

A47 Blofield to North Burlingham Dualling

Scheme Number: TR010040

Volume 6

6.2 Environmental Statement Appendices **Appendix 8.5 – Wintering bird survey report**

APFP Regulation 5(2)(a)

Planning Act 2008

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

December 2020

Infrastructure Planning

Planning Act 2008

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

A47 Blofield to North Burlingham
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ENVIRONMENTAL STATEMENT APPENDICES
Appendix 8.5 Wintering bird survey report

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Table of contents

1.	Introduction	1
2.	Desk Study	7
3.	Methodology	13
4.	Field surveys	16
5.	Results	20
6.	Assessment and mitigation	22
7.	References	37

Tables

Table 2-1	All species recorded on the wintering bird survey	7
Table 2-2	Records of bird species and their designations and conservational value	10
Table 3-1	Bird species diversity criteria: The importance of an area based on the number of bird species recorded (Fuller 1980)	13
Table 3-2	Species value, terms and criteria	14
Table 4-1	Date and weather conditions of each survey	16
Table 4-2	Total species recorded which cited on European and UK legislation and of conservation concern	16
Table 4-3	Total species recorded which cited on European and UK legislation and of conservation concern	17
Table 4-4	Total species recorded which cited on European and UK legislation and of conservation concern	17
Table 4-5	Total species recorded which cited on European and UK legislation and of conservation concern	18
Table 4-6	Total species recorded which cited on European and UK legislation and of conservation concern	18
Table 4-7	Disturbance events	18
Table 5-1	Key species recorded, their designations, conservation status and total count per survey.	20
Table 6-1	Habitat requirement and nature conservation value of important species cited on Birds Directive Annex I, WCA 1, NERC, LBAP, BoCC Red/Amber and IUCN species of wintering birds.	24

1 Introduction

1.1. Background

1.1.1. In 2019, Wintering bird Surveys were undertaken as part of the A47 between Blofield and North Burlingham project. This is to inform the Environmental Statement (ES) Chapter at PCF Stage 3 for the A47 Blofield to North Burlingham Improvement Scheme.

1.1.2. The scheme improvements will:

- improve accessibility to and around the region, reducing congestion and delays to enable more reliable journey times
- improve safety performance for all road users, contributing to a 40% reduction target in accidents across Highways England's roads over the implemented schemes' first five years in operation
- provide alternative access to local roads
- improve the environmental impact of traffic along the A47 route, particularly for the communities in the six scheme areas
- support economic growth in the Peterborough, Norwich and Great Yarmouth areas by improving overall road capacity

1.1.3. This baseline report provides a summary of the results of the wintering bird surveys undertaken between Blofield to North Burlingham in January, February, November and December 2019. Impacts of the proposed development and proposals for mitigation which addressed in chapter six.

1.2. Scheme description and location

1.2.1. The site is located along the A47 between Blofield and North Burlingham, Norfolk and is located between grid ref TG 3349 1012 to the west and TG 3887 1019 to the east. It is proposed to:

- building a dual carriageway south of the existing A47
- connecting to the existing dual carriageway sections of the A47 to the east and west
- new, safer junctions at Yarmouth Road and the B1140:
 - a compact grade separated junction at B1140 with overbridge
 - new merge lane and closing the central reserve at Yarmouth Road Junction preventing right turns across traffic
 - new two way junction at Main Road, to the east of North Burlingham

- a new footway / cycleway connecting Blofield and North Burlingham and also across the B1140 junction
- a new overbridge east of Blofield
- returning the existing A47 to the local network
- introduction of lighting at the Yarmouth Road junction and a new lighting layout at the B1140 junction
- closure of an existing layby and provision of a new layby
- agricultural access track to south of new dual carriageway
- new drainage, boundary fencing, safety barriers and signage

1.2.2. The survey area comprises of the proposed route of the new road layout, with a buffer zone of 500m from the proposed new A47. The buffer is primarily the existing A47 and agricultural fields with associated hedgerows, stands of trees, small woodlands, farm buildings and residential properties.

1.3. Aims and objectives

1.3.1. The wintering bird surveys aim to determine which species are using the study area during winter and to assess its importance for supporting populations of notable bird species including:

- species protected under Schedule 1 of the Wildlife and Countryside Act (WCA) 1981, as amended
- species of principal importance for the purpose of conserving biodiversity covered under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006
- red and amber listed birds of conservation concern (BoCC) (Eaton *et al.*, 2015)

1.3.2. The data gathered will assist in determining the potential significant effects on wintering birds and the potential effects on assemblages through the following impacts:

Construction:

- habitat loss (direct impact)
- disturbance from construction, i.e. noise and visual disturbance (indirect impacts)

Operation:

- mortality of wintering birds e.g. traffic collisions (direct impact)

- reduced population size & overwintering success due to traffic noise and visual disturbance (indirect impact)

1.4. Relevant bird legislation

1.4.1. This legislation is presented in summary form and is intended for general guidance only. It is recommended the original documentation is referred to for detailed and definitive information. Web addresses can be found in chapter seven.

International Conventions

1.4.2. The Bonn Convention (1979) provides protection to migratory species and their habitats. There are a number of legally binding international agreements, including:

- African Eurasian Migratory Waterbird Agreement (AEWA)
- Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia
- Convention on the Conservation of Migratory Species (CMS)

1.4.3. The Bern Convention (1982) aims to ensure the protection of wild plant and animal species. The obligations of the Convention are transposed into national law by the Wildlife and Countryside Act 1981 (as amended). At the European level, the obligations are met by means of the Directive 2009/147/EC on the conservation of wild birds (the Birds Directive).

European legislation

1.4.4. The Birds Directive

- The European Union meets its obligations for bird species under the Bern Convention and Bonn Convention by means of Directive 2009/147/EC (Birds Directive) on the conservation of wild birds.
- The Council Directive 2009/147/EC on the conservation of wild birds provides for the conservation and management of all wild bird species naturally occurring in the European Union, their nests, eggs and habitats. The Birds Directive bans activities that directly threaten birds (e.g. deliberate killing and destruction of nests and young), regulates hunting of selected species, bans non-selective and large scale killing of birds, and promotes research for bird conservation and management. Article 4(4) of the Birds Directive requires that member states “should strive to avoid pollution or deterioration of habitats.” The Conservation of Habitats and Species (Amendment) Regulations 2017 provide a fuller transposition of the Birds Directive into English law. Regulation 8 introduces a new Regulation 9A to the Habitats Regulations for duties of appropriate authorities in relation to wild bird habitat. Regulation 9A(3) addresses the transposition of Article 2 of the Birds

Directive, while Regulation 9A(8), requiring competent authorities to “use all reasonable endeavours” to “avoid any pollution or deterioration of habitats of wild birds.”

- 1.4.5. Annex 1 of the EC Birds Directive also lists rare and vulnerable species of wild birds that are subject to special conservation measures.

UK and English Legislation

Wildlife and Countryside Act (1981)

- 1.4.6. The primary legislation relating to the protection of British birds lies within Part 1 of the Wildlife and Countryside Act (1981).
- 1.4.7. Under current legislation it is an offence to:
- kill, injure or take any wild bird
 - take, damage or destroy the nest of any wild bird while that nest is in use or being built
 - take or destroy an egg of any wild bird
- 1.4.8. Schedule 1 of the Act lists a number of species which are protected by special penalties at all times. In addition, the Act makes it an offence (subject to exceptions) to:
- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5
 - interfere with places used for shelter or protection by a wild animal
 - intentionally disturb animals occupying such places
 - the Act also prohibits certain methods of killing, injuring, or taking wild animals
- 1.4.9. In addition to statutory protection, some bird species have been identified within key documents as species of conservation concern.

UK Biodiversity Action Plan (UKBAP)

- 1.4.10. The UK Post 2010 Biodiversity Framework (2012) has now succeeded the UK Biodiversity Action Plan (UKBAP) (2007). Much of the work previously carried out by the UKBAP is now focussed at the country level. The UKBAP lists of priority species and habitats remain important and have been used to draw up the statutory lists of species of principal importance for the conservation of biodiversity in England and Scotland under the Natural Environment and Rural Communities Act (2006). The UK Biodiversity Action Plan (UKBAP) (2007) lists 59 bird species as priority species requiring conservation action, and

consequently action plans have been developed for the conservation of these species.

Local Biodiversity Action Plan (LBAP)

1.4.11. Norfolk Biodiversity Partnership lists 16 bird species as priority species requiring conservation action. Local Biodiversity Action Plans identify habitat and species conservation priorities at a local level (typically at the County level) and are usually drawn up by a consortium of local Government organisations and conservation charities.

National Network National Policy Statement (NNNPS)

1.4.12. The NNNPS outlines government planning policies to deliver nationally significant infrastructure projects (NSIPs) and provides planning guidance for these projects and the basis for the examination by the Examination Authority and decisions by the Secretary of State. The NNNPS states that development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.

1.5. Conservation status and guidance

Birds of Conservation Concern

1.5.1. The Birds of Conservation Concern 4: The Red List for Birds was published in December 2015. The document is commonly referred to as the UK Red List for birds. This is the fourth review of the status of birds in the UK, Channel Islands and the Isle of Man, and is an update of the last assessment in 2009. Using standardised criteria, 244 species with breeding, passage or wintering populations in the UK were assessed by experts from a range of bird non-governmental organisations (NGOs) and assigned to the red, amber or green lists of conservation concern.

- Red list species are those whose breeding population or range is rapidly declining (50% or more in the last 25 years), have declined historically and not recovered, or those of global conservation concern.
- Amber list species are those whose breeding population is in moderate decline (25 – 49% in the last 25 years), breed rarely, are of international importance, are localised species and of unfavourable conservation status in Europe.

The IUCN Red List of Threatened Species

- 1.5.2. The IUCN Red List of Threatened Species is widely recognized as the most comprehensive, objective global approach for evaluating the conservation status of plant and animal species. The introduction in 1994 of a scientifically rigorous approach to determine risks of extinction that is applicable to all species has become a world standard.

2. Desk Study

- 2.1.1. In works undertaken to date, wintering bird surveys have been completed and the findings of these reports will be summarised below.
- 2.1.2. Further to this, a data search was carried out using multi-agency geographical information for the countryside (MAGIC) maps for all statutory and non-statutory protected sites and these are summarised in chapter 2.3.

2.2. Previous studies

- 2.2.1. Previously, a wintering bird survey was undertaken by an ornithologist between January and March 2017. On each visit, the ornithologist walked a transect route around the 500m buffer survey area of the proposed new A47 road and recorded bird observations, such as birds in flight. The surveys were undertaken during suitable weather conditions and followed standard methods for bird monitoring including the use of British Trust for Ornithology (BTO) species codes and symbols for bird activity (Bibby *et al.*, 2000).
- 2.2.2. The surveys aimed to determine which species were using the study area during winter and to assess its importance for supporting populations of notable species including:
- species protected under Schedule 1 of the Wildlife and Countryside Act (WCA) 1981, as amended
 - species of Principal Importance for the purpose of conserving biodiversity covered under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006
 - red and amber listed Birds of Conservation Concern (BoCC) (Eaton *et al.*, 2015)
- 2.2.3. In total 23 species were recorded (Table 2-1). This included two species listed on the Wildlife & Countryside Act (1981) Schedule 1, 11 species on the red-listed species of conservation concern and seven species on the amber list.

Table 2-1 All species recorded on the wintering bird survey

BTO Code	Common Name	Scientific Name	Designation	Conservation Status
BF	Bullfinch	<i>Pyrrhula pyrrhula</i>	NERC	BoCC Amber
BH	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Birds Dir 2.2	BoCC Amber
BZ	Buzzard	<i>Buteo buteo</i>	Bonn	N/A
CM	Common Gull	<i>Larus canus</i>	Birds Dir 2.2	BoCC Amber
D	Dunnock	<i>Prunella modularis</i>	Bern, NERC	BoCC Amber

BTO Code	Common Name	Scientific Name	Designation	Conservation Status
FF	Fieldfare	<i>Turdus pilaris</i>	Birds Dir 2.2, WCA 1	BoCC Red
GP	Golden Plover	<i>Pluvialis apricaria</i>	Bonn, Birds Dir 1, 2.2	N/A
GV	Grey Plover	<i>Pluvialis squatarola</i>	Bonn, Birds Dir 2.2	BoCC Amber
HG	Herring Gull	<i>Larus argentatus</i>	Birds Dir 2.2, NERC	BoCC Red
HS	House Sparrow	<i>Passer domesticus</i>	NERC,	BoCC Red
K	Kestrel	<i>Falco tinnunculus</i>	N/A	N/A
L	Lapwing	<i>Vanellus vanellus</i>	Birds Dir 2.2, NERC,	BoCC Red
LI	Linnet	<i>Linaria cannabina</i>	Bern, NERC,	BoCC Red
M	Mistle Thrush	<i>Turdus viscivorus</i>	Birds Dir 2.2	BoCC Red
MA	Mallard	<i>Anas platyrhynchos</i>	Bonn, Birds Dir 2.1	BoCC Amber
MP	Meadow Pipit	<i>Anthus pratensis</i>	N/A	BoCC Amber
PW	Pied Wagtail	<i>Motacilla alba</i>	Bern	N/A
RE	Redwing	<i>Turdus iliacus</i>	Birds Dir 2.2, WCA 1	BoCC Red
S	Skylark	<i>Alauda arvensis</i>	Birds Dir 2.2, NERC, LBAP	BoCC Red
SG	Starling	<i>Sturnus vulgaris</i>	Birds Dir 2.2, NERC	BoCC Red
SN	Snipe	<i>Gallinago gallinago</i>	Bonn, Birds Dir 2.1	N/A
ST	Song Thrush	<i>Turdus philomelos</i>	Birds Dir 2.2, NERC, LBAP	BoCC Red
Y	Yellowhammer	<i>Emberiza citrinella</i>	Bern, NERC	BoCC Red

Bern – Bern Convention (1982)

Bonn – Bonn Convention (1979)

WCA1 – Wildlife and Countryside Act (1981) Schedule One

Birds Dir 1, 2.1 & 2.2 – EC Directive on the Conservation of Wild Birds (791409/EEC) Annex 1, 2.1 and 2.2

NERC – National Environment of Rural Communities Act Section 41

LBAP – Local Action Plan Species

BoCC Red – Birds of Conservation Concern Red List

BoCC Amber - Birds of Conservation Concern Amber List

IUCN NT – IUCN Near Threatened Status (European Status)

IUCN VU – IUCN Vulnerable Status (European Status)

2.3. Designed sites

2.3.1. A MAGIC search was undertaken for all statutory and non-statutory protected sites within a 500m buffer of the main A47.

Ramsar

2.3.2. The Broadland is a designated Ramsar site approximately 1.7km east of the proposed route covering an area of 5488ha. Broadland is a low-lying wetland complex straddling the boundaries between east Norfolk and north Suffolk. The area includes the river valley systems of the Bure, Yare and Waveney and their major tributaries. The open distinctive landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow.

2.3.3. The Broadland qualifies for Ramsar designation under the following criteria (not a complete list, but relevant to this bird report):

- Criterion 6 - Species/populations occurring at levels of international importance including:
 - Bewick's swan, (*Cygnus columbianus bewickii*) 196 individuals, representing an average of 2.4% of the GB population, wigeon (*Anas penelope*) 6769 individuals, representing an average of 1.6% of the GB population, gadwall (*Anas strepera*) 545 individuals, representing an average of 3.1% of the GB population and shoveler (*Anas clypeata*) 247 individuals, representing an average of 1.6% of the GB population.
- Noteworthy fauna; bird species currently occurring at levels of national importance, this includes:
 - Marsh harrier (*Circus aeruginosus*), coot (*Fulica atra*), cormorant (*Phalacrocorax carbo*), bittern (*Botaurus stellaris*), bean goose (*Anser fabalis*), white-fronted goose (*Anser albifrons*), teal (*Anas crecca*), pochard (*Aythya ferina*), smew (*Mergellus albellus*), hen harrier (*Circus cyaneus*), water rail (*Rallus aquaticus*) and ruff (*Philomachus pugnax*).

Special Protection Area (SPA)

2.3.4. The Broadland is also a designated SPA and covers 5508ha. The area includes the river valley systems of the Bure, Yare and Waveney and their major tributaries. The distinctive open landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow.

2.3.5. This site qualifies under Article 4 of the Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC:

- Shoveler (231) wintering
- Wigeon (10,071) wintering
- Gadwall (240) wintering
- Hen harrier (22) wintering
- Bewick's swan (600) wintering
- Whooper swan, *Cygnus cygnus* (100) wintering
- Ruff (96) wintering
- Bittern (2) breeding
- Marsh harrier (16) breeding

2.3.6. This site also qualifies under Article 4.1 of the Directive (79/409/EEC) during the breeding season the area regularly supports:

- Bittern, at least 10% of the GB breeding population
- Marsh harrier, 10.2% of the GB breeding population

2.3.7. Over winter the area regularly supports:

- Hen harrier, 2.9 % of the GB population
- Bewick's swan, at least 8.2% of the GB population
- Whooper swan, 1.8% of the GB population

2.3.8. The site also qualifies under Article 4 of the Directive (79/409/EEC)

- Gadwall, 0.8% of the population

2.4. Data search

2.4.1. A data search from the National Biodiversity Network (NBN) Atlas returned 47,227 bird records within 1km of the proposed new A47 road; however, due to licence restrictions, not all these records can be reported for commercial purposes.

2.4.2. NBN Atlas record sources under the following licences:

- Open Government Licence (OGL)
- Creative Commons Licence with Attribution (CC-BY)

2.4.3. A total of 302 records were identified which could be used for commercial purposes (as above). These have been summarised in Table 2-2.

Table 2-2 Records of bird species and their designations and conservational value

Common Name	Scientific Name	Number of Records	Latest Sighting	Designation and Conservation Value
Blackbird	<i>Turdus merula</i>	68	2009	Birds Dir 2.2
Blue tit	<i>Cyanistes caeruleus</i>	17	2009	N/A
Brambling	<i>Fringilla montifringilla</i>	2	2009	WCA1
Carrion crow	<i>Corvus corone</i>	1	2009	Birds Dir 2.2
Chaffinch	<i>Fringilla coelebs</i>	18	2009	N/A
Coal tit	<i>Periparus ater</i>	7	2009	N/A
Collared dove	<i>Streptopelia decaocto</i>	14	2009	Birds Dir 2.2

Common Name	Scientific Name	Number of Records	Latest Sighting	Designation and Conservation Value
Common gull	<i>Larus canus</i>	1	2009	Birds Dir 2.2, BoCC Amber
Common swift	<i>Apus apus</i>	1	2011	Bern, BoCC Amber
Continental robin	<i>Erithacus rubecula</i>	19	2009	Bern
Dunnock	<i>Prunella modularis</i>	13	2009	Bern, NERC, BoCC Amber
Feral pigeon	<i>Columba livia</i>	1	2009	Birds Dir 2.1
Goldfinch	<i>Carduelis carduelis</i>	8	2009	Bern
Great spotted Woodpecker	<i>Dendrocopos major</i>	1	2009	Bern
Great tit	<i>Parus major</i>	16	2009	N/A
Green woodpecker	<i>Picus viridis</i>	2	2009	Bern
Greenfinch	<i>Chloris chloris</i>	8	2009	Bern
Herring gull	<i>Larus argentatus</i>	1	2009	Birds Dir 2.2, NERC, BoCC Red, IUCN NT
House sparrow	<i>Passer domesticus</i>	29	2009	NERC, BoCC Red
Jackdaw	<i>Corvus monedula</i>	1	2009	Birds Dir 2.2
Jay	<i>Garrulus glandarius</i>	1	2009	Birds Dir 2.2
Long-tailed tit	<i>Aegithalos caudatus</i>	10	2009	N/A
Magpie	<i>Pica pica</i>	4	2009	Birds Dir 2.2
Mallard	<i>Anas platyrhynchos</i>	1	2009	Bonn, Birds Dir 2.1, BoCC Amber
Marsh tit	<i>Poecile palustris</i>	3	N/A	NERC, BoCC Red
Pheasant	<i>Phasianus colchicus</i>	3	2009	Birds Dir 2.1
Pied/White wagtail	<i>Motacilla alba</i>	3	2009	Bonn, Birds Dir 2.2, BoCC Amber
Red-legged partridge	<i>Alectoris rufa</i>	1	2009	Birds Dir 2.1
Song thrush	<i>Turdus philomelos</i>	1	2009	Bonn, Birds Dir 1, LBAP
Starling	<i>Sturnus vulgaris</i>	24	2009	Birds Dir 2.2, BoCC Amber
Woodpigeon	<i>Columba palumbus</i>	19	2009	Birds Dir 2.1
Wren	<i>Troglodytes troglodytes</i>	4	2009	Bern

Bern – Bern Convention (1982)
WCA 1 – Wildlife and Countryside Act (1981) Schedule One
Birds Dir 1 – EC Directive on the Conservation of Wild Birds (791409/EEC) Annex 1
NERC – National Environment of Rural Communities Act Section 41
LBAP – Local Action Plan Species
BoCC Red – Birds of Conservation Concern Red List
BoCC Amber - Birds of Conservation Concern Amber List
IUCN VU – IUCN Vulnerable Status (European Status)

3. Methodology

- 3.1.1. The site was visited on four occasions through the wintering bird season (January, February, November & December 2019). The ‘look-see’ method (*Gilbert et al., 1998*) was used, where all birds observed using the site were counted. The survey method was broadly based on that of territory mapping (*Bibby et al., 2000*) as used for the BTO Common Bird Census (CBC). Standard BTO species codes and symbols for bird activity were used to identify birds and denote activity where appropriate.
- 3.1.2. On each visit, the surveyor, an experienced ornithologist, used binoculars to survey the open habitat whilst walking along a pre-determined transect route (Appendix A) at a slow pace so that all birds could be located and recorded.
- 3.1.3. The number of species recorded in the area is a simple measure of diversity that can help indicate the importance at each season of the year. The areas importance in value can be determined by a number of factors including geographical location, the diversity of habitats present and size of the habitat. Fuller (1980) detailed the diversity criteria, for bird species diversity, as shown in Table 3-1.

Table 3-1 Bird species diversity criteria: The importance of an area based on the number of bird species recorded (Fuller 1980)¹

National Importance	Regional Importance	County Importance	Local Importance
85+	70-84	50-69	25-49

- 3.1.4. Fuller’s criteria and professional judgement have been used to assess the importance of the survey area for wintering birds. In addition to evaluating the area based on the wintering bird assemblages, consideration is given to the value of the area for the populations of individual key species that it supports. This was done by comparing the population present within the survey area with national and country wintering populations for certain species. National population estimates have been referred to as published in Musgrove *et al.* (2013).
- 3.1.5. As Fuller’s criteria was written in 1980, farmland bird species have continued to suffer a large-scale decline across the UK. Due to this, consideration of counts which are within the upper limits of each criteria should be carried out using professional judgement to determine whether the count should be upgraded into the lower limits of the next highest criteria.

¹ Although these criteria are principally concerned with breeding populations, they are used here as an indication of the importance of the wintering bird population.

3.1.6. The conservation value of individual species can be measured by two separate approaches: nature conservation value and conservation status. The Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on ecological impact assessment (CIEEM 2018), assesses nature conservation value within a geographical context. To attain each level of value, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in Table 3-2. In some cases, professional judgement may be required to increase or decrease the allocation of specific value, based upon local knowledge.

Table 3-2 Species value, terms and criteria

Species Value	Selection Criteria
International and European	<p>A species which is part of the cited interest of a SPA and which regularly occurs in internationally or nationally important numbers.</p> <p>A species which is present in internationally important numbers (>1% of international population).</p>
National	<p>A species which is part of the cited interest of an SSSI and which regularly occurs in nationally or regionally important numbers.</p> <p>A nationally important assemblage of breeding or over-wintering species.</p> <p>A species which is present in nationally important numbers (>1% UK population).</p> <p>Rare breeding species (<300 breeding pairs in the UK).</p>
Regional	<p>Species of principal importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in regionally important numbers.</p> <p>Species present in regionally important numbers (>1% of regional population).</p> <p>Sustainable populations of species that are rare or scarce within a region.</p> <p>Species on the BoCC red list and which regularly occur in regionally important numbers.</p>
County	<p>Species of principal importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006), which are not covered above and which regularly occur in county important numbers.</p> <p>Species present in county important numbers (>1% of county population).</p> <p>Sustainable populations of species that are rare or scarce within a county, or listed as priority species for nature conservation under the Scottish Biodiversity List.</p> <p>A site designated for its county important assemblage of birds (e.g. a SINC Site).</p> <p>Species on the BoCC Red List and which regularly occur in county important numbers.</p>
District	<p>Species of principal importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006), which are not covered above, and are rare in the locality or in the relevant natural area profile.</p>

Species Value	Selection Criteria
	<p>Species present in numbers just short of county importance.</p> <p>Sustainable populations of species which are rare or scarce within the locality.</p> <p>A site whose designation falls just short for inclusion in its county important assemblage of birds (e.g. a SINC Site).</p> <p>Other species on the BoCC red list and which are considered to regularly occur in district important numbers.</p>
Local	<p>Other species of conservation interest (e.g. all other species on the BoCC Red and Amber List and listed as of principle importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006) which are not covered above, regularly occurring in locally sustainable populations.</p>
Site	<p>All other BoCC green list, common and widespread species.</p>

3.2. Pre-survey constraints

- 3.2.1. The pre-designed survey transects were from the breeding bird survey transects undertaken in 2018.
- 3.2.2. The transects accessed private property after permission was granted and where possible access was along public rights of way surrounding the site. The transect route chosen targeted higher-value areas, rather than attempting to cover the entirety of the site. This is not considered to represent a significant limitation to the survey.
- 3.2.3. There is potential for species to be missed or go unnoticed due to the nature of wintering bird surveys and possibilities of birds not vocalising or being located in dense vegetation. There is also potential to miss nocturnal species.
- 3.2.4. The details of this report will remain valid for two years from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based upon.

4. Field surveys

4.1.1. The field surveys were undertaken during the wintering bird season (January February, November and December 2019) inclusive. All surveys were led by a specialist ornithological ecologist and assisted by fellow members of the ecology team.

4.2. Survey data and conditions

Table 4-1 Date and weather conditions of each survey

Survey Number	Date	Weather Conditions
Survey One – January 2019	23	Foggy start clearing to scattered cloud. Temperature -1 – 5°C. Wind N2
	24	Sunny with scattered clouds. Temperature -2 – 3°C. Wind SW2
Survey Two – February 2019	19	Bright with scattered cloud. Temperature 4-10°C. Wind SW4
	20	Bright with scattered cloud. Temperature 7-11°C. Wind SW3
Survey Three – November 2019	28	Overcast, drizzle showers. Temperature 9-10°C. Wind W3
	29	Partly sunny. Temperature 3-8°C. Wind NW2
Survey Four – December 2019	16	Scattered clouds. Temperature 6-8°C. Wind SW1
	17	Overcast, drizzle showers. Temperature 6-7°C. Wind SW1

4.3. Bird survey records

4.3.1. In total 59 species were recorded during the wintering bird season between January, February, November & December 2019 across the site. A breakdown of species and total individuals recorded per survey can be found in Appendix B. Full survey datasets can be provided on request.

Table 4-2 Total species recorded which cited on European and UK legislation and of conservation concern

Designation	Number of Species
Wildlife and Countryside Act	5
Birds Directive	4
NERC	11
BoCC Red List	12
BoCC Amber List	12
LBAP	3
IUCN Red List	6

Survey one – January 2019

4.3.2. Table 4-3 summarises the total number of species which are cited under legislation outlined in chapter one. Some species are cited on multiple legislations. A total of 53 species were observed.

Table 4-3 Total species recorded which cited on European and UK legislation and of conservation concern

Designation	Number of Species
Wildlife and Countryside Act	4
Birds Directive	3
NERC	10
BoCC Red List	12
BoCC Amber List	11
LBAP	3
IUCN Red List	6

Survey two – February 2019

4.3.3. Table 4-4 summarises the total number of species which are cited under legislation outlined in chapter one. Some species are cited on multiple legislations. A total of 49 species were observed.

Table 4-4 Total species recorded which cited on European and UK legislation and of conservation concern

Designation	Number of Species
Wildlife and Countryside Act	2
Birds Directive	1
NERC	10
BoCC Red List	11
BoCC Amber List	11
LBAP	3
IUCN Red List	5

Survey three – November 2019

4.3.4. Table 4-5 summarises the total number of species which are cited under legislation outlined in chapter one. Some species are cited on multiple legislation. A total of 46 species were observed.

Table 4-5 Total species recorded which cited on European and UK legislation and of conservation concern

Designation	Number of Species
Wildlife and Countryside Act	2
Birds Directive	1
NERC	6
BoCC Red List	9
BoCC Amber List	9
LBAP	2
IUCN Red List	5

Survey four – December 2019

4.3.5. Table 4-6 summarises the total number of species which are cited under legislation outlined in chapter one. Some species are cited on multiple legislation. A total of 34 species were observed.

Table 4-6 Total species recorded which cited on European and UK legislation and of conservation concern

Designation	Number of Species
Wildlife and Countryside Act	2
Birds Directive	0
NERC	9
BoCC Red List	9
BoCC Amber List	5
LBAP	2
IUCN Red List	5

4.4. Disturbance events

4.4.1. Disturbance was recorded at numerous points during the bird survey. The main disturbance events include the following detailed in Table 4-7.

Table 4-7 Disturbance events

Activity	Time	Level of Disturbance
Agricultural Operations	Occasional activities from ploughing, herbicide application, fertiliser application, reseeding etc.	Negligible – mainly game birds moving between field boundaries.
Bird Scaring	Regular use of gas guns throughout the transect.	High – Large scale flushes of woodpigeons across the site. Passerines in cover crops also flushed
Dog Walkers	Occasional chasing of flocks of birds, and alarm calls heard by birds on footpaths when dogs were present.	Low – alarm calls and low-level flushing from areas adjacent to footpaths

Activity	Time	Level of Disturbance
Game Keeping	Regular shooting activities and gamekeepers driving around estates.	Moderate – flocks of woodpigeons flushed by gunshots and game birds seen to flush.
Arboriculture Operation	Occasional chainsaw operations in woodland areas.	Low – mainly a reduction in bird activity including vocalising.

4.5. Survey constraints

- 4.5.1. During the second survey, access was withheld from landholding located at TG351097 due to agriculture operations. This meant that certain areas along the transect route were not assessed for wintering birds. Most of this landholding was able to be observed from adjacent land, and therefore, it is not considered a constraint on the results.

5. Results

5.1. Wintering bird survey

- 5.1.1. A total of 59 species were recorded within the site boundary during the surveys. Of the 59 species: 12 are red-listed, 12 are amber-listed, five are listed on WCA Schedule 1, four are listed on the Birds Directive and 11 are cited on NERC Act.
- 5.1.2. Table 5-1 outlines the key species wintering on site (cited on the Birds Directive Annex I, WCA Schedule One, the NERC Act, LBAP Birds of Conservation Concern and listed on IUCN). This information is displayed spatially in Appendix C. Full survey results are provided in Appendix B.

Table 5-1 Key species recorded, their designations, conservation status and total count per survey.

Common Name	Scientific Name	Designation	Conservation Status	Total Individuals			
				Survey One	Survey Two	Survey Three	Survey Four
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Birds Dir 2.2	BoCC Amber	252	25	40	75
Bullfinch	<i>Pyrrhula pyrrhula</i>	NERC, UKBAP	BoCC Amber	3	1	0	0
Common Gull	<i>Larus canus</i>	Birds Dir 2.2	BoCC Amber	15	84	5	0
Dunnock	<i>Prunella modularis</i>	Bern, NERC, UKBAP	BoCC Amber	6	14	6	5
Fieldfare	<i>Turdus pilaris</i>	Birds Dir 2.2, WCA 1	BoCC Red, IUCN LC	12	27	48	89
Goldcrest	<i>Regulus regulus</i>	0	IUCN LC (NT)	4	10	8	1
Golden Plover	<i>Pluvialis apricaria</i>	Bonn, Birds Dir 1, 2.2	0	16	0	0	0
Great Black-backed Gull	<i>Larus marinus</i>	Birds Dir 2.2	BoCC Amber	1	1	1	0
Greenshank	<i>Tringa nebularia</i>	Bonn, Birds Dir 2.2, WCA 1	BoCC Amber	0	0	0	1
Herring Gull	<i>Larus argentatus</i>	Birds Dir 2.2, NERC,	BoCC Red, IUCN NT	12	8	9	8
House Sparrow	<i>Passer domesticus</i>	NERC,	BoCC Red	16	38	15	14
Lapwing	<i>Vanellus vanellus</i>	Birds Dir 2.2, NERC,	BoCC Red, IUCN VU	38	0	0	5
Lesser Black-backed Gull	<i>Larus fuscus</i>	Birds Dir 2.2	BoCC Amber	3	3	4	0
Linnet	<i>Linaria cannabina</i>	Bern, NERC,	BoCC Red	84	381	89	32
Mallard	<i>Anas platyrhynchos</i>	Bonn, Birds Dir 2.1	BoCC Amber	15	2	2	0

Common Name	Scientific Name	Designation	Conservation Status	Total Individuals			
				Survey One	Survey Two	Survey Three	Survey Four
Marsh Harrier	<i>Circus aeruginosus</i>	Bonn, Birds Dir 1, WCA 1	BoCC Amber	1	0	0	0
Meadow Pipit	<i>Anthus pratensis</i>	0	BoCC Amber, IUCN NT	2	31	67	1
Mistle Thrush	<i>Turdus viscivorus</i>	Birds Dir 2.2	BoCC Red	34	3	13	1
Peregrine	<i>Falco peregrinus</i>	Bern, Bonn, Birds Dir 1, WCA 1	0	0	1	0	0
Pink-footed Goose	<i>Anser brachyrhynchus</i>	Bonn, Birds Dir 2.2	BoCC Amber	0	2	204	0
Redwing	<i>Turdus iliacus</i>	Birds Dir 2.2, WCA 1	BoCC Red, IUCN NT	63	63	2	0
Reed Bunting	<i>Emberiza schoeniclus</i>	Bern, NERC,	BoCC Amber	1	9	0	1
Skylark	<i>Alauda arvensis</i>	Birds Dir 2.2, NERC,	BoCC Red	9	7	60	9
Song Thrush	<i>Turdus philomelos</i>	Birds Dir 2.2, NERC,	BoCC Red	5	5	5	0
Sparrowhawk	<i>Accipiter nisus</i>	Bonn, Birds Dir 1	0	0	2	2	0
Starling	<i>Sturnus vulgaris</i>	Birds Dir 2.2, NERC,	BoCC Red	64	12	67	1
Stock Dove	<i>Columba oenas</i>	Birds Dir 2.2	BoCC Amber	10	7	22	0
Woodcock	<i>Scolopax rusticola</i>	Birds Dir 2.1,	BoCC Red	1	1	0	0
Yellowhammer	<i>Emberiza citrinella</i>	Bern, NERC,	BoCC Red	7	5	0	2

Designation

Bern – Bern Convention (1982)

Bonn – Bonn Convention (1979)

WCA 1 – Wildlife and Countryside Act (1981) Schedule One

Birds Dir 1 – EC Directive on the Conservation of Wild Birds (791409/EEC) Annex I

NERC – Environment and Rural Communities Act (2006)

LBAP – Local Biodiversity Action Plan Species

Conservation Status

BoCC Red – Birds of Conservation Concern Red List

BoCC Amber - Birds of Conservation Concern Amber List

IUCN VU – IUCN Vulnerable Status (European Status)

IUCN NT – IUCN Near Threatened Status (European Status)

6. Assessment and mitigation

6.1. Bird assemblages

- 6.1.1. The overall assemblage of bird species recorded on site was typical of the range of habitat which dominates the site including hedgerow, woodland, scrub habitat and agricultural habitat.
- 6.1.2. Fuller (1980) devised a standard where the importance of an area can be assessed by the number of bird species recorded (Table 3-1). The species list for the whole site was 59. This places the site within the range of county importance.

6.2. Species value level

- 6.2.1. On comparing the wintering bird data obtained with national and county populations outlined by Musgrove *et al.* (2013) and in the Norfolk Bird and Mammal Report 2017 (produced by Norfolk and Norwich Naturalist Society) with the guidance on ecological impact assessment (Table 3-2), most of the species recorded are resident and regular wintering species within the region. At the species value level, the site is considered to be of local conservation value.
- 6.2.2. Pink-footed Goose is mentioned in the Information Sheet for Ramsar Wetlands (RIS) for Broadland. However, it is mentioned under the heading "Species/populations identified subsequent to designation for possible future consideration under criterion 6". Although they are not yet considered qualified for the Ramsar citation, this species has been assessed as a cited species of the Ramsar in Table 6-1.

6.3. Impact of habitat change or loss

- 6.3.1. The impact on wintering bird species across the site arising from the effects of the proposed works is based upon an understanding of each species individual requirements for winter foraging and roosting.
- 6.3.2. The species recorded on site that are considered most sensitive to impacts from habitat change are species which are listed under Annex I of the Bird Directive, birds which are cited on the Birds of Conservation Concern red and amber list and those on the Local Biodiversity Action Plan. The habitat requirements, species status during the surveys and nature conservation value are summarised in Table 6-1. In addition, residual impacts arising from the proposed works through habitat loss or change have also been assessed for these species.

- 6.3.3. It is considered that impacts to other species that are wintering on the site are expected to be no greater than those listed in Table 6-1.

Table 6-1 Habitat requirement and nature conservation value of important species cited on Birds Directive Annex I, WCA 1, NERC, LBAP, BoCC Red/Amber and IUCN species of wintering birds.

Species	Habitat Requirement	Survey Account	Nature Conservation Value ²	Unmitigated Impacts
Black-headed Gull	Highly gregarious in winter both when feeding and roosting. Commonly feeds on worms, insects, fish and carrions both on agricultural land and wetland habitats during the winter months.	Birds were present during Survey one & two, with numbers decreasing by survey two by 908% mainly due to birds moving away to other feeding areas and nesting grounds. Numbers remained low during survey three and four	Local	Loss of arable land and wetland habitat across the site will reduce foraging habitat.
Bullfinch	Winters mainly in broad-leaved woodland, but also common in dense hedgerow and thickets. Adult birds are herbivores although invertebrates are important for fledgelings.	Birds were recorded on Survey one and two.	Local	Loss of hedgerow sections and scrub habitat within the site which currently offers foraging habitat.
Common Gull	Widespread across agriculture, urban parkland and wetland habitats during winter months. The main food source is invertebrates with some fish.	Birds were recorded throughout the site during survey one two and three.	Local	Loss of arable land and wetland habitat across the site will reduce foraging habitat.
Duncock	Commonly occupies a wide variety of scrub grown situations. Has adapted to field hedgerows, farms, railway embankments, parks, gardens and vacant urban land. Feeds mainly on insects but small seeds are an important winter food.	Birds were recorded throughout the site during all four surveys.	Local	Loss of hedgerow and scrub areas within the site which currently offers foraging and roosting habitat. Loss of arable land will reduce suitable foraging habitat
Fieldfare	Found in both arable and grassland agricultural land, hedges and trees. Can also utilise urban areas feeding on ornamental berry trees. Feeds mainly on insects, worms and berries.	Small flocks were present feeding in agricultural fields during all four surveys.	Local	Loss of hedgerow and scrub areas within the site which currently offers foraging and roosting habitat. Loss of arable land will reduce suitable foraging habitat.

² Based on criteria set out in table 3-2 and professional judgement.

Species	Habitat Requirement	Survey Account	Nature Conservation Value ²	Unmitigated Impacts
Goldcrest	Found mainly in coniferous woodlands and parks with large mature trees although they can range during the winter months when food is in short supply. Feeds mainly on small invertebrates such as spiders and moth eggs.	Birds were recorded in suitable woodland habitats throughout the site during all four surveys.	Local	Loss of woodland habitat across the site will reduce wintering foraging and roosting habitat.
Golden Plover	In winter months feeds in lowland fields eating worms, beetles and insects.	Two flocks containing nine and seven birds were observed feeding in fields at TG384100 and TG348104.	Local	Loss of arable land and wetland habitat across the site will reduce foraging habitat.
Great Black-backed Gull	In winter months birds can range widely and can associate with other gulls feeding near suburban areas, open countryside and wetland habitats. Feeds on shellfish, birds and carrion	Individuals birds were seen flying over the site on survey one, two and three.	Local	Loss of arable land and wetland habitat across the site will reduce foraging habitat.
Greenshank	On passage found inland around lakes and freshwater marshes, as well as at coastal wetlands and estuaries.	A single bird was flushed off a small flood during survey four.	Local	Loss of wetland habitat will reduce foraging opportunities.
Herring Gull	Commonly found across countryside and urban areas, feeding on open fields, wetlands, lakes and parkland. A varied diet of carrion, seeds, fruits, birds, small mammals, insects and fish.	Small numbers were recorded during both all four surveys.	Local	Loss of arable land and wetland habitat across the site will reduce foraging habitat.
House Sparrow	Often associated with humans and will typically avoid dense vegetation. Usually, avoid arable crops and areas lacking in shrubs and trees other than during feeding.	Birds were recorded in good numbers across the site on all four surveys.	Local	Loss of scrub and hedgerow habitat across the site which currently offers roosting habitat.
Lapwing	Often found on moist open lowland ground. Often associates with farmland preferring spring-sown crops. Feeds on worms and invertebrates	A flock of 31 birds were observed flying east towards Blofield during survey one and a smaller flock of seven were observed flying north over the A47 near TG346096. A flock of five birds were recorded during survey four.	Local	Loss of arable land and wetland habitat across the site will reduce foraging habitat.
Lesser Black-backed Gull	Increasingly common in urban habitats and also found in open countryside feeding in fields and wetland habitats. They are omnivorous and have a varied diet.	Three birds were observed during survey one, two and three feeding in and flying over open agricultural fields.	Local	Loss of arable land and wetland habitat across the site will reduce foraging habitat.

Species	Habitat Requirement	Survey Account	Nature Conservation Value ²	Unmitigated Impacts
Linnet	Found in various habitats such as open countryside, heathland, rough ground, farmland hedge, saltmarshes and parks and gardens. Feeding mainly on seeds and insects.	Birds were recorded on all four surveys. During survey two one large flock in excess of 200 birds were observed in freshly cut winter cover crop at TG 34911 10214.	Local	Removal of scrub & hedgerows will reduce roosting habitat across the site. The loss of arable land will reduce foraging habitat.
Mallard	Commonly found in suitable wetland habitats and urban areas such as parks.	Birds were recorded in survey one, two and three.	Local	Loss of wetland areas across the site will reduce foraging habitat.
Marsh Harrier	Mainly favouring reedbeds and marshes, birds will range over farmland habitat close to wetlands. Feeds mainly on small birds and mammals	A single bird was seen flying north along Lingwood Road at TG359094	International ³	Loss of agricultural land and wetland habitats across the site will remove foraging availability.
Meadow Pipit	Feeds in open habitats, either uncultivated or low-intensity agriculture and moorland, but also occurs in low numbers in arable croplands. Feeds mostly on insects with some seeds in the winter months.	Two birds were recorded on the first survey, with numbers increasing to 31 on survey two. This could be due to birds which moved further south during the winter move back to upland areas later, feeding up in agricultural fields on route. A peak count was recorded during the late autumn movement in November with 67 birds recorded. Number dropped to a single bird in survey four.	Local	Removal of grassland and agricultural areas will reduce suitable roosting and foraging habitat.
Mistle Thrush	Commonly found in woodland and woodland edge, farmland, parkland and gardens. Diet consists mainly of invertebrates, with berries in autumn and winter.	Birds were recorded in open habitat across the site during all four surveys.	Local	Loss of woodland edge and parkland will reduce roosting and foraging habitat.
Peregrine	In winter birds often move from the coastal areas to open grassland and marshland. They also are becoming more regular to suburban areas and a pair annually breed on Norwich Cathedral since 2009. They mainly eat Medium-sized birds, such as wading birds, pigeons and small ducks.	A single bird was seen on survey one sitting on a raised banking north of the A47 at TG 33915 10707.	Local	Loss of foraging habitat across the site and removal of hedgerows which contain prey.

³ Marsh Harrier is a species on the Broadlands SPA citation, and therefore, fulfils the International species requirement outlined in Table 3-2.

Species	Habitat Requirement	Survey Account	Nature Conservation Value ²	Unmitigated Impacts
Pink-footed Goose	Found mainly on agricultural fields throughout the winter and grazing marshes. Feeds mainly on grain, winter cereal, potatoes and grass.	Two birds were observed on survey two flying south over Blofield at TG339093. During survey three, three flocks of bird (87, 67 & 50) were recorded flying NW over the scheme.	International	Loss of arable areas where species can forage over winter.
Redwing	Found in both arable and grassland agricultural land, hedges and trees. Can also utilise urban areas feeding on ornamental berry trees. Feeds mainly on insects, worms and berries.	Flocks of redwing were present during survey one, two and three, often associating with flocks of fieldfare feeding on open agricultural habitat.	Local	Loss of hedgerow and scrub areas within the site which currently offers foraging and roosting habitat. Loss of arable land will reduce suitable foraging habitat
Reed Bunting	Found mainly in farmland and wetland habitats including ditch edges, crops and set aside. Young are fed solely on invertebrates until they fledge. During winter birds feed mainly on seed.	A single bird was recorded on survey one, with numbers increasing to nine during survey two. A single bird was recorded during survey four.	Local	Loss of hedgerow habitat will reduce roosting habitat and the loss of arable land will remove foraging habitat.
Skylark	Species which prefer open farmland habitats where short, sparse vegetation provides cover and foraging habitat. Feeds on plant and animal products with insects being especially important in the summer.	Birds were recorded during all four surveys, all feeding in the open agricultural grass fields.	Local	Loss of arable areas where species are currently feeding over winter.
Song Thrush	Often associated with thick hedgerows, native woodland and damp ground, including grazed pasture. The main food source is worms and snails when insect larvae and berry crops are not available.	Birds were recorded across the site during both survey one, two and three.	Local	Loss of hedgerows across site which currently offers roosting and foraging habitat.
Sparrowhawk	Found in woodland habitats near open fields and can also be seen in suburban areas hunting around gardens. Mainly feed on birds.	Two birds were recorded during survey two and three. One bird was seen hunting across agricultural land, and another bird was located perched in a small area of trees.	Local	Loss of woodland habitat, hedgerows and farmland will reduce the feeding availability for this species.
Starling	Found in wide-ranging habitats from open countryside, suburban areas such as gardens and parkland and saltmarsh. Feeds mainly on invertebrates and fruit.	Flocks of birds were recorded on all four surveys.	Local	Loss of foraging habitat across the site and removal of trees with suitable roosting cavities.

Species	Habitat Requirement	Survey Account	Nature Conservation Value ²	Unmitigated Impacts
Stock Dove	In winter small flocks form to feed in agricultural areas, mainly where arable stubble and cover crops remain where they feed mainly on seeds.	Birds were recorded during survey one two and three, with numbers decreasing slightly during the early spring and late winter.	Local	Loss of foraging habitat across the site.
Woodcock	Found mainly in deciduous and mixed woodland and young conifer plantations where it feeds and rests amongst the leaf litter or bracken. Feeds mainly on worms, beetles, spiders, caterpillars, fly larvae and small snails.	Individuals birds were recorded on survey one and two.	Local	The loss of woodland habitat will reduce suitable wintering habitat for this species.
Yellowhammer	Traditionally based on edges of open areas or forest and scrub. Found wintering extensively across cultivated land with hedges and plantations. Feeds mainly on seeds, with an increase in invertebrates during the summer.	Small numbers were recorded on survey one, two and four.	Local	The loss of arable fields will greatly reduce foraging opportunities. Removal of hedgerows will also reduce the roosting habitat.

6.4. Construction impacts

- 6.4.1. Construction operations are likely to disturb bird species of nature conservation interest using the site for roosting and foraging. The construction of the new road will result in land-take, fragmentation and general habitat loss.
- 6.4.2. The loss of some habitats during the construction phase cannot be mitigated and therefore, it is highly likely that birds currently using the site will move away to find alternative suitable winter feeding-grounds.
- 6.4.3. Hedgerows are also likely to be removed, increasing the fragmentation of corridors across the site. This will be unfavourable to many bird species recorded and will likely see a reduction in hedgerow species during the construction phase of the project.
- 6.4.4. Visual and noise disturbance from machinery required during the construction phase will likely lead to desertion or avoidance of the area by wintering bird species.

6.5. Operational impacts

- 6.5.1. Birds are generally considered likely to be affected by an increase in traffic and can be particularly susceptible to noise from a new road.
- 6.5.2. Post-construction monitoring of the site should be undertaken to establish if there has been an increase in road casualties as a result of the proposed works. A wintering bird survey replicating this survey methodology is recommended to establish whether there has been a reduction in population size from the works. If a reduction is observed, further mitigation will be required.

6.6. Mitigation measures

- 6.6.1. The following mitigation measures are suggested.
 - Areas across the site which require vegetation clearance during the winter months should be staggered to allow the natural food resources to be consumed by the birds remaining on site.
 - To prevent disturbance to off-site habitats, areas around the site boundary should be buffered where possible using retained hedgerows or artificial screening to reduce visual disturbance.
 - Where fragmentation of hedgerows occurs, movable screens should be placed across the gaps created where possible to allow birds to continue using the hedgerow as a corridor without disturbance.
 - Site compounds should be screened off from the surrounding habitat to reduce visual disturbance.

- It is important that the hedgerows, scrub and standard trees are retained and managed for their value to birds and other wildlife.

6.7. Mitigation and conservation compensation

6.7.1. To ensure biodiversity is retained, protected and enhanced within the development resulting in a net gain for wintering birds, the following is suggested:

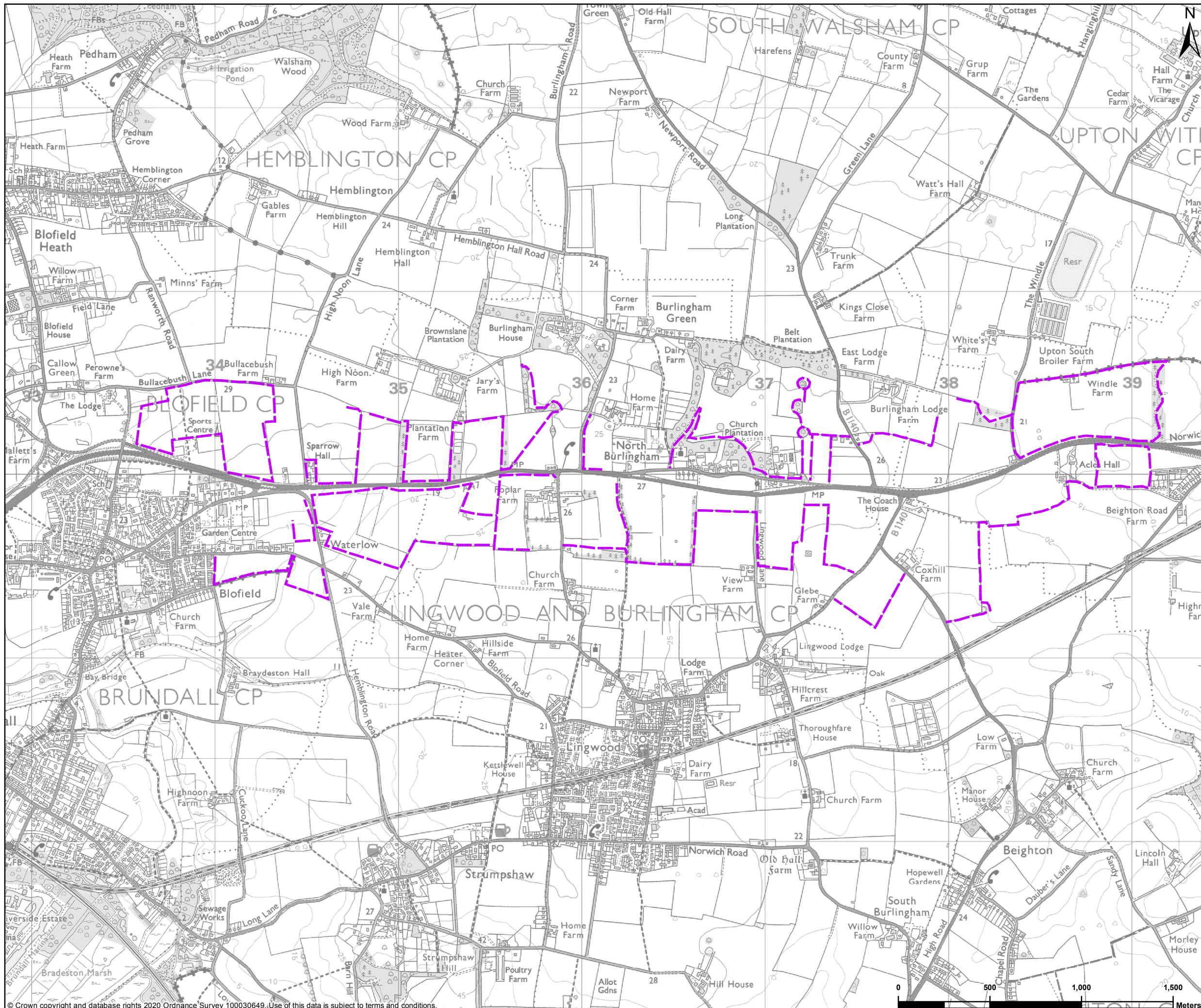
- Hedgerow gaps are to be infilled with at least double hedge planting, ideally triple.
- Ensure all trees around the site are protected and retained where possible and any trees are afforded a root protection zone.
- Native planting should be encouraged to attract invertebrates and berry-rich species should be planted away from the new road in the hedgerow and scrub replanting plans.
- Wetlands should be suitably replanted with reeds to help increase populations of invertebrates.
- Areas of grassland should be allowed to be unmanaged, to enable the establishment of rough grassland habitats which will increase both invertebrate and small mammal populations.
- Areas of set aside should be allowed along pre-designated boundary hedgerows and sown with seed rich plant species to provide suitable foraging for wintering birds to promote species moving back into the site after works have completed.

7. References

- Bern (1982) [online] <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104> [accessed March 2019]
- Bibby, C.J., N.D. Burgess & D.A. Hill (2000): *Bird Census Techniques* (Second Edition). London: Academic Press
- Birds Directive (2009) [online] <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:EN:PDF> [accessed March 2019]
- Bonn (1979) [online] <https://www.cms.int/en/page/appendix-i-ii-cms> [accessed March 2019]
- CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland*, Chartered Institute of Environmental Management, Winchester.
- Department of the Environment (1981) *Wildlife and Countryside Act 1981* (as amended) [online] www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810069_en_1 [Accessed March 2019]
- Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove, A., Noble, D., Stroud, D. and Gregory, R. (2015) *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*. *British Birds* 108: 708 - 746.
- Fuller, R.J. (1980) A Method for Assessing the Ornithological Importance of Sites for Nature Conservation *Biological Conservation* 17:229-239
- Gilbert, G., Gibbons, D.W., and Evans, J. (1998). *Bird Monitoring Methods-a manual of techniques for key UK species*. RSPB, Sandy.
- Highways England (2014) *A47 corridor improvement programme* [online] <http://roads.highways.gov.uk/projects/a47-corridor-improvement-programme/> [Accessed March 2019]
- International Union for Conservation of Nature (2017) *The IUCN Red list of Threatened Species* [online] <http://www.iucnredlist.org/> [accessed March 2019]
- Musgrove, A., Aebischer, N., Eaton, M., Hearn, S., Newson, S., Noble, D., Parsons, M., Risely, K. & Stroud, D. (2013) *Population estimates of birds in Great Britain and the United Kingdom*. *British Birds* 106:64-100.
- National Planning Policy Framework (2019) [online] <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [accessed March 2019]
- Natural Environment and Rural Communities Act (2006) [online] <https://www.legislation.gov.uk/ukpga/2006/16/contents> [accessed March 2019]

- Norfolk and Norwich Naturalist Society (2017) Norfolk Bird and Mammal Report 2017, Volume 50, Part 2
- Norfolk Local Biodiversity Action Plan (2011) [online] <http://www.norfolkbiodiversity.org/actionplans/> [accessed April 2019]
- UK Post 2010 Biodiversity Framework (2012) JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) UK Post-2010 Biodiversity Framework. [online] <http://jncc.defra.gov.uk/page-6189> [accessed March 2019]

Annex A: Transect Route



LEGEND

- Wintering bird survey transect route



P01	17/12/2020	FIRST EDITION	PC	MY	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD

DESIGNER

SWECO

CONTRACTOR

GallifordTry

CLIENT

**highways
england**

PROJECT TITLE

A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE

PCF STAGE 3

DRAWING TITLE

ANNEX A - WINTERING BIRD SURVEYS
TRANSECT ROUTES

SUITABILITY

FOR INFORMATION

SHEET SIZE	SCALE	STATUS
A3	1:20,000	S2

DRAWING NUMBER

HE551490-GTY-EBD-000-DR-GI-30018

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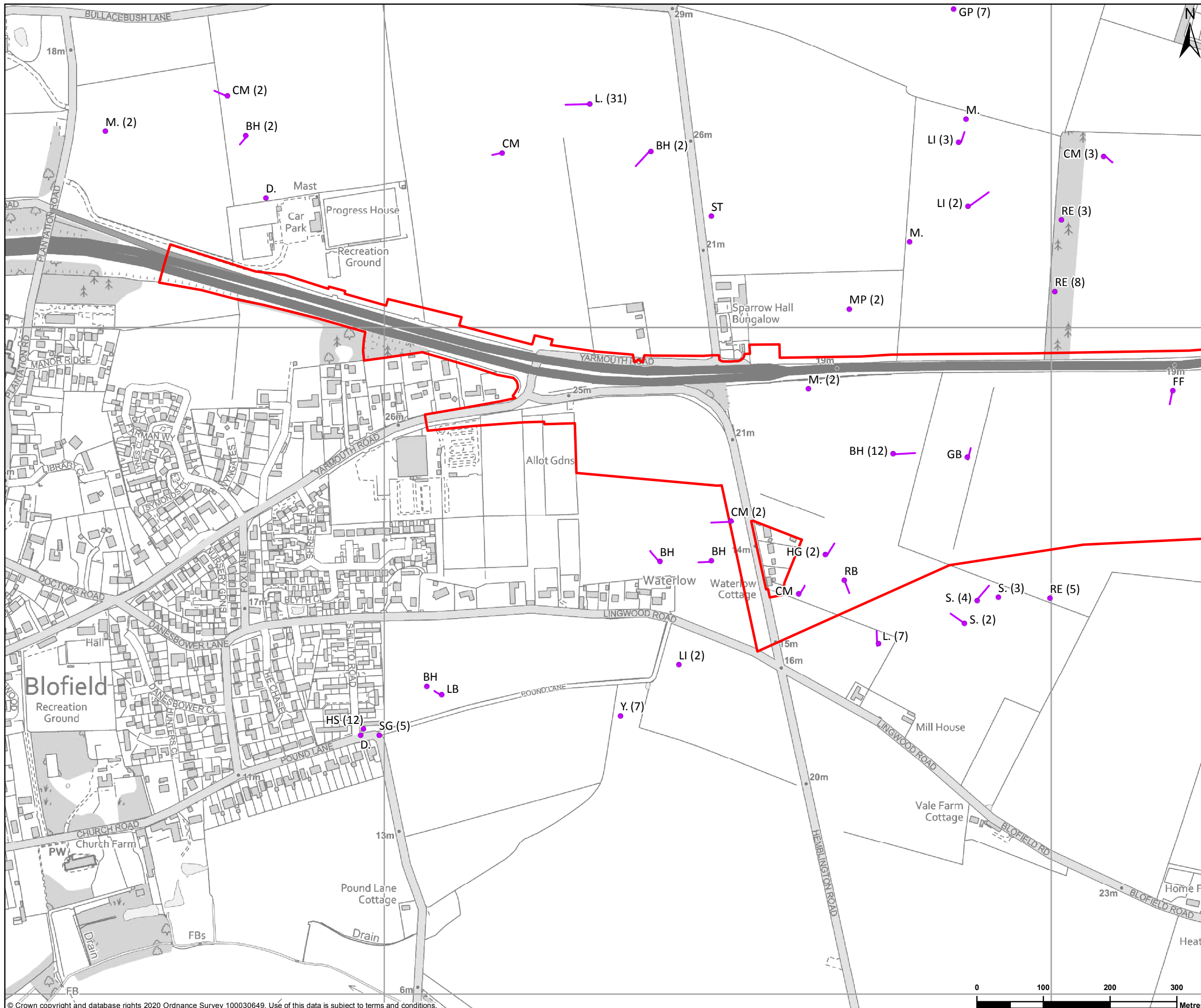
Annex B: Full wintering bird data

Common Name	Scientific Name	Designation	Conservation Status	Total Individuals			
				Survey One	Survey Two	Survey Three	Survey Four
Blackbird	Turdus merula	Birds Dir 2.2	0	105	54	46	26
Black-headed Gull	Chroicocephalus ridibundus	Birds Dir 2.2	BoCC Amber	252	25	40	75
Blue Tit	Cyanistes caeruleus	0	0	79	60	52	22
Bullfinch	Pyrrhula pyrrhula	NERC, UKBAP	BoCC Amber	3	1	0	0
Buzzard	Buteo buteo	Bonn	0	5	7	7	4
Canada Goose	Branta canadensis	Birds Dir 2.1	0	50	0	0	0
Carrion Crow	Corvus corone	Birds Dir 2.2	0	79	56	89	23
Chaffinch	Fringilla coelebs	0	0	29	59	63	29
Coal Tit	Parus ater	0	0	2	0	0	0
Collared Dove	Streptopelia decaocto	Birds Dir 2.2	0	9	8	5	0
Common Gull	Larus canus	Birds Dir 2.2	BoCC Amber	15	84	5	0
Dunnock	Prunella modularis	Bern, NERC, UKBAP	BoCC Amber	6	14	6	5
Feral Pigeon	Columba livia domestica	0	0	8	5	8	0
Fieldfare	Turdus pilaris	Birds Dir 2.2, WCA 1	BoCC Red, IUCN LC	12	27	48	89
Goldcrest	Regulus regulus	0	IUCN LC (NT)	4	10	8	1
Golden Plover	Pluvialis apricaria	Bonn, Birds Dir 1, 2.2	0	16	0	0	0
Goldfinch	Carduelis carduelis	Bern	0	52	45	43	36
Great Black-backed Gull	Larus marinus	Birds Dir 2.2	BoCC Amber	1	1	1	0
Great Spotted Woodpecker	Dendrocopos major	Bern	0	2	2	2	3
Great Tit	Parus major	0	0	57	57	15	7

Common Name	Scientific Name	Designation	Conservation Status	Total Individuals			
				Survey One	Survey Two	Survey Three	Survey Four
Green Woodpecker	<i>Picus viridis</i>	Bern	0	1	0	1	0
Greenfinch	<i>Chloris chloris</i>	Bern	0	5	11	2	0
Greenshank	<i>Tringa nebularia</i>	Bonn, Birds Dir 2.2, WCA 1	BoCC Amber	0	0	0	1
Herring Gull	<i>Larus argentatus</i>	Birds Dir 2.2, NERC,	BoCC Red, IUCN NT	12	8	9	8
House Sparrow	<i>Passer domesticus</i>	NERC,	BoCC Red	16	38	15	14
Jackdaw	<i>Coloeus monedula</i>	Birds Dir 2.2	0	14	64	29	2
Jay	<i>Garrulus glandarius</i>	Birds Dir 2.2	0	7	10	5	0
Kestrel	<i>Falco tinnunculus</i>	0	0	2	1	5	0
Lapwing	<i>Vanellus vanellus</i>	Birds Dir 2.2, NERC,	BoCC Red, IUCN VU	38	0	0	5
Lesser Black-backed Gull	<i>Larus fuscus</i>	Birds Dir 2.2	BoCC Amber	3	3	4	0
Linnet	<i>Linaria cannabina</i>	Bern, NERC,	BoCC Red	84	381	89	32
Long-tailed Tit	<i>Aegithalos caudatus</i>	0	0	22	13	41	6
Magpie	<i>Pica pica</i>	Birds Dir 2.2	0	14	17	27	10
Mallard	<i>Anas platyrhynchos</i>	Bonn, Birds Dir 2.1	BoCC Amber	15	2	2	0
Marsh Harrier	<i>Circus aeruginosus</i>	Bonn, Birds Dir 1, WCA 1	BoCC Amber	1	0	0	0
Meadow Pipit	<i>Anthus pratensis</i>	0	BoCC Amber, IUCN NT	2	31	67	1
Mistle Thrush	<i>Turdus viscivorus</i>	Birds Dir 2.2	BoCC Red	34	3	13	1
Nuthatch	<i>Sitta europaea</i>	0	0	0	1	1	2
Peregrine	<i>Falco peregrinus</i>	Bern, Bonn, Birds Dir 1, WCA 1	0	1	0	0	0
Pheasant	<i>Phasianus colchicus</i>	Birds Dir 2.1	0	23	20	65	36

Common Name	Scientific Name	Designation	Conservation Status	Total Individuals			
				Survey One	Survey Two	Survey Three	Survey Four
Pied Wagtail	Motacilla alba	Bern	0	30	25	47	5
Pink-footed Goose	Anser brachyrhynchus	Bonn, Birds Dir 2.2	BoCC Amber	0	2	204	0
Raven	Corvus corax	0	0	1	0	0	0
Red-legged Partridge	Alectoris rufa	Birds Dir 2.1	0	159	64	217	39
Redwing	Turdus iliacus	Birds Dir 2.2, WCA 1	BoCC Red, IUCN NT	63	63	2	0
Reed Bunting	Emberiza schoeniclus	Bern, NERC,	BoCC Amber	1	9	0	1
Robin	Erithacus rubecula	Bern	0	45	55	16	20
Rook	Corvus frugilegus	Birds Dir 2.2	0	8	2	13	0
Skylark	Alauda arvensis	Birds Dir 2.2, NERC,	BoCC Red	9	7	60	9
Snipe	Gallinago gallinago	Bonn, Birds Dir 2.1	0	0	0	1	0
Song Thrush	Turdus philomelos	Birds Dir 2.2, NERC,	BoCC Red	5	5	5	0
Sparrowhawk	Accipiter nisus	Bonn, Birds Dir 1	0	0	2	2	0
Starling	Sturnus vulgaris	Birds Dir 2.2, NERC,	BoCC Red	64	12	67	1
Stock Dove	Columba oenas	Birds Dir 2.2	BoCC Amber	10	7	22	0
Treecreeper	Certhia familiaris	0	0	0	3	0	2
Woodcock	Scolopax rusticola	Birds Dir 2.1,	BoCC Red	1	1	0	0
Woodpigeon	Columba palumbus	Birds Dir 2.1	0	386	458	524	187
Wren	Troglodytes troglodytes	Bern	0	12	12	6	5
Yellowhammer	Emberiza citrinella	Bern, NERC,	BoCC Red	7	5	0	2

Annex C: Distribution map of key species



LEGEND

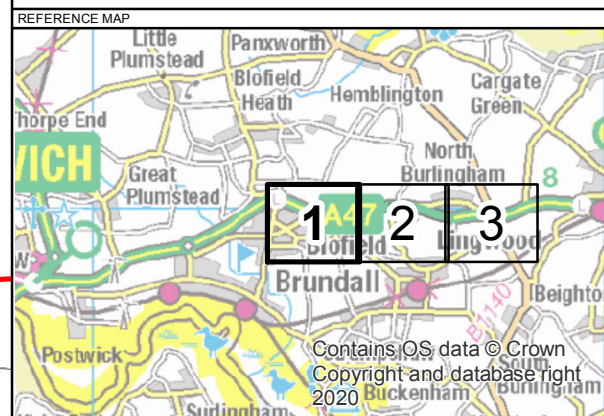
- Red line boundary
- Wintering bird survey flight path

Wintering bird survey results

- Sighting activity* (Quantity >1)

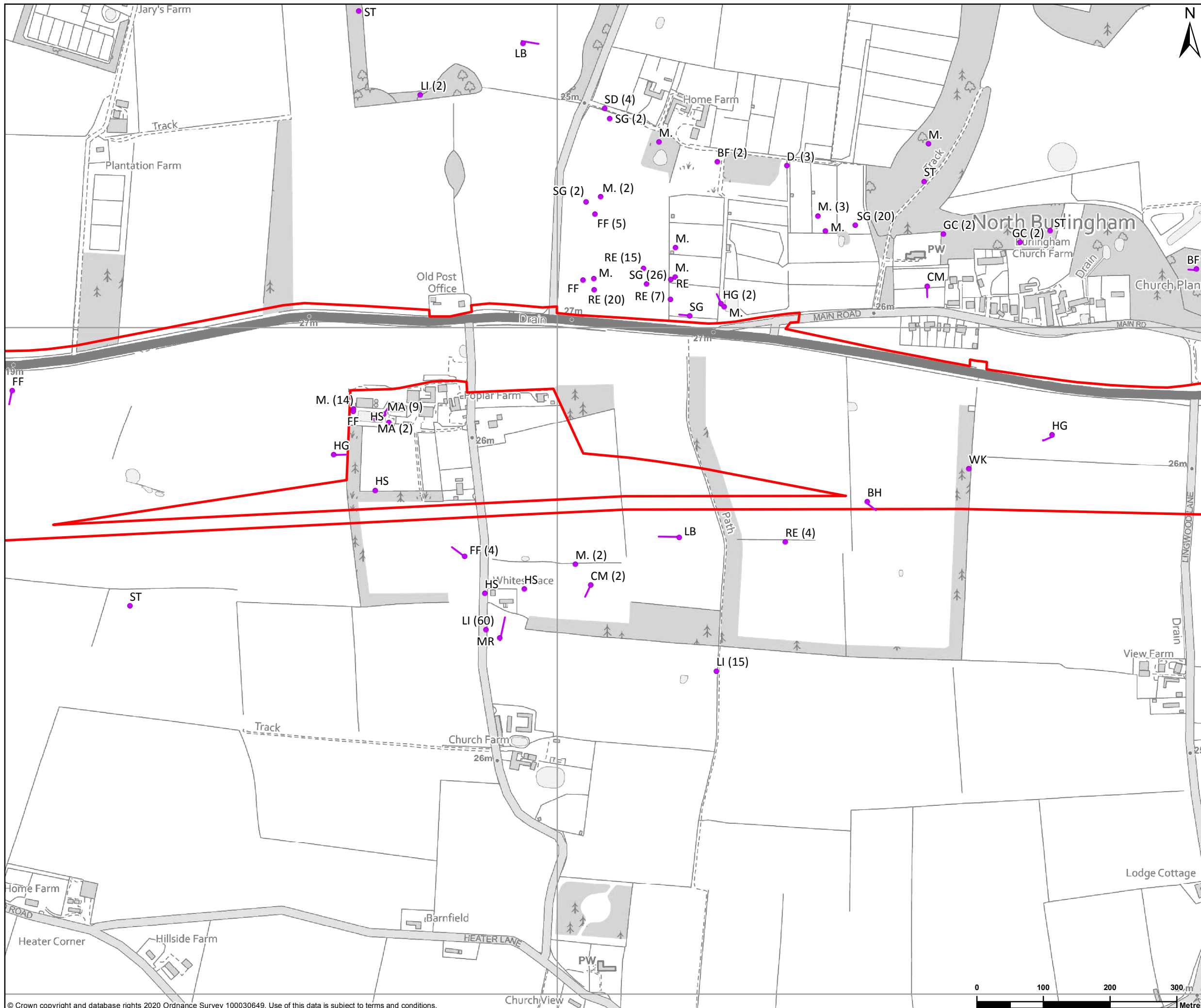
Note:
* Present common names and respective BTO codes shown in the following table.

Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Mallard	MA
Bullfinch	BF	Marsh Harrier	MR
Common Gull	CM	Meadow Pipit	MP
Dunnock	D.	Mistle Thrush	M.
Fieldfare	FF	Peregrine	PE
Goldcrest	GC	Redwing	RE
Golden Plover	GP	Reed Bunting	RB
Great Black-backed Gull	GB	Skylark	S.
Herring Gull	HG	Song Thrush	ST
House Sparrow	HS	Starling	SG
Lapwing	L.	Stock Dove	SD
Lesser Black-backed Gull	LB	Woodcock	WK
Linnet	LI	Yellowhammer	Y.



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A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (JANUARY 2019) SHEET 1 OF 3 TR010040/APP/6.3					
SUITABILITY					
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SHEET SIZE	A3	SCALE	1:5,500	STATUS	S2
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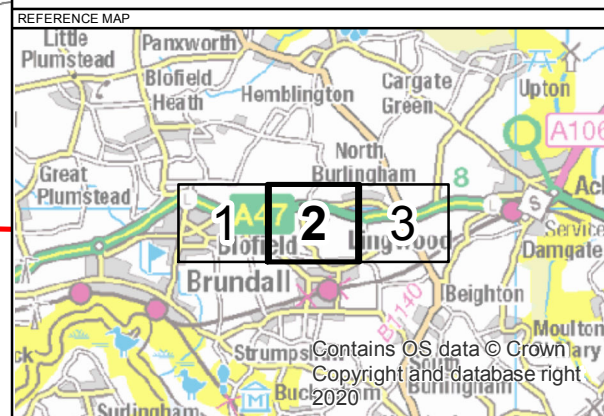


LEGEND

- Red line boundary
- Wintering bird survey flight path
- Wintering bird survey results
 - Sighting activity* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

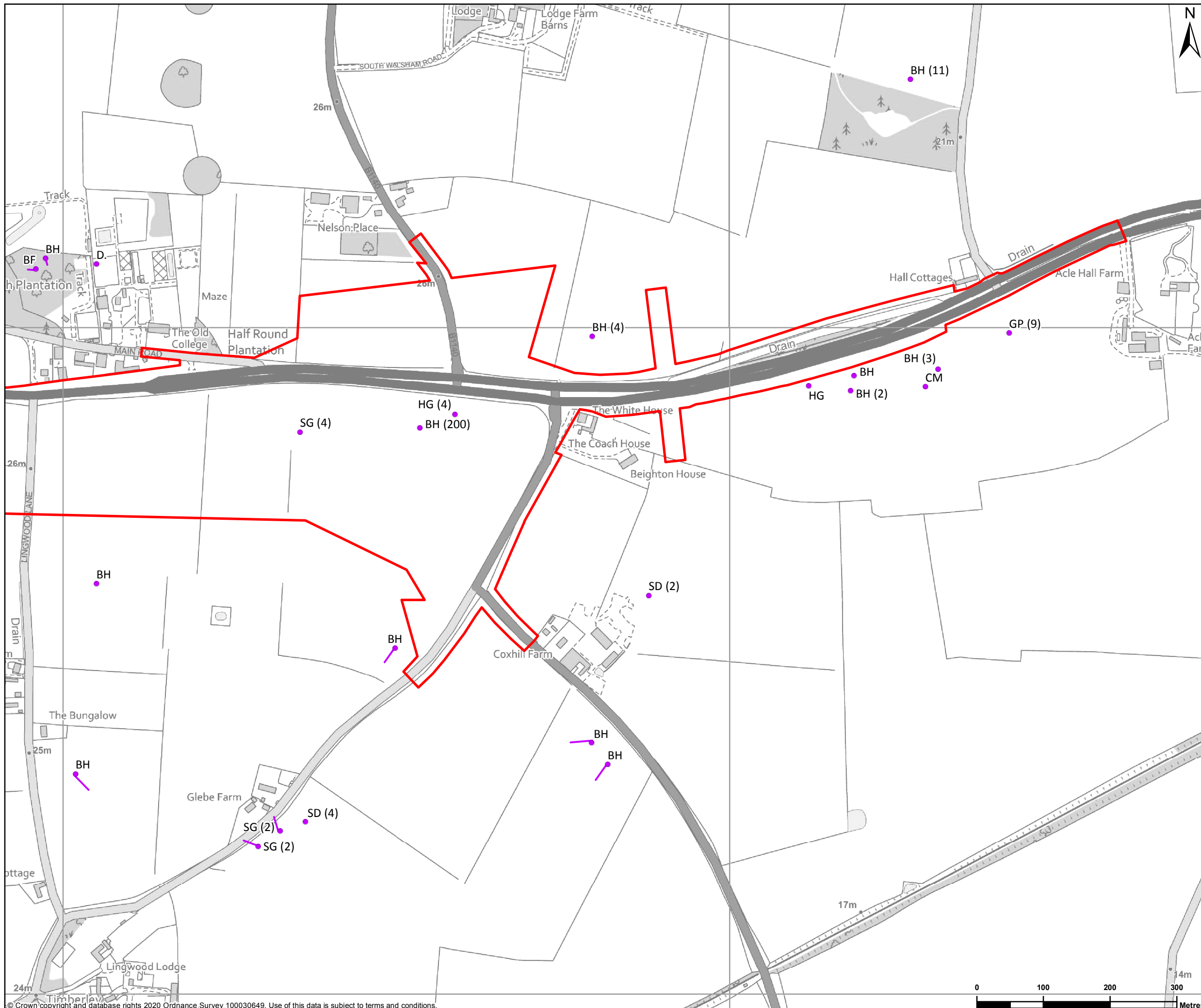
Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Mallard	MA
Bullfinch	BF	Marsh Harrier	MR
Common Gull	CM	Meadow Pipit	MP
Duncock	D.	Mistle Thrush	M.
Fieldfare	FF	Peregrine	PE
Goldcrest	GC	Redwing	RE
Golden Plover	GP	Reed Bunting	RB
Great Black-backed Gull	GB	Skylark	S.
Herring Gull	HG	Song Thrush	ST
House Sparrow	HS	Starling	SG
Lapwing	L.	Stock Dove	SD
Lesser Black-backed Gull	LB	Woodcock	WK
Linnet	LI	Yellowhammer	Y.



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PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (JANUARY 2019) SHEET 2 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE	SCALE		STATUS		
A3	1:5,500		S2		
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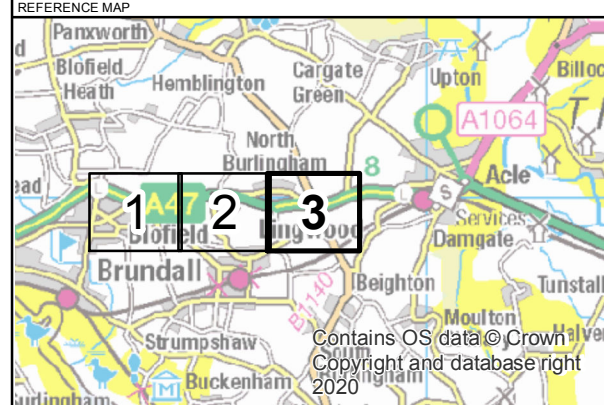


LEGEND

- Red line boundary
- Wintering bird survey flight path
- Wintering bird survey results
 - Sighting activity* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

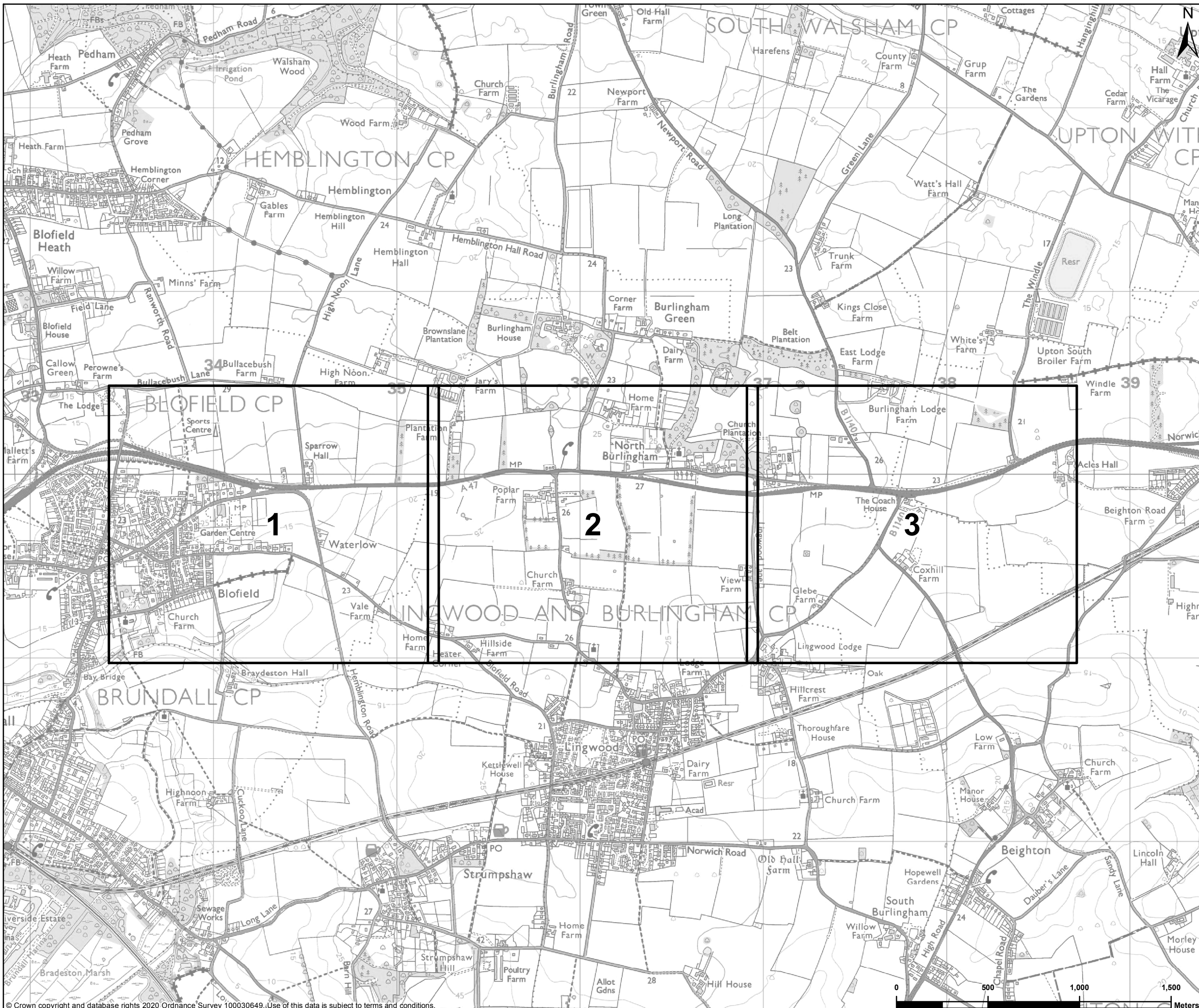
Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Mallard	MA
Bullfinch	BF	Marsh Harrier	MR
Common Gull	CM	Meadow Pipit	MP
Duncock	D.	Mistle Thrush	M.
Fieldfare	FF	Peregrine	PE
Goldcrest	GC	Redwing	RE
Golden Plover	GP	Red Bunting	RB
Great Black-backed Gull	GB	Skylark	S.
Herring Gull	HG	Song Thrush	ST
House Sparrow	HS	Starling	SG
Lapwing	L.	Stock Dove	SD
Lesser Black-backed Gull	LB	Woodcock	WK
Linnet	LI	Yellowhammer	Y.



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PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (JANUARY 2019) SHEET 3 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE		SCALE		STATUS	
A3		1:5,500		S2	
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A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE

PCF STAGE 3

DRAWING TITLE

**ANNEX A - WINTERING BIRD SURVEY RESULTS
(JANUARY 2019)
KEY PLAN
TR010040/APP/6.3**

SUITABILITY

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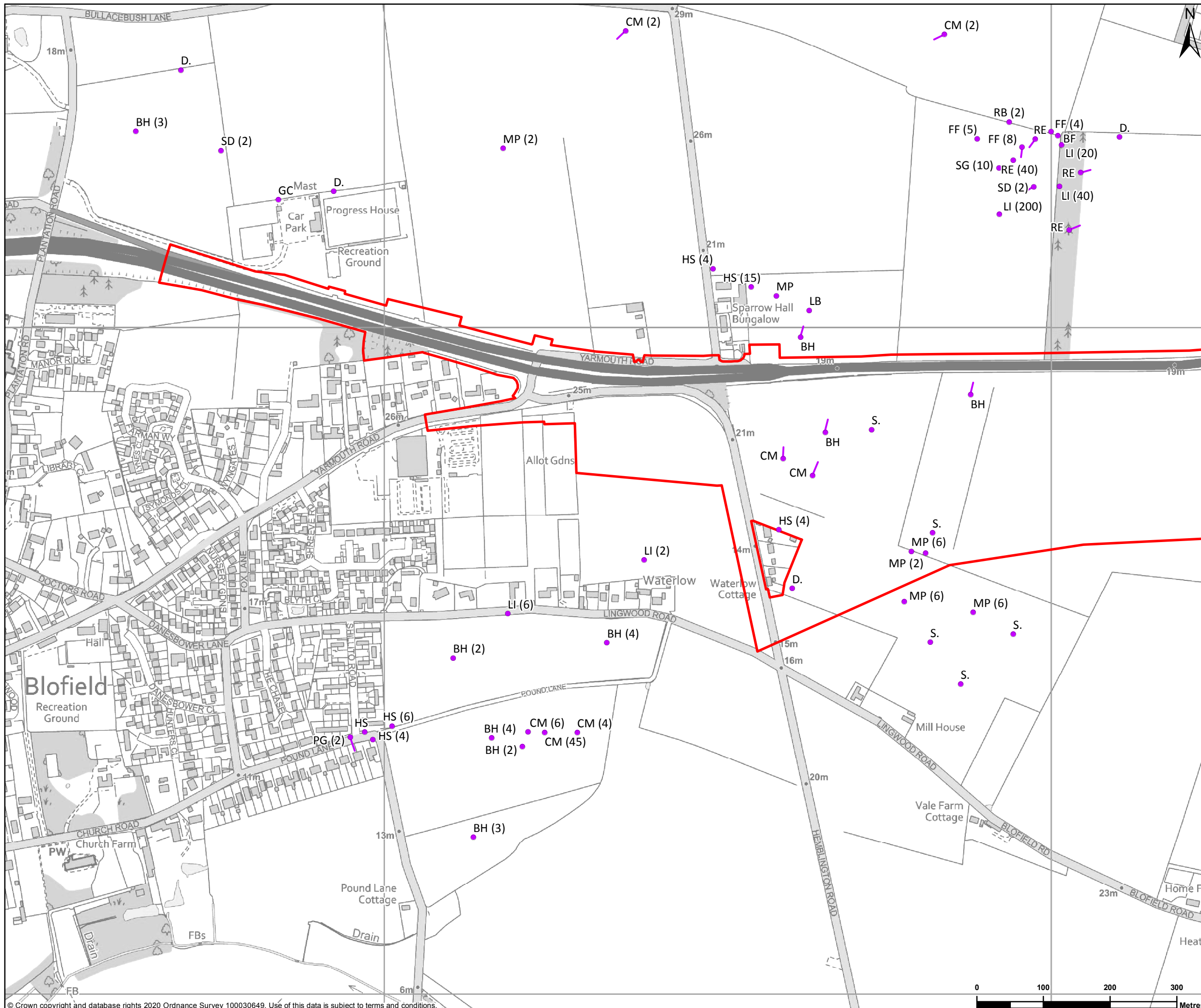
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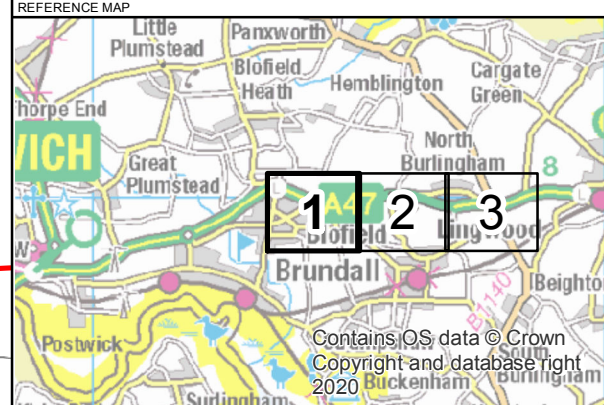


LEGEND

- Red line boundary
- Wintering bird survey flight path
- Wintering bird survey results
 - Sighting activity* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

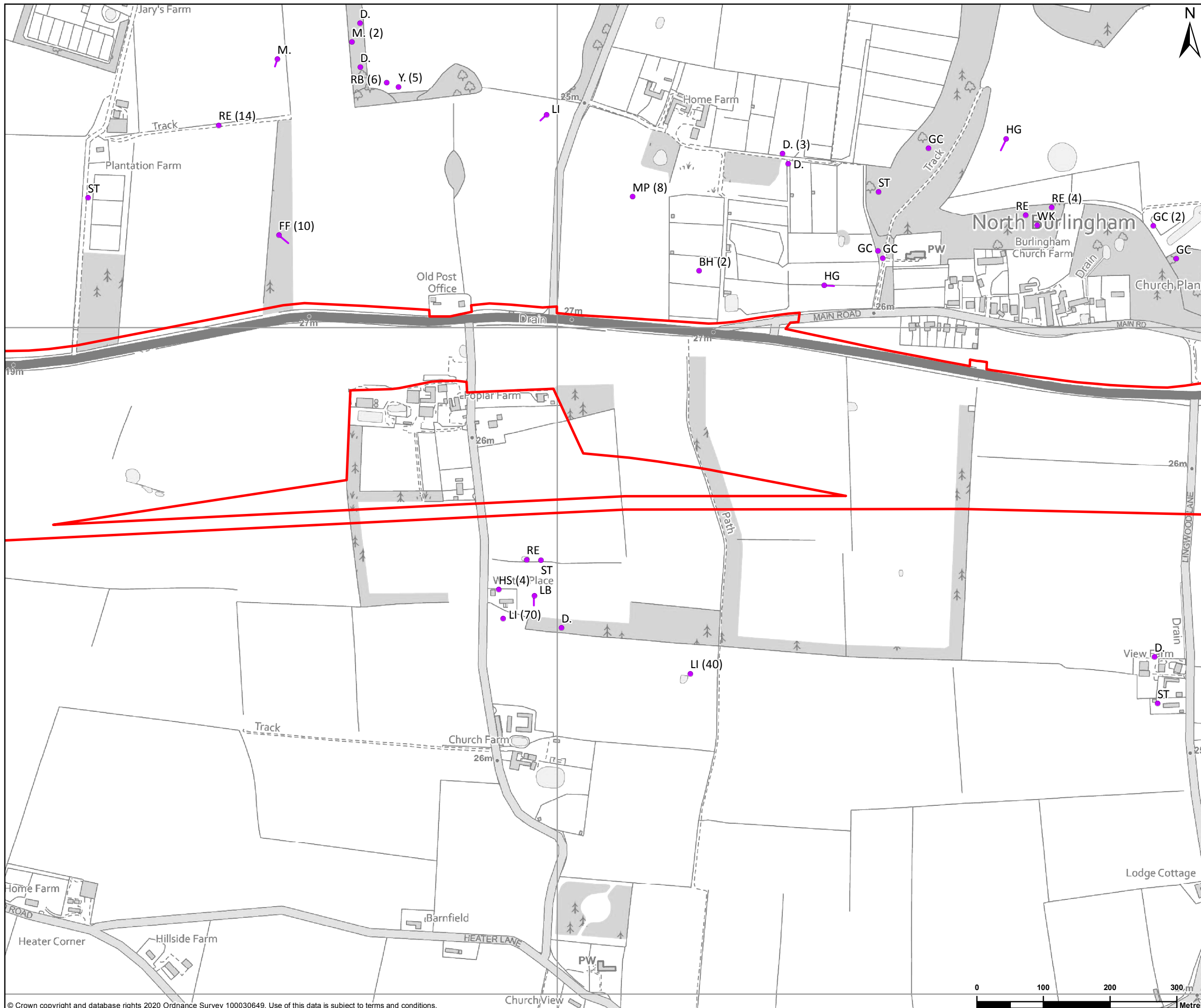
Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Meadow Pipit	MP
Bullfinch	BF	Mistle Thrush	M.
Common Gull	CM	Pink-footed Goose	PG
Dunnock	D.	Redwing	RE
Fieldfare	FF	Reed Bunting	RB
Goldcrest	GC	Skylark	S.
Great Black-backed Gull	GB	Song Thrush	ST
Herring Gull	HG	Sparrowhawk	SH
House Sparrow	HS	Starling	SG
Lesser Black-backed Gull	LB	Stock Dove	SD
Linnet	LI	Woodcock	WK
Mallard	MA	Yellowhammer	Y.



P01	17/12/2020	FIRST EDITION	PC	BM	DW
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DESIGNER					
CONTRACTOR					
CLIENT					
PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (FEBRUARY 2019) SHEET 1 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE		SCALE		STATUS	
A3		1:5,500		S2	
DRAWING NUMBER					
HE551490-GTY-EBD-000-DR-GI-30023					

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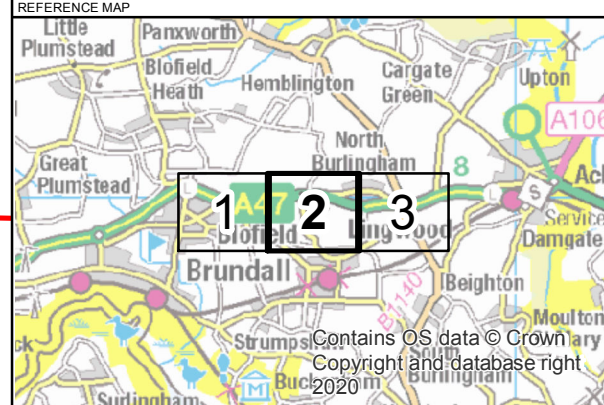


LEGEND

- Red line boundary
- Wintering bird survey flight path
- Wintering bird survey results
 - Sighting activity* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

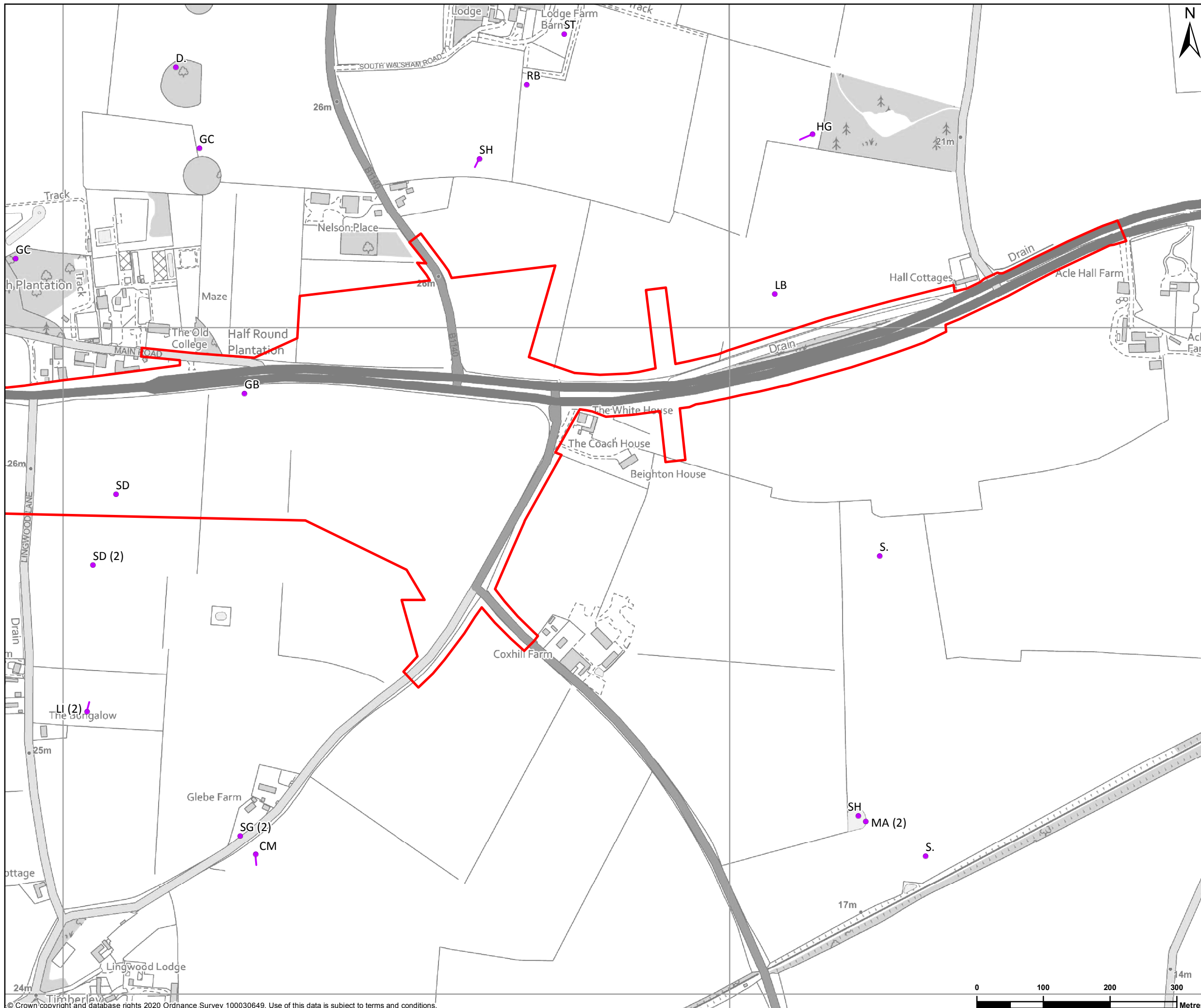
Common Name	BTO Code	Common Name	BTO Code
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Herring Gull	HG	Sparrowhawk	SH
House Sparrow	HS	Starling	SG
Lesser Black-backed Gull	LB	Stock Dove	SD
Linnet	LI	Woodcock	WK
Mallard	MA	Yellowhammer	Y.



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CONTRACTOR					
GallifordTry					
CLIENT					
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PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (FEBRUARY 2019) SHEET 2 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE		SCALE		STATUS	
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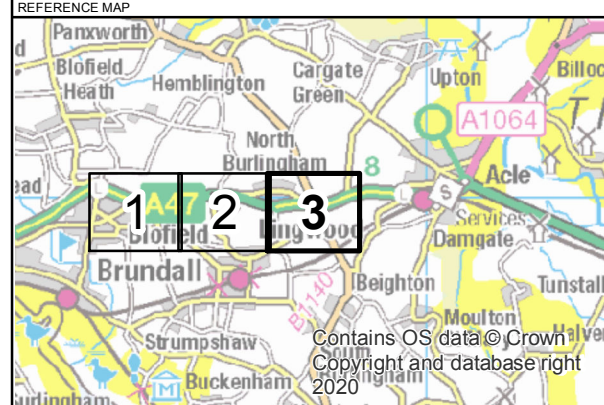


LEGEND

- Red line boundary
- Wintering bird survey flight path
- Wintering bird survey results
 - Sighting activity* (Quantity >1)

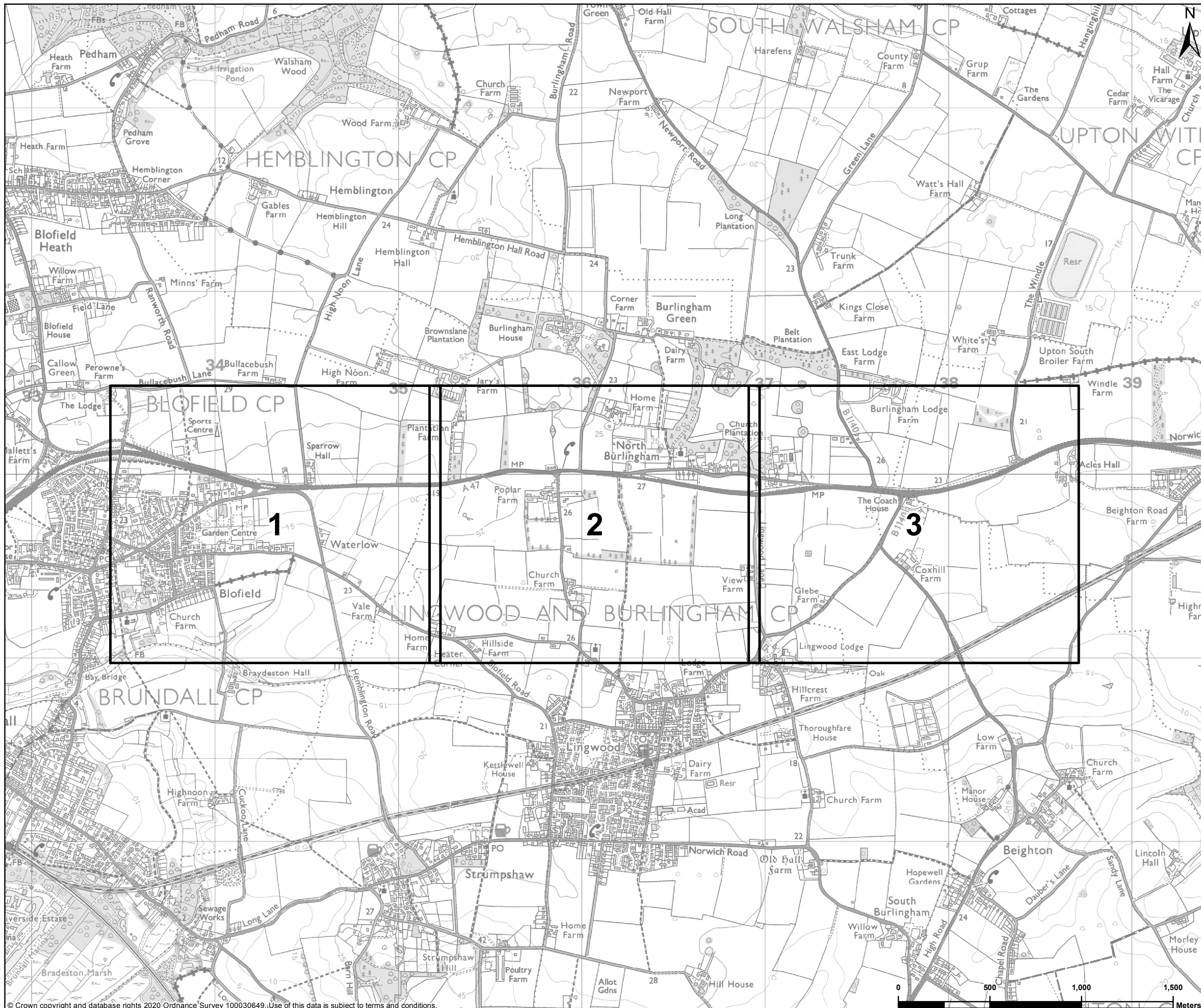
Note:
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Black-headed Gull	BH	Meadow Pipit	MP
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Linnet	LI	Woodcock	WK
Mallard	MA	Yellowhammer	Y.



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD
DESIGNER					
CONTRACTOR					
CLIENT					
PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (FEBRUARY 2019) SHEET 3 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE		SCALE		STATUS	
A3		1:5,500		S2	
DRAWING NUMBER					
HE551490-GTY-EBD-000-DR-GI-30025					

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**highways
england**

PROJECT TITLE

A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE

PCF STAGE 3

DRAWING TITLE

**ANNEX A - WINTERING BIRD SURVEY RESULTS
(FEBRUARY 2019)
KEY PLAN
TR010040/APP/6.3**

SUITABILITY

FOR INFORMATION

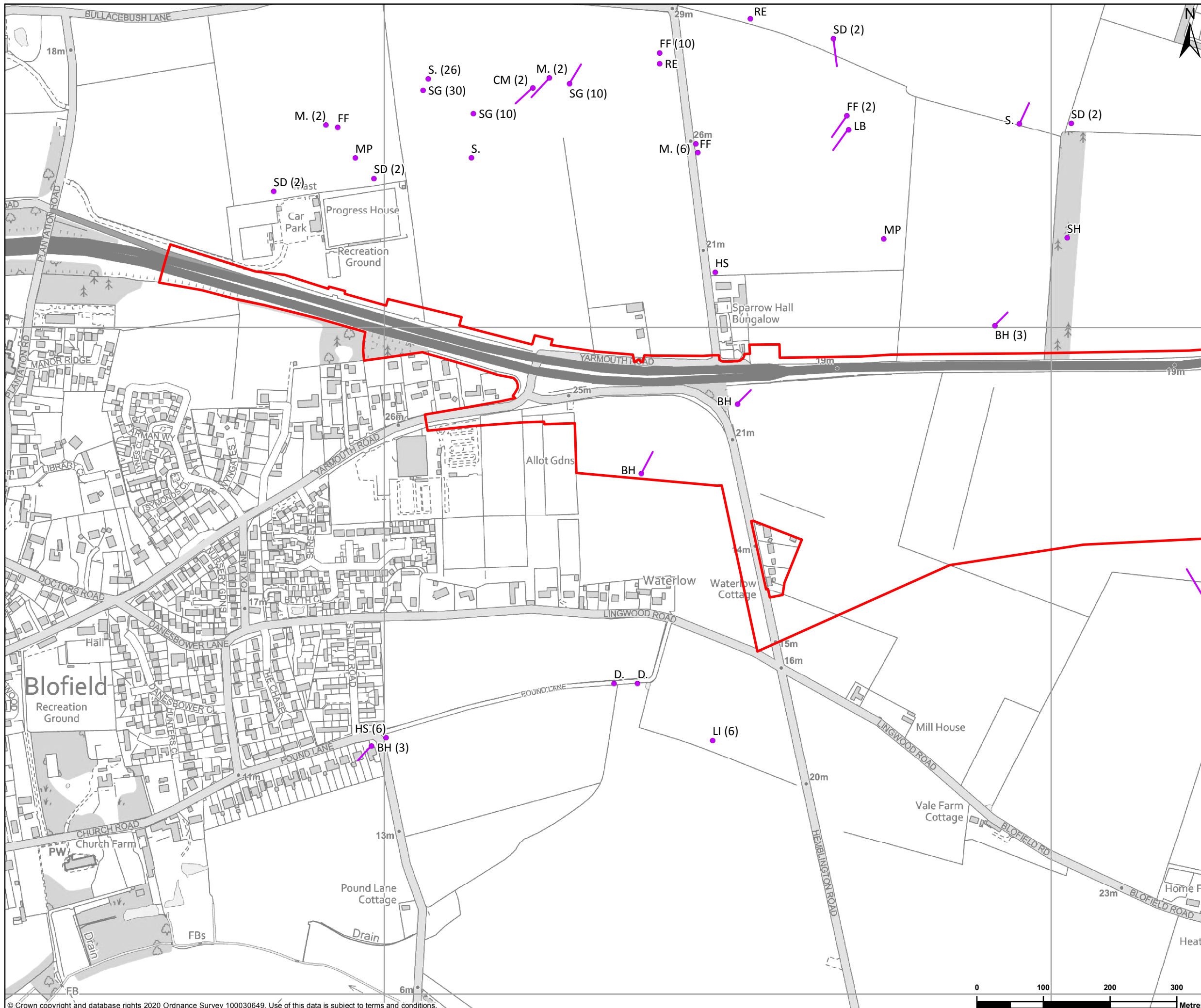
SHEET SIZE	SCALE	STATUS
A3	1:20,000	S2

DRAWING NUMBER

HE55 1490-GTY-EBD-000-DR-GI-30026

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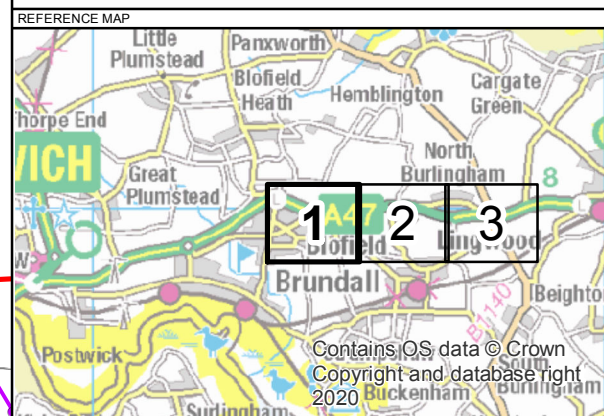


LEGEND

- Red line boundary
- Wintering bird survey flight path
- Wintering bird survey results
 - Sighting activity* (Quantity >1)

Note:
 * Present common names and respective BTO codes shown in the following table.

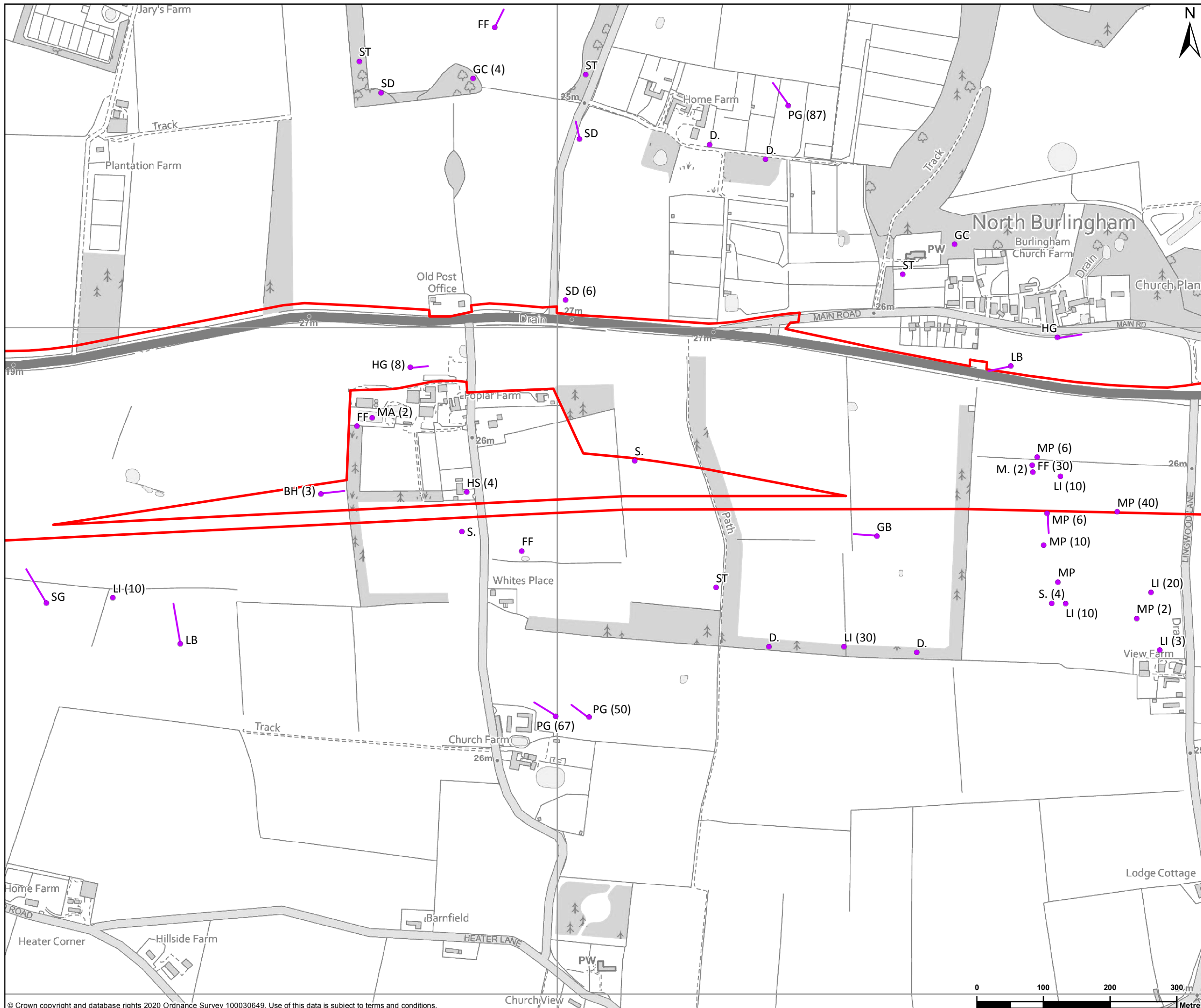
Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Mallard	MA
Common Gull	CM	Meadow Pipit	MP
Dunnock	D.	Mistle Thrush	M.
Fieldfare	FF	Pink-footed Goose	PG
Goldcrest	GC	Redwing	RE
Great Black-backed Gull	GB	Skylark	S.
Herring Gull	HG	Song Thrush	ST
House Sparrow	HS	Sparrowhawk	SH
Lesser Black-backed Gull	LB	Starling	SG
Linnet	LI	Stock Dove	SD



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD
DESIGNER					
SWECO					
CONTRACTOR					
GallifordTry					
CLIENT					
highways england					
PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (NOVEMBER 2019) SHEET 1 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE	SCALE		STATUS		
A3	1:5,500		S2		
DRAWING NUMBER					
HE551490-GTY-EBD-000-DR-GI-30027					

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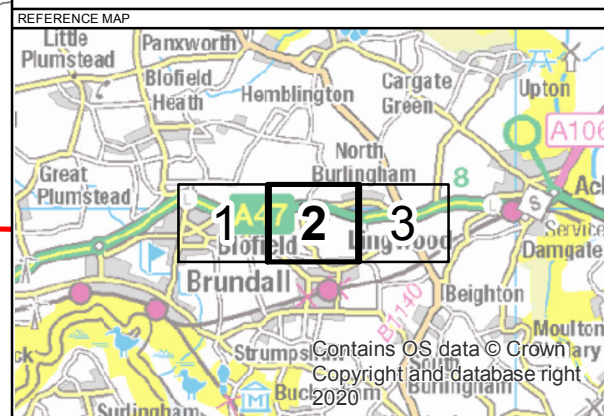


LEGEND

- Red line boundary
- Wintering bird survey flight path
- Wintering bird survey results
 - Sighting activity* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Mallard	MA
Common Gull	CM	Meadow Pipit	MP
Dunnock	D.	Mistle Thrush	M.
Fieldfare	FF	Pink-footed Goose	PG
Goldcrest	GC	Redwing	RE
Great Black-backed Gull	GB	Skylark	S.
Herring Gull	HG	Song Thrush	ST
House Sparrow	HS	Sparrowhawk	SH
Lesser Black-backed Gull	LB	Starling	SG
Linnet	LI	Stock Dove	SD



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD

DESIGNER
SWECO

CONTRACTOR
GallifordTry

CLIENT
highways england

PROJECT TITLE
A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE
PCF STAGE 3

DRAWING TITLE
**ANNEX A - WINTERING BIRD SURVEY RESULTS (NOVEMBER 2019)
SHEET 2 OF 3
TR010040/APP/6.3**

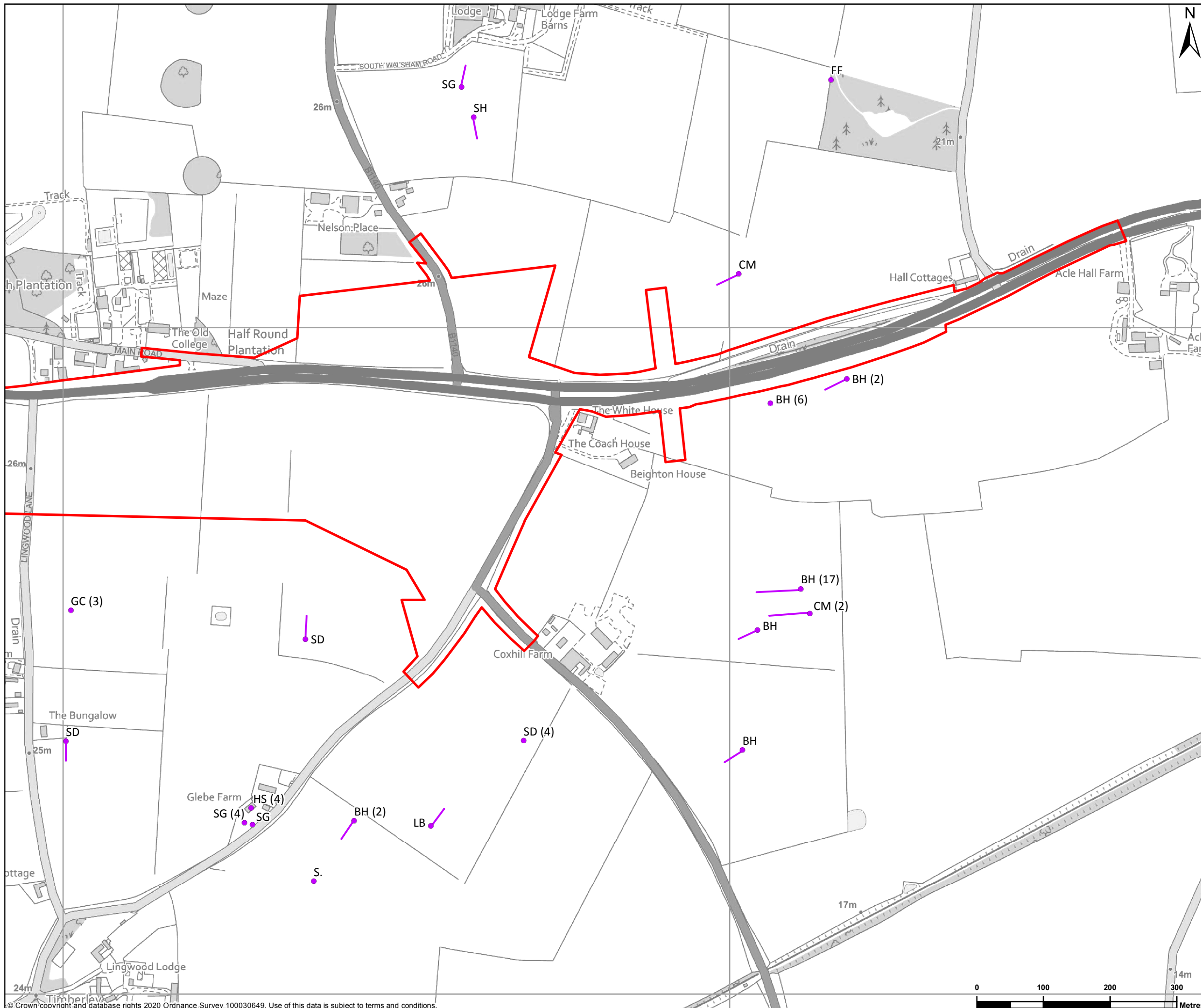
SUITABILITY
FOR INFORMATION

SHEET SIZE	SCALE	STATUS
A3	1:5,500	S2

DRAWING NUMBER
HE551490-GTY-EBD-000-DR-GI-30028

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LEGEND

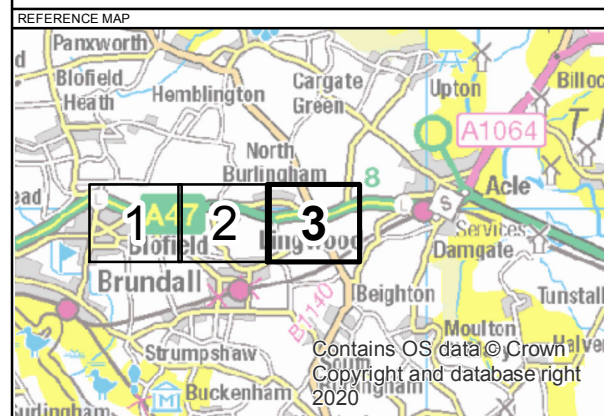
- Red line boundary
- Wintering bird survey flight path

Wintering bird survey results

- Sighting activity* (Quantity >1)

Note:
 * Present common names and respective BTO codes shown in the following table.

Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Mallard	MA
Common Gull	CM	Meadow Pipit	MP
Duncock	D.	Mistle Thrush	M.
Fieldfare	FF	Pink-footed Goose	PG
Goldcrest	GC	Redwing	RE
Great Black-backed Gull	GB	Skylark	S.
Herring Gull	HG	Song Thrush	ST
House Sparrow	HS	Sparrowhawk	SH
Lesser Black-backed Gull	LB	Starling	SG
Linnet	LI	Stock Dove	SD



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD

DESIGNER

CONTRACTOR

CLIENT

PROJECT TITLE
 A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE
 PCF STAGE 3

DRAWING TITLE
 ANNEX A - WINTERING BIRD SURVEY RESULTS (NOVEMBER 2019)
 SHEET 3 OF 3
 TR010040/APP/6.3

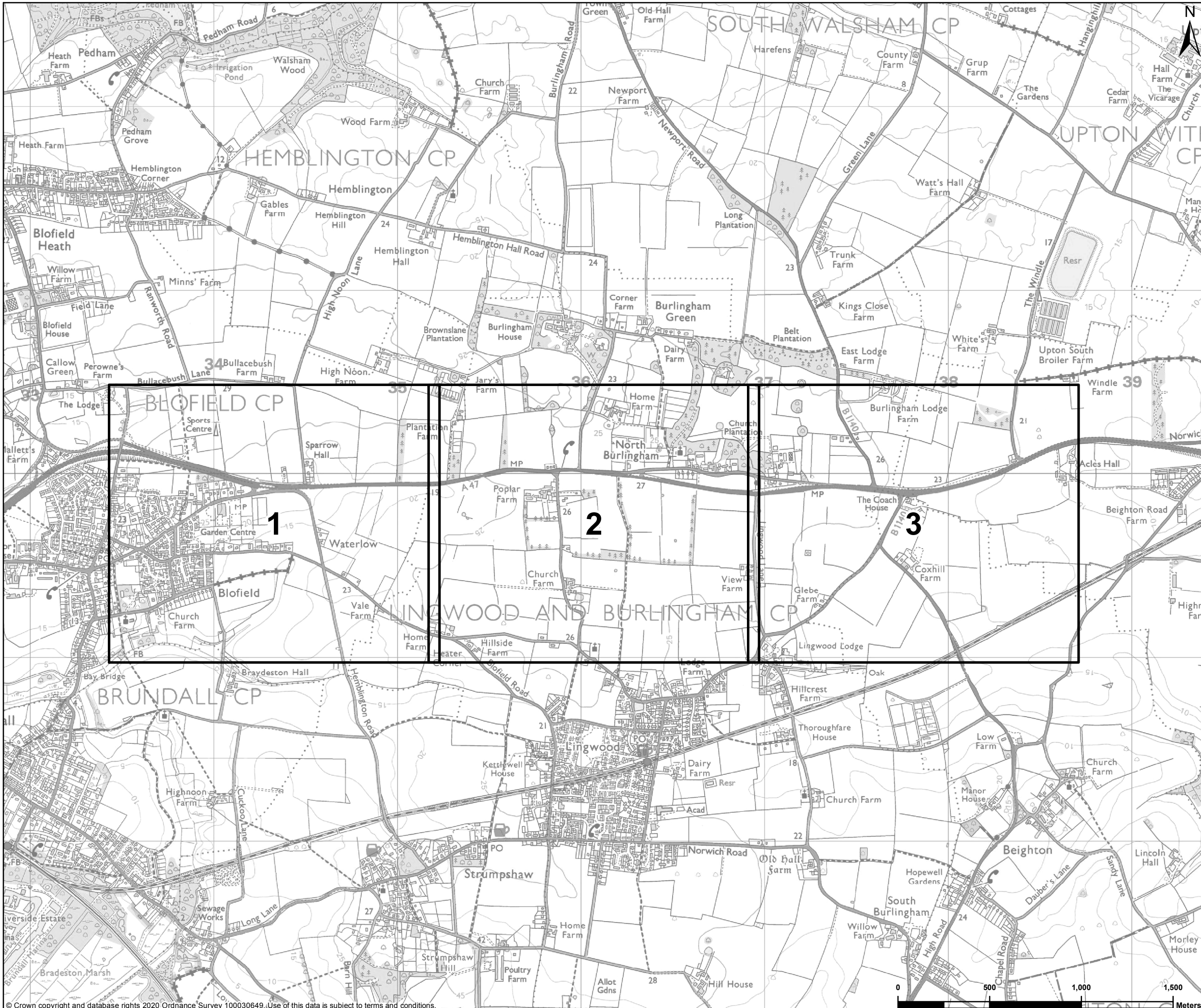
SUITABILITY
 FOR INFORMATION

SHEET SIZE	SCALE	STATUS
A3	1:5,500	S2

DRAWING NUMBER
 HE551490-GTY-EBD-000-DR-GI-30029

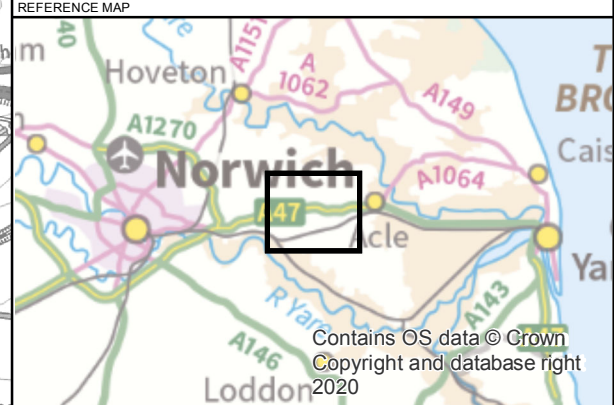
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Sheet extent



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD

DESIGNER

SWECO

CONTRACTOR

GallifordTry

CLIENT

**highways
england**

PROJECT TITLE

A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE

PCF STAGE 3

DRAWING TITLE

**ANNEX A - WINTERING BIRD SURVEY RESULTS
(NOVEMBER 2019)
KEY PLAN
TR010040/APP/6.3**

SUITABILITY

FOR INFORMATION

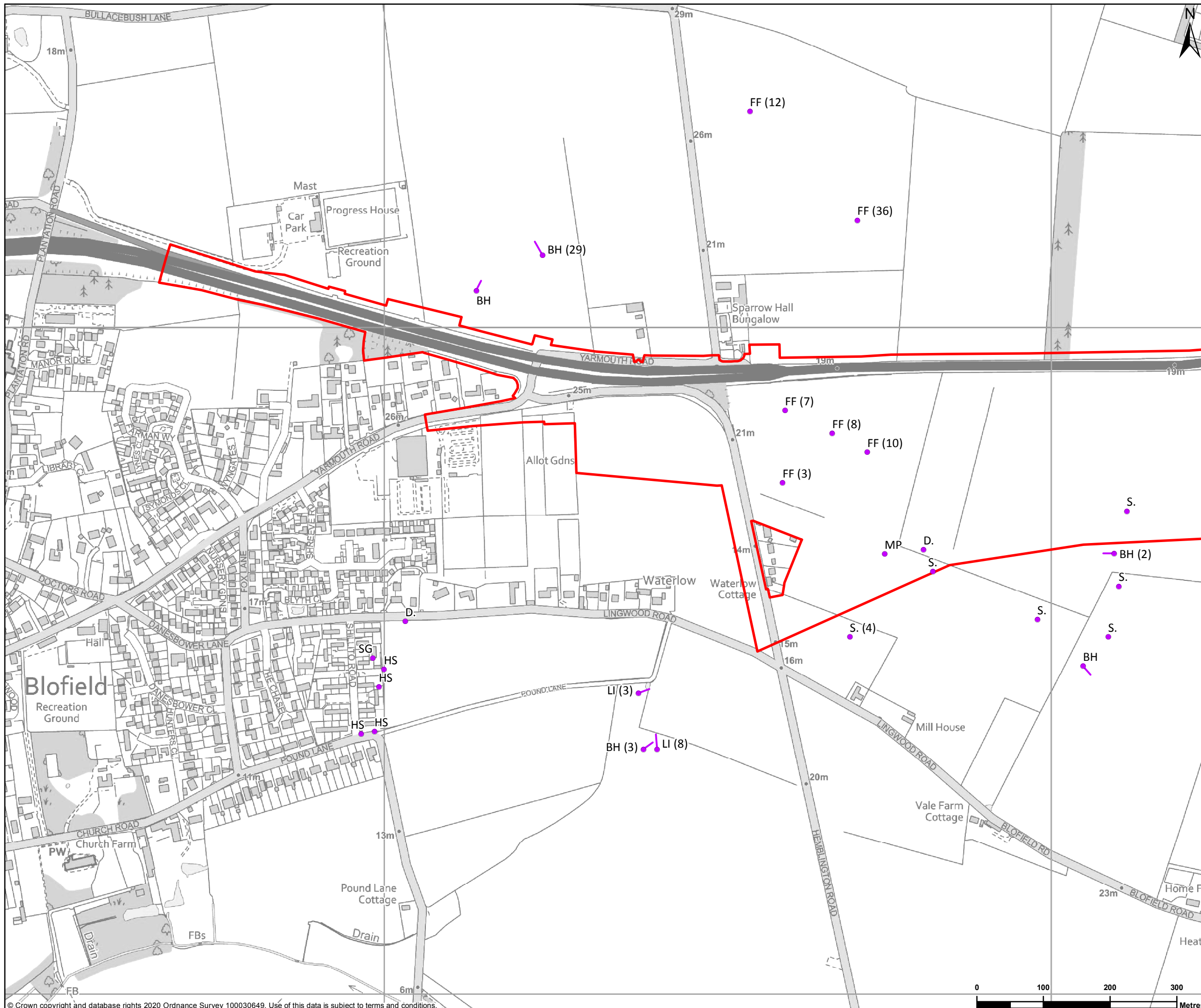
SHEET SIZE	SCALE	STATUS
A3	1:20,000	S2

DRAWING NUMBER

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LEGEND

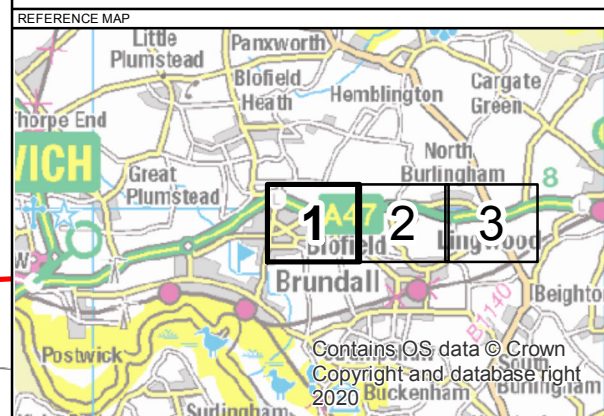
- Red line boundary
- Wintering bird survey flight path

Wintering bird survey results

- Sighting activity* (Quantity >1)
- ▲ Calling* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

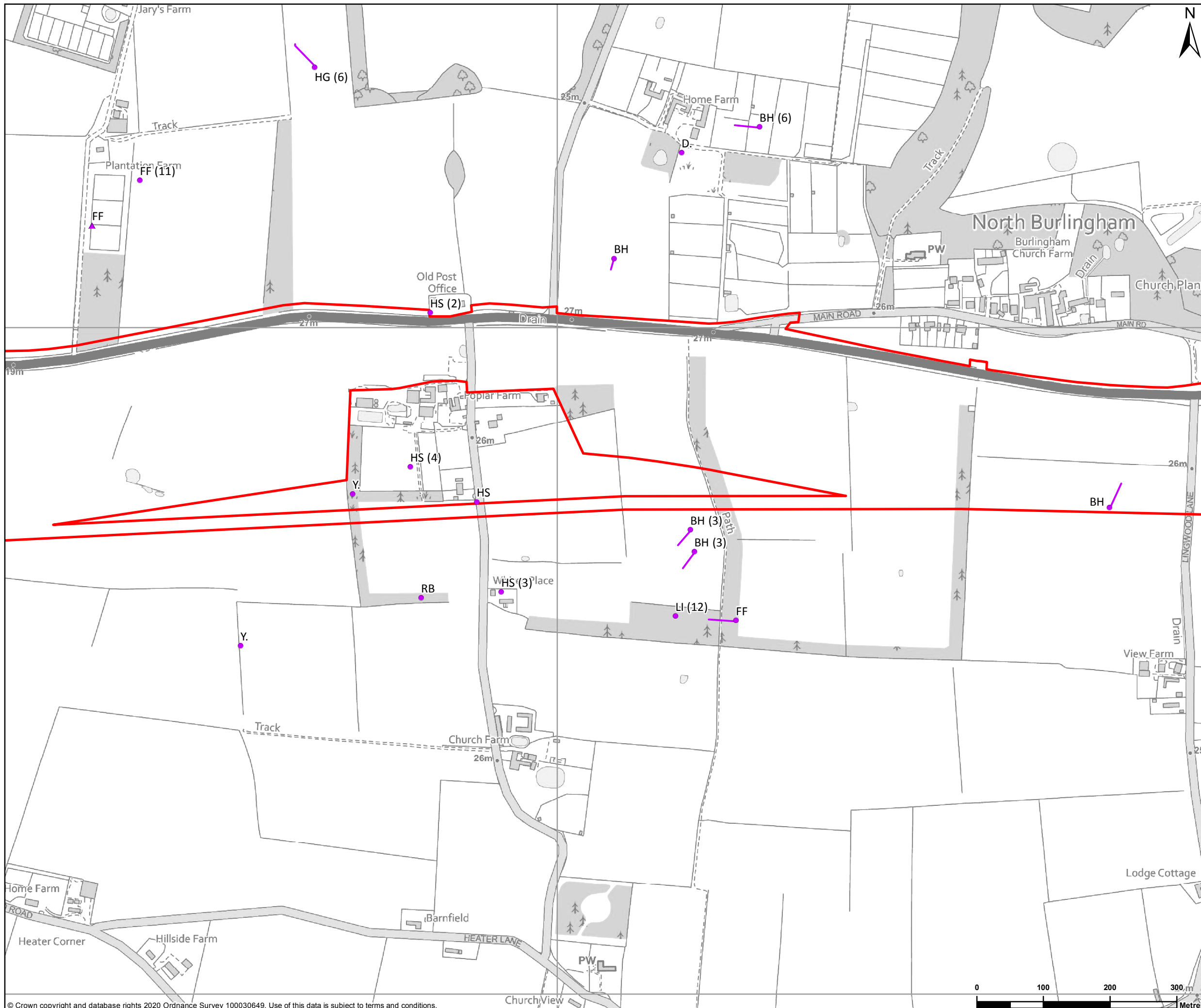
Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Lapwing	L.
Dunnock	D.	Linnet	LI
Fieldfare	FF	Meadow Pipit	MP
Goldcrest	GC	Mistle Thrush	M.
Greenshank	GK	Reed Bunting	RB
Herring Gull	HG	Skylark	S.
House Sparrow	HS	Starling	SG



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD
DESIGNER					
SWECO					
CONTRACTOR					
GallifordTry					
CLIENT					
highways england					
PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (DECEMBER 2019) SHEET 1 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE	A3	SCALE	1:5,500	STATUS	S2
DRAWING NUMBER					
HE551490-GTY-EBD-000-DR-GI-30031					

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LEGEND

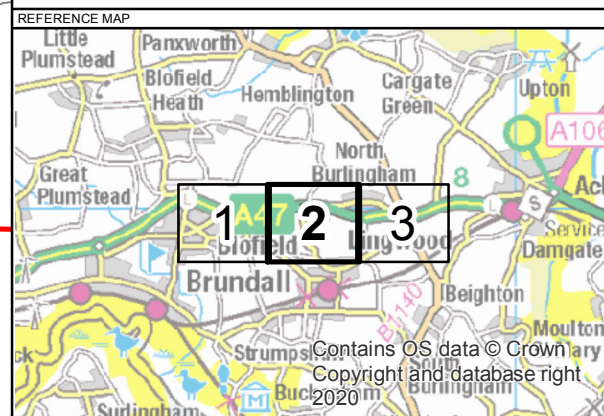
- Red line boundary
- Wintering bird survey flight path

Wintering bird survey results

- Sighting activity* (Quantity >1)
- Calling* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Lapwing	L.
Dunnoch	D.	Linnet	LI
Fieldfare	FF	Meadow Pipit	MP
Goldcrest	GC	Mistle Thrush	M.
Greenshank	GK	Reed Bunting	RB
Herring Gull	HG	Skylark	S.
House Sparrow	HS	Starling	SG



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD

DESIGNER
SWECO

CONTRACTOR
GallifordTry

CLIENT
highways england

PROJECT TITLE
A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE
PCF STAGE 3

DRAWING TITLE
ANNEX A - WINTERING BIRD SURVEY RESULTS (DECEMBER 2019) SHEET 2 OF 3 TR010040/APP/6.3

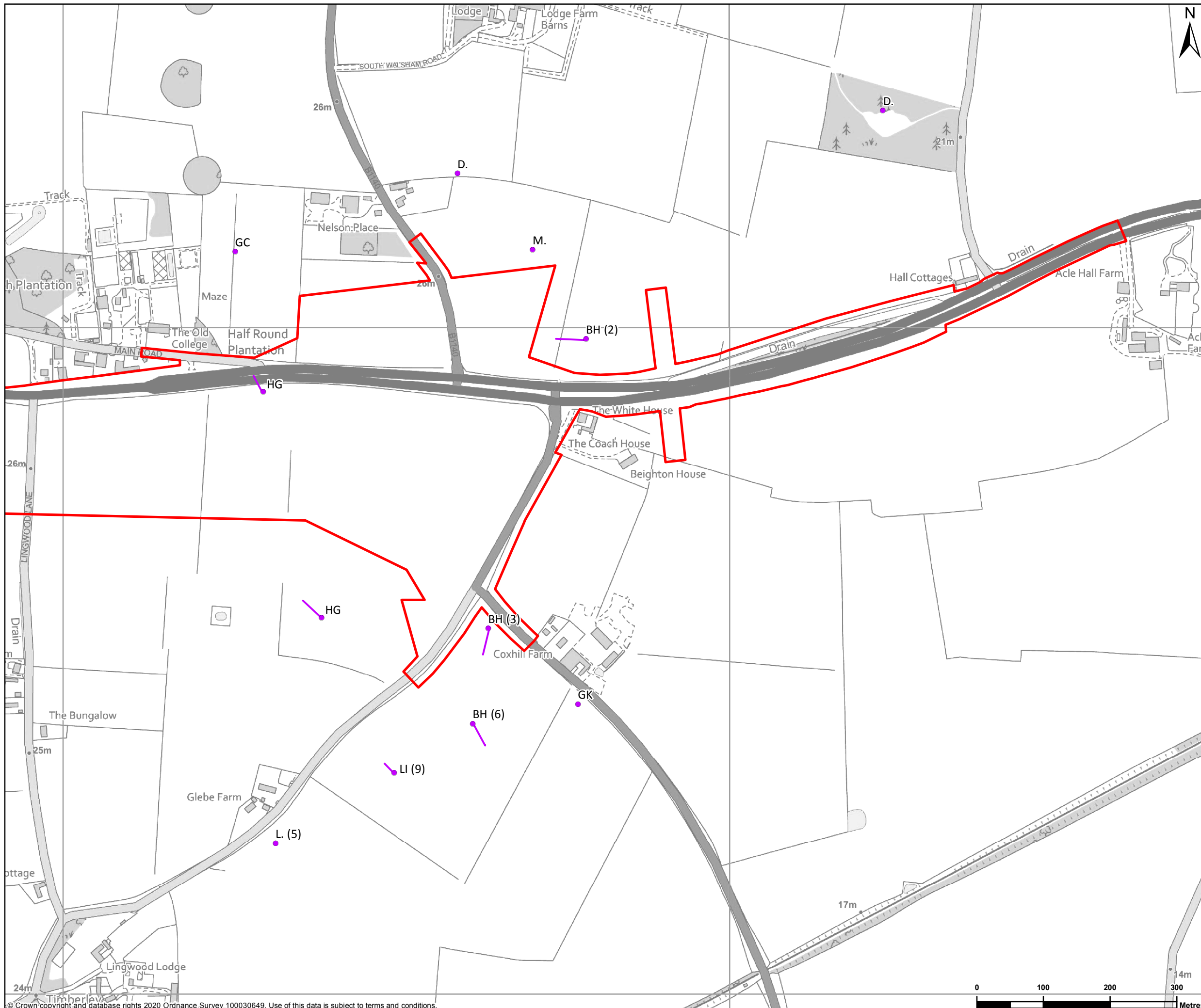
SUITABILITY
FOR INFORMATION

SHEET SIZE	SCALE	STATUS
A3	1:5,500	S2

DRAWING NUMBER
HE551490-GTY-EBD-000-DR-GI-30032

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LEGEND

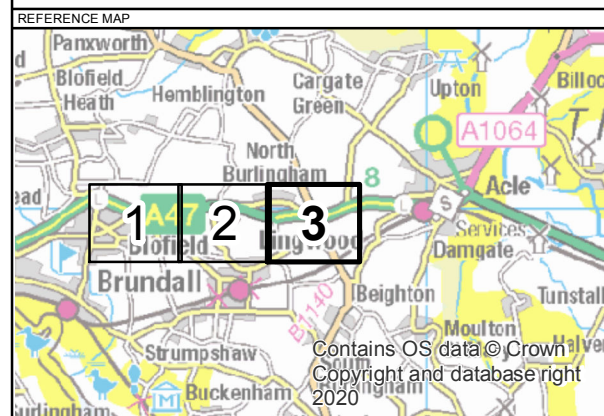
- Red line boundary
- Wintering bird survey flight path

Wintering bird survey results

- Sighting activity* (Quantity >1)
- Calling* (Quantity >1)

Note:
* Present common names and respective BTO codes shown in the following table.

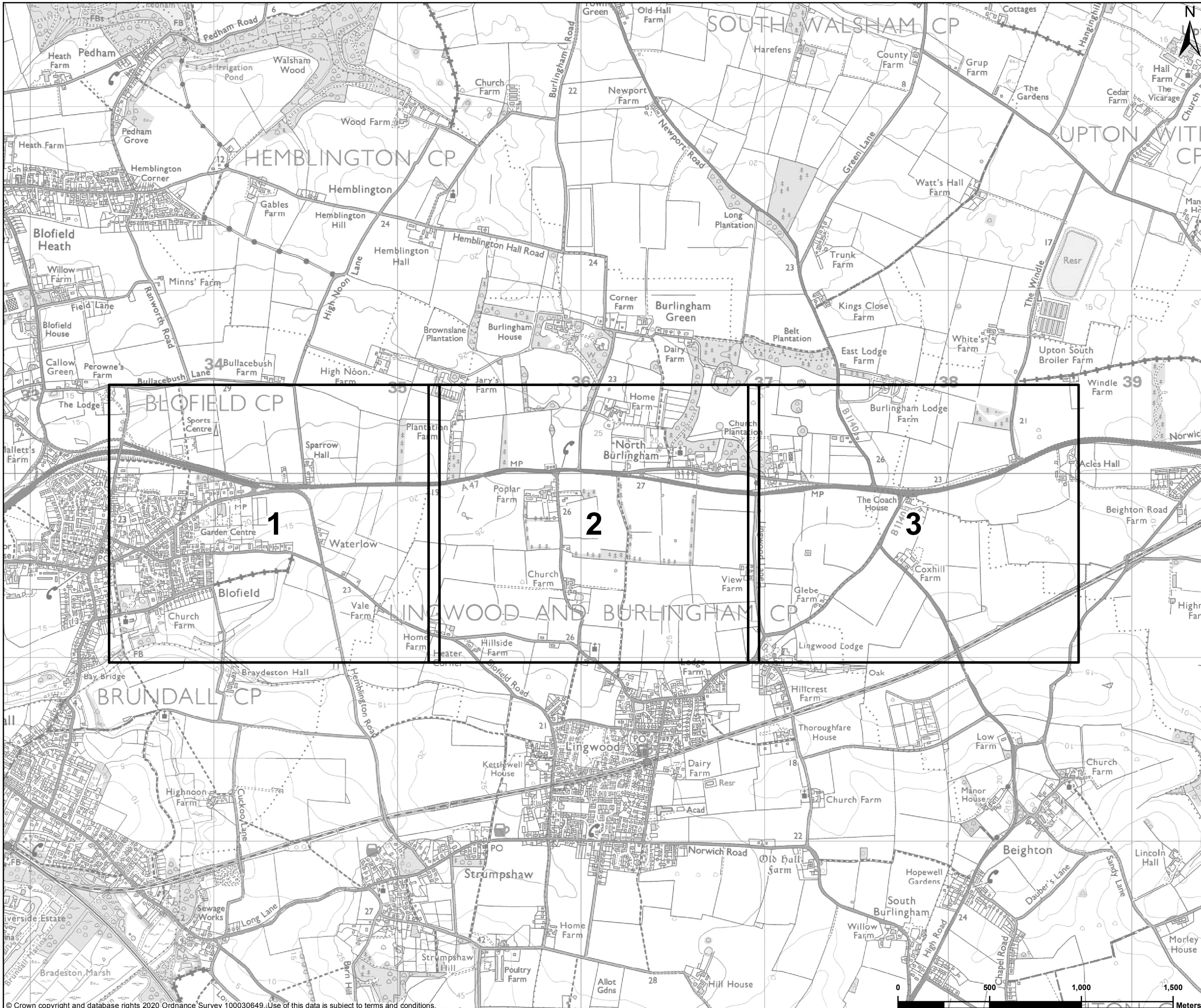
Common Name	BTO Code	Common Name	BTO Code
Black-headed Gull	BH	Lapwing	L.
Dunnock	D.	Linnet	LI
Fieldfare	FF	Meadow Pipit	MP
Goldcrest	GC	Mistle Thrush	M.
Greenshank	GK	Reed Bunting	RB
Herring Gull	HG	Skylark	S.
House Sparrow	HS	Starling	SG



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD
DESIGNER					
CONTRACTOR					
CLIENT					
PROJECT TITLE					
A47 BLOFIELD TO NORTH BURLINGHAM					
PROJECT STAGE					
PCF STAGE 3					
DRAWING TITLE					
ANNEX A - WINTERING BIRD SURVEY RESULTS (DECEMBER 2019) SHEET 3 OF 3 TR010040/APP/6.3					
SUITABILITY					
FOR INFORMATION					
SHEET SIZE		SCALE		STATUS	
A3		1:5,500		S2	
DRAWING NUMBER					
HE551490-GTY-EBD-000-DR-GI-30033					

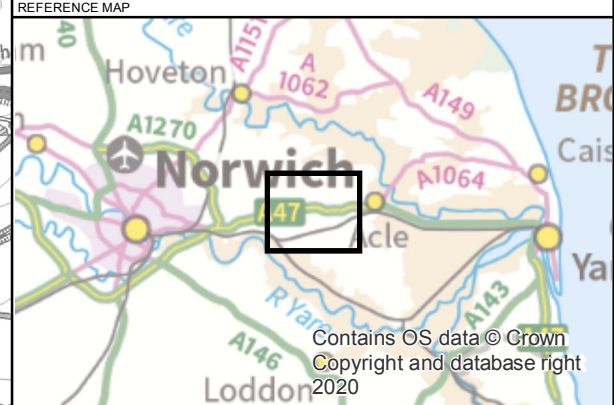
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Sheet extent



P01	17/12/2020	FIRST EDITION	PC	BM	DW
REV	DATE	REVISION NOTE	ORG	CHKD	APPD

DESIGNER

SWECO

CONTRACTOR

GallifordTry

CLIENT

**highways
england**

PROJECT TITLE

A47 BLOFIELD TO NORTH BURLINGHAM

PROJECT STAGE

PCF STAGE 3

DRAWING TITLE

**ANNEX A - WINTERING BIRD SURVEY RESULTS
(DECEMBER 2019)
KEY PLAN
TR010040/APP/6.3**

SUITABILITY

FOR INFORMATION

SHEET SIZE	SCALE	STATUS
A3	1:20,000	S2

DRAWING NUMBER

HE551490-GTY-EBD-000-DR-GI-30034

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