

NFI 25-year projection of timber availability in Ayrshire and Arran

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Summary

This report provides a detailed picture of the 25-year forecast of timber availability in Ayrshire and Arran. Although presented for different periods, these estimates are effectively a subset of those published as part of the 50-year forecast estimates presented in the National Forest Inventory (NFI) *50-year forecasts of softwood timber availability (2014)* and *50-year forecast of hardwood timber availability (2014)* reports. 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 *NFI forecasts methodology overview* report for a detailed description and discussion of forecasting future availability of timber from NFI field survey data and from information in the Forestry Commission's sub-compartment database (SCDB).

The methodology and interpretation underlying the forecast in this report are discussed in the NFI reports *50-year forecast of softwood timber availability (2014)* and the *50-year forecast of hardwood timber availability (2014)*. These reports can also be referred to for the wider Scotland and Great Britain context.

The estimates reported here 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. These field samples constitute approximately two thirds of the sites to be sampled within the first cycle of NFI field sampling. As a consequence, the estimates in this report are described as provisional.

25-year forecast of timber availability

Refer to the NFI report *50-year forecast of softwood timber availability (2014)* for a description of the underlying methodology and interpretation of the softwood forecast, and also for the Scotland and GB context.

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The timber availability estimates for the Forestry Commission are derived using the harvesting regimes described in the Forestry Commission approved forest design plans and thinning plans as of 31 March 2012.

The softwood timber availability estimates for the Private sector are based on a scenario which assumes conifers are felled at age of maximum mean annual increment with moderate wind risk measures being taken. The hardwood timber availability estimates are derived only from those areas where there is evidence of thinning in broadleaves. This is a conservative assumption but more closely reflects current practice than assuming all broadleaved stands will be managed. Those broadleaved stands that are assumed to be subject to future management under this scenario are felled at age of maximum mean annual increment with moderate wind risk measures being taken.

Where standing conifers are already beyond the age of maximum mean annual increment, the forecast assumes that a proportion will be felled during the forecast period. The assumptions can be found in full in **Table D2** of the NFI report *50-year forecast of softwood timber availability (2014)*. Where standing broadleaves are already beyond the age of maximum mean annual increment, the forecast assumes that a proportion will be felled during the forecast period. The assumptions can be found in full in the section 'Overdue timber' starting on **Page 20** of the NFI report *50-year forecast of hardwood timber availability (2014)*.

Restocking assumptions for conifer stands clearfelled during the forecast period have been implemented that provide for:

- a 10% reduction in the area of conifers on the subsequent rotation
- currently clearfelled land is restocked
- a change in the composition of conifer species on for restocking

Restocking assumptions for broadleaved stands clearfelled during the forecast period have been included that provide for:

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- No reduction in stocked area
- Like for like species choices
- That 50% of the land associated with the reduction in conifer stocked area after felling of conifers

A full description of the restocking assumptions can be found in **Table D4** of the NFI report *50-year forecast of softwood timber availability (2014)*. The same restocking assumptions have been applied to both the FC and Private sector forecasts. Woodland that is classed as currently clearfelled will be restocked according to the restock prescription.

It should be noted that a small amount of thinning volume arising from restocking is included in the timber availability estimates for later periods of the forecast.

Results

The results presented in this report are estimates of the 25-year forecast of softwood and hardwood availability under the harvesting scenario as described, for Ayrshire and Arran.

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

Results for Ayrshire and Arran

Map 1 Ayrshire and Arran



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Table 1 Summary of stocked area 31 March 2012 – Ayrshire and Arran

	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers	29.9	20.3	5	50.2
All broadleaves	1.4	14.5	7	15.9
All species	31.3	34.8	3	66.1

Tables A1 and A2 showing the 25-year forecast broken down by time period, top diameter class and principal species groups can be found in the associated spreadsheet.

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Figure 1 Summary of 25-year forecast of annual softwood timber availability – Ayrshire and Arran

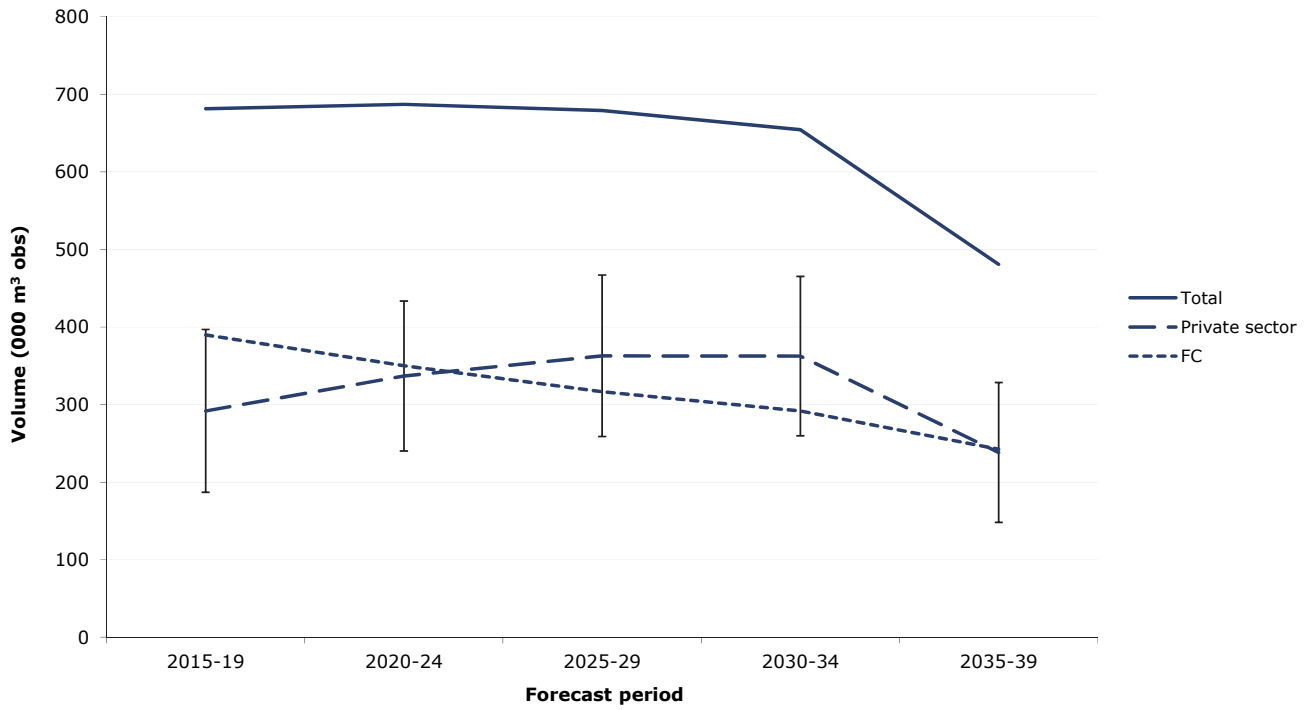


Table 2 Summary of 25-year forecast of average annual timber availability – Ayrshire and Arran

Forecast period	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
Softwood				
2015-19	390	292	36	681
2020-24	350	337	29	687
2025-29	316	363	29	679
2030-34	292	363	28	654
2035-39	242	238	38	481
Hardwood				
2015-19	0	4	38	4
2020-24	0	8	22	8
2025-29	1	10	22	10
2030-34	0	10	22	11
2035-39	0	11	22	11
Total				
2015-19	390	296	35	685
2020-24	350	345	28	695
2025-29	317	372	28	689
2030-34	292	373	28	665
2035-39	243	249	36	492

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Figure 2 Cumulative softwood timber availability over the 25-year forecast – Ayrshire and Arran

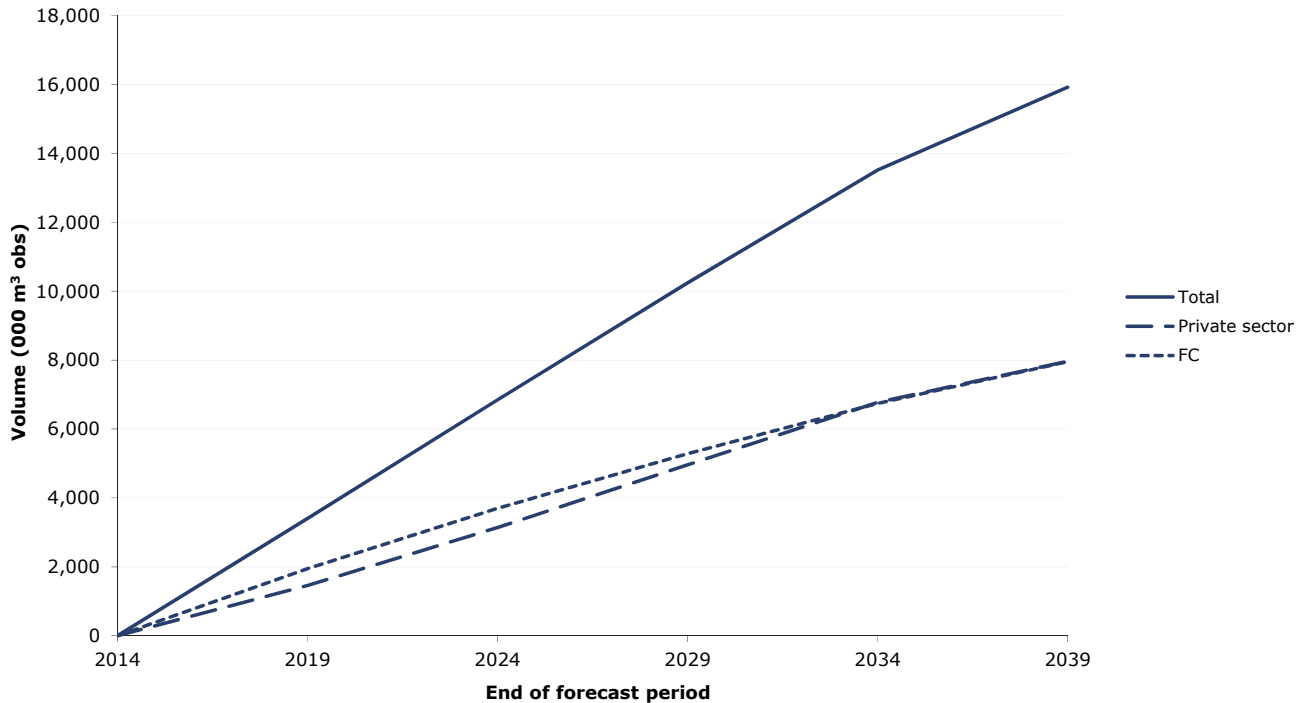


Table 3 Cumulative timber availability over the 25-year forecast – Ayrshire and Arran

Forecast period	FC	Private sector	Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	volume (000 m ³ obs)
Softwood			
2015-19	1,948	1,459	3,407
2015-24	3,698	3,144	6,842
2015-29	5,280	4,958	10,238
2015-34	6,740	6,771	13,511
2015-39	7,952	7,962	15,914
Hardwood			
2015-19	0	19	19
2015-24	0	59	59
2015-29	3	107	110
2015-34	5	158	163
2015-39	6	212	218
Total			
2015-19	1,948	1,478	3,426
2015-24	3,698	3,204	6,902
2015-29	5,284	5,065	10,349
2015-34	6,745	6,929	13,674
2015-39	7,958	8,175	16,133

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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