



# Wetland Bird Survey Volunteer Handbook

Greater Manchester Ecology Unit

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## **Carbon Landscape Citizen Science Project**

### *Contact us*

Please contact the Greater Manchester Ecology Unit (GMEU) if you have any questions with regard to this survey handbook.

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# Introduction

Thank you for volunteering to take part in the Carbon Landscape's Citizen Science Project to monitor key species through structured surveillance. The project's boundary, [view map: <https://gmwildlife.org.uk/mapapp/?project=carbonlandscape>] encloses the core of the Great Manchester Wetlands Nature Improvement Area (NIA) which supports a host of European and UK protected species, as well as UK Biodiversity Priority Species, all dependent on the mossland and wetland habitats which the project will enhance and restore.

The project will build on the existing survey work being undertaken and will also recruit and train new recorders, our Citizen Scientists. It aims to significantly increase survey coverage of target species, across the key habitat restoration areas, and the wider Carbon Landscape. The surveys have been designed with the help of specialist county and vice-county recorders who between them have a wealth of experience in species monitoring in the North-west of England.

The survey methods are structured and repeatable allowing valuable data to be collected, not only during the three year lifetime of the project, but well into the future. Biological datasets are of most value when collected over a long time span. Monitoring the abundance and distribution of the target species is an important mechanism for measuring the success of the habitat works on the ground and changes to the landscape over time.

The robust data collected from the project's surveys and the subsequent survey effort will be used to monitor sites over time, allowing the success of habitat management works to be assessed and to influence future sustainable management. This will be of particular benefit to those owning or managing land within the Carbon Landscape, whilst providing ecologists and conservationists with biological data that can be analysed at landscape scale. This project will provide important insights into the factors influencing abundance and distribution and will be used to support future species conservation work.

Your contribution as a Citizen Scientist to the Carbon Landscape Project is greatly valued.

The survey guidance in this handbook is based on the British Trust for Ornithology (BTO) / Joint Nature Conservation Committee (JNCC) / Royal Society for the Protection of Birds (RSPB) Wetland Bird Survey (WeBS) methodology.

# Survey Preparations

## Site selection

Most of the wetland sites within the Carbon Landscape boundary are already counted for the national BTO/JNCC/RSPB WeBS Survey, primarily from September to March. The Carbon Landscape Citizen Science Project aims to complement this survey effort by recruiting new recorders to take on unallocated sites and to carry out additional roost counts of key species. This will ensure that coverage is as comprehensive as possible and will enable species distribution to be mapped at a landscape scale. To check which sites are currently available visit the BTO website

<https://app.bto.org/websonline/sites/vacant/vacant-sites.jsp#lon=-2.5179291&lat=53.4806910&zoom=11>

Please email [carbonlandscape@gmwildlife.org.uk](mailto:carbonlandscape@gmwildlife.org.uk) with your preferred sites and we will advise on availability.

## Submitting your survey data

When carrying out your survey, please enter your data onto the field survey forms provided. Your data should ideally be submitted to GMEU as soon as possible after each survey visit. We are currently developing an online data entry portal and will inform you once this is live. However, as an interim measure survey forms should be scanned and emailed to [carbonlandscape@gmwildlife.org.uk](mailto:carbonlandscape@gmwildlife.org.uk) or posted to GMEU. If sending by post, please ensure you retain a copy of your data as a backup.

## Land owner permission

Landowners' permission for access onto private land where there are no public rights of way must be obtained. If you are unsure if you have permission to walk on land please check with GMEU.

You will be issued with a letter that briefly explains that you require access to carry out ecological surveys and advising that you request the landowner to contact GMEU should they require additional information. We rely very much on the good will of farmers and landowners.

## Survey timings

The Carbon Landscape Project surveys should be carried out at the specified time of year which varies depending on the target species or taxonomic group. The surveys have been designed so that they can be completed by one or a number of different volunteers over a year. The survey methodologies and dates are based on current national surveys which will allow the direct comparison of the results.

# General equipment list

Some of the surveys require specialist equipment, details of which can be found in the individual survey methodologies, However, there are a number of items that should be taken on every survey: -

- Survey route map
- Field survey form
- Clipboard, recording form and 2B pencil
- Waterproof clothing
- Sturdy walking boots
- First aid kit
- Whistle
- Compass
- Camera (may be useful)
- Mobile phone, in case of emergency (do not rely on smart phones for navigation)
- Warm clothing (if required)
- Insect repellent (if required)
- Suntan lotion (if required)
- Food and drink (if required)

## Optional equipment

- Global positioning system (GPS), available to loan from GMEU

## Health and safety

We want you to remain safe. Before any survey is attempted, the route should be pre walked and any potential risk assessed. Listed below are a wide variety of general hazards that you might encounter when working in the field along with precautions to reduce the risks: -

<i>Example risk</i>	<i>Example precautions</i>
<i>Undulating / rough terrain and steep slopes</i>	<i>Select appropriate footpath / route. Wear appropriate footwear with good soles and ankle support.</i>
<i>Weather</i>	<i>Ensure you are aware of the forecast prior to your survey. This is of particular importance in the winter or when visiting remote areas.</i>
<i>Dense vegetation</i>	<i>Hazards such as holes, burrows, tree stumps or fencing may be obscured. Work with care in such conditions.</i>
<i>Protruding stems</i>	<i>Take care when bending to survey vegetation to avoid injuries to eyes.</i>
<i>Streams and rivers</i>	<i>Cross streams or rivers only by footbridges or other purposely built structures. Avoid any structures that appear damaged or poorly maintained.</i>
<i>Poorly maintained footpaths, stiles, etc.</i>	<i>Avoid these if possible and report to the appropriate agencies.</i>
<i>Lone working</i>	<i>Conduct survey work in pairs whenever possible</i>
<i>Secluded sites</i>	<i>If in doubt err on the side of caution and do not walk alone. Inform another person of where you are going, your route and estimated time of return and arrange for them to contact the authorities if you do not contact them to say you have arrived back safely.</i>
<i>'People' Hazards - might include poachers, strangers in isolated sites, irate owner/occupier, people with dangerous dogs, etc.</i>	<i>Exercise good judgement and assess the situation. Avoid confrontation and withdraw if threatened. Record any incident and inform the appropriate authorities. Carry a mobile phone. Operate lone working system and if in doubt do not work alone.</i>
<i>Farm animals</i>	<i>Heed any warning signage and avoid entering fields containing dangerous livestock.</i>
<i>People with firearms</i>	<i>If shooting is legal make yourself known audibly and visibly. If illegal, withdraw and report to the authorities.</i>
<i>Railways</i>	<i>NO fieldwork on active railways.</i>
<i>Hypothermia</i>	<i>Wear appropriate warm and waterproof clothing. Carry extra clothing and high energy food (e.g. chocolate).</i>

# Biosecurity

In the wake of the recent ash die back emergency, the Forestry Commission have updated their biosecurity guidance and produced a 13 page booklet on the subject. It is recommended that this is downloaded and read at

[http://www.forestry.gov.uk/pdf/FC\\_Biosecurity\\_Guidance.pdf/\\$file/FC\\_Biosecurity\\_Guidance.pdf](http://www.forestry.gov.uk/pdf/FC_Biosecurity_Guidance.pdf/$file/FC_Biosecurity_Guidance.pdf).

For low risk biosecurity control, ensure that footwear is clean prior to the visit (visually free from loose soil and plant debris). If necessary, brush or wash in soapy water before visit. Keep vehicular access to a minimum, where practicable, keep to established hard tracks. Clean accumulated mud from vehicles. Observe signage at sites and follow any site specific biosecurity instructions.

Where a damaging tree pest is known or suspected to be present and there is a risk of spreading the pest further, a higher level of biosecurity control will be needed. Please refer to the above document. Higher level controls will be required if the site is under animal health control, for example foot and mouth disease.

# Wetland bird survey - core count plus

## Survey method

### *Background*

The survey is a monthly count of water birds at distinct wetland sites, allowing the monitoring of change in water bird numbers and distribution. Breeding information informs Site of Biological Importance (SBI) selection, annual bird reports and national targeting. Sex ratios provide useful information on population structure.

### *Dates*

Counts are made once a month, on or as near as possible to the predetermined priority count dates. These are available on the BTO website - <https://www.bto.org/volunteer-surveys/webs>

### *Useful / essential equipment*

- Binoculars / telescope
- Bird ID guide
- A tally counter may be useful where large numbers of birds are present

## *Survey preparation*

A map of your allocated site will be provided. If the waterbody is very large you may be asked to survey a specific part of it; conversely, a site may contain a number of smaller waterbodies and you may survey more than one. The waterbody should be surveyed, from suitable vantage points on dry land. The wetland bird counts will take place every month at the same site. Before commencing any counts, carry out an initial visit to determine which areas the birds use and plan a safe route around the survey site. The habitat survey can be carried out during this initial visit.

## *Habitat survey*

It is not necessary to repeat the habitat survey every month; however, it would be beneficial to repeat the survey during the summer and the winter as the nature of any vegetation which is adjacent to the waterbody is likely to change significantly. Water levels may also change significantly. The purpose and focus of the habitat survey is as follows:

- To record the habitat(s) associated with the waterbody which are important for wetland birds.
- To record the type of waterbody.
- To record changes in the habitat.
- To record any changes in the area of clear water.

Choose suitable points from which to view the site (Figure 1 overleaf) and record the grid reference for these points in order that this can be repeated as required in the future. A site which has a simple shape will require a small number of points whereas a site with a more complex shape may require a larger number of viewing points. Access may not be possible to all sides of a waterbody and on some sites both the habitat survey and the subsequent bird counts will need to be carried out from a more restricted area (Figure 2).

Example points from which habitat record photographs could be taken. ★

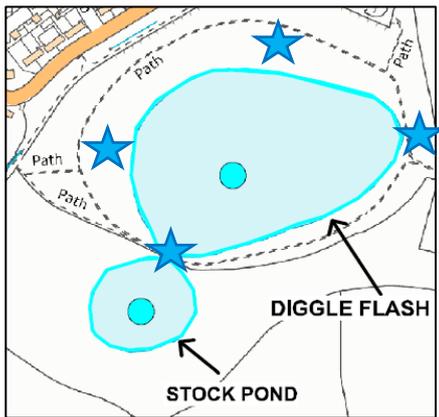


Figure 1

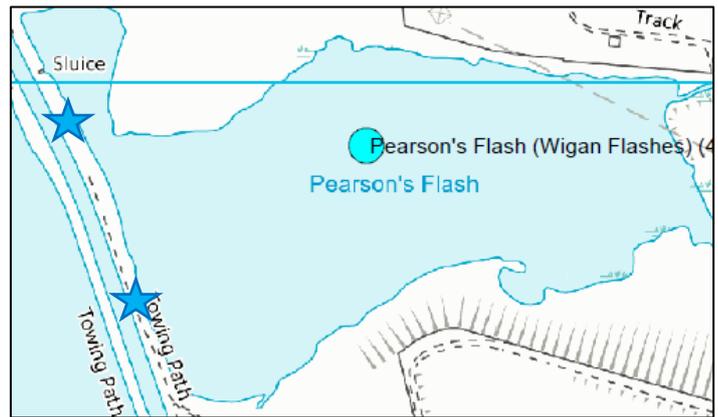


Figure 2

## Bird survey methodology

Please take care to avoid disturbing the birds during the survey. Flushing birds from nests or away from young could be very detrimental. During periods of prolonged cold weather any disturbance which causes the birds to expend additional energy places stress on them at a time when they may find it difficult to survive the cold conditions.

Survey the whole of a predefined area recording numbers of all waterbird species (divers, grebes, cormorants, herons, Spoonbill, swans, geese, ducks, rails, cranes, waders and Kingfisher). Counts of gulls and terns are optional. Also include escaped birds and hybrids which should be recorded as hybrid duck or hybrid goose.

Birds flying overhead e.g. Pink-footed Geese should be excluded from the main count unless they are obviously using the site (i.e. flying from one part of the water body to another area). However, do note overflying birds in the additional information box, recording the species, number, direction of flight and time.

If a bird is heard but not seen, it can be recorded as present but no count number should be allocated. No estimates should be made for secretive birds which are not detected during the count; only birds seen or heard should be recorded. If you consider that the count is (e.g. obscured by fog or wind-blown waves), this can be indicated on the survey form.

Record the total number of individuals of a species and where possible, the number of males and females. Where it is not possible to differentiate between the sexes, or if you are unsure of the sex (e.g. during eclipse plumage or when birds are immature), the sex ratio counts can be omitted. It is not necessary to assign a sex to every bird which is counted e.g. a flock of 50 Goldeneye which contains 20 males would be entered as 50 in the Total Count box and 20 in the Male Count box. The female count may be left blank if you are unsure about the numbers of females and immature birds.

In addition to recording the numbers of birds, breeding codes should also be recorded when applicable.

The number of birds in large flocks is generally estimated by initially counting the individuals within a block (e.g. 10 or 20 birds) and then by counting the numbers of such blocks in the flock. Groups of 50 or 100 can be used if the flocks are very large and an allowance made for the varying densities of birds. A photograph can also be useful for retrospectively counting the individuals in a flock.

If large numbers of birds are moving, or are thought likely to leave (e.g. because of impending disturbance), the following should allow at least an approximate count: Make a quick total count (don't separate species); then make a quick assessment of proportions of species, starting with the most common species; then re-scan slowly for less common species; finally, scan slowly through the whole flock recording accurate counts of separate species. A tally counter and note book may be useful in addition to the recording form.

## *Time of day and count conditions*

Morning is usually the most suitable time as many species are most active at that time. Counts should be completed within four hours at the most. Sites requiring more time should ideally be divided into sub-sections, with two or more counters used to cover the site.

Ensure that the weather is safe and suitable for surveying and avoid conditions which present a hazard to surveyors or the birds. If necessary, avoid surveying during severe spells of cold weather in order to prevent disturbance to birds.

## *Supplementary counts*

In some circumstances, supplementary counts of selected species may provide useful additional information when assessing the importance of sites. This may include, for example, roost counts of cormorants, goosanders, gulls or snipe that are absent from the site when the Core Counts are made. Such counts can also be made on a monthly basis, ideally on the same date as the core count, using another copy of the form, marked 'Roost Count' and recording the start and end times.

Cormorants, goosanders and gulls are best counted flying into their roost during the hour before sunset and for up to 30 minutes afterwards. Snipe which can be difficult to count accurately during the daytime without disturbing them fly out from their roost after dusk to feed during the night. Their calls and habit of flying high up into the sky, making their silhouettes clearly visible, present an ideal opportunity to obtain an accurate count of roost numbers.

## *Additional records*

Any additional biological records that are observed whilst carrying out the survey will be very welcome. The additional notes box at the end of the survey form can be used for this purpose.

# Appendix

## Grid references

GPS often display grid references of 10 figures which would imply an accuracy of 1m<sup>2</sup>. Most GPS will give a ± accuracy number. If this number is 10m or less, an 8 figure grid reference can be recorded to reduce this false accuracy (i.e. a grid reference which has an accuracy of 10m rather than 1m).

If you have a 10 figure grid reference (accurate to 1m) and you want to obscure it to an 8 figure grid reference (accurate to 10m), the following example shows you how to remove the final digits from the easting and northing to reduce the precision.

GPS Reading SD 58315 03315 → Recorded Grid Reference SD 5831 0331

If you have an 8 figure grid reference (accurate to 10m) and you want to obscure it to a six figure grid reference (accurate to 100m), the following example shows you how to remove the final digit from the easting and northing.

8 Figure Grid Reference SD 5831 0331 → 6 Figure Grid Reference SD 583 033 **Be careful** - never round the numbers up when reducing the accuracy of a grid reference as it would move your record to an adjacent grid square north-east of the actual location.

The screenshot here shows different levels of precision for the same marker location on the map. Click this link and then click on the marker to try this yourself -

<https://gmwildlife.org.uk/mapapp/?path=SD6254500455>

