

Table 3. Results summary – breeding species

Species	BTO Code	Conservation Status	Approximate Number of Breeding Pairs					
			Transect 1	Transect 2	Transect 3	Transect 4	Transect 5	TOTAL
Greater Canada Goose <i>Branta canadensis</i>	CG	-	-	1	1	-	-	2
Mallard <i>Anas platyrhynchos</i>	MA	BoCCW3 Amber	-	-	1	-	-	1
Common Buzzard <i>Buteo buteo</i>	BZ	-	1	-	-	1	-	2
Lapwing <i>Vanellus vanellus</i>	L.	BoCCW3 Red S7	-	2	-	-	-	1
Curlew <i>Numenius arquata</i>	CU	BoCCW3 Red S7	-	-	1	-	-	1
Woodpigeon <i>Columba palumbus</i>	WP	-	-	-	1	-	-	1
Collard Dove <i>Streptopelia decaocto</i>	CD	-	-	-	-	1	-	1
Cuckoo <i>Cuculus canorus</i>	CK	BoCCW3 Red S7	3	-	-	2	3	8
Nightjar ⁷ <i>Caprimulgus europaeus</i>	NJ	BoCCW3 Amber	-	-	-	1	-	1
Great Spotted Woodpecker <i>Dendrocopos major</i>	GS	-	1	-	-	1	2	4
Jay <i>Garrulus glandarius</i>	J.	-	-	-	-	1	-	1
Magpie <i>Pica pica</i>	MG	-	-	-	1	-	-	1
Jackdaw <i>Corvus monedula</i>	JD	-	-	-	20	-	-	20
Carrion Crow <i>Corvus corone</i>	C.	-	-	1	1	-	-	2
Raven <i>Corvus corax</i>	RN	-	-	1	-	-	-	1
Goldcrest <i>Regulus regulus</i>	GC	BoCCW3 Amber	4	-	-	2	-	6
Blue Tit <i>Cyanistes caeruleus</i>	BT	-	16	-	2	2	6	26
Great Tit <i>Parus major</i>	GT	-	7	-	2	1	4	14
Coal Tit <i>Periparus ater</i>	CT	-	2	6	1	1	1	12
Skylark <i>Alauda arvensis</i>	S.	BoCCW3 Amber S7	8	43	15	16	57	139
Long-tailed Tit <i>Aegithalos caudatus</i>	LT	BoCCW3 Amber	-	-	2	-	-	2
Chiffchaff <i>Phylloscopus collybita</i>	CC	-	6	-	4	3	-	13

7 Identified during nocturnal bat surveys.

Species	BTO Code	Conservation Status	Approximate Number of Breeding Pairs					
			Transect 1	Transect 2	Transect 3	Transect 4	Transect 5	TOTAL
Willow Warbler <i>Phylloscopus trochilus</i>	WW	BoCCW3 Red	25	24	21	16	23	109
Blackcap <i>Sylvia atricapilla</i>	BC		22	-	15	3	2	42
Garden Warbler <i>Sylvia borin</i>	GW		8	-	-	-	-	8
Whitethroat <i>Sylvia communis</i>	WH	BoCCW3 Red	1	2	1	7	-	11
Grasshopper Warbler <i>Locustella naevia</i>	GH	BoCCW3 Red	2	-	4	9	17	34
Sedge Warbler <i>Acrocephalus schoenobaenus</i>	SW		-	4	5	2	-	11
Wren <i>Troglodytes troglodytes</i>	WR	-	45	8	27	9	20	109
Starling <i>Sturnus vulgaris</i>	SG	BoCCW3 Red S7	-	-	-	-	1	1
Blackbird <i>Turdus merula</i>	B.	-	12	2	5	3	7	29
Song Thrush <i>Turdus philomelos</i>	ST	BoCCW3 Amber S7	9	4	4	5	1	23
Mistle Thrush <i>Turdus viscivorus</i>	M.	BoCCW3 Amber	1	1	-	-	1	2
Robin <i>Erithacus rubecula</i>	R.	-	23	-	12	3	2	40
Redstart <i>Phoenicurus phoenicurus</i>	RT		1	-	-	-	3	4
Stonechat <i>Saxicola rubicola</i>	SC	-	-	15	2	12	20	49
Wheatear <i>Oenanthe oenanthe</i>	W.		-	8	-		1	9
Dunnock <i>Prunella modularis</i>	D.	S7	3	-	1	-	1	5
House Sparrow <i>Passer domesticus</i>	HS	BoCCW3 Amber S7	-	-	5	-	-	5
Pied Wagtail <i>Motacilla alba</i>	PW	-	-	4	4	-	1	9
Grey Wagtail <i>Motacilla cinerea</i>	GL	BoCCW3 Amber	-	-	-	1	-	1
Tree Pipit <i>Anthus trivialis</i>	TP	BoCCW3 Amber S7	1	1	-	1	-	3
Meadow Pipit <i>Anthus pratensis</i>	MP	BoCCW3 Amber	8	27	14	42	48	139
Chaffinch <i>Fringilla coelebs</i>	CH	-	23	4	13	6	4	50
Bullfinch <i>Pyrrhula pyrrhula</i>	BF	BoCCW3 Red S7	-	-	4	2	-	6
Linnet <i>Linaria cannabina</i>	LI	BoCCW3 Red S7	-	3	2	2	-	7

Species	BTO Code	Conservation Status	Approximate Number of Breeding Pairs					
			Transect 1	Transect 2	Transect 3	Transect 4	Transect 5	TOTAL
Lesser Redpoll <i>Acanthis cabaret</i>	LR	BoCCW3 Amber S7	-	3	5	6	-	14
Crossbill	CR	S1	2	-	-	1	-	3
Goldfinch <i>Carduelis carduelis</i>	GO	-	2	-	6	2	-	10
Siskin <i>Spinus spinus</i>	SK	-	5	-	-	2	1	8
Yellowhammer <i>Emberiza citrinella</i>	Y.	BoCCW3 Red S7	-	-	-	-	1	1
Reed Bunting <i>Emberiza schoeniclus</i>	RB	BoCCW3 Amber S7	-	5	8	10	9	32

Table 4. Results summary – non-breeding species

Species	Conservation Status	Notes
Goosander <i>Mergus merganser</i>	-	29/04/19 – Adult female flew over southeast
Red Kite <i>Milvus milvus</i>	BoCCW3 Amber S1	10/05/19 – Adult foraging in north of Study Area 11/05/19 – Adult foraging in south of the Study Area 12/06/19 – adult foraging on the north of the Study Area No evidence of breeding within the Study Area or adjacent areas. Anecdotally, (farmer, pers comm.), breeding in valley to the north of the site.
Lesser Black-backed Gull <i>Larus fuscus</i>	BoCCW3 Amber	24/04/19 - One adult in flight over the Study Area and 15 foraging in pasture. 09/05/19 – Two in flight over centre of Study Area
Herring Gull <i>Larus argentatus</i>	BoCCW3 Red S7	23/04/19 – Two adults in flight over the Study Area 24/04/19 - Six adults in flight and 75 foraging within pasture in the east of the Study Area 09/05/19 – one in flight over Study Area
Kestrel <i>Falco tinnunculus</i>	BoCCW3 Red S7	09/05/19 – Adult female foraging in centre of Study Area
Hobby <i>Falco subbuteo</i>	S1	24/06/19 – Adult in flight in the south of the Study Area
Sand Martin <i>Riparia riparia</i>	-	24/04/19 – two in flight in the east of the Study Area 10/05/19 - ten in flight in the east of the Study Area
Swallow <i>Hirundo rustica</i>	-	Recorded during each survey foraging over the Study Area
House Martin <i>Delichon urbicum</i>	-	24/04/19 – five in flight in the south of the Study Area
Rook <i>Corvus frugilegus</i>	-	Logged during each survey foraging within pasture in the north and east of the Study Area

5.2 Goshawk Survey

There were no observations of Goshawk during the targeted surveys, and this species is consequently considered absent from the Study Area and 1km buffer zone.

The sole observations during the survey period related to birds seen on 9 July and 23 July during Honey-buzzard surveys. Both observations were in excess of 4km from the site.

5.3 Honey-buzzard Survey

There was no evidence of breeding Honey-buzzard within the Study Area or 2km buffer zone. Throughout the survey period, there were only two distant Honey-buzzard sightings, both in excess of 4km from the site.

The nearest known nest site in this well studied area is approximately 4.5 km from the site.

6 Summary

A suite of breeding bird surveys to inform the proposed complimentary restoration works at Nant Helen was completed during 2019. These surveys included a CBC survey and targeted Goshawk and Honey-buzzard surveys.

During CBC surveys all species observed or heard were recorded. A total 62 species were logged, of which 52 species were considered to have bred within the Study Area. Of these species ten are included on the BoCCW 3 Red list, 13 on the BoCCW 3 Amber list with 14 being included on Section 7 of the Environment (Wales) Act 2016. One species (Common Crossbill) that is included on Schedule 1 of the Wildlife and Country 1981 (as amended) bred within the survey area.

No territories of Goshawk or Honey-buzzard were present within the Study Area or relevant buffers. A number of observations of Red Kite occurred during the survey period, although no evidence of breeding within the Study Area was noted.

Figures

- Figure 1** Study Area
- Figure 2** Transect Details
- Figure 3** Drawings 1-15: BBS Results for Species of Conservation Significance
- Figure 4** Drawings 1-60: BBS Results for all Species



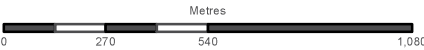
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

Study Area

F1	2019-11-14	EA	CP	
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Issue	Date	By	Chkd	Appd
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Client
Celtic Energy

Job Title
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Restoration Earthworks**

**Figure 1
Study Area**

Scale at A3
1:20,000

Job No 271968-05	Drawing Status For Issue
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Drawing No 001	Issue F1
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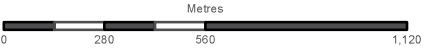
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- BBS Transect 1
- BBS Transect 2
- BBS Transect 3
- BBS Transect 4
- BBS Transect 5
- Survey Area

P0	2019-11-13	KJ	CP	PC
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Issue	Date	By	Chkd	Appd
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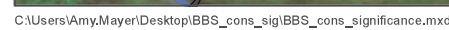
Survey Details

Scale at A3

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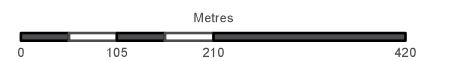
Drawing No	Issue
002	P0



BF Bullfinch
CK Cuckoo
GC Goldcrest
GH Grasshopper Warbler
LI Linnet
LT Long-tailed Tit
M. Mistle Thrush
MP Meadow Pipit
RB Reed Bunting
S. Skylark
ST Song Thrush
WH Whitethroat
WW Willow Warbler

Legend

-  Site Boundary
 Transect 1
 Transect 2
 Transect 3
 Transect 5
R. ➤ Away
R. ➤ Away, Alarm
== R. ➤ Away, Call
♂ R. ➤ Away, Male
R. - R. Different Simultaneous
· R. ➤ Flight
R. ⬅ Land
R. — R Simultaneous
= Alarm
— Call
♀ Pair
R. Sight record
○ Song



F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

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Project Title

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Drawing Title

BBS Transect 1 - April Species of Conservation Significance

Scale at A3

1:8,250

Role

Suitability

For Issue

Arup Job No
271968-05

Name
001

EV

F1



- CK Cuckoo
- D. Dunnock
- GC Goldcrest
- L. Lapwing
- LI Linnet
- M. Mistle Thrush
- MP Meadow Pipit
- RB Reed Bunting
- S. Skylark
- ST Song Thrush
- TP Tree Pipit
- WH Whitethroat
- WW Willow Warbler

Legend

- Site Boundary
- Transect 1
- Transect 2
- Transect 3
- Transect 5
- R. - Away
- R. - R. Different Simultaneous
- R. - Flight
- R. - Flight, Call
- R. - Land
- R. - Land, Male
- R. - R. Simultaneous
- Song, two locations, same bird
- Alarm
- Call
- Nest
- Sight record
- Song

Metres

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

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Scale at A3
1:8,250

Role

Suitability

For Issue	
Arup Job No 271968-05	Rev F1
Name 002	



- BF Bullfinch

CK Cuckoo

CR Crossbill (common)

D. Dunnock

GC Goldcrest

GH Grasshopper Warbler

L. Lapwing

LI Linnet
- MP Meadow Pipit

RB Reed Bunting

S. Skylark

SG Starling

ST Song Thrush

TP Tree Pipit

WH Whitethroat

WW Willow Warbler

Legend

Site Boundary

Transect 1

Transect 2

Transect 3

Transect 5

R. Away

R. Away, Alarm

R. Away, Call

R. Different Simultaneous

R. Flight

Flight, Song

R. Land

R. Land, Male

R. Land, Song

R. Simultaneous

Alarm

Call

Call, Food

Call, Male

R. Sight record

Song

Metres

0105210420

F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

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BBS Transect 1 - June
Species of Conservation
Significance

Scale at A3

1:8,250

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

003



GH Grasshopper Warbler
HS House Sparrow
LI Linnet
MA Mallard
MP Meadow Pipit
RB Reed Bunting
S. Skylark
ST Song Thrush
WH Whitethroat
WW Willow Warbler

Legend

Site Boundary
Transect 1
Transect 2
Transect 4
Transect 5

R. ➤ Away
R. ➤ Away, Alarm
R. ➤ Away, Call
R. - - R. Different Simultaneous
R. - - Flight
R. - - Flight, Call
R. ➤ Land
R. - - R. Simultaneous

Alarm
Call
Nest
Sight record
Song

Metres

0	75	150	300
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F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

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Drawing Title
BBS Transect 2 - April Species of Conservation Significance

Scale at A3
1:6,000

Role

Suitability
For Issue

Arup Job No 271968-05	Rev F1
---------------------------------	------------------

Name
004



- CK Cuckoo
- GH Grasshopper Warbler
- HS House Sparrow
- L. Lapwing
- LI Linnet
- M. Mistle Thrush
- MP Meadow Pipit
- RB Reed Bunting
- S. Skylark
- TP Tree Pipit
- WH Whitethroat
- WW Willow Warbler

Legend

- Site Boundary
- Transect 1
- Transect 2
- Transect 4
- Transect 5
- Aggressive
- Away
- Away, Alarm
- R. Different Simultaneous
- Flight
- Flight, Alarm
- Flight, Call
- R. food Flight, Food
- Land
- RSimultaneous
- Song, two locations, same bird
- Alarm
- Call
- Nest
- onOn
- Sight record
- Song

Metres

<

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

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Project Title
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Drawing Title
BBS Transect 2 - May Species of Conservation Significance

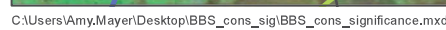
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1:6,000

Role

Suitability

For Issue

Arup Job No 271968-05	Rev F1
Name 005	



RB Reed Bunting
S. Skylark
SG Starling
SL Lapwing
ST Song Thrush
TP Tree Pipit
WH Whitethroat
WW Willow Warbler

 Site Boundary
 Transect 1
 Transect 2
 Transect 4
 Transect 5

☐ Song





- BF Bullfinch

CK Cuckoo

CU Curlew

D. Dunnock

GH Grasshopper Warbler

HS House Sparrow

L. Lapwing

LI Linnet

LT Long-tailed Tit
- M. Mistle Thrush

MA Mallard

MP Meadow Pipit

RB Reed Bunting

S. Skylark

SG Starling

ST Song Thrush

WH Whitethroat

WW Willow Warbler

- Legend
- Site Boundary

Transect 1

Transect 2

Transect 3

Transect 4

R. Away

R. Away, Call

R. R.Different Simultaneous

R. Flight

R. Flight, Call, Female

R. Land

R. RSimultaneous

Alarm

Call

R. Sight record

Song

Metres

0100200400

F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

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Project Title

Nant Helen Complementary

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Drawing Title

BBS Transect 3 - April

Species of Conservation

Significance

Scale at A3

1:7,750

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
007	



- BF Bullfinch

D. Dunnock

GH Grasshopper Warbler

HS House Sparrow

LI Linnet

LT Long-tailed Tit

M. Mistle Thrush

MP Meadow Pipit

RB Reed Bunting

S. Skylark

SG Starling

ST Song Thrush
- TP Tree Pipit

WH Whitethroat

WW Willow Warbler

Legend

Site Boundary

Transect 1

Transect 2

Transect 3

Transect 4

Aggressive

Away

R. - R. Different Simultaneous

R. - Flight

R. - Flight, Alarm

R. - R Simultaneous

Song, two locations, same bird

Alarm

Call

Male

Sight record

Song

Metres

0100200400

F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

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Drawing Title
BBS Transect 3 - May
Species of Conservation
Significance

Scale at A3
1:7,750
Role

Suitability

For Issue

Arup Job No

271968-05

Name

008

Rev

F1



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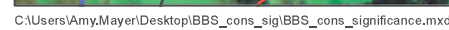
Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 3 - June
Species of Conservation
Significance**

Scale at A3
1:6,750

Role
For Issue
Arup Job No
271968-05
Name
009

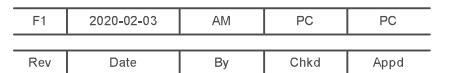
Rev
F1



ST Song Thrush
WH Whitethroat
WW Willow Warbler

 Site Boundary
 Transect 2
 Transect 3
 Transect 4
 Transect 5

- R. ➤ Away
- R. ➤ Away, Alarm
- R. ➤ Away, Call
- R. - R. Different Sim
- R. ➤ Flight
- R. ➤ Flight, Call
- R. ➤ Land
- ➤ Land, Song



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Client

Project Title

Drawing Title

BBS Transect 4 - April Species of Conservation Significance

1:6,750

Suitability

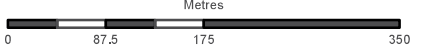
Arup Job No
271968-05

ev
F1



- BF Bullfinch
CK Cuckoo
GC Goldcrest
GH Grasshopper Warbler
HS House Sparrow
L Lapwing
LI Linnet
M Mistle Thrush
MP Meadow Pipit
RB Reed Bunting
S Skylark
SG Starling
- TP Tree Pipit
WH Whitethroat
WW Willow Warbler

- Site Boundary
Transect 2
Transect 3
Transect 4
Transect 5
- Aggressive
- Away
- Away, Alarm
- R. Different Simultaneous
- Flight
- Flight, Alarm
- Flight, Call
- Food Flight, Food
- Land
- Land, Song
- R. Simultaneous
- Song, two locations, same bird
- Alarm
- Call
- Nesting material
- Nest
- onOn
- Sight record
- Song



F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

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Project Title
Nant Helen Earthworks

Drawing Title
**BBS Transect 4 - May
Species of Conservation
Significance**

Scale at A3
1:6,750

Role

Suitability
For Issue

Arup Job No
271968-05

Name
011

Rev
F1





- CK Cuckoo
D. Dunnock
GH Grasshopper Warbler
HS House Sparrow
LI Linnet
MP Meadow Pipit
RB Reed Bunting
S. Skylark
SG Starling
ST Song Thrush
TP Tree Pipit
WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Transect 5

R. Away

R. Away, Alarm

R. R. Different Simultaneous

R. Flight

Flight, Aggressive

R. Flight, Call

Flight, Song

R. Land

R. Land, Male

Land, Song

Call

Fight

R. Sight record

Song

Metres

0	87.5	175	350	
F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

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Project Title

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Drawing Title

BBS Transect 5 - April
Species of Conservation
Significance

Scale at A3

1:6,750

Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
013	



- CK Cuckoo

GH Grasshopper Warbler

L Lapwing

LI Linnet

M Mistle Thrush

MP Meadow Pipit

RB Reed Bunting

S Skylark

SG Starling
- WH Whitethroat

WW Willow Warbler

Y Yellowhammer

Legend

Site Boundary

Transect 2

Transect 4

Transect 5

R. ➔ Away

R. - - R. Different Simultaneous

· R. ➔ Flight

R. ➔ Flight, Alarm

= Flight, Song

R. ➔ Land

○ ➔ Land, Song

R. - R Simultaneous

○ - ○ Song, two locations, same bird

= Alarm

- Call

⋈ Fight

R. Sight record

○ Song

Metres

0	87.5	175	350	
F1	2020-02-03	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 5 - May
Species of Conservation
Significance

Scale at A3

1:6,750

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

014





ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 1 - East
April

Scale at A3
1:3,000

Role

Suitability
For Issue
Arup Job No
271968-05
Name
001

Rev
F1



Legend

Site Boundary

Transect 1

Transect 2

Transect 3

Alarm

Alarm, Male

Call

Family

Female

Sight record

Song

Aggressive

Away

Away, Alarm

Away, Alarm, Male

Away, Male

Away, Song

- - R. Different Simultaneous

- R. Flight

- Land

- Land, Male

- Song, two locations, same bird

Metres

0 37.5 75 150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 1 - East May

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
002	



Legend

Site Boundary

Transect 1

Transect 2

Transect 3

Alarm

Alarm, Family

Alarm, Male

Call

Call, Food

Family

Nest

Sight record

Song

Away

R. - R. Different Simultaneous

R. - Flight

R. - Flight, Alarm

R. - Land

R. - Land, Male

Metres

0 37.5 75 150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 1 - East June

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
003	



- B. Blackbird

BC Blackcap

BF Bullfinch

BT Blue Tit

BZ Buzzard

CC Chiffchaff

CG Canada Goose

CH Chaffinch

CK Cuckoo

GC Goldcrest

GH Grasshopper Warbler

GO Goldfinch
- GT Great Tit

H. Grey Heron

LR Redpoll (Lesser)

M. Mistle Thrush

MP Meadow Pipit

R. Robin

S. Skylark

SK Siskin

ST Song Thrush

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 1

Alarm

Alarm, Male

Call

Call, Male

Male

Sight record

Song

Away

Away, Male

-R- Different Simultaneous

Flight

Flight, Female

Land

Metres

0

37.5

75

150

F1

2020-01-27

AM

PC

PC

Rev

Date

By

Chkd

Appd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street

Bristol

BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 1 - Centre East April

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

004





- B. Blackbird
- BC Blackcap
- BF Bullfinch
- BT Blue Tit
- BZ Buzzard
- C. Carrion Crow
- CC Chiffchaff
- CH Chaffinch
- CK Cuckoo
- CT Coal Tit
- D. Dunnock
- G. Green Woodpecker
- GT Great Tit
- KT Red Kite
- LR Redpoll (Lesser)
- MP Meadow Pipit
- R. Robin
- RN Raven
- S. Skylark
- SK Siskin
- ST Song Thrush
- WR Wren
- WW Willow Warbler

Legend

- Site Boundary
- Transect 1
- Alarm
- Alarm, Family
- Alarm, Male
- Call
- Call, Food
- Call, Male
- Family
- Juvenile
- Sight record
- Song
- Away
- Away, Alarm, Male
- R- Different Simultaneous
- R- Flight
- R- Flight, Call
- R- Flight, Male
- Land
- Land, Male

Metres				
0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 1 - Centre East
June

Scale at A3
1:3,000
Role

Suitability
For Issue
Arup Job No
271968-05
Name
006

Rev
F1



- B. Blackbird

BC Blackcap

BF Bullfinch

BT Blue Tit

BZ Buzzard

CC Chiffchaff

CG Canada Goose

CH Chaffinch

GC Goldcrest

GT Great Tit
- GW Garden Warbler

LT Long-tailed Tit

M. Mistle Thrush

R. Robin

RN Raven

S. Skylark

SK Siskin

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 1

Alarm

Alarm, Male

Call

Female

Male

Sight record

Song

Away

Away, Male

- - R.Different Simultaneous

R. Flight

Land

Land, Female

Land, Male

R.Simultaneous

Metres

0	37.5	75	150	
F1	2020-01-27	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 1 - Centre West
April

Scale at A3

1:3,000

Role

Suitability

For Issue	Rev
Arup Job No	F1
271968-05	
Name	
007	



- B. Blackbird

BC Blackcap

BT Blue Tit

CC Chiffchaff

CH Chaffinch

CK Cuckoo

CT Coal Tit

D. Dunnock

GC Goldcrest

GT Great Tit

GW Garden Warbler
- LI Linnet

MP Meadow Pipit

R. Robin

S. Skylark

SK Siskin

SL Swallow

ST Song Thrush

WP Woodpigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 1

Alarm

Alarm, Male

Call

Call, Male

fam Family

R. Sight record

Song

R. Away

Alarm, Male

Away, Male

Away, Song

- - R. Different Simultaneous

R. Flight

Flight, Male

Land, Male

R. Simultaneous

Metres

0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 1 - Centre West
May

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

008



- B. Blackbird

BC Blackcap

BF Bullfinch

BT Blue Tit

C. Carrion Crow

CC Chiffchaff

CH Chaffinch

CK Cuckoo

CR Crossbill (common)

CT Coal Tit

D. Dunnock
- G. Green Woodpecker

GT Great Tit

MP Meadow Pipit

R. Robin

RN Raven

S. Skylark

SK Siskin

ST Song Thrush

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 1

Alarm

Alarm, Family

Alarm, Female

Call

Call, Male

Family

Juvenile

Sight record

Song

Away

R. Different Simultaneous

Flight

Flight, Call

Flight, Song

Land

Land, Male

Land, Song

Metres

0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 1 - Centre West
June**

Scale at A3
1:3,000
Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
009	



- B. Blackbird

BC Blackcap

BF Bullfinch

BT Blue Tit

BZ Buzzard

C. Carrion Crow

CC Chiffchaff

CH Chaffinch

CT Coal Tit

GC Goldcrest

GH Grasshopper Warbler

GT Great Tit

GW Garden Warbler

J. Jay

PW Pied Wagtail

R. Robin

RN Raven

SK Siskin

SW Sedge Warbler

W. Wheatear

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 1

Alarm

Call

Call, Male

Male

Pair

Sight record

Song

Away

R. - R. Different Simultaneous

Flight

Flight, Call

Land, Male

Metres

037.575150

F1	2020-01-27	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 1 - West
April

Scale at A3
1:3,000

Role

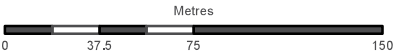
Suitability
For Issue
Arup Job No
271968-05
Name
010

Rev
F1



Legend

- Site Boundary
- Transect 1
- Alarm
- Call
- Sight record
- Song
- Away
- - R.Different Simultaneous
- Flight
- Land
- Land, Call
- Land, Food



Rev	Date	By	Chkd	Appd
F1	2020-01-28	AM	PC	PC

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 1 - West
May**

Scale at A3
1:3,000

Role

Suitability
For Issue
Arup Job No
271968-05
Name
011

Rev
F1



- B. Blackbird

BT Blue Tit

C. Carrion Crow

CR Crossbill (common)

GC Goldcrest

GT Great Tit

LI Linnet

LR Redpoll (Lesser)

MP Meadow Pipit
- PW Pied Wagtail

R. Robin

RN Raven

S. Skylark

SK Siskin

ST Song Thrush

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 1

R. - - R. Different Simultaneous

R. -> Flight

R. -> Flight, Call

R. -> Land

Land, Song

Metres

0

37.5

75

150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 1 - West
June

Scale at A3
1:3,000
Role

Suitability

For Issue

Arup Job No
271968-05

Rev
F1

Name
012



- B. Blackbird

BT Blue Tit

BZ Buzzard

CG Canada Goose

CH Chaffinch

GH Grasshopper Warbler

HG Herring Gull

JD Jackdaw

LB Lesser Black-backed Gull
- LR Redpoll (Lesser)

MP Meadow Pipit

PW Pied Wagtail

S. Skylark

SL Swallow

SM Sand Martin

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 3

Alarm

Call

Sight record

Song

Away

- - R. Different Simultaneous

R. Flight

Metres

0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 3 - North
April

Scale at A3
1:3,000
Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
013	



- B. Blackbird

BC Blackcap

C. Carrion Crow

CC Chiffchaff

CG Canada Goose

CH Chaffinch

D. Duncock

HG Herring Gull

JD Jackdaw

LT Blackbird
- LT Long-tailed Tit

MP Meadow Pipit

R. Robin

RB Reed Bunting

S. Skylark

SC Stonechat

SL Swallow

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 3

Alarm

R. Sight record

Song

Aggressive

Away

Flight

Simultaneous

Song, two locations, same bird

Metres

037.575150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 3 - North
May

Scale at A3

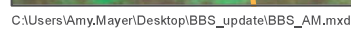
1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
014	



MG Magpie
MP Meadow Pipit
PW Pied Wagtail
R. Robin
RB Reed Bunting
S. Skylark
SK Siskin
SL Swallow
WP Woodpigeon
WR Wren
WW Willow Warbler

 Site Boundary

— Call

food Food

R. Sight re

☐ feed -

R. Away

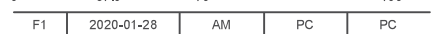
-R- Away, Aggressive

○ Away, Song

·R.→ Flight

- R. $\Rightarrow$ Flight, Call

— Simultaneous



Coordinate System: British National Grid

ADLID

63 St Thomas Street
Dorchester

Celtic Energy Ltd.

Nant Helen Complementary Restoration Earthworks

BBS Transect 3 - North
June

1:3,000

Suitabi

For Issue

Name _____



Legend

- Site Boundary
- Transect 3
- = Alarm
- * Nest
- R. Sight record
- O Song
- R. Away
- R. Flight
- R. Flight, Alarm

Metres				
0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 3 - Centre
April**

Scale at A3
1:3,000

Role

Suitability

For Issue

Arup Job No
271968-05

Name

016

Rev

F1



ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary Restoration Earthworks

Drawing Title
BBS Transect 3 - Centre May

Scale at A3
1:3,000

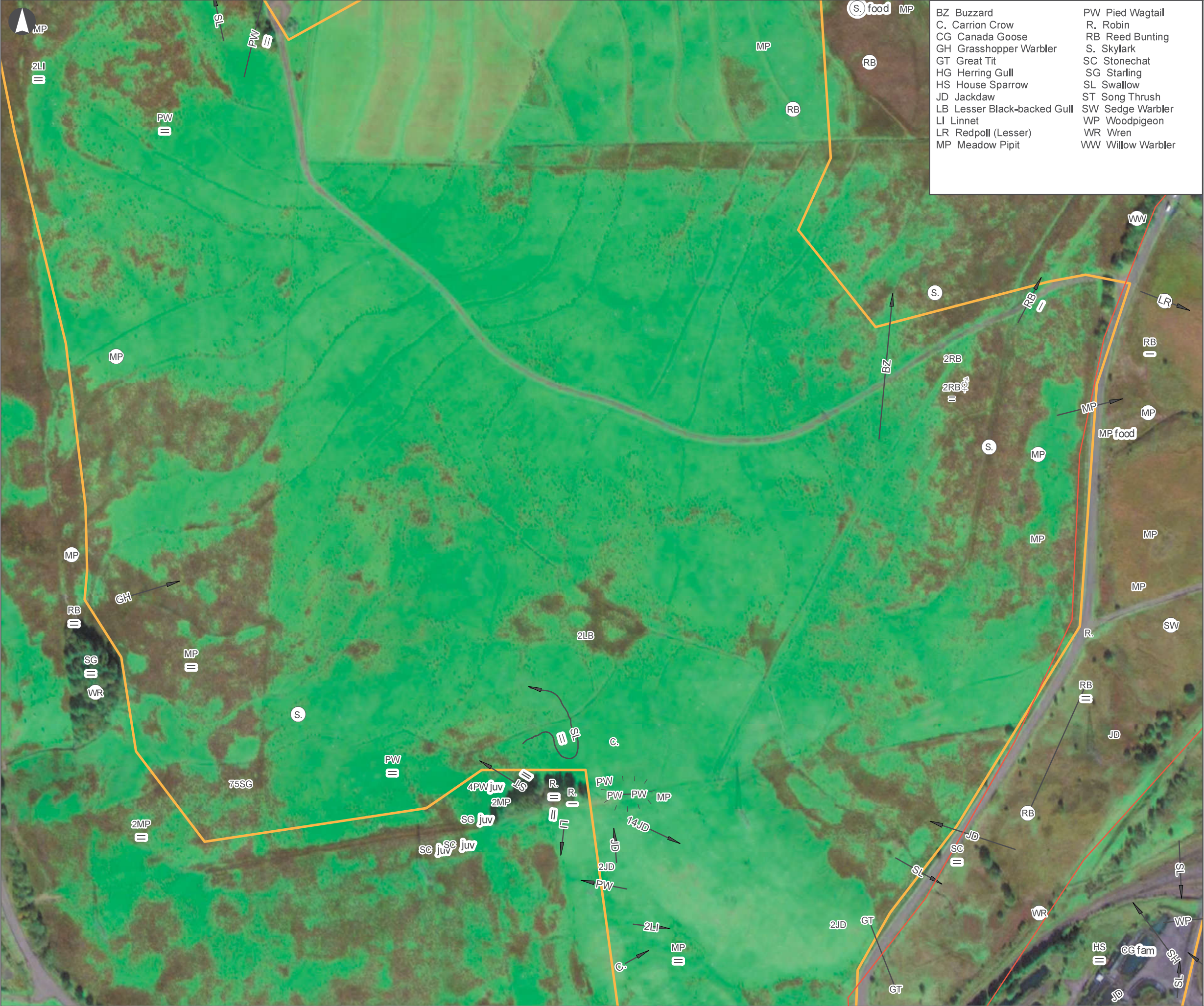
Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1

Name
017



Legend

Site Boundary

Transect 3

Alarm

Call

Family

Food

Juvenile

Nest

Sight record

Song

foodSong, Food

Aggressive

Away

Away, Alarm

-R-Different Simultaneous

-R-Flight

-R-Flight, Alarm

-R-Flight, Call

-R-Flight, Song

-R-Simultaneous

Metres

0 37.5 75 150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 3 - Centre June

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
018	



- B. Blackbird

BC Blackcap

C. Carrion Crow

CG Canada Goose

CH Chaffinch

GG Great Crested Grebe

GO Goldfinch

HG Herring Gull

HM House Martin

HS House Sparrow

JD Jackdaw

L. Lapwing
- LI Linnet

MP Meadow Pipit

PW Pied Wagtail

R. Robin

RB Reed Bunting

S. Skylark

SG Starling

SL Swallow

WP Wood Pigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 3

Alarm

Nest

Sight record

Song

Away

- - R. Different Simultaneous

R. Flight

Metres

0

37.5

75

150

F1	2020-01-31	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 3 - Centre East
April

Scale at A3
1:3,000
Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

019



- B. Blackbird

BT Blue Tit

C. Carrion Crow

CD Collared Dove

CG Canada Goose

CH Chaffinch

D. Dunnock

GO Goldfinch

HS House Sparrow

JD Jackdaw

LB Lesser Black-backed Gull

LI Linnet

LR Redpoll (Lesser)
- MG Magpie

PW Pied Wagtail

R. Robin

RB Reed Bunting

RN Raven

S. Skylark

SI Swift

SL Swallow

SM Sand Martin

SW Sedge Warbler

WP Wood Pigeon

WR Wren

Legend

Site Boundary

Transect 3

Alarm

Call

Nest

Sight record

Song

Away

Flight

Flight, Alarm

RMove

RSimultaneous

Song, two locations, same bird

Metres

0

37.5

75

150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 3 - Centre East
May

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
020	



- | | |
|-----------------------------|---------------------|
| B. Blackbird | LR Redpoll (Lesser) |
| BC Blackcap | MA Mallard |
| BT Blue Tit | MP Meadow Pipit |
| BZ Buzzard | PW Pied Wagtail |
| C. Carrion Crow | R. Robin |
| CG Canada Goose | RB Reed Bunting |
| CH Chaffinch | S. Skylark |
| GO Goldfinch | SC Stonechat |
| GT Great Tit | SG Starling |
| HG Herring Gull | SL Swallow |
| HS House Sparrow | ST Song Thrush |
| JD Jackdaw | SW Sedge Warbler |
| LB Lesser Black-backed Gull | WP Wood Pigeon |
| LI Linnet | WR Wren |

 Site Boundary

— Alarm

— Call

fam Family

food Food

juv Juvenile

R. Sight record

☐ Song

— Aggressive

R. Away

R. ➤ Away, Alarm

R.  Away, Call

R. - - R. Different Simultaneous

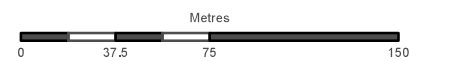
- R. ➔ Flight

R. Flight, Alarm

- RjuvFlight, Juv

Flight, Song

R.—R.Simultaneous



F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 3 - Centre East
June

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No
271968-05

Name
021

EV

F1



- B. Blackbird

BC Blackcap

BF Bullfinch

BT Blue Tit

C. Carrion Crow

CC Chiffchaff

CH Chaffinch

D. Dunnock

GH Grasshopper Warbler

GO Goldfinch
- GT Great Tit

HS House Sparrow

JD Jackdaw

LI Linnet

LT Long-tailed Tit

R. Robin

S. Skylark

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 3

Alarm

Call

Nest

Sight record

Song

Away

Away, Call

Away, Nest material

-R-Different Simultaneous

Flight

Flight, Alarm

Flight, Call

Flight, Call, Female

Flight, Nest material

Simultaneous

Metres

0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 3 - East
April

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

022



- B. Blackbird

BC Blackcap

BF Bullfinch

BT Blue Tit

C. Carrion Crow

CC Chiffchaff

CH Chaffinch

CT Coal Tit

GH Grasshopper Warbler

GO Goldfinch

HG Herring Gull

HS House Sparrow
- JD Jackdaw

LI Linnet

R. Robin

RB Reed Bunting

RN Raven

S. Skylark

SL Swallow

ST Song Thrush

SW Sedge Warbler

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 3

Alarm

Call

Male

Sight record

Song

Away

R.foodAway, Food

R. Flight

R. Flight, Call

R.Simultaneous

Song, two locations, same bird

Metres

037.575150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 3 - East
May

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

023



- B. Blackbird

BC Blackcap

BF Bullfinch

CC Chiffchaff

CH Chaffinch

GO Goldfinch

HM House Martin

HS House Sparrow

JD Jackdaw
- LR Redpoll (Lesser)

MP Meadow Pipit

PW Pied Wagtail

SL Swallow

ST Song Thrush

SW Sedge Warbler

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 3

Alarm

Nest

Sight record

Song

Away

- - R-Different Simultaneous

· R- Flight

R- Flight, Alarm

R-food Flight, Food

R- RSimultaneous

Metres

0

37.5

75

150

F1

2020-01-28

AM

PC

PC

Rev

Date

By

Chkd

Appd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street

Bristol

BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 3 - East June

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

024



- B. Blackbird
BC Blackcap
BF Bullfinch
BT Blue Tit
CH Chaffinch
CK Cuckoo
GH Grasshopper Warbler
GT Great Tit
LR Redpoll (Lesser)
MA Mallard
MP Meadow Pipit
PW Pied Wagtail
R. Robin
S. Skylark
SC Stonechat
SG Starling
ST Song Thrush
W. Wheatear
WR Wren
WW Willow Warbler

Legend

- Site Boundary
Transect 2
Transect 4
Transect 5
Alarm
Alarm, Male
Call
Nest
Sight record
Song
Away
- - R. Different Simultaneous
- R. Flight
- R. Flight, Call
Flight, Song
Land

Metres

<

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 4 - West
April**

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Name

025

Rev

F1



Legend

Site Boundary

Transect 2

Transect 4

Transect 5

Alarm

Alarm, Family

Alarm, Male

Call

Female

Male

Nesting material

Sight record

Song

Away

- R. Different Simultaneous

Flight

Flight, Alarm

Flight, Call

Land, Song

Simultaneous

Metres

0 37.5 75 150

F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

**Nant Helen Complementary
Restoration Earthworks**

Drawing Title

**BBS Transect 4 - West
May**

Scale at A3

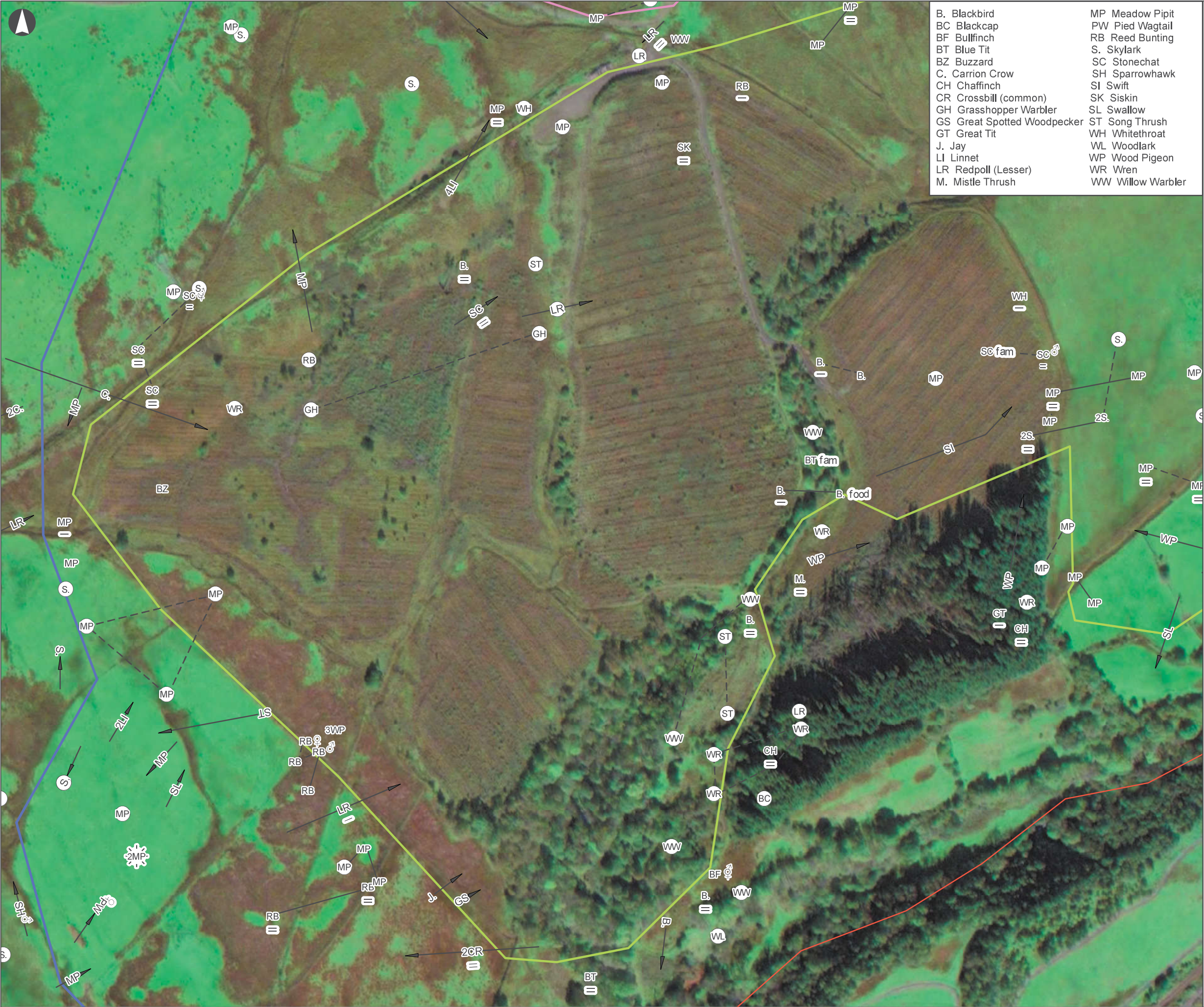
1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
026	



- B. Blackbird

BC Blackcap

BF Bullfinch

BT Blue Tit

BZ Buzzard

C. Carrion Crow

CH Chaffinch

CR Crossbill (common)

GH Grasshopper Warbler

GS Great Spotted Woodpecker

GT Great Tit

J. Jay

LI Linnet

LR Redpoll (Lesser)

M. Mistle Thrush
- MP Meadow Pipit

PW Pied Wagtail

RB Reed Bunting

S. Skylark

SC Stonechat

SH Sparrowhawk

SI Swift

SK Siskin

SL Swallow

ST Song Thrush

WH Whitethroat

WL Woodlark

WP Wood Pigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Transect 5

Alarm

Alarm, Male

Alarm, Pair

Call

Family

Female

Fight

Food

Male

Pair

Sight record

Song

R. Away

R. Different Simultaneous

R. Flight

R. Flight, Alarm

R. Flight, Call

R. Flight, Male

R. Flight, Song

R. Land

R. Land, Female

R. Land, Song

R. Simultaneous

Metres

0 37.5 75 150

F1

2020-01-28

AM

PC

PC

Rev

Date

By

Chkd

Appd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 4 - West
June

Scale at A3
1:3,000

Role

Suitability
For Issue

Arup Job No
271968-05

Rev
F1

Name
027



- B. Blackbird

GD Goosander

GH Grasshopper Warbler

JD Jackdaw

LI Linnet

LR Redpoll (Lesser)

MA Mallard

MP Meadow Pipit
- N. Nightingale

RN Raven

S. Skylark

SC Stonechat

W. Wheatear

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Alarm

Alarm, Female

Alarm, Male

Call

Nest

onOn

Sight record

Song

Away

Away, Call

-R-Different Simultaneous

-R-Flight

-R-Flight, Call

-R-Flight, Female

Flight, Song

-R-Simultaneous

Metres

0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 4 - Centre
April

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

028



- B. Blackbird

BT Blue Tit

C. Carrion Crow

CC Chiffchaff

CH Chaffinch

CK Cuckoo

GH Grasshopper Warbler

JD Jackdaw

KT Red Kite

LI Linnet

LR Redpoll (Lesser)

M. Mistle Thrush

MG Magpie
- MP Meadow Pipit

R. Robin

RB Reed Bunting

RN Raven

S. Skylark

SC Stonechat

SG Starling

SL Swallow

W. Wheatear

WH Whitethroat

WP Wood Pigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Alarm

Call

Nesting material

* on On

R. Sight record

Song

R. Away

R. Away, Alarm

R. - R. Different Simultaneous

R. Flight

R. Flight, Alarm

R. Flight, Call

R. food Flight, Food

R. Simultaneous

Song, two locations, same bird

Metres

0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 4 - Centre
May**

Scale at A3
1:3,000
Role

Suitability

For Issue	
Arup Job No	Rev
271968-05	F1
Name	
029	



- B. Blackbird

BT Blue Tit

C. Carrion Crow

CC Chiffchaff

CD Collared Dove

CH Chaffinch

GH Grasshopper Warbler

GO Goldfinch

GT Great Tit

JD Jackdaw

LR Redpoll (Lesser)

M. Mistle Thrush

MG Magpie

MP Meadow Pipit
- RB Reed Bunting

RN Raven

S. Skylark

SC Stonechat

SG Starling

SI Swift

SK Siskin

SL Swallow

ST Song Thrush

W. Wheatear

WH Whitethroat

WP Wood Pigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Alarm

Alarm, Male

Call

Family

Food

Juvenile

Nest

Sight record

Song

Away

Away, Call

Away, Family

Different Simultaneous

Flight

Flight, Alarm

Simultaneous

0 37.5 75 150

Metres

F1

2020-01-28

AM

PC

PC

Rev

Date

By

Chkd

Appd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street

Bristol

BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 4 - Centre

June

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

030



- B. Blackbird
C. Carrian Crow
CG Canada Goose
CH Chaffinch
GD Goosander
GH Grasshopper Warbler
GO Goldfinch
HS House Sparrow
JD Jackdaw
LI Linnet
- MA Mallard
MP Meadow Pipit
PW Pied Wagtail
RN Raven
S. Skylark
SG Starling
ST Song Thrush
WH Whitethroat
WP Wood Pigeon

Legend

Site Boundary
Transect 2
Transect 4

Alarm
Call
Nest
Sight record
Song

R. Away
R. Away, Call
R. - R. Different Simultaneous
R. Flight
R. Flight, Call
R. Flight, Female
R. Flight, Nest material
R. Land
R. Simultaneous

Metres

0	37.5	75	150
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F1	2020-01-28	AM	PC	PC
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Rev	Date	By	Chkd	Appd
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Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 4 - East
April**

Scale at A3
1:3,000

For Issue	Rev
Arup Job No 271968-05	F1
Name 031	



- BC Blackcap

C. Carrion Crow

CH Chaffinch

CK Cuckoo

CT Coal Tit

GH Grasshopper Warbler

GT Great Tit

HS House Sparrow

JD Jackdaw

LB Lesser Black-backed Gull

LI Linnet

M. Mistle Thrush
- MP Meadow Pipit

PW Pied Wagtail

R. Robin

RB Reed Bunting

RN Raven

S. Skylark

SC Stonechat

SG Starling

SL Swallow

TP Tree Pipit

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Alarm

Call

Nest

on On

Sight record

Song

Aggressive

Away

- - R. Different Simultaneous

Flight

Flight, Alarm

Flight, Call

Food Flight, Food

Simultaneous

Song, two locations, same bird

Metres

0	37.5	75	150	
F1	2020-01-28	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

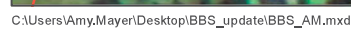
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 4 - East
May**

Scale at A3
1:3,000
Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
032	



- JD Jackdaw
LI Linnet
M. Mistle Thrush
MP Meadow Pipit
RB Reed Bunting
RN Raven
S. Skylark
SC Stonechat
SL Swallow
ST Song Thrush
SW Sedge Warbler
TP Tree Pipit
WP Wood Pigeon
WR Wren
WW Willow Warbler

F1



- B. Blackbird
BC Blackcap
C. Carrion Crow
CG Canada Goose
CH Chaffinch
GH Grasshopper Warbler
GO Goldfinch
HG Herring Gull
JD Jackdaw
LI Linnet
LR Redpoll (Lesser)
MP Meadow Pipit
- MP Meadow Pippit
PW Pied Wagtail
RB Reed Bunting
RN Raven
RW Reed Warbler
S. Skylark
SW Sedge Warbler
W. Wheatear
WH Whitethroat
WP Woodpigeon
WR Wren
WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Alarm

Call

* on On

R. Sight record

Song

R. Away

R. Away, Call

R.foodAway, Food

R. - - R. Different Simultaneous

R. Flight

R. Flight, Call

R.mat Flight, Nest material

R. Land

R. Simultaneous

Metres

0 37.5 75 150

F1	2020-01-29	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 2 - South East April

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
034	



- B. Blackbird

C. Carrion Crow

CG Canada Goose

CH Chaffinch

CK Cuckoo

GH Grasshopper Warbler

GO Goldfinch

GT Great Tit

HG Herring Gull

JD Jackdaw

K. Kestrel

LB Lesser Black-backed Gull

LI Linnet

M. Mistle Thrush
- MP Meadow Pipit

RB Reed Bunting

RN Raven

S. Skylark

SC Stonechat

SL Swallow

SW Sedge Warbler

TP Tree Pipit

W. Wheatear

WH Whitethroat

WP Wood Pigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Alarm

Call

Nest

on On

Sight record

Song

Aggressive

Away

Away, Alarm

Away, Call

Away, Female

Flight

Flight, Alarm

Flight, Call

Land

Simultaneous

Song, two locations, same bird

Metres

0

37.5

75

150

F1

2020-01-29

AM

PC

PC

Rev

Date

By

Chkd

Appd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 2 - South East
May

Scale at A3
1:3,000

Role

Suitability

For Issue

Arup Job No
271968-05

Rev
F1

Name
035



- B. Blackbird

BZ Buzzard

CH Chaffinch

CT Coal Tit

GH Grasshopper Warbler

GO Goldfinch

L. Lapwing

LI Linnet

MP Meadow Pipit

RB Reed Bunting
- RN Raven

S. Skylark

SC Stonechat

SL Swallow

ST Song Thrush

SW Sedge Warbler

TP Tree Pipit

W. Wheatear

WP Wood Pigeon

WR Wren

Legend

Site Boundary

Transect 2

Transect 4

Alarm

Call

fam Family

R. Sight record

Song

R. Away

R. Away, Call

Rfam Away, Family

R- - R.Different Simultaneous

R. Flight

R. Flight, Call

R. Simultaneous

Metres

037.575150

F12020-01-29AMPCPC

RevDateByChkdAppd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 2 - South East
June

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

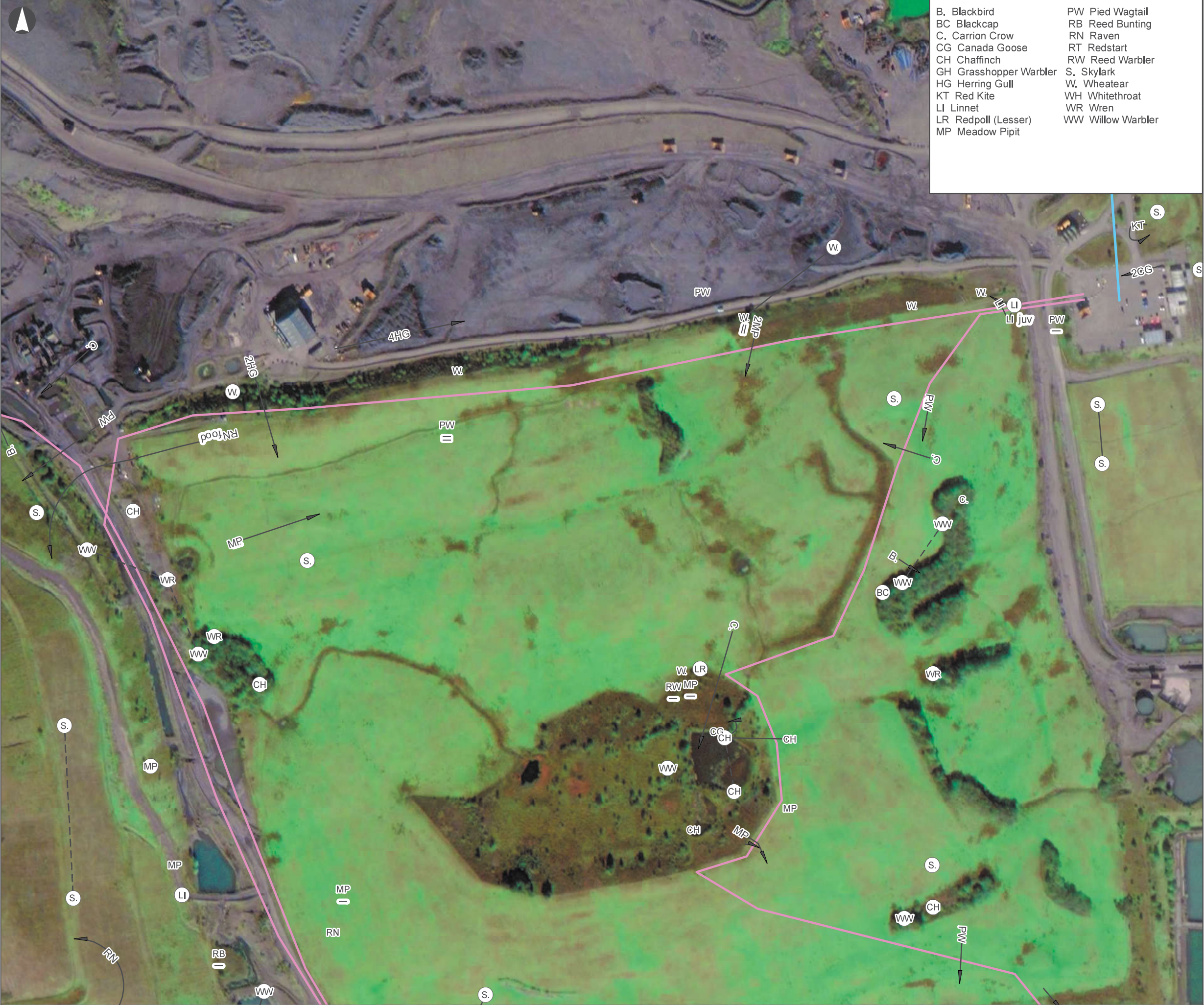
271968-05

Rev

F1

Name

036



Legend

Site Boundary

Transect 1

Transect 2

Alarm

Call

Male

Sight record

Song

Away

Away, Alarm

Away, Call

Food

Away, Food

Different Simultaneous

Flight

Flight, Call

Land

Simultaneous

Metres

0 37.5 75 150

F1	2020-01-29	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

**Nant Helen Complementary
Restoration Earthworks**

Drawing Title

**BBS Transect 2 - North East
April**

Scale at A3

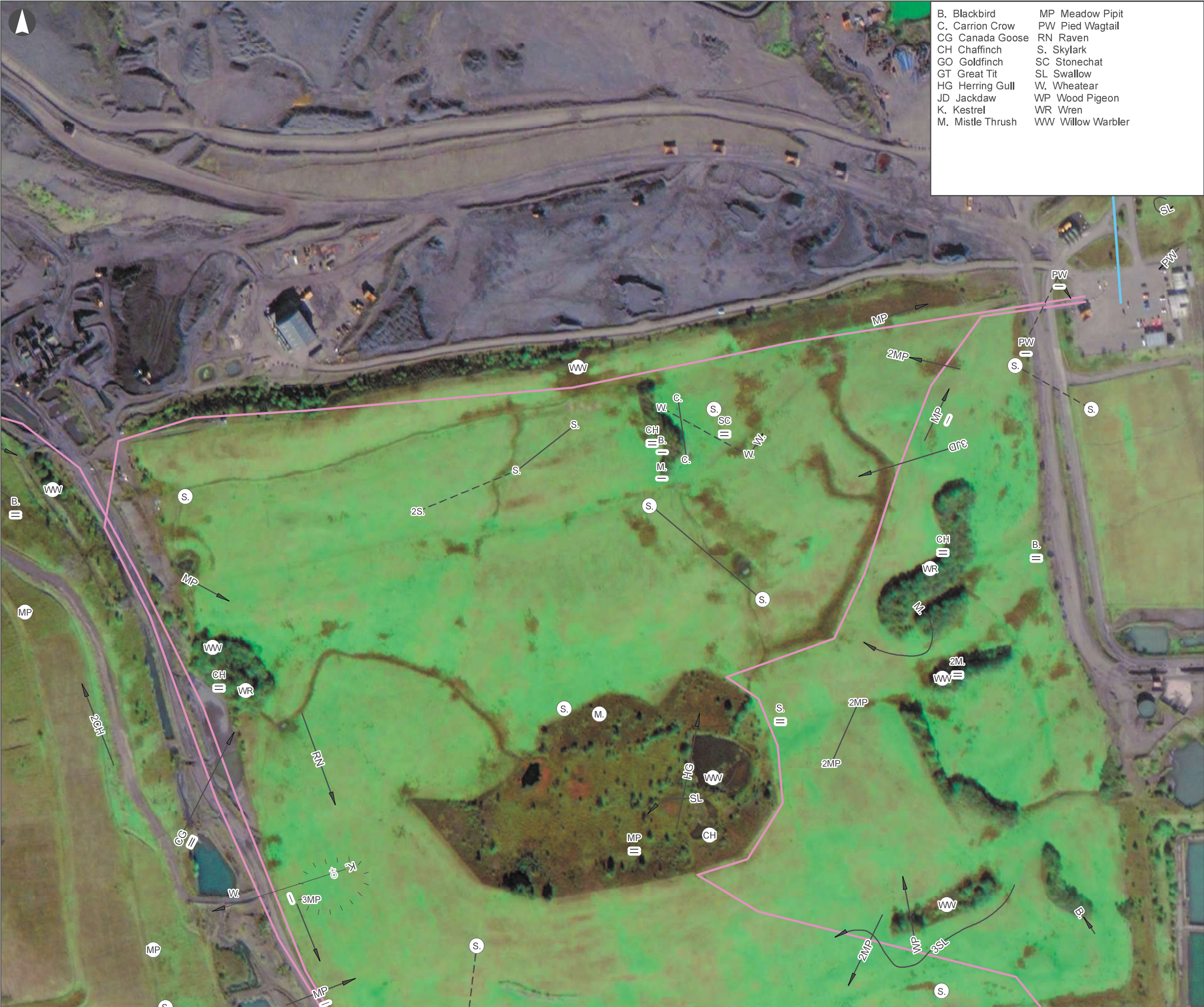
1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
037	



- B. Blackbird

C. Carrion Crow

CG Canada Goose

CH Chaffinch

GO Goldfinch

GT Great Tit

HG Herring Gull

JD Jackdaw

K. Kestrel

M. Mistle Thrush

MP Meadow Pipit

PW Pied Wagtail

RN Raven

S. Skylark

SC Stonechat

SL Swallow

W. Wheatear

WP Wood Pigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 1

Transect 2

Alarm

Call

Sight record

Song

Aggressive

Away

Away, Alarm

Away, Call

Away, Female

Different Simultaneous

Flight

Flight, Call

Land

Land, Male

Simultaneous

Song, two locations, same bird

Metres

0

37.5

75

150

F1	2020-01-29	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

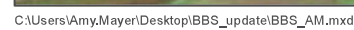
Drawing Title
**BBS Transect 2 - North East
May**

Scale at A3
1:3,000
Role

Suitability

For Issue

Arup Job No 271968-05	Rev F1
Name 038	



PW Pied Wagtail
RB Reed Bunting
RN Raven
RT Redstart
RW Reed Warbler
S. Skylark
W. Wheatear
WH Whitethroat
WR Wren
WW Willow Warbler

 Site Boundary
 Transect 1
 Transect 2

$\overline{R} \rightarrow$ Away
 $\overline{R} \rightarrow$ Away, Call
 $\overline{R} \cdot - R$ Different Simultaneous
 $\cdot R \rightarrow$ Flight
 $\overline{R} \leftarrow$ Land, Male



Celtic Energy Ltd.

Nant Helen Complementary Restoration Earthworks

BBS Transect 2 - North East
June

1:3,000

For Issue

Name



Legend

Site Boundary

Transect 2

Transect 4

Transect 5

Alarm

Alarm, Female

Alarm, Male

Call

On

Sight record

Song

Song, Pair

Away

Away, Alarm

Away, Call

Away, Pair

- - R. Different Simultaneous

· R. Flight

· R. Flight, Call

Flight, Song

R. R. Simultaneous

Metres

0 37.5 75 150

F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

**Nant Helen Complementary
Restoration Earthworks**

Drawing Title

**BBS Transect 2 - South West
April**

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
040	



- B. Blackbird

CG Canada Goose

CH Chaffinch

JD Jackdaw

L. Lapwing

LI Linnet

MP Meadow Pipit

PW Pied Wagtail
- RB Reed Bunting

S. Skylark

SC Stonechat

SL Swallow

SW Sedge Warbler

W. Wheatear

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Transect 5

Alarm

Call

Female

Male

* on On

R. Sight record

Song

R. Away

R. - - R. Different Simultaneous

R. Flight

R. Flight, Alarm

R. Flight, Call

R. Simultaneous

Song, two locations, same bird

Metres

0

37.5

75

150

F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary Restoration Earthworks

Drawing Title
BBS Transect 2 - South West May

Scale at A3
1:3,000

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
041	



- B. Blackbird

C. Carrion Crow

GH Grasshopper Warbler

GO Goldfinch

KT Red Kite

LR Redpoll (Lesser)

MP Meadow Pipit

PW Pied Wagtail

RB Reed Bunting
- RN Raven

S. Skylark

SC Stonechat

ST Song Thrush

SW Sedge Warbler

W. Wheatear

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Transect 5

Alarm

Call

Female

Juv Juvenile

Nest

R. Sight record

Song

R. Away

R. - - R. Different Simultaneous

R. Flight

R. Flight, Alarm

R. Flight, Call

R. Land, Male

R. Simultaneous

Metres

0

37.5

75

150

F1	2020-01-31	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 2 - South West
June

Scale at A3
1:3,000
Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
042	



- B. Blackbird

BZ Buzzard

C. Carrion Crow

CG Canada Goose

CH Chaffinch

GH Grasshopper Warbler

GO Goldfinch

KT Red Kite

LI Linnet

MP Meadow Pipit
- PW Pied Wagtail

RB Reed Bunting

RN Raven

S. Skylark

SC Stonechat

ST Song Thrush

W. Wheatear

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

= Alarm

- Call

* on On

R. Sight record

○ Song

R. Away

R. food Away, Food

R. - R. Different Simultaneous

R. Flight

Metres

0

37.5

75

150

F1	2020-01-29	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 2 - North West
April

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Rev

F1

Name

043



- B. Blackbird

CG Canada Goose

CH Chaffinch

K. Kestrel

L. Lapwing

LI Linnet

MP Meadow Pipit

PW Pied Wagtail
- RB Reed Bunting

S. Skylark

SC Stonechat

SL Swallow

W. Wheatear

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Alarm

Call

* on On

R. Sight record

Song

R. Away

R. Away, Alarm

R. Away, Female

R. Flight

R. Simultaneous

Song, two locations, same bird

Metres

0 37.5 75 150

F1

2020-01-29

AM

PC

PC

Rev

Date

By

Chkd

Appd

Coordinate System: British National Grid

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 2 - North West
May

Scale at A3
1:3,000

Role

Suitability

For Issue

Arup Job No
271968-05

Rev
F1

Name
044



- B. Blackbird

C. Carrian Crow

CK Cuckoo

GH Grasshopper Warbler

HG Herring Gull

L. Lapwing

LI Linnet

MP Meadow Pipit

PW Pied Wagtail
- RB Reed Bunting

S. Skylark

SG Starling

SW Sedge Warbler

W. Wheatear

WH Whitethroat

WP Woodpigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Alarm

Call

juv Juvenile

R. Sight record

Song

R. Away

R. Away, Alarm

R. Away, Call

R. - R.Different Simultaneous

R. Flight

R. Simultaneous

Metres

0	37.5	75	150	
F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
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Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary Restoration Earthworks

Drawing Title

BBS Transect 2 - North West June

Scale at A3

1:3,000

Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
045	



- B. Blackbird

BT Blue Tit

BZ Buzzard

C. Carriion Crow

CC Chiffchaff

CH Chaffinch

CK Cuckoo

CT Coal Tit

GH Grasshopper Warbler

GO Goldfinch
- GT Great Tit

HS House Sparrow

LI Linnet

MP Meadow Pipit

S. Skylark

SG Starling

SL Swallow

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 4

Transect 5

Call

Sight record

Song

Away

- - R. Different Simultaneous

Flight

Flight, Call

Land

Land, Male

Land, Song

Metres

0

37.5

75

150

F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
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BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 5 - South East
April

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

271968-05

Name

046

Rev

F1



Legend

Site Boundary

Transect 4

Transect 5

Alarm

Call

Call, Male

Sight record

Song

Away

Flight

Flight, Alarm

Flight, Call

Land

Land, Song

Metres

0 37.5 75 150

F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
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Client

Celtic Energy Ltd.

Project Title

**Nant Helen Complementary
Restoration Earthworks**

Drawing Title

**BBS Transect 5 - South East
May**

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No	Rev
271968-05	F1
Name	
047	



- B. Blackbird

BT Blue Tit

C. Carrion Crow

CH Chaffinch

CR Crossbill (common)

G. Green Woodpecker

GS Great Spotted Woodpecker

GT Great Tit

HM House Martin

J. Jay

LI Linnet

LR Redpoll (Lesser)

M. Mistle Thrush
- MP Meadow Pipit

PW Pied Wagtail

RB Reed Bunting

S. Skylark

SC Stonechat

SG Starling

SH Sparrowhawk

SL Swallow

ST Song Thrush

WP Wood Pigeon

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 4

Transect 5

Alarm

Alarm, Male

Call

Family

Female

Fight

Male

Sight record

Song

Away

R. - R. Different Simultaneous

Flight

Flight, Alarm

Flight, Call

Flight, Male

Land

Land, Female

Land, Song

R. - R. Simultaneous

Metres

0

37.5

75

150

F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 5 - South East
June

Scale at A3
1:3,000

Role

Suitability
For Issue
Arup Job No
271968-05
Name
048

Rev
F1



- C. Carrion Crow
- CK Cuckoo
- GH Grasshopper Warbler
- MP Meadow Pipit
- PW Pied Wagtail
- RB Reed Bunting
- RN Raven
- S. Skylark
- SC Stonechat
- ST Song Thrush
- W. Wheatear
- WR Wren
- WW Willow Warbler

Legend

- Site Boundary
- Transect 2
- Transect 4
- Transect 5
- Alarm, Male
- Call
- Sight record
- Song
- Song, Pair
- Away
- Away, Alarm
- Away, Pair
- - R. Different Simultaneous
- Flight
- Flight, Aggressive
- Flight, Call
- Land

Metres				
0	37.5	75	150	
F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
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BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 5 - East
April

Scale at A3
1:3,000

Role

Suitability
For Issue
Arup Job No
271968-05
Name
049

Rev
F1



- CH Chaffinch

CK Cuckoo

GH Grasshopper Warbler

JD Jackdaw

L Lapwing

LR Redpoll (Lesser)

MP Meadow Pipit

RB Reed Bunting
- S Skylark

SC Stonechat

SG Starling

SL Swallow

W Wheatear

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 2

Transect 4

Transect 5

=

Alarm

=

Alarm, Family

=

Alarm, Male

=

Call

=

Female

Fight

=

Male

R.

Sight record

Song

R.

Away

R. - - R.

Different Simultaneous

R.

Flight

R.

Flight, Alarm

=

Flight, Call

R.

Land

Land, Song

R.

Simultaneous

Song, two locations, same bird

0

37.5

75

150

F1

2020-01-30

AM

PC

PC

Rev

Date

By

Chkd

Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client

Celtic Energy Ltd.

Project Title

Nant Helen Complementary
Restoration Earthworks

Drawing Title

BBS Transect 5 - East
May

Scale at A3

1:3,000

Role

Suitability

For Issue

Arup Job No

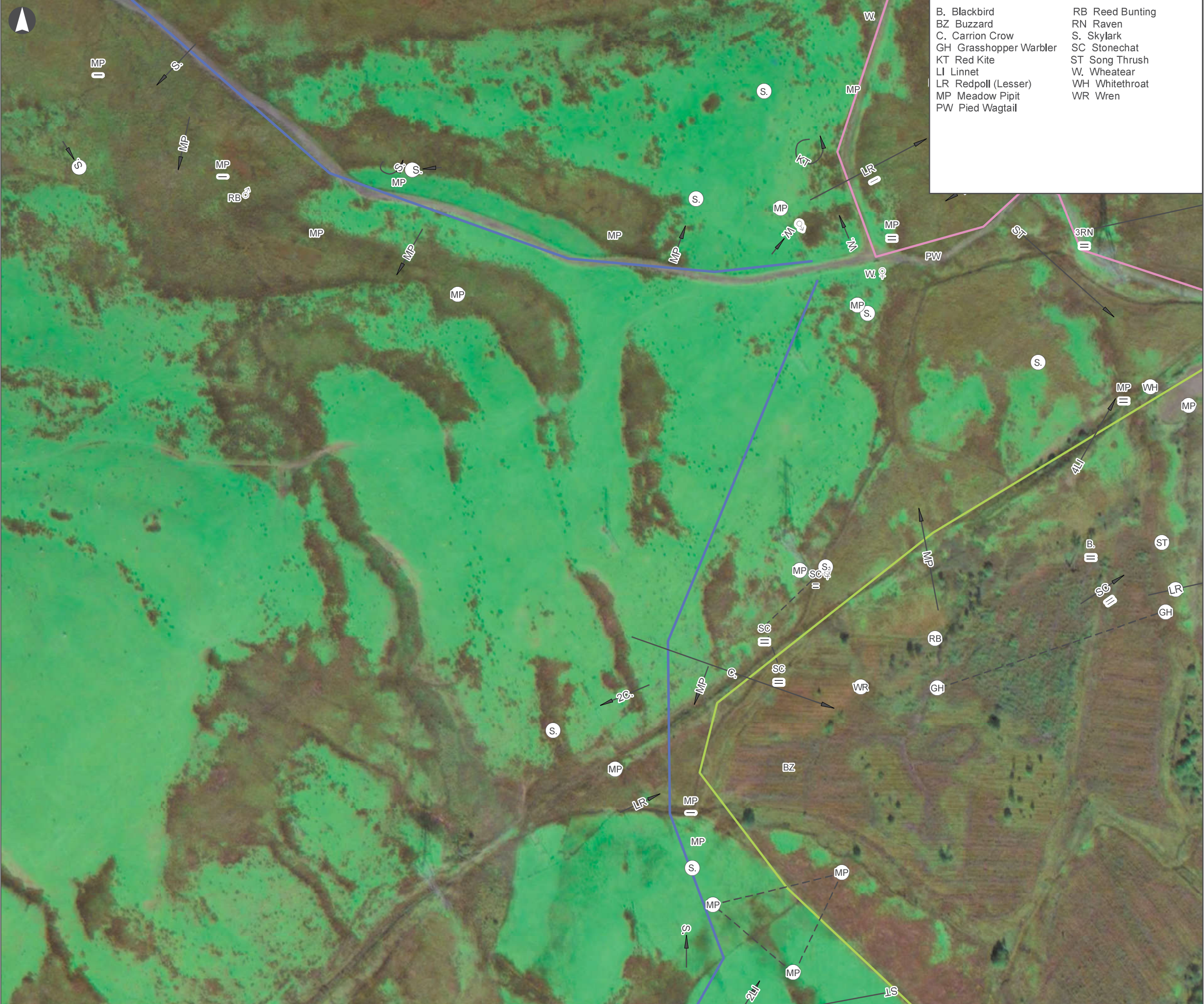
271968-05

Rev

F1

Name

050





- B. Blackbird

BT Blue Tit

BZ Buzzard

CH Chaffinch

GH Grasshopper Warbler

GT Great Tit

LB Lesser Black-backed Gull
- MP Meadow Pipit

PW Pied Wagtail

RB Reed Bunting

S. Skylark

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 5

Call

R. Sight record

Song

R. Away

R. - - R. Different Simultaneous

R. Flight

♂ R. Land, Male

Metres

0	37.5	75	150	
F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 5 - North
April**

Scale at A3
1:3,000
Role

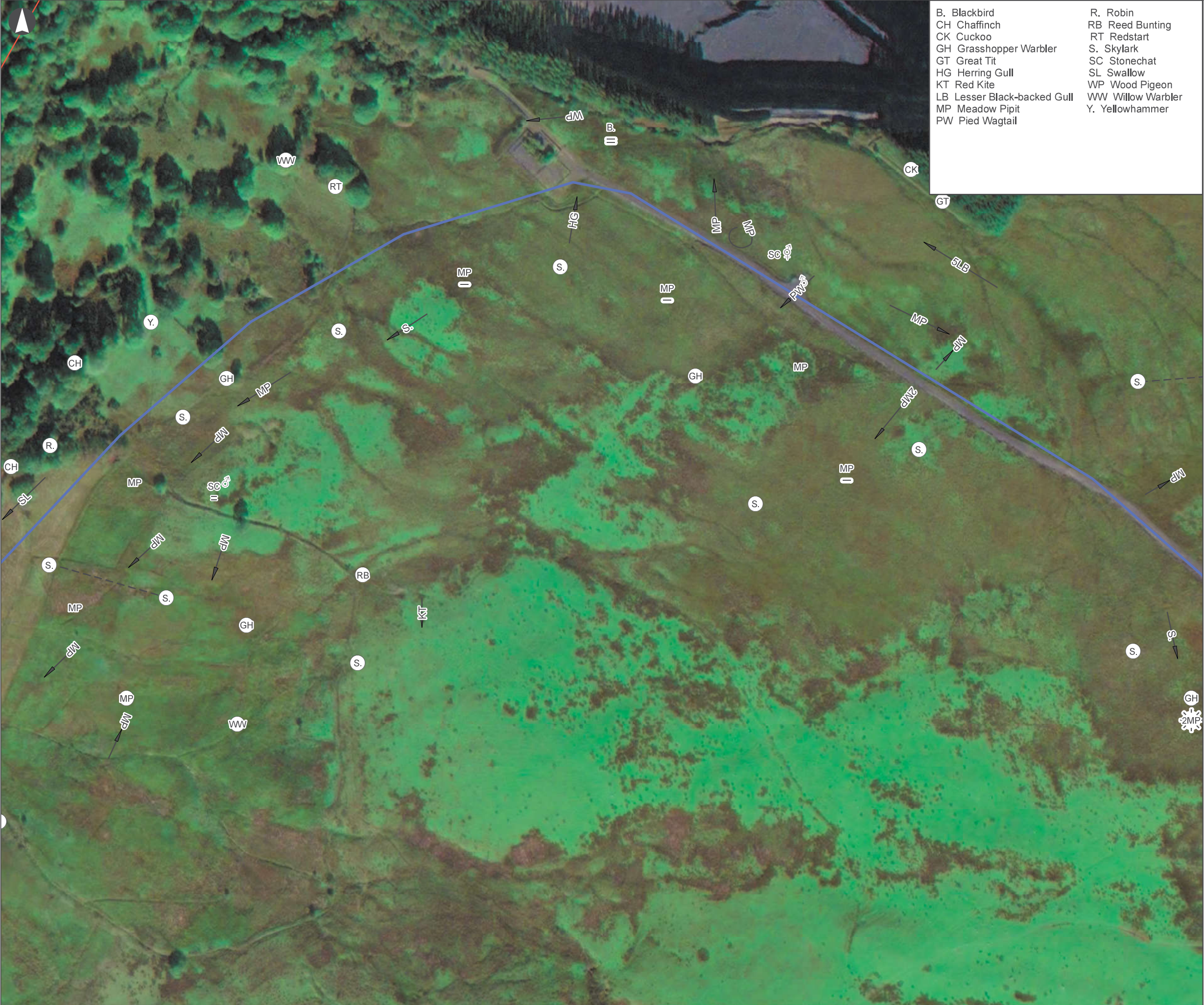
Suitability

For Issue

Arup Job No
271968-05

Name
052

Rev
F1



- B. Blackbird

CH Chaffinch

CK Cuckoo

GH Grasshopper Warbler

GT Great Tit

HG Herring Gull

KT Red Kite

LB Lesser Black-backed Gull

MP Meadow Pipit

PW Pied Wagtail
- R. Robin

RB Reed Bunting

RT Redstart

S. Skylark

SC Stonechat

SL Swallow

WP Wood Pigeon

WW Willow Warbler

Y. Yellowhammer

Legend

Site Boundary

Transect 5

Alarm

Alarm, Male

Call

Fight

Pair

Sight record

Song

Away

- - R. Different Simultaneous

Flight

Flight, Male

Land

Metres

0	37.5	75	150	
F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
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Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 5 - North
May

Scale at A3
1:3,000
Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
053	



- B. Blackbird
- BT Blue Tit
- CH Chaffinch
- LR Redpoll (Lesser)
- MP Meadow Pipit
- R. Robin
- RB Reed Bunting
- S. Skylark
- SC Stonechat
- SK Siskin
- SL Swallow
- WR Wren

Legend

- Site Boundary
- Transect 5
- Alarm
- Alarm, Male
- Call
- Call, Male
- Female
- Male
- Sight record
- Song
- Away
- - R.Different Simultaneous
- Flight
- Land
- Land, Song

Metres

0	37.5	75	150	
F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
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Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 5 - North
June

Scale at A3
1:3,000

Role

Suitability

For Issue

Arup Job No
271968-05

Rev
F1

Name
054



- B. Blackbird

BT Blue Tit

BZ Buzzard

D. Dunnock

FP Feral Pigeon

GH Grasshopper Warbler

MP Meadow Pipit

PW Pied Wagtail
- RB Reed Bunting

RT Redstart

S. Skylark

SC Stonechat

SL Swallow

TP Tree Pipit

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 5

Alarm, Male

Call

Fight

Sight record

Song

Away

- - R.Different Simultaneous

Flight

Flight, Call

Land

Metres

0	37.5	75	150	
F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 5 - West
April

Scale at A3
1:3,000
Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
055	



- B. Blackbird

BC Blackcap

BT Blue Tit

C. Carrion Crow

GH Grasshopper Warbler

GS Great Spotted Woodpecker

MP Meadow Pipit

PW Pied Wagtail

RT Redstart

S. Skylark

SC Stonechat

WH Whitethroat

WR Wren

WW Willow Warbler

Legend

Site Boundary

Transect 5

Alarm, Male

Call

Sight record

Song

Away

Away, Female

Away, Male

R. Different Simultaneous

Flight

Land

Metres

0	37.5	75	150	
F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
Nant Helen Complementary
Restoration Earthworks

Drawing Title
BBS Transect 5 - West
May

Scale at A3
1:3,000
Role

Suitability	
For Issue	
Arup Job No	Rev
271968-05	F1
Name	
056	



- B. Blackbird

BZ. Buzzard

C. Carrion Crow

G. Green Woodpecker

M. Mistle Thrush

MP. Meadow Pipit

PW. Pied Wagtail

RB. Reed Bunting
- RT. Redstart

S. Skylark

SC. Stonechat

SL. Swallow

ST. Song Thrush

WR. Wren

WW. Willow Warbler

Legend

Site Boundary

Transect 5

Alarm, Pair

Call

Call, Male

Male

Song

Away

Flight

Land

Metres

0

37.5

75

150

F1	2020-01-30	AM	PC	PC
Rev	Date	By	Chkd	Appd

Coordinate System: British National Grid
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

ARUP

63 St Thomas Street
Bristol
BS1 6JZ

Client
Celtic Energy Ltd.

Project Title
**Nant Helen Complementary
Restoration Earthworks**

Drawing Title
**BBS Transect 5 - West
June**

Scale at A3
1:3,000
Role

Suitability

For Issue

Arup Job No

271968-05

Name

057

Rev

F1