

# NFI 25-year projection of timber availability in the Angus, and Perth and Kinross Council Areas

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## Summary

This report provides a detailed picture of the 25-year forecast of timber availability for the Angus, and Perth and Kinross Council Areas. 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.

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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](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.

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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 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 the Angus, and the Perth and Kinross Council Areas.

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 Angus, and Perth and Kinross Council Areas

**Map 1** Angus, Perth and Kinross



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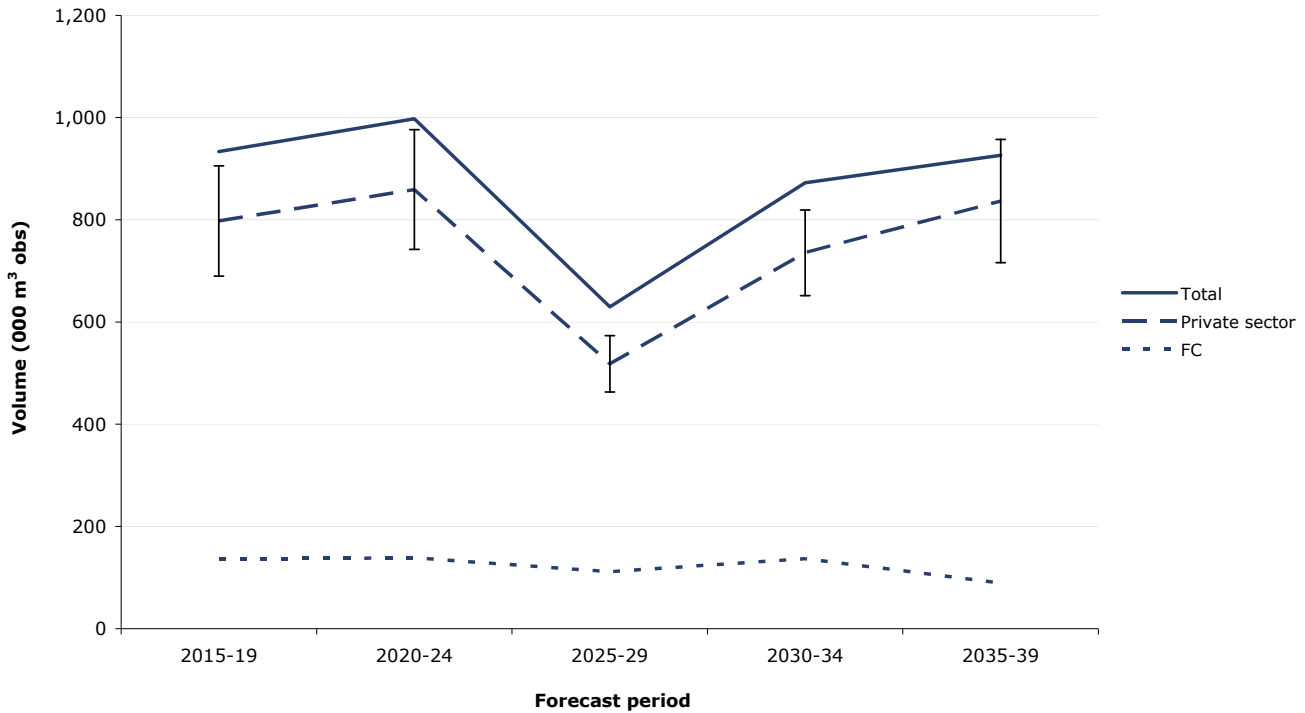
**Table 1** Summary of stocked area 31 March 2012 – Angus, Perth and Kinross

|                 | FC               | Private sector   |     | Total            |
|-----------------|------------------|------------------|-----|------------------|
|                 | area<br>(000 ha) | area<br>(000 ha) | SE% | area<br>(000 ha) |
| All conifers    | 23.8             | 44.9             | 3   | <b>68.7</b>      |
| All broadleaves | 1.8              | 28.9             | 4   | <b>30.7</b>      |
| All species     | 25.6             | 74.0             | 2   | <b>99.5</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.

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**Figure 1** Summary of 25-year forecast of annual softwood timber availability – Angus, Perth and Kinross



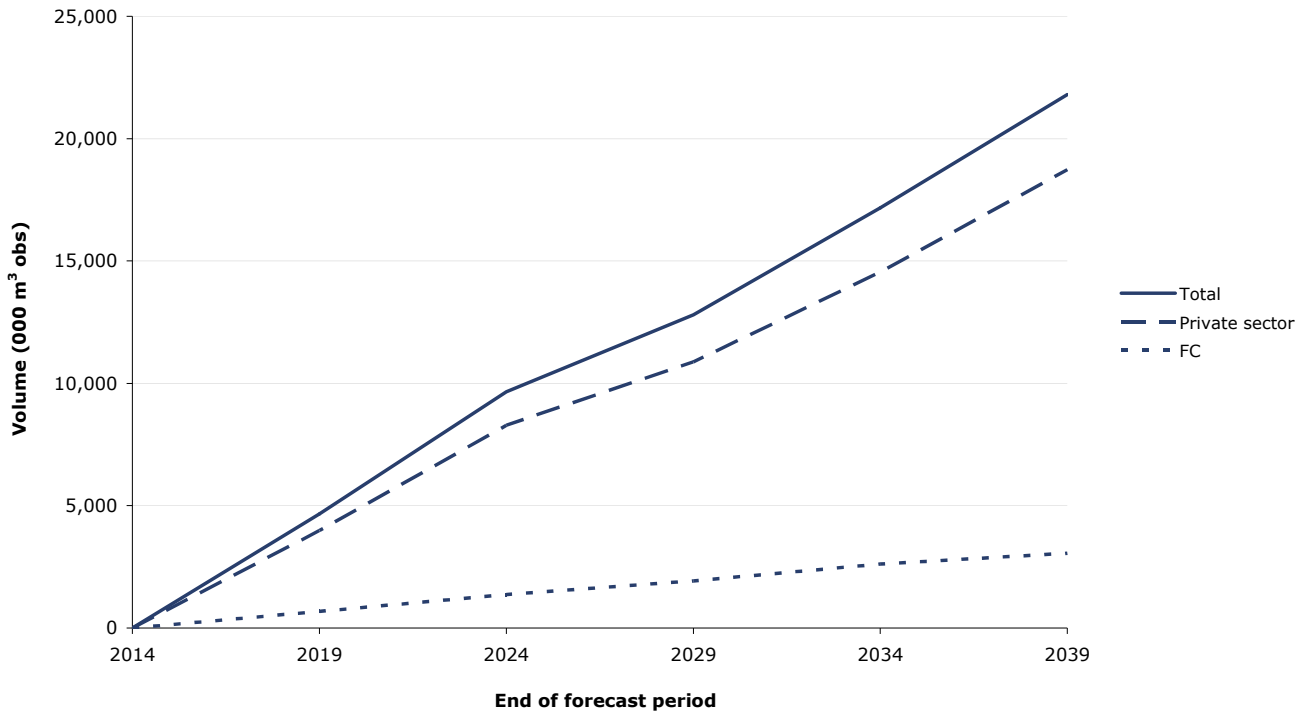
**Table 2** Summary of 25-year forecast of average annual timber availability – Angus, Perth and Kinross

| Forecast period | FC                                 | Private sector                     |     | Total                              |
|-----------------|------------------------------------|------------------------------------|-----|------------------------------------|
|                 | volume<br>(000 m <sup>3</sup> obs) | volume<br>(000 m <sup>3</sup> obs) | SE% | volume<br>(000 m <sup>3</sup> obs) |
| <b>Softwood</b> |                                    |                                    |     |                                    |
| 2015-19         | 136                                | 798                                | 14  | <b>934</b>                         |
| 2020-24         | 139                                | 859                                | 14  | <b>998</b>                         |
| 2025-29         | 112                                | 518                                | 11  | <b>630</b>                         |
| 2030-34         | 137                                | 735                                | 11  | <b>872</b>                         |
| 2035-39         | 90                                 | 837                                | 14  | <b>926</b>                         |
| <b>Hardwood</b> |                                    |                                    |     |                                    |
| 2015-19         | 0                                  | 41                                 | 19  | <b>41</b>                          |
| 2020-24         | 1                                  | 37                                 | 14  | <b>37</b>                          |
| 2025-29         | 2                                  | 32                                 | 16  | <b>34</b>                          |
| 2030-34         | 1                                  | 31                                 | 11  | <b>32</b>                          |
| 2035-39         | 1                                  | 39                                 | 12  | <b>39</b>                          |
| <b>Total</b>    |                                    |                                    |     |                                    |
| 2015-19         | 136                                | 839                                | 13  | <b>975</b>                         |
| 2020-24         | 139                                | 896                                | 13  | <b>1,035</b>                       |
| 2025-29         | 113                                | 551                                | 10  | <b>664</b>                         |
| 2030-34         | 138                                | 766                                | 11  | <b>905</b>                         |
| 2035-39         | 90                                 | 876                                | 14  | <b>966</b>                         |



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**Figure 2** Cumulative softwood timber availability over the 25-year forecast – Angus, Perth and Kinross



**Table 3** Cumulative timber availability over the 25-year forecast – Angus, Perth and Kinross

| Forecast period | FC                                 | Private sector                     | Total                              |
|-----------------|------------------------------------|------------------------------------|------------------------------------|
|                 | volume<br>(000 m <sup>3</sup> obs) | volume<br>(000 m <sup>3</sup> obs) | volume<br>(000 m <sup>3</sup> obs) |
| <b>Softwood</b> |                                    |                                    |                                    |
| 2015-19         | 679                                | 3,989                              | <b>4,668</b>                       |
| 2015-24         | 1,372                              | 8,284                              | <b>9,656</b>                       |
| 2015-29         | 1,930                              | 10,875                             | <b>12,805</b>                      |
| 2015-34         | 2,615                              | 14,552                             | <b>17,167</b>                      |
| 2015-39         | 3,063                              | 18,734                             | <b>21,797</b>                      |
| <b>Hardwood</b> |                                    |                                    |                                    |
| 2015-19         | 1                                  | 203                                | <b>204</b>                         |
| 2015-24         | 4                                  | 387                                | <b>391</b>                         |
| 2015-29         | 12                                 | 549                                | <b>561</b>                         |
| 2015-34         | 18                                 | 702                                | <b>720</b>                         |
| 2015-39         | 21                                 | 895                                | <b>916</b>                         |
| <b>Total</b>    |                                    |                                    |                                    |
| 2015-19         | 680                                | 4,193                              | <b>4,873</b>                       |
| 2015-24         | 1,376                              | 8,673                              | <b>10,049</b>                      |
| 2015-29         | 1,942                              | 11,428                             | <b>13,369</b>                      |
| 2015-34         | 2,633                              | 15,260                             | <b>17,893</b>                      |
| 2015-39         | 3,084                              | 19,638                             | <b>22,722</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)

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