



Habitat and Species Survey Techniques

This document outlines the standard techniques of habitat and species surveys currently used in the UK. In order to manage the natural attributes of your club, it would be advisable to have the whole site surveyed both as a record of species present and a baseline against which to measure change achieved through positive management in the years to come.

Two techniques have been developed to identify the nature conservation value of any site. Both provide a consistent terminology, and are now adopted as standard for surveying and describing habitats throughout the UK:

- The Phase 1 Habitat survey
- The National Vegetation Classification (NVC)

Phase One Habitat Survey

This is the standard technique for classifying and mapping British habitats as laid down by the Joint Nature Conservation Committee. A Phase 1 Habitat Survey would identify, map and describe the main habitats, giving dominant plant species and target notes about special value in each compartment. This type of survey provides a record of habitats that are likely to be ecologically important, including providing target notes on important aspects of a site. The survey can be conducted at any time of the year, but it is best done in spring/summer when vegetation is more readily identifiable.

The following is included in a phase 1 habitat survey:

- Desk study (obtaining pre-existing ecological data relating to the site)
- Field survey (on site visit to map habitats)
- Written report
- Map (produced to JNCC standard phase 1 habitat survey classification)

The broad classification of habitats is:

- woodland and scrub
- grassland and marsh
- tall herb and fern
- heathland



- mire
- swamp, marginal and inundation
- open water

Most if not all of these habitats occur on Scotland's golf courses. Each broad category is subdivided into more detailed components which are recognizable in the field by trained surveyors. The survey is recorded onto 1:10,000 or 1:25,000 OS maps using a standard system of colouring and annotation. The minimum unit of recording is 0.1ha.

The 'Phase 1 Maps' are designed to be easily read and can be employed in planning procedure. An example map is available to view in the list of downloads. Where a surveyor identifies habitats regarded as significant, a 'Target Note' is made which indicates the need for a more detailed 'Phase 2' survey of the site at a later date.

A Phase 2 Habitat Survey could subsequently be done to provide more in depth information for the most valuable areas, which would produce a comprehensive species inventory and DAFOR analysis to record populations. (DAFOR = Dominant, Abundant, Frequent, Occasional, Rare).

In unusual circumstances there is provision for a 'Phase 3' survey. Target notes may highlight the need to carry out further, species-specific studies (which may be subject to seasonal constraints) to fully inform a planning application. Further details on species-specific surveys can be found on the SGEG website.

The National Vegetation Classification (NVC)

The NVC is a detailed phytosociological classification, which assesses the full suite of vascular plant, bryophyte and macro-lichen species within a certain vegetation type. For more detailed information on NVC please refer to www.jncc.gov.uk/page-4259

In the context of golf course design and management, Phase One Surveys will highlight areas of importance for nature conservation and allow a description of the natural history resource of an area, whereas NVC will provide detailed information on all areas which should be considered in design decision making.



Species-specific studies - Whilst Phase 1 and 2 Surveys focus on plant species, surveyors usually compile anecdotal list of birds, mammals, amphibians and invertebrates they observe casually during their visit. Great crested newts, water vole, pine martin, otters, red squirrel, all bats, badgers and numerous bird and plant species are protected under Schedule 5 of the Wildlife and Countryside Act 1981. For specific information regards each of these species please refer to the specific download on the SGEG website.

SGEG recommend specialist surveys should be carried out to highlight the most appropriate action regarding future management. These surveys can be conducted by specialist surveyors, local ranger services, amateur natural history groups, etc. The presence of such a species rarely imparts management constraints on the club and additional funds are available for responsible stewardship. For assistance in determining which type of survey your facility needs and contacts of ecological surveyors please contact SGEG at www.infosgeg.org.uk

SGEG have produced a document which details habitat surveying methodologies, data analysis and recommendations as well as a review of current best practice. The publication is entitled '*Nature Conservation and Golf Course Development: Best Practice Advice*'. This document is free of charge and available as a download from the website www.sgeg.org.uk.