

# Waterways Breeding Bird Survey

## Title

Waterways Breeding Birds Survey (WBBS) 1998 to present

## Description and Summary of Results

The Waterways Breeding Bird Survey (WBBS) started in 1998 and was developed as a successor to the Waterways Bird Survey which had been running since 1974, and to complement the, then fairly new, Breeding Bird Survey, which had taken over from the Common Birds Census as the main monitoring survey for common birds. Like CBC before it, BBS provides relatively poor samples for waterway specialist species and benefits from a targeted sister survey.

The 500m transect sections match those used by the Environment Agency's River Habitat Survey (RHS). This is a wide-ranging habitat monitoring initiative by the Environment Agency and other stakeholders to provide indicators of biodiversity along waterways. Results are included for relevant species in the annually updated Birds of the Wider Countryside report ([www.bto.org/birdtrends](http://www.bto.org/birdtrends)).

## Methods of Data Capture

WBBS uses a two-visit transect method like that of BBS, although suitably adapted for waterways, and is both quicker and simpler for volunteers than WBS.

WBBS methods differ from BBS in that transect sections are 500m long, rather than 200m, they lie alongside a waterway (rather than being in two lines across a 1-km square), and there may be any number from one to ten 500m sections in a survey plot. All individuals of all bird species are recorded in the transect sections along stretches of river, stream or canal in two visits made between April and June.

Another key difference from the earlier Waterways Bird Survey (WBS) is that, as in BBS, sites are allocated randomly rather than chosen by the volunteer. This is essential if modern statistical analysis methods are to be used successfully.

Mammals and habitats are also recorded.

## Purpose of Data Capture

The aim of the Waterways Breeding Bird Survey (WBBS) is to monitor changes in the breeding populations of the bird species along waterways in the UK, especially those species that are not adequately covered by the Breeding Bird Survey.

## Geographic Coverage

All of the UK although there have been very few surveys in Northern Ireland.

### **Temporal Coverage**

WBBS began in 1998 and continues to the present. Each stretch of waterway is surveyed for birds twice each breeding season and sometimes a third time (usually at the start of the season) to record habitat details.

### **Other Interested parties**

WBBS has been funded in most years by the Environment Agency (EA) and by a consortium of water utility and waterways companies.

The founder sponsors of the pilot year in addition to the EA were Thames Water, British Waterways, Severn Trent, Hyder (Welsh Water) and Anglian Water.

Severn Trent, Anglian Water and Essex & Suffolk Water have sponsored WBBS in some subsequent years.

### **Organiser(s)**

John Marchant

### **Current Staff Contact**

John Marchant john.marchant@bto.org

### **Publications**

The population trends are published for relevant species in the Birds of the Wider Countryside report ([www.bto.org/birdtrends](http://www.bto.org/birdtrends)) each year.

An annual report is produced and the results are noted annually in *BTO News*.

There have been several research reports on the evaluation and its association with other aspects of the Environment Agency's work:

Marchant, J. & Gregory, R. 1999. *Waterways Breeding Bird Survey Plot Study 1998: adaption of census methods to rivers and canals*. Published by Environment Agency as R&D Technical Report W205. *BTO Research Report* no. 218.

Marchant, J.H., Noble, D.G., Leech, D.I & Freeman, S.N. 2002. *River Habitat Survey & Waterways Breeding Bird Survey 1998-2000 – Final Report*. Published by Environment Agency and as *BTO Research Report* no. 291.

Newson, S., Noble, D. & Marchant, J. 2003. *Analysis of population trends for waterways birds*. *BTO Research Report* no. 337.

Marchant, J.H., Joys, A.C., Noble, D.G. & Coombes, R.H. 2005. *Waterways Breeding Bird Survey: progress and population trends 1998-2004*. The Environment Agency and as *BTO Research Report* no. 412.

**Available from NBN?**

No.

**Computer data -- location**

BTO network Unix network personal space.

**Computer data -- outline contents**

Separate year files for birds, habitats, mammals and nest counts (eg b98e, h98e m98e and n98e). The birds files tabulate counts by transect section for each site, species and distance band.

**Computer data -- description of contents**

The format of bYYe is:

Cols: 1-4 observer number; 5-10 1-km square grid reference; 11-14 County (as GBxx where xx are 2 letters as per standard BTO coding); 15-20 Date (as DDMMYY); 21 E(for Early Visit) or L (Late Visit); 22-25 Codes for Cloud, Rain, Wind, Visibility; 26-29 Start time HHMM; 30-33 Finish time HHMM; 44-45 2-letter bird species code; 46 Distance Band (1, 2, 3 or F); 47-76 Count of bird in each 500m section (3 cols per section).

The format of hYYe is:

Cols: 3-6 observer number; 7-10 Year; 11-16 1-km square grid reference; 17-20 County (GBxx); 21-23 start altitude; 24-31 start grid ref; 32-34 finish altitude; 35-42 finish grid ref; 45-46 transect section (1-10 500m section); 47-57 first habitat (waterway itself); 58-68 second habitat; 69-79 third habitat.

**Information held in BTO Archives**

All survey returns are received on paper and are stored at The Nunnery.

**Notes on Access and Use****Other information needed****Notes on Survey Design**

The WBBS is a modified line-transect survey based on randomly selected stretches of waterway. The difference in sampling effort in different areas and on different types of waterway is taken into account when calculating trends.

However, stretches that are temporarily inaccessible, or which are not taken up due to their remote location, are retained in order to maintain the integrity of the sampling design, although it is recognised that some will seldom, if ever, be surveyed. Note that observers are not allowed to reject sites because they "are unlikely to have any worthwhile birds".

**Specific Issues for Analysis**

Potential analysts and users are strongly advised to discuss any use of the data with relevant BTO staff before they start.