

NFI Method Statement

Purpose

The purpose of this document is to describe the method for the National Forest Inventory (NFI) woodland map, the method for its predecessor the National Inventory of Woodland and Trees (NIWT), and to present a table that compares the two.

For further background information on the NFI and NIWT projects, including contact details, statistical reports and data downloads please visit

www.forestry.gov.uk/inventory

NFI Woodland Map

The England NFI map is based upon Ordnance Survey colour 25cm orthorectified digital imagery flown between 2002 and 2009.

The Scotland NFI map is based upon Ordnance Survey colour 25cm orthorectified digital imagery flown between 2000 and 2009.

The Wales NFI map is based upon 40cm per pixel orthorectified digital imagery flown in 2006 provided by the Welsh Assembly.

In general the photographic images should have been no older than 3 years at the time of creating the digital map. OS MasterMap (OSMM) features were used where the woodland boundary was coincident with or within 10m of the perceived woodland edge

As well as differentiating by interpreted forest type, open areas in woodland were mapped as interpreted open areas (IOA's).

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The categories used for IFT's and IOA's are:

NFI Interpreted Forest Types

- Conifer,
- Broadleaved,
- Mixed (predominantly conifer),
- Mixed (predominantly broadleaved)
- Coppice,
- Coppice with standards,
- Shrub,
- Young Trees,
- Felled and
- Ground prepared for planting

NFI Interpreted Open Areas

- Open
- Water
- Grass
- Agricultural land
- Urban/Building
- Forest road /track,
- River
- Power line
- Quarry
- Bare
- Wind farm
- Other vegetation

For NFI the definition of woodland is

- A minimum area of 0.5 hectares under stands of trees with, or with the potential to achieve, tree crown cover of more than 20% of the ground. Areas of young trees, which have the potential to achieve a canopy cover of more than 20%, will also be interpreted as woodland and mapped.
- The minimum width for woodland is 20 m, although where woodlands are connected by a narrow neck of woodland less than 20 m wide, the break may be disregarded if less than 20 m in extent.
- Intervening land classes such as
 - Roads - all metalled roads should be excluded from the woodland area, but internal forest tracks, farmers tracks, rides etc. will be included as part of the woodland if < 20m wide.
 - Rivers – where the gap in woodland is $\geq 20\text{m}$ then rivers will be excluded from the woodland area.
 - Power lines etc. - where the gap in woodland is $\geq 20\text{m}$ then power lines will be excluded from the woodland area.
 - Railways – all normal gauge railways should be excluded from woodland

- "Scrubby vegetation" is included within this survey where low woody growth seems to dominate a likely woodland site.

The definition of an IOA is any open area that is ≥ 20 m wide and ≥ 0.5 ha in extent and is completely surrounded by woodland IFT's.

NIWT Woodland Map

In England, the digital map of all woodland was derived from 1:25,000-scale stereo colour aerial photography flown between 1991 and 1999.

In Scotland the woodland map was derived from the LCS88 Land Cover Scotland mapping exercise, which mostly referenced 1:24000 scale black and white stereo aerial photography flown between 1987 and 1988 with additional 1:24000 scale colour coverage through the Central belt.

In Wales, a digital map of all woodland was derived from 1:25,000-scale stereo colour aerial photography flown between 1991 and 1999.

The individual woodland polygons of this map were then differentiated into Interpreted Forest Types (IFT's) of 1 ha and over.

The categories used for IFT's were:

- Conifer
- Broadleaved
- Mixed
- Young trees
- Ground prepared for planting
- Felled
- Coppice
- Coppice with Standards
- Shrub (replaced the Scrub category in Scotland)

The map was then updated to 1998 for new planting based on Woodland Grant Schemes information and FC first rotation new planting information from the FE SCDB

For NIWT, the definition of woodland was:

- Woodland of 2 hectares and over, and with a minimum width of 50 m, under stands of trees with, or the potential to achieve, tree crown cover of more than 50% (Scotland) or 20% (England and Wales).
- Areas of open space integral to the woodland are also included.

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- Intervening land-classes such as roads, rivers or pipelines are disregarded if less than 50 m in extent.

'Scrubby' vegetation is not included as a separate category but as conifer, broadleaved or mixed tree types and included in the Main Woodland Survey.

Table summarising NFI and NIWT method differences

	National Forest Inventory NFI)	National Inventory of Woodland and Trees (NIWT)
Minimum Extent of Woodland also Minimum Extent of Interpreted Forest type (IFT) / Interpreted Forest Area (IOA)	0.5 ha	2.0 ha
Minimum Width of Gap Between Woodlands and Minimum Width of IOA	20m	50m
Derived from	25cm per pixel resolution orthorectified Ordnance Survey imagery (England and Scotland) 40cm per pixel resolution orthorectified imagery (Welsh Assembly)	1:25000 Fixed scale photography
Interpreted Forest Types (IFT's)	Conifer Broadleaved Mixed Predominantly Conifer Mixed predominantly Broadleaved Coppice Coppice with Standards Shrub Young Trees Ground Prepared for Planting Felled	Conifer Broadleaved Mixed Coppice Coppice with Standards Young Trees Ground Prepared for Planting Felled

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Interpreted Open Areas (IOA's - Completely surrounded by woodland)	Agric	
	Bare	
	Grass	N/A
	Power line	N/A
	Quarry	N/A
	River	N/A
	Road	N/A
	Urban	N/A
	Other Vegetation	N/A
	Water	N/A
	Wind farm	N/A
Requirements	OS MasterMap features are used as boundaries where they fall within 10m of the perceived woodland edge	All woodland both urban and rural is mapped and included in the survey
	All woodland, both urban and rural is mapped and included in the survey.	Roads less than 50m included in the woodland area
	All public roads excluded regardless of width	Rivers visibly less than 50m wide included in the woodland area
	Rivers visibly less than 20m wide are included in the woodland area	Power lines less than 50m wide included in the woodland area
	Power lines less than 20m wide included in the woodland area	Railways less than 50m wide included in the woodland area
	All railways excluded from the woodland area	
Updates	Updates will be on a regular rolling program utilising change detection software as well as new planting information	Updated to 31st March 2002 with new planting information from Forest Enterprise Sub Compartment Database (FE SCDB) and country based grant scheme data.

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