

NFI provisional estimates for woodland in the North Devon Biosphere Reserve

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Summary

This report provides a detailed picture of stocked area of woodland, the standing volume of timber and associated biomass and carbon stock for the North Devon Biosphere Reserve area. These estimates are a subset of those published as part of the 2012 growing stock information presented in the National Forest Inventory (NFI) *50-year forecasts of softwood timber availability* and *50-year forecast of hardwood timber availability*. NFI reports are published at www.forestry.gov.uk/inventory.

The estimates provided in this report are provisional in nature.



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Approach

The approach taken in the derivation of these results and to be used in their interpretation is described in the full suite of forecast reports which can be found at www.forestry.gov.uk/forecast. Refer to the *Standing timber volume in coniferous trees in Britain* and the *NFI preliminary estimates of quantities of broadleaved species in British Woodlands with special focus on ash* reports for a description of the underlying methodologies and interpretation, and also for the England and GB context.

The estimates reported here for the Private sector are based upon field samples assessed between October 2009 and August 2013, the results of which have been subjected to rigorous data quality assurance procedures.

Results

The results presented in this report are estimates of standing volumes and stocked areas at 31 March 2012 for the North Devon Biosphere Reserve. The data sources used for the compilation of these estimates are the same as described in the National Forest Inventory *50-year forecast of softwood availability (2014)* and *50-year forecast of hardwood availability (2014)* reports. Estimates for the Forestry Commission (FC) estate are derived from the FC's sub-compartment database, while those for the Private sector (i.e. non-FC) estate are derived from information collected in the NFI field survey. A fuller description of these data sources and how they are used in the production of estimates, including sampling standard errors attached to the Private sector estimates, is provided in the earlier documents.

Results are provided for stocked area at 31 March 2012 (**Figure 1** and **Tables 1-3**), felled area (**Table 4**), standing volume at 31 March 2012 (**Figure 2** and **Tables 5-7**), and biomass and carbon stocks at 31 March 2012 (**Tables 8-9**).

Tables and Figures broken down by tree species provide information on the most prevalent species found in the area covered by this report, with other less prevalent species grouped into the "other conifers" and "other broadleaves" categories. This is because the NFI field survey has an insufficient number of samples to provide reliable estimates for the less prevalent species found in the area.

The values in the tables have been independently rounded, so may not add to the totals shown. In some breakdowns of Private sector estimates the estimates in the body of the table may not sum to the quoted total because each individual value, including the total, has been independently generated by the estimation procedure used for results from the

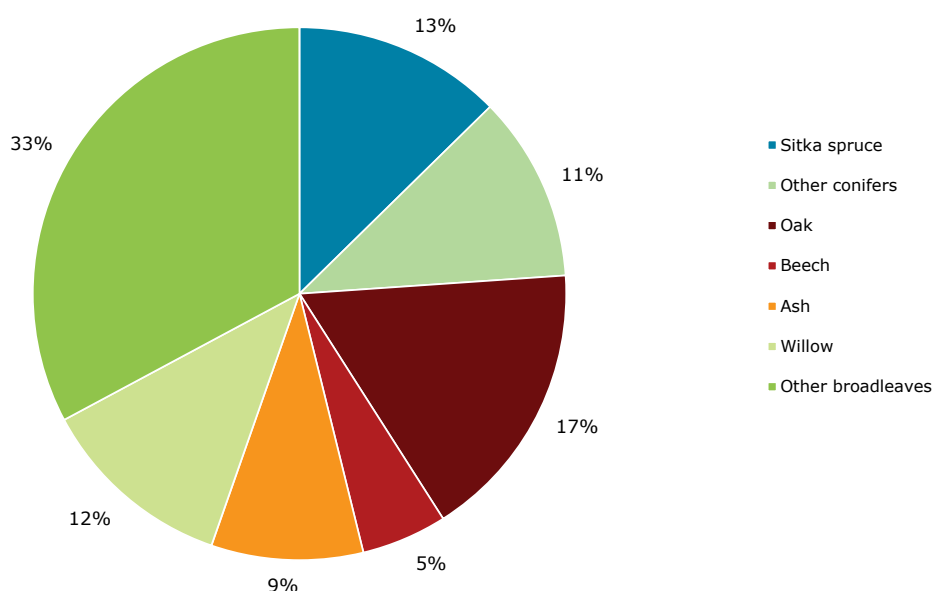
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NFI sample survey. Sampling standard errors (SE) attached to Private sector estimates are expressed in relative terms (%) to the right of the relevant estimate.

Among the less prevalent conifer species, Douglas fir contributes an average of around 45%, and Larches around 30%, of each of the stocked area, standing volume, biomass and carbon estimates reported in the "Other conifers" group (**Tables 1, 5, 8 and 9** respectively). The number of NFI field samples covering these species is too small to provide reliable individual estimates.

Stocked area at 31 March 2012

Figure 1 Selected tree species composition by stocked area at 31 March 2012



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Table 1 Stocked area by selected tree species at 31 March 2012

Selected species	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
North Devon Biosphere Reserve				
All conifers	1.8	4.4	10	6.2
Sitka spruce	1.1	2.2	20	3.3
Other conifers	0.7	2.3	21	2.9
All broadleaves	0.4	19.7	6	20.1
Oak	0.0	4.4	14	4.5
Beech	0.0	1.3	26	1.4
Ash	0.0	2.4	20	2.4
Willow	0.0	3.1	20	3.1
Other broadleaves	0.3	8.3	10	8.6
All species	2.2	24.2	4	26.4

Table 2 Stocked area by age class at 31 March 2012

Age class	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers				
0-40 years	1.3	2.6	20	3.9
41+ years	0.5	1.8	25	2.3
Total	1.8	4.4	10	6.2
All broadleaves				
0-20 years	0.1	5.1	14	5.1
21-40 years	0.1	5.9	12	6.0
41-60 years	0.1	4.5	16	4.6
61-80 years	0.0	1.4	24	1.5
81+ years	0.1	2.8	21	2.8
Total	0.4	19.7	6	20.1
All species				
0-20 years	0.6	6.5	12	7.1
21-40 years	0.9	7.1	12	8.0
41-60 years	0.5	6.1	14	6.7
61-80 years	0.1	1.6	23	1.6
81+ years	0.1	2.8	21	2.9
Total	2.2	24.2	4	26.4

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Table 3 Stocked area by mean stand dbh class at 31 March 2012

Mean stand DBH	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers				
0-20 cm	1.0	1.9	22	3.0
20-40 cm	0.5	2.0	20	2.5
40+ cm	0.3	0.5	37	0.8
Total	1.8	4.4	10	6.2
All broadleaves				
0-10 cm	0.0	5.7	11	5.8
10-15 cm	0.1	3.4	15	3.5
15-20 cm	0.1	2.3	21	2.4
20-30 cm	0.0	3.0	18	3.1
30-40 cm	0.1	1.7	22	1.8
40-60 cm	0.0	2.3	22	2.3
60+ cm	0.0	1.2	29	1.2
Total	0.4	19.7	6	20.1
All species				
0-10 cm	0.3	6.9	10	7.2
10-15 cm	0.4	4.0	14	4.4
15-20 cm	0.4	2.5	20	2.9
20-30 cm	0.3	3.7	16	3.9
30-40 cm	0.3	3.2	16	3.5
40-60 cm	0.3	2.7	19	3.0
60+ cm	0.0	1.2	28	1.2
Total	2.2	24.2	4	26.4

Table 4 Felled area at 31 March 2012

Clearfelled area	FC	Private sector		Total
	area (ha)	area (ha)	SE%	area (ha)
North Devon Biosphere Reserve	47.7	332.1	58	379.8

Standing volume at 31 March 2012

Figure 2 Selected tree species composition by standing volume at 31 March 2012

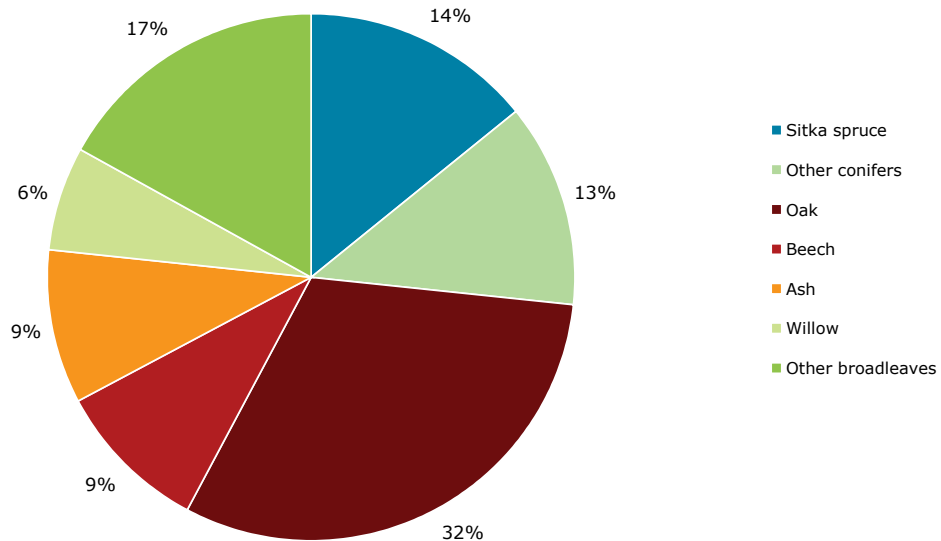


Table 5 Standing volume by selected tree species at 31 March 2012

Selected species	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
North Devon Biosphere Reserve				
All conifers	384	1,302	15	1,686
Sitka spruce	216	681	27	898
Other conifers	168	620	24	788
All broadleaves	41	4,609	15	4,650
Oak	5	1,946	23	1,951
Beech	5	593	57	598
Ash	1	594	26	594
Willow	0	408	25	408
Other broadleaves	31	1,033	15	1,064
All species	426	5,913	12	6,339

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Table 6 Standing volume by age class at 31 March 2012

Age class	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers				
0-40 years	188	393	30	581
41+ years	196	909	25	1,105
Total	384	1,302	15	1,686
All broadleaves				
0-20 years	0	235	21	236
21-40 years	7	748	13	755
41-60 years	12	1,221	18	1,232
61-80 years	7	651	23	659
81+ years	15	1,753	28	1,768
Total	41	4,609	15	4,650
All species				
0-20 years	14	278	19	291
21-40 years	182	1,106	16	1,288
41-60 years	183	1,955	16	2,138
61-80 years	22	747	23	768
81+ years	26	1,828	27	1,854
Total	426	5,913	12	6,339

Table 7 Standing volume by mean stand dbh class at 31 March 2012

Mean stand DBH	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
0-20 cm	112	127	29	239
20-40 cm	162	906	20	1,068
40+ cm	110	268	38	379
Total	384	1,302	15	1,686
All broadleaves				
0-10 cm	0	156	15	156
10-15 cm	10	421	16	431
15-20 cm	11	392	21	402
20-30 cm	6	775	20	781
30-40 cm	8	660	23	667
40-60 cm	4	924	21	929
60+ cm	0	1,280	37	1,280
Total	41	4,609	15	4,650
All species				
0-10 cm	0	171	14	171
10-15 cm	40	501	15	542
15-20 cm	90	426	19	516
20-30 cm	91	992	17	1,083
30-40 cm	85	1,368	17	1,453
40-60 cm	104	1,100	18	1,204
60+ cm	4	1,356	35	1,359
Total	426	5,913	12	6,339

Biomass and carbon stocks at 31 March 2012

Table 8 Standing biomass by selected tree species at 31 March 2012

Selected species	FC	Private sector		Total
	biomass (000 odt)	biomass (000 odt)	SE%	biomass (000 odt)
North Devon Biosphere Reserve				
All conifers	256	755	14	1,011
Sitka spruce	146	385	26	531
Other conifers	110	370	23	481
All broadleaves	40	4,091	14	4,131
Oak	5	1,663	22	1,668
Beech	5	508	53	512
Ash	0	506	25	507
Willow	0	443	24	443
Other broadleaves	30	937	14	966
All species	296	4,849	12	5,145

Table 9 Total carbon stocks in selected tree species at 31 March 2012

Selected species	FC	Private sector		Total
	carbon (000 t)	carbon (000 t)	SE%	carbon (000 t)
North Devon Biosphere Reserve				
All conifers	128	378	14	506
Sitka spruce	73	192	26	265
Other conifers	55	185	23	240
All broadleaves	20	2,046	14	2,065
Oak	2	832	22	834
Beech	2	254	53	256
Ash	0	253	25	253
Willow	0	221	24	221
Other broadleaves	15	468	14	483
All species	148	2,425	12	2,573

NFI national reports and papers

The principal themes reported on for the 2011 woodland profile and future forecasts are:

- GB 2011 preliminary estimates of broadleaved species
- GB 2011 standing coniferous timber volume
- UK 25-year forecast of softwood availability
- GB 25-year forecast of coniferous standing volume and increment
- Biomass in live woodland trees in Britain
- Carbon in live woodland trees in Britain

The principal themes reported on for the 2012 woodland profile and future forecasts are:

- 50-year forecast of softwood timber availability
- 50-year forecast of hardwood timber availability

Each theme has a series of reports, papers and data, tailored for different audiences and uses. All the documents and data can be found on the NFI website www.forestry.gov.uk/inventory.

Glossary

A glossary of terms is presented in the full suite of forecast reports which can be found at www.forestry.gov.uk/forecast.

Official Statistics

This is an Official Statistics publication. More information about Official Statistics and the UK Statistics Authority is available at www.statisticsauthority.gov.uk

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