

# Methodology Note:

## Annual Woodland Area Estimates

### Introduction

This paper sets out the methodology used to produce annual estimates of woodland area in Great Britain, outlining proposed refinements to be introduced in 2012.

Annual estimates of woodland area in Northern Ireland are based on administrative data and estimates from the Forest Service. As there have been no changes to the methodology for Northern Ireland, this paper relates to figures for Great Britain only.

### Background

Estimates of woodland area in Great Britain are based on figures produced from forest inventories. Until recently, forest inventories in Great Britain were undertaken every 15 years or so. The current National Forest Inventory (NFI), unlike previous inventories, is planned to run on a continuous 5-year cycle.

As forest inventories are generally not designed to produce annual figures, a process is required for updating the results on an annual basis to take account of changes in woodland area.

### Previous methodology

The first estimates of woodland area from the new National Forest Inventory were released in Spring 2011. Before then, annual estimates of woodland area in Great Britain were obtained from the following sources:

- For woodland owned or managed by the Forestry Commission, data were obtained annually from administrative systems.
- For other (non-FC) woodland, estimates were based on the 1995-99 National Inventory of Woodland and Trees (NIWT). The NIWT figures were then rolled forward for each country by adding statistics for new planting of non-FC woodland and disposals of FC woodland. No account was taken of woodland converted to another land use, nor of changes in composition at restocking, as there were no sufficiently reliable data sources for these topics.

### Current methodology

For the estimate of woodland area at March 2011 (provided in the 2011 edition of *Woodland Area, Planting & Restocking* and in *Forestry Statistics 2011* and *Forestry Facts & Figures 2011*), the woodland area at March 2010 was obtained from the 2010 National Forest Inventory woodland map, published in Spring 2011. The 2010 figures were then rolled forward for each country by adding statistics for new planting to produce 2011 estimates. No account was taken of woodland converted to another land use.

The breakdown between FC and non-FC woodlands was estimated by overlaying geographic boundaries for all Forestry Commission land onto the NFI map. As information on type of woodland (conifer/broadleaf) was not available from the NFI in 2011, the conifer/broadleaf breakdown for each country (within GB) and ownership type was estimated by applying the breakdowns obtained using the previous data sources (see previous methodology, above).

Further information on the National Forest Inventory, including differences in the definitions used between NIWT and the NFI are available at [www.forestry.gov.uk/forestry/INFD-8EYJWF](http://www.forestry.gov.uk/forestry/INFD-8EYJWF).

### Further refinements proposed to the methodology

Future estimates of woodland area will continue to be based on the National Forest Inventory. However, as more data becomes available from the NFI, the methodology used to produce annual woodland area estimates will be refined.

2012 estimates will be based on a revised woodland map, following further work by the Inventory & Forecasting team to examine the differences between the NIWT and NFI maps and to update to a March 2011 base date.

The methodology for estimating the breakdown of woodland area into conifers and broadleaves will also be revised for the production of 2012 estimates. Initial estimates of conifer stocked area and broadleaved stocked area at March 2011, derived from interim field survey results, will be used to estimate the breakdown by type of woodland. Non-stocked areas (i.e. felled areas and open space that is integral to the woodland) will be added to the conifer and broadleaved stocked areas pro-rata, to produce estimates of overall conifer and broadleaved areas at March 2011. These figures will then be rolled forward to produce estimates at March 2012, by adding new planting figures for 2011-12, as with the current methodology.

### Effects of proposed refinements to the methodology

The roll-forward methodology takes no account of changes between conifers and broadleaves on restocking. Thus, any conifer woodland at the time of NIWT was assumed to remain as conifer woodland, and broadleaved woodland was assumed to remain broadleaved, after any trees were felled and the area restocked. If the net effect of changes in woodland composition is an increase in one type of woodland, the proposed refinements (described above) will result in a step change to the estimates of conifer and broadleaf woodland areas in Great Britain.

In addition, the differences identified between the NIWT and NFI maps (in particular, woodland areas that had been missed from the NIWT map) may also result in a change to the ratio of conifer and broadleaved areas in Great Britain, if the areas that had been missed were predominantly of one type.

Changes to the overall woodland area estimates are also expected to occur from the additional work that has been undertaken since Spring 2010 to check the NFI map against the previous NIWT map. Such changes are expected to be relatively minor.

### Further information

Further information on the National Forest Inventory and National Inventory of Woodland and Trees is available at [www.forestry.gov.uk/inventory](http://www.forestry.gov.uk/inventory).

Estimates of 2011 woodland area were released in

- [Woodland Area, Planting and Restocking](#) (2011 edition);
- [Forestry Facts & Figures 2011](#);
- [Forestry Statistics 2011](#).

Sheila Ward  
Statistics, Forestry Commission  
May 2012

### Glossary

**Broadleaves** Trees that do not have needles or cones, such as oak, birch and beech. A few, such as alder, have cone-like structures for their seeds which are not true cones.

**Conifers** Trees with needles and cones, such as spruce, pine and larch.

**Forestry Commission (FC)** The government department responsible for forestry matters in Great Britain. The responsibility for forestry is devolved to ministers in the Scottish Government and the Welsh Government, but some executive functions are exercised throughout Great Britain by the FC.

**Forest** In the United Kingdom, there is no formal definition of 'forest'; the term is often used for large woodland areas (especially conifers) or for old Royal hunting preserves such as the New Forest or the Forest of Dean.

**Forest Service (FS)** An agency of the Northern Ireland Department of Agriculture and Rural Development.

**Great Britain (GB)** England, Wales and Scotland.

**New planting** Establishing woodland on ground that was not woodland in the recent past.

**NFI** National Forest Inventory.

**NIWT** National Inventory of Woodland and Trees.

**Restocking** The replanting of an area after trees are removed.

**United Kingdom (UK)** Great Britain and Northern Ireland.

**Woodland** Land under stands of trees with a canopy cover of at least 20% (25% in Northern Ireland), or having the potential to achieve this, including integral open space, and including felled areas that are awaiting restocking.