwit (<i>Limosa limosa islandica</i>), Iceland/W Europe	3.323 individuals, representing an average of 7% of the population (5-year peak mean 1998/9- 2002/3)
Dunlin (<i>Calidris alpina alpina</i>), W Siberia/W Europe	38.196 individuals, representing an average of 2.8% of the population (5-year peak mean 1998/9-2002/3 - spring peak)
Grey plover (<i>Pluvialis squatarola</i>), E Atlantic/W Africa	11.021 individuals, representing an average of 4.4% of the population (5-year peak mean 1998/9-2002/3 - spring peak)
Red knot (<i>Calidris canutus islandica</i>), W & Southern Africa	42.692 individuals, representing an average of 9.4% of the population (5-year peak mean 1998/9-2002/3)
Redshank (<i>Tringa totanus totanus</i>)	4.465 individuals, representing an average of 1.7% of the population (5-year peak mean 1998/9-2002/3)
Ringed plover (<i>Charadrius hiaticula</i>), Europe/Northwest Africa	3.761 individuals, representing an average of 5.1% of the population (5-year peak mean 1998/9-2002/3 - spring peak)
Sanderling (<i>Calidris alba</i>)	Eastern Atlantic 7.401 individuals, representing an average of 6% of the population (5-year peak mean 1998/9- 2002/3 - spring peak)

Section 20 of the Ramsar citation (<https://rsis.ramsar.org/RISapp/files/RISrep/GB325RIS.pdf>)

Noteworthy fauna: Birds Species currently occurring at levels of national importance: Species regularly supported during the breeding season: Black-headed gull, *Larus ridibundus*, N & C Europe 14888 apparently occupied nests, representing an average of 11.6% of the GB population (Seabird 2000 Census) Information Sheet on Ramsar Wetlands (RIS), page 5 Ramsar Information Sheet: UK11057 Page 5 of 10 Ribble and Alt Estuaries Produced by JNCC: Version 3.0, 14/09/2007 Common tern, *Sterna hirundo hirundo*, N & E Europe 182 pairs, representing an average of 1.7% of the GB population (1996)

Appendix G. Ribble Estuary Site of Special Scientific Interest (SSSI) Information

COUNTY: LANCASHIRE & MERSEYSIDE

SITE NAME: RIBBLE ESTUARY

DISTRICT: FYLDE, SEFTON METROPOLITAN, SOUTH RIBBLE AND WEST LANCASHIRE

Status: SSSI notified under Section 28 of the Wildlife and Countryside Act 1981. Includes the Ribble Estuary National Nature Reserve declared under Section 19 of the National Parks and Access to the Countryside Act 1949.

Local Planning Authority: Fylde Borough Council, Sefton Metropolitan Borough Council, South Ribble Borough Council, West Lancashire Borough Council.

National Grid Reference: SD 375240

Area: 9226.3 (ha.) 22798.2 (ac.)

Ordnance Survey Sheet 1:50,000: 102, 108

1:25,000: SD 21, 22, 23, 31, 32, 33, 42

Date Notified (Under 1949 Act): –

Date of Last Revision: 1979

1966 (Southport Sanctuary)

1976 (Ribble Estuary)

Date Notified (Under 1981 Act): 1984

Date of Last Revision: 1984

Other Information:

1. Listed as an internationally important coastal site in 'A Nature Conservation Review' ed. D.A Ratcliffe (1977) Cambridge University Press.
2. 2,916 ha of the foreshore west of the National Nature Reserve are covered by the Southport Sanctuary, a National Wildfowl Refuge made a statutory bird sanctuary by the Wild Birds (Southport Sanctuary) Order 1956 under the Protection of Birds Act 1954. By virtue of the Interpretation Act 1978 the Order remains in force.
3. 6,730.0 ha of the SSSI are in Lancashire and 2,501.6 ha are in Merseyside.
4. The area of the National Nature Reserve is 2302 ha.
5. The boundary of the SSSI has been modified by a number of deletions and one extension.
6. The site is adjacent to the Southport Sand Dunes and Foreshore SSSI.

Description and Reasons for Notification:

The Ribble Estuary is situated on the Lancashire coast west of Preston between Southport and Lytham St. Anne's extending inland to Longton. It has extensive intertidal sand-silt flats with one of the largest areas of grazed green marsh in Britain and includes small areas of recently reclaimed saltmarsh. The estuary is of international importance for the passage and wintering waterfowl it supports, being a major link in the chain of estuaries down the west coast of Britain used by birds on migration between the breeding grounds in the far north and their wintering grounds further south. The Ribble Estuary National Nature Reserve is located in the centre of the SSSI and most of the foreshore in Sefton outside the NNR is covered by the Southport Sanctuary which provides a protected low tide roost for pink-footed geese (*Anser brachyrhynchus*).

The mudflats are rich in invertebrates on which the waders and many of the wildfowl, especially shelduck (*Tadorna tadorna*), feed and the sandbanks also provide low tide roosting sites for pink-footed geese. The saltmarshes consist mainly of saltmarsh grass/Red fescue sward with a belt of cordgrass (*Spartina*) at the seaward edge. They provide roosting sites for the waders at high tide and support large numbers of wildfowl such as mallard (*Anas platyrhynchos*), teal (*Anas crecca*), wigeon (*Anas penelope*) and pink-footed geese (*Anser brachyrhynchus*).

The estuary supports internationally important numbers of the following waterfowl: Bewick's swan (*Cygnus columbianus bewickii*), pink-footed goose, shelduck, wigeon, oystercatcher (*Haematopus ostralegus*), knot (*Calidris canutus*), sanderling (*Calidris alba*), dunlin (*Calidris alpina alpina*), black-tailed godwit (*Limosa limosa islandica*) and bar-tailed godwit (*Limosa lapponica*) as well as smaller populations of lapwing (*Vanellus vanellus*), curlew (*Numenius arquata*), grey plover (*Pluvialis squatarola*) and golden plover (*Pluvialis apricaria*). The total numbers of waterfowl are also of international importance. Wildfowl numbers regularly exceed the criterion of 10,000. During the period 1977–82 the peak counts of waders greatly exceeded the criterion of 20,000, being always in excess of 56,000 with a maximum of 86,000, keeping the Ribble in the top seven estuaries in Britain for waders. The breeding bird communities of the saltmarsh are also significant and include nationally important breeding populations of black-headed gull (*Chroicocephalus ridibundus*), common tern (*Sterna hirundo*) and Redshank (*Tringa tetanus*).

Enclosed by the Coastal Road is an area of reclaimed unimproved grazing marsh, an uncommon habitat in NW England. This still supports a variety of saltmarsh plants in the more brackish parts nearer the sea and along the creeks. Plants such as cord-grass (*Spartina sp.*), thrift (*Armeria maritima*), sea aster (*Tripolium pannonicum*) and the brackish water crowfoot (*Ranunculus baudotii*), a particularly scarce plant in NW England, occur here. These areas are important as a major high tide roost for waterfowl, especially Redshank (*Tringa tetanus*), grey plover (*Pluvialis squatarola*), black-tailed godwit, dunlin, oystercatcher, Bewick's swan and wigeon. They also support a diverse breeding bird community which includes skylark (*Alauda arvensis*), lapwing, teal, shoveler (*Anas clypeata*), ringed plover (*Charadrius hiaticula*) and snipe (*Gallinago gallinago*).

References for Appendix G

Ratcliffe, R.A. 1977. *A Nature Conservation Review*. Cambridge University Press

Appendix H. Newton Marsh Site of Special Scientific Interest (SSSI) Information

COUNTY: LANCASHIRE

SITE NAME: NEWTON MARSH

DISTRICT: FYLDE

Status: SSSI notified under Section 28 of the Wildlife and Countryside Act, 1981.

Local Planning Authority: Fylde Borough Council

National Grid Reference: SD 450292

Area: 65.6 (ha) 162.1 (ac)

Ordnance Survey Sheet 1:50 000 102

1:10 000 SD 42 NE SD 42 NW

Date Notified (Under 1949 Act): 1979

Date of Last Revision: –

Date Notified (Under 1981 Act): 1986

Date of Last Revision: 1986

Other Information:

The site boundary remains unchanged at renotification.

Description and Reasons for Notification:

Newton Marsh is located near to the Ribble Estuary, 2km east of Freckleton, and comprises 162 acres of grazed, improved pasture reclaimed from former saltmarsh but retaining a number of pools and ditches. These features, the relative lack of disturbance, its size and proximity to the Ribble Estuary and its position along a major migration route down the west coast of Britain account for the importance of the site for over-wintering and migrant birds.

Over 100 bird species have been recorded from Newton Marsh, the majority being spring and winter visitors forming part of the migrant populations which use the west coast estuaries of Britain on their route from the breeding grounds in the far north and the wintering grounds further south. The proximity of Newton Marsh to the Ribble Estuary allows an interchange of birds between the two sites and total numbers will vary according to local conditions. On average Newton Marsh supports in the region of 10,000 birds each winter, but under adverse conditions these numbers can be substantially higher as the marsh provides a valuable source of refuge, protected from high tides and relatively free from disturbance.

Large flocks of golden plover (*Pluvialis apricaria*) habitually favour this site in the winter and numbers present each year (up to 8,000) regularly exceed the qualifying level for national importance (2,000). Other winter visitors include large numbers of lapwing (*Vanellus vanellus*) (up to 10,000) with smaller flocks of snipe (*Gallinago gallinago*), bar-tailed godwit (*Limosa lapponica*), Redshank (*Tringa tetanus*), dunlin (*Calidris alpina alpina*), mallard (*Anas platyrhynchos*), teal (*Anas crecca*), shelduck (*Tadorna tadorna*) and wigeon (*Anas penelope*). In spring and autumn up to 1,200 black-tailed godwits (*Limosa limosa islandica*) have been recorded from the site and numbers of this species are in most years in excess of the qualifying level for national importance (50). Other passage migrants include greenshank (*Tringa nebularia*), spotted Redshank (*Tringa erythropus*), common sandpiper (*Actitis hypoleucos*) and sanderling (*Calidris alba*).

While the natural saltmarsh breeding bird community has been altered by a change in the nature of the vegetation brought about by reclamation, the wetness of the pasture has encouraged the development of a new bird

community which includes freshwater fen, saltmarsh and farmland species. Regular breeding species include lapwing, Redshank, mallard, moorhen (*Gallinula chloropus*), coot (*Fulica atra*), skylark (*Alauda arvensis*), yellow wagtail (*Motacilla flava*) and meadow pipit (*Anthus pratensis*), with less frequent breeding records for snipe (*Gallinago gallinago*), little grebe (*Tachybaptus ruficollis*), mute swan (*Cygnus olor*), shelduck (*Tadorna tadorna*), reed bunting (*Emberiza schoeniclus*), oystercatcher (*Haematopus ostralegus*) and corn bunting (*Emberiza calandra*).

The interest of the site is further enhanced by the presence of a variety of aquatic and marsh plants in the pools and ditches, which include the flowering rush (*Butomus umbellatus*) and spiked sedge (*Carex spicata*), both rare species in Lancashire.

Appendix I. Jacobs Breeding Bird Survey Results Table – April, May and June 2020 Surveys

Key

Amber and Red Lists – Birds of Conservation Concern 4 (2015)

Sched 1 – Schedule 1 Wildlife and Countryside Act 1981 (as amended)

LBAP – Local Biodiversity Action Plan

NERC – Natural Environment and Rural Communities Act 2006: Section 41 List of species of principal importance

SPA – Qualifying species of the Ribble and Alt Estuaries Special Protection Area

Ramsar – Qualifying species of the Ribble and Alt Estuaries Ramsar Site

SSSI – Qualifying species of the Ribble and Alt Estuaries Site of Special Scientific Interest (SSSI) and/or Newton Marsh SSSI

Species	Scientific name	Visit No.			Conservation Status									
		1	2	3	Ribble and Alt Estuaries SPA	Ribble and Alt Estuary Ramsar	Ribble Estuary SSSI	Newton Marsh SSSI	WCA 1981 Schedule 1	BoCC 4 Red List	BoCC 4 Amber List	NERC Act 2006 S41 Species	Lancashire BAP	
Blackbird	<i>Turdus merula</i>	6	21	8										
Blackcap	<i>Sylvia atricapilla</i>	7	4	4										
Black-headed gull	<i>Chroicocephalus ridibundus</i>	2	2	1	Y	Y (noteworthy only)	Y				Y			
Blue tit	<i>Cyanistes caeruleus</i>	7	6	1										
Bullfinch	<i>Pyrrhula pyrrhula</i>	-	-	2							Y	Y		
Buzzard	<i>Buteo buteo</i>	5	2	2										
Canada goose	<i>Branta canadensis</i>	1	6	8										
Carrion crow	<i>Corvus corone</i>	3	9	5										
Chaffinch	<i>Fringilla coelebs</i>	9	16	1										
Chiffchaff	<i>Phylloscopus collybita</i>	7	2	9										
Coal tit	<i>Periparus ater</i>	1	1	-										
Collared dove	<i>Streptopelia decaocto</i>	-	1	3										
Common gull	<i>Larus canus</i>	-	-	1							Y			

Breeding Bird Survey Report

Species	Scientific name	Visit No.			Conservation Status								
		1	2	3									
					Ribble and Alt Estuaries SPA	Ribble and Alt Estuary Ramsar	Ribble Estuary SSSI	Newton Marsh SSSI	WCA 1981 Schedule 1	BoCC 4 Red List	BoCC 4 Amber List	NERC Act 2006 S41 Species	Lancashire BAP
Common tern	<i>Sterna hirundo</i>	-	2	3	Y	Y (noteworthy only)	Y				Y		
Coot	<i>Fulica atra</i>	3	3	-				Y					
Cormorant	<i>Phalacrocorax carbo</i>	-	1	7									
Curlew	<i>Numenius arquata</i>	2	1	-						Y		Y	
Dunnock	<i>Prunella modularis</i>	5	4	1							Y	Y	
Goldcrest	<i>Regulus regulus</i>	2	-	1									
Goldfinch	<i>Carduelis carduelis</i>	1	22	2									
Great black-backed gull	<i>Larus marinus</i>	-	-	5							Y		
Great spotted woodpecker	<i>Dendrocopos major</i>	-	2	-									
Great tit	<i>Parus major</i>	6	5	7									
Greenfinch	<i>Chloris chloris</i>	2	1	4									
Grey heron	<i>Ardea cinerea</i>	3	3	4									
Grey partridge	<i>Perdix perdix</i>	2	-	-						Y		Y	Y
Grey wagtail	<i>Motacilla cinerera</i>	-	-	1						Y			
Grey heron	<i>Ardea cinerea</i>	-	-	2									
Herring gull	<i>Larus argentatus</i>	1	-	-						Y		Y	
Hobby	<i>Falco subbuteo</i>	-	-	1					Y				
House martin	<i>Delichon urbicum</i>	7	4	2							Y		
House sparrow	<i>Passer domesticus</i>	1	6	1						Y		Y	Y
Jackdaw	<i>Corvus monedula</i>	6	6	3									

Breeding Bird Survey Report

Species	Scientific name	Visit No.			Conservation Status								
		1	2	3									
					Ribble and Alt Estuaries SPA	Ribble and Alt Estuary Ramsar	Ribble Estuary SSSI	Newton Marsh SSSI	WCA 1981 Schedule 1	BoCC 4 Red List	BoCC 4 Amber List	NERC Act 2006 S41 Species	Lancashire BAP
Jay	<i>Garrulus glandarius</i>	1	-	-									
Kestrel	<i>Falco tinnunculus</i>	3	1	3							Y		
Lapwing	<i>Vanellus vanellus</i>	9	1	1				Y		Y		Y	Y
Lesser black-backed gull	<i>Larus fuscus</i>	6	4	1 7	Y		Y				Y		
Lesser whitethroat	<i>Sylvia curruca</i>	-	1	-									
Long-tailed tit	<i>Aegithalos caudatus</i>	1	3	4									
Magpie	<i>Pica pica</i>	7	16	1									
Mallard	<i>Anas platyrhynchos</i>	2	13	2				Y			Y		
Mistle thrush	<i>Turdus viscivorus</i>	1	2	4						Y			
Moorhen	<i>Gallinula chloropus</i>	3	4	1				Y					
Mute swan	<i>Cyngus olor</i>	-	2	6				Y			Y		
Nuthatch	<i>Sitta europaea</i>	-	-	2									
Oystercatcher	<i>Haematopus ostralegus</i>	2	-	-	Y			Y			Y		
Pheasant	<i>Phasianus colchicus</i>	2	3	1									
Pied wagtail	<i>Motacilla alba</i>	3	1	6									
Red-legged partridge	<i>Alectoris rufa</i>	2	-	1									
Reed bunting	<i>Emberiza schoeniclus</i>	1	-	2				Y			Y	Y	Y
Reed warbler	<i>Acrocephalus scirpaceus</i>	-	3	1									

Breeding Bird Survey Report

Species	Scientific name	Visit No.			Conservation Status								
		1	2	3	Ribble and Alt Estuaries SPA	Ribble and Alt Estuary Ramsar	Ribble Estuary SSSI	Newton Marsh SSSI	WCA 1981 Schedule 1	BoCC 4 Red List	BoCC 4 Amber List	NERC Act 2006 S41 Species	Lancashire BAP
Robin	<i>Erithacus rubecula</i>	1	12	1									
Rook	<i>Corvus frugilegus</i>	3	-	1									
Skylark	<i>Alauda arvensis</i>	-	2	-				Y		Y		Y	Y
Snipe	<i>Gallinago gallinago</i>	-	1	-				Y			Y		
Song thrush	<i>Turdus philomelos</i>	6	10	1						Y		Y	Y
Sparrowhawk	<i>Accipiter nisus</i>	1	2	1									
Starling	<i>Sturnus vulgaris</i>	3	113	1						Y		Y	
Stock dove	<i>Columba oenas</i>	3	2	3							Y		
Swallow	<i>Hirundo rustica</i>	3	38	1									
Swift	<i>Apus apus</i>	-	-	1							Y		
Whitethroat	<i>Sylvia communis</i>	3	2	4									
Willow warbler	<i>Phylloscopus trochilus</i>	2	4	1							Y		
Woodpigeon	<i>Columba palumbus</i>	1	33	2									
Wren	<i>Troglodytes troglodytes</i>	6	26	1									
TOTAL					3	2 (both noteworthy only)	3	9	1	11	17	12	6

Appendix J. Population Status of Breeding Bird Species of Conservation Concern in Lancashire

All population information is taken from The State of Lancashire's Birds: An Atlas of the Breeding and Wintering Birds of Lancashire and North Merseyside 2007-2011 (White, *et al.*, 2013). The species listed below are included in at least one of the following; Council Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive'); Wildlife and Countryside Act 1981 (as amended); NERC Act 2006 Section 41 and/or BoCC4 (Eaton *et al.*, 2015).

*unless otherwise stated

Species	Scientific Name	Lancashire breeding pairs population estimates 2007-11*	Lancashire likely peak counts for species 2007-11*	Jacobs' breeding bird survey peak counts April – June inclusive 2020	% of Lancashire population estimate
Black-headed gull	<i>Chroicocephalus ridibundus</i>	16,000	32,000	2	<0.1
Bullfinch	<i>Pyrrhula pyrrhula</i>	2000	4000	2	<0.1
Common gull	<i>Larus canus</i>	No numbers	No numbers provided	1	n/a
Common tern	<i>Sterna hirundo</i>	650	1300	1	<0.1
Curlew	<i>Numenius arquata</i>	3000	6000	2	<0.1
Duncock	<i>Prunella modularis</i>	10,500	21,000	14	<0.1
Great black-backed gull	<i>Larus marinus</i>	25	50	5	10
Grey partridge	<i>Perdix perdix</i>	1250	2500	2	<0.1
Grey wagtail	<i>Motacilla cinerera</i>	650	1300	1	<0.1
Herring gull	<i>Larus argentatus</i>	1800	3600	1	<0.1
Hobby	<i>Falco subbuteo</i>	15	30	1	3.3
House martin	<i>Delichon urbicum</i>	4250	8500	28	0.32
House sparrow	<i>Passer domesticus</i>	35000	70,000	10	<0.1
Kestrel	<i>Falco tinnunculus</i>	600	1200	3	0.25
Lapwing	<i>Vanellus vanellus</i>	6500	13,000	13	0.1
Lesser black-backed gull	<i>Larus fuscus</i>	15000	30,000	17	0.13
Mallard	<i>Anas platyrhynchos</i>	3500	7000	26	0.37
Mistle thrush	<i>Turdus viscivorus</i>	3400	6800	4	<0.1
Mute swan	<i>Cygnus olor</i>	191	382	6	1.57
Oystercatcher	<i>Haematopus ostralegus</i>	2200	4400	2	<0.1
Reed bunting	<i>Emberiza schoeniclus</i>	3000	6000	2	<0.1
Skylark	<i>Alauda arvensis</i>	7000	14000	1	<0.1

Species	Scientific Name	Lancashire breeding pairs population estimates 2007-11*	Lancashire likely peak counts for species 2007-11*	Jacobs' breeding bird survey peak counts April – June inclusive 2020	% of Lancashire population estimate
Snipe	<i>Gallinago gallinago</i>	375	750	1	0.13
Song thrush	<i>Turdus philomelos</i>	6000	12000	17	0.14
Starling	<i>Sturnus vulgaris</i>	12000	24,000	196	0.8
Stock dove	<i>Columba oenas</i>	1700	3400	3	<0.1
Swift	<i>Apus apus</i>	1500	3000	16	0.53
Willow warbler	<i>Phylloscopus trochilus</i>	8000	16,000	4	<0.1

References for Appendix J

Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn, R., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A. and Gregory, R.D. 2015. Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 108, pp708-746296–341.

White, S., McCarthy, B., Dunstan, S., Martin, S., Harris, B., Hulme, G., and Marsh, P. 2013. *The State of Lancashire's Birds: An Atlas of the Breeding and Wintering Birds of Lancashire and North Merseyside 2007-2011*. Lancashire and Cheshire Fauna Society.