

**Coltsdene Solar Farm**  
Wintering Bird Survey Report

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## Issuing office

[Newcastle]

<b>Client</b>	Renewable Energy Systems Limited
<b>Project</b>	Coltsdene Solar Farm
<b>Version</b>	DRAFT
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# 1 Introduction

- 1.1 BSG Ecology was commissioned by Renewable Energy Systems Ltd. (RES) in March 2024 to conduct a Preliminary Ecological Appraisal at the proposed Coltsdene Solar Farm, in Kibblesworth, centred on Ordnance Survey (OS) Grid Reference NZ232566. This appraisal considers land within the red line provided by the client, hereafter referred to as 'the Site'. An extent greater than the Site was subject to field survey within this assessment, this is referred to as the "Survey Area" totalling 236.49 ha. This area was initially part of the Site but on 25 January 2025 the boundary was reduced in its extent to 92.5 ha. The additional area extent was surveyed to ensure continuity as part of the wintering bird surveys and was also included within the breeding bird survey scope. Extents of both the Site and the Survey Area are provided in **Figure 1**.

## Site description

- 1.2 The Site covers an area of approximately 92.5 ha of predominantly arable land directly west of the village of Kibblesworth, Gateshead, approximately 1.3 km west of the A1 corridor.
- 1.3 Habitats within the Site consist primarily of arable land with associated margins and boundary hedgerows. Pockets of modified grassland, scrub and woodland are also present. Notably, Coltspool Burn flows in an easterly direction through the north of the Site and Strandy Burn is located offsite to the north, both of which are tributaries of the River Team (a statutory main river).
- 1.4 Habitats adjacent to the Site are dominated by arable and pastoral land with the village of Kibblesworth to the east. Four local wildlife sites (LWS) are present onsite or directly adjacent. Other habitats in the locality include pockets of deciduous woodland, connected through hedgerow networks and riparian corridors, semi-improved grassland and open mosaic habitat on previously developed land to the east.
- 1.5 The Site is located within the Gateshead Greenbelt (Gateshead Local Policy CS19) and the southern extent is sited within the designated Wildlife Corridor (Gateshead Local Policy 37). The Bowes Railway Line Local Wildlife Site runs through the centre of the Site (Gateshead Local Plan 2010-2030). The Site is also located within the Impact Risk Zone (IRZ) for three Sites of Special Scientific Interest (SSSI) (MAGIC accessed December 2024).

## Description of project

- 1.6 It is understood that current proposals comprise the development of a 49.9 MW solar array and associated infrastructure, including access tracks, boundary fencing, inverters and a substation. At the time of writing, detailed plans are not available.

## Personnel

- 1.7 The breeding bird characterisation surveys were undertaken by Tom Cadwallender, an experienced freelance Ornithologist, Alexander Permain, Senior Ecologist at BSG Ecology and Harry Glass, Ecologist at BSG Ecology. Tom and Alexander are experienced bird surveyors and regularly undertake bird surveys in lowland farmland habitats. Support personnel were used for the nocturnal surveys on health and safety grounds. The territory mapping and reporting has been prepared by Alex Permain who has over 3 years' experience in report production and has considerable experience in completing site assessments for ornithological interest.
- 1.8 This report has been reviewed by Ian Heard. He has over 14 years of experience in completing ornithological field surveys, writing ornithological reports and providing technical advice.

## 2 Methods

### Desk study

- 2.1 The Environmental Records Centre for the North East (ERIC NE) was approached for records of protected and notable bird records within 2 km of the Survey Area. The data for which was received on 27 November 2024.
- 2.2 Where relevant, desk study data has been discussed within **Section 3** of this report.

### Wintering bird survey

- 2.3 Wintering bird survey methodology followed current industry standard guidance (Bird Survey & Assessment Steering Group, 2023) which effectively combines the 'Common Bird Census' (CBC) and 'Winter Farmland Bird Survey' as devised by the BTO in reference to Bibby, *et al.*, (2000). During the four survey visits, the 'look-see' methodology (Gilbert, *et al.*, 1998) was undertaken, observing habitats along a pre-determined survey transect route and stopping at intervals, scanning the area for birds using close-focusing binoculars. All species heard and or seen were recorded onto base maps using standard BTO species codes and survey symbology, in accordance with standard practice. **Figure 1, Section 5** shows the transect route taken.
- 2.4 One wintering bird survey was undertaken per month of the 'core winter' period (November 2024 to February 2025) to ensure that resident and overwintering species were covered. Surveys conducted during the diurnal period and between the timings of 07:30 and 18:30 (adjusted accordingly for daylight changes). All surveys were undertaken during suitable weather conditions (see **Table 1**).

**Table 1: Wintering bird survey details**

Date	Visit ID	Wind (Beaufort)	Cloud Cover (Oktas)	Precipitation	Temperature (°C)	Survey time
19/11/2024	1	F1	3/8	none	1	09:00 – 13:15
20/11/2024	1	F3	6/8	none	1	09:30 – 13:30
17/12/2024	2	F2	8/8	none	8	09:00 – 12:45
18/12/2024	2	F3	3/8	none	10	08:50 – 11:45
21/01/2025	3	F1	6/8	none	4	08:15 – 12:00
22/01/2025	3	F1	6/8	none	-1	08:20 – 11:25
18/02/2025	4	F1	8/8	none	1	07:40 – 11:15
19/02/2025	4	F1	8/8	none	1	07:35 – 10:00

### Consideration as to the Limitations to methods

- 2.5 No limitations were recorded as part of the wintering bird surveys.

### 3 Results

#### Desk study

- 3.1 ERIC NE returned 9421 records of birds within 2 km of the Survey Area. Due to the volume of records, a full summery is not provided herein, although raw data can be made available on request. An assessment of the record centre data for the winter period determined that most of the records relate to common and widespread species.
- 3.2 Of the records returned, notable over-wintering birds include records of two wintering goose species within 2 km of the Survey Area, both of which are BoCC Red List species: Greenland white-fronted goose *Anser albifrons flavirostris* (nine records) and pink-footed goose *Anser brachyrhynchus* (one record). None of these records relate to the Survey Area. The white-fronted goose and pink-footed goose records relate to sites outside of the borough of Gateshead and near Ponteland, Northumberland.

#### Field survey

- 3.3 Wintering bird surveys recorded a total of 39 species were recorded within the Site and Survey Area during surveys conducted by BSG Ecology in 2024 and 2025. The species recorded included 24 BoCC species of conservation concern, including: 10 red-listed species (curlew *Numenius arquata*, greenfinch *Chloris coelebs*, grey partridge *Perdix perdix*, herring gull *Larus argentatus*, house sparrow *Passer domesticus*, lapwing *Vanellus vanellus*, mistle thrush *Turdus viscivorus*, skylark *Alauda arvensis*, tree sparrow *Passer montanus* and willow tit *Poecile montanus*). It also includes 14 amber-listed species: black-headed gull *Chroicocephalus ridibundus*, bullfinch *Phyrrhula pyrrhula*, common gull *Larus canus*, dunnock *Prunella modularis*, greylag goose *Anser anser*, kestrel *Falco tinnunculus*, mallard *Anas platyrhynchos*, meadow pipit *Anthus pratensis*, redwing *Turdus iliacus*, reed bunting *Emberiza schoeniclus*, song thrush *Turdus philomelos*, stock dove *Columba oenas*, woodpigeon *Columba palumbus* and wren *Troglodytes troglodytes*.
- 3.4 The remaining fifteen species are of low conservation concern, and have not been considered further within this report, unless any significant aggregations were recorded.
- 3.5 A range of passerine species was recorded with some species forming relatively large flocks, which is a commonly observed behaviour for wintering birds in farmland habitats.
- 3.6 **See Figures 2 – 4, Section 5** for the results of the wintering bird surveys from November 2024 to February 2025.
- 3.7 Some species were present in large flocks, with peak counts being as follows:
- Greylag goose – up to 268 birds
  - Woodpigeon – up to 275 birds
- 3.8 The following species were recorded flying over the Survey Area: curlew, buzzard *Buteo buteo*, herring gull *Larus argentatus*.
- 3.9 **Table 2** (overleaf) presents the species recorded as part of the suite of wintering bird surveys.

**Table 2:** Bird species recorded during wintering bird surveys. Species recorded within the Survey Area are marked as 'Y'. The peak count flock size is provided and entries in brackets were flying over the Survey Area)

Common name	Scientific name	BoCC Status	Nov 2024	Dec 2024	Jan 2025	Feb 2025
Curlew	<i>Numenius arquata</i>	Red				(Y)
Greenfinch	<i>Chloris chloris</i>	Red				4
Grey partridge	<i>Perdix perdix</i>	Red	Y	9		
Herring gull	<i>Larus argentatus</i>	Red	Y			
House sparrow	<i>Passer domesticus</i>	Red				13
Lapwing	<i>Vaneullus vanellus</i>	Red	Y		Y	
Mistle thrush	<i>Turdus viscivorus</i>	Red	Y			
Skylark	<i>Alauda arvensis</i>	Red				4
Tree sparrow	<i>Passer montanus</i>	Red		6	8	18
Willow tit	<i>Poecile montanus</i>	Red				Y
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber	Y			
Bullfinch	<i>Pyrrhulla pyrrhula</i>	Amber		5	Y	
Common gull	<i>Larus canus</i>	Amber				6
Dunnock	<i>Prunella modularis</i>	Amber	Y	Y	Y	
Greylag goose	<i>Anser anser</i>	Amber	270		Y	
Kestrel	<i>Falco tinnuculus</i>	Amber	(Y)	(Y)	Y	
Mallard	<i>Anas platyrhynchos</i>	Amber				Y
Meadow pipit	<i>Anthus pratensis</i>	Amber	Y			
Redwing	<i>Turdus iliacus</i>	Amber	Y	8		
Reed bunting	<i>Emberiza schoeniclus</i>	Amber			Y	
Song thrush	<i>Turdus philomelos</i>	Amber	Y		Y	Y
Stock dove	<i>Columba oenas</i>	Amber			Y	Y
Woodpigeon	<i>Columba palumbus</i>	Amber	223	65	275	85
Wren	<i>Troglodytes troglodytes</i>	Amber	Y	Y	Y	Y

Blackbird	<i>Turdus merula</i>	Green	Y	Y	Y	Y
Blue tit	<i>Cyanistes caeruleus</i>	Green	Y	Y	Y	Y
Buzzard	<i>Buteo buteo</i>	Green	(Y)		(Y)	(Y)
Carrion crow	<i>Corvus corone</i>	Green	Y	Y	Y	Y
Chaffinch	<i>Fringilla colebs</i>	Green	Y	Y	Y	Y
Coal tit	<i>Periparus ater</i>	Green				Y
Goldfinch	<i>Carduelis carduelis</i>	Green			Y	Y
Great-spotted woodpecker	<i>Dendrocopus major</i>	Green	Y			
Great tit	<i>Parus major</i>	Green		Y	Y	Y
Jackdaw	<i>Corvus monedula</i>	Green				
Long-tailed tit	<i>Aegithalos caudatus</i>	Green		Y	Y	
Magpie	<i>Pica pica</i>	Green	Y	Y	Y	
Robin	<i>Erithacus rubecula</i>	Green	Y	Y	Y	Y
Siskin	<i>Spinus spinus</i>	Green				(8)
Red-legged partridge	<i>Alectoris rufa</i>	Not Assessed			Y	

### Species accounts

3.10 Species accounts of notable species (BoCC Red List and Amber List species) recorded during the wintering bird survey are provided in **Table 3**.

**Table 3:** Species accounts associated with BoCC Red and Amber List species recorded during the wintering bird surveys of 2024 and 2025.

Species	Description
<b>BoCC Red List</b>	
Curlew	One curlew was recorded on the final survey in February 2025. The individual was recorded flying over the Survey Area.
Greenfinch	A flock of four greenfinch was recorded on the final survey in February 2025. The observation was to the eastern boundary just outside of the Site within an area of woodland.
Grey partridge	Grey partridge was recorded on two surveys. A single covey with four birds during the first survey in November 2024. On the second survey in December 2024, a total of 24 birds was recorded with the largest 'covey' totalling nine birds.

Herring gull	A single bird observed during the first survey in November 2024 within the Survey Area to the north.
House sparrow	Recorded on the final survey in IN February 2025, a flock of 13 birds. These were located to the south east of the Site near residential properties within Kibblesworth Village.
Lapwing	One individual was recorded on the first and third survey.
Mistle thrush	One individual was recorded on the first survey within the Survey Area to the north west.
Skylark	A flock of four birds was recorded on the final survey. They were observed foraging within a cereal crop field to the north of the Survey Area.
Starling	Large flocks of up to 200 birds were recorded, all of which flying over the Survey Area. Starling often forms large communal roosts during winter. <sup>1</sup>
Tree sparrow	Recorded primarily on the boundary of the Site to the south east where the Tyne and Wear Heritage Way is located.
Willow tit	A pair of willow tit was recorded on the final survey. The pair was observed within the Survey Area, in the north edge of woodland surrounding the Tyne and Wear Heritage Way.
<b>BoCC Amber List</b>	
Bullfinch	Recorded on the second and third survey. A flock of five birds was noted on the second survey within the Site to the north. Seven birds (including a flock of three) were recorded during the third survey.
Common gull	Recorded within the Survey Area on the final survey. A total of six birds were recorded within a flock using the cereal crop field to the north.
Dunnock	Resident species recorded on three of the four surveys.
Greylag goose	Recorded on two surveys. A notably large flock of 268 birds was recorded on the first survey within the centre of the Survey Area. It is likely that many, if not all of these birds are feral greylag geese, rather than overwintering however supplementary over-wintering birds into this flock cannot be ruled out.
Kestrel	Recorded foraging within the Survey Area on three of the surveys.
Mallard	Recorded within the Survey Area to the north east, within a waterbody.
Meadow pipit	A total of four birds was recorded on the first survey, three of which were in a flock.
Redwing	Recorded on the first and second survey. During the second survey a flock of eight birds was recorded feeding on berries on the boundary of the Site to the south east.
Reed bunting	Recorded on the third survey (two birds).

<sup>1</sup> BTO BirdFacts: Starling (<https://www.bto.org/understanding-birds/birdfacts/starling>)

Song thrush	Resident species recorded on three surveys.
Sparrowhawk	Recorded perched and foraging on two surveys.
Stock dove	Recorded on two surveys, with four birds observed on the third survey.
Woodpigeon	Common resident recorded on all surveys. A flock size of 275 birds was recorded on the third survey, and this was the largest count across the survey effort.
Wren	Common resident recorded on all surveys.

### **Summary**

3.11 Overall, the results represent a typical overwintering assemblage of bird species for a large arable dominated site that includes small areas of grassland, arable crop, waterbodies, woodland and hedgerows. A total of 39 bird species were recorded within the Survey Area; 24 of which (61%) are birds of moderate or of high conservation concern. Most species were dependent upon the hedgerows, scrub and pockets of woodland across the Survey Area with resident, red-listed birds present such as tree sparrow was present for most of the survey period. Traditional farmland species such as grey partridge and skylark were observed foraging in winter stubbles, but mostly in smaller flocks.

## 4 References

Bibby, C.J., Burgess, N.D., Hill, D.A. and Mustoe, S.H. (2000) Bird census techniques. Academic Press, London.

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## 5 Figures

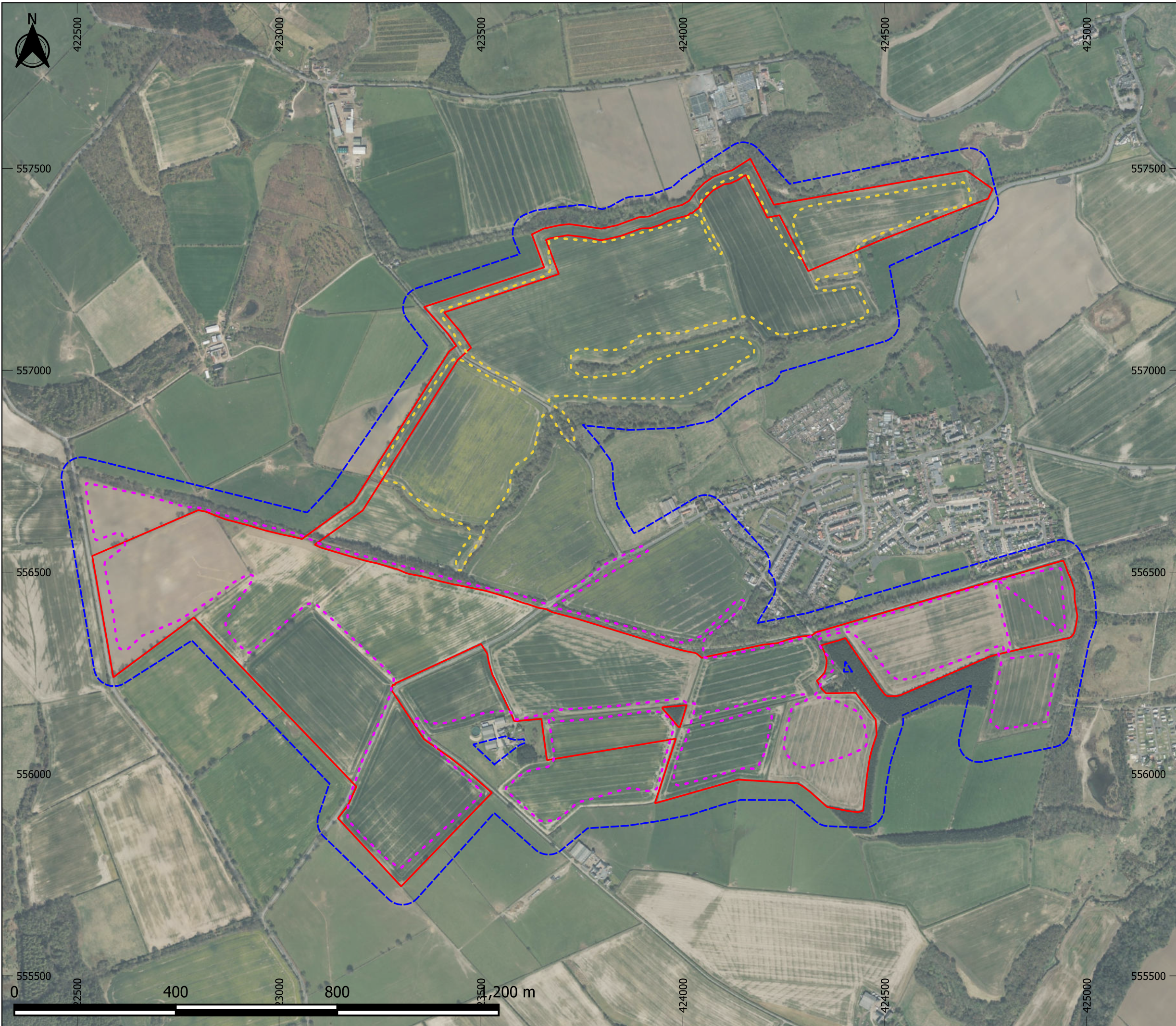
Figure 1: Wintering bird survey results: November 2024

Figure 2: Wintering bird survey results: December 2024

Figure 3: Wintering bird survey results: January 2025

Figure 4: Wintering bird survey results: February 2025

Figure 5: Wintering bird survey transect map



- Legend
- - - Transect A
  - - - Transect B
  - - - Survey boundary
  - Site boundary



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 Figure 1: Winter bird survey transect map

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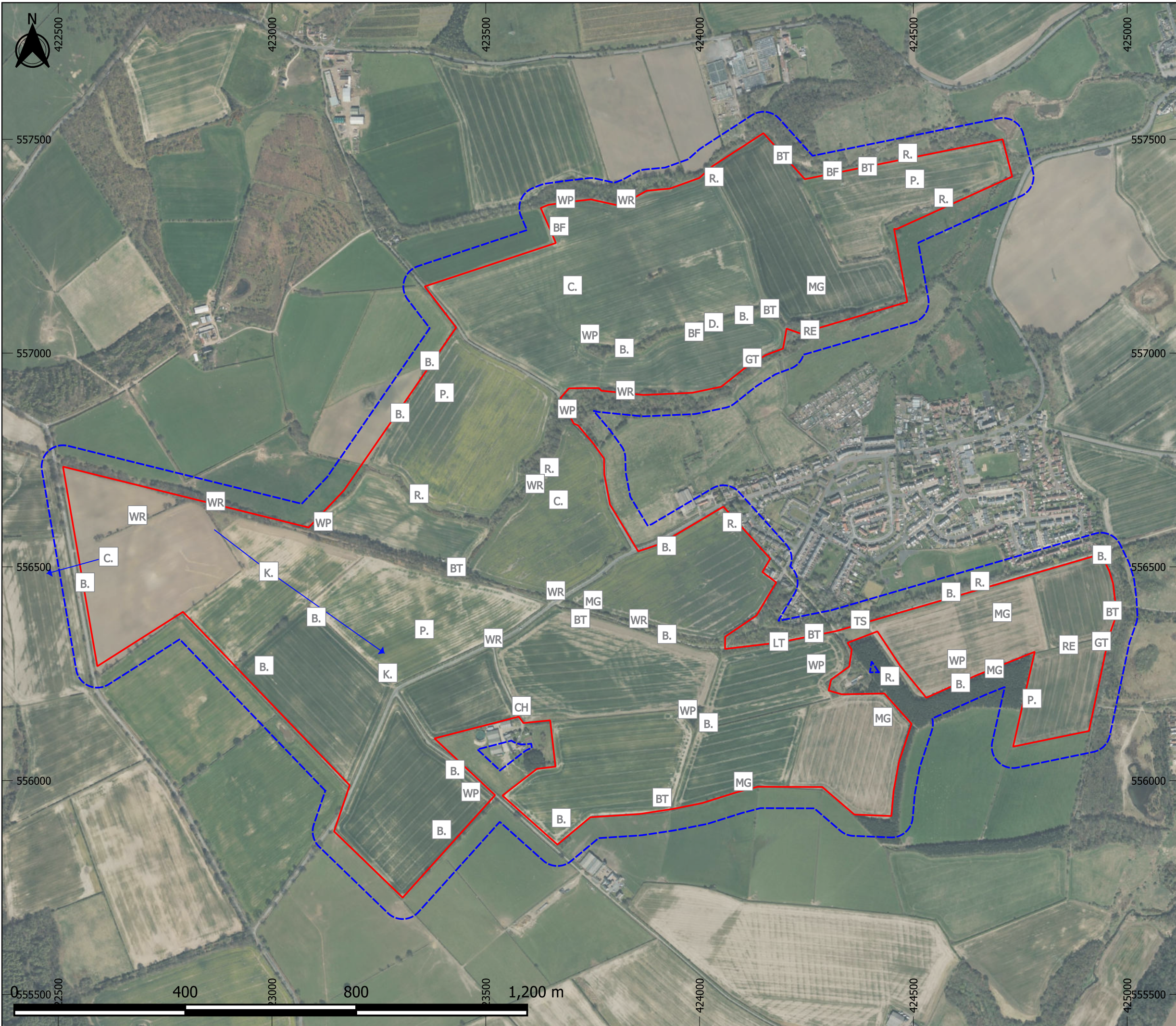
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- Legend
- Bird Flight Line
  - Visit 2 - non-breeding
  - Site boundary
  - Survey boundary

BTO Code	Common Name
B.	Blackbird
BF	Bullfinch
BT	Blue Tit
C.	Carrion Crow
CH	Chaffinch
D.	Dunnock
GT	Great Tit
K.	Kestrel
LT	Long-tailed Tit
MG	Maggie
P.	Grey Partridge
R.	Robin
RE	Redwing
TS	Tree Sparrow
WP	Woodpigeon
WR	Wren



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 Figure 3: WBS results - December

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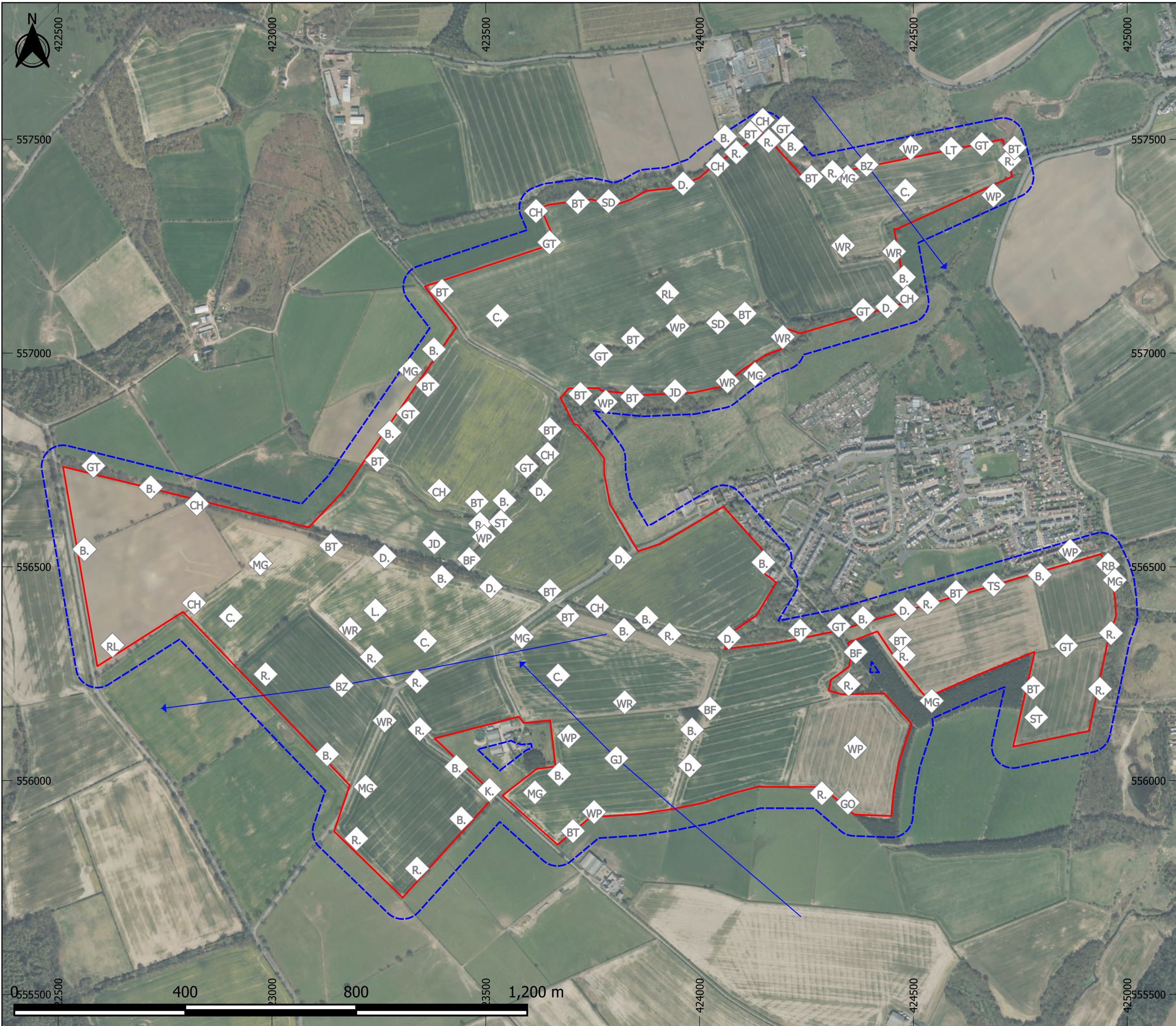
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- Legend
- Bird Flight Line
  - Visit 3 - non-breeding
  - Site boundary
  - Survey boundary

BTO Code	Common Name
B.	Blackbird
BF	Bullfinch
BT	Blue Tit
BZ	Buzzard
C.	Carrion Crow
CH	Chaffinch
D.	Dunnock
GJ	Greylag Goose
GO	Goldfinch
GT	Great Tit
JD	Jackdaw
K.	Kestrel
L.	Lapwing
LT	Long-tailed Tit
MG	Magpie
R.	Robin
RB	Reed Bunting
RL	Red-legged Partridge
SD	Stock Dove
ST	Song Thrush
TS	Tree Sparrow
WP	Woodpigeon
WR	Wren

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 Figure 4: WBS results - January

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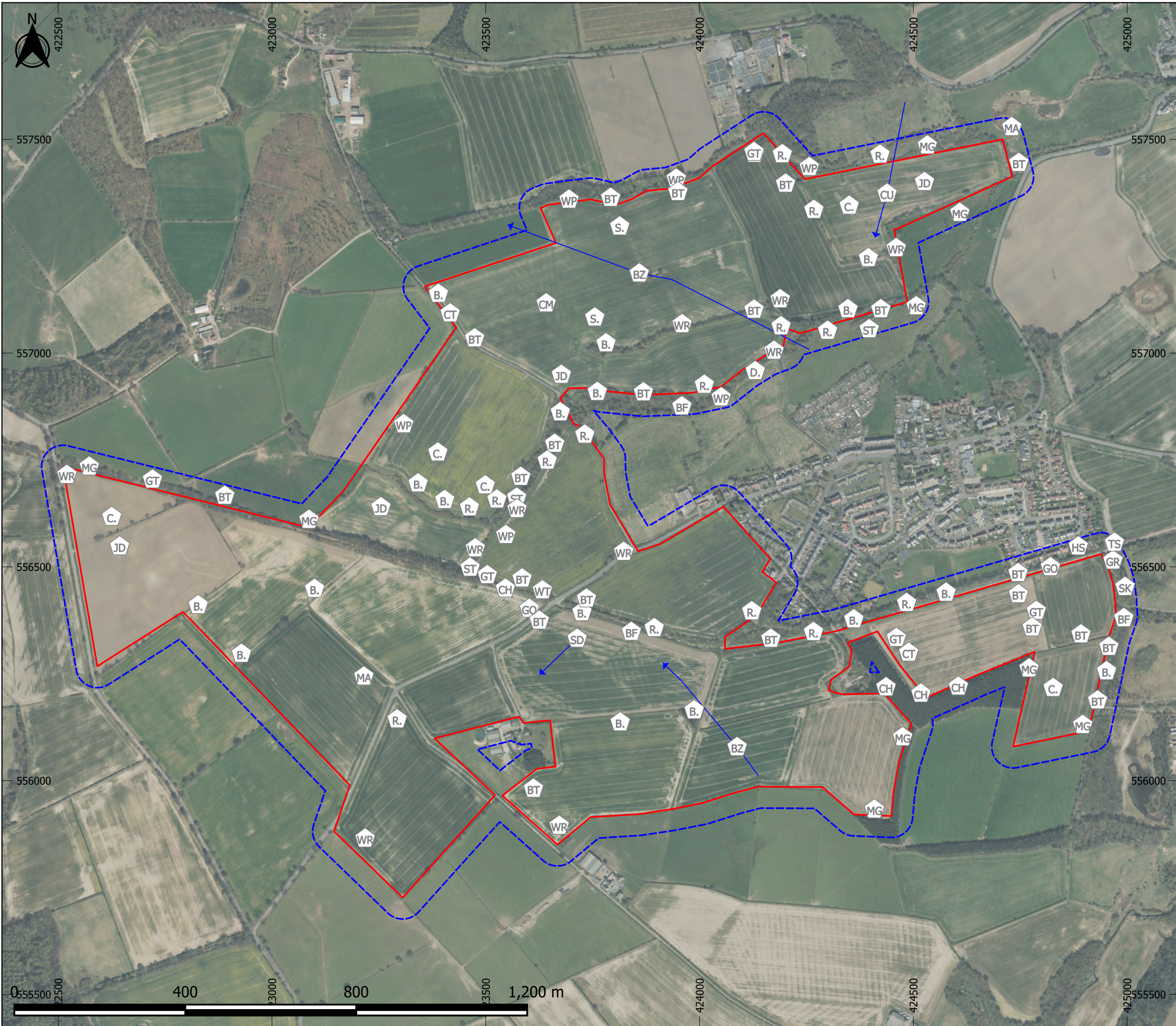
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- Legend
- Bird Flight Line
  - Visit 4 - non-breeding
  - Site boundary
  - Survey boundary

BTO Code	Common Name
B.	Blackbird
BF	Bullfinch
BT	Blue Tit
BZ	Buzzard
C.	Carrion Crow
CH	Chaffinch
CM	Common Gull
CT	Coal Tit
CU	Curlew
D.	Dunnock
GO	Goldfinch
GR	Greenfinch
GT	Great Tit
HS	House Sparrow
JD	Jackdaw
MA	Mallard
MG	Magpie
R.	Robin
S.	Skylark
SD	Stock Dove
SK	Siskin
ST	Song Thrush
TS	Tree Sparrow
WP	Woodpigeon
WR	Wren
WT	Willow Tit

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 Figure 5: WBS results - February

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