

NFI provisional estimates for woodland in the Dorset Local Enterprise Partnership area

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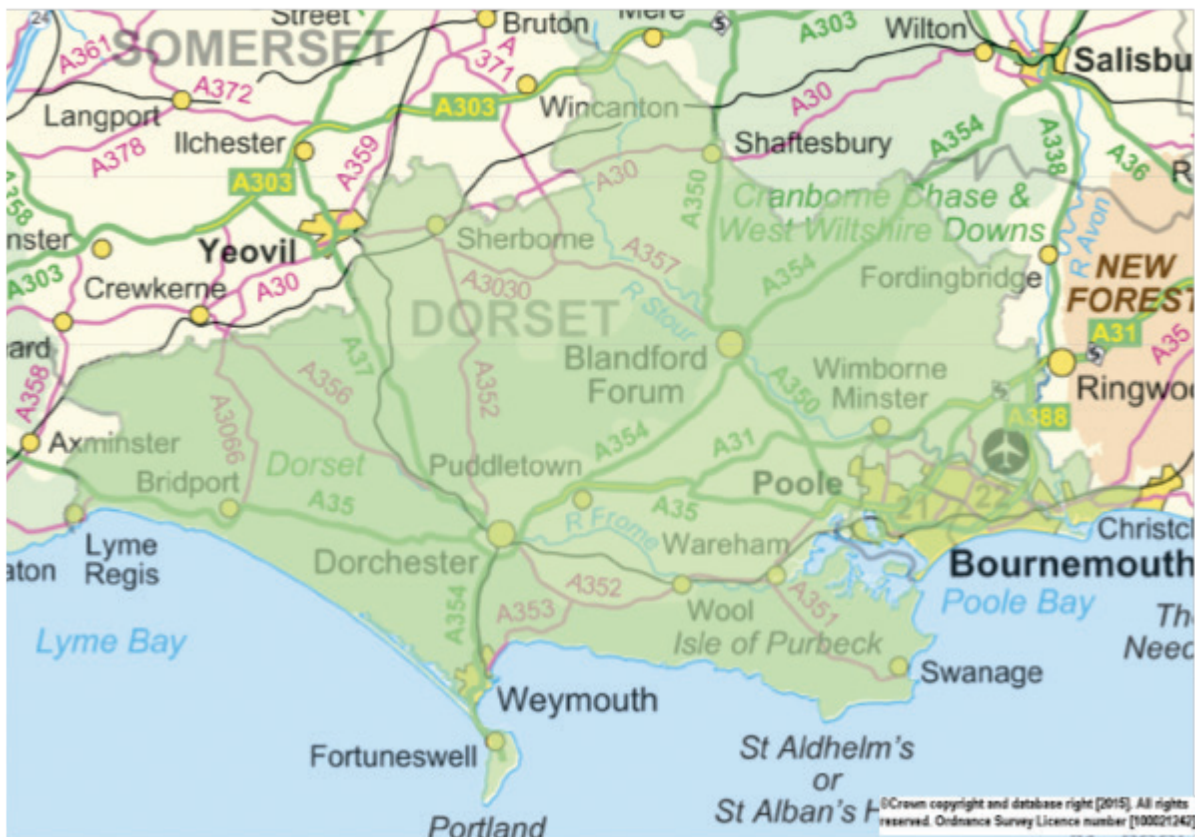
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Summary

This report provides a detailed picture of the stocked area in woodland, the standing volume of timber and the associated live biomass and carbon stocks for woodland in the Dorset Local Enterprise Partnership (LEP) 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 forecast of softwood timber availability (2014)* and *50-year forecast of hardwood timber availability (2014)*. NFI reports are published at www.forestry.gov.uk/inventory.

In addition, the report provides forecasts of timber availability, standing volume and increment for softwoods and hardwoods arising from the stocked area and standing volume. Forecasts are based on the 'headline' harvesting scenario described in the 50-year forecasts NFI reports. An alternative forecast is provided using a harvesting scenario which brings all Private sector broadleaved woodland into production.

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 for coniferous trees in Britain* (2012) and the *NFI preliminary estimates of quantities of broadleaved species in British woodlands with special focus on ash* (2012) reports for a description of the underlying methodologies and interpretation, and also for the England and Great Britain (GB) context. Refer to the *NFI forecasts methodology* (2012) 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 wider context of forecasts of timber production from woodland in GB and its constituent countries under a range of harvesting scenarios can be found in the *50-year forecast of softwood timber availability* (2014) and the *50-year forecast of hardwood timber availability* (2014).

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 classed as provisional.

Results

The results presented in this report are estimates of standing volumes and stocked areas at 31 March 2012, and 50-year forecasts of softwood and hardwood availability under the 'headline' harvesting scenario and also under a scenario assuming all hardwoods are harvested in Private sector woodland in the Dorset LEP area. The data sources used for the compilation of these estimates are the same as described in the NFI reports *Standing timber volume for coniferous trees in Britain* (2012), the *50-year forecast of softwood availability* (2014) and the *50-year forecast of hardwood availability* (2014). Estimates for the Forestry Commission (FC) estate are derived from the FC's SCDB, 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 (SEs) attached to the Private sector estimates, is provided in the earlier documents.

Results are provided for stocked area at 31 March 2012 (**Figures 1–1a** and **Tables 1–3**), felled area (**Table 4**), standing volume at 31 March 2012 (**Figures 2–2a** and **Tables 5–7**), biomass and carbon stocks at 31 March 2012 (**Tables 8–9**), evidence of thinning in Private sector stands from the NFI field survey (**Figure 3**), the 'headline' 50-year forecast (**Figures 4–8** and **Tables 10–12**) and the 'unrestricted' 50-year forecast

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(**Figures 9–13** and **Tables 13–15**). **Figures 14–15** and **Table 16** compare the hardwood production under the two scenarios.

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 NFI sample survey. Sampling SEs attached to Private sector estimates are expressed in relative terms (%) to the right of the relevant estimate. Percentages in the pie charts may also not sum to 100 due to rounding.

Stocked area at 31 March 2012

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

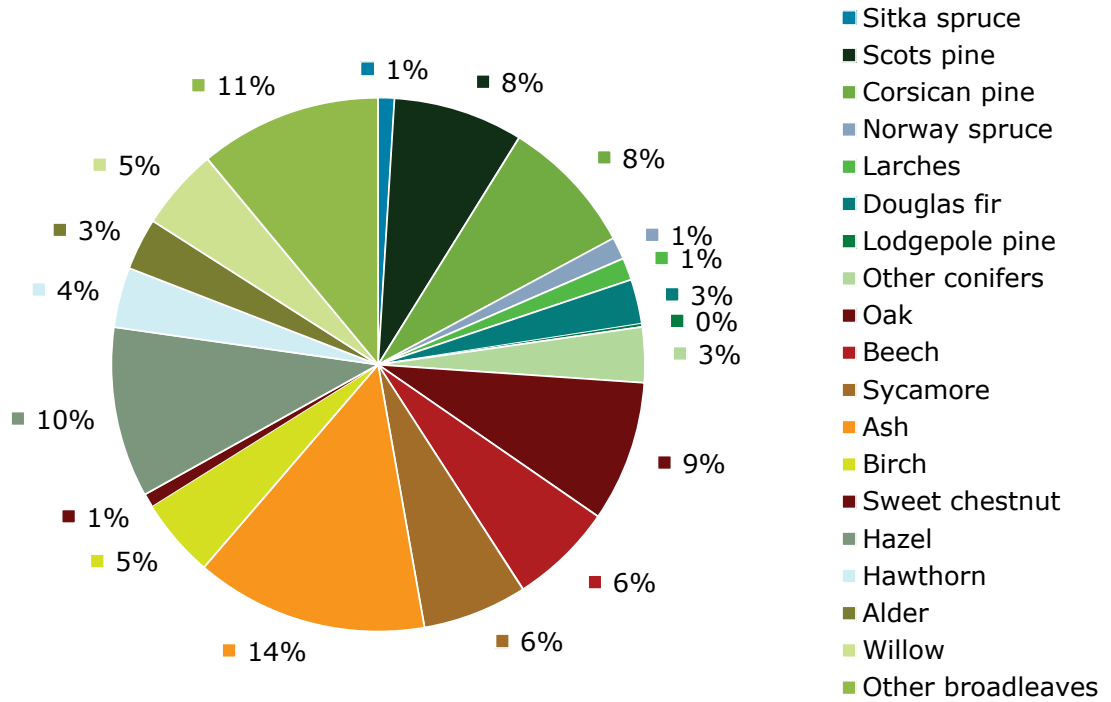
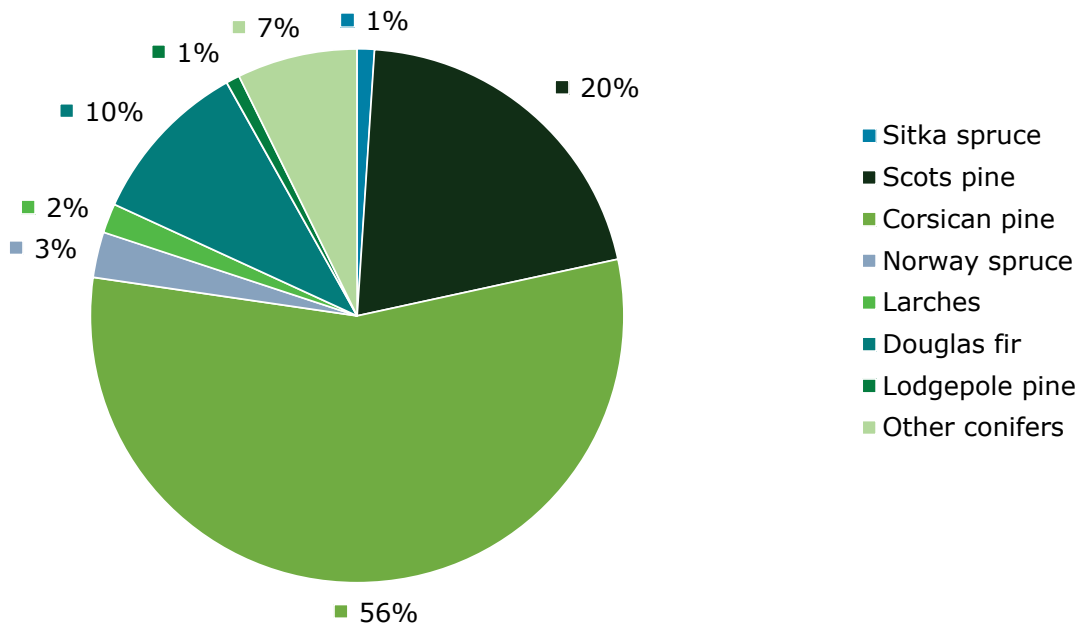


Figure 1a Principal conifer tree species composition by stocked area at 31 March 2012



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

Principal species	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Conifers				
Sitka spruce	0.0	0.3	51	0.3
Scots pine	0.6	1.8	20	2.4
Corsican pine	1.8	0.8	38	2.6
Norway spruce	0.1	0.3	41	0.4
Larches	0.1	0.4	37	0.4
Douglas fir	0.3	0.5	35	0.8
Lodgepole pine	0.0	0.0	90	0.1
Other conifers	0.2	0.8	28	1.0
All conifers	3.1	4.9	8	8.1
Broadleaves				
Oak	0.2	2.5	16	2.6
Beech	0.5	1.5	26	1.9
Sycamore	0.0	1.9	20	2.0
Ash	0.1	4.3	12	4.4
Birch	0.1	1.4	19	1.5
Sweet chestnut	0.0	0.2	61	0.3
Hazel	0.0	3.2	16	3.2
Hawthorn	0.0	1.1	28	1.1
Alder	0.0	1.0	35	1.0
Willow	0.0	1.5	23	1.5
Other broadleaves	0.2	3.2	11	3.4
All broadleaves	1.1	22.0	3	23.1
All species				
All species	4.2	26.8	2	31.0

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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				
0–10 years	0.3	0.6	39	0.9
11–20 years	0.4	0.1	47	0.5
21–40 years	0.6	0.6	27	1.2
41–60 years	1.1	2.7	16	3.8
61–80 years	0.7	0.6	34	1.3
81–100 years	0.1	0.1	65	0.2
100+ years	0.0	0.2	72	0.2
Total	3.1	4.9	8	8.1
All broadleaves				
0–10 years	0.0	3.1	14	3.1
11–20 years	0.0	2.4	15	2.4
21–40 years	0.1	4.1	12	4.1
41–60 years	0.6	3.0	15	3.7
61–80 years	0.2	3.2	15	3.4
81–100 years	0.0	3.1	15	3.1
100+ years	0.0	3.2	16	3.2
Total	1.1	22.0	3	23.1
All species				
0–10 years	0.3	3.7	14	4.0
11–20 years	0.4	2.5	15	2.9
21–40 years	0.7	4.7	11	5.3
41–60 years	1.8	5.7	11	7.5
61–80 years	0.9	3.8	14	4.7
81–100 years	0.1	3.3	14	3.4
100+ years	0.1	3.2	15	3.3
Total	4.2	26.8	2	31.0

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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				
0-7 cm	0.3	0.7	37	1.0
7-10 cm	0.2	0.1	34	0.3
10-15 cm	0.2	0.2	42	0.3
15-20 cm	0.3	0.2	38	0.5
20-30 cm	0.7	1.5	22	2.2
30-40 cm	0.8	1.3	21	2.2
40-60 cm	0.5	0.7	28	1.2
60-80 cm	0.0	0.2	64	0.3
80+ cm	0.0	0.0	94	0.0
Total	3.1	4.9	8	8.1
All broadleaves				
0-7 cm	0.0	4.0	12	4.1
7-10 cm	0.1	4.0	12	4.0
10-15 cm	0.1	2.7	14	2.8
15-20 cm	0.1	2.0	16	2.1
20-30 cm	0.3	3.2	14	3.4
30-40 cm	0.2	1.8	16	2.0
40-60 cm	0.3	2.0	19	2.3
60-80 cm	0.1	1.2	26	1.3
80+ cm	0.0	1.1	24	1.1
Total	1.1	22.0	3	23.1
All species				
0-7 cm	0.4	4.7	12	5.1
7-10 cm	0.2	4.1	12	4.3
10-15 cm	0.3	2.9	13	3.1
15-20 cm	0.4	2.3	15	2.6
20-30 cm	0.9	4.7	12	5.6
30-40 cm	1.0	3.2	13	4.2
40-60 cm	0.8	2.7	16	3.5
60-80 cm	0.1	1.3	25	1.4
80+ cm	0.1	1.1	24	1.2
Total	4.2	26.8	2	31.0

Table 4 Felled area at 31 March 2012

Clearfelled area	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
	0.1	0.2	50	0.3

Standing volume at 31 March 2012

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

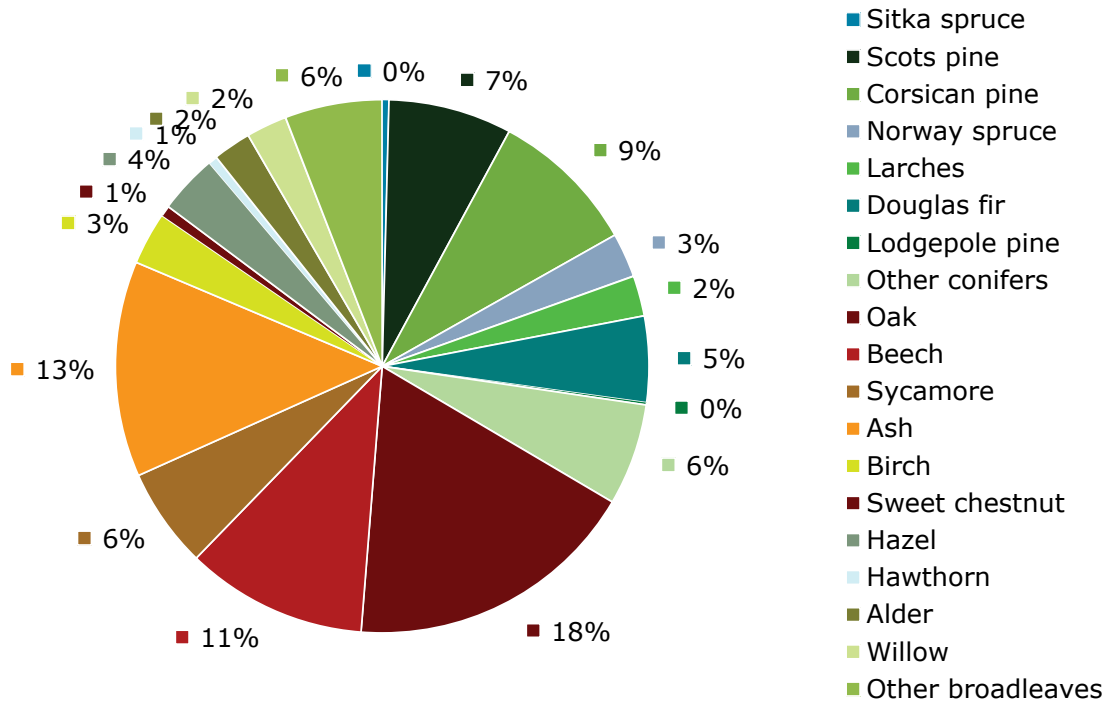
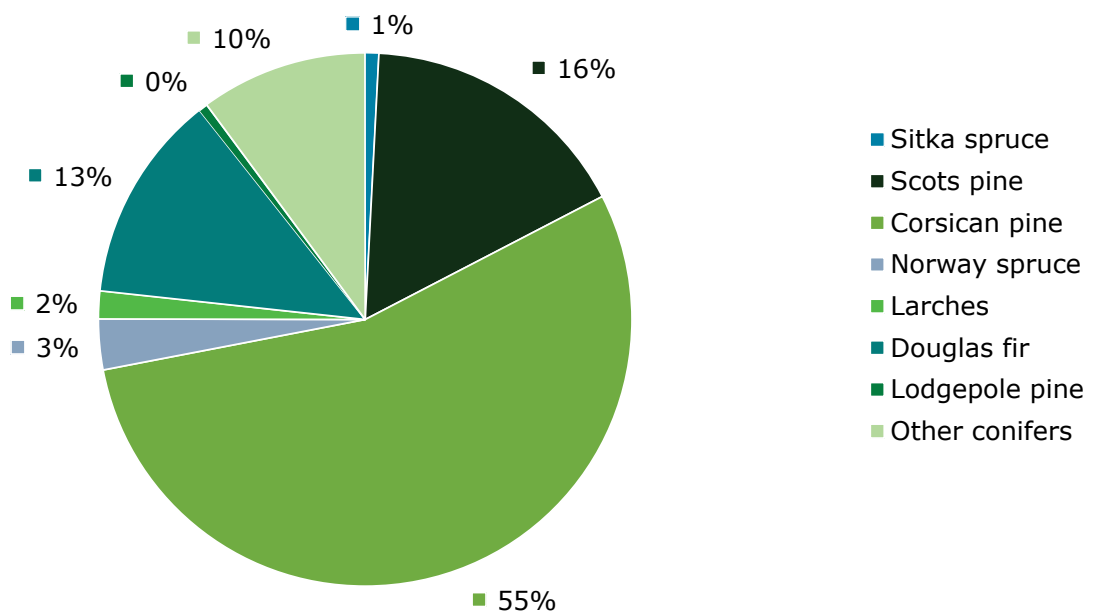


Figure 2a Principal conifer tree species composition by standing volume at 31 March 2012



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

Principal species	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
Conifers				
Sitka spruce	6	26	45	32
Scots pine	122	469	22	591
Corsican pine	403	303	33	706
Norway spruce	23	190	53	212
Larches	12	182	38	194
Douglas fir	93	318	36	411
Lodgepole pine	4	7	90	11
Other conifers	75	412	30	487
All conifers	738	1,906	12	2,644
Broadleaves				
Oak	26	1,378	22	1,404
Beech	99	768	33	867
Sycamore	5	474	28	478
Ash	19	1,012	14	1,031
Birch	11	242	20	253
Sweet chestnut	0	50	65	51
Hazel	0	282	25	282
Hawthorn	0	43	32	43
Alder	1	181	33	181
Willow	0	195	30	195
Other broadleaves	24	442	27	466
All broadleaves	184	5,118	8	5,302
All species				
All species	922	6,977	7	7,899

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Table 6 Standing volume by age class at 31 March 2012

Age class	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
0–10 years	0	0	46	0
11–20 years	14	5	48	19
21–40 years	121	108	21	229
41–60 years	338	1,306	16	1,643
61–80 years	222	236	33	458
81–100 years	39	131	56	170
100+ years	4	120	52	124
Total	738	1,906	12	2,644
All broadleaves				
0–10 years	0	3	83	3
11–20 years	1	61	15	62
21–40 years	4	451	14	455
41–60 years	114	690	14	804
61–80 years	51	763	17	814
81–100 years	3	1,258	21	1,260
100+ years	12	1,892	19	1,905
Total	184	5,118	8	5,302
All species				
0–10 years	0	3	81	3
11–20 years	15	66	15	81
21–40 years	125	559	12	684
41–60 years	452	1,997	12	2,449
61–80 years	273	1,000	15	1,273
81–100 years	41	1,391	20	1,433
100+ years	16	1,960	19	1,976
Total	922	6,977	7	7,899

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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				
0-7 cm	0	0	-	0
7-10 cm	5	5	37	9
10-15 cm	19	15	37	34
15-20 cm	60	74	37	134
20-30 cm	221	416	22	637
30-40 cm	224	744	23	969
40-60 cm	174	535	28	709
60-80 cm	19	115	47	133
80+ cm	16	3	94	19
Total	738	1,906	12	2,644
All broadleaves				
0-7 cm	0	16	32	16
7-10 cm	1	157	17	158
10-15 cm	9	308	18	317
15-20 cm	10	429	18	439
20-30 cm	42	744	13	786
30-40 cm	36	639	16	674
40-60 cm	66	722	20	788
60-80 cm	15	819	27	834
80+ cm	5	1,284	28	1,289
Total	184	5,118	8	5,302
All species				
0-7 cm	0	16	32	16
7-10 cm	6	161	16	167
10-15 cm	28	323	17	351
15-20 cm	70	503	16	574
20-30 cm	263	1,161	11	1,423
30-40 cm	260	1,384	14	1,644
40-60 cm	240	1,261	18	1,501
60-80 cm	33	884	26	917
80+ cm	21	1,284	28	1,305
Total	922	6,977	7	7,899

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Biomass and carbon stocks at 31 March 2012

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

Principal species	FC	Private sector		Total
	biomass (000 odt)	biomass (000 odt)	SE%	biomass (000 odt)
Conifers				
Sitka spruce	4	18	46	22
Scots pine	88	324	22	412
Corsican pine	242	170	33	411
Norway spruce	12	97	53	110
Larches	8	111	37	119
Douglas fir	63	204	36	267
Lodgepole pine	3	5	90	8
Other conifers	44	235	29	279
All conifers	463	1,164	11	1,627
Broadleaves				
Oak	24	1,151	21	1,175
Beech	95	630	31	725
Sycamore	4	372	26	376
Ash	17	838	14	855
Birch	11	228	20	238
Sweet chestnut	0	41	63	41
Hazel	0	271	22	271
Hawthorn	0	55	32	55
Alder	0	140	33	141
Willow	0	213	29	213
Other broadleaves	22	369	22	390
All broadleaves	173	4,352	7	4,525
All species				
All species	636	5,492	6	6,127

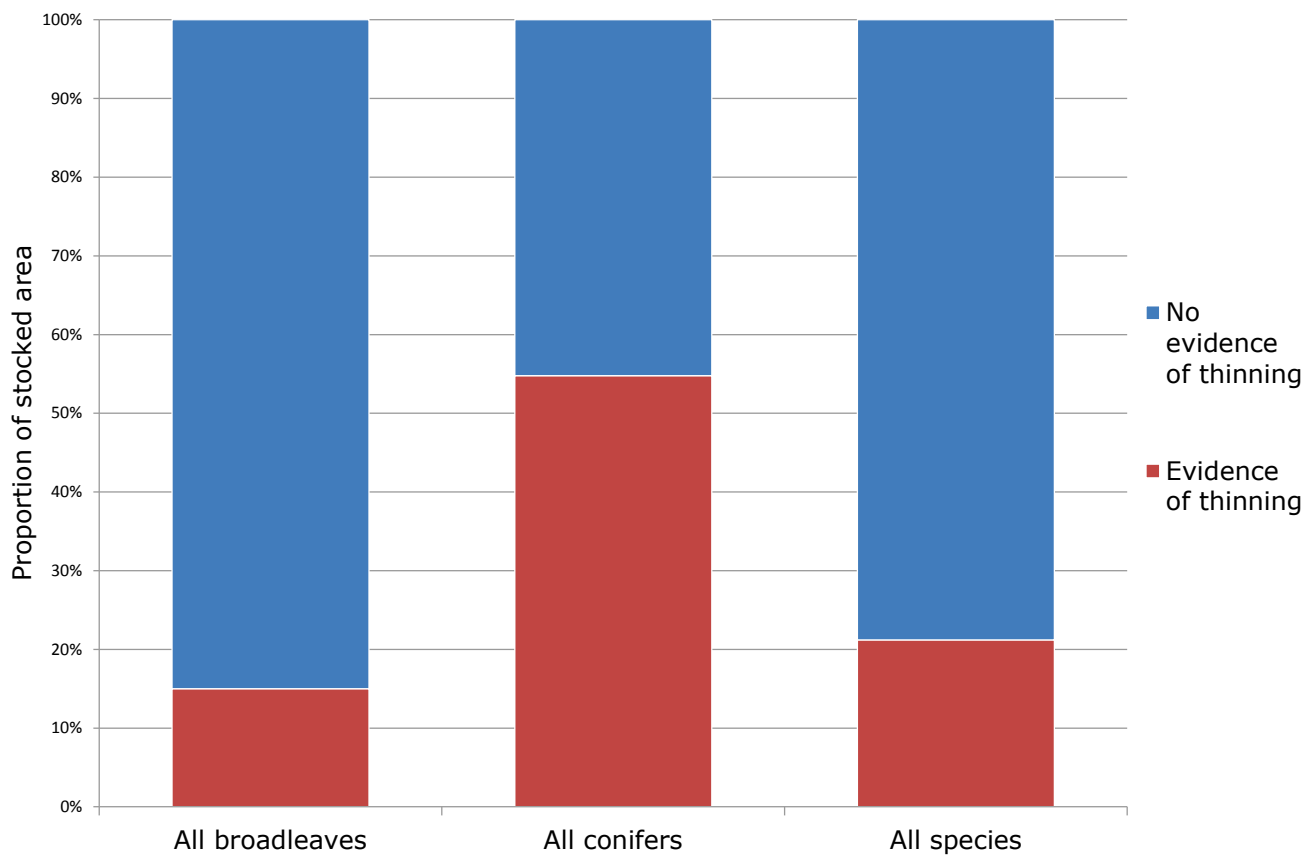
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Table 9 Total carbon stocks in principal tree species at 31 March 2012

Principal species	FC	Private sector		Total
	carbon (000 t)	carbon (000 t)	SE%	carbon (000 t)
Conifers				
Sitka spruce	2	9	46	11
Scots pine	44	162	22	206
Corsican pine	121	85	33	206
Norway spruce	6	49	53	55
Larches	4	55	37	59
Douglas fir	31	102	36	133
Lodgepole pine	1	2	90	4
Other conifers	22	118	29	139
All conifers	231	582	11	813
Broadleaves				
Oak	12	576	21	588
Beech	47	315	31	362
Sycamore	2	186	26	188
Ash	8	419	14	428
Birch	5	114	20	119
Sweet chestnut	0	20	63	20
Hazel	0	135	22	136
Hawthorn	0	28	32	28
Alder	0	70	33	70
Willow	0	107	29	107
Other broadleaves	11	184	22	195
All broadleaves	87	2,176	7	2,262
All species				
All species	318	2,746	6	3,064

Evidence of thinning

Figure 3 Evidence of thinning in Private sector sites



50-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 England 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 England and GB context.

In **Figures 4–8 and Tables 10–12** the estimates for the Forestry Commission are based on harvesting regimes derived from Forestry Commission felling and thinning plans as of 31 March 2012.

For the Private sector, information for **Figures 4–8 and Tables 10–12** is based on a scenario which assumes felling at age of maximum mean annual increment with moderate wind risk measures for conifers. For broadleaves, however, only those areas where there is evidence of thinning are assumed to be managed in future. This is a highly conservative assumption but better reflects current practice than assuming all stands will be managed. In turn it is assumed that these broadleaved stands are managed to felling at age of maximum mean annual increment with moderate wind risk measures.

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

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

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

- no reduction in stocked area
- like-for-like species choices are used for broadleaves
- 50% of the land associated with the reduction in conifer stocked area arising from the assumption above is stocked with broadleaves

A full description of the restocking assumptions is to be found in Table D3 of the *50-year forecast of softwood timber availability (2014)*. The same restocking assumptions have been applied to both the Forestry Commission and Private sector forecasts.

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Woodland that is classed as currently clearfelled will be restocked according to the restock prescription.

In **Figures 9–13** and **Tables 13–15** the management assumptions for the Private sector hardwoods have been changed to assume all hardwoods are thinned and felled rather than only those in areas that have evidence of thinning. In this report, the tables and figures for estimates under this management scenario will be labelled as 'unrestricted'.

Figures 14–15 and **Table 16** compare the Private sector hardwood timber availability under the two scenarios. **Figure 14** shows the Private sector hardwood availability for the two scenarios during the 50-year forecast. **Figure 15** and **Table 16** compare the hardwood availability in first 15 years of the forecast under the two scenarios.

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50-year forecast of timber availability under the 'headline' harvesting scenario

Table 10 50-year forecast of timber availability by time period and principal species

Principal species	2013-16			2017-21			2022-26			2027-31						
	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total				
	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)				
All conifers	39	146	24	185	33	72	18	105	24	82	37	105	22	74	23	95
Sitka spruce	0	0	77	0	0	3	56	3	0	1	56	1	0	1	53	1
Scots pine	5	9	26	14	4	12	25	15	3	9	23	12	2	42	37	44
Corsican pine	24	55	46	79	19	9	52	28	14	12	74	26	11	2	61	13
Norway spruce	2	8	53	10	1	5	49	6	1	26	86	27	1	7	73	8
Larches	1	5	43	5	0	11	42	11	0	5	42	6	0	5	41	5
Douglas fir	4	34	41	37	4	13	64	17	3	4	63	7	3	4	60	8
Lodgepole pine	0	0	90	1	0	0	90	0	0	1	90	1	0	0	90	0
Other conifers	3	35	46	38	5	18	42	23	2	24	53	26	3	13	33	16
All broadleaves	4	31	47	35	3	28	27	31	4	18	38	21	3	10	21	13
Oak	1	3	41	4	0	5	46	5	0	2	34	2	0	1	36	2
Beech	2	3	42	6	2	9	54	11	2	10	62	12	2	4	33	6
Sycamore	0	3	63	3	0	1	77	1	0	0	33	1	0	1	37	1
Ash	1	20	69	20	0	10	41	10	1	3	33	3	1	1	22	1
Birch	0	2	81	2	0	2	79	2	0	1	58	1	0	0	29	0
Sweet chestnut	0	0	68	0	0	0	56	0	0	0	54	0	0	1	83	1
Hazel	0	0	39	0	0	0	37	0	0	1	50	1	0	0	42	0
Hawthorn	0	0	46	0	0	0	36	0	0	0	35	0	0	0	32	0
Alder	0	0	94	0	0	0	83	0	0	0	77	0	0	0	77	0
Willow	0	0	69	0	0	0	32	0	0	0	35	0	0	0	34	0
Other broadleaves	1	0	87	1	0	0	46	1	0	0	32	1	0	1	22	1
All species	44	172	22	216	36	96	16	132	27	99	31	126	25	84	20	109

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Table 10 (cont'd) 50-year forecast of timber availability by time period and principal species

Principal species	2032-36			2037-41			2042-46			2047-51						
	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total				
	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)				
All conifers	18	33	24	51	20	55	18	75	36	34	14	70	13	40	18	53
Sitka spruce	0	2	35	2	0	2	31	2	0	3	37	4	0	2	28	2
Scots pine	2	20	37	22	3	34	27	37	3	12	27	15	3	18	39	21
Corsican pine	10	2	61	11	11	0	46	12	25	0	43	25	4	0	38	4
Norway spruce	1	1	48	1	0	1	35	2	1	4	74	4	1	5	50	6
Larches	0	3	56	3	0	3	53	3	0	2	54	3	1	2	52	3
Douglas fir	3	5	56	8	3	7	41	10	4	6	30	10	3	6	28	9
Lodgepole pine	0	0	90	0	0	0	82	0	0	1	89	1	0	0	50	0
Other conifers	1	2	50	3	2	8	41	10	2	6	23	8	2	6	20	8
All broadleaves	3	25	59	28	4	12	19	16	5	22	30	27	4	16	15	20
Oak	0	1	36	2	1	2	43	3	1	1	34	2	0	2	36	2
Beech	2	19	76	21	3	5	37	8	2	12	47	14	3	4	40	7
Sycamore	0	1	49	1	0	1	31	1	0	1	28	1	0	2	36	2
Ash	1	1	24	2	0	2	25	2	2	2	22	4	0	4	29	5
Birch	0	0	41	1	0	1	41	1	0	1	32	1	0	1	30	1
Sweet chestnut	0	0	64	0	0	0	64	0	0	0	64	0	0	0	64	0
Hazel	0	0	36	0	0	0	34	0	0	1	73	1	0	1	33	1
Hawthorn	0	0	39	0	0	0	35	0	0	0	33	0	0	0	33	0
Alder	0	0	77	0	0	0	77	0	0	0	91	0	0	0	94	0
Willow	0	0	31	0	0	0	30	0	0	0	30	0	0	0	32	0
Other broadleaves	0	1	18	1	0	1	17	2	1	2	33	3	0	1	17	2
All species	21	58	28	80	24	67	15	91	41	55	14	97	17	55	13	72

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Table 10 (cont'd) 50-year forecast of timber availability by time period and principal species

Principal species	2052-56			2057-61				
	FC	Private sector		Total	FC	Private sector		Total
	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	
All conifers	14	31	11	45	15	36	10	51
Sitka spruce	1	2	22	3	0	2	21	3
Scots pine	2	10	18	12	4	13	19	17
Corsican pine	5	0	37	5	5	0	37	6
Norway spruce	1	2	47	3	0	2	48	3
Larches	0	3	50	3	1	2	53	3
Douglas fir	3	6	28	10	3	7	26	10
Lodgepole pine	0	0	71	0	0	0	71	0
Other conifers	2	8	19	10	2	9	19	10
All broadleaves	3	15	22	18	4	28	47	32
Oak	1	1	30	2	0	1	29	2
Beech	1	4	39	5	3	22	60	25
Sycamore	0	2	53	2	0	0	56	0
Ash	0	4	28	4	0	1	45	2
Birch	0	1	48	1	0	1	32	1
Sweet chestnut	0	0	64	0	0	0	64	0
Hazel	0	0	41	0	0	1	42	1
Hawthorn	0	0	33	0	0	0	33	0
Alder	0	0	-	0	0	0	94	0
Willow	0	0	32	0	0	0	32	0
Other broadleaves	0	3	62	4	0	1	17	1
All species	17	46	10	62	19	64	21	83

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Table 11 50-year forecast of standing volume; average annual volumes within periods

Forecast period	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
2013–16	709	1,572	13	2,281
2017–21	720	1,311	15	2,030
2022–26	739	1,118	14	1,857
2027–31	765	859	14	1,624
2032–36	800	753	14	1,553
2037–41	822	732	13	1,554
2042–46	779	696	13	1,476
2047–51	772	757	12	1,529
2052–56	803	855	12	1,657
2057–61	822	983	11	1,805
All broadleaves				
2013–16	189	5,171	8	5,360
2017–21	205	5,413	8	5,618
2022–26	221	5,766	7	5,987
2027–31	235	6,187	7	6,423
2032–36	249	6,563	7	6,812
2037–41	258	6,947	7	7,205
2042–46	265	7,281	6	7,546
2047–51	266	7,582	6	7,849
2052–56	274	7,857	6	8,132
2057–61	280	8,037	6	8,317
All species				
2013–16	897	6,706	7	7,603
2017–21	925	6,702	7	7,627
2022–26	960	6,873	7	7,833
2027–31	1,000	7,034	6	8,034
2032–36	1,049	7,299	6	8,348
2037–41	1,080	7,657	6	8,737
2042–46	1,044	7,949	6	8,993
2047–51	1,038	8,306	6	9,344
2052–56	1,077	8,672	5	9,749
2057–61	1,102	8,975	5	10,077

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Table 12 50-year forecast of net increment; average annual volumes within periods

Forecast period	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
2013-16	26	35	14	61
2017-21	28	33	14	60
2022-26	25	31	11	56
2027-31	23	30	10	54
2032-36	22	31	11	53
2037-41	21	38	11	60
2042-46	20	45	11	64
2047-51	18	51	11	69
2052-56	19	56	11	75
2057-61	20	62	10	82
All broadleaves				
2013-16	7	65	10	72
2017-21	6	84	6	90
2022-26	6	97	5	103
2027-31	6	99	5	105
2032-36	6	95	6	101
2037-41	6	89	6	94
2042-46	5	82	6	87
2047-51	5	76	6	81
2052-56	5	69	6	74
2057-61	5	63	7	68
All species				
2013-16	33	99	8	132
2017-21	34	116	5	150
2022-26	31	128	5	159
2027-31	29	129	5	158
2032-36	28	126	5	154
2037-41	27	126	5	153
2042-46	25	125	5	150
2047-51	23	124	5	148
2052-56	24	123	5	147
2057-61	25	123	5	147

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Figure 4 Overview of 50-year forecast of average annual softwood availability

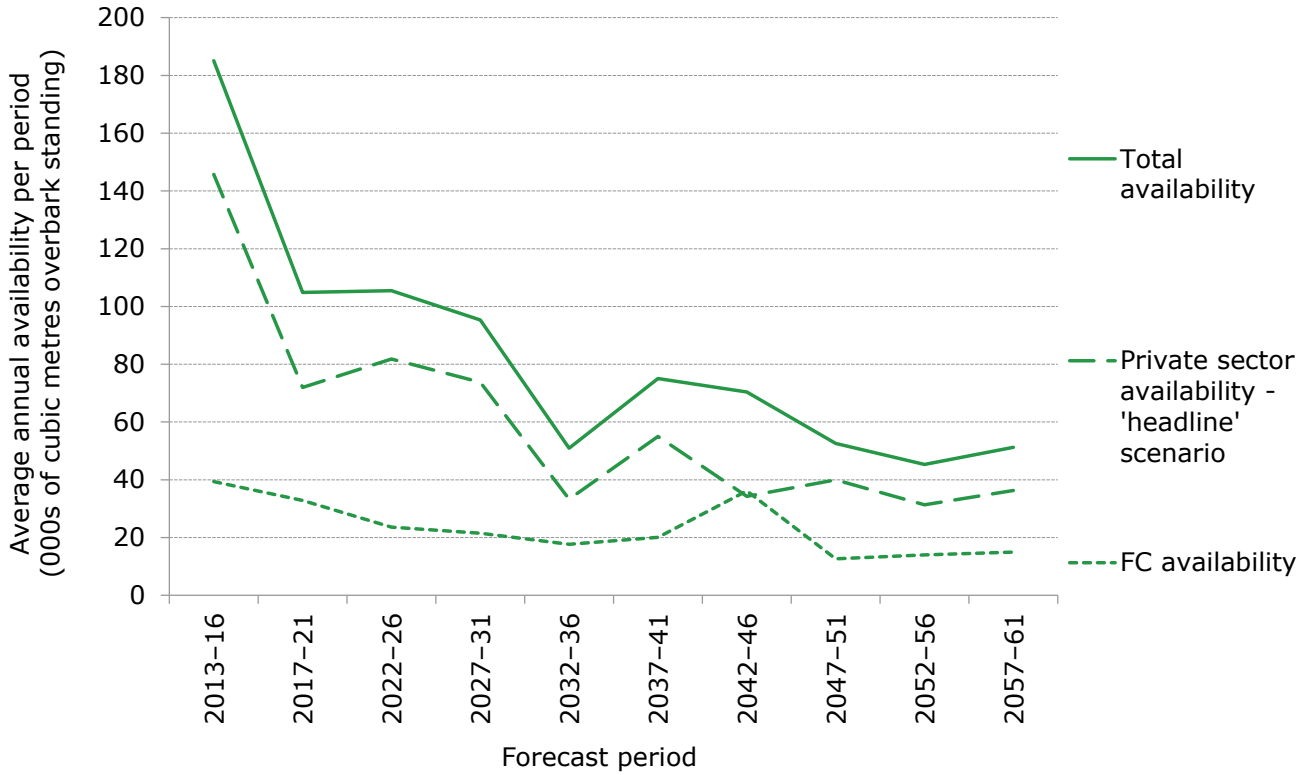
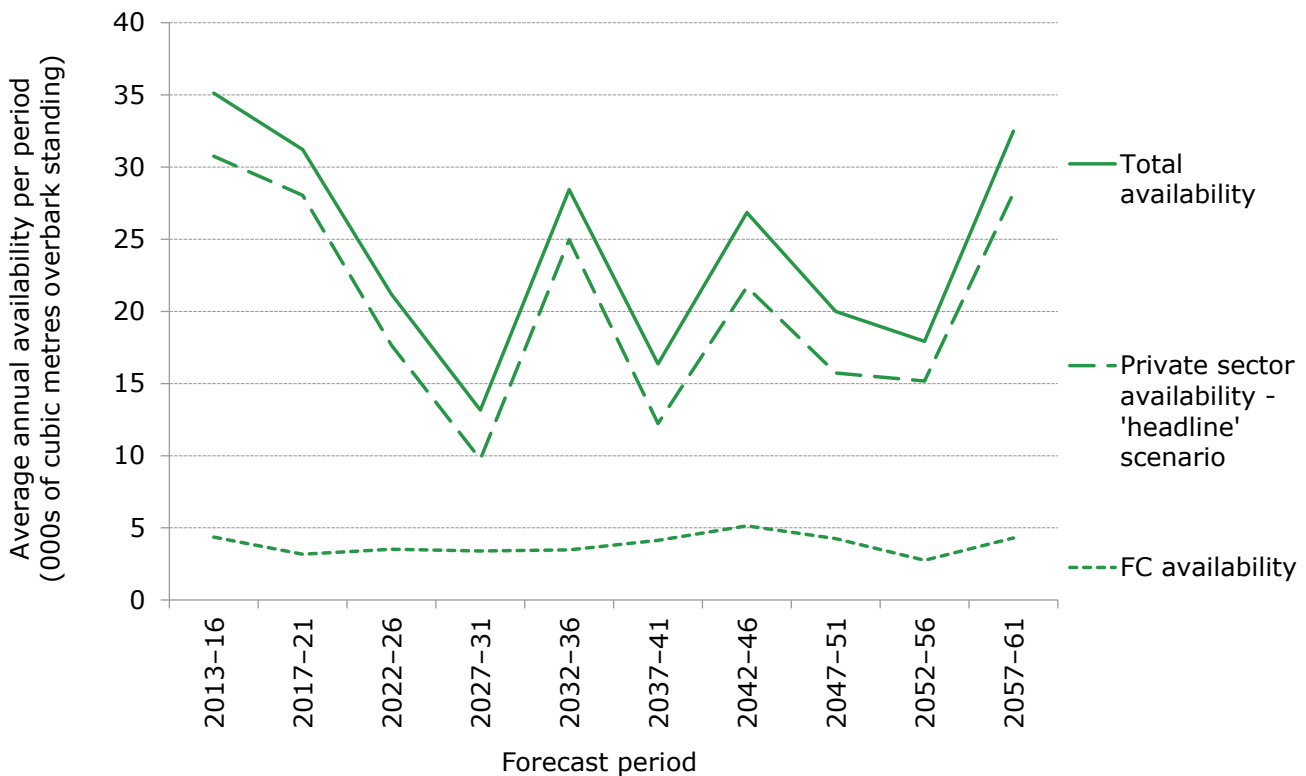


Figure 4a Overview of 50-year forecast of average annual hardwood availability



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Figure 5 50-year forecast of average annual softwood availability

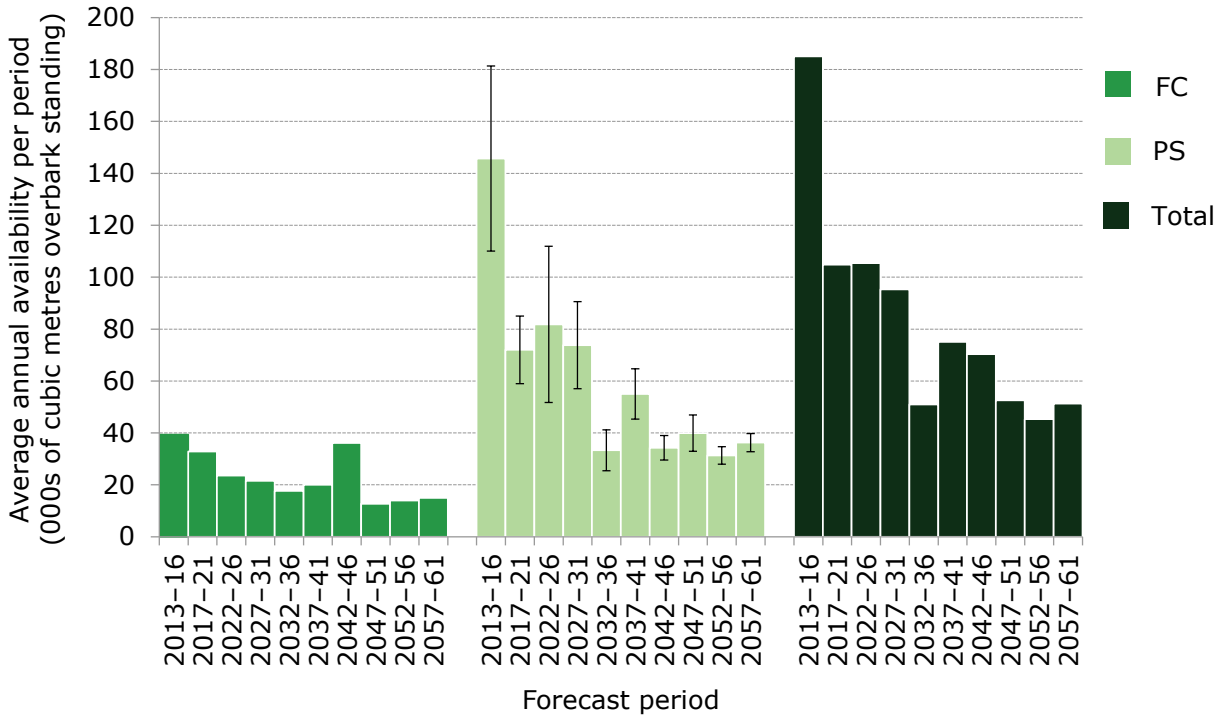
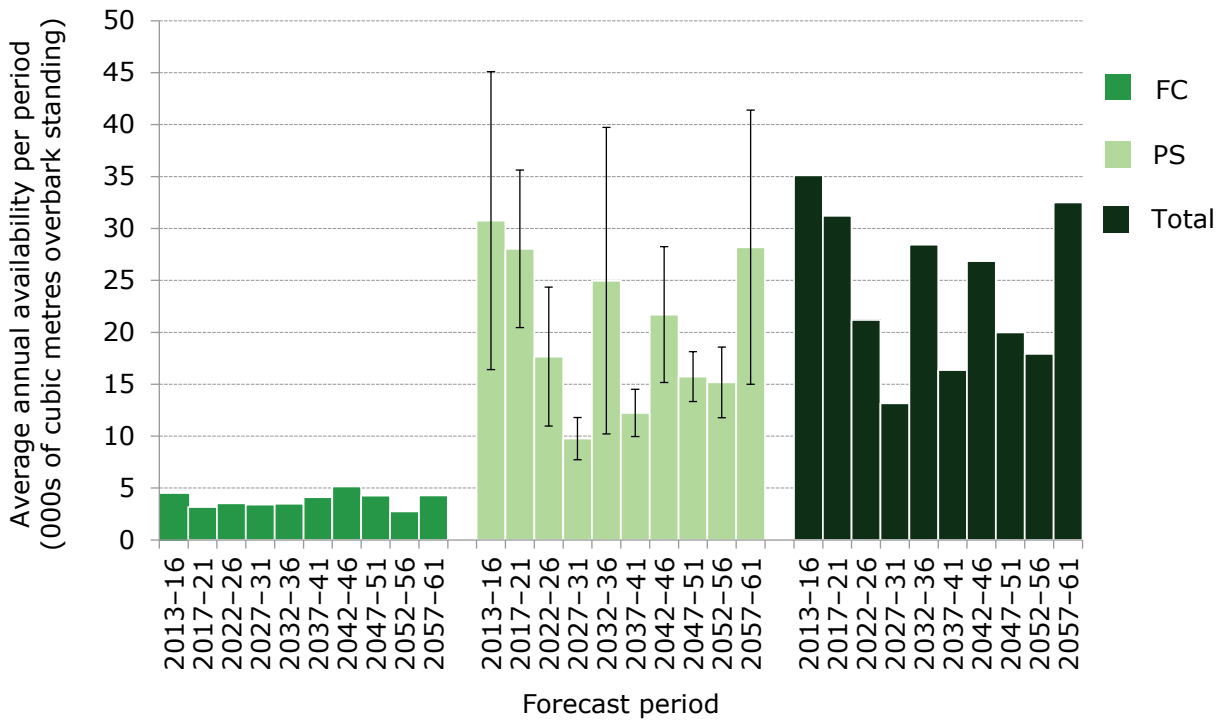


Figure 6 50-year forecast of average annual hardwood availability



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Figure 7 50-year forecast of softwood standing volume, increment and availability

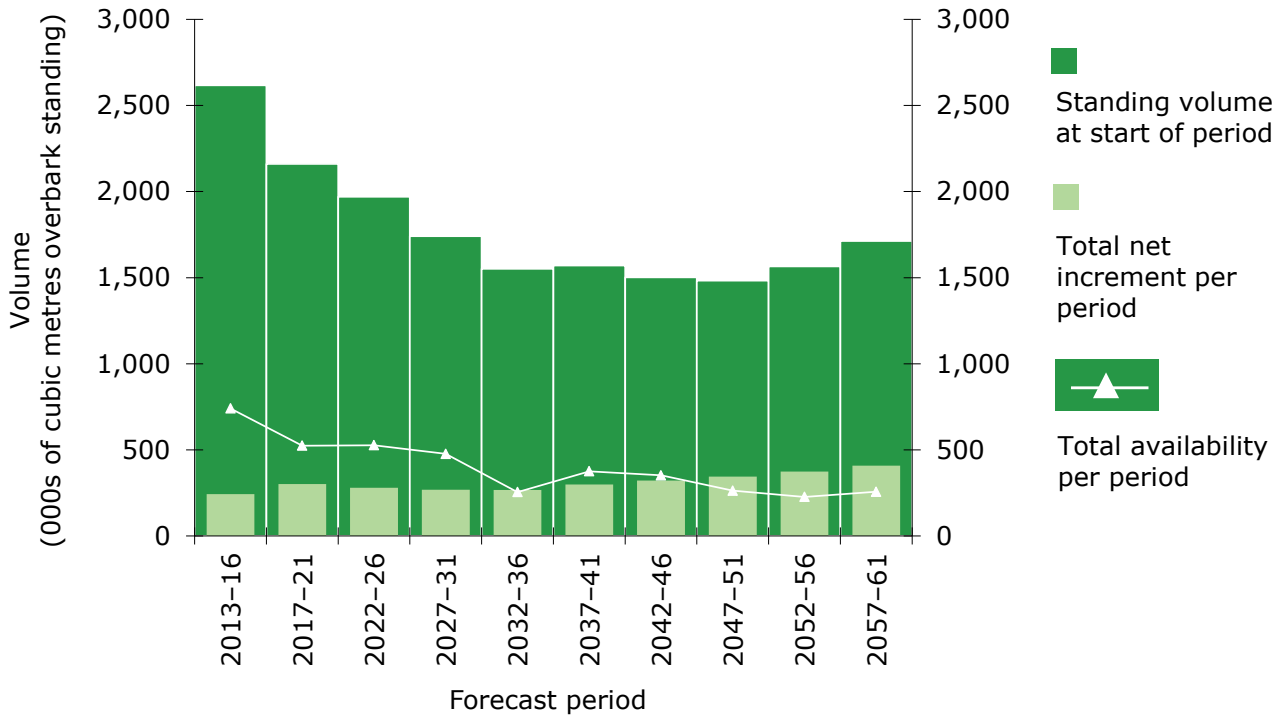
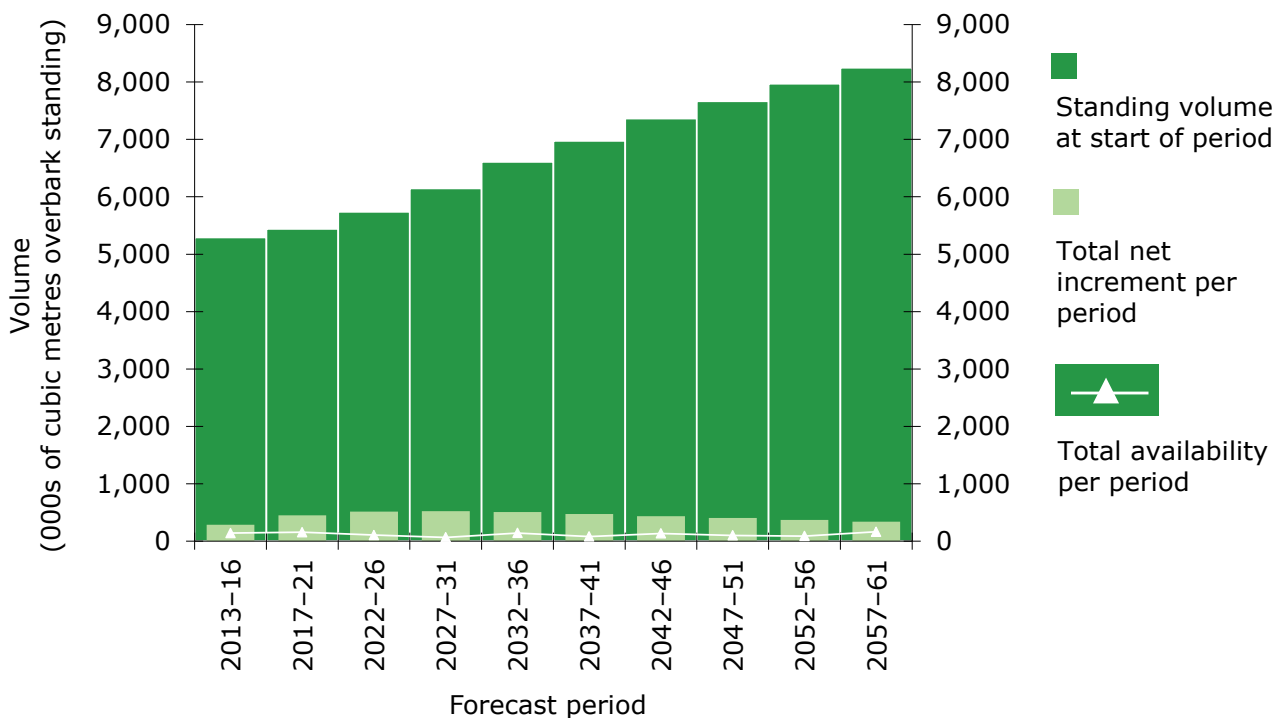


Figure 8 50-year forecast of hardwood standing volume, increment and availability



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50-year forecast of timber availability under the 'unrestricted' scenario

Table 13 50-year forecast of timber availability by time period and principal species – unrestricted biological potential for Private sector hardwoods

Principal species	2013-16			2017-21			2022-26			2027-31						
	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total				
	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)				
All conifers	39	146	24	185	33	72	18	105	24	82	37	105	22	74	23	95
Sitka spruce	0	0	77	0	0	3	56	3	0	1	56	1	0	1	53	1
Scots pine	5	9	26	14	4	12	25	15	3	9	23	12	2	42	37	44
Corsican pine	24	55	46	79	19	9	52	28	14	12	74	26	11	2	61	13
Norway spruce	2	8	53	10	1	5	49	6	1	26	86	27	1	7	73	8
Larches	1	5	43	5	0	11	42	11	0	5	42	6	0	5	41	5
Douglas fir	4	34	41	37	4	13	64	17	3	4	63	7	3	4	60	8
Lodgepole pine	0	0	90	1	0	0	90	0	0	1	90	1	0	0	90	0
Other conifers	3	35	46	38	5	18	42	23	2	24	53	26	3	13	33	16
All broadleaves	4	407	14	411	3	270	7	273	4	164	18	168	3	87	19	90
Oak	1	29	39	30	0	29	38	30	0	22	44	23	0	36	42	36
Beech	2	21	45	24	2	27	39	29	2	53	50	55	2	8	35	10
Sycamore	0	76	37	76	0	28	22	28	0	13	26	13	0	4	31	4
Ash	1	127	18	127	0	84	14	85	1	29	13	30	1	9	19	9
Birch	0	22	20	22	0	27	23	27	0	9	23	9	0	3	27	3
Sweet chestnut	0	4	85	4	0	4	82	4	0	1	60	1	0	1	65	1
Hazel	0	26	27	26	0	26	28	26	0	15	27	15	0	3	29	3
Hawthorn	0	1	27	1	0	2	34	2	0	2	39	2	0	1	30	1
Alder	0	18	32	18	0	18	32	18	0	5	34	5	0	8	85	8
Willow	0	10	55	10	0	4	23	4	0	5	24	5	0	7	23	7
Other broadleaves	1	70	40	70	0	16	24	16	0	9	18	9	0	6	14	6
All species	44	549	12	593	36	338	7	374	27	245	17	272	25	161	15	186

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Table 13 (cont'd) 50-year forecast of timber availability by time period and principal species – unrestricted biological potential for Private sector hardwoods

Principal species	2032-36			2037-41			2042-46			2047-51						
	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total	FC	Private sector	Total				
	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)				
All conifers	18	33	24	51	20	55	18	75	36	34	14	70	13	40	18	53
Sitka spruce	0	2	35	2	0	2	31	2	0	3	37	4	0	2	28	2
Scots pine	2	20	37	22	3	34	27	37	3	12	27	15	3	18	39	21
Corsican pine	10	2	61	11	11	0	46	12	25	0	43	25	4	0	38	4
Norway spruce	1	1	48	1	0	1	35	2	1	4	74	4	1	5	50	6
Larches	0	3	56	3	0	3	53	3	0	2	54	3	1	2	52	3
Douglas fir	3	5	56	8	3	7	41	10	4	6	30	10	3	6	28	9
Lodgepole pine	0	0	90	0	0	0	82	0	0	1	89	1	0	0	50	0
Other conifers	1	2	50	3	2	8	41	10	2	6	23	8	2	6	20	8
All broadleaves	3	75	20	79	4	91	13	95	5	92	10	97	4	105	9	109
Oak	0	9	24	10	1	10	20	10	1	6	18	7	0	7	21	7
Beech	2	20	71	22	3	6	34	9	2	15	41	16	3	5	32	8
Sycamore	0	4	24	4	0	5	20	6	0	9	23	9	0	16	30	16
Ash	1	14	18	15	0	20	17	20	2	19	13	21	0	33	23	33
Birch	0	5	21	5	0	5	20	6	0	10	26	10	0	9	22	9
Sweet chestnut	0	0	46	0	0	0	46	0	0	0	41	0	0	1	49	1
Hazel	0	3	33	3	0	6	30	6	0	10	43	10	0	12	21	12
Hawthorn	0	2	36	2	0	3	31	3	0	2	30	2	0	2	29	2
Alder	0	1	35	1	0	2	34	2	0	3	32	3	0	4	37	4
Willow	0	6	24	6	0	21	49	21	0	5	34	5	0	4	25	4
Other broadleaves	0	10	17	10	0	12	15	12	1	13	14	14	0	11	13	12
All species	21	109	15	130	24	146	10	170	41	126	8	167	17	144	8	161

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Table 13 (cont'd) 50-year forecast of timber availability by time period and principal species – unrestricted biological potential for Private sector hardwoods

Principal species	2052-56			2057-61				
	FC	Private sector	Total	FC	Private sector	Total		
	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)		
All conifers	14	31	11	45	15	36	10	51
Sitka spruce	1	2	22	3	0	2	21	3
Scots pine	2	10	18	12	4	13	19	17
Corsican pine	5	0	37	5	5	0	37	6
Norway spruce	1	2	47	3	0	2	48	3
Larches	0	3	50	3	1	2	53	3
Douglas fir	3	6	28	10	3	7	26	10
Lodgepole pine	0	0	71	0	0	0	71	0
Other conifers	2	8	19	10	2	9	19	10
All broadleaves	3	103	13	106	4	97	14	102
Oak	1	8	22	8	0	7	16	7
Beech	1	5	29	6	3	24	54	27
Sycamore	0	7	21	7	0	6	22	6
Ash	0	32	20	32	0	14	14	14
Birch	0	5	21	5	0	6	23	6
Sweet chestnut	0	2	55	2	0	2	55	2
Hazel	0	7	21	7	0	9	20	9
Hawthorn	0	2	28	2	0	4	26	4
Alder	0	4	37	4	0	4	36	4
Willow	0	15	66	15	0	12	42	12
Other broadleaves	0	16	19	16	0	10	14	10
All species	17	133	10	150	19	133	10	152

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Table 14 50-year forecast of standing volume; average annual volumes within periods – unrestricted biological potential for Private sector hardwoods

Forecast period	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
2013–16	709	1,572	13	2,281
2017–21	720	1,311	15	2,030
2022–26	739	1,118	14	1,857
2027–31	765	859	14	1,624
2032–36	800	753	14	1,553
2037–41	822	732	13	1,554
2042–46	779	696	13	1,476
2047–51	772	757	12	1,529
2052–56	803	855	12	1,657
2057–61	822	983	11	1,805
All broadleaves				
2013–16	189	3,999	9	4,188
2017–21	205	3,128	10	3,333
2022–26	221	2,434	11	2,654
2027–31	235	2,326	11	2,561
2032–36	249	2,411	11	2,660
2037–41	258	2,618	10	2,877
2042–46	265	2,827	9	3,091
2047–51	266	3,058	8	3,324
2052–56	274	3,162	8	3,436
2057–61	280	3,291	7	3,571
All species				
2013–16	897	5,534	7	6,432
2017–21	925	4,417	8	5,342
2022–26	960	3,540	8	4,501
2027–31	1,000	3,172	9	4,173
2032–36	1,049	3,147	9	4,196
2037–41	1,080	3,328	8	4,409
2042–46	1,044	3,494	8	4,539
2047–51	1,038	3,781	7	4,819
2052–56	1,077	3,977	6	5,054
2057–61	1,102	4,229	6	5,331

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Table 15 50-year forecast of net increment; average annual volumes within periods – unrestricted biological potential for Private sector hardwoods

Forecast period	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
2013–16	26	35	14	61
2017–21	28	33	14	60
2022–26	25	31	11	56
2027–31	23	30	10	54
2032–36	22	31	11	53
2037–41	21	38	11	60
2042–46	20	45	11	64
2047–51	18	51	11	69
2052–56	19	56	11	75
2057–61	20	62	10	82
All broadleaves				
2013–16	7	62	10	69
2017–21	6	71	7	78
2022–26	6	79	7	85
2027–31	6	92	6	98
2032–36	6	109	6	115
2037–41	6	130	5	135
2042–46	5	141	4	146
2047–51	5	142	4	147
2052–56	5	129	4	134
2057–61	5	123	4	128
All species				
2013–16	33	96	8	129
2017–21	34	104	6	138
2022–26	31	110	6	141
2027–31	29	122	5	152
2032–36	28	139	5	167
2037–41	27	167	4	194
2042–46	25	184	4	209
2047–51	23	191	4	214
2052–56	24	183	4	207
2057–61	25	183	3	207

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Figure 9 Overview of 50-year forecast of average annual softwood availability – unrestricted biological potential for Private sector hardwoods

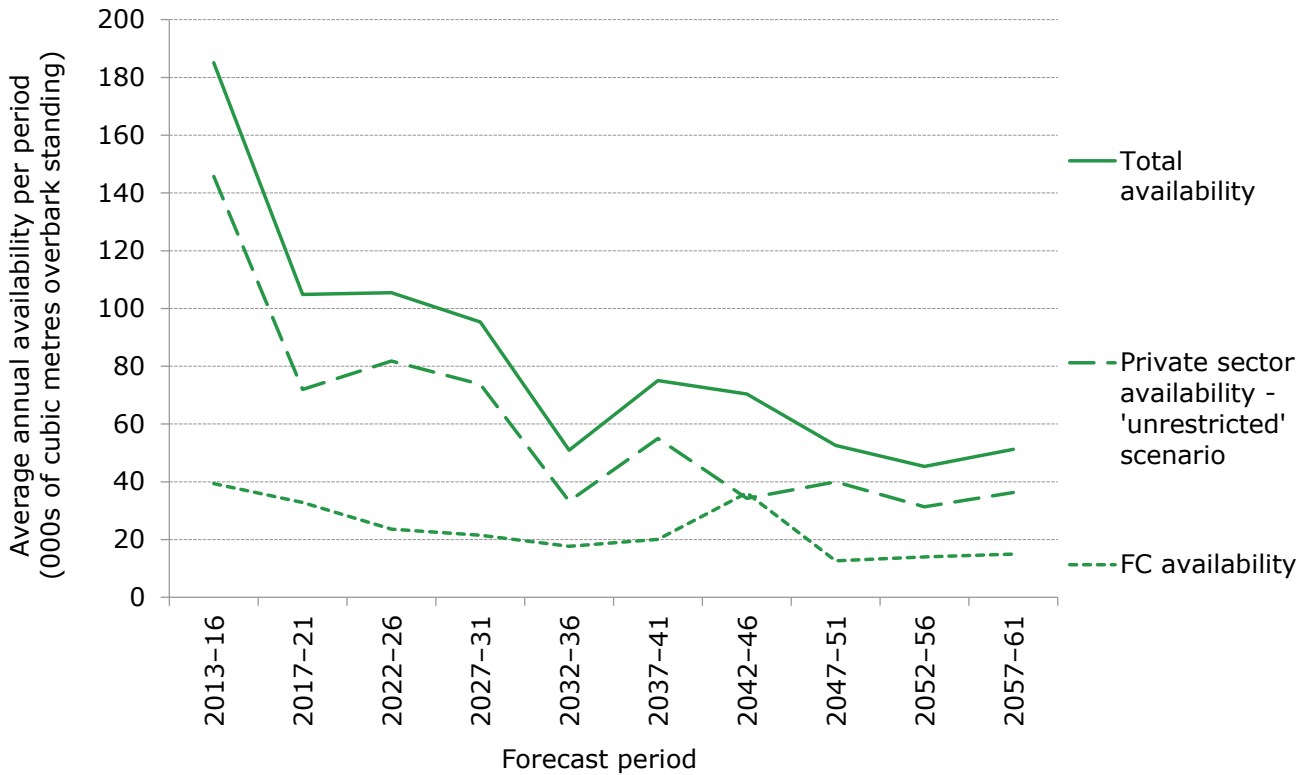
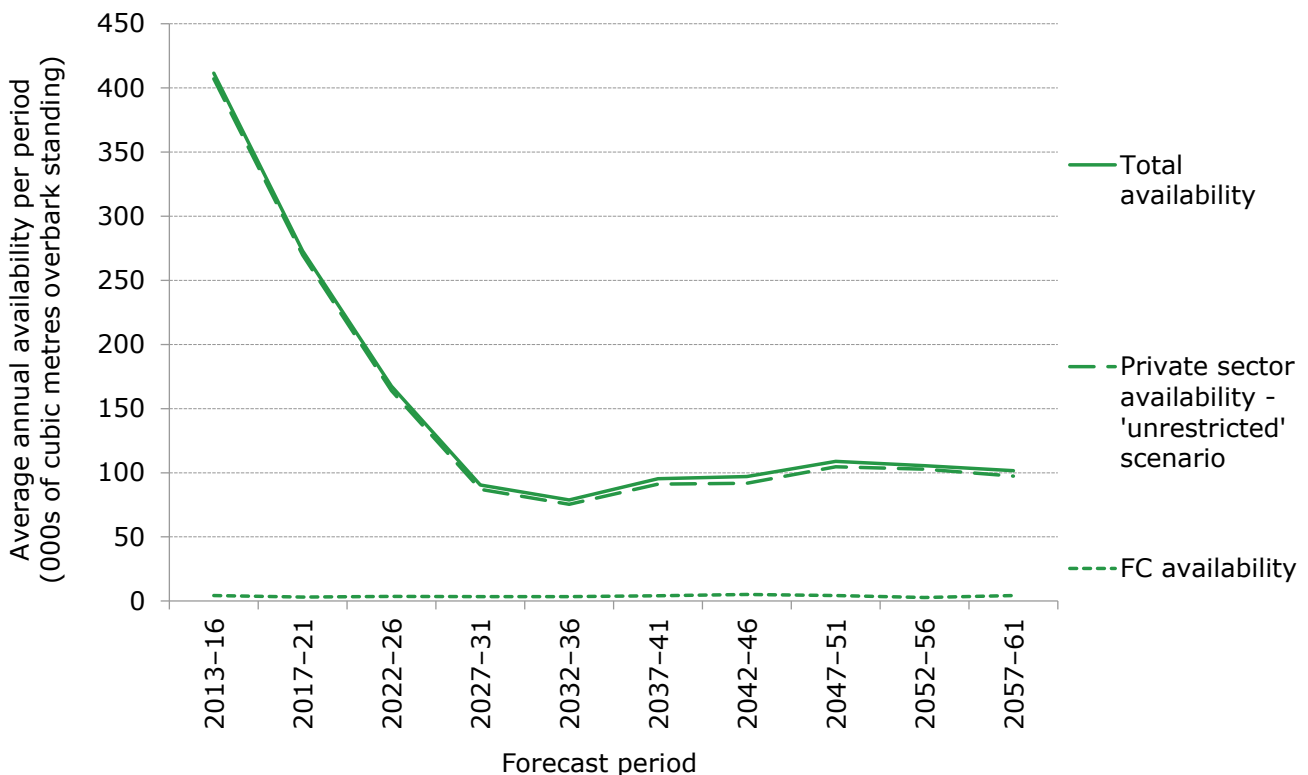


Figure 9a Overview of 50-year forecast of average annual hardwood availability – unrestricted biological potential for Private sector hardwoods



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Figure 10 50-year forecast comparison of average annual softwood availability–unrestricted biological potential for Private sector hardwoods

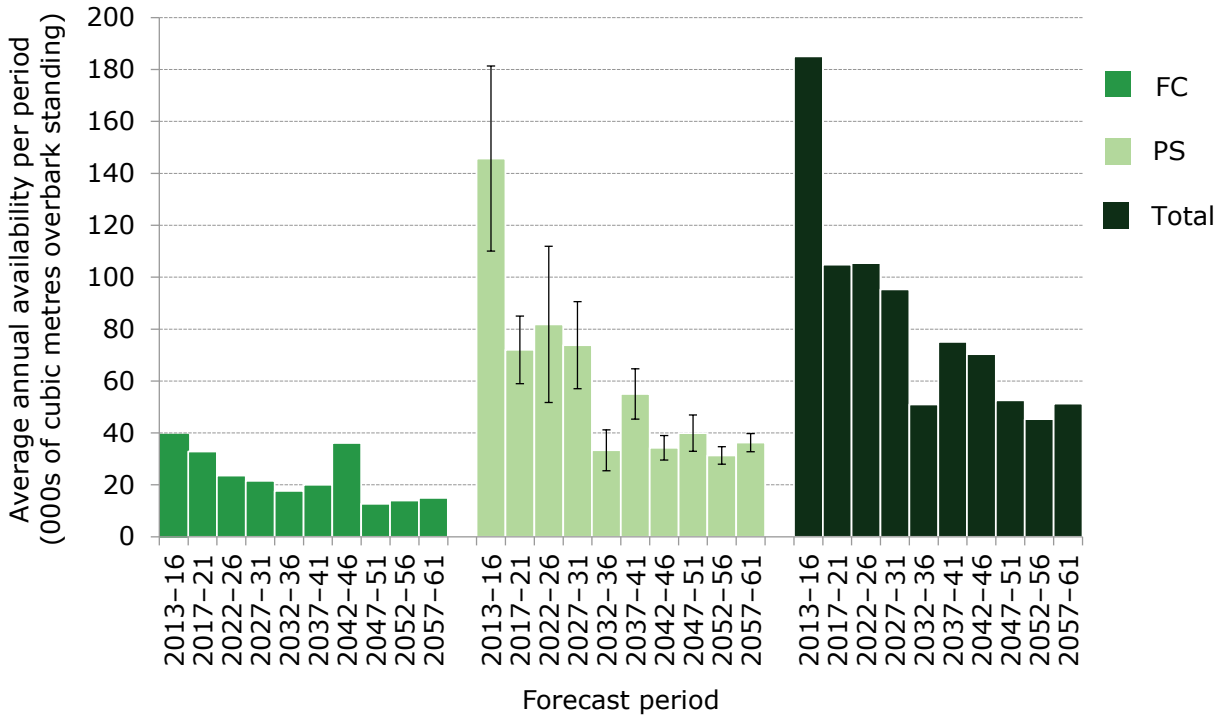
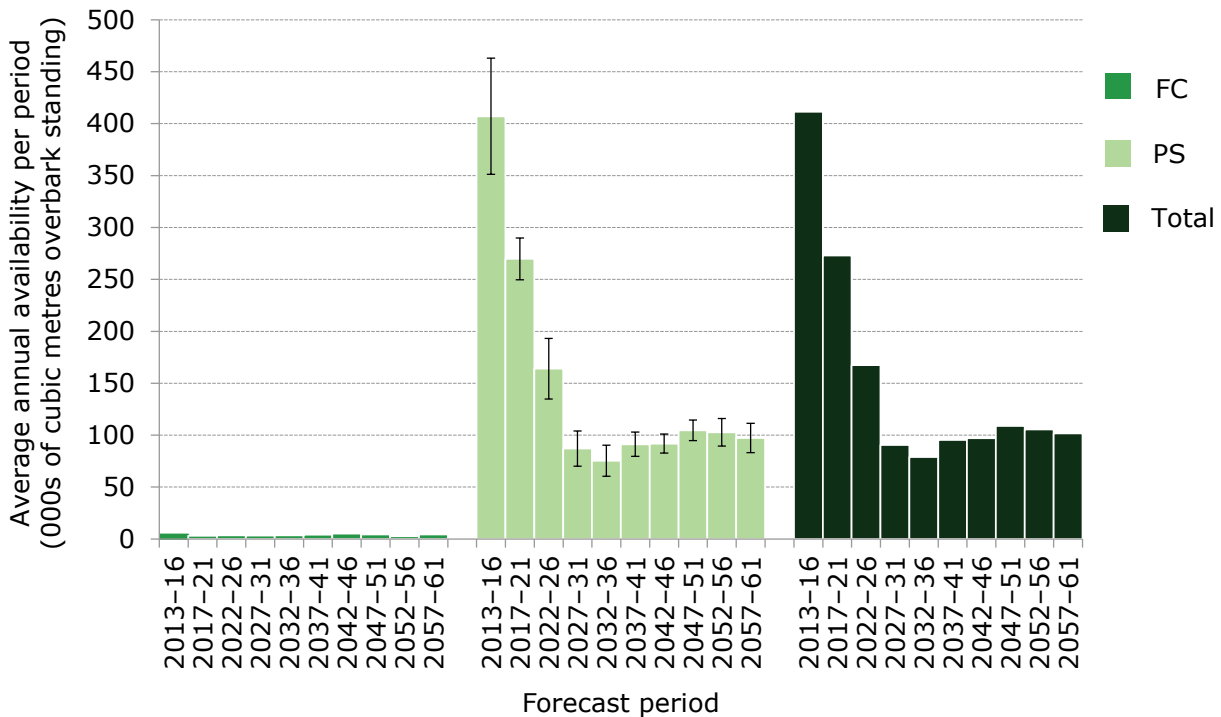


Figure 11 50-year forecast comparison of average annual hardwood availability – unrestricted biological potential for Private sector hardwoods



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Figure 12 50-year summary of softwood standing volume, increment and availability – unrestricted biological potential for Private sector hardwoods

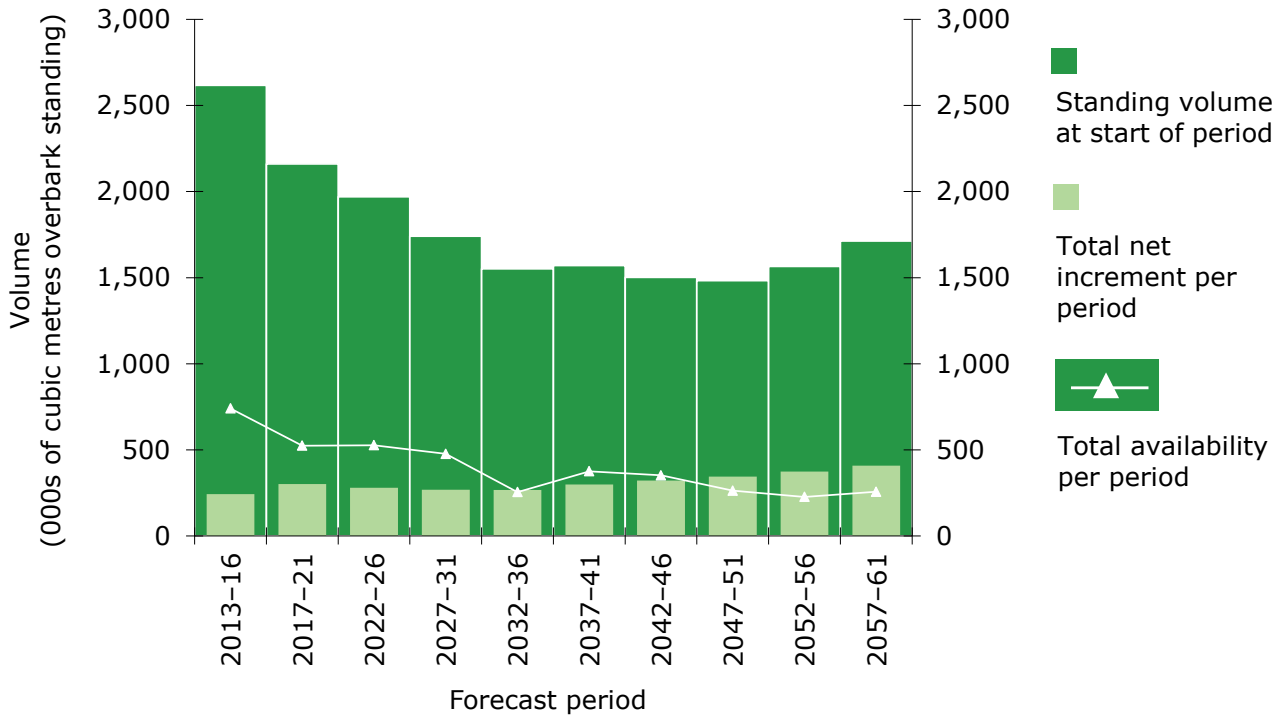
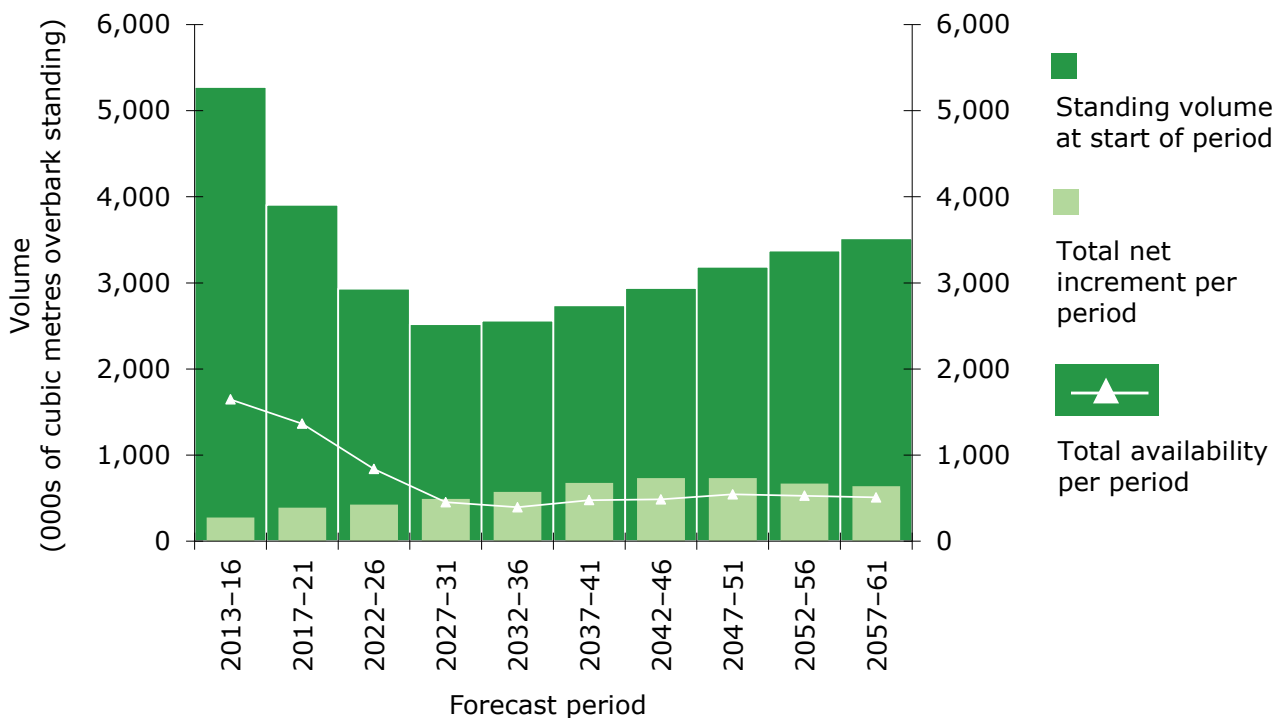


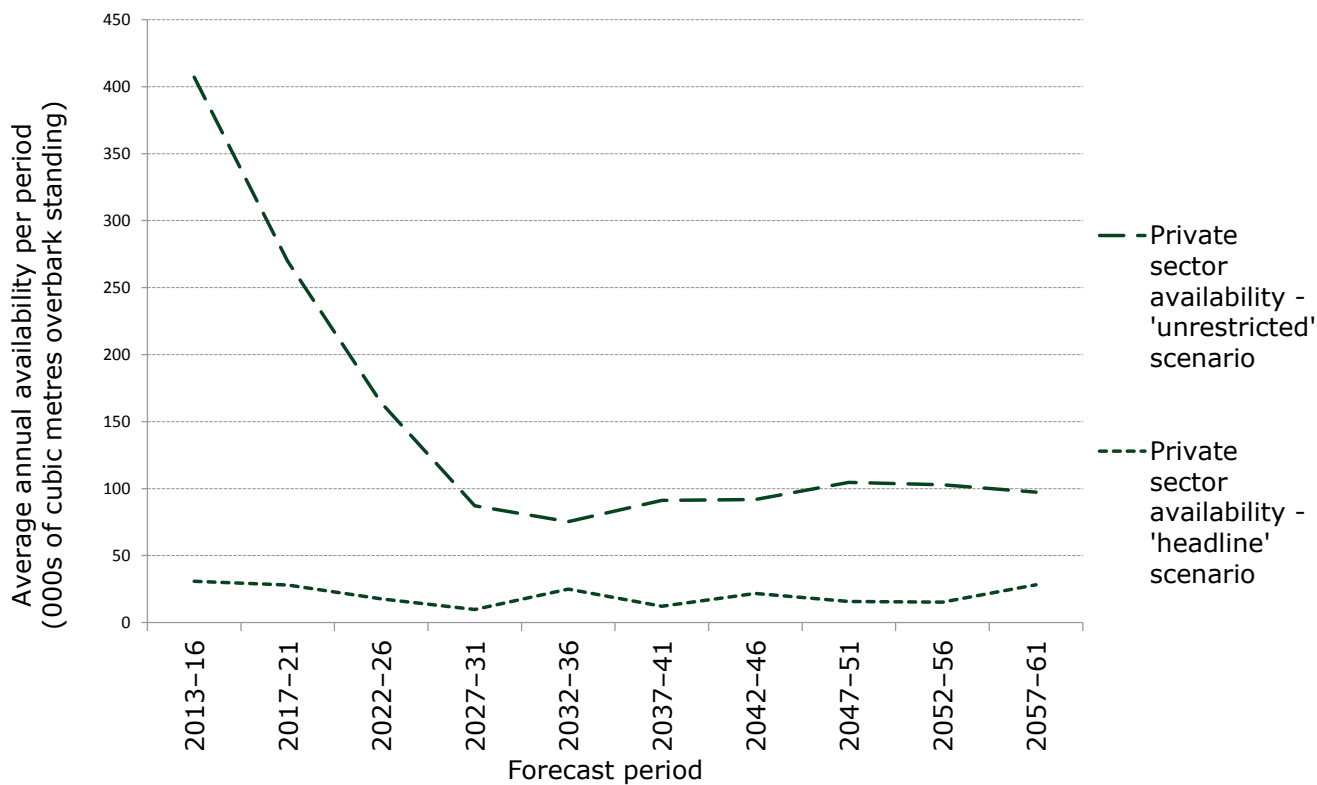
Figure 13 50-year summary of hardwood standing volume, increment and availability – unrestricted biological potential for Private sector hardwoods



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Comparison of hardwood production between harvesting scenarios

Figure 14 50-year forecast comparison of average annual hardwood timber availability



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Figure 15 15-year forecast comparison of average annual hardwood timber availability

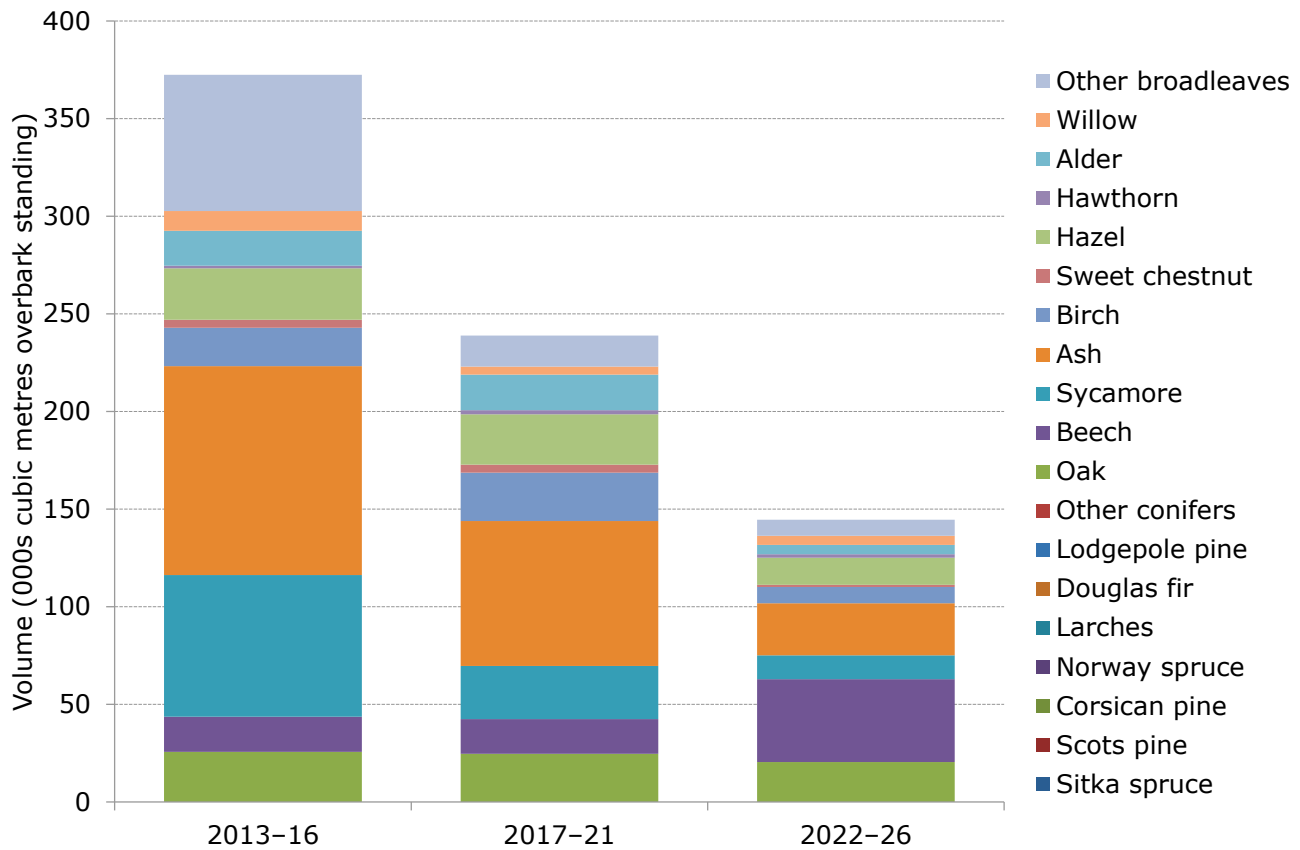


Table 16 15-year forecast comparison of average annual timber availability

Principal species	2013-16			2017-21			2022-26		
	Headline	Unrestricted volume (000 m³ obs)	Difference	Headline	Unrestricted volume (000 m³ obs)	Difference	Headline	Unrestricted volume (000 m³ obs)	Difference
All conifers	185	185	0	105	105	0	105	105	0
Sitka spruce	0	0	0	3	3	0	1	1	0
Scots pine	14	14	0	15	15	0	12	12	0
Corsican pine	79	79	0	28	28	0	26	26	0
Norway spruce	10	10	0	6	6	0	27	27	0
Larches	5	5	0	11	11	0	6	6	0
Douglas fir	37	37	0	17	17	0	7	7	0
Lodgepole pine	1	1	0	0	0	0	1	1	0
Other conifers	38	38	0	23	23	0	26	26	0
All broadleaves	35	411	376	31	273	242	21	168	146
Oak	4	30	26	5	30	25	2	23	20
Beech	6	24	18	11	29	18	12	55	42
Sycamore	3	76	73	1	28	27	1	13	12
Ash	20	127	107	10	85	74	3	30	27
Birch	2	22	20	2	27	25	1	9	8
Sweet chestnut	0	4	4	0	4	4	0	1	1
Hazel	0	26	26	0	26	26	1	15	14
Hawthorn	0	1	1	0	2	2	0	2	2
Alder	0	18	18	0	18	18	0	5	5
Willow	0	10	10	0	4	4	0	5	5
Other broadleaves	1	70	70	1	16	16	1	9	8
All species	216	593	376	132	374	242	126	272	146

NFI national reports and papers

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

- 2011 preliminary estimates of broadleaved species in British woodlands
- 2011 standing coniferous timber volume
- 25-year forecast of softwood availability
- 25-year forecast of coniferous standing volume and increment
- 2011 biomass in live woodland trees in Britain
- 2011 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 availability
- 50 year forecast of hardwood 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

National Forest Inventory Statistician: Alan Brewer