



2. General Survey Techniques Level 1: Walk-over Survey.

INTRODUCTION

As a starting point, even if you already know the woodland well, you should carry out a rapid but thorough reconnaissance visit / walk-over survey to your study area. This will help to set the wood and any features you find there into context and can be done before any documentary research. The aim of this initial walk-over reconnaissance is to acquire an overview of your study area: its geology, topography, ecology and most obvious historic features, so do not spend too long examining any individual tree or other historic feature. A walk-over survey form can be completed and you can take photographs or make a few sketches on your map or in your notebook. This basic information will help you to structure any more detailed surveys.

A survey of a large wood can seem daunting so break the area down systematically into smaller, more manageable chunks, and agree a suitable timetable. Check that the wood is not already divided into compartments which is often the case if forestry operations are carried out. If compartments already exist then it may be more meaningful if your surveys match these. It is recommended that a general survey (Level 1) of the whole woodland is carried out before a very detailed survey of a small area possibly overlooking a unique feature. Always remember that, as a volunteer, you can return to the woodland and expand the surveys at a later date.

For all surveys make a note of the following as a minimum:

The date of the survey.

Who carried out the survey.

Where the survey was carried out (provide map references or GPS reference points where possible).

Take pictures of or draft a sketch showing the dimensions and location of any important features.

An appropriate map and the skills to locate and record features onto a base map, is key to undertaking survey work. The 1:2,500 scale (1mm on the map = 2.5m on the ground) map is recommended for the general survey. It will have fixed point features

already mapped which you can check they still exist and then use them as reference points for your more detailed mapping and to orientate yourself.

HOW TO RECORD FEATURES ONTO A BACKGROUND MAP (LEVEL 1 SURVEY)

Using the survey form, note the surrounding land use, aspect/slope and any distinctive features of the woodland as background information. If you are able to, walk around the boundary of your woodland or if not, follow all the major footpaths and note down any distinctive features you can see from them. The sort of features you are looking for include, a ditch or bank; a fence or wall; any large, tightly clustered or mishapen trees or shrubs; any square, oblong, oval platforms; any round, oval or oblong hollows or pits; any entrances or gateways; and tracks or paths; any streams or other watercourses; distinct patches of ground flora; changes in vegetation and any standing building / structural remains.

Features are divided into three categories (point, linear and polygon) for mapping purposes.

Point features are those which are too small to usefully define their perimeters and which can be depicted as a single point on a map. Examples of these are a single tree, boundary stone or small hollow or pit. In practice it will be up to you to decide when it is worth recording a structural feature's extent in more detail at a later stage. For example, recording inscriptions on boundary stones. See page 21 for recording worked and veteran trees. As a general rule, it is appropriate to record any feature smaller than 10m by 10m as a point feature.

Linear features are those which are long and narrow where their course can be defined as a line. Boundaries and tracks should always be recorded as linear features, even if only short lengths survive intermittently, in order to give a clear indication of their direction. A linear feature is recorded by using a sequence of Grid References with a minimum of two points (one at either end) if it is a straight line. For other lines more points are needed, with one at each major angle change, creating a 'dot-to-dot' effect. Curving lines are depicted as a series of





2. General Survey Techniques Level 1: Walk-over Survey.

short straight segments. Some linear features such as watercourses, hedges and the woodland's boundary should already be shown on modern Ordnance Survey maps but note when the map was surveyed and if any recent management work has taken place. Straight linear features which appear on the modern Ordnance Survey maps and still exist on the ground are very useful as 'fixed points' for pin-pointing newly discovered features especially in dense woodland.

Polygon features are used to depict large features or clusters of similar features that you can group together. They require a sequence of Grid References to define the perimeter of the area they cover. They are recorded in a similar way to linear features except that the last Grid Reference point is identical to the first. Some such as ponds are obvious and may already appear on Ordnance Survey maps others such as old coppice compartments, less so and you may need to think carefully how you define these.

For each feature, you will need to work out a Grid Reference. This is of fundamental importance so that you and other people can locate the feature in the future. Grid references can be derived in several ways.

- Directly from an Ordnance Survey map if the feature has already been mapped.
- From an Ordnance Survey map if you can plot new features onto it using other details shown on the existing map.
- Using a hand-held Global Positioning System (GPS).

There are several low-tech survey techniques, which require only a few cheap items of equipment (tape-measures etc). Even if you have a GPS these more basic techniques may prove useful, for example, to plot angle changes in linear features or polygons. Two of the more useful and straightforward techniques are 'baseline and off-set survey' and 'tape (or pace) and compass survey'. With the 'baseline and off-set survey' technique, you establish straight 'baselines' in relation to fixed features shown on your Ordnance Survey base map. You can then measure out 'tape-off' from the baseline at right angles, or 'off-set', to survey new points, whether

individual point features or angle changes in linear or polygon features. The baseline is drawn on your recording map and the features plotted onto the map in relation to the baseline. The 'tape (or pace) and compass survey' may be the only way of penetrating into the heart of your woodland if there are no fixed reference points in its interior. Using a tape measure is obviously more accurate than pacing, especially on uneven ground or in undergrowth, but it is always slower and sometimes impossible. Here a single fixed reference point is used and new points you want to record are taken from that using a compass bearing in degrees towards the new point you want to record, and either pace or tape out the distance to the new point, keeping your pace length as close as possible to 1m. Write down the bearing and distance and use a 360-degree protractor and scale ruler to plot it onto your Ordnance Survey 1:2,500 background map, ideally straight away. Remember that Magnetic North and Map North (or Grid North) are not exactly the same: the angle of Magnetic North will be shown in the margin of the map sheet (so make a separate photocopy of this part of the sheet if you are planning to use a compass). Repeat this process, either from your original start-point, or starting again at the new point you have established. In this way, you will end up with a zig-zag line possibly with several side branches. It is useful to finish at another fixed reference point so that you can establish the accuracy of your survey.

Details of these techniques are described in more detail in the *Woodland Heritage Manual* and English Heritage's free guidance publications *With alidade and tape* (2004) and *Understanding archaeological landscapes: a guide to good recording practice* (2007), which are both downloadable from the English Heritage website (see bibliography page).

Note down any features, numbering them in sequence, on your map and survey form or in a notebook with a brief description including a grid reference or GPS location for future reference. This will enable you to assess the data you collect to pinpoint where you will need to carry out more detailed work.





3. Survey Sheets Walk-over Survey (Level 1).

1. GENERAL INFORMATION

Woodland Name		Surveyor(s) Name(s)	
Woodland Location		Date of Survey	

2. WOODLAND LOCATION AND SITUATION

Grid Reference (Centre using map)			Approx. size of woodland (in hectares)		
Topography of the landscape (Situation of the wood)	Broad valley	Narrow valley	Plain	Hill	Plateau
	Lowland	Moorland	Crag/cliff	Other (describe)	
Slope (Is the wood located on a slope and is this uniform through wood)	Vertical	Steep	Undulating	Gently Sloping	
	Flat				
Aspect (if the wood is located on a slope)	North	East	South	West	

3. WOODLAND TYPE (circle all that apply)

Broadleaved woodland (over 95%)	Plantation (conifers)
Mixed Woodland - dominated by broadleaves	Conifer woodland (over 95%)
Mixed Woodland - dominated by conifers	Orchard
Plantation (broadleaved)	Wood Pasture (parkland/scattered trees)
Plantation (mixed)	Other
Specify Other / Notes	

4. FEATURES IN THE WOODLAND (circle all that apply)

Recently felled area(s)	Disturbed / bare ground	Glades / rides / canopy gaps
Springs / streams / flushes	Ponds / standing water	Ditches / goits / culverts
Hedge (s)	Bank(s)	Routeways / paths / trackway
Standing dead wood	Rock Exposure	Platform(s)
Dead wood on ground	Heathland	Pits / Hollows
Specify Other / Notes		

3. Survey Sheets

Walk-over Survey (Level 1).

5. SUMMARY OF FEATURES FOUND IN THE WOODLAND. NOTE: RECORD THE FEATURE NUMBER ON YOUR BASE MAP WHILST CARRYING OUT THE SURVEY (print out extra pages for your survey if needed)

Feature Number	Grid Reference (s)	Description / Notes	Photograph / sketch (yes/number)

