

# NFI 25-year projection of timber availability in the Dumfries and Galloway Council Area

**Issued by:** National Forest Inventory, Forestry Commission,  
231 Corstorphine Road, Edinburgh, EH12 7AT

**Date:** December 2014

**Enquiries:** Ben Ditchburn, 0300 067 5064  
NFI@forestry.gsi.gov.uk

**Statistician:** Alan Brewer,  
alan.brewer@forestry.gsi.gov.uk

**Website:** [www.forestry.gov.uk/inventory](http://www.forestry.gov.uk/inventory)  
[www.forestry.gov.uk/forecast](http://www.forestry.gov.uk/forecast)

## Summary

This report provides a detailed picture of the 25-year forecast of timber availability for the Dumfries and Galloway Council Area. 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](http://www.forestry.gov.uk/inventory).

The estimates provided in this report are provisional in nature.

## Contents

Approach .....	5
25-year forecast of timber availability .....	6
Results .....	7
Results for the Dumfries and Galloway Council Area .....	8
Results for Dumfriesshire .....	11
Results for Galloway .....	14
NFI national reports and papers .....	17
Glossary .....	17

## Maps

<b>Map 1</b> Dumfries and Galloway .....	8
<b>Map 2</b> Dumfriesshire .....	11
<b>Map 3</b> Galloway .....	14

## Figures

<b>Figure 1</b> Summary of 25-year forecast of annual softwood timber availability – Dumfries and Galloway .....	9
<b>Figure 2</b> Cumulative softwood timber availability over the 25-year forecast – Dumfries and Galloway .....	10
<b>Figure 3</b> Summary of 25-year forecast of annual softwood timber availability – Dumfriesshire .....	12
<b>Figure 4</b> Cumulative softwood timber availability over the 25-year forecast – Dumfriesshire .....	13
<b>Figure 5</b> Summary of 25-year forecast of annual softwood timber availability – Galloway .....	15
<b>Figure 6</b> Cumulative softwood timber availability over the 25-year forecast – Galloway .....	16

# NFI Provisional Report

---

## Tables

<b>Table 1</b>	Summary of stocked area 31 March 2012 – Dumfries and Galloway .....	8
<b>Table 2</b>	Summary of 25-year forecast of average annual timber availability – Dumfries and Galloway .....	9
<b>Table 3</b>	Cumulative timber availability over the 25-year forecast – Dumfries and Galloway .....	10
<b>Table 4</b>	Summary of stocked area 31 March 2012 – Dumfriesshire .....	11
<b>Table 5</b>	Summary of 25-year forecast of average annual timber availability – Dumfriesshire .....	12
<b>Table 6</b>	Cumulative timber availability over the 25-year forecast – Dumfriesshire .....	13
<b>Table 7</b>	Summary of stocked area 31 March 2012 – Galloway .....	14
<b>Table 8</b>	Summary of 25-year forecast of average annual timber availability – Galloway .....	15
<b>Table 9</b>	Cumulative timber availability over the 25-year forecast – Galloway .....	16

## 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](http://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.

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

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 restocking

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

# NFI Provisional Report

---

- 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 the Dumfries and Galloway Council 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 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 the Dumfries and Galloway Council Area

**Map 1** Dumfries and Galloway



© Crown copyright and database right (2014). All rights reserved. Ordnance Survey Licence number [100021242]

**Table 1** Summary of stocked area 31 March 2012 – Dumfries and Galloway

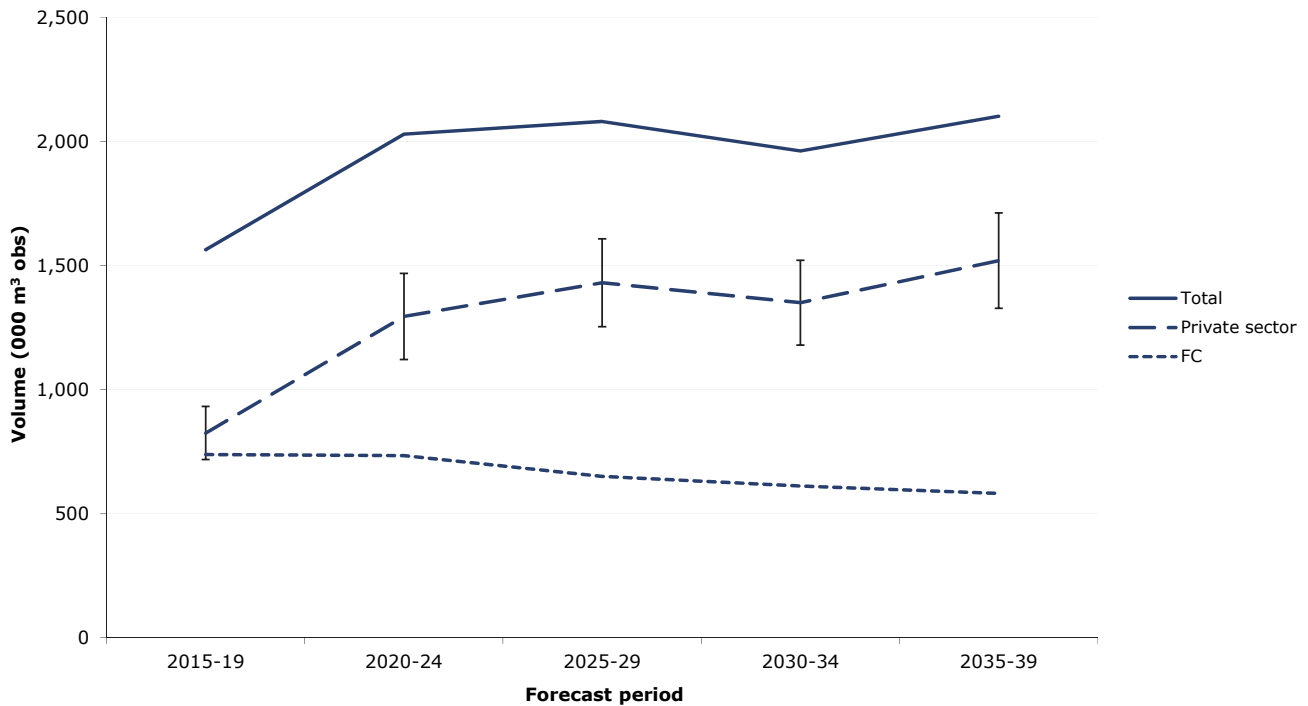
	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers	59.1	65.1	2	<b>124.2</b>
All broadleaves	4.0	25.2	7	<b>29.2</b>
All species	63.0	90.3	2	<b>153.4</b>

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.



# NFI Provisional Report

**Figure 1** Summary of 25-year forecast of annual softwood timber availability – Dumfries and Galloway

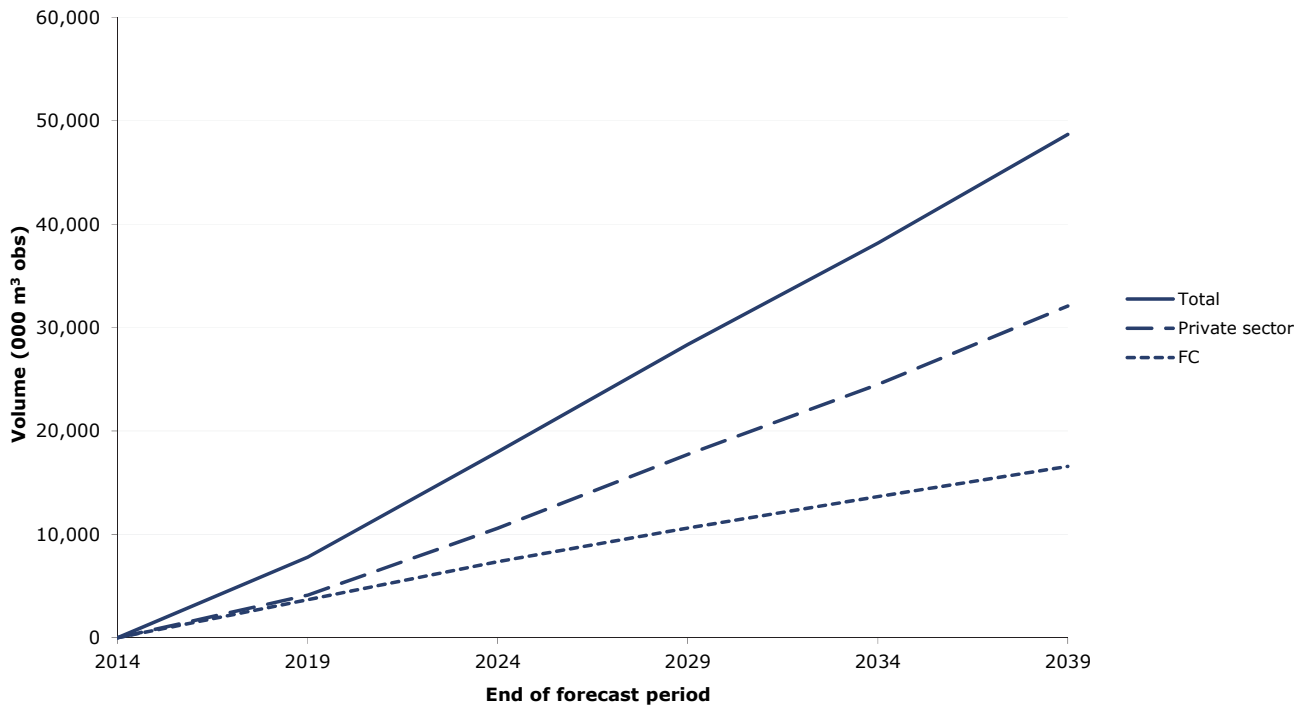


**Table 2** Summary of 25-year forecast of average annual timber availability – Dumfries and Galloway

Forecast period	FC	Private sector		Total
	volume (000 m <sup>3</sup> obs)	volume (000 m <sup>3</sup> obs)	SE%	volume (000 m <sup>3</sup> obs)
<b>Softwood</b>				
2015-19	739	825	13	<b>1,564</b>
2020-24	734	1,295	13	<b>2,029</b>
2025-29	650	1,430	12	<b>2,080</b>
2030-34	611	1,350	13	<b>1,961</b>
2035-39	582	1,519	13	<b>2,101</b>
<b>Hardwood</b>				
2015-19	1	22	18	<b>24</b>
2020-24	1	30	15	<b>31</b>
2025-29	1	35	14	<b>36</b>
2030-34	1	34	14	<b>35</b>
2035-39	2	55	30	<b>57</b>
<b>Total</b>				
2015-19	740	848	13	<b>1,588</b>
2020-24	736	1,328	13	<b>2,063</b>
2025-29	651	1,470	12	<b>2,121</b>
2030-34	613	1,355	12	<b>1,967</b>
2035-39	584	1,581	12	<b>2,165</b>

# NFI Provisional Report

**Figure 2** Cumulative softwood timber availability over the 25-year forecast – Dumfries and Galloway

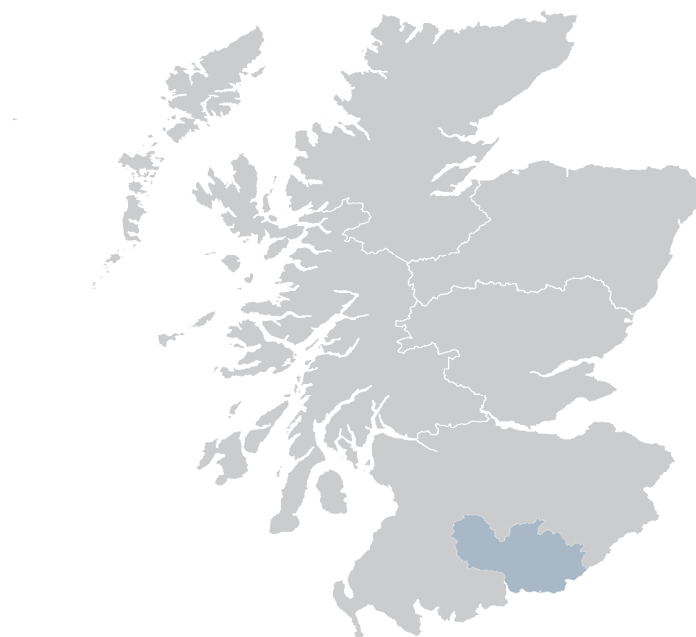


**Table 3** Cumulative timber availability over the 25-year forecast – Dumfries and Galloway

Forecast period	FC	Private sector	Total
	volume (000 m <sup>3</sup> obs)	volume (000 m <sup>3</sup> obs)	volume (000 m <sup>3</sup> obs)
<b>Softwood</b>			
2015-19	3,693	4,125	<b>7,818</b>
2015-24	7,364	10,598	<b>17,962</b>
2015-29	10,613	17,749	<b>28,362</b>
2015-34	13,670	24,500	<b>38,170</b>
2015-39	16,578	32,097	<b>48,675</b>
<b>Hardwood</b>			
2015-19	5	112	<b>118</b>
2015-24	12	263	<b>275</b>
2015-29	17	439	<b>456</b>
2015-34	24	608	<b>632</b>
2015-39	34	882	<b>915</b>
<b>Total</b>			
2015-19	3,698	4,242	<b>7,940</b>
2015-24	7,376	10,880	<b>18,257</b>
2015-29	10,630	18,230	<b>28,860</b>
2015-34	13,694	25,003	<b>38,697</b>
2015-39	16,612	32,909	<b>49,521</b>

## Results for Dumfriesshire

### Map 2 Dumfriesshire



© Crown copyright and database right (2014). All rights reserved. Ordnance Survey Licence number [100021242]

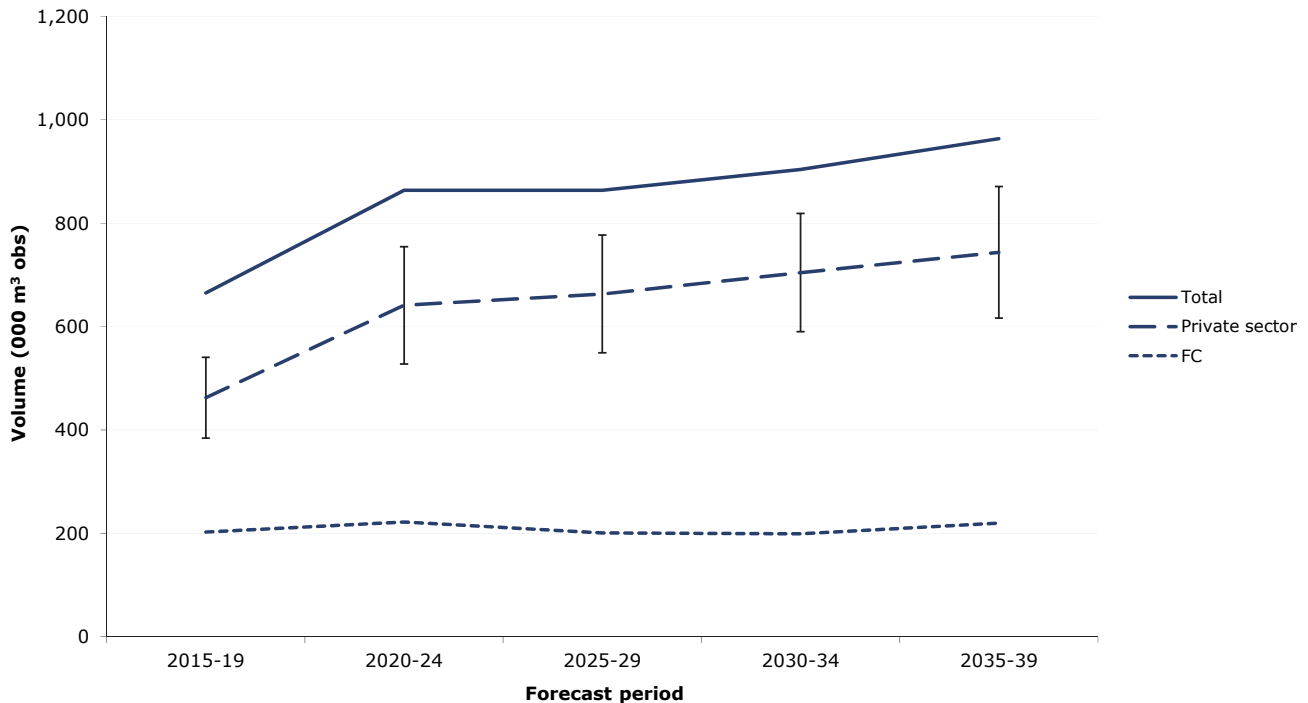
**Table 4** Summary of stocked area 31 March 2012 – Dumfriesshire

	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers	17.5	34.4	3	<b>51.9</b>
All broadleaves	0.8	10.8	8	<b>11.6</b>
All species	18.3	45.2	2	<b>63.5</b>

Tables A3 and A4 showing the 25-year forecast broken down by time period, top diameter class and principal species groups can be found in the associated spreadsheet.

# NFI Provisional Report

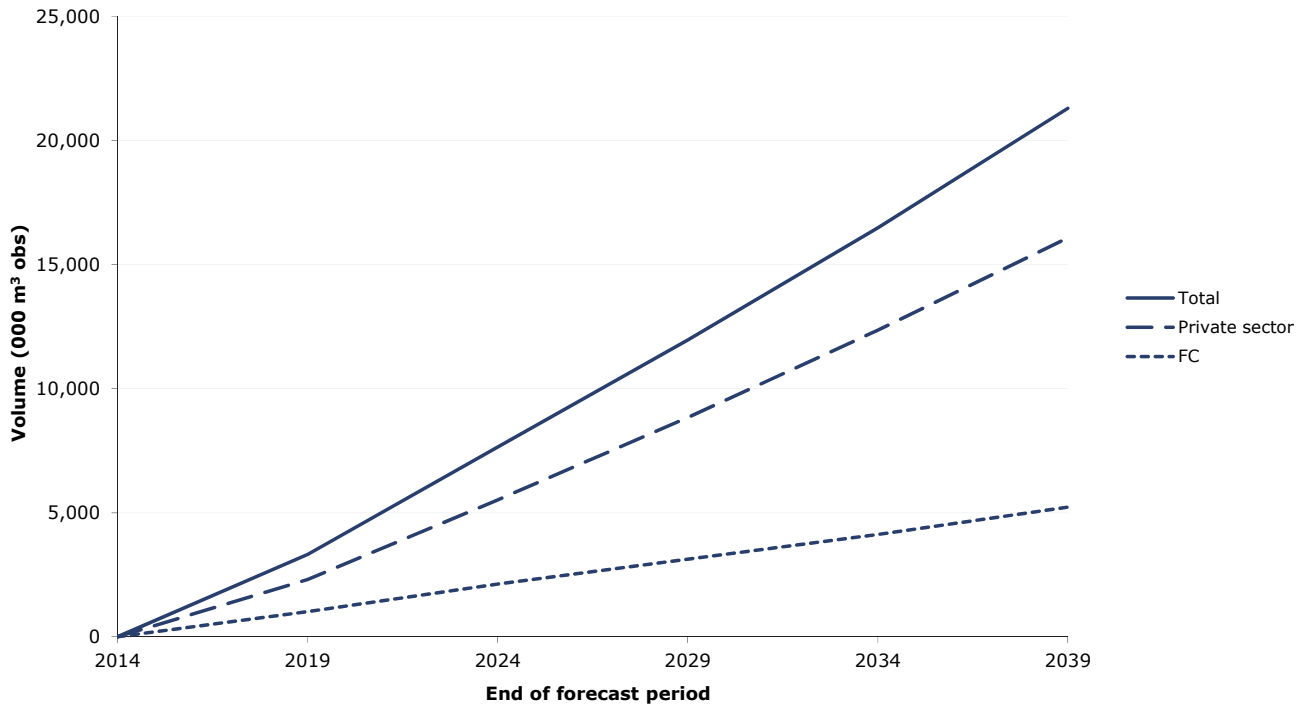
**Figure 3** Summary of 25-year forecast of annual softwood timber availability – Dumfriesshire



**Table 5** Summary of 25-year forecast of average annual timber availability – Dumfriesshire

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
<b>Softwood</b>				
2015-19	203	463	17	<b>665</b>
2020-24	222	641	18	<b>863</b>
2025-29	201	663	17	<b>864</b>
2030-34	199	704	16	<b>904</b>
2035-39	220	744	17	<b>963</b>
<b>Hardwood</b>				
2015-19	0	13	19	<b>13</b>
2020-24	0	21	16	<b>21</b>
2025-29	0	23	14	<b>23</b>
2030-34	0	20	14	<b>20</b>
2035-39	0	36	39	<b>36</b>
<b>Total</b>				
2015-19	203	476	16	<b>678</b>
2020-24	222	663	17	<b>885</b>
2025-29	201	686	17	<b>887</b>
2030-34	199	724	16	<b>923</b>
2035-39	220	780	16	<b>1,000</b>

**Figure 4** Cumulative softwood timber availability over the 25-year forecast – Dumfriesshire



**Table 6** Cumulative timber availability over the 25-year forecast – Dumfriesshire

Forecast period	FC	Private sector	Total
	volume (000 m <sup>3</sup> obs)	volume (000 m <sup>3</sup> obs)	volume (000 m <sup>3</sup> obs)
<b>Softwood</b>			
2015-19	1,013	2,313	<b>3,325</b>
2015-24	2,124	5,519	<b>7,642</b>
2015-29	3,128	8,834	<b>11,961</b>
2015-34	4,124	12,356	<b>16,480</b>
2015-39	5,223	16,075	<b>21,298</b>
<b>Hardwood</b>			
2015-19	0	65	<b>65</b>
2015-24	1	171	<b>172</b>
2015-29	2	285	<b>287</b>
2015-34	2	383	<b>385</b>
2015-39	4	563	<b>567</b>
<b>Total</b>			
2015-19	1,013	2,378	<b>3,391</b>
2015-24	2,125	5,690	<b>7,815</b>
2015-29	3,129	9,120	<b>12,249</b>
2015-34	4,126	12,740	<b>16,866</b>
2015-39	5,227	16,639	<b>21,866</b>

## Results for Galloway

### Map 3 Galloway



© Crown copyright and database right [2014]. All rights reserved. Ordnance Survey Licence number [100021242]

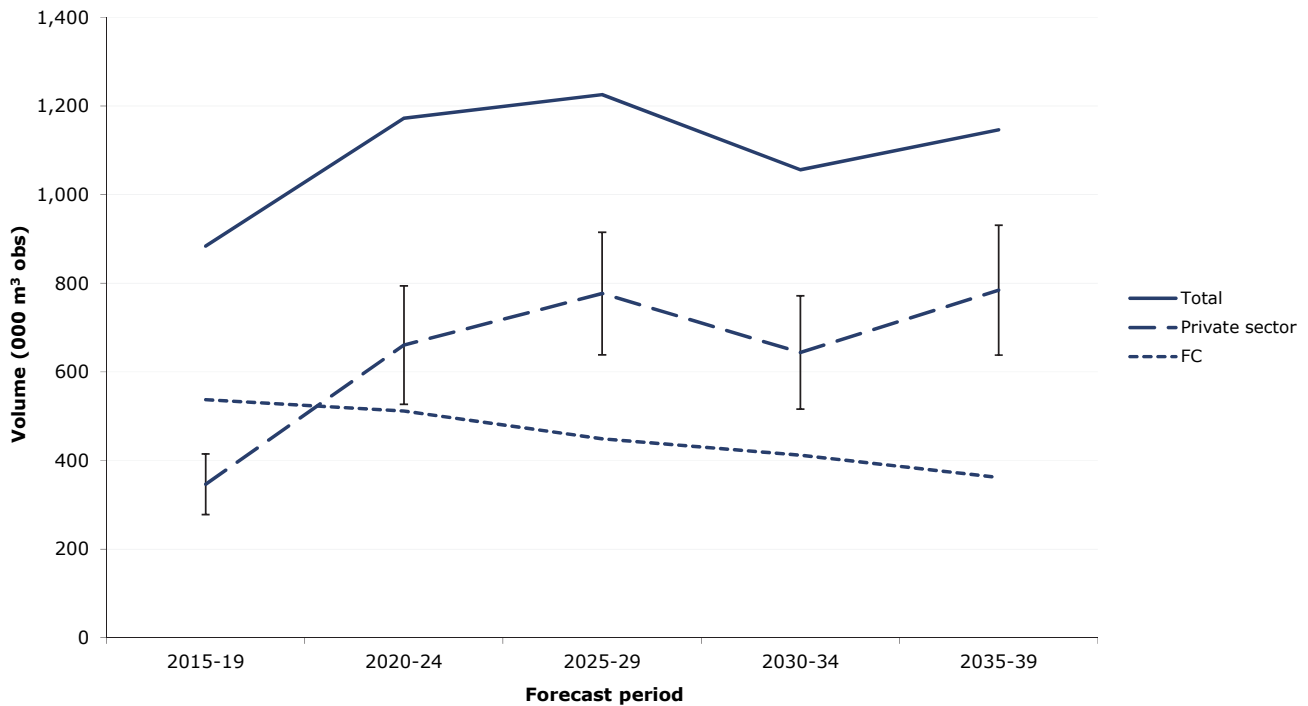
**Table 7** Summary of stocked area 31 March 2012 – Galloway

	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers	41.6	30.7	4	<b>72.3</b>
All broadleaves	3.1	13.9	12	<b>17.0</b>
All species	44.7	44.6	4	<b>89.3</b>

Tables A5 and A6 showing the 25-year forecast broken down by time period, top diameter class and principal species groups can be found in the associated spreadsheet.

# NFI Provisional Report

**Figure 5** Summary of 25-year forecast of annual softwood timber availability – Galloway

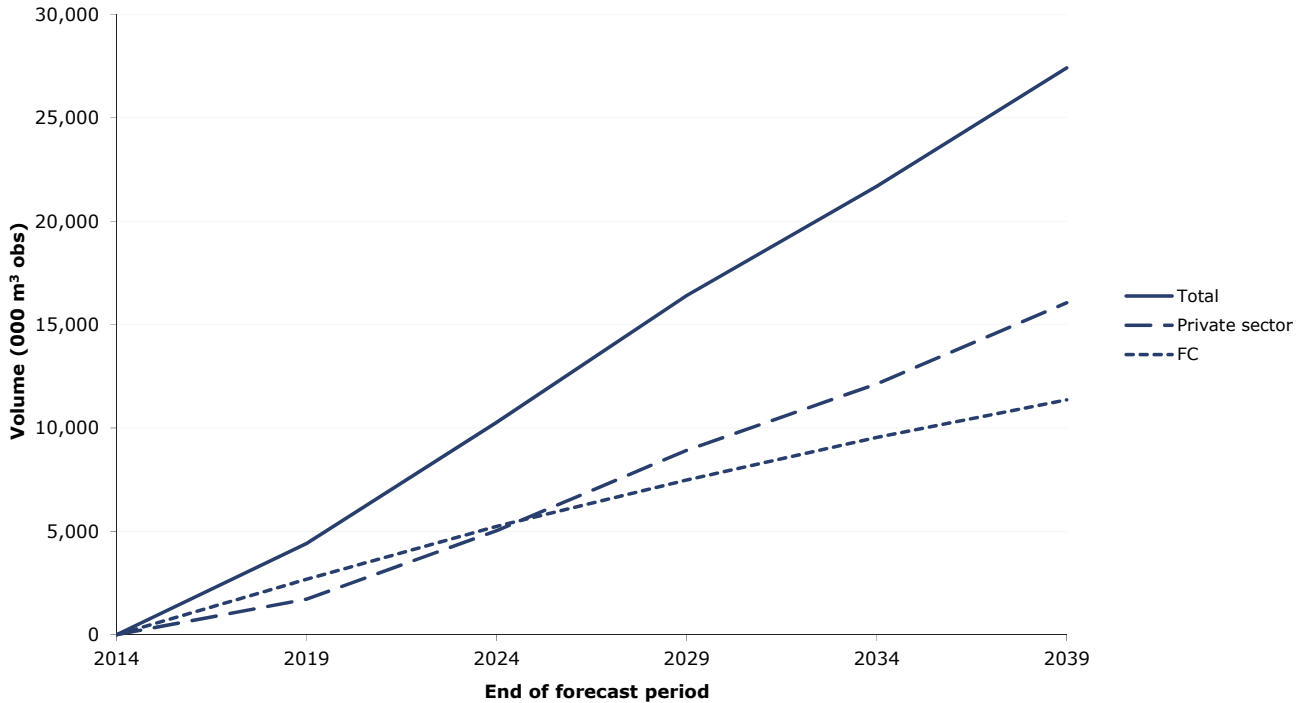


**Table 8** Summary of 25-year forecast of average annual timber availability – Galloway

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
<b>Softwood</b>				
2015-19	537	346	20	<b>884</b>
2020-24	511	661	20	<b>1,172</b>
2025-29	449	777	18	<b>1,226</b>
2030-34	412	644	20	<b>1,056</b>
2035-39	362	784	19	<b>1,146</b>
<b>Hardwood</b>				
2015-19	1	9	36	<b>10</b>
2020-24	1	9	29	<b>10</b>
2025-29	1	12	30	<b>13</b>
2030-34	1	14	30	<b>15</b>
2035-39	2	16	28	<b>17</b>
<b>Total</b>				
2015-19	538	356	19	<b>894</b>
2020-24	512	673	20	<b>1,186</b>
2025-29	450	795	18	<b>1,244</b>
2030-34	413	623	20	<b>1,036</b>
2035-39	363	807	18	<b>1,171</b>

# NFI Provisional Report

**Figure 6** Cumulative softwood timber availability over the 25-year forecast – Galloway



**Table 9** Cumulative timber availability over the 25-year forecast – Galloway

Forecast period	FC	Private sector	Total
	volume (000 m <sup>3</sup> obs)	volume (000 m <sup>3</sup> obs)	volume (000 m <sup>3</sup> obs)
<b>Softwood</b>			
2015-19	2,686	1,732	<b>4,418</b>
2015-24	5,243	5,035	<b>10,278</b>
2015-29	7,488	8,918	<b>16,406</b>
2015-34	9,549	12,136	<b>21,685</b>
2015-39	11,358	16,057	<b>27,415</b>
<b>Hardwood</b>			
2015-19	5	47	<b>52</b>
2015-24	9	94	<b>103</b>
2015-29	14	155	<b>169</b>
2015-34	20	225	<b>245</b>
2015-39	28	303	<b>331</b>
<b>Total</b>			
2015-19	2,691	1,780	<b>4,471</b>
2015-24	5,253	5,148	<b>10,400</b>
2015-29	7,502	9,121	<b>16,623</b>
2015-34	9,569	12,235	<b>21,804</b>
2015-39	11,386	16,272	<b>27,658</b>



## 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](http://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](http://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](http://www.statisticsauthority.gov.uk)

National Forest Inventory Statistician: Alan Brewer