

## INSTRUCTIONS

Thank you for volunteering to take part in the Countryside Survey 2000 Bird Count (CS2000). This survey will allow us to examine habitat associations in detail by tying in your bird counts with the detailed habitat data already collected by the Institute of Terrestrial Ecology (ITE). This is the fourth national Countryside Survey (following surveys in 1978, 1984 and 1990) but this is the first time that bird surveys have been included.

The survey is designed to be a simple, enjoyable and extremely valuable birdwatching exercise. The methods are based on those of the BTO/JNCC/RSPB Breeding Bird Survey (BBS) but observers familiar with that survey should be aware of some differences in methods, which are highlighted in the box below. Plots are specially selected 1 kilometre (km) squares of the National Grid. Observers make just three visits, the first to record habitat types and to set up a suitable survey route, and the second and third to record birds that are seen or heard while walking along the route.

**You should have received one set of instructions, one habitat recording form including a map of the square, two field recording sheets, two count summary sheets, a letter of introduction for landowners and an address list of landowners.**

### SUMMARY OF FIELDWORK

- |    |                       |  |
|----|-----------------------|--|
| 1. | March - April         | Reconnaissance visit to set up or check census route and complete habitat recording form.  |
| 2. | Early April - mid-May | Complete the first bird count.   |
| 3. | Mid-May - late June   | Complete the second bird count.  |
| 4. | 31st July             | Return data to Regional Organisers or directly to the BTO if there is no acting organiser. |

N.B. The fieldwork should begin and end later in more northerly parts of the UK.

### Differences between Countryside Survey 2000 Bird Counts and the Breeding Bird Survey

1. CS2000 involves surveying up to 4-km of transects, BBS involves 2-km.
2. Transects must not intrude into neighbouring squares in CS2000.
3. Only birds within the square boundary are recorded in CS2000.
4. Individual birds noted in more than one transect section are recorded in each section in CS2000.
5. Birds flying over the square but not using the sky above it for feeding, displaying or song are excluded in CS2000.
6. You must gain permission to enter all land to carry out CS2000.
7. Very little habitat recording is required in CS2000.

### WHICH SQUARE SHOULD YOU SURVEY?

The survey squares are preselected 1-km squares. Grid references are in standard Ordnance Survey format (i.e. two letters for the 100-km square, two numbers representing the 'easting' and two numbers representing the 'northing'). Squares have been identified by ITE according to a formal sampling strategy to cover all habitats and regions. Comprehensive coverage is vital to the survey design. Please make every effort to cover the square that is assigned to you. **Please get in touch either with your Regional Organiser or the BTO if you will not be able to cover this square.**

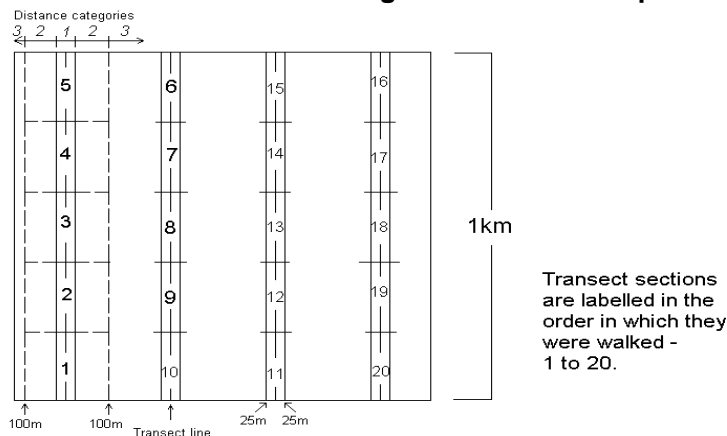
## FINDING AND MARKING A ROUTE

It is important to make a reconnaissance visit to your square before you carry out your first bird count. This will allow you to plan a suitable route through your square and contact landowners.

The counting route through the square (the transect line) should **ideally** consist of four parallel lines, north-south or east-west, each 1-km long. Transect lines should **ideally** be at least 200 metres (m) apart. Each transect line should be divided into 5 equal sections of 200m in length, making a total of 20 (4x5), numbered 1 to 20, as shown in figure 1. We recognise, however, that in some squares it will not be possible to fit in the ideal arrangement of transects or 4-km of transects but please fit in as many as possible.

**It is very important that access permission is sought to enter all so as not to jeopardise the good working relationships established between ITE and the landowners. ITE has provided an address list and map to help identify the landowners in your square.**

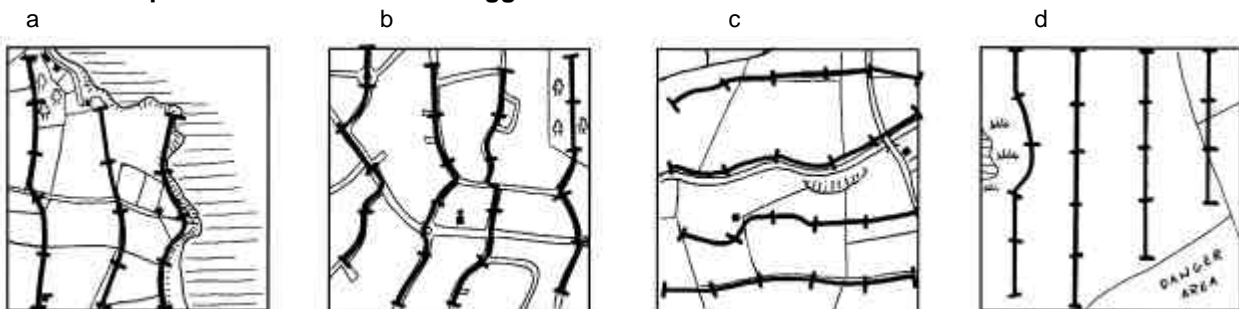
**Figure 1. Transect sections and distance categories in a 1-km square.**



In practice, your transect lines are likely to deviate from the 'ideal' because of problems with access, or barriers such as roads, rivers, and canals: possible solutions are given below in figure 2. **It is very important that transect sections do not intrude into neighbouring squares as habitat data has only been collected for the area within the specified 1-km square boundary.**

If you cannot fit all 20 transect sections into your square, please fit in as great a length as possible. We would like you to cover the square, even if you cannot get close to ideal coverage. In general, it may only be possible to achieve ideal coverage in moorland areas.

**Figure 2. Examples: bold lines indicate suggested transect route with divisions in 200m sections.**



- Around 30% of the square is sea; it is only possible to fit 13 transect sections in.
- Mostly urban; access restricted to roads and paths.
- Only one place to cross the river; ideal pattern but running W-E due to easier access.
- Open moorland; ideal pattern possible except for diversion to avoid bog. No access to rifle range in southeast corner so only 17 transect sections possible.

## WHEN TO VISIT

The main part of the breeding season, roughly between 1st April and 30th June, in the lowlands of southern Britain, should be divided into two counting periods (early season visit = early April to mid-May; late season visit = mid-May to late June) and one visit should be made in each half. **Visits should be at least 4 weeks apart.** The first should coincide with the main activity period of the resident breeding birds in an area, while the second should take place after the arrival of the latest migrant breeding birds. Where local conditions dictate, for example, at higher altitudes and further north, visits should be shifted to later in the season.

**Counts should be made during the morning, beginning ideally between 6am and 7am, and no later than 9am, finishing midday.** Counts will be more productive the earlier you are able to start. Starting times can be shifted to begin later in more remote and less accessible areas.

## WEATHER

Please do not attempt to census birds in conditions of heavy rain, poor visibility or strong wind.

## RECORDING BIRDS

Please record all the birds you encounter as you walk along the four linear transects. Birds should be noted in the appropriate distance category, measured at right angles to the transect line. Do not record birds that are behind you as you begin a census or beyond the end of the transect. The first 200 metre transect section should be marked as section 1 on the map, the second as section 2 etc. Please walk the same transect lines in the same order on each of the two visits.

From your chosen starting point begin to walk the first 1-km of your transect route at a slow and methodical pace. We recommend that you pause regularly to listen for bird songs. As a guide an average visit (to include all transects) should last around three hours. Record all the birds you see and hear on the field recording sheets in the appropriate transect sections 1-20 and in the appropriate distance category (see below). The transect is divided into 200m sections for convenience; please don't worry about birds at the boundary of two sections: record them in the one which seems more appropriate, but not in both. At the end of the first quarter (section 5) of the transect, break from recording while you make your way to the start of the next transect section. Commence recording again through sections 6-10, then 11-15 and finally 16-20. If the same individual birds are noted in more than one transect section, they should be recorded on the field sheet in brackets after the first time. These birds should be transferred to the summary sheet in the same way but, again, they should be recorded in brackets, separate from all birds noted for the first time (see example on page 6). This does not apply to birds moving between distance bands in the same transect section. So, for example, a Mistle Thrush that can be heard singing from several transect stretches should be recorded once, where it was first detected.

We would strongly encourage observers to use the standard BTO species codes (see page 8). Please familiarise yourself with the most likely codes before you go into the field. If a species is not listed on page 8 please give the full common name. There is no need to record the activity or sex of the birds you encounter although you may wish to do so. Please distinguish juvenile birds recorded from adults in those species where this is possible (e.g. B.juv, juvenile Blackbird) because **juveniles should be excluded from the summary sheets.** Please also note any feral species on transects.

Birds should be recorded in one of the following three categories when they were first noted:

1. within 25 metres either side of the line;
2. between 25 and 100 metres either side of the line;
3. more than 100 metres either side of the line but **excluding birds outside the 1-km square boundary.**

**Birds in flight should only be noted if they are using the sky above the square for feeding, singing or displaying.** They should be recorded in the appropriate distance band and recorded once only. A Swallow passing over the transect hawking insects should be recorded in the '0-25 metre' distance band, a Sparrowhawk seen displaying 200 metres away should be recorded in the 'more than 100 metres' distance band. This applies to species hunting over the square, including birds of prey; Swifts and hirundines or birds displaying or singing over the square, such as Skylarks. Birds flying over the square but not using it for any of the reasons stated above should not be included. This would include birds flying from roosts, such as gulls, or moving to or from feeding sites outside the square, such as pigeons.

Please note that distances are measured perpendicular to the transect line (i.e. at right angles to the line). A bird seen 200m ahead of the observer but close to the transect line should be recorded in the 0-25 metre distance category. We recommend that observers measure out distance categories (25m and 100m) using a combination of a tape measure and pacing to familiarise themselves with these before fieldwork begins. The map should be helpful for estimating distances, note that the scale is 1:10,000 (100 metres=1 cm).

## COUNT SUMMARIES

Please complete the summary sheets (one for each field recording sheet) as soon as possible after each field visit and preferably on the same day. The form summarises the information so that it can be analysed. Simply transfer the number of individual birds (**excluding juveniles**) that were recorded in each section of the transect, 1-20, on each visit, in each distance band. Print the two-letter species codes in the appropriate boxes (and remember to add a **full stop** for single letter codes e.g. B. = Blackbird).

You may find it helpful to cross through species registrations on the field recording sheet as you transfer this information to the summaries. This reduces the chance of duplicating or missing records.

If you have difficulty distinguishing adult and young birds, simply estimate, to the best of your ability, how many adults were present. We appreciate that mixed-aged flocks of crows or Starlings, for example, will present problems later in the season and ask that you observe and record with great care. Colonial nesters should be entered in the box provided (see below).

## COLONIAL NESTING BIRDS

Birds nesting in dense colonies within the square (Rook, Sand Martin and gulls) may not be adequately censused using the standard method and we ask observers to count or estimate the number of nests in the whole 1-km square **in addition to recording counts of birds in transects as with other species.** Colony counts should be conducted separately from the transects and **only** for those species listed above. They should be entered in the box on page 1 of the field sheet and transferred to the box on page 4 of the summary sheet.



## HABITAT RECORDING - FIELDS ONLY

Very detailed habitat recording has already been carried out by ITE. However, most of this was completed in 1998 or 1999 and field use may have changed since then. Please enter a crop habitat code in each agricultural field within the square. We only need to know the broad crop type - one of the 8 categories listed below. These may be recorded on your preliminary visit to set up your transect route but should be checked on the first bird count visit to see if they have changed. **The habitat codes used should reflect the crops present on the bird counts.** If the field use changes between the first and second visit, record the habitat type on the second visit in brackets. In the example on page 7, the top right hand field was recorded as **B** (bare earth) on the first bird count but by the second count a pea crop had emerged so a **(O)** (other crop) was noted in brackets.

### Habitat codes

G	<b>Grassland.</b> Includes grazed and ungrazed, improved and unimproved. Sown grass can be distinguished from cereal crops by the narrower (less than 8mm wide) and darker coloured leaves.
B	<b>Bare earth.</b> Includes ploughed and harrowed land.
S	<b>Stubble or fallow.</b> Includes agricultural land taken out of food production, such as set-aside and game-cover strips.
C	<b>Cereals.</b> Autumn or spring sown. Spring-sown cereals may not be identifiable until the second bird count.
R	<b>Root crops.</b> Includes sugar beet, potatoes, turnips, swede and carrots.
I	<b>Oil seed rape.</b> Includes both autumn and spring sown rape. Recently emerged rape has two small circular leaves. Older plants have lobed, cabbage-like leaves.
O	<b>Other crops.</b> Includes vegetables such as brassicas, linseed, maize, beans etc.
U	<b>Unknown or miscellaneous.</b> Please specify on the map if relevant.

An example of a completed Transect and Habitat Recording Form can be found on page 7.

## RETURN OF DATA

**Please return completed forms to your Regional Organiser by the 31st July - earlier if possible.** Forms to be returned for each square should include: a habitat and transect map, two field recording sheets and two count summaries.

Fieldworkers should not put themselves in a position which could place them, or others, in danger. The Trust does not take any responsibility or liability for any actions and subsequent consequences from the activities of fieldworkers.

***Many thanks for helping with this important project. We hope you enjoy the survey.***

**The Countryside 2000 Bird Count is organised by the BTO with the support of the Institute of Terrestrial Ecology and is funded by the Department of the Environment, Transport and the Regions.**



# Example of completed Field Recording Sheet and Count Summary Sheet

1km grid square	TL 8177		
Observer name	Andy Wilson		
Visit date	28/04		
Start time	06:20		
Finish time	09:25		

Colony counts		
Species	Number of nests	Date
Rook	21	28/4

Each of the following boxes represents a 200 metre transect section. Please record all birds in the appropriate section and distance band. The dotted line represents the line walked.

1

2

START OF FIRST TRANSECT



## COUNTRYSIDE SURVEY 2000 BIRD COUNT COUNT SUMMARY SHEET

1kmsquare	TL 8177		Observer name	Andy Wilson						
Two-letter species code and species name	Distance Band			1	2	3	4	5	6	7
PH Pheasant	0-25 metres									
	25-100 metres	1								
	>100 metres		2				1			
S. Skylark	0-25 metres		3							
	25-100 metres		1		1					
	>100 metres	2					1			
RL Red-legged Partridge	0-25 metres	1								
	25-100 metres			1						
	>100 metres									
WP Woodpigeon	0-25 metres					3				
	25-100 metres	6								
	>100 metres		2							
M. Mistle Thrush	0-25 metres									
	25-100 metres									
	>100 metres	1								
SL Swallow	0-25 metres	1	1(1)							
	25-100 metres									
	>100 metres									
WR Wren	0-25 metres									
	25-100 metres		1							
	>100 metres									
C. Carrion Crow	0-25 metres									
	25-100 metres									
	>100 metres			1						
WW Willow Warbler	0-25 metres									
	25-100 metres		1							
	>100 metres									
BT Blue Tit	0-25 metres									
	25-100 metres									
	>100 metres									
D. Dunnock	0-25 metres									
	25-100 metres									
	>100 metres									

Note:

The Woodpigeon which flew over transect section 1 was not transferred to the summary sheet as it did not land within the square.

The Red-legged Partridge in transect section 1 flew from close to the transect line to a distance of over 100 metres but it was transferred to the closest of these categories (0-25 metres) on the summary sheet.

The Swallow in transect section 1 was hawking insects over the field and passed over all three distance categories but as it flew over the transect line, it was transferred to the summary sheet as being in the closest distance category (0-25 metres). The first of the 2 Swallows noted in section 2 was the same individual as noted in section one so is recorded with brackets on both the field and summary sheets.

Example of completed Transect and Habitat Recording Sheet



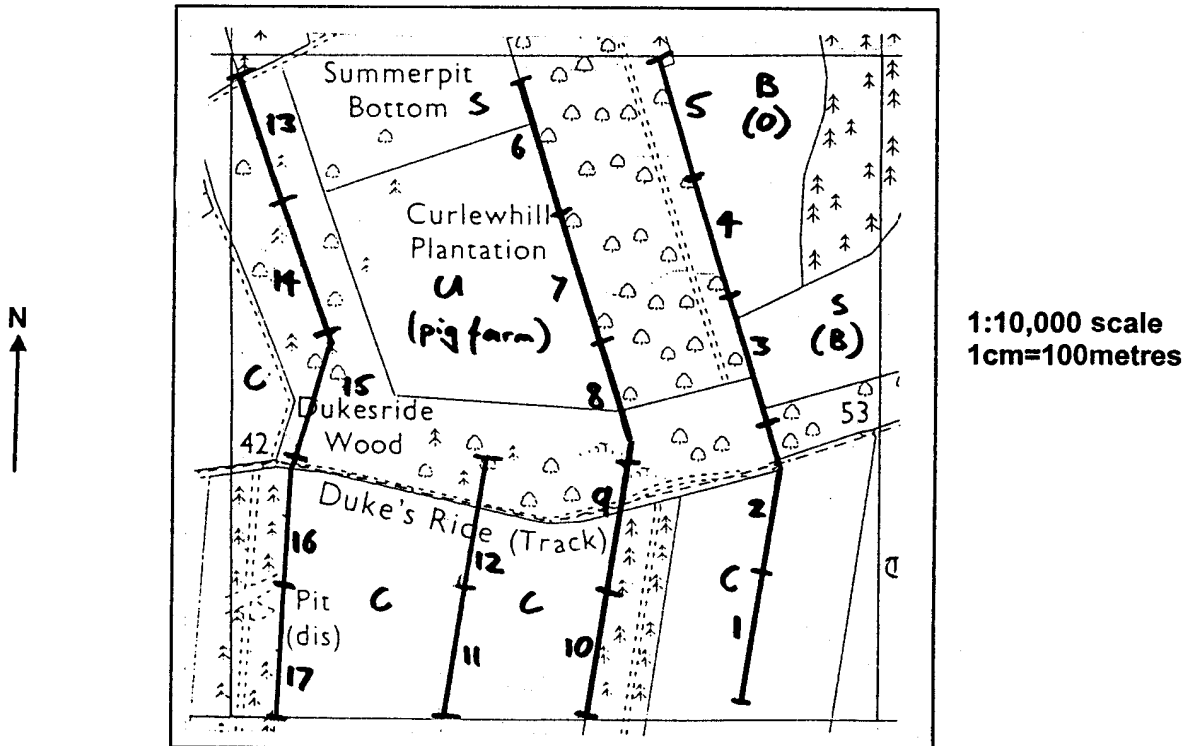
COUNTRYSIDE  
SURVEY 2000  
BIRD COUNTS



TRANSECT AND HABITAT RECORDING FORM

Name and address		Andy Wilson British Trust for Ornithology, The Nursery, Thetford, Norfolk, IP24 2PU ☎ 01842 750050			
Date of first bird count:		28:04		Date of second bird count:	
				02:06	
1km square	TL8177	BTO region	SUFF	CS square number	0000

Please mark your transect route carefully on the map below, numbering each of the 200 metre sections 1 to 20. Assign one of the habitat codes below to each agricultural field within the square. Please use a red pen for this.



Assign one of the following crop codes to each of the fields within the square, marking the code within the field on the map above:

G	Grassland	R	Root crop
B	Bare earth	I	Oil seed rape
S	Stubble or fallow	O	Other crop
C	Cereals	U	Unknown or miscellaneous

## BTO SPECIES CODES

AC	Arctic Skua	GG	Great Crested Grebe	PU	Puffin
AE	Arctic Tern	ND	Great Northern Diver	PS	Purple Sandpiper
AV	Avocet	GS	Great Spotted Woodpecker	Q.	Quail
BY	Barnacle Goose	NX	Great Skua	RN	Raven
BO	Barn Owl	GT	Great Tit	RA	Razorbill
BA	Bar-tailed Godwit	GE	Green Sandpiper	RG	Red Grouse
BR	Bearded Tit	G.	Green Woodpecker	ED	Red-backed Shrike
BS	Berwick's Swan	GR	Greenfinch	RM	Red-breasted Merganser
BI	Bittern	GK	Greenshank	RQ	Red-crested Pochard
BK	Black Grouse	H.	Grey Heron	FV	Red-footed Falcon
BH	Black-headed Gull	GJ	Greylag Goose	KT	Red Kite
BW	Black-tailed Godwit	P.	Grey Partridge	RL	Red-legged Partridge
BV	Black-throated Diver	GV	Grey Plover	NK	Red-necked Phalarope
BX	Black Redstart	GL	Grey Wagtail	RH	Red-throated Diver
B.	Blackbird	GU	Guillemot	LR	Redpoll
BC	Blackcap	HF	Hawfinch	RK	Redshank
TY	Black Guillemot	HH	Hen Harrier	RT	Redstart
BN	Black-necked Grebe	HG	Herring Gull	RE	Redwing
BJ	Black Tern	HY	Hobby	RB	Reed Bunting
BU	Bluethroat	HZ	Honey Buzzard	RW	Reed Warbler
BT	Blue Tit	HC	Hooded Crow	RZ	Ring Ousel
BL	Brambling	HP	Hoopoe	RI	Ring-necked Parakeet
BG	Brent Goose	HM	House Martin	RP	Ringed Plover
BF	Bullfinch	HS	House Sparrow	R.	Robin
BZ	Buzzard	JD	Jackdaw	DV	Rock Dove
C.	Carrion Crow	J.	Jay	RC	Rock Pipit
CG	Canada Goose	K.	Kestrel	RO	Rook
CP	Capercaillie	KF	Kingfisher	RS	Roseate Tern
CW	Cetti's Warbler	KI	Kittiwake	RY	Ruddy Duck
CH	Chaffinch	KN	Knot	RU	Ruff
CC	Chiffchaff	LM	Lady Amherst's Pheasant	SM	Sand Martin
CF	Chough	LA	Lapland Bunting	SS	Sanderling
CL	Cirl Bunting	L.	Lapwing	TE	Sandwich Tern
CT	Coal Tit	TL	Leach's Petrel	VI	Savi's Warbler
CD	Collared Dove	LB	Lesser B.b. Gull	SQ	Scarlet Rosefinch
CM	Common Gull	LS	Lesser Sp. Woodpecker	SP	Scaup
CS	Common Sandpiper	LW	Lesser Whitethroat	CY	Scottish Crossbill
CX	Common Scoter	LI	Linnet	SW	Sedge Warbler
CN	Common Tern	ET	Little Egret	NS	Serin
CE	Corncrake	LG	Little Grebe	SA	Shag
CO	Coot	LU	Little Gull	SU	Shelduck
CA	Cormorant	LO	Little Owl	SX	Shorelark
CB	Corn Bunting	LP	Little Ringed Plover	SE	Short-eared Owl
CI	Crested Tit	AF	Little Tern	SV	Shoveler
CR	Crossbill	LE	Long-eared Owl	SK	Siskin
CK	Cuckoo	LT	Long-tailed Tit	S.	Skylark
CU	Curlew	MG	Magpie	SZ	Slavonian Grebe
DW	Dartford Warbler	MA	Mallard	SN	Snipe
DI	Dipper	MN	Mandarin	SB	Snow Bunting
DO	Dotterel	MX	Manx Shearwater	ST	Song Thrush
DN	Dunlin	MR	Marsh Harrier	SH	Sparrowhawk
D.	Dunnock	MT	Marsh Tit	AK	Spotted Crake
EG	Egyptian Goose	MV	Marsh Warbler	SF	Spotted Flycatcher
E.	Eider	MP	Meadow Pipit	SG	Starling
FP	Feral Pigeon	MU	Mediterranean Gull	SD	Stock Dove
FF	Fieldfare	ML	Merlin	SC	Stonechat
FC	Firecrest	M.	Mistle Thrush	TN	Stone-curlew
F.	Fulmar	MH	Moorhen	TM	Storm Petrel
GA	Gadwall	MO	Montagu's Harrier	SL	Swallow
GX	Gannet	MS	Mute Swan	SI	Swift
GW	Garden Warbler	N.	Nightingale	TO	Tawny Owl
GY	Garganey	NJ	Nightjar	T.	Teal
GC	Goldcrest	NH	Nuthatch	TK	Temminck's Stint
EA	Golden Eagle	OP	Osprey	TP	Tree Pipit
OL	Golden Oriole	OC	Oystercatcher	TS	Tree Sparrow
GF	Golden Pheasant	PE	Peregrine	TC	Treecreeper
GP	Golden Plover	PH	Pheasant	TU	Tufted Duck
GN	Goldeneye	PF	Pied Flycatcher	TT	Turnstone
GO	Goldfinch	PW	Pied Wagtail	TD	Turtle Dove
GD	Goosander	PT	Pintail	TW	Twite
GI	Goshawk	PO	Pochard	WA	Water Rail
GH	Grasshopper Warbler	PG	Pink-footed Goose	W.	Wheatear
GB	Great B.b. Gull	PM	Ptarmigan	WM	Whimbrel

WC	Whinchat
WG	White-fronted Goose
WH	Whitethroat
WS	Whooper Swan
WN	Wigeon
WT	Willow Tit
WW	Willow Warbler
WO	Wood Warbler
WK	Woodcock
WL	Woodlark
WP	Woodpigeon
OD	Wood Sandpiper
WR	Wren
WY	Wryneck
YW	Yellow Wagtail
Y.	Yellowhammer