

ECN Protocols for Standard Measurements at Terrestrial Sites

BI (BB/BC/BM) Protocols

Note 1 British Trust for Ornithology (BTO) CBC habitat mapping instructions

(Taken from BTO Common Birds Census instructions)

Information on the nature of the habitat is an essential complement to the data you supply on the numbers and distribution of the territorial birds on your plot. It enables us to assess how representative is our index (by comparing the habitat of our plots with that of farmland or woodland as a whole), to compare the birds on plots of different habitat and, most importantly perhaps, to measure the effects on birds of specified changes in the environment.

If the habitat of your plot is subjected to major change, subsequent census results may form the basis of a detailed case study. We are likely to welcome the continuation of a census following such change, even where the changed area is substantially less attractive for birds, but please check with us first to ensure that results will be worthwhile.

The following items are needed annually to accompany each completed census:

- (a) **a habitat map.** A full habitat map is essential in the first year, but in subsequent years it is necessary only to show changes from the previous year's map, and any special information which is relevant to that year (including field use on farmland plots). Details on compiling habitat maps are given below.
- (b) **a completed habitat questionnaire.** Each observer will be sent a questionnaire before the start of the season, to be completed as fully as possible and returned with the maps. The content of the questionnaire may vary from year to year but for farmland will include field-use (cropping, management, farm chemicals used, etc), hedgerow management and other detailed aspects of habitat change. If there has been no change on the plot, whether farmland or woodland, this will be your opportunity to say so.

In addition, photographs of the plot are very helpful to the analyst, since they give an accurate impression of the habitat; they must be regarded as a complement to the habitat maps and questionnaires, not a substitute. Colour slides are particularly welcome. Please enclose them with a map showing the points from which the photographs were taken, and a note of the date.

Farmland habitat maps

In your first season, and in any subsequent season if you wish, please complete a full habitat map. This should be on one of the outline maps sent to you for the census and should describe the permanent skeleton of the plot - including any hedges, fences, ditches, tracks and lanes, farmsteads gardens, scrub, copses, permanent pasture, streams and standing water - together with a note of the field use in that season. Conventions are to mark hedgerows and wooded areas in green, and any streams or standing water in blue. Mapping should extend for 50-100 metres beyond the plot boundaries. The following details should be given:

- (a) the plot boundaries, clearly marked
- (b) contours, copied from the 6" or 2½" OS maps
- (c) a six-figure grid reference for a point near the centre of the plot
- (d) a description of each copse or block of woodland (see woodland section below)
- (e) the structure of each hedge in terms of height, width, shape, main species of hedgerow shrubs and species and height of standard trees. The positions of standard trees should be marked with a cross
- (f) position of any nestboxes
- (g) any other details you think may affect the distribution of birds on your plot.

Estimate hedge width at the height at which the width is greatest; for hedges not recently trimmed it may be necessary to give ranges for height and width rather than single values.

A full habitat map will be welcome in any subsequent year of the census, and would be particularly useful following a period of habitat change, but the only requirement following the initial year is for a 'crops and changes' map. This should show:

- (a) any changes in the habitat since the map for the preceding year, eg hedgerow losses, streams which have been dredged
- (b) the cropping or field-use
- (c) the hedgerows present in that year, marked with a green line
- (d) the period of the season for which any standing water was present.

The 'crops and changes' map can be used to illustrate points you mention in your answers on the annual questionnaire. Please remember that unless you inform us of changes we might assume that the information on your previous habitat map is correct, so it is very important to keep up to date with recording habitat change.

Habitat information is best collected during the course of normal visits, but make a special visit if you wish. Notes made on the visit maps should be cancelled as they are copied to the habitat map.

Woodland habitat maps

As for farmland, a full habitat map is requested to accompany your first census. Please read the section on farmland habitat maps and mark all the features listed there, where relevant to the habitats present on your plot and in the surrounding 50-100 metre zone. In addition, the following specifically woodland features should be recorded:

- (a) rides, clearings and glades
- (b) boundaries between the major stand types, together with a brief description of each type.

Stand types can be recognised as blocks of woodland within which the tree and shrub species and the woodland structure are broadly uniform. Please provide the following details for each stand:

1. **Management type:** stands may vary in management (eg high forest, wood pasture, active coppice, derelict coppice). In coppiced woods, the boundaries of different ages of coppice should be marked and the approximate date of cutting provided. Please inform us of any management activity on the annual questionnaire.
2. **Canopy or tree layer:** list the dominant species of trees and estimate by eye the approximate % cover for each tree species contributing more than 10% of the total ground cover. Also estimate the typical height of the dominant tree species: BTO staff can advise on methods if necessary.
3. **Shrub layer:** (1-5 m above ground): list the main species, their typical height and approximate % cover.
4. **Field layer and ground composition:** record the approximate % cover of grass, heather, herbs, bracken, bramble, rocks, etc.

Many plots contain only three or four different stand types which can be readily identified, and it will be rare to need more than seven or eight. A friendly botanist may be able to assist. If in difficulty consult the BTO. Please remember to keep us informed of any changes in habitat in subsequent years. Maps showing changes only would be welcome in addition to the completed questionnaire.