

National Forest Inventory statistics for Thames

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Thames

Map 1 Map of England and the aligned areas

The map shows shortened names for some of the aligned areas. The short names and their full equivalents are to be found in **Appendix A**.



Key findings for Thames

Thames (THS) has a land area of 725,400 hectares making it 9th largest out of the 14 aligned areas by land area. With 13.4% of this land covered by woodland, THS ranks 4th out of 14 in terms of percentage woodland cover. Some 3% of this woodland is under Forestry Commission ownership or management.

Scots pine is the most commonly occurring of the conifer species whether assessed by stocked area (41%), standing volume (44%) or number of trees (37%).

Oak is the most commonly occurring of the broadleaved species when assessed by stocked area (16%). Beech is the most commonly occurring of the broadleaved species when assessed by standing volume (24%). Hazel is the most commonly occurring of the broadleaved species when assessed by number of trees (14%).

Some 26% of standing coniferous volume is beyond the age of maximum mean annual increment (or above terminal height of 25m in higher windthrow risk areas). The harvesting assumptions applied in the forecast assume that a proportion of this volume will be felled over a period of time from the start of the forecast. Some 41% of conifer and mixed broadleaf/conifer sections (PS only) show evidence of thinning.

Overall 52% of standing broadleaved volume is beyond the age of maximum mean annual increment (or above terminal height of 25m in higher windthrow risk areas). Some 26% of broadleaved sections (PS only) show evidence of thinning.

Across THS:

- Ash is estimated as 12% of total stocked area (15% of broadleaved stocked area), 13% of standing volume (17% of broadleaved standing volume) and 10% of the number of trees (11% of the number of broadleaved trees).
- Oak is estimated as 13% of total stocked area (16% of broadleaved stocked area), 18% of standing volume (24% of broadleaved standing volume) and 8% of the number of trees (9% of the number of broadleaved trees).
- Sweet chestnut is estimated as 2% of total stocked area (2% of broadleaved stocked area), 2% of standing volume (3% of broadleaved standing volume) and 2% of the number of trees (2% of the number of broadleaved trees).
- Larch is estimated as 3% of total stocked area (17% of conifer stocked area), 4% of standing volume (17% of conifer standing volume) and 2% of the number of trees (14% of the number of conifer trees).

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Introduction

National forest inventories are carried out by the Forestry Commission to provide accurate, up-to-date information about the size, distribution, composition and condition of the forests and woodlands in Great Britain (GB). This information is essential for developing and monitoring policies and guidance to support sustainable forest management.

The current National Forest Inventory (NFI), which began in 2010, is a multipurpose operation that has involved the production of a forest and woodland map for Britain and a continuing programme of field surveys (the first cycle of field surveys completed in late 2015) of the mapped forest and woodland areas.

Information and data collected by the National Forest Inventory is being used for a number of purposes, including estimates and 25-year forecasts of forest metrics such as:

- standing volume
- timber availability
- tree growth and increment
- carbon stocks
- biomass

Estimates of aspects of the biodiversity and social value of forests and woodlands will also be provided by the NFI.

This report brings together key woodland information for England previously published across the range of NFI thematic reports. Within the NFI programme, results are presented by the NUTS 1 boundaries^{*}. This report heads a series of reports where the woodland statistics are broken down by aligned area. The data sources and methodology covering the suite of reports is to be found in the report for England and the aligned areas.

^{*} See <http://ec.europa.eu/eurostat/web/nuts/overview> for a description of the Nomenclature of territorial units for statistics (NUTS) classification system.

How the estimates are prepared

The methodology, data sources and assumptions are described in the England report. It is important that the estimates presented in this report are interpreted in the light of the information provided in the England report.

The methodology introduces the sub-compartment database and the National Forest Inventory. It describes the metrics presented in this report and how they are derived. The methodology covers how the FC and private sector (PS) forecasts are prepared and includes commentary on the assumptions made in order to calculate the forecast estimates. Finally the methodology covers the tree health metrics.

Note on the estimates

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 standard errors attached to Private sector estimates are expressed in relative terms (%) to the right of the relevant estimate and as \pm error bars in the figures. Percentages in the pie charts may also not sum to 100 due to rounding.

Due to biological and sampling constraints, for example where there is a very small population of a species within a particular region, the estimates may have a high associated standard error. Since this indicates a high level of uncertainty around those estimates then caution should be used when drawing any conclusions from these values as the estimate may not be representative of the real population. Such estimates have been 'lowlighted' in the tables.

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Woodland area statistics

Woodland area by woodland type

Figure 1 Woodland area by woodland type

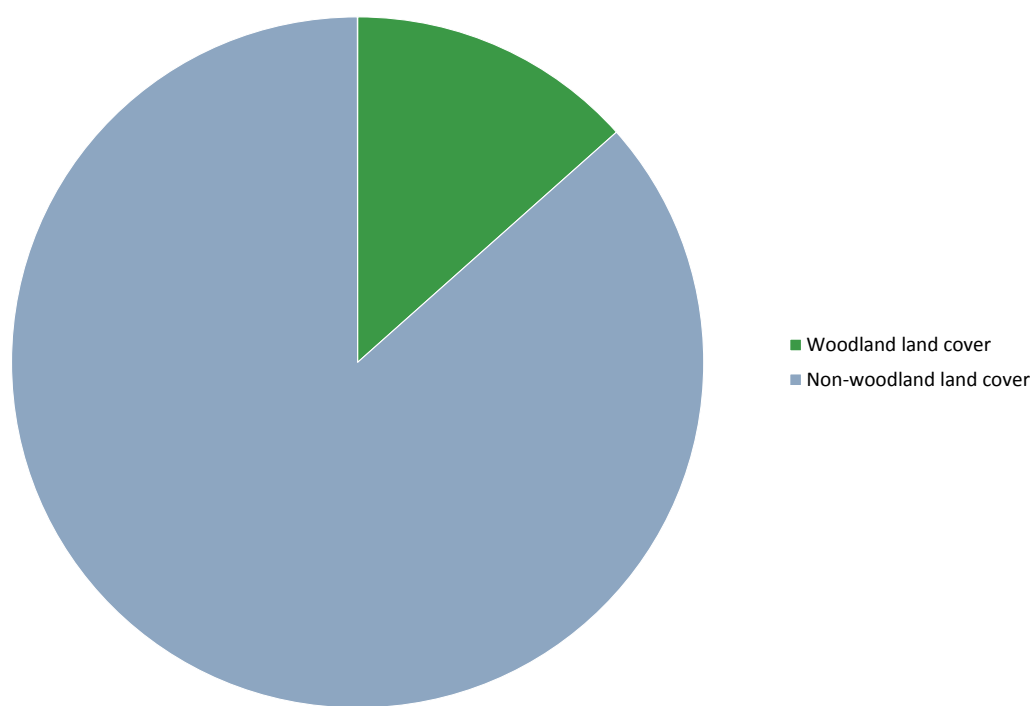


Table 1 Woodland area by woodland type

Woodland Type	Area (ha)	%
Thames		
Woodland	95,698	98%
Assumed woodland	1,101	1%
Low density	445	0%
Total mapped woodland	97,244	100%
Non-woodland area	628,156	
Land area	725,400	
Woodland land cover		13%
Non-woodland land cover		87%

Part 2 - what our woodlands are like today

Woodland area by ownership

Figure 2 Woodland area by ownership

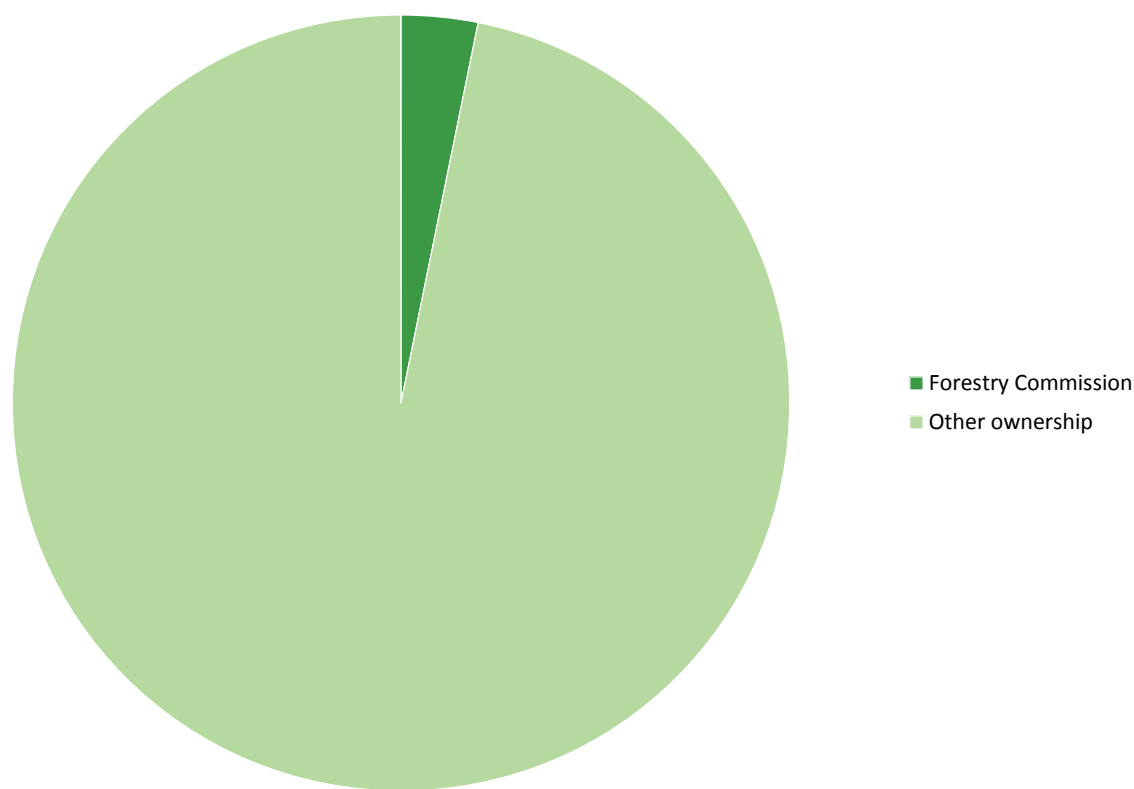


Table 2 Woodland area by ownership

Ownership	Area (ha)	% Woodland
Thames		
Forestry Commission	3,086	3%
Other ownership	94,158	97%
Total area of woodland	97,244	100%

Part 2 - what our woodlands are like today

Woodland area by interpreted forest type

Figure 3 Woodland area by interpreted forest type

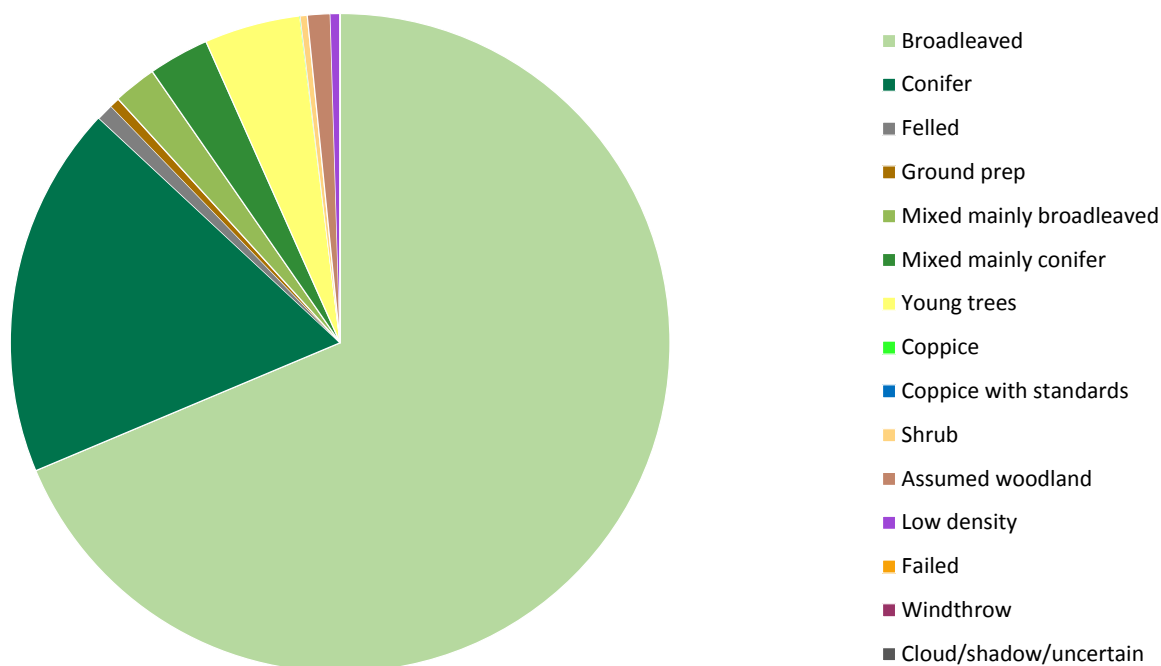


Table 3 Woodland area by interpreted forest type

Forest type	Total area (ha)	% of total area
Thames		
Broadleaved	66,757	69%
Conifer	17,799	18%
Felled	793	1%
Ground prep	471	0%
Mixed mainly broadleaved	2,057	2%
Mixed mainly conifer	2,890	3%
Young trees	4,566	5%
Coppice	36	0%
Coppice with standards	10	0%
Shrub	318	0%
Assumed woodland	1,090	1%
Low density	456	0%
Failed	0	0%
Windthrow	0	0%
Cloud/shadow/uncertain	0	0%
TOTALS	97,244	100%

Part 2 - what our woodlands are like today

Woodland area by interpreted forest type and woodland size

Figure 4 Woodland area by interpreted forest type and woodland size

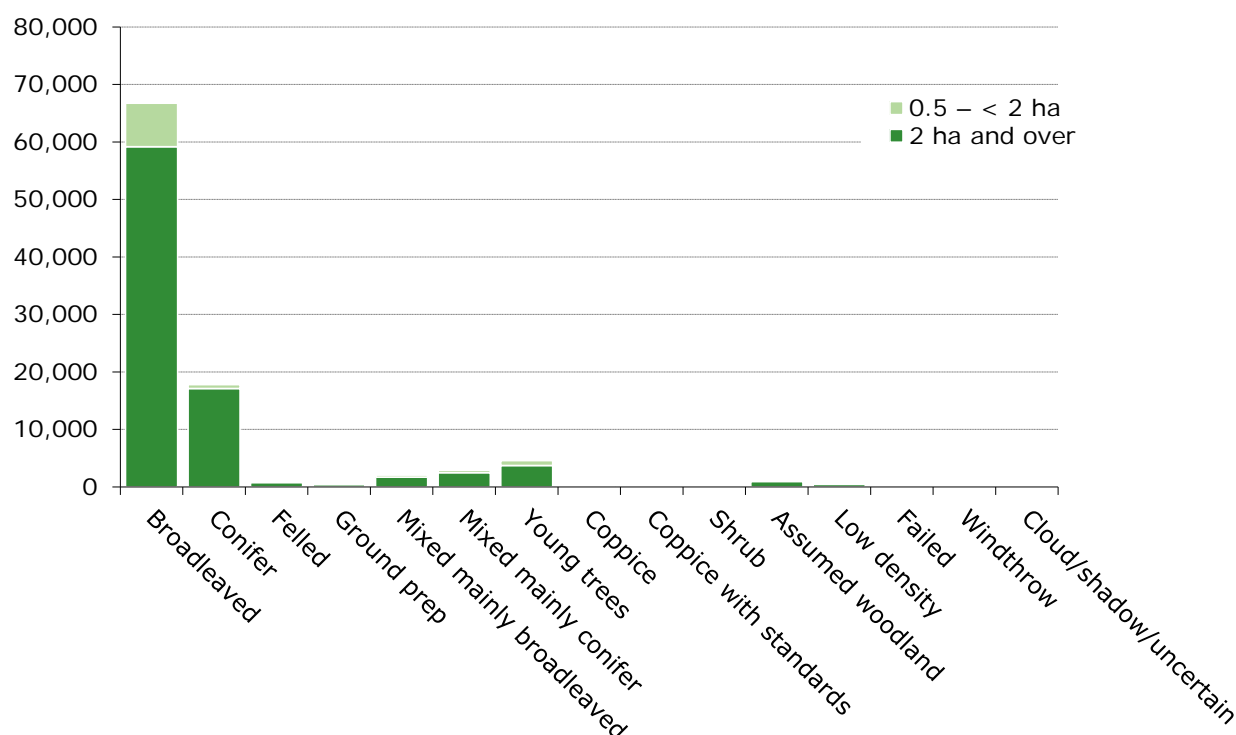


Table 4 Woodland area by interpreted woodland type and woodland size

Forest type	Woodland size		Total area (ha)
	2 ha and over	0.5 – < 2 ha	
Thames			
Broadleaved	59,188	7,569	66,757
Conifer	17,103	696	17,799
Felled	785	8	793
Ground prep	426	45	471
Mixed mainly broadleaved	1,699	358	2,057
Mixed mainly conifer	2,466	424	2,890
Young trees	3,718	849	4,566
Coppice	36	0	36
Coppice with standards	10	0	10
Shrub	239	79	318
Assumed woodland	958	131	1,090
Low density	436	20	456
Failed	0	0	0
Windthrow	0	0	0
Cloud/shadow/uncertain	0	0	0
TOTALS	87,064	10,180	97,244

Part 2 - what our woodlands are like today

Woodland area by interpreted forest type and ownership

Figure 5 Woodland area by interpreted forest type and ownership

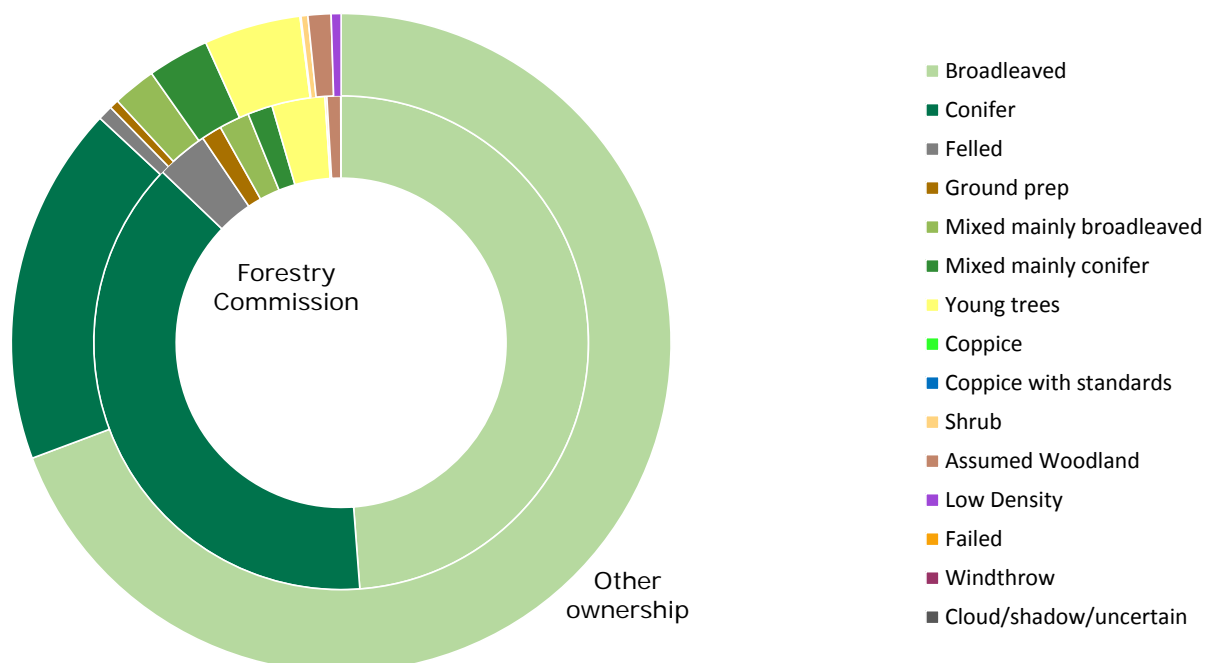


Table 5 Woodland area by interpreted forest type and ownership

Forest type	Forestry Commission		Other ownership	
	Area (ha)	% of total area	Area (ha)	% of total area
Thames				
Broadleaved	1,506	49%	65,251	69%
Conifer	1,184	38%	16,616	18%
Felled	105	3%	688	1%
Ground prep	41	1%	430	0%
Mixed mainly broadleaved	61	2%	1,996	2%
Mixed mainly conifer	50	2%	2,840	3%
Young trees	107	3%	4,460	5%
Coppice	0	0%	36	0%
Coppice with standards	0	0%	10	0%
Shrub	4	0%	314	0%
Assumed Woodland	28	1%	1,062	1%
Low Density	< 1	0%	455	0%
Failed	0	0%	0	0%
Windthrow	0	0%	0	0%
Cloud/shadow/uncertain	0	0%	0	0%
TOTALS	3,086	100%	94,158	100%

Part 2 - what our woodlands are like today

Woodland area by interpreted forest type, woodland size and ownership

Table 6 Woodland area by interpreted forest type, woodland size and ownership

Forest type	2 ha and over		0.5 – < 2 ha		Total area (ha)
	Forestry Commission	Other	Forestry Commission	Other	
Thames					
Broadleaved	1,502	57,686	3	7,565	66,757
Conifer	1,184	15,920	0	696	17,799
Felled	105	680	0	8	793
Ground prep	41	385	0	45	471
Mixed mainly broadleaved	61	1,638	0	358	2,057
Mixed mainly conifer	48	2,418	2	422	2,890
Young trees	107	3,611	0	849	4,567
Coppice	0	36	0	0	36
Coppice with standards	0	10	0	0	10
Shrub	4	235	0	79	318
Assumed woodland	28	931	0	131	1,090
Low Density	< 1	435	0	20	456
Failed	0	0	0	0	0
Windthrow	0	0	0	0	0
Cloud/shadow/uncertain	0	0	0	0	0
Totals	3,081	83,983	5	10,174	97,244

Part 2 - what our woodlands are like today

Woodland area by size class distribution

Figure 6 Woodland area by size class distribution

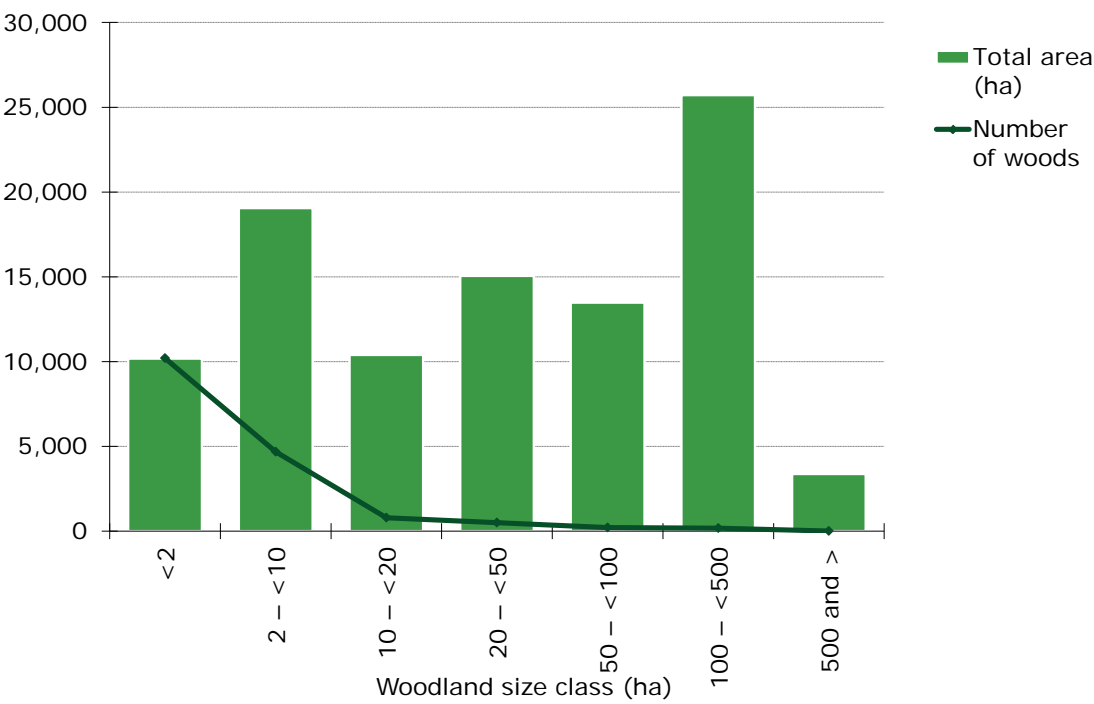


Table 7 Woodland area by size class distribution

Size class (ha)	Total area (ha)	Number of woods	% of total area	Mean wood area (ha)
Thames				
<2	10,180	10,194	10%	< 1
2 – <10	19,050	4,682	20%	4
10 – <20	10,396	785	11%	13
20 – <50	15,058	497	15%	30
50 – <100	13,480	212	14%	64
100 – <500	25,712	171	26%	150
500 and >	3,368	4	3%	842
All woods	97,244	16,545	100%	6

Part 2 - what our woodlands are like today

Open areas in woodland by land use type

Figure 7 Open areas in woodland by land use type

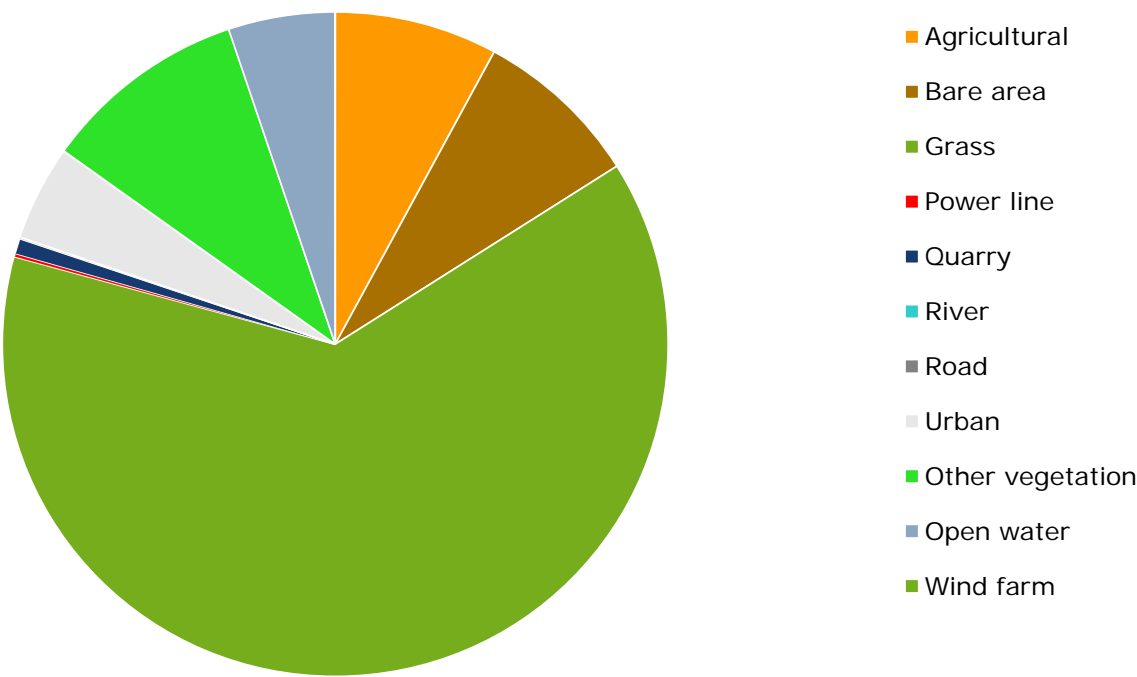


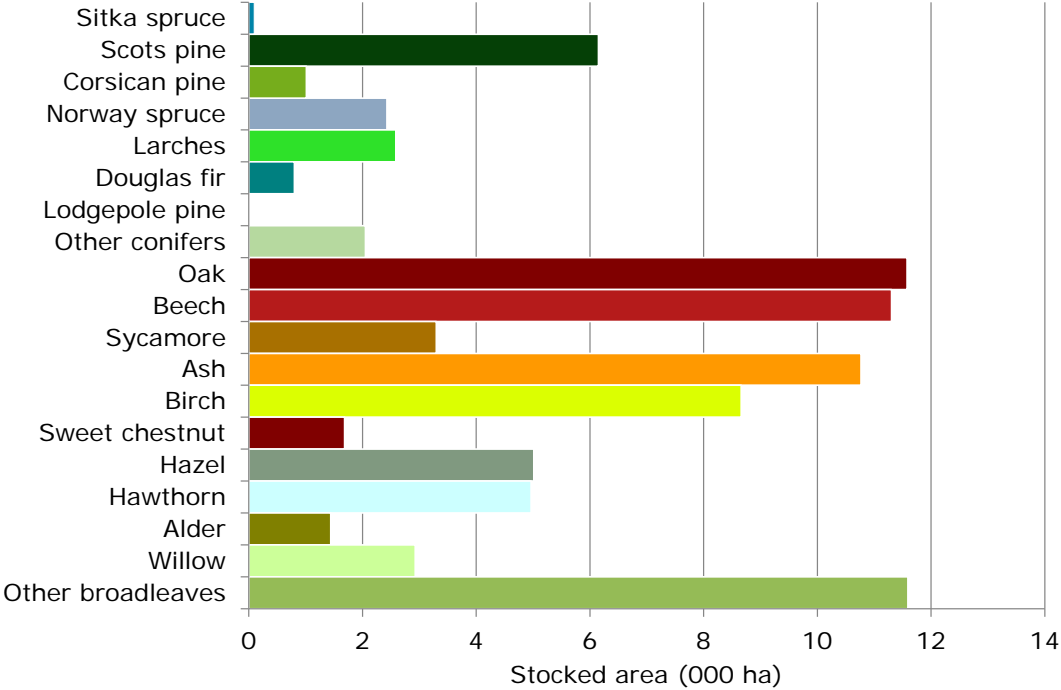
Table 8 Open areas in woodland by land use type

Interpreted open area	Total area (ha)	% of total area
Thames		
Agricultural	209	8%
Bare area	214	8%
Grass	1,668	63%
Power line	4	0%
Quarry	19	1%
River	< 1	0%
Road	1	0%
Urban	122	5%
Other vegetation	263	10%
Open water	137	5%
Wind farm	0	0%
TOTALS	2,637	100%

Net area under canopy

Stocked area by species

Figure 8 Stocked area by principal tree species



Part 2 - what our woodlands are like today

Table 9 Stocked area by principal tree species

Principal species	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Conifers				
Sitka spruce	< 0.1	< 0.1	41	< 0.1
Scots pine	0.2	5.9	13	6.1
Corsican pine	0.3	0.7	40	1.0
Norway spruce	0.2	2.2	17	2.4
Larches	< 0.1	2.5	17	2.6
Douglas fir	0.1	0.7	33	0.8
Lodgepole pine	< 0.1	0.0	-	< 0.1
Other conifers	0.2	1.9	18	2.1
All conifers	1.1	14.0	6	15.1
Broadleaves				
Oak	0.4	11.1	8	11.6
Beech	0.4	10.9	9	11.3
Sycamore	< 0.1	3.3	14	3.3
Ash	< 0.1	10.7	8	10.8
Birch	0.1	8.5	9	8.7
Sweet chestnut	< 0.1	1.7	20	1.7
Hazel	< 0.1	5.0	11	5.0
Hawthorn	0.0	5.0	12	5.0
Alder	< 0.1	1.4	22	1.4
Willow	0.0	2.9	17	2.9
Other broadleaves	0.3	11.3	7	11.6
All broadleaves	1.4	72.2	2	73.6
All species				
All species	2.6	86.0	1	88.6

Part 2 - what our woodlands are like today

Figure 9 Stocked area by principal conifer species

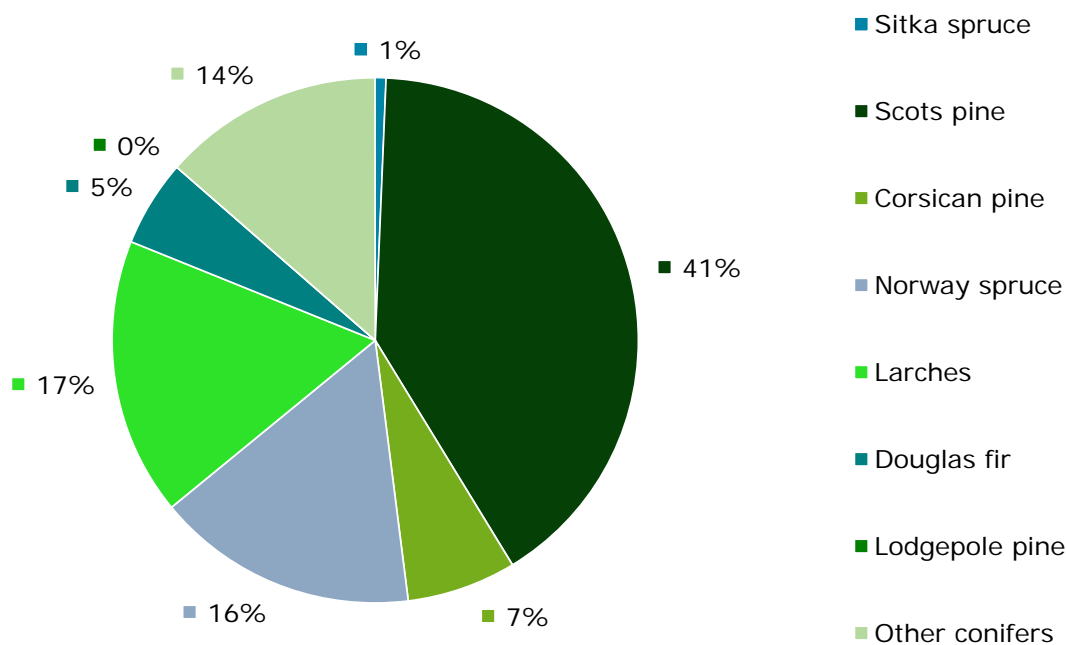
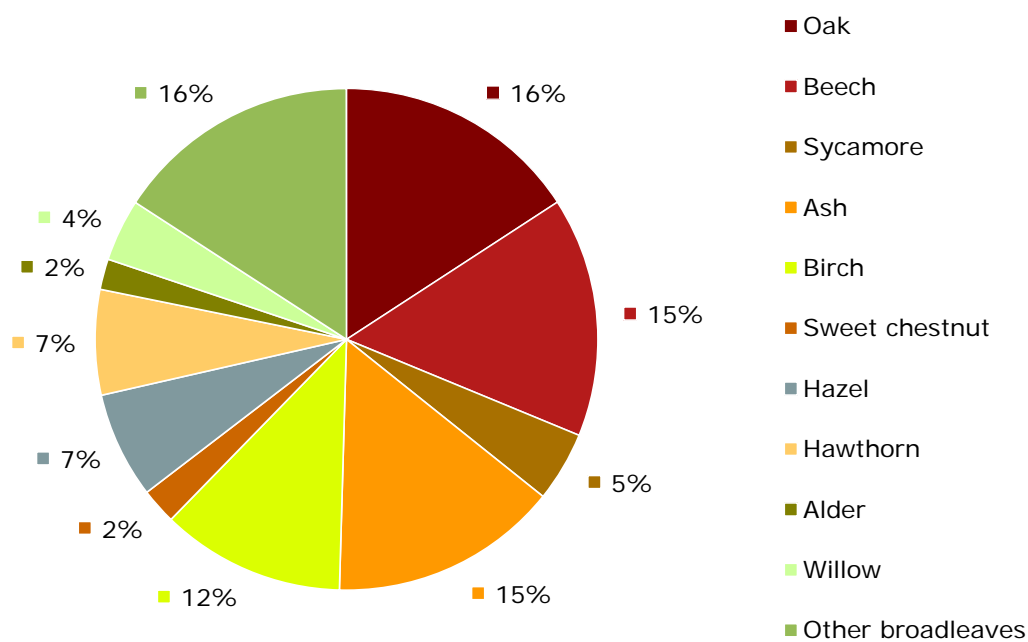


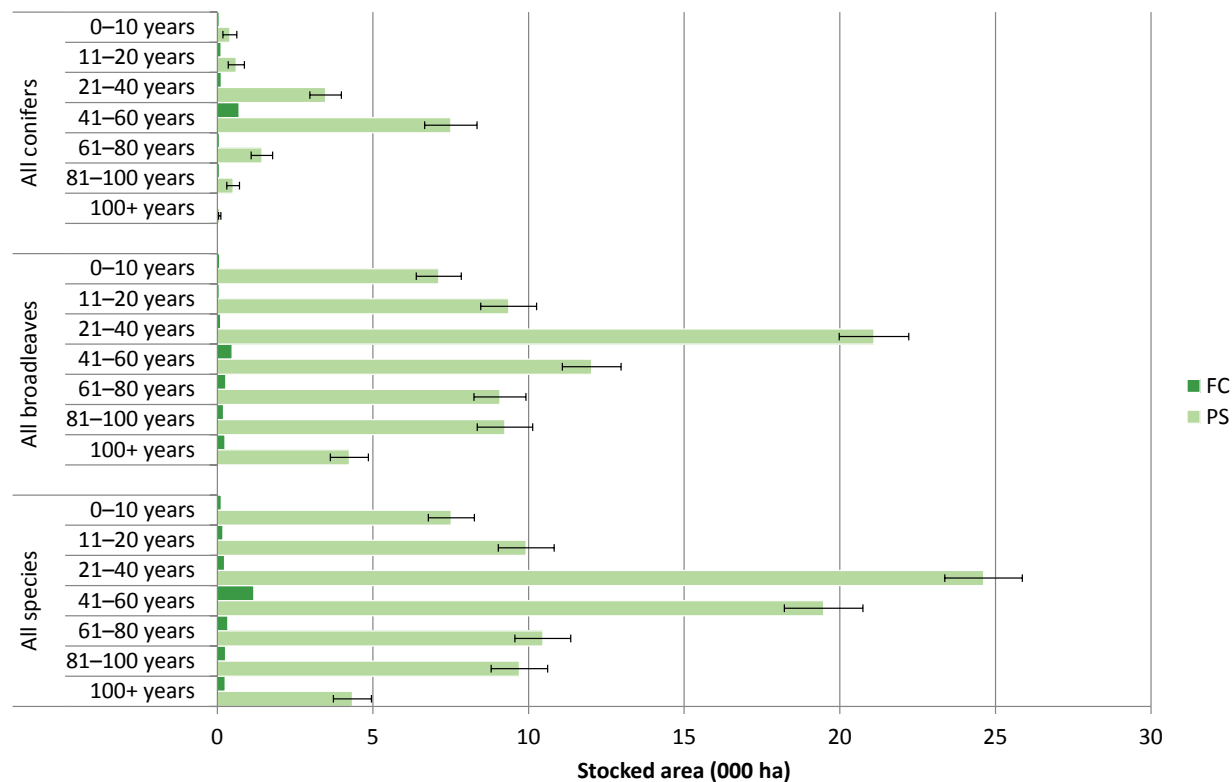
Figure 10 Stocked area by principal broadleaved species



Part 2 - what our woodlands are like today

Stocked area by age class

Figure 11 Stocked area by age class



Part 2 - what our woodlands are like today

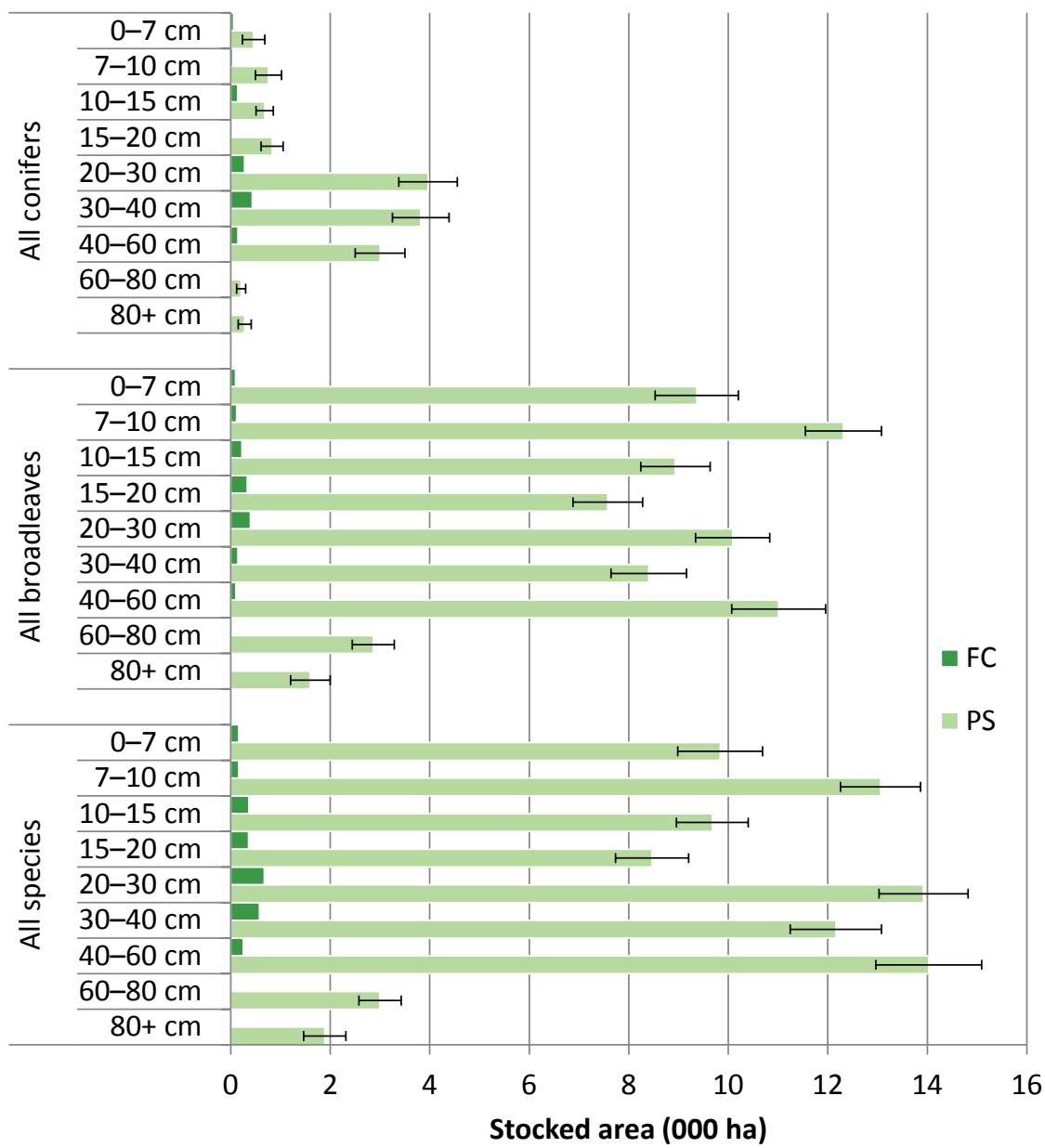
Table 10 Stocked area by age class

Age class (years)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers				
0–10	< 0.1	0.4	55	0.5
11–20	0.1	0.6	43	0.7
21–40	0.1	3.5	15	3.6
41–60	0.7	7.5	11	8.2
61–80	< 0.1	1.4	24	1.5
81–100	< 0.1	0.5	40	0.6
100+	< 0.1	< 0.1	48	< 0.1
Total	1.1	14.0	6	15.1
All broadleaves				
0–10	< 0.1	7.1	10	7.2
11–20	< 0.1	9.4	10	9.4
21–40	0.1	21.1	5	21.2
41–60	0.5	12.0	8	12.5
61–80	0.3	9.1	9	9.4
81–100	0.2	9.2	10	9.4
100+	0.2	4.2	14	4.5
Total	1.4	72.2	2	73.6
All species				
0–10	0.1	7.5	10	7.6
11–20	0.2	9.9	9	10.1
21–40	0.2	24.6	5	24.9
41–60	1.2	19.5	6	20.7
61–80	0.3	10.5	9	10.8
81–100	0.3	9.7	9	10.0
100+	0.2	4.3	14	4.6
Total	2.6	86.0	1	88.6

Part 2 - what our woodlands are like today

Stocked area by mean stand dbh class

Figure 12 Stocked area by mean stand dbh class



Part 2 - what our woodlands are like today

Table 11 Stocked area by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
All conifers				
0–7	< 0.1	0.5	49	0.5
7–10	< 0.1	0.8	35	0.8
10–15	0.1	0.7	25	0.8
15–20	< 0.1	0.8	27	0.9
20–30	0.3	4.0	15	4.2
30–40	0.4	3.8	15	4.3
40–60	0.1	3.0	17	3.1
60–80	< 0.1	0.2	44	0.2
80+	< 0.1	0.3	46	0.3
Total	1.1	14.0	6	15.1
All broadleaves				
0–7	< 0.1	9.4	9	9.5
7–10	0.1	12.3	6	12.4
10–15	0.2	8.9	8	9.2
15–20	0.3	7.6	9	7.9
20–30	0.4	10.1	7	10.5
30–40	0.1	8.4	9	8.5
40–60	0.1	11.0	9	11.1
60–80	< 0.1	2.9	15	2.9
80+	< 0.1	1.6	25	1.6
Total	1.4	72.2	2	73.6
All species				
0–7	0.2	9.8	9	10.0
7–10	0.2	13.1	6	13.2
10–15	0.4	9.7	7	10.0
15–20	0.4	8.5	9	8.8
20–30	0.7	13.9	6	14.6
30–40	0.6	12.2	8	12.7
40–60	0.3	14.0	8	14.3
60–80	< 0.1	3.0	14	3.0
80+	< 0.1	1.9	23	1.9
Total	2.6	86.0	1	88.6

Part 2 - what our woodlands are like today

Clearfelled area

Table 12 Clearfelled area

Clearfelled area	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames	0.2	0.8	45	1.0

Comparison of mapped area estimates and stocked area estimates

Figure 13 Simplified comparison of mapped area and stocked area

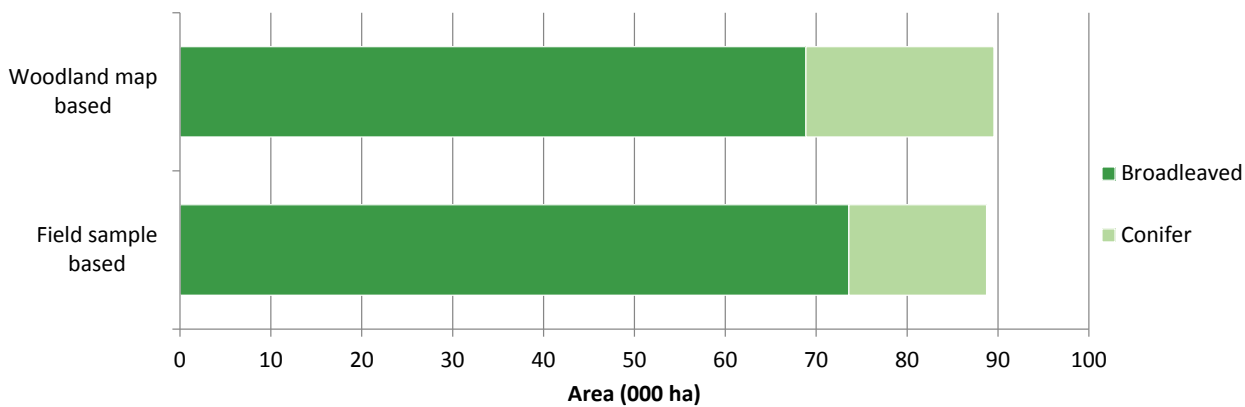


Table 13 Simplified comparison of mapped area and stocked area

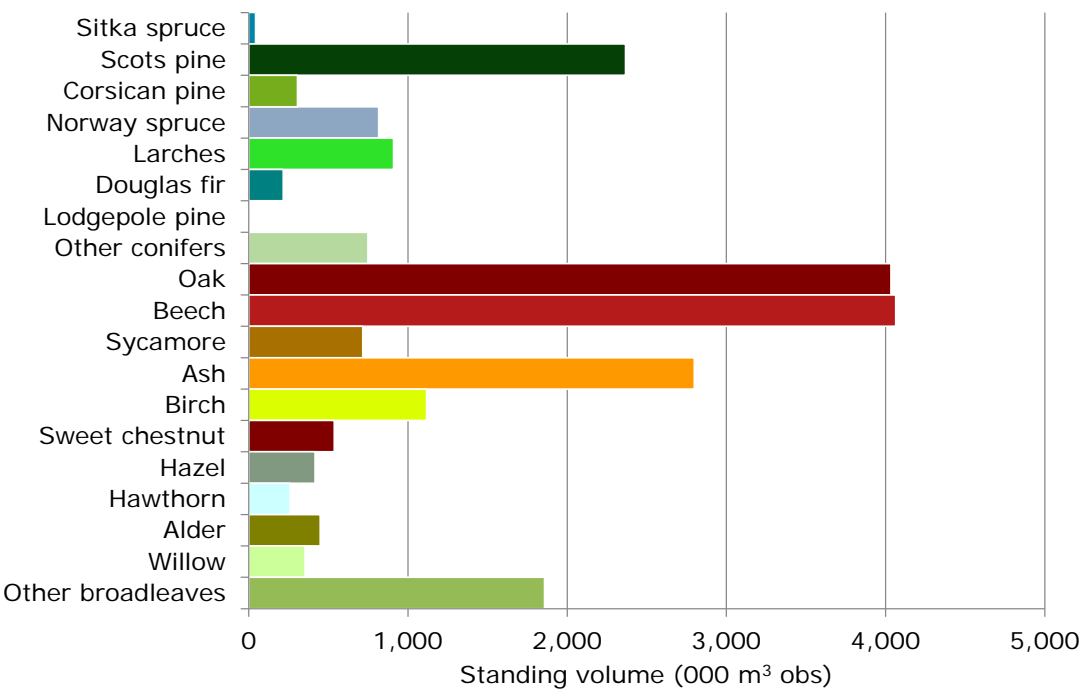
	Woodland map based	Field sample based
	area (000 ha)	
Thames		
Broadleaved	68.9	73.6
Conifer	20.7	15.1

The broadleaved class includes broadleaved, mixed mainly broadleaved, coppice and coppice with standards. The conifer class includes conifer and mixed mainly conifer. The transition class is excluded from this table as it is not possible to differentiate between conifer and broadleaves with aerial photography interpretation. The area of young trees is included in the field sample based estimates.

Standing volume

Standing volume by species

Figure 14 Standing volume by principal tree species



Part 2 - what our woodlands are like today

Table 14 Standing volume by principal tree species

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	< 1	41	40	41
Scots pine	46	2,320	14	2,366
Corsican pine	64	242	42	306
Norway spruce	58	758	18	816
Larches	15	894	19	909
Douglas fir	33	184	33	217
Lodgepole pine	< 1	0	-	< 1
Other conifers	58	691	23	749
All conifers	273	5,135	7	5,408
Broadleaves				
Oak	84	3,950	10	4,033
Beech	56	4,007	12	4,063
Sycamore	1	715	21	716
Ash	16	2,783	10	2,798
Birch	12	1,105	13	1,117
Sweet chestnut	2	535	22	537
Hazel	1	415	17	416
Hawthorn	0	260	17	260
Alder	1	448	29	449
Willow	0	355	29	355
Other broadleaves	46	1,811	15	1,858
All broadleaves	220	16,472	4	16,691
All species				
All species	493	21,562	3	22,055

Part 2 - what our woodlands are like today

Figure 15 Standing volume by principal conifer species

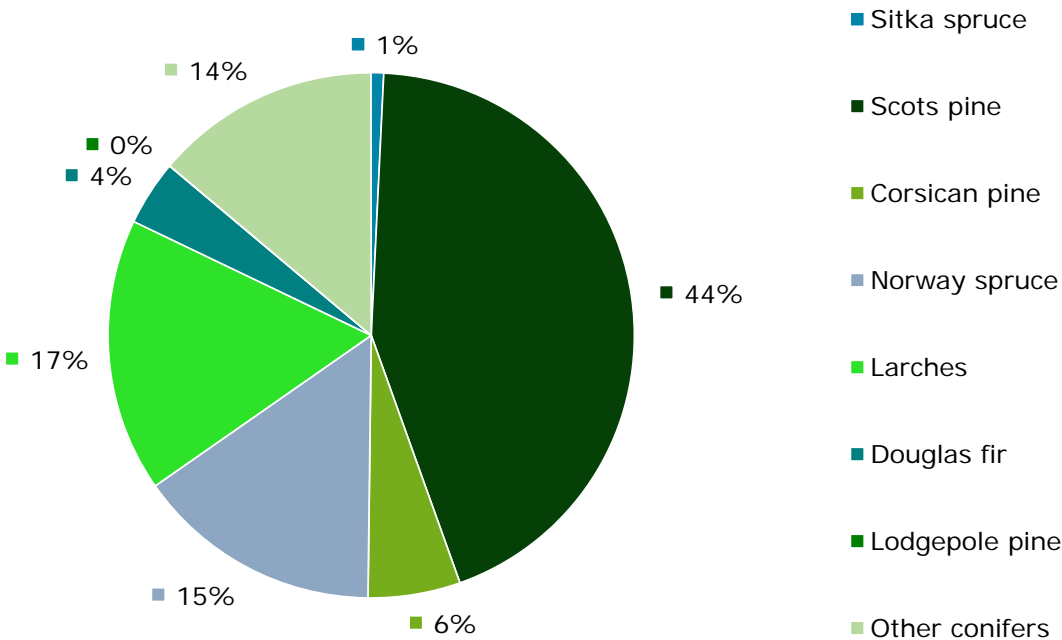
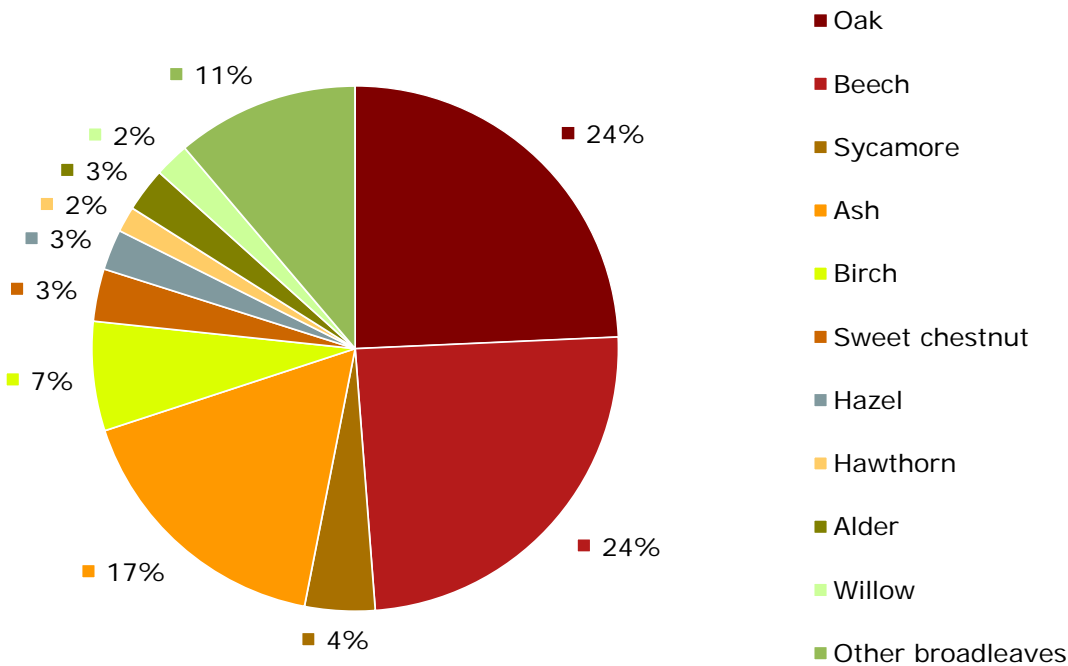


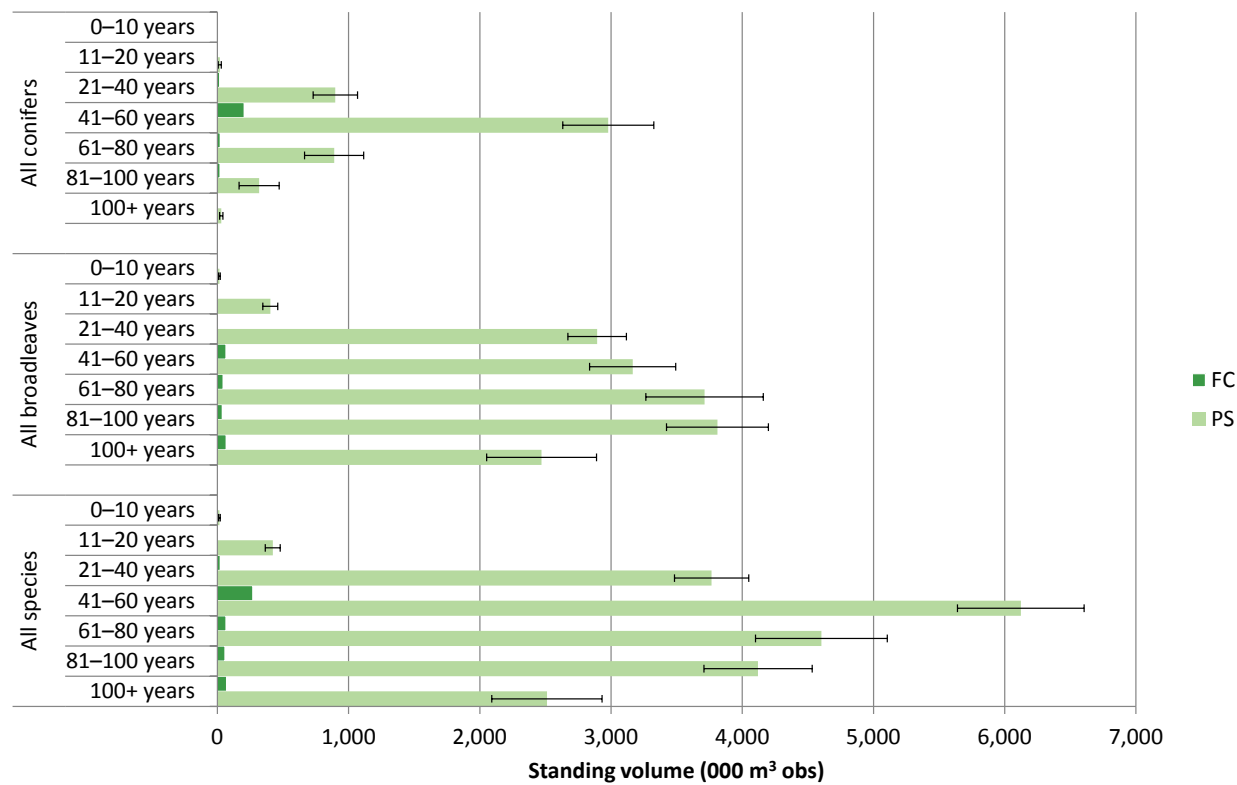
Figure 16 Standing volume by principal broadleaved species



Part 2 - what our woodlands are like today

Standing volume by age class

Figure 17 Standing volume by age class



Part 2 - what our woodlands are like today

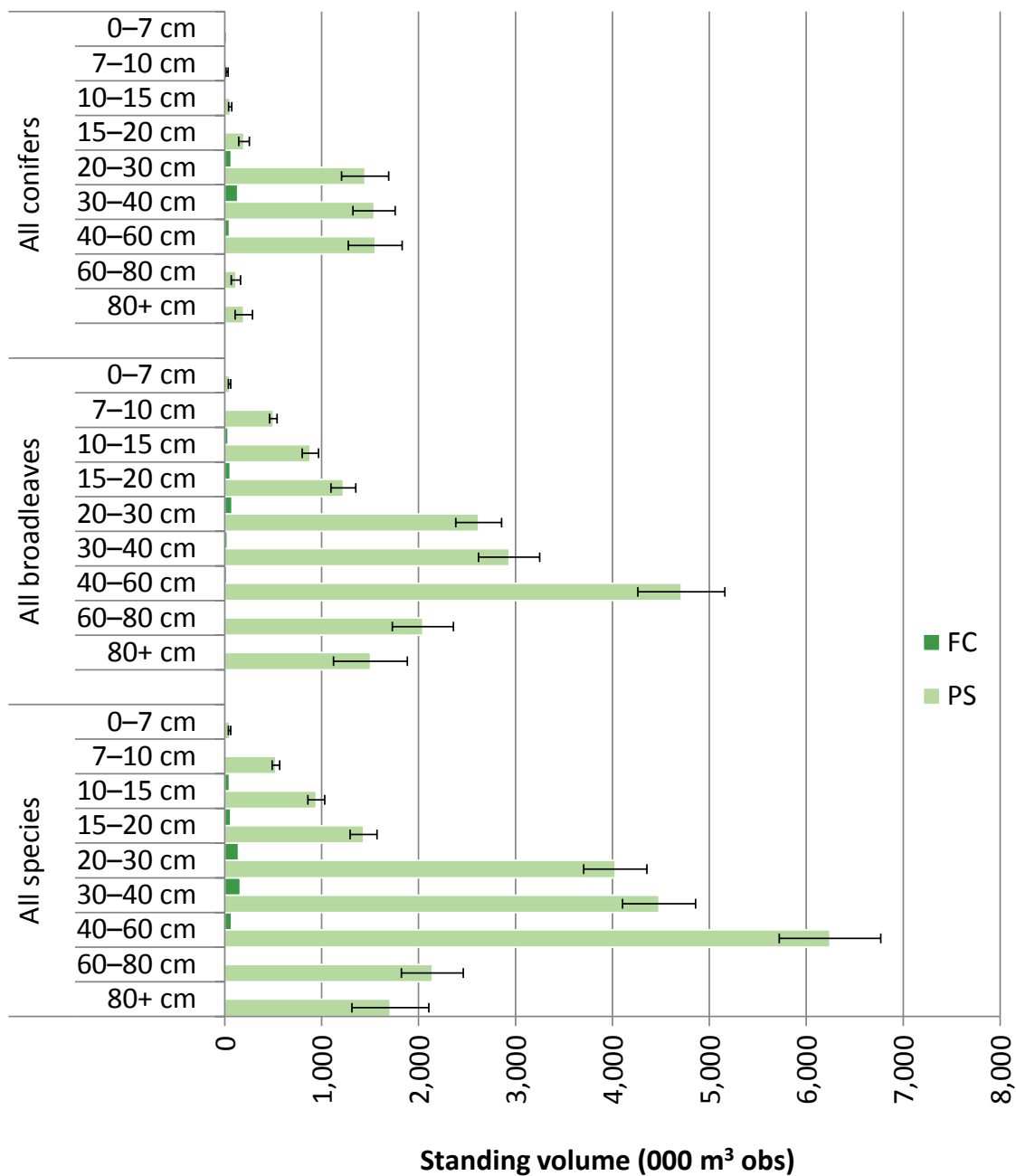
Table 15 Standing volume by age class

Age class (years)	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
0–10	< 1	< 1	73	< 1
11–20	6	18	60	25
21–40	17	899	19	916
41–60	205	2,979	12	3,184
61–80	22	890	25	912
81–100	21	319	48	340
100+	2	30	43	32
Total	273	5,135	7	5,408
All broadleaves				
0–10	0	16	43	16
11–20	< 1	404	14	404
21–40	5	2,894	8	2,899
41–60	65	3,165	10	3,230
61–80	44	3,712	12	3,756
81–100	37	3,810	10	3,847
100+	67	2,471	17	2,538
Total	220	16,472	4	16,691
All species				
0–10	< 1	16	42	16
11–20	7	422	13	430
21–40	23	3,766	8	3,789
41–60	270	6,122	8	6,393
61–80	65	4,603	11	4,668
81–100	58	4,120	10	4,178
100+	70	2,512	17	2,581
Total	493	21,562	3	22,055

Part 2 - what our woodlands are like today

Standing volume by mean stand dbh class

Figure 18 Standing volume by stand mean dbh class



Part 2 - what our woodlands are like today

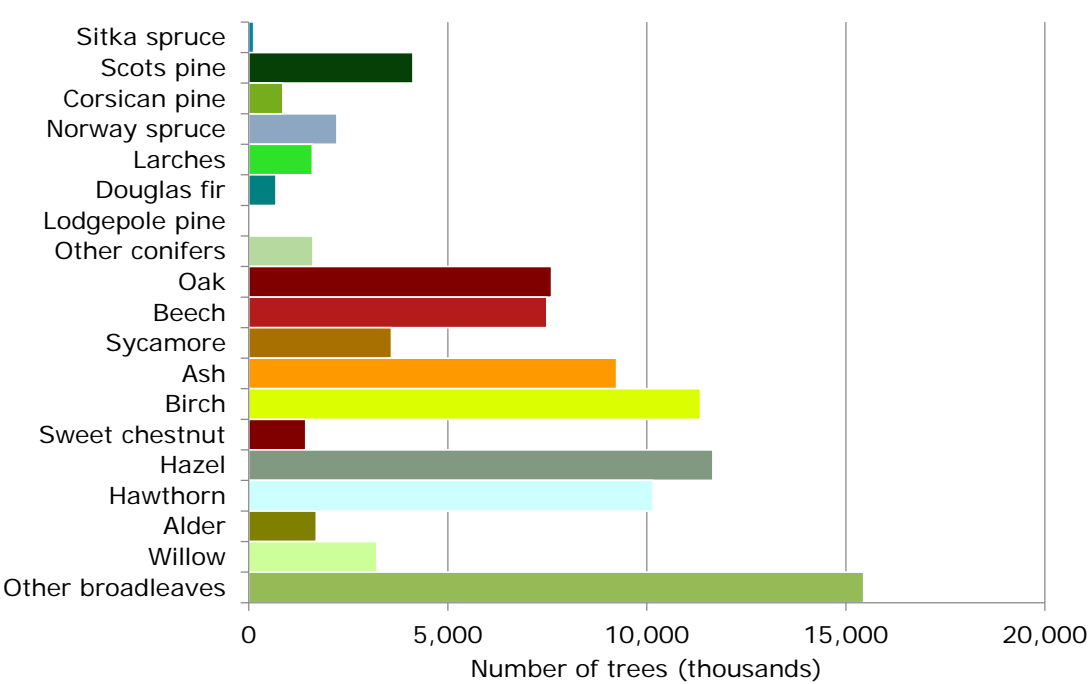
Table 16 Standing volume by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE%	volume (000 m ³ obs)
All conifers				
0–7	< 1	< 1	61	< 1
7–10	< 1	24	42	25
10–15	13	58	28	71
15–20	5	199	28	203
20–30	68	1,448	17	1,516
30–40	134	1,541	14	1,676
40–60	48	1,553	18	1,601
60–80	4	116	41	120
80+	< 1	196	45	196
Total	273	5,135	7	5,408
All broadleaves				
0–7	< 1	50	24	50
7–10	4	501	8	505
10–15	34	883	10	917
15–20	56	1,224	10	1,280
20–30	74	2,620	9	2,694
30–40	27	2,934	11	2,961
40–60	22	4,711	10	4,733
60–80	2	2,045	15	2,047
80+	< 1	1,504	25	1,504
Total	220	16,472	4	16,691
All species				
0–7	< 1	50	24	51
7–10	5	527	7	532
10–15	47	945	9	992
15–20	61	1,432	10	1,493
20–30	142	4,030	8	4,172
30–40	161	4,482	8	4,643
40–60	70	6,244	8	6,315
60–80	6	2,142	15	2,148
80+	< 1	1,709	23	1,709
Total	493	21,562	3	22,055

Number of measureable trees

Number of measureable trees by species

Figure 19 Number of measureable trees by principal tree species



Part 2 - what our woodlands are like today

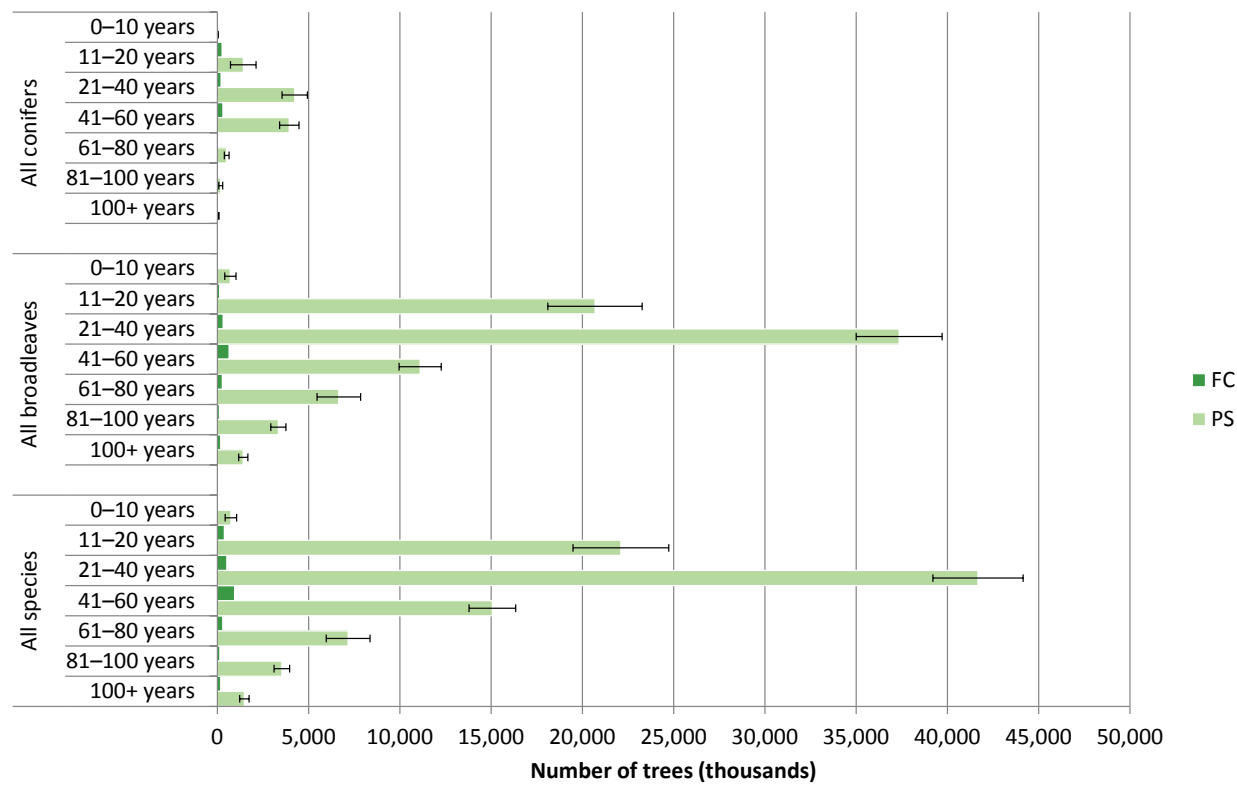
Table 17 Number of measureable trees by principal tree species

Principal species	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Conifers				
Sitka spruce	< 1	117	50	117
Scots pine	99	4,025	19	4,124
Corsican pine	416	439	48	855
Norway spruce	115	2,098	19	2,214
Larches	58	1,540	22	1,598
Douglas fir	43	641	57	684
Lodgepole pine	< 1	0	-	< 1
Other conifers	94	1,521	22	1,615
All conifers	825	10,386	10	11,211
Broadleaves				
Oak	358	7,248	13	7,606
Beech	417	7,070	12	7,487
Sycamore	8	3,576	16	3,584
Ash	134	9,108	11	9,242
Birch	197	11,153	12	11,350
Sweet chestnut	37	1,394	24	1,431
Hazel	30	11,633	13	11,663
Hawthorn	0	10,155	17	10,155
Alder	14	1,680	27	1,695
Willow	0	3,217	18	3,217
Other broadleaves	465	14,982	9	15,447
All broadleaves	1,660	81,289	4	82,950
All species				
All species	2,485	91,782	4	94,267

Part 2 - what our woodlands are like today

Number of measureable trees by age class

Figure 20 Number of measureable trees by age class



Part 2 - what our woodlands are like today

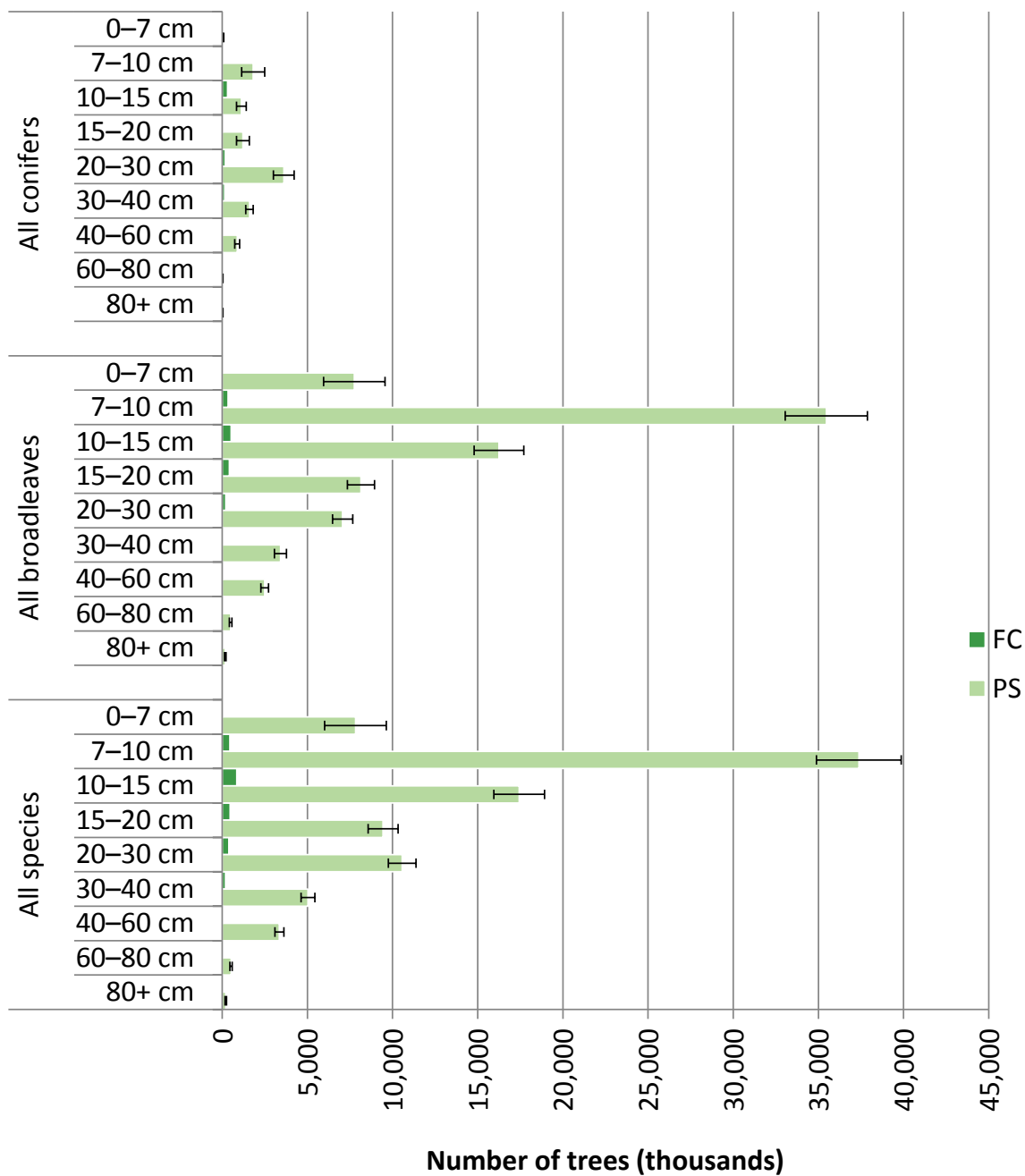
Table 18 Number of measureable trees by age class

Age class (years)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
All conifers				
0–10	4	26	73	30
11–20	260	1,424	49	1,684
21–40	202	4,238	16	4,440
41–60	306	3,941	13	4,247
61–80	23	512	25	535
81–100	24	187	57	211
100+	6	58	64	64
Total	825	10,386	10	11,211
All broadleaves				
0–10	0	713	44	713
11–20	129	20,695	12	20,824
21–40	320	37,356	6	37,677
41–60	643	11,111	10	11,755
61–80	272	6,654	18	6,927
81–100	116	3,342	12	3,458
100+	179	1,418	18	1,597
Total	1,660	81,289	4	82,950
All species				
0–10	4	740	42	745
11–20	389	22,109	12	22,498
21–40	522	41,675	6	42,197
41–60	949	15,069	8	16,018
61–80	296	7,167	17	7,462
81–100	140	3,536	12	3,677
100+	185	1,484	17	1,670
Total	2,485	91,782	4	94,267

Part 2 - what our woodlands are like today

Number of measureable trees by mean stand dbh class

Figure 21 Number of measureable trees by mean stand dbh class



Part 2 - what our woodlands are like today

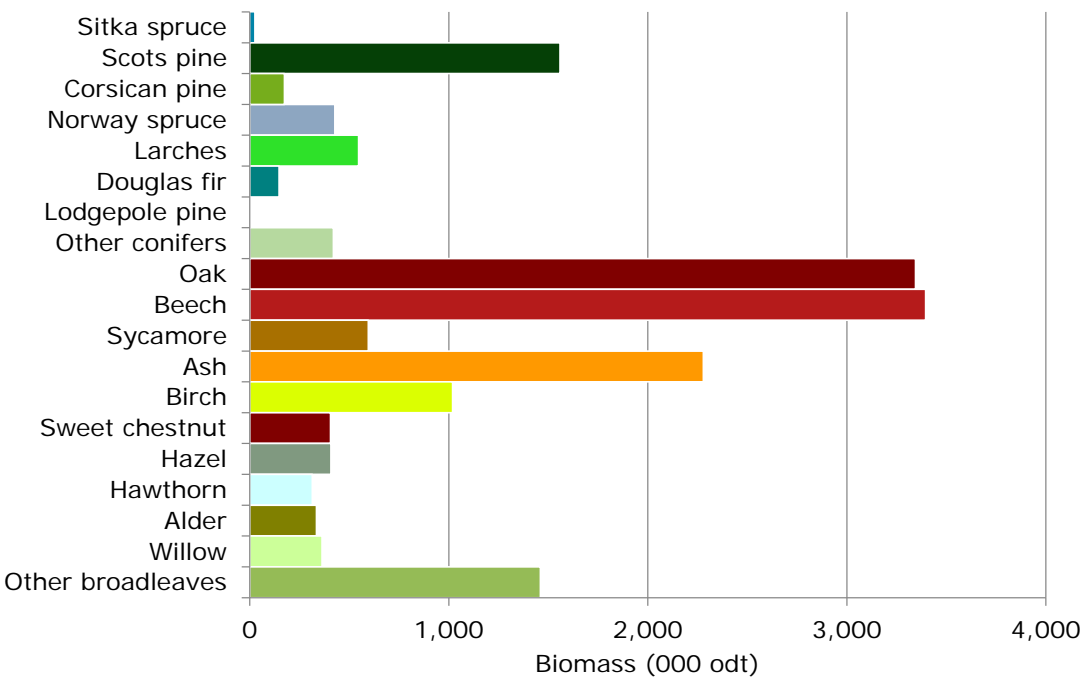
Table 19 Number of measureable trees by mean stand dbh class

Mean stand DBH	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
All conifers				
0–7 cm	< 1	54	64	54
7–10 cm	98	1,821	37	1,919
10–15 cm	322	1,127	25	1,449
15–20 cm	33	1,222	31	1,255
20–30 cm	180	3,618	17	3,798
30–40 cm	158	1,605	14	1,763
40–60 cm	32	880	17	913
60–80 cm	1	31	39	32
80+ cm	< 1	28	45	28
Total	825	10,386	10	11,211
All broadleaves				
0–7 cm	88	7,757	23	7,845
7–10 cm	349	35,468	7	35,817
10–15 cm	532	16,249	9	16,781
15–20 cm	428	8,154	10	8,581
20–30 cm	211	7,070	8	7,280
30–40 cm	38	3,425	10	3,463
40–60 cm	15	2,495	9	2,510
60–80 cm	< 1	496	14	497
80+ cm	< 1	176	25	176
Total	1,660	81,289	4	82,950
All species				
0–7 cm	88	7,825	23	7,914
7–10 cm	447	37,378	7	37,825
10–15 cm	853	17,442	9	18,296
15–20 cm	461	9,442	9	9,903
20–30 cm	391	10,567	8	10,958
30–40 cm	196	5,040	8	5,236
40–60 cm	47	3,359	8	3,406
60–80 cm	2	521	13	523
80+ cm	< 1	205	22	205
Total	2,485	91,782	4	94,267

Biomass stocks in live woodland trees

Biomass stocks by species

Figure 22 Biomass stocks by principal tree species



Part 2 - what our woodlands are like today

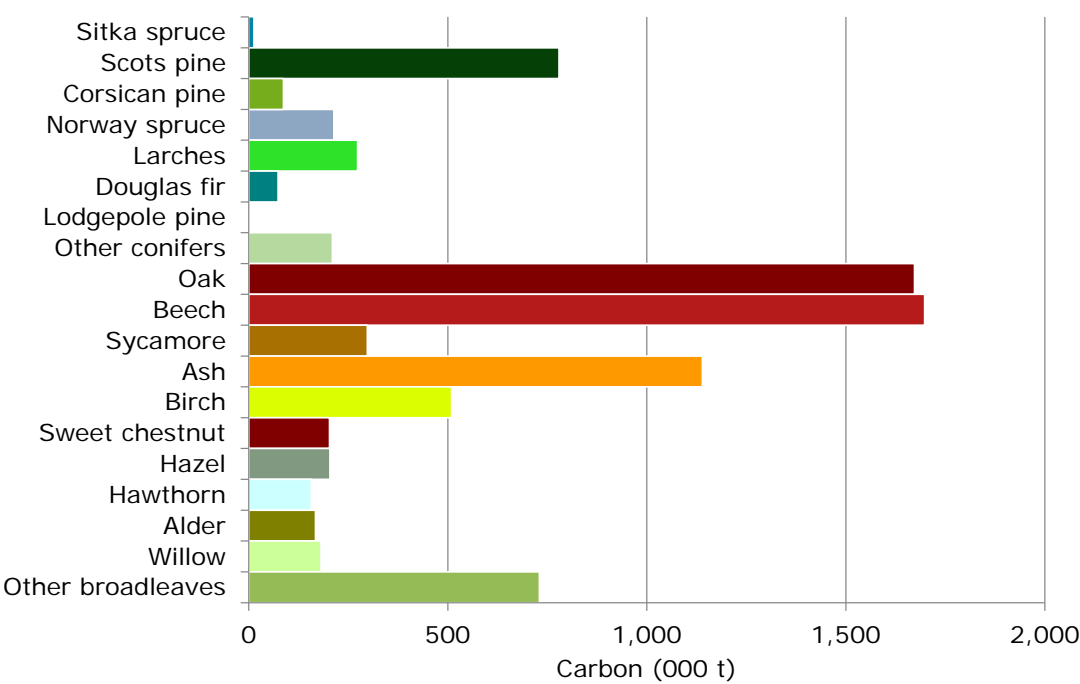
Table 20 Biomass stocks by principal tree species

Principal species	FC	Private sector		Total
	biomass (000 odt)	biomass (000 odt)	SE%	biomass (000 odt)
Conifers				
Sitka spruce	< 1	24	40	24
Scots pine	33	1,526	14	1,559
Corsican pine	39	135	43	175
Norway spruce	33	395	18	427
Larches	10	537	19	547
Douglas fir	22	125	31	147
Lodgepole pine	< 1	0	-	< 1
Other conifers	32	388	23	420
All conifers	168	3,134	7	3,302
Broadleaves				
Oak	77	3,268	10	3,345
Beech	55	3,341	12	3,396
Sycamore	1	594	20	595
Ash	15	2,264	10	2,279
Birch	12	1,008	12	1,020
Sweet chestnut	2	404	21	406
Hazel	1	406	16	407
Hawthorn	0	314	16	314
Alder	< 1	334	28	335
Willow	0	363	28	363
Other broadleaves	42	1,418	12	1,460
All broadleaves	206	13,785	4	13,991
All species				
All species	374	16,899	3	17,273

Carbon stocks in live woodland trees

Carbon stocks by species

Figure 23 Carbon stocks by principal tree species



Part 2 - what our woodlands are like today

Table 21 Carbon stocks by principal tree species

Principal species	FC	Private sector		Total
	carbon (000 t)	carbon (000 t)	SE%	carbon (000 t)
Conifers				
Sitka spruce	< 1	12	40	12
Scots pine	16	763	14	779
Corsican pine	20	68	43	87
Norway spruce	16	197	18	214
Larches	5	269	19	274
Douglas fir	11	62	31	73
Lodgepole pine	< 1	0	-	< 1
Other conifers	16	194	23	210
All conifers	84	1,567	7	1,651
Broadleaves				
Oak	38	1,634	10	1,673
Beech	27	1,670	12	1,698
Sycamore	< 1	297	20	298
Ash	7	1,132	10	1,139
Birch	6	504	12	510
Sweet chestnut	< 1	202	21	203
Hazel	< 1	203	16	204
Hawthorn	0	157	16	157
Alder	< 1	167	28	167
Willow	0	181	28	181
Other broadleaves	21	709	12	730
All broadleaves	103	6,893	4	6,996
All species				
All species	187	8,450	3	8,637

Existing woodland management information and economic viability data (PS only)

Sample square distribution

Table 22 Sample square distribution

Number of squares surveyed	Number of squares surveyed	Number of Private sector squares surveyed	Number of Private sector squares containing coniferous species	Number of Private sector squares containing broadleaved species
Thames	361	354	227	345

Part 2 - what our woodlands are like today

Evidence of management

Figure 24 Evidence of management in PS broadleaf sections

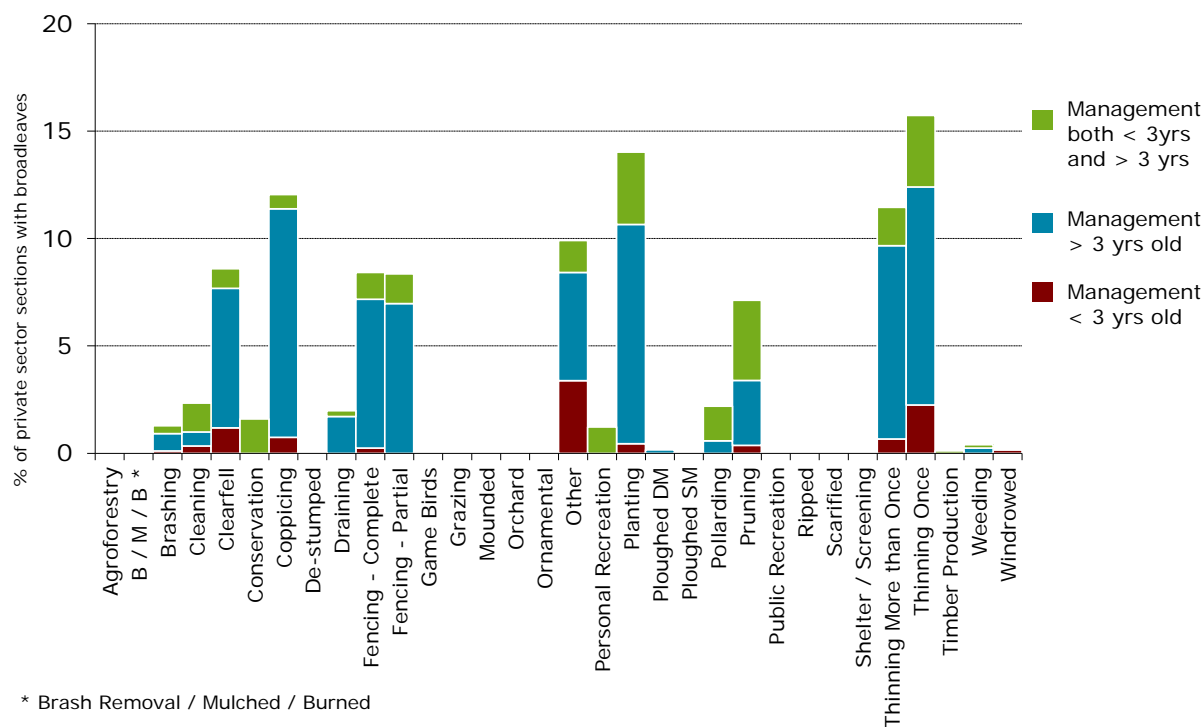
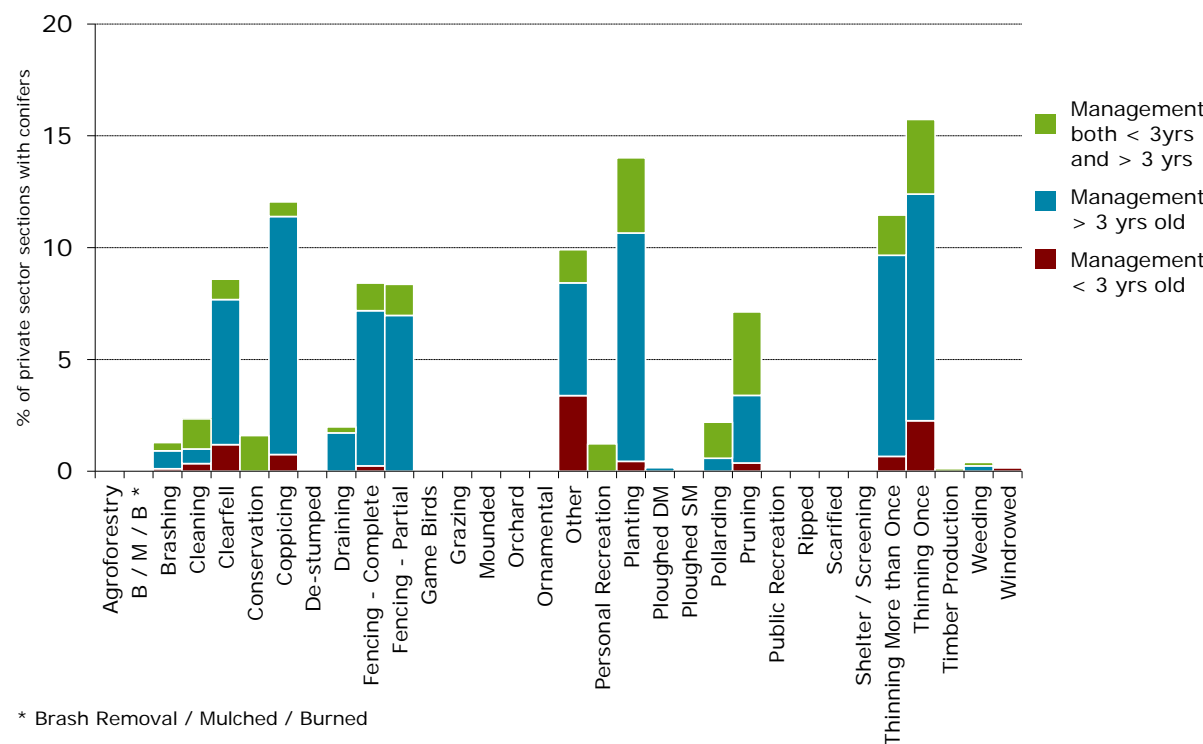


Figure 25 Evidence of management in PS conifer sections



Part 2 - what our woodlands are like today

Figure 26 Evidence of management in PS mixed broadleaf/conifer sections

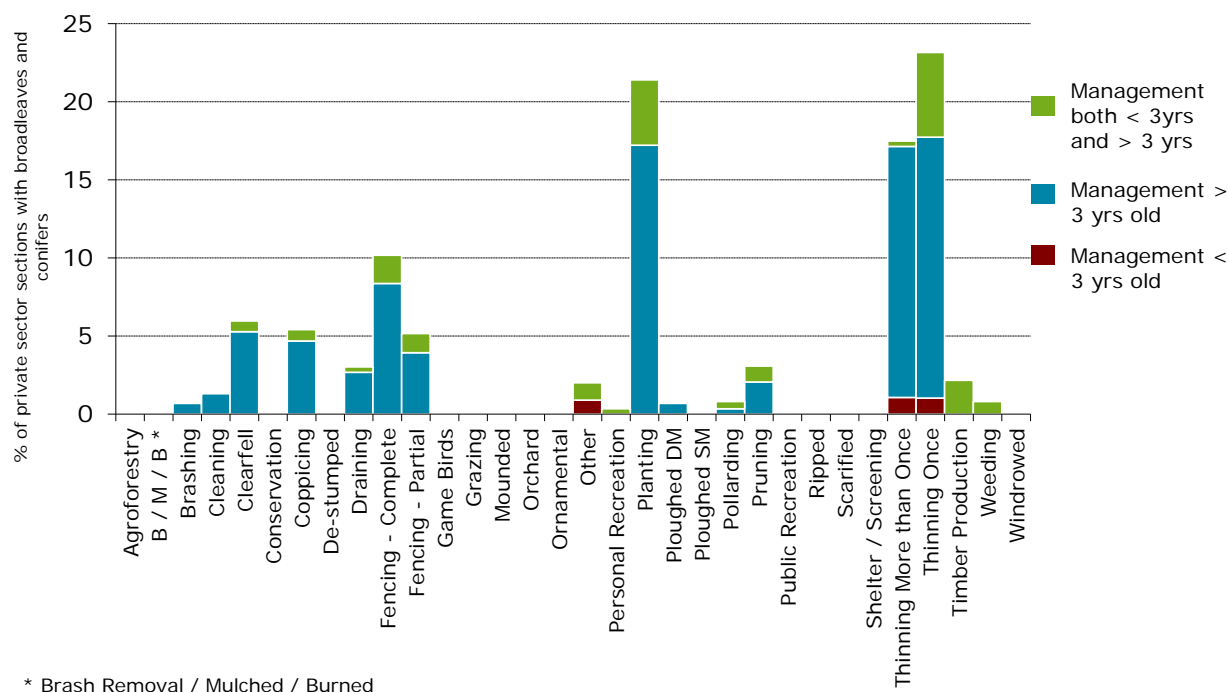
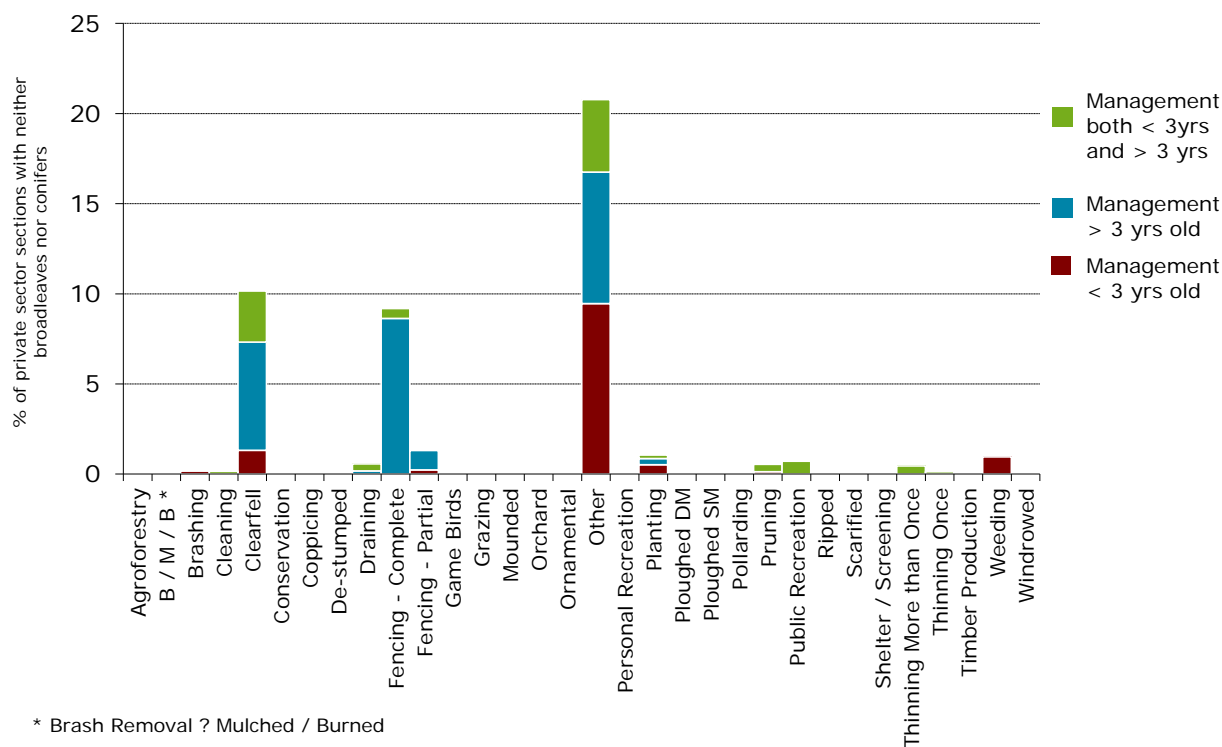


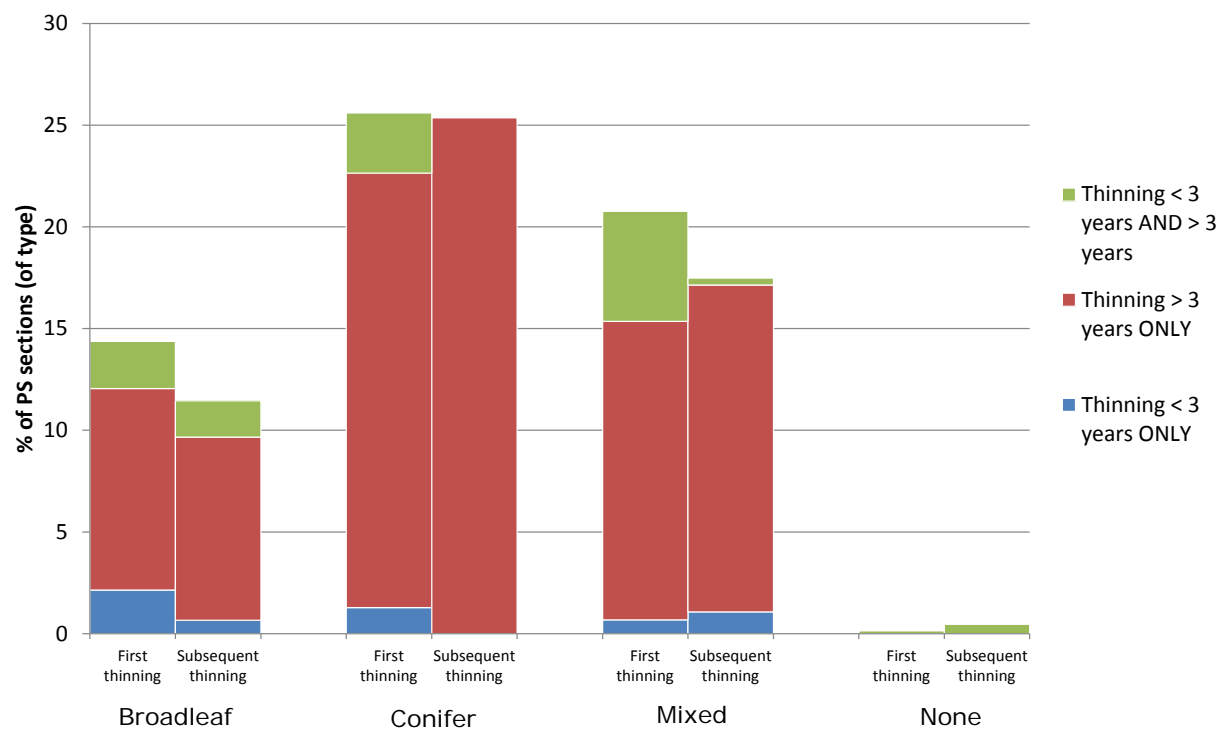
Figure 27 Evidence of management in PS sections with no broadleaf or conifer



Part 2 - what our woodlands are like today

Evidence of thinning

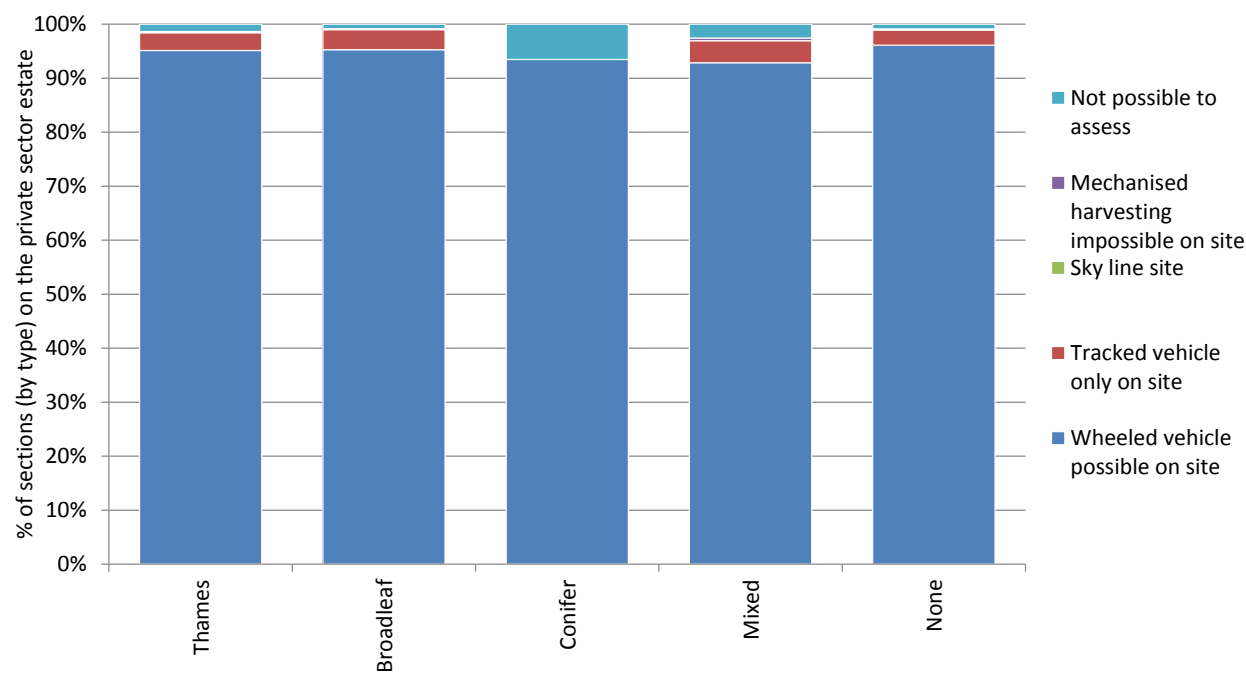
Figure 28 Evidence of thinning



Part 2 - what our woodlands are like today

Suitability for harvesting

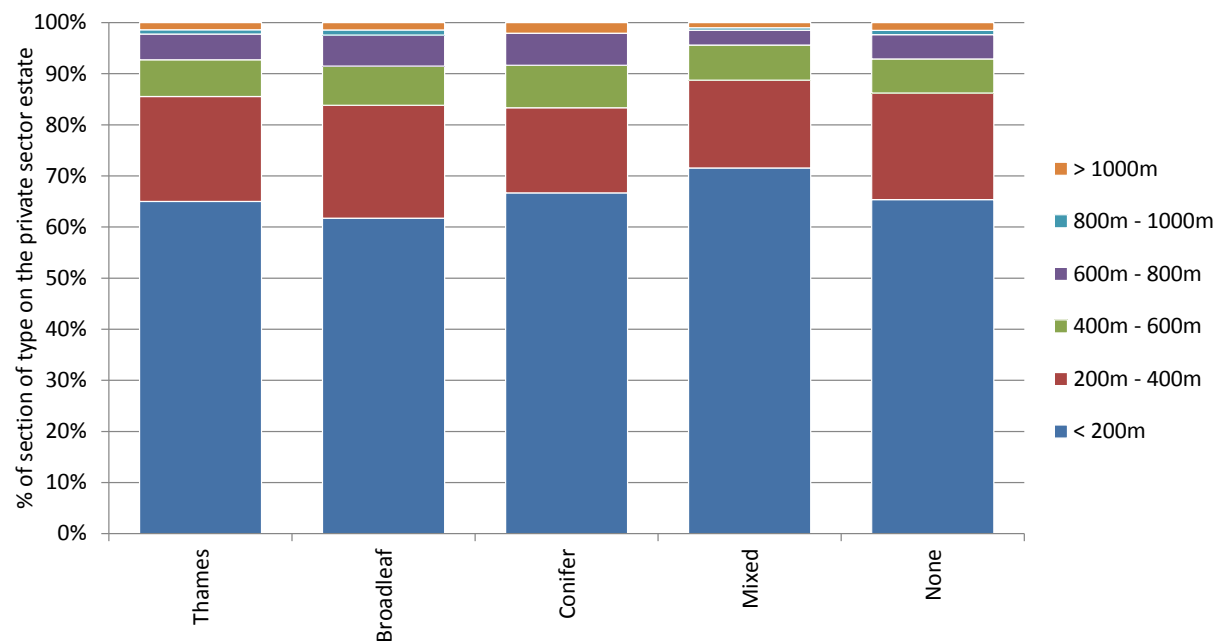
Figure 29 Suitability for harvesting



Part 2 - what our woodlands are like today

Distance to road

Figure 30 Distance to road



Part 2 - what our woodlands are like today

Type of road or ride

Figure 31 Road or ride in survey square

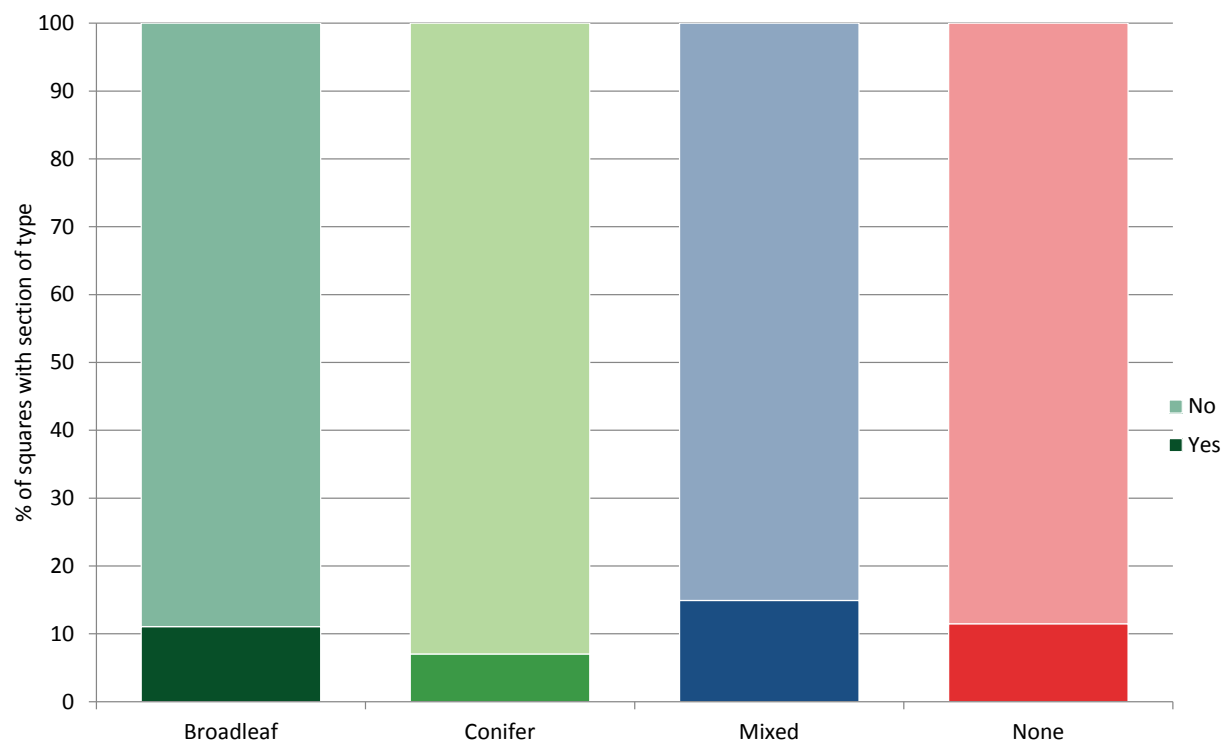
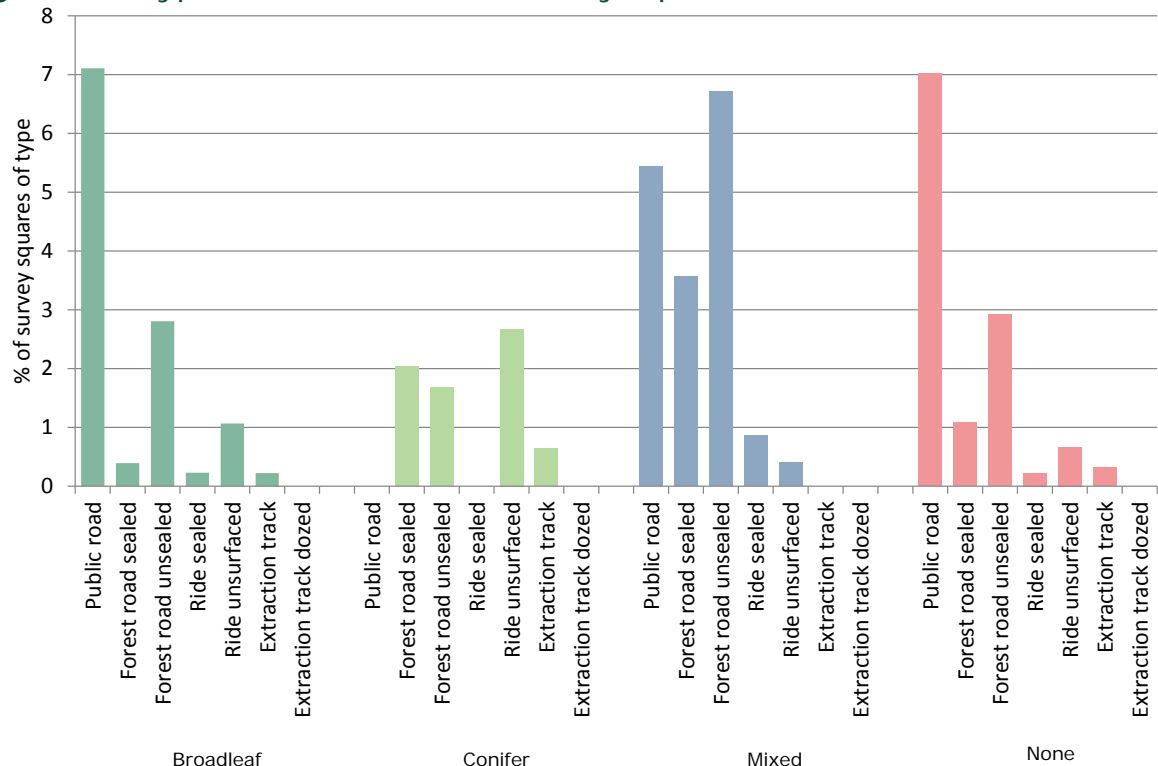


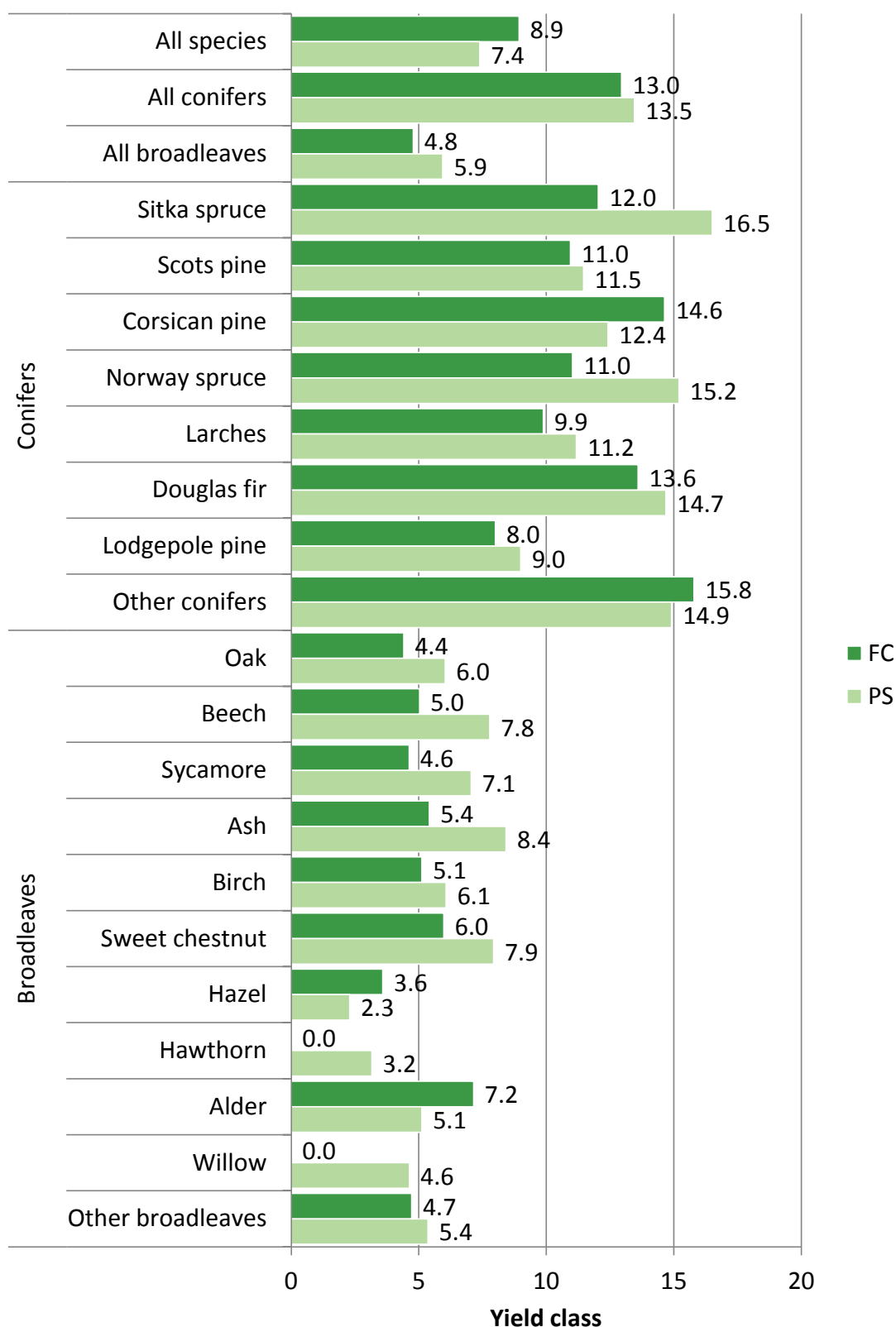
Figure 32 Type of road or ride in survey square



Part 2 - what our woodlands are like today

Mean yield class

Figure 33 Mean yield class by principal tree species (FC and PS)



Part 2 - what our woodlands are like today

Table 23 Mean yield class by principal tree species (FC and PS)

Principal species	FC	Private sector
	mean yield class weighted by area	
Conifers		
Sitka spruce	12.0	16.5
Scots pine	11.0	11.5
Corsican pine	14.6	12.4
Norway spruce	11.0	15.2
Larches	9.9	11.2
Douglas fir	13.6	14.7
Lodgepole pine	8.0	9.0
Other conifers	15.8	14.9
All conifers	13.0	13.5
Broadleaves		
Oak	4.4	6.0
Beech	5.0	7.8
Sycamore	4.6	7.1
Ash	5.4	8.4
Birch	5.1	6.1
Sweet chestnut	6.0	7.9
Hazel	3.6	2.3
Hawthorn	0.0	3.2
Alder	7.2	5.1
Willow	0.0	4.6
Other broadleaves	4.7	5.4
All broadleaves	4.8	5.9
All species		
All species	8.9	7.4

Overdue timber stocks

Overdue volume and area

Table 24 Standing volume in overdue timber stocks

	FC	Private sector	
	volume (000 m ³ obs)	volume (000 m ³ obs)	SE %
Thames			
All conifers	12	1,384	19
All broadleaves	< 1	8,688	7
All species	13	10,061	7

Table 25 Stocked area of overdue timber stocks

	FC	Private sector	
	area (000 ha)	area (000 ha)	SE %
Thames			
All conifers	< 0.1	2.4	16
All broadleaves	< 0.1	19.9	5
All species	< 0.1	22.2	5

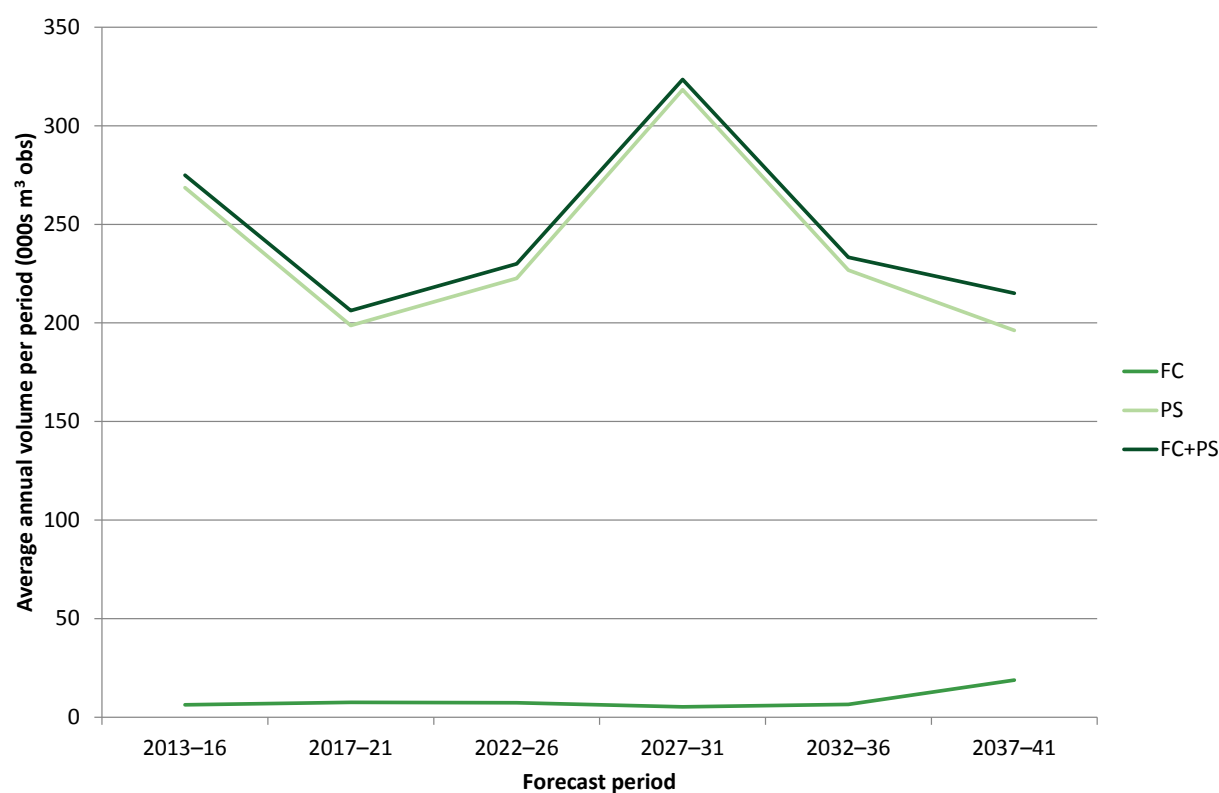
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25-year softwood forecast

25-year forecast of softwood timber availability

Figure 34 Summary of 25–year forecast of softwood timber availability; average annual volume within period



Part 3 - how our woodlands might change

Figure 35 25-year forecast of softwood timber availability; average annual volume within period

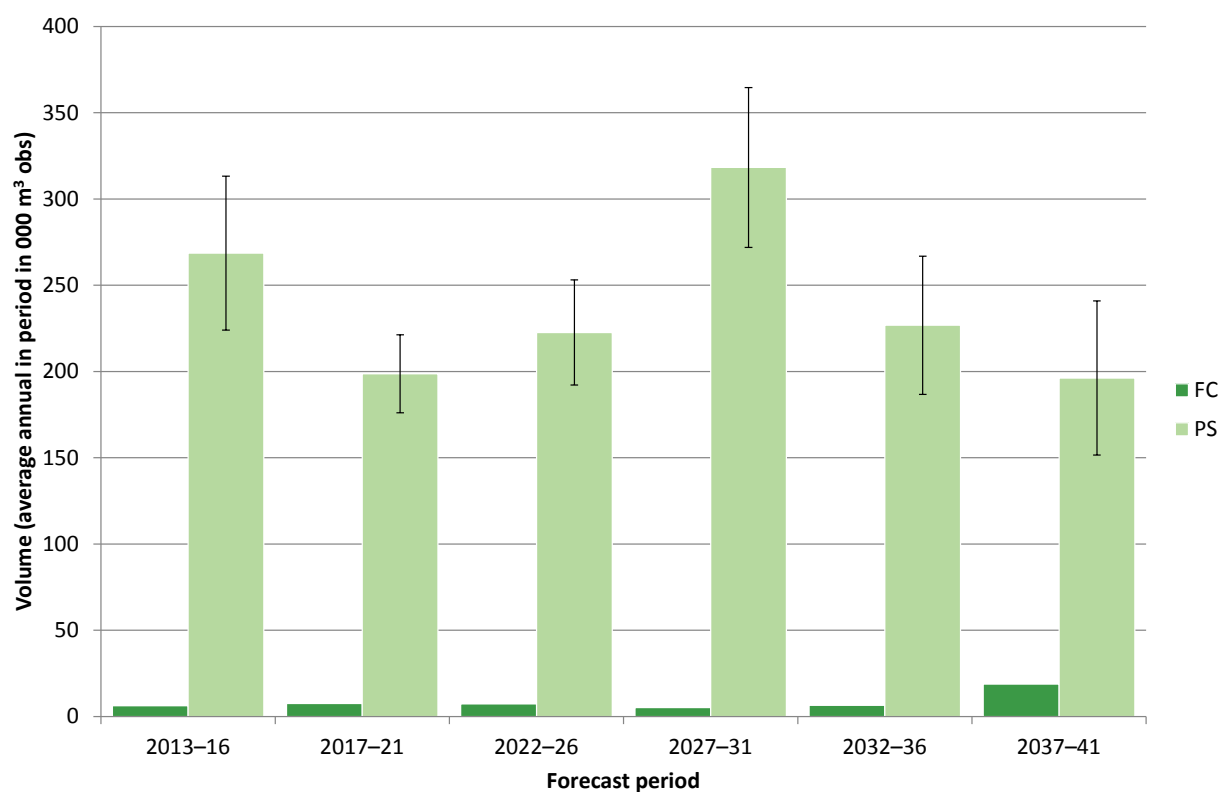


Table 26 25-year forecast of softwood availability; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	6	269	17	275
2017-21	7	199	11	206
2022-26	7	223	14	230
2027-31	5	318	15	324
2032-36	7	227	18	233
2037-41	19	196	23	215

Part 3 - how our woodlands might change

25-year forecast of softwood timber availability by principal species

Table 27 25-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2013–16			2017–21		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	6	269	17	7	199	11
Sitka spruce	< 1	< 1	60	0	4	49
Scots pine	< 1	127	29	< 1	65	23
Corsican pine	2	6	41	4	10	56
Norway spruce	< 1	28	19	< 1	26	19
Larches	< 1	69	39	< 1	51	27
Douglas fir	< 1	11	44	< 1	9	34
Lodgepole pine	0	0	–	0	0	–
Other conifers	3	26	19	2	34	26

Table 27 (cont'd) 25-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2022–26			2027–31		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	7	223	14	5	318	15
Sitka spruce	0	< 1	49	0	< 1	49
Scots pine	< 1	71	18	1	165	24
Corsican pine	4	31	72	3	12	60
Norway spruce	< 1	52	35	< 1	75	33
Larches	< 1	26	18	< 1	28	23
Douglas fir	< 1	9	48	< 1	6	32
Lodgepole pine	< 1	0	–	< 1	0	–
Other conifers	< 1	32	30	< 1	31	34

Part 3 - how our woodlands might change

Table 27 (cont'd) 25-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2032–36			2037–41		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	7	227	18	19	196	23
Sitka spruce	< 1	3	34	< 1	4	27
Scots pine	< 1	131	29	4	81	39
Corsican pine	4	2	57	4	1	55
Norway spruce	< 1	30	32	2	50	32
Larches	< 1	33	39	2	11	23
Douglas fir	< 1	6	31	1	6	26
Lodgepole pine	0	0	–	< 1	< 1	45
Other conifers	< 1	23	30	4	44	67

25-year forecast of softwood timber availability % spruce

Table 28 25-year forecast of softwood timber availability % spruce

Thames		Top diameter class (cm)								Total
		7–14	14–16	16–18	18–24	24–34	34–44	44–54	54+	
2013–16	FC (%)	4	11	12	18	18	14	15	46	15
	PS (%)	26	25	23	17	9	5	2	< 1	11
2017–21	FC (%)	9	9	10	12	11	9	7	5	10
	PS (%)	25	24	24	21	14	10	7	9	15
2022–26	FC (%)	5	5	4	6	7	7	6	14	7
	PS (%)	24	27	27	25	23	25	26	16	24
2027–31	FC (%)	4	4	3	3	2	2	3	3	3
	PS (%)	22	21	24	23	25	25	25	20	24
2032–36	FC (%)	27	17	10	7	6	5	6	13	11
	PS (%)	22	20	16	15	15	14	14	10	14
2037–41	FC (%)	32	26	19	12	12	13	14	18	16
	PS (%)	27	27	28	24	26	29	31	31	27

Part 3 - how our woodlands might change

25-year forecast of softwood timber availability by top diameter class

Table 29 25-year forecast of softwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2013–16			2017–21		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	1	21	12	< 1	15	14
14–16	< 1	9	12	< 1	7	13
16–18	< 1	12	13	< 1	9	12
18–24	1	46	13	1	36	10
24–34	2	81	20	2	62	12
34–44	< 1	48	23	1	35	16
44–54	< 1	25	25	< 1	17	20
54+	< 1	26	26	< 1	18	24
Total	6	269	17	7	199	11

Table 29 (cont'd) 25-year forecast of softwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2022–26			2027–31		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	< 1	13	16	< 1	12	13
14–16	< 1	6	18	< 1	6	13
16–18	< 1	8	19	< 1	7	13
18–24	1	40	21	1	40	13
24–34	2	72	17	2	97	14
34–44	1	39	16	< 1	66	18
44–54	< 1	21	17	< 1	38	20
54+	< 1	23	19	< 1	53	24
Total	7	223	14	5	318	15

Part 3 - how our woodlands might change

Table 29 (cont'd) 25-year forecast of softwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2032–36			2037–41		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	1	13	17	2	17	17
14–16	< 1	4	17	< 1	5	22
16–18	< 1	6	21	< 1	5	26
18–24	2	33	22	3	26	32
24–34	2	76	20	6	65	30
34–44	< 1	44	20	4	39	25
44–54	< 1	22	22	2	19	25
54+	< 1	29	31	2	20	23
Total	7	227	18	19	196	23

Part 3 - how our woodlands might change

25-year forecast of standing volume in conifers

Figure 36 25-year forecast of standing volume in conifers

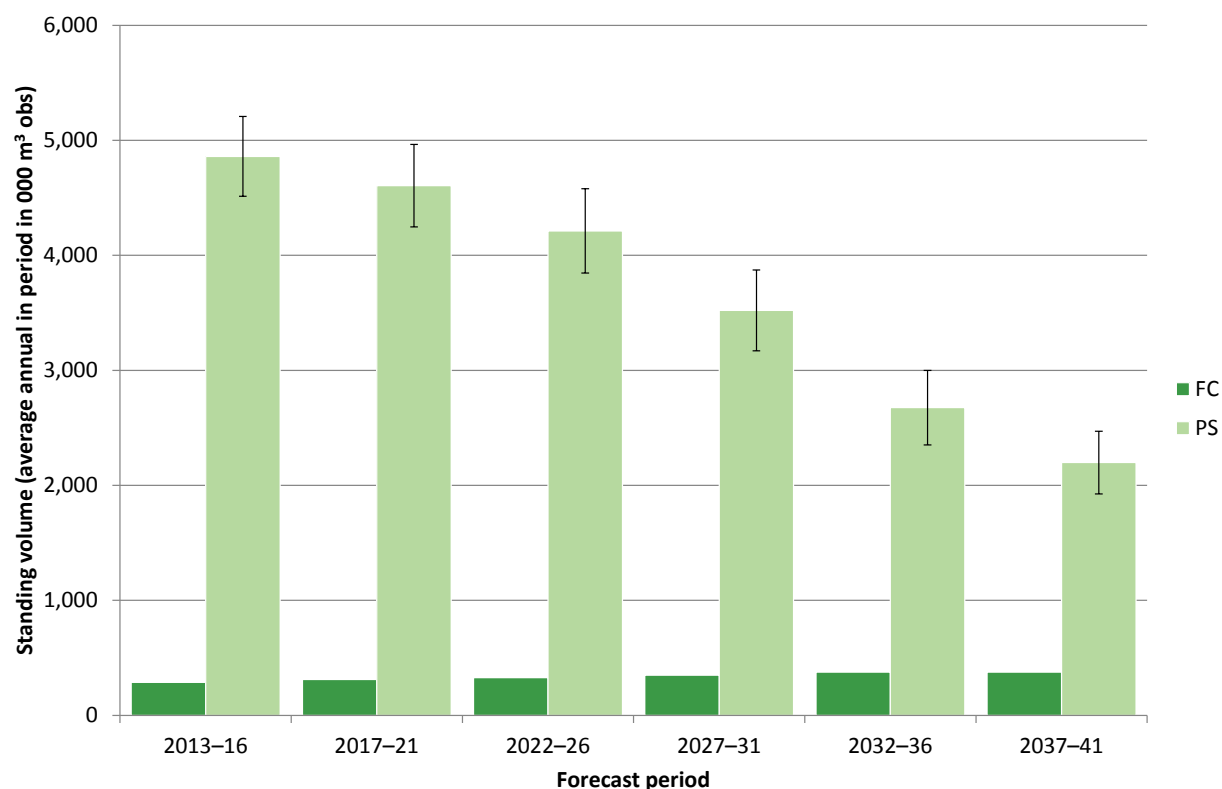


Table 30 25-year forecast of standing volume in conifers; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	287	4,860	7	5,148
2017-21	311	4,606	8	4,917
2022-26	329	4,213	9	4,541
2027-31	348	3,522	10	3,870
2032-36	376	2,676	12	3,052
2037-41	375	2,198	12	2,574

Part 3 - how our woodlands might change

25-year forecast of net increment in conifers

Figure 37 25-year forecast of net increment in conifers

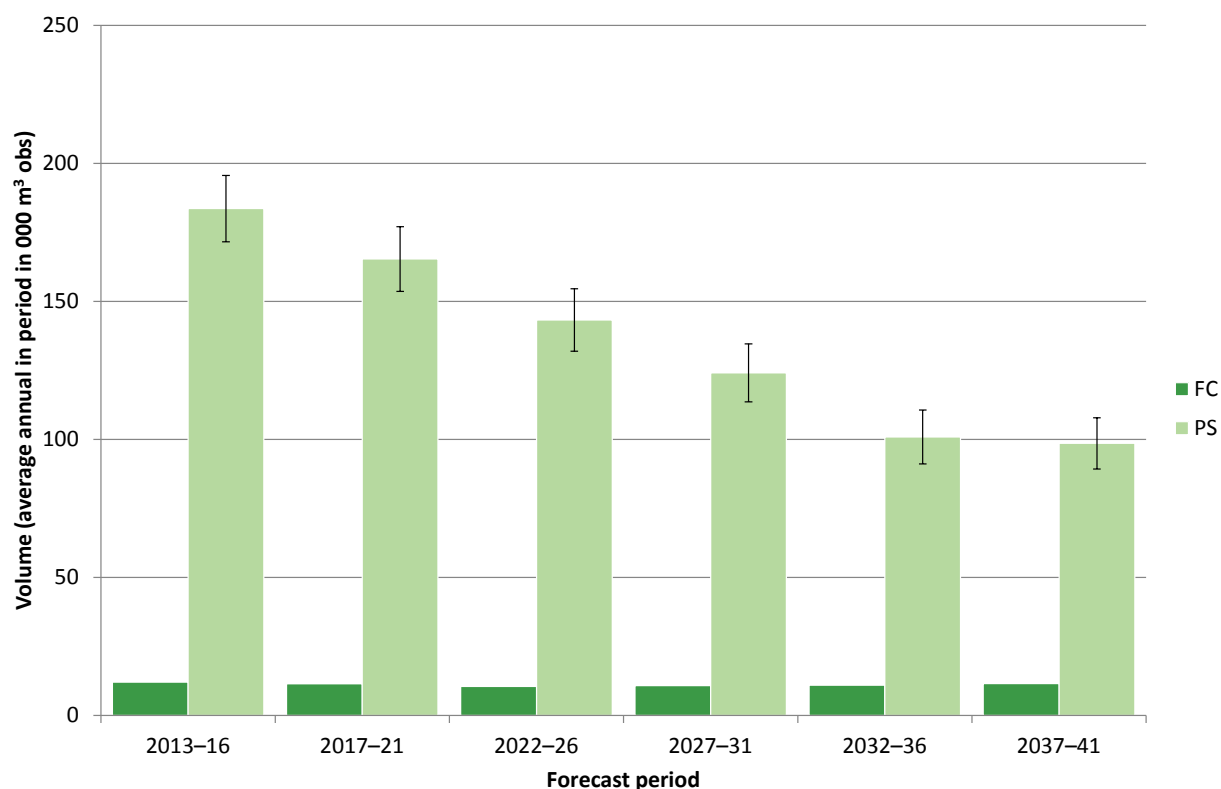


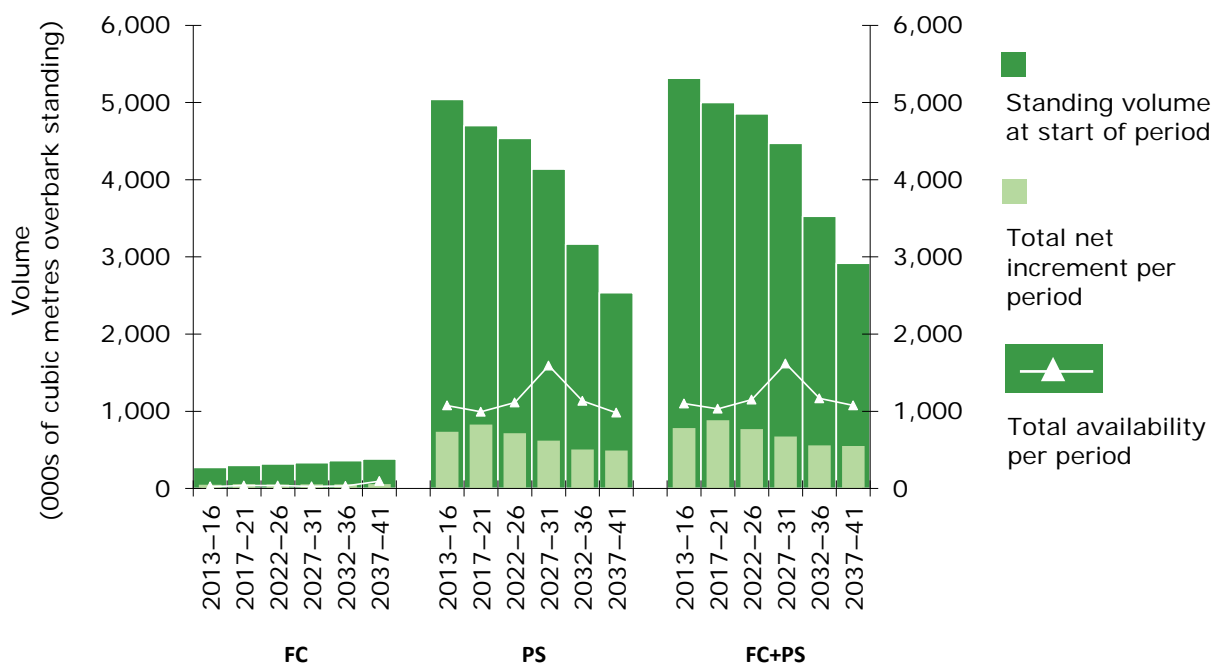
Table 31 25-year forecast of net increment in conifers; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	12	184	7	196
2017-21	11	165	7	177
2022-26	10	143	8	154
2027-31	11	124	8	135
2032-36	11	101	10	112
2037-41	11	99	9	110

Part 3 - how our woodlands might change

Combined standing volume, net increment and availability

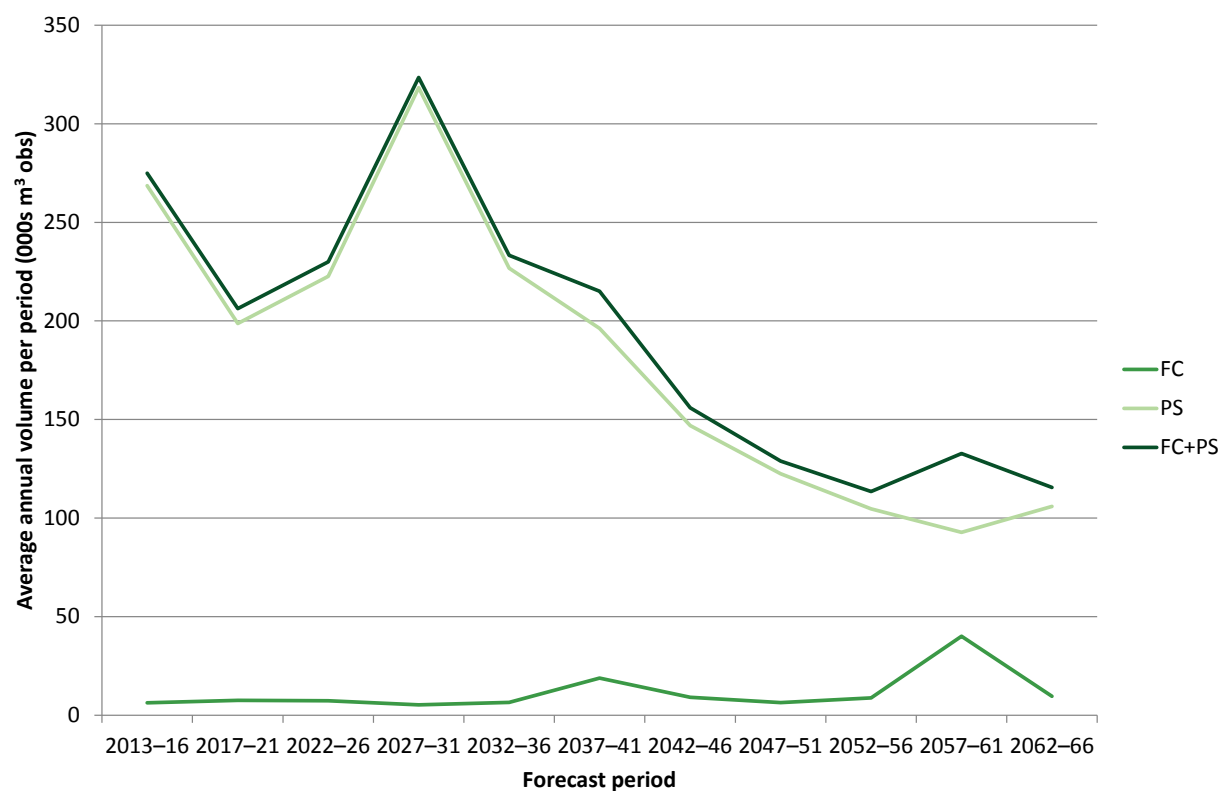
Figure 38 25-year forecast of standing volume, net increment and softwood availability



50-year softwood forecast

50-year forecast of softwood timber availability

Figure 39 Summary of 50-year forecast of softwood timber availability; average annual volume within period



Part 3 - how our woodlands might change

Figure 40 50-year forecast of softwood timber availability; average annual volume within period

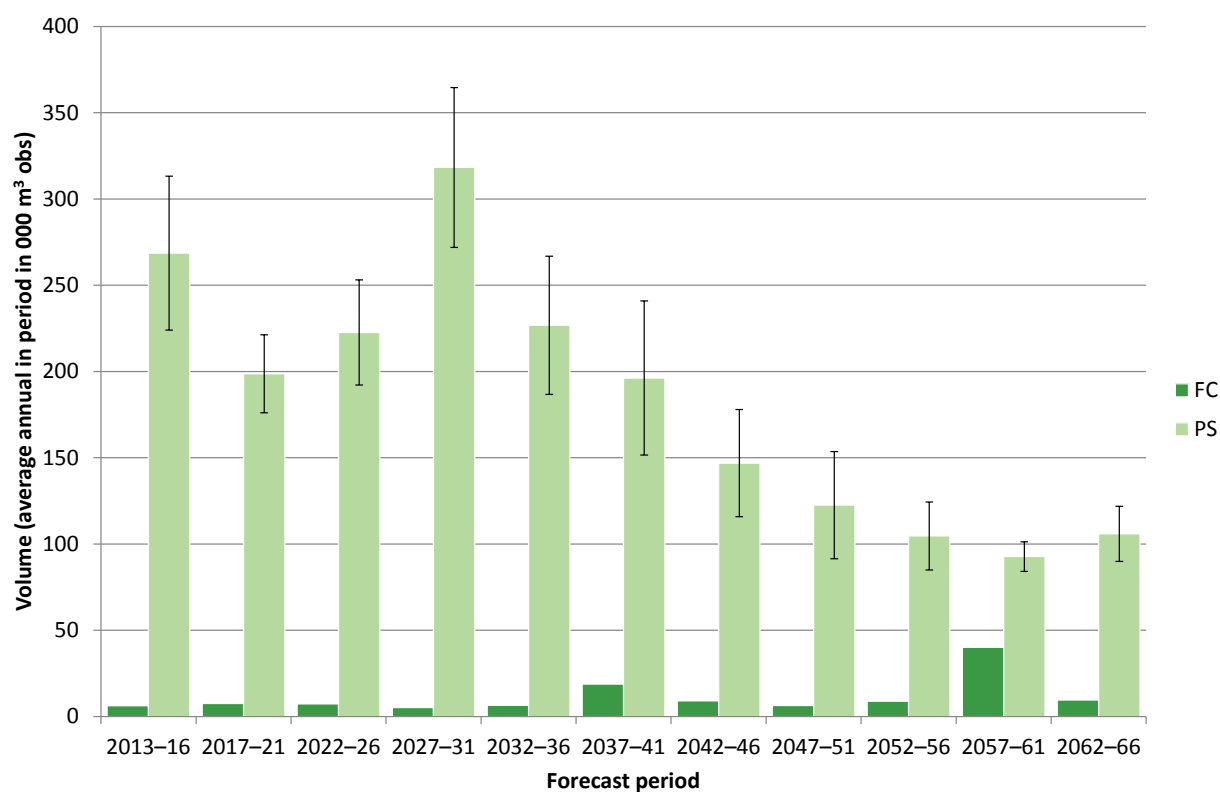


Table 32 Summary of 50-year forecast of softwood timber availability; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	6	269	17	275
2017-21	7	199	11	206
2022-26	7	223	14	230
2027-31	5	318	15	324
2032-36	7	227	18	233
2037-41	19	196	23	215
2042-46	9	147	21	156
2047-51	6	123	25	129
2052-56	9	105	19	113
2057-61	40	93	9	133
2062-66	10	106	15	116

Part 3 - how our woodlands might change

50-year forecast of softwood timber availability by principal species

Table 33 50-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2013–16			2017–21		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	6	269	17	7	199	11
Sitka spruce	< 1	< 1	60	0	4	49
Scots pine	< 1	127	29	< 1	65	23
Corsican pine	2	6	41	4	10	56
Norway spruce	< 1	28	19	< 1	26	19
Larches	< 1	69	39	< 1	51	27
Douglas fir	< 1	11	44	< 1	9	34
Lodgepole pine	0	0	-	0	0	-
Other conifers	3	26	19	2	34	26

Table 33 (cont'd) 50-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2022–26			2027–31		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	7	223	14	5	318	15
Sitka spruce	0	< 1	49	0	< 1	49
Scots pine	< 1	71	18	1	165	24
Corsican pine	4	31	72	3	12	60
Norway spruce	< 1	52	35	< 1	75	33
Larches	< 1	26	18	< 1	28	23
Douglas fir	< 1	9	48	< 1	6	32
Lodgepole pine	< 1	0	-	< 1	0	-
Other conifers	< 1	32	30	< 1	31	34

Part 3 - how our woodlands might change

Table 33 (cont'd) 50-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2032–36			2037–41		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	7	227	18	19	196	23
Sitka spruce	< 1	3	34	< 1	4	27
Scots pine	< 1	131	29	4	81	39
Corsican pine	4	2	57	4	1	55
Norway spruce	< 1	30	32	2	50	32
Larches	< 1	33	39	2	11	23
Douglas fir	< 1	6	31	1	6	26
Lodgepole pine	0	0	-	< 1	< 1	45
Other conifers	< 1	23	30	4	44	67

Table 33 (cont'd) 50-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2042–46			2047–51		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	9	147	21	6	123	25
Sitka spruce	< 1	8	41	< 1	5	22
Scots pine	2	50	38	1	48	52
Corsican pine	4	< 1	49	2	1	43
Norway spruce	< 1	56	44	< 1	25	42
Larches	< 1	9	27	< 1	10	39
Douglas fir	< 1	7	21	< 1	14	37
Lodgepole pine	< 1	< 1	45	< 1	< 1	45
Other conifers	2	14	26	1	19	45

Part 3 - how our woodlands might change

Table 33 (cont'd) 50-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2052–56			2057–61		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All conifers	9	105	19	40	93	9
Sitka spruce	< 1	7	17	< 1	8	15
Scots pine	1	49	38	5	33	18
Corsican pine	3	< 1	45	3	< 1	50
Norway spruce	< 1	13	24	16	13	24
Larches	< 1	8	26	2	10	24
Douglas fir	< 1	9	18	7	11	17
Lodgepole pine	< 1	< 1	45	< 1	< 1	45
Other conifers	2	17	26	7	17	16

Table 33 (cont'd) 50-year forecast of softwood timber availability by principal species; average annual volume within period

Principal species	2062–66		
	FC	Private sector	
	volume (000 m ³ obs)		SE%
Thames			
All conifers	10	106	15
Sitka spruce	< 1	8	13
Scots pine	1	34	22
Corsican pine	2	< 1	36
Norway spruce	< 1	16	27
Larches	< 1	5	17
Douglas fir	3	23	49
Lodgepole pine	< 1	< 1	45
Other conifers	2	20	15

Part 3 - how our woodlands might change

50-year forecast of softwood timber availability % spruce

Table 34 50-year forecast of softwood timber availability % spruce

Thames		Top diameter class (cm)								Total
		7-14	14-16	16-18	18-24	24-34	34-44	44-54	54+	
2013-16	FC (%)	4	11	12	18	18	14	15	46	15
	PS (%)	26	25	23	17	9	5	2	< 1	11
2017-21	FC (%)	9	9	10	12	11	9	7	5	10
	PS (%)	25	24	24	21	14	10	7	9	15
2022-26	FC (%)	5	5	4	6	7	7	6	14	7
	PS (%)	24	27	27	25	23	25	26	16	24
2027-31	FC (%)	4	4	3	3	2	2	3	3	3
	PS (%)	22	21	24	23	25	25	25	20	24
2032-36	FC (%)	27	17	10	7	6	5	6	13	11
	PS (%)	22	20	16	15	15	14	14	10	14
2037-41	FC (%)	32	26	19	12	12	13	14	18	16
	PS (%)	27	27	28	24	26	29	31	31	27
2042-46	FC (%)	28	26	24	11	2	1	< 1	1	11
	PS (%)	20	30	30	36	48	56	58	48	44
2047-51	FC (%)	20	24	27	24	7	3	3	3	16
	PS (%)	20	21	23	21	22	27	35	37	24
2052-56	FC (%)	16	18	20	22	12	5	7	8	14
	PS (%)	28	25	22	19	13	9	9	13	19
2057-61	FC (%)	27	32	40	43	45	43	43	40	42
	PS (%)	26	29	24	18	21	16	14	23	23
2062-66	FC (%)	10	13	15	19	21	14	10	10	16
	PS (%)	26	30	27	19	17	20	23	23	23

Part 3 - how our woodlands might change

50-year forecast of standing volume in conifers

Figure 41 50-year forecast of standing volume in conifers; average annual volume within period

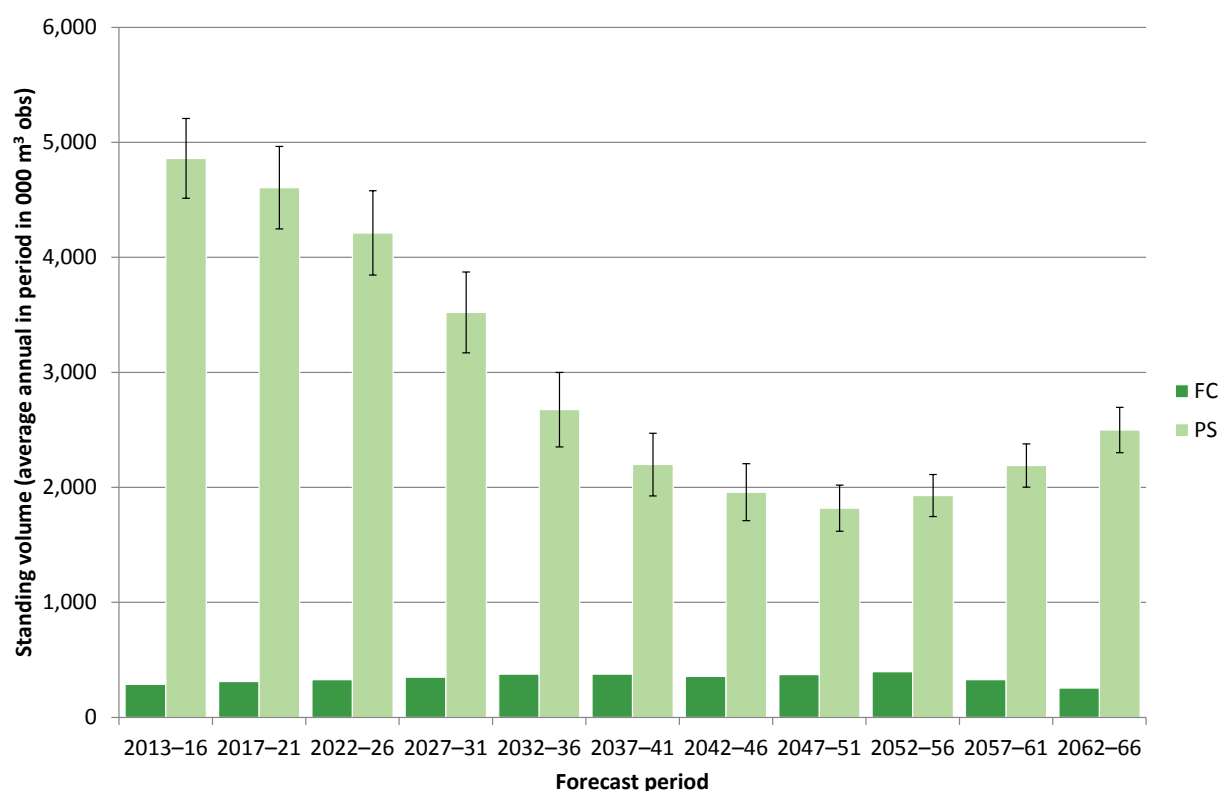


Table 35 50-year forecast of standing volume in conifers; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	287	4,860	7	5,148
2017-21	311	4,606	8	4,917
2022-26	329	4,213	9	4,541
2027-31	348	3,522	10	3,870
2032-36	376	2,676	12	3,052
2037-41	375	2,198	12	2,574
2042-46	356	1,958	13	2,313
2047-51	372	1,819	11	2,191
2052-56	397	1,929	9	2,326
2057-61	328	2,190	9	2,518
2062-66	255	2,500	8	2,754

Part 3 - how our woodlands might change

50-year forecast of net increment in conifers

Figure 42 50-year forecast of net increment in conifers; average annual volume within period

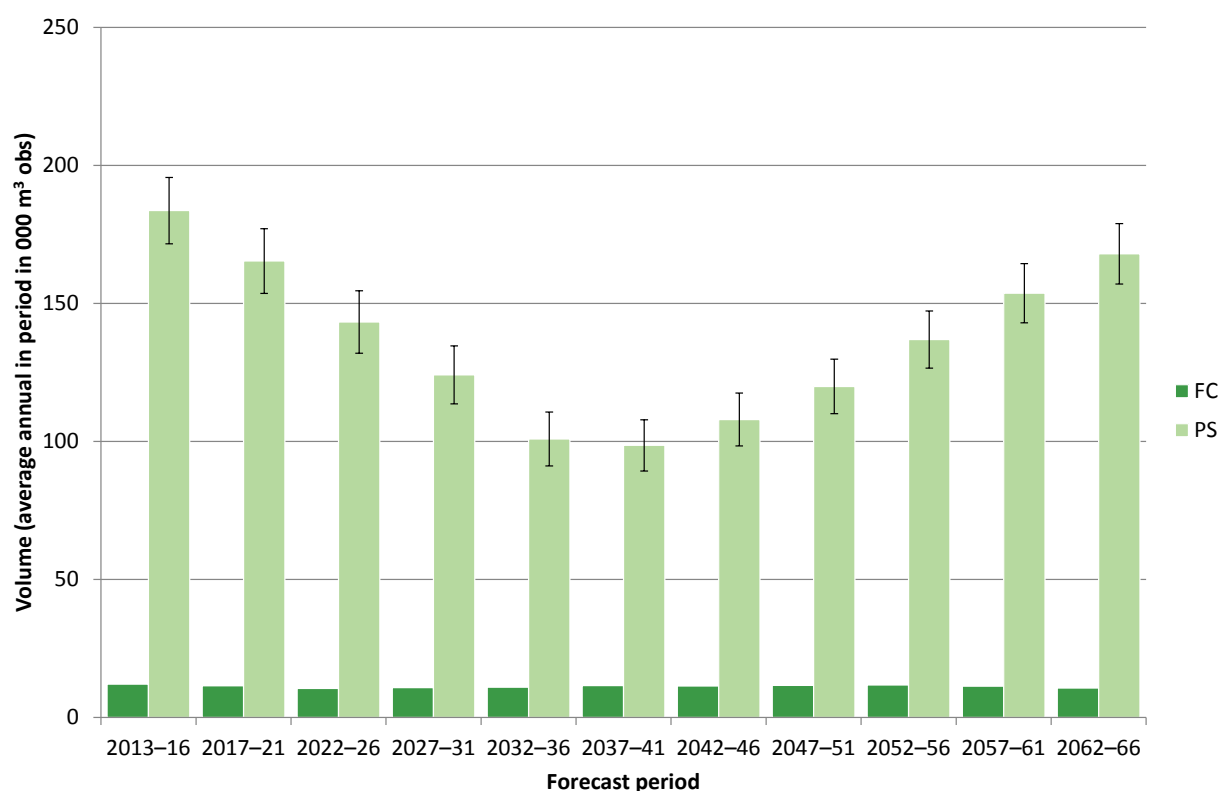


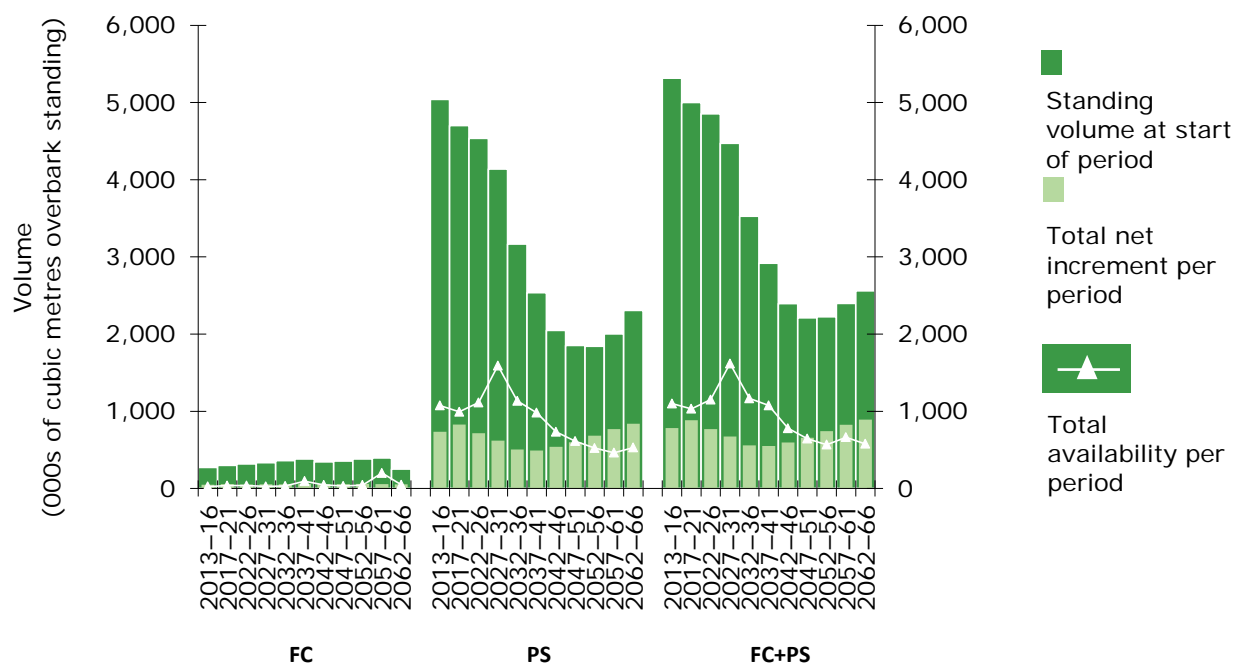
Table 36 50-year forecast of net increment in conifers; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000m³ obs)
Thames				
2013–16	12	184	7	196
2017–21	11	165	7	177
2022–26	10	143	8	154
2027–31	11	124	8	135
2032–36	11	101	10	112
3037–41	11	99	9	110
2042–46	11	108	9	119
2047–51	12	120	8	131
2052–56	12	137	8	149
2057–61	11	154	7	165
2062–66	11	168	7	179

Part 3 - how our woodlands might change

Combined standing volume, net increment and availability

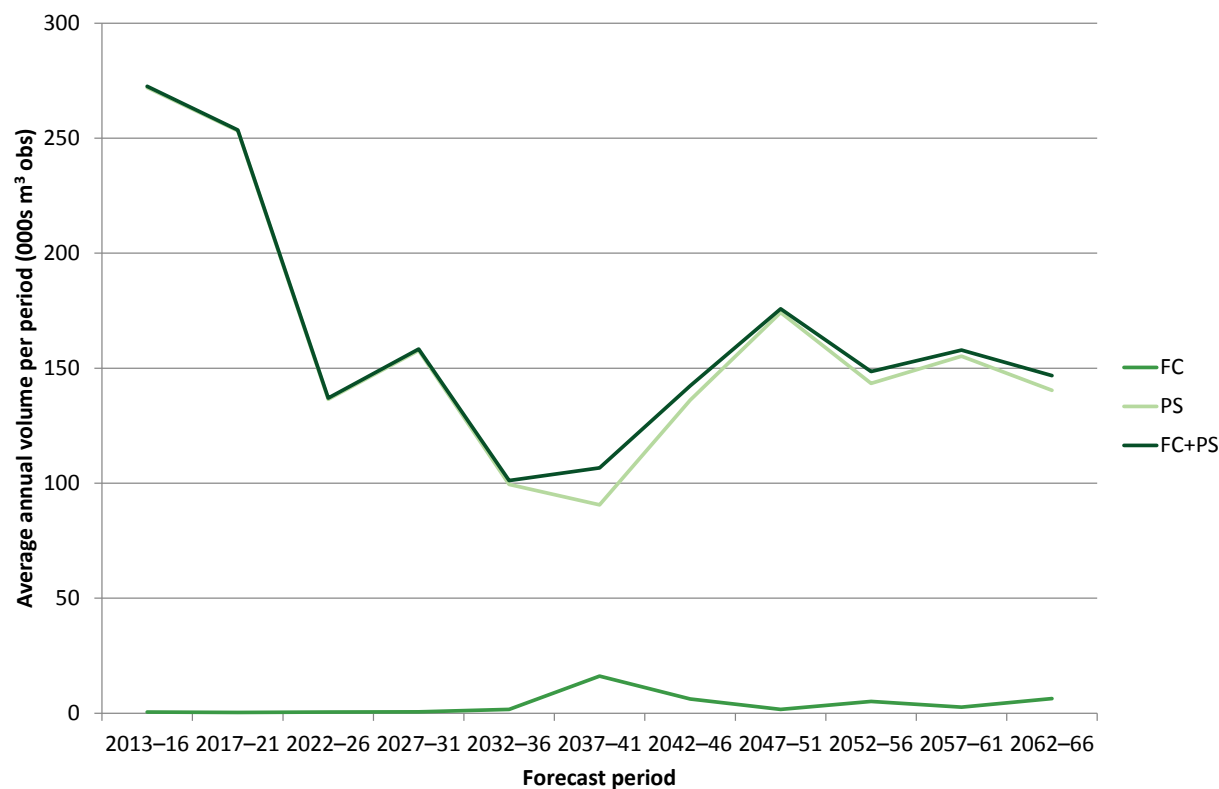
Figure 43 50-year forecast of standing volume, net increment and softwood availability



50-year hardwood forecast

50-year forecast of hardwood timber availability

Figure 44 Summary of 50-year forecast of hardwood timber availability; average annual volume within period



Part 3 - how our woodlands might change

Figure 45 50-year forecast of hardwood timber availability; average annual volume within period

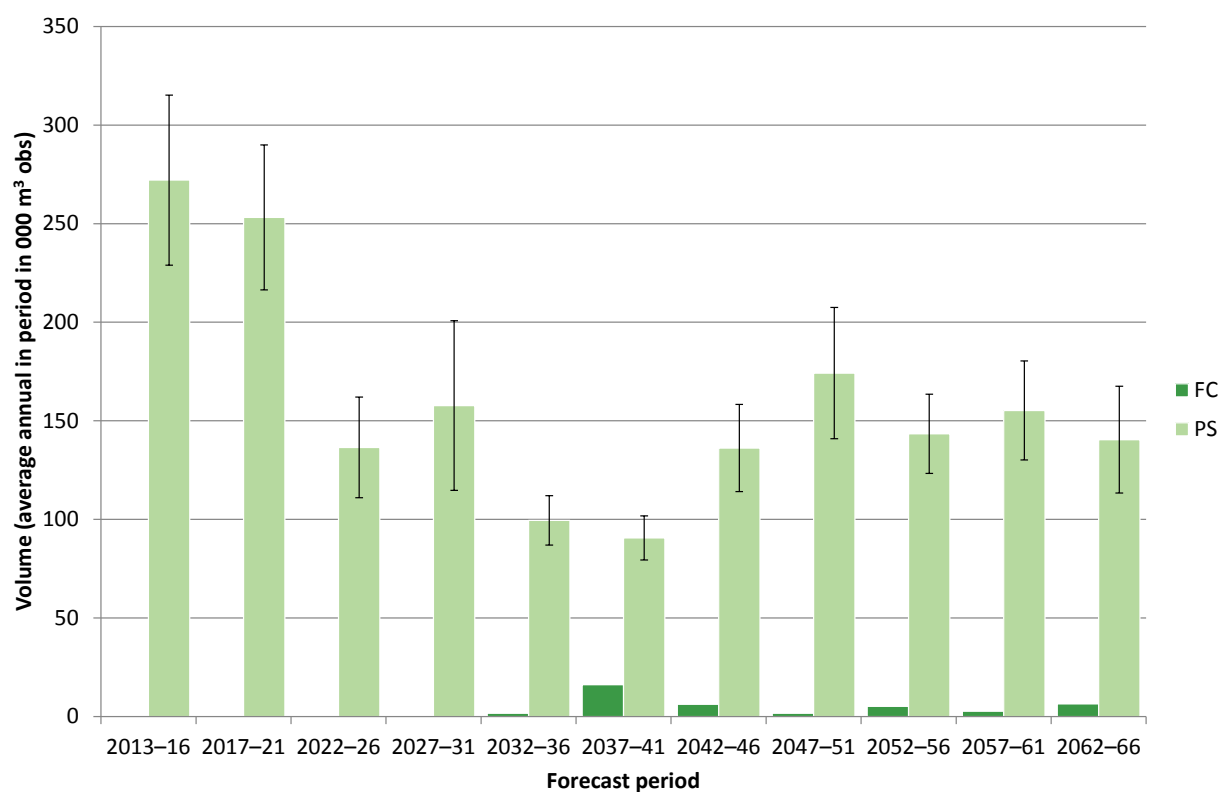


Table 37 50-year forecast of hardwood timber availability; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	< 1	272	16	273
2017-21	< 1	253	15	254
2022-26	< 1	136	19	137
2027-31	< 1	158	27	158
2032-36	2	99	13	101
2037-41	16	91	12	107
2042-46	6	136	16	142
2047-51	2	174	19	176
2052-56	5	143	14	149
2057-61	3	155	16	158
2062-66	6	140	19	147

Part 3 - how our woodlands might change

50-year forecast of hardwood timber availability by principal species

Table 38 50-year forecast of hardwood timber availability by principal species; average annual volume within period

Principal species	2013–16			2017–21		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	< 1	272	16	< 1	253	15
Oak	< 1	29	31	< 1	43	37
Beech	< 1	91	35	< 1	81	28
Sycamore	< 1	18	57	0	19	53
Ash	< 1	83	22	< 1	65	20
Birch	< 1	13	34	< 1	16	28
Sweet chestnut	< 1	11	78	< 1	2	31
Hazel	0	< 1	32	0	2	29
Hawthorn	0	< 1	39	0	< 1	28
Alder	< 1	< 1	61	0	< 1	61
Willow	0	< 1	32	0	< 1	26
Other broadleaves	< 1	20	41	< 1	23	37

Table 38 (cont'd) 50-year forecast of hardwood timber availability by principal species; average annual volume within period

Principal species	2022–26			2027–31		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	< 1	136	19	< 1	158	27
Oak	< 1	36	55	< 1	22	34
Beech	< 1	41	31	< 1	96	43
Sycamore	< 1	5	45	0	1	28
Ash	< 1	22	25	< 1	9	30
Birch	< 1	9	27	< 1	7	41
Sweet chestnut	< 1	4	46	< 1	4	49
Hazel	0	3	57	0	1	23
Hawthorn	0	< 1	25	0	< 1	24
Alder	< 1	1	60	< 1	< 1	65
Willow	0	< 1	24	0	< 1	25
Other broadleaves	< 1	12	22	< 1	11	26

Part 3 - how our woodlands might change

Table 38 (cont'd) 50-year forecast of hardwood timber availability by principal species; average annual volume within period

Principal species	2032–36			2037–41		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	2	99	13	16	91	12
Oak	1	22	34	2	20	29
Beech	< 1	36	22	11	29	28
Sycamore	< 1	3	40	< 1	3	43
Ash	< 1	13	18	< 1	17	17
Birch	< 1	4	29	< 1	5	19
Sweet chestnut	< 1	8	60	< 1	2	33
Hazel	0	2	31	0	2	32
Hawthorn	0	1	22	0	1	19
Alder	< 1	< 1	54	< 1	< 1	43
Willow	0	1	22	0	1	23
Other broadleaves	< 1	8	15	2	9	14

Table 38 (cont'd) 50-year forecast of hardwood timber availability by principal species; average annual volume within period

Principal species	2042–46			2047–51		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	6	136	16	2	174	19
Oak	5	15	22	< 1	56	47
Beech	< 1	49	37	< 1	51	33
Sycamore	< 1	6	26	< 1	5	31
Ash	< 1	21	16	< 1	19	18
Birch	< 1	9	20	< 1	9	21
Sweet chestnut	< 1	8	57	< 1	9	64
Hazel	0	2	35	0	4	25
Hawthorn	0	1	18	0	1	18
Alder	< 1	1	53	< 1	< 1	51
Willow	0	2	38	0	1	24
Other broadleaves	< 1	16	29	< 1	17	40

Part 3 - how our woodlands might change

Table 38 (cont'd) 50-year forecast of hardwood timber availability by principal species; average annual volume within period

Principal species	2052–56			2057–61		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	5	143	14	3	155	16
Oak	4	18	38	1	20	43
Beech	< 1	46	32	< 1	54	35
Sycamore	< 1	7	42	< 1	8	55
Ash	< 1	37	19	< 1	47	25
Birch	< 1	8	21	< 1	8	22
Sweet chestnut	< 1	1	34	< 1	2	41
Hazel	0	3	40	0	2	28
Hawthorn	0	1	18	0	1	18
Alder	< 1	1	48	< 1	1	74
Willow	0	2	30	0	1	26
Other broadleaves	< 1	18	23	< 1	9	22

Table 38 (cont'd) 50-year forecast of hardwood timber availability by principal species; average annual volume within period

Principal species	2062–66		
	FC	Private sector	
	volume (000 m ³ obs)		SE%
Thames			
All broadleaves	6	140	19
Oak	5	11	17
Beech	< 1	54	46
Sycamore	< 1	6	45
Ash	< 1	35	23
Birch	< 1	12	25
Sweet chestnut	< 1	3	69
Hazel	0	< 1	29
Hawthorn	0	2	20
Alder	< 1	< 1	65
Willow	0	2	31
Other broadleaves	< 1	13	26

Part 3 - how our woodlands might change

50-year forecast of hardwood timber availability by top diameter class

Table 39 50-year forecast of hardwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2013–16			2017–21		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	< 1	24	15	< 1	21	9
14–16	< 1	10	22	< 1	7	14
16–18	< 1	11	22	< 1	8	14
18–24	< 1	41	17	< 1	35	12
24–34	< 1	67	16	< 1	71	15
34–44	< 1	46	21	< 1	46	18
44–54	< 1	27	24	< 1	25	21
54+	0	46	27	< 1	41	27
Total	< 1	272	16	< 1	253	15

Table 39 (cont'd) 50-year forecast of hardwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2022–26			2027–31		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	< 1	18	12	< 1	22	10
14–16	< 1	4	15	< 1	3	20
16–18	< 1	4	18	< 1	4	24
18–24	< 1	18	16	< 1	17	28
24–34	< 1	32	17	< 1	45	37
34–44	< 1	21	26	< 1	29	37
44–54	< 1	12	30	< 1	16	39
54+	0	26	37	< 1	21	36
Total	< 1	136	19	< 1	158	27

Part 3 - how our woodlands might change

Table 39 (cont'd) 50-year forecast of hardwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2032–36			2037–41		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	< 1	27	11	2	30	10
14–16	< 1	3	10	< 1	4	10
16–18	< 1	3	11	1	4	10
18–24	< 1	10	16	4	9	11
24–34	< 1	21	20	4	15	18
34–44	< 1	14	19	2	11	21
44–54	< 1	7	19	< 1	6	23
54+	< 1	13	26	1	11	31
Total	2	99	13	16	91	12

Table 39 (cont'd) 50-year forecast of hardwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2042–46			2047–51		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	2	31	9	< 1	27	9
14–16	< 1	7	9	< 1	6	10
16–18	< 1	7	10	< 1	6	11
18–24	< 1	22	14	< 1	19	11
24–34	1	27	24	< 1	32	21
34–44	< 1	17	33	< 1	27	26
44–54	< 1	10	35	< 1	16	27
54+	< 1	15	28	< 1	41	36
Total	6	136	16	2	174	19

Part 3 - how our woodlands might change

Table 39 (cont'd) 50-year forecast of hardwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2052–56			2057–61		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
7–14	2	25	10	1	23	10
14–16	< 1	6	11	< 1	5	10
16–18	< 1	7	12	< 1	5	12
18–24	< 1	24	13	< 1	19	15
24–34	< 1	31	18	< 1	34	19
34–44	< 1	19	23	< 1	24	21
44–54	< 1	10	27	< 1	13	24
54+	< 1	20	28	< 1	31	31
Total	5	143	14	3	155	16

Table 39 (cont'd) 50-year forecast of hardwood timber availability by top diameter class; average annual volume within period

Top diameter class (cm)	2062–66		
	FC	Private sector	
	volume (000 m ³ obs)		SE%
Thames			
7–14	2	24	11
14–16	< 1	6	17
16–18	< 1	7	17
18–24	1	22	16
24–34	2	26	15
34–44	< 1	17	26
44–54	< 1	9	28
54+	< 1	28	54
Total	6	140	19

Part 3 - how our woodlands might change

50-year forecast of standing volume in broadleaves

Figure 46 50-year forecast of standing volume in broadleaves; average annual volume within period

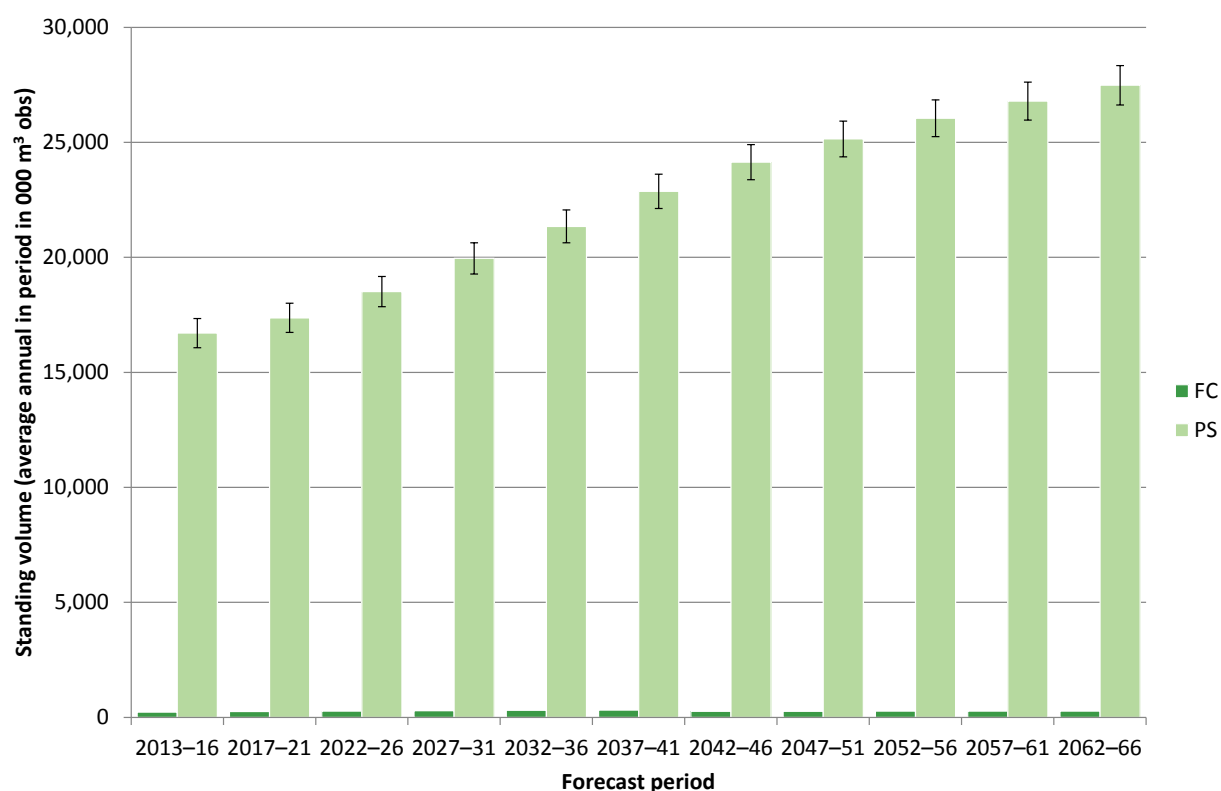


Table 40 50-year forecast of standing volume in broadleaves; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	231	16,708	4	16,939
2017-21	251	17,371	4	17,622
2022-26	273	18,517	4	18,790
2027-31	295	19,957	3	20,251
2032-36	312	21,348	3	21,660
2037-41	315	22,871	3	23,186
2042-46	261	24,143	3	24,405
2047-51	262	25,149	3	25,411
2052-56	269	26,050	3	26,319
2057-61	275	26,796	3	27,071
2062-66	276	27,485	3	27,761

Part 3 - how our woodlands might change

Table 41 50-year forecast of standing volume in broadleaves by principal species; average annual volume within period

Principal species	2013–16			2017–21		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	231	16,708	4	251	17,371	4
Oak	87	4,030	10	94	4,127	10
Beech	60	3,925	12	69	3,918	12
Sycamore	1	711	20	1	708	19
Ash	16	2,756	10	17	2,714	10
Birch	13	1,191	13	15	1,347	13
Sweet Chestnut	2	518	21	2	565	21
Hazel	1	453	17	1	521	16
Hawthorn	0	295	17	0	370	16
Alder	1	464	28	1	498	27
Willow	0	389	28	0	460	27
Other broadleaves	48	1,893	14	51	2,059	14

Table 41 (cont'd) 50-year forecast of standing volume in broadleaves by principal species; average annual volume within period

Principal species	2022–26			2027–31		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	273	18,517	4	295	19,957	3
Oak	100	4,224	10	107	4,421	10
Beech	77	4,037	11	85	4,051	11
Sycamore	2	741	19	2	822	18
Ash	18	2,819	11	19	3,096	10
Birch	17	1,530	13	19	1,724	13
Sweet Chestnut	2	616	21	2	662	21
Hazel	2	596	15	2	675	14
Hawthorn	0	471	15	0	587	14
Alder	1	538	27	2	579	27
Willow	0	553	26	0	650	24
Other broadleaves	54	2,294	13	57	2,587	12

Part 3 - how our woodlands might change

Table 41 (cont'd) 50-year forecast of standing volume in broadleaves by principal species; average annual volume within period

Principal species	2032–36			2037–41		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	312	21,348	3	315	22,871	3
Oak	110	4,585	10	114	4,754	10
Beech	93	4,086	11	89	4,281	11
Sycamore	2	898	17	2	965	17
Ash	20	3,387	10	20	3,663	10
Birch	21	1,912	12	23	2,085	12
Sweet Chestnut	2	689	22	2	739	22
Hazel	3	751	13	3	812	13
Hawthorn	0	706	14	0	824	14
Alder	2	616	26	2	651	26
Willow	0	748	23	0	844	23
Other broadleaves	60	2,863	11	60	3,138	11

Table 41 (cont'd) 50-year forecast of standing volume in broadleaves by principal species; average annual volume within period

Principal species	2042–46			2047–51		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	261	24,143	3	262	25,149	3
Oak	104	4,931	10	98	4,997	9
Beech	50	4,392	11	54	4,491	11
Sycamore	2	1,022	17	1	1,070	17
Ash	19	3,904	9	19	4,118	9
Birch	24	2,232	12	25	2,353	12
Sweet Chestnut	3	761	22	3	782	23
Hazel	4	865	13	4	905	13
Hawthorn	0	939	13	0	1,048	13
Alder	2	678	26	2	703	25
Willow	0	935	22	0	1,020	22
Other broadleaves	55	3,385	10	56	3,559	10

Part 3 - how our woodlands might change

Table 41 (cont'd) 50-year forecast of standing volume in broadleaves by principal species; average annual volume within period

Principal species	2052–56			2057–61		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	269	26,050	3	275	26,796	3
Oak	96	5,078	10	95	5,201	10
Beech	58	4,571	11	64	4,660	11
Sycamore	1	1,108	16	1	1,125	16
Ash	20	4,263	9	20	4,249	9
Birch	26	2,455	12	26	2,549	11
Sweet Chestnut	3	824	23	3	869	23
Hazel	4	935	13	5	961	13
Hawthorn	0	1,152	13	0	1,249	13
Alder	2	724	25	2	738	25
Willow	0	1,103	21	0	1,179	21
Other broadleaves	58	3,734	10	59	3,911	10

Table 41 (cont'd) 50-year forecast of standing volume in broadleaves by principal species; average annual volume within period

Principal species	2062–66		
	FC	Private sector	
	volume (000 m ³ obs)		SE%
Thames			
All broadleaves	276	27,485	3
Oak	89	5,371	9
Beech	68	4,734	11
Sycamore	1	1,136	16
Ash	21	4,211	10
Birch	26	2,621	11
Sweet Chestnut	3	905	23
Hazel	5	992	13
Hawthorn	0	1,340	13
Alder	2	750	25
Willow	0	1,252	21
Other broadleaves	61	4,069	10

Part 3 - how our woodlands might change

50-year forecast of net increment in broadleaves

Figure 47 50-year forecast of net increment in broadleaves; average annual volume within period

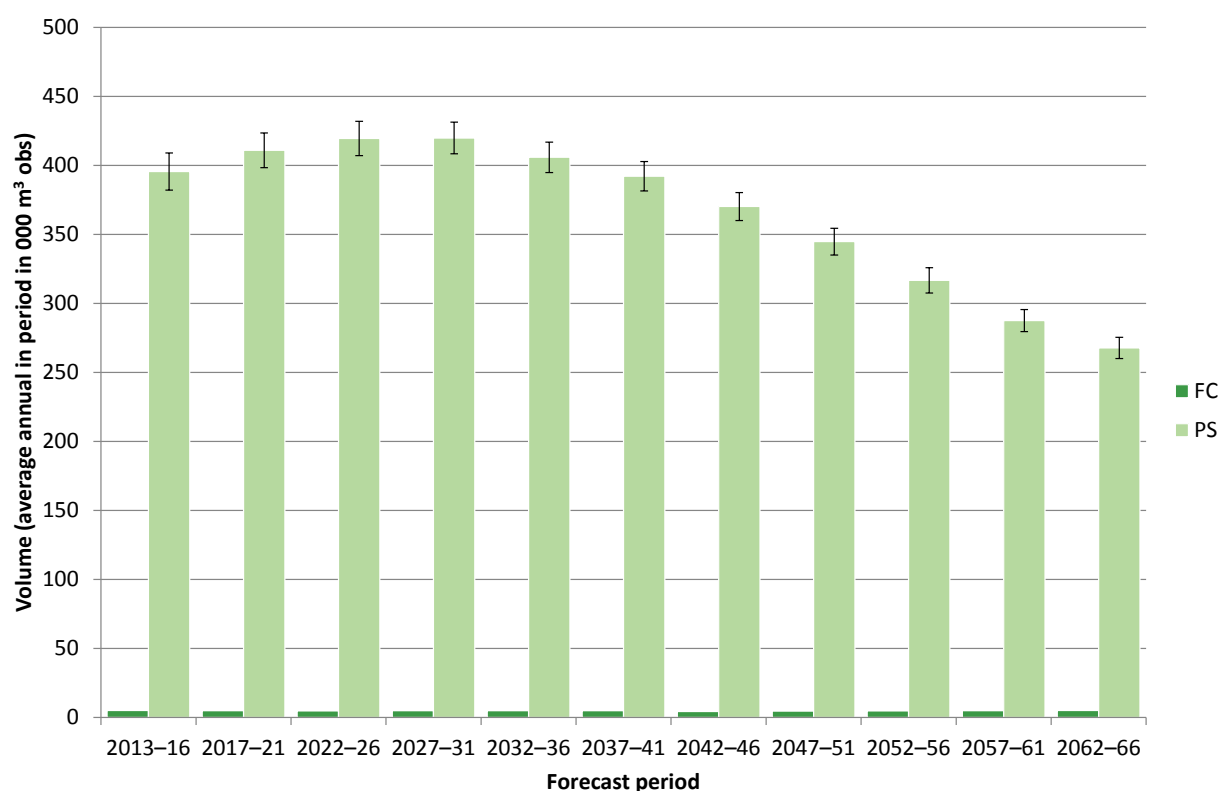


Table 42 50-year forecast of net increment in broadleaves; average annual volume within period

Forecast period	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
2013-16	5	396	3	401
2017-21	5	411	3	416
2022-26	5	420	3	424
2027-31	5	420	3	425
2032-36	5	406	3	411
2037-41	5	392	3	397
2042-46	4	370	3	374
2047-51	4	345	3	349
2052-56	5	317	3	321
2057-61	5	288	3	292
2062-66	5	268	3	273

Part 3 - how our woodlands might change

Table 43 50–year forecast of net increment in broadleaves by principal species; average annual volume within period

Principal species	2013–16			2017–21		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	5	396	3	5	411	3
Oak	2	63	9	2	62	9
Beech	2	78	10	2	79	10
Sycamore	< 1	17	17	< 1	18	16
Ash	< 1	68	10	< 1	64	10
Birch	< 1	49	12	< 1	49	12
Sweet Chestnut	< 1	11	23	< 1	13	21
Hazel	< 1	16	14	< 1	17	13
Hawthorn	0	15	13	0	18	13
Alder	< 1	7	39	< 1	9	27
Willow	0	15	25	0	17	21
Other broadleaves	< 1	53	10	< 1	61	9

Table 43 (cont'd) 50–year forecast of net increment in broadleaves by principal species; average annual volume within period

Principal species	2022–26			2027–31		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	5	420	3	5	420	3
Oak	1	61	8	2	59	8
Beech	2	78	10	2	75	10
Sycamore	< 1	18	16	< 1	18	16
Ash	< 1	63	9	< 1	68	8
Birch	< 1	49	12	< 1	46	12
Sweet Chestnut	< 1	13	21	< 1	13	21
Hazel	< 1	17	12	< 1	18	14
Hawthorn	0	23	14	0	24	15
Alder	< 1	9	25	< 1	9	23
Willow	0	20	19	0	20	19
Other broadleaves	< 1	66	9	< 1	67	9

Part 3 - how our woodlands might change

Table 43 (cont'd) 50-year forecast of net increment in broadleaves by principal species; average annual volume within period

Principal species	2032–36			2037–41		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	5	406	3	5	392	3
Oak	2	57	8	2	55	8
Beech	2	70	10	2	69	10
Sycamore	< 1	17	18	< 1	16	19
Ash	< 1	70	9	< 1	70	10
Birch	< 1	41	11	< 1	38	11
Sweet Chestnut	< 1	13	21	< 1	13	21
Hazel	< 1	16	14	< 1	14	14
Hawthorn	0	25	14	0	25	14
Alder	< 1	8	23	< 1	7	24
Willow	0	20	19	0	20	19
Other broadleaves	< 1	65	8	< 1	63	8

Table 43 (cont'd) 50-year forecast of net increment in broadleaves by principal species; average annual volume within period

Principal species	2042–46			2047–51		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	4	370	3	4	345	3
Oak	2	53	8	2	51	8
Beech	1	66	10	1	64	10
Sycamore	< 1	15	21	< 1	14	21
Ash	< 1	66	10	< 1	60	11
Birch	< 1	35	10	< 1	31	11
Sweet Chestnut	< 1	12	22	< 1	11	22
Hazel	< 1	12	14	< 1	10	14
Hawthorn	0	24	13	0	23	13
Alder	< 1	6	23	< 1	6	23
Willow	0	19	19	0	19	19
Other broadleaves	< 1	59	8	< 1	54	8

Part 3 - how our woodlands might change

Table 43 (cont'd) 50-year forecast of net increment in broadleaves by principal species; average annual volume within period

Principal species	2052–56			2057–61		
	FC	Private sector		FC	Private sector	
	volume (000 m³ obs)		SE%	volume (000 m³ obs)		SE%
Thames						
All broadleaves	5	317	3	5	288	3
Oak	2	48	8	2	46	9
Beech	1	62	10	2	61	11
Sycamore	< 1	13	21	< 1	10	18
Ash	< 1	52	11	< 1	39	9
Birch	< 1	28	11	< 1	25	11
Sweet Chestnut	< 1	11	22	< 1	10	22
Hazel	< 1	9	14	< 1	8	13
Hawthorn	0	22	13	0	20	13
Alder	< 1	5	23	< 1	4	23
Willow	0	18	19	0	17	19
Other broadleaves	< 1	49	8	< 1	45	8

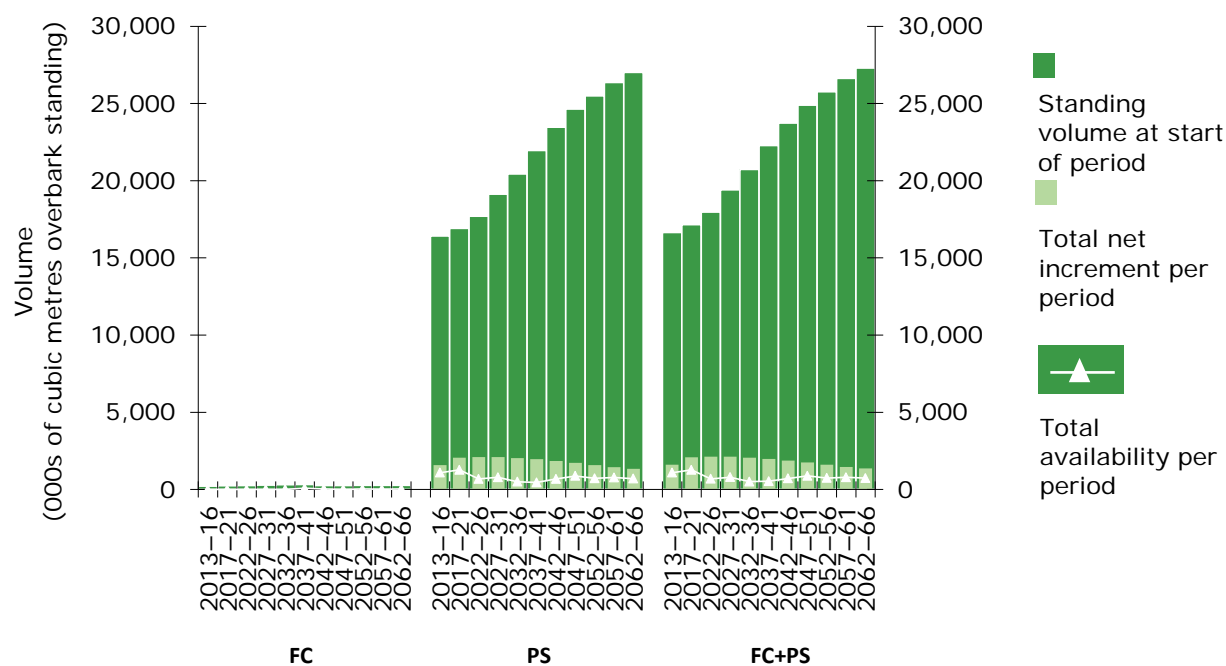
Table 43 (cont'd) 50-year forecast of net increment in broadleaves by principal species; average annual volume within period

Principal species	2062–66		
	FC	Private sector	
	volume (000 m ³ obs)		SE%
Thames			
All broadleaves	5	268	3
Oak	2	47	9
Beech	2	61	11
Sycamore	< 1	8	15
Ash	< 1	29	8
Birch	< 1	23	11
Sweet Chestnut	< 1	10	22
Hazel	< 1	7	12
Hawthorn	0	19	13
Alder	< 1	3	23
Willow	0	16	19
Other broadleaves	< 1	43	8

Part 3 - how our woodlands might change

Combined standing volume, net increment and availability

Figure 48 combined hardwood standing volume, net increment and availability



Part 4 – Tree health

Ash..... 97

Oak..... 106

Sweet chestnut 115

Larch 124

Part 4 – Tree health

Ash

Figure 49 Stocked area of ash by age class

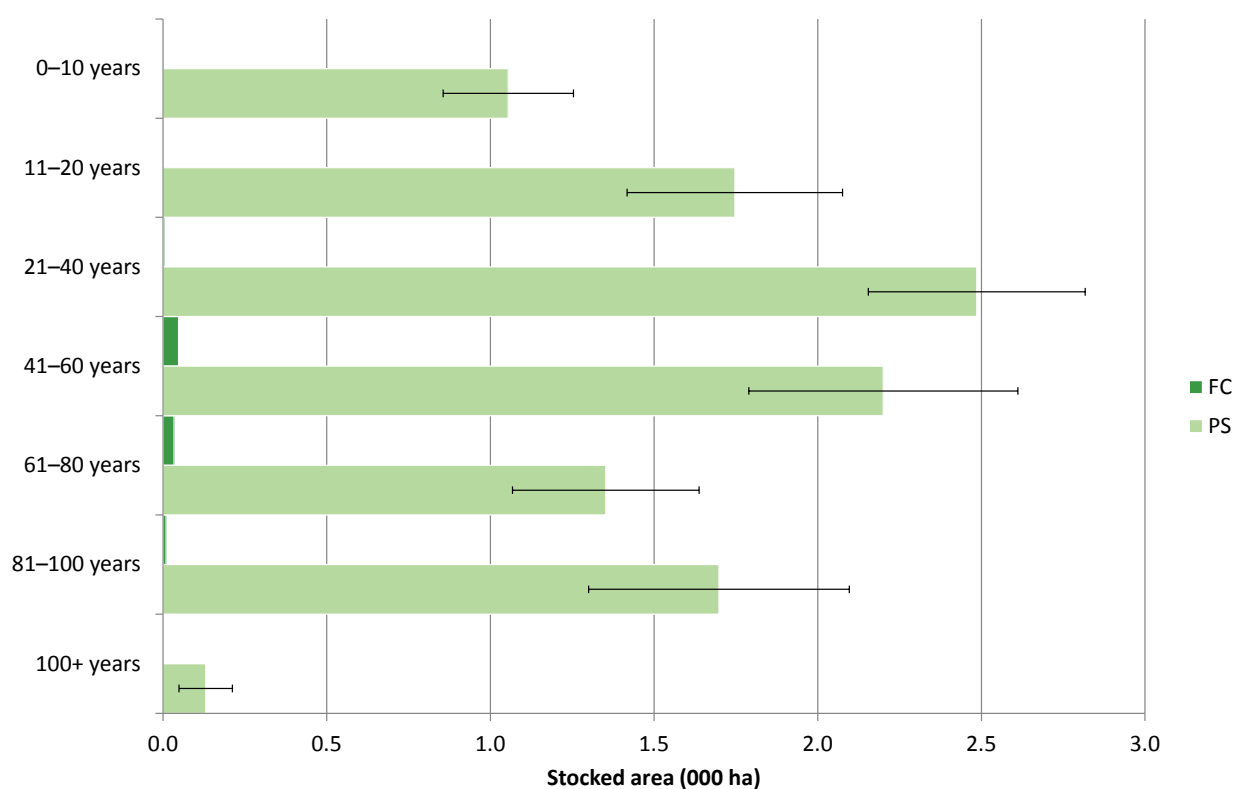


Table 44 Stocked area of ash by age class

Age class (years)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0-10	< 0.1	1.1	19	1.1
11-20	< 0.1	1.7	19	1.7
21-40	< 0.1	2.5	13	2.5
41-60	< 0.1	2.2	19	2.2
61-80	< 0.1	1.4	21	1.4
81-100	< 0.1	1.7	23	1.7
100+	< 0.1	0.1	62	0.1
Total	< 0.1	10.7	8	10.8

Part 4 – Tree health

Figure 50 Stocked area of ash by mean stand dbh class

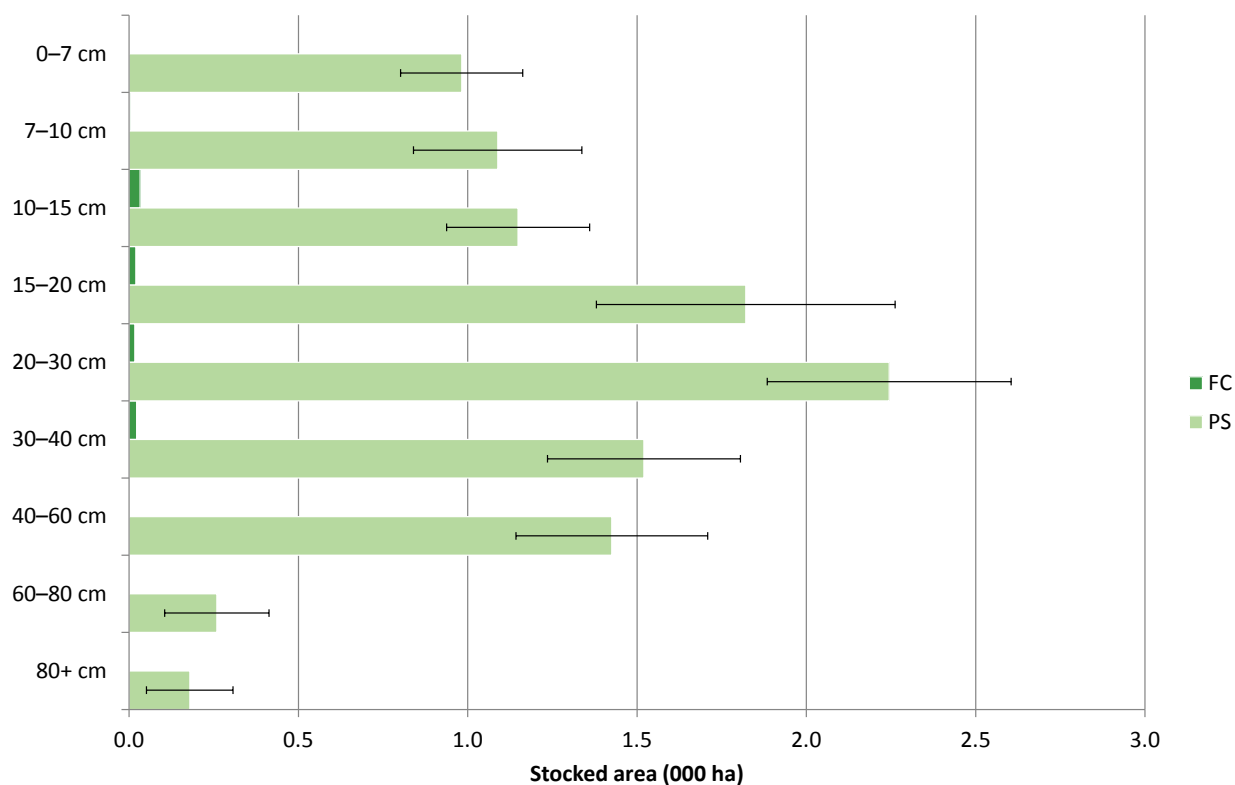


Table 45 Stocked area of ash by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0-7	< 0.1	1.0	18	1.0
7-10	< 0.1	1.1	23	1.1
10-15	< 0.1	1.1	18	1.2
15-20	< 0.1	1.8	24	1.8
20-30	< 0.1	2.2	16	2.3
30-40	< 0.1	1.5	19	1.5
40-60	< 0.1	1.4	20	1.4
60-80	0.0	0.3	60	0.3
80+	< 0.1	0.2	71	0.2
Total	< 0.1	10.7	8	10.8

Part 4 – Tree health

Figure 51 Standing volume of ash by age class

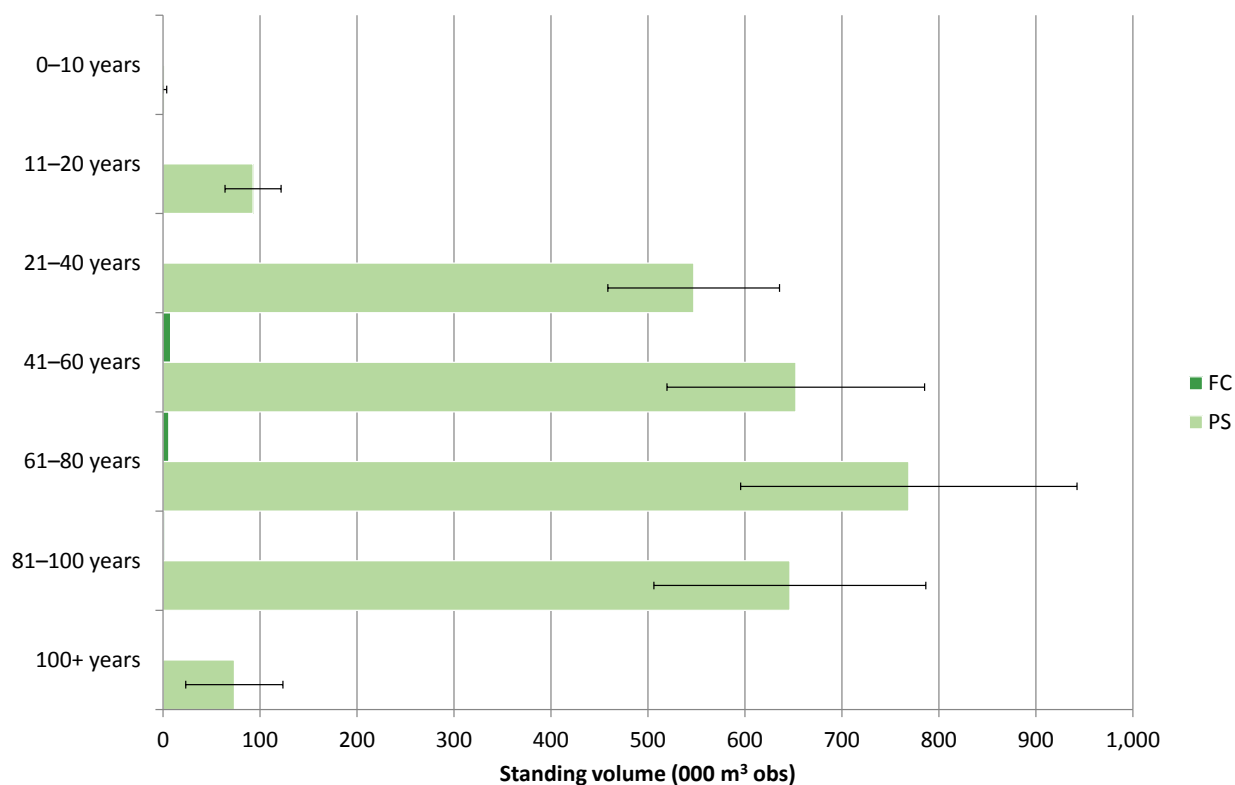


Table 46 Standing volume of ash by age class

Age class (years)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0-10	0	2	129	2
11-20	< 1	93	31	93
21-40	< 1	547	16	547
41-60	8	652	20	660
61-80	6	769	23	775
81-100	1	646	22	648
100+	< 1	74	68	74
Total	16	2,783	10	2,798

Part 4 – Tree health

Figure 52 Standing volume of ash by mean stand dbh class

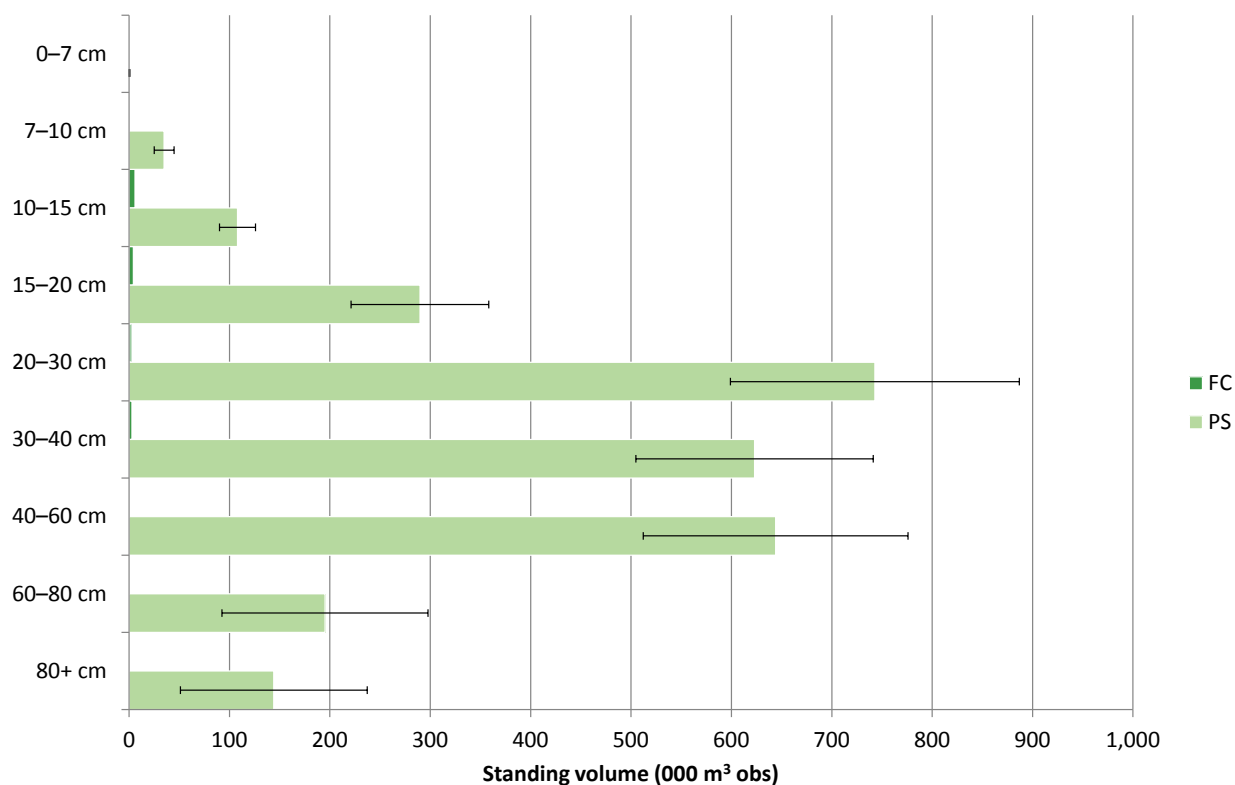


Table 47 Standing volume of ash by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0-7	0	< 1	105	< 1
7-10	< 1	35	28	35
10-15	6	108	17	114
15-20	4	290	24	294
20-30	2	743	19	745
30-40	3	623	19	626
40-60	< 1	644	20	644
60-80	< 1	195	53	195
80+	< 1	144	65	144
Total	16	2,783	10	2,798

Part 4 – Tree health

Figure 53 Number of ash trees by age class

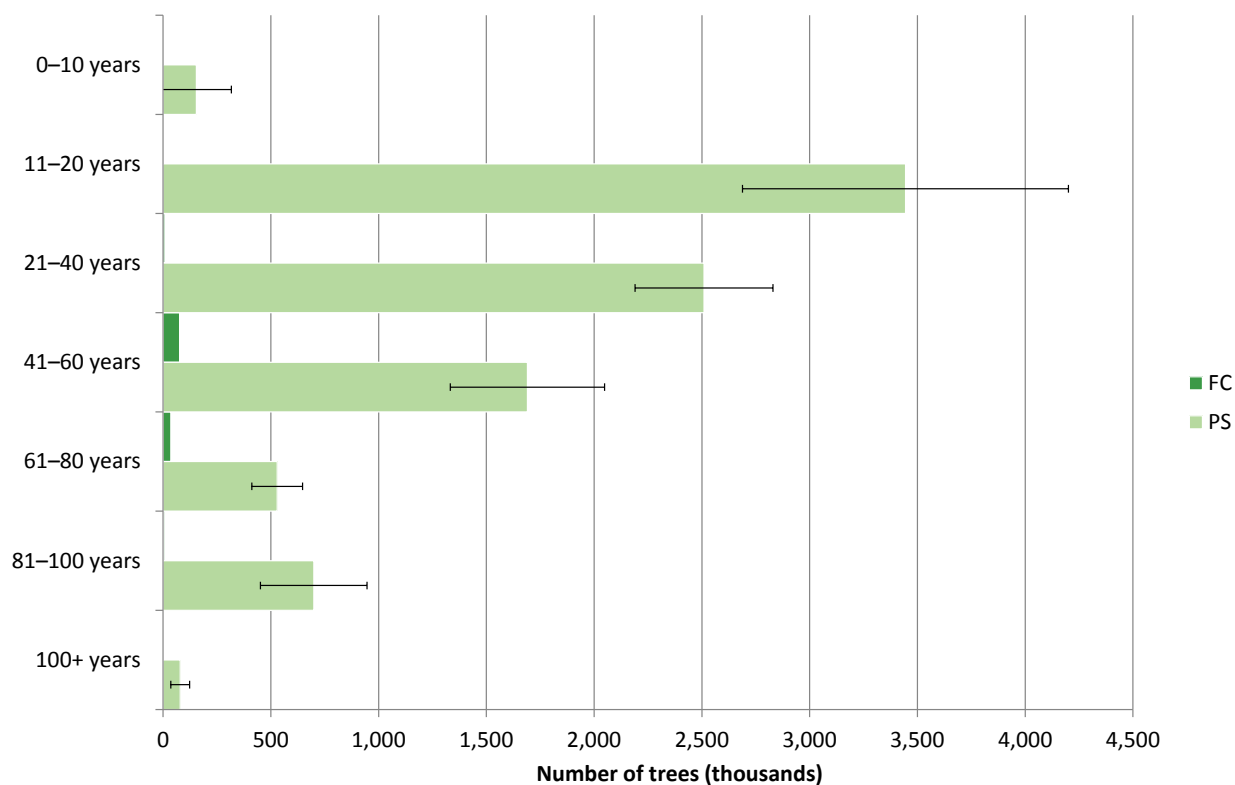


Table 48 Number of ash trees by age class

Age class (years)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0-10	0	155	105	155
11-20	4	3,444	22	3,448
21-40	8	2,510	13	2,518
41-60	77	1,691	21	1,768
61-80	36	529	22	566
81-100	6	699	35	705
100+	3	80	54	83
Total	134	9,108	11	9,242

Part 4 – Tree health

Figure 54 Number of ash trees by mean stand dbh class

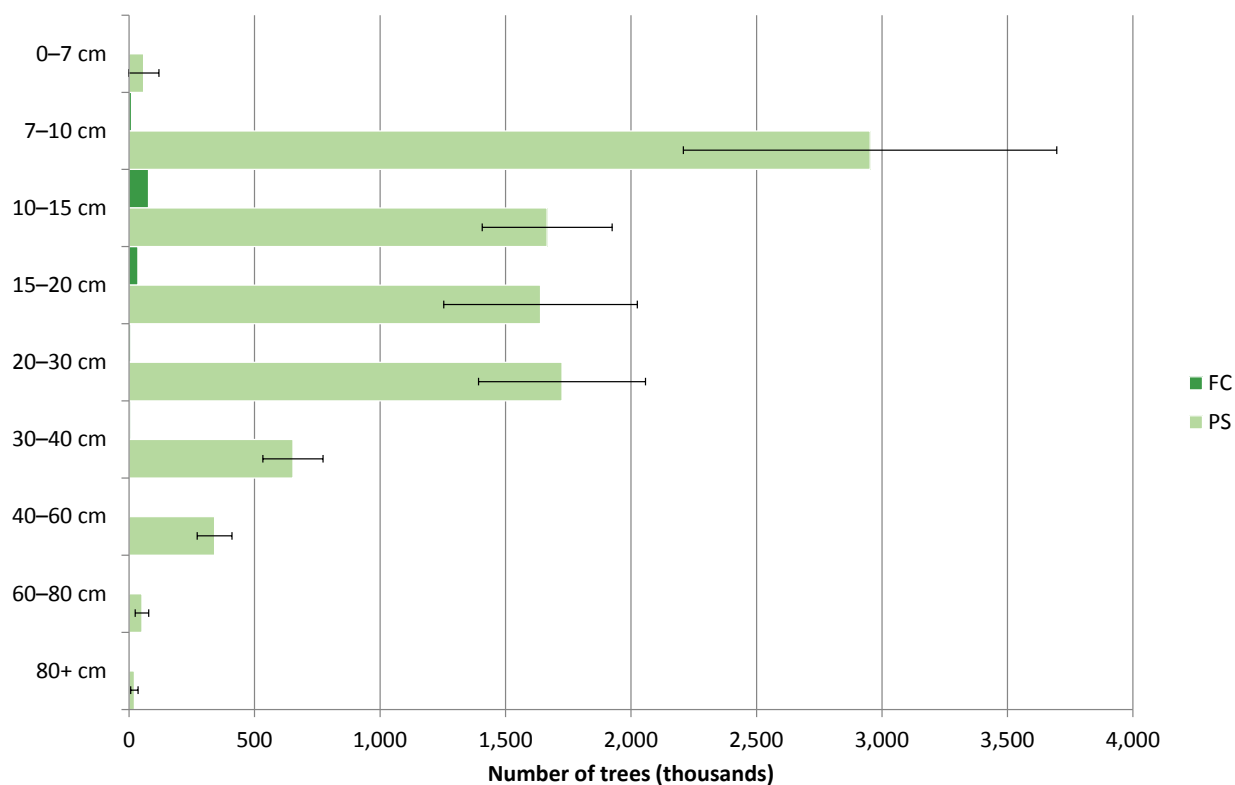
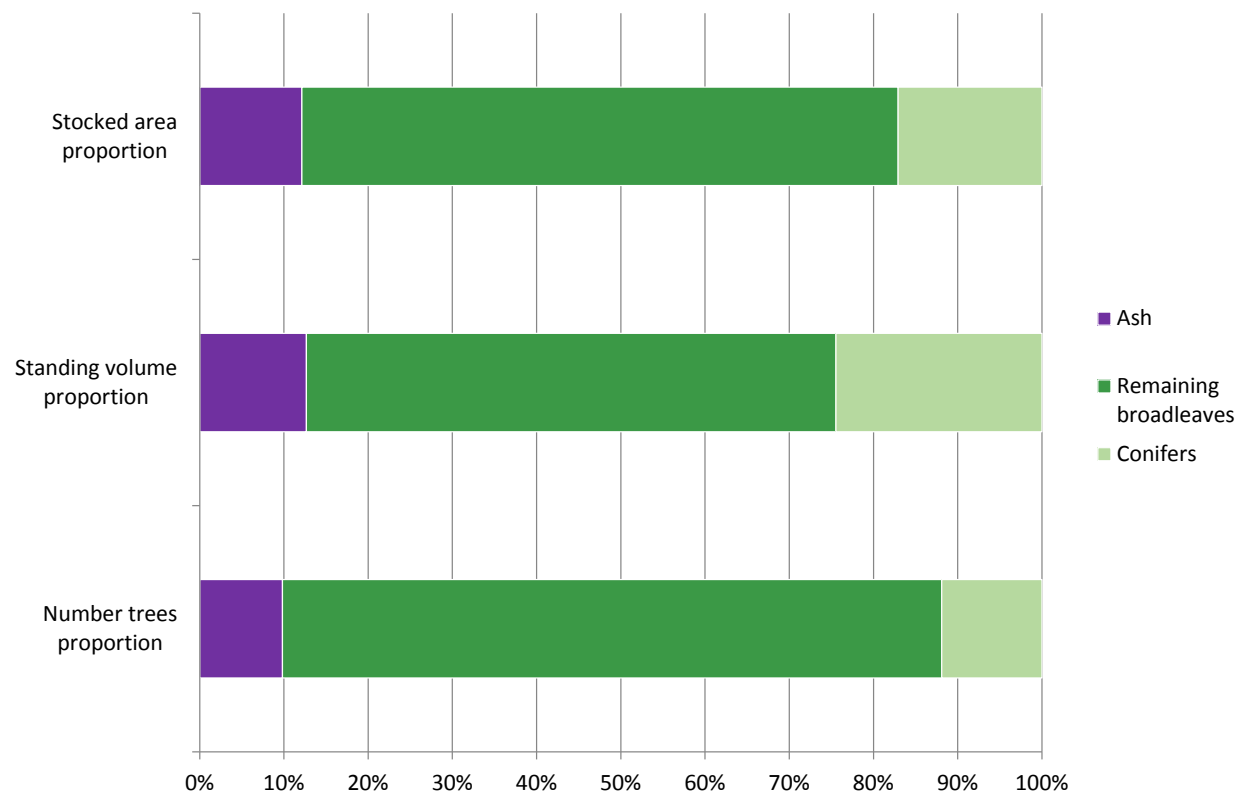


Table 49 Number of ash trees by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0-7	0	58	105	58
7-10	10	2,953	25	2,963
10-15	77	1,666	16	1,743
15-20	35	1,640	24	1,675
20-30	7	1,725	19	1,732
30-40	5	653	18	658
40-60	< 1	341	20	341
60-80	< 1	51	53	51
80+	< 1	22	68	22
Total	134	9,108	11	9,242

Part 4 – Tree health

Figure 55 Ash as a proportion of woodland



Part 4 – Tree health

Table 50 Stocked area of ash as a proportion of woodland

Aligned area	Stocked area of ash			
	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames	< 0.1	10.7	8	10.8

Table 50 (cont'd) Stocked area of ash as a proportion of woodland

Aligned area	Stocked area of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of ash in all broadleaves	Percentage of ash in all species
	area (000 ha)	area (000 ha)	(percent)	(percent)
Thames	73.6	88.6	15	12

Table 51 Standing volume of ash as a proportion of woodland

Aligned area	Standing volume of ash			
	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames	16	2,783	10	2,798

Table 51 (cont'd) Standing volume of ash as a proportion of woodland

Aligned area	Standing volume of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of ash in all broadleaves	Percentage of ash in all species
	volume (000 m³ obs)	volume (000 m³ obs)	(percent)	(percent)
Thames	16,691	22,055	17	13

Part 4 – Tree health

Table 52 Number of ash trees as a proportion of woodland

Aligned Area	Numbers of trees of ash			
	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames	134	9,108	11	9,242

Table 52 (cont'd) Number of ash trees as a proportion of woodland

Aligned Area	Number of trees of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of ash in all broadleaves	Percentage of ash in all species
	number of trees (thousands)	number of trees (thousands)	(percent)	(percent)
Thames	82,950	94,267	11	10

Part 4 – Tree health

Oak

Figure 56 Stocked area of oak by age class

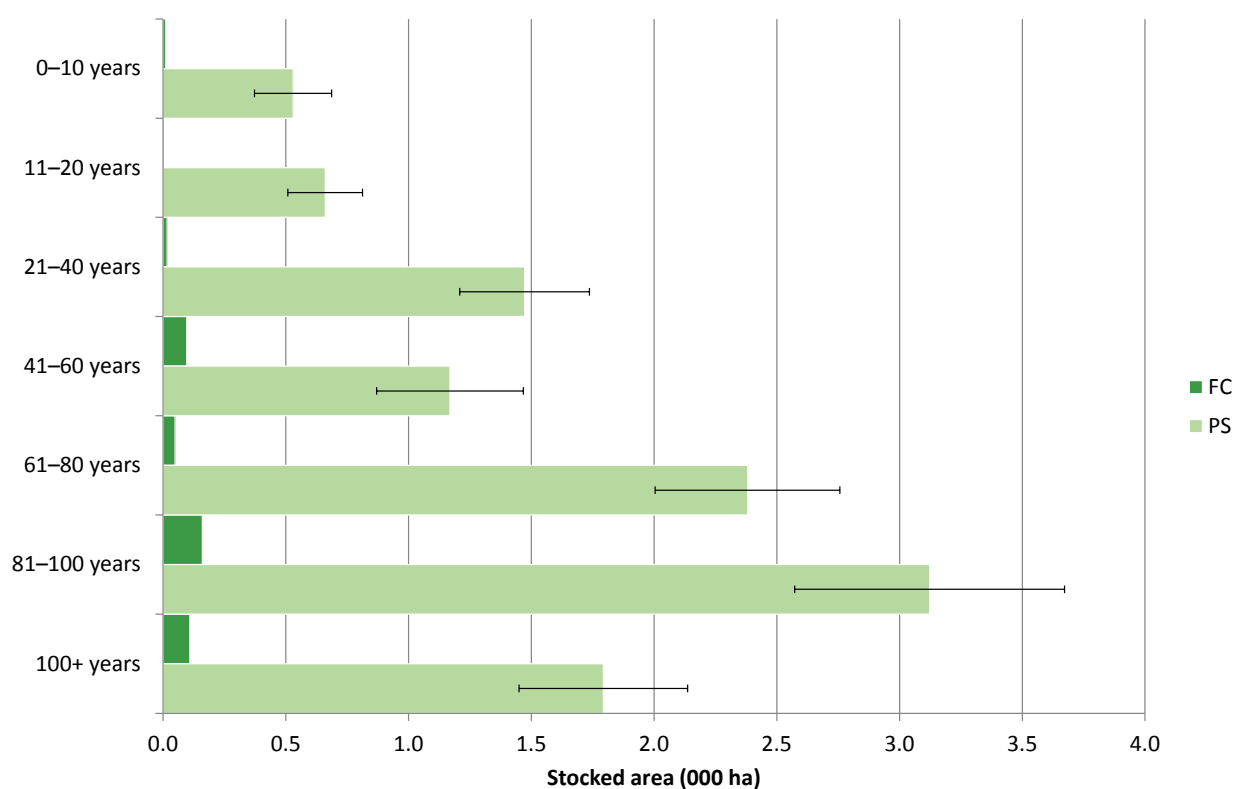


Table 53 Stocked area of oak by age class

Age class (years)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0-10	< 0.1	0.5	30	0.5
11-20	< 0.1	0.7	23	0.7
21-40	< 0.1	1.5	18	1.5
41-60	< 0.1	1.2	26	1.3
61-80	< 0.1	2.4	16	2.4
81-100	0.2	3.1	18	3.3
100+	0.1	1.8	19	1.9
Total	0.4	11.1	8	11.6

Part 4 – Tree health

Figure 57 Stocked area of oak by mean stand dbh class

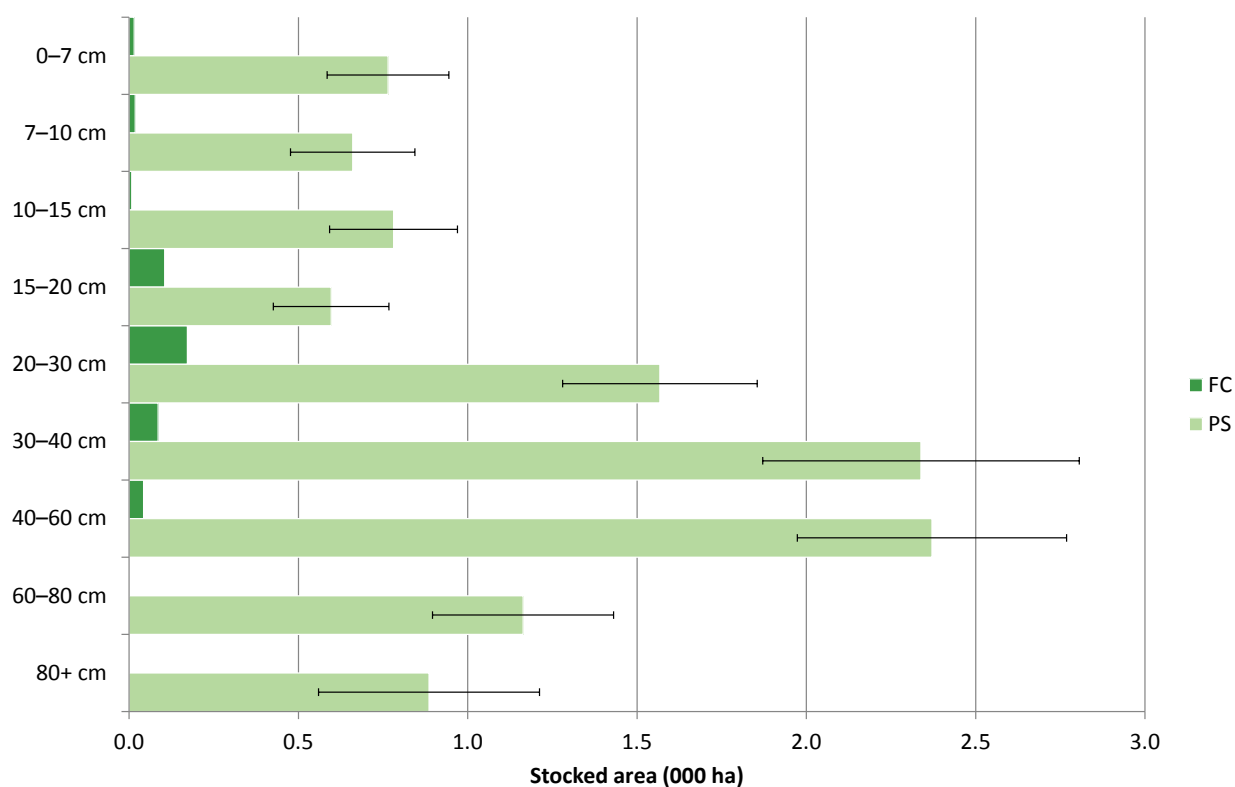


Table 54 Stocked area of oak by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0-7	< 0.1	0.8	23	0.8
7-10	< 0.1	0.7	28	0.7
10-15	< 0.1	0.8	24	0.8
15-20	0.1	0.6	29	0.7
20-30	0.2	1.6	18	1.7
30-40	< 0.1	2.3	20	2.4
40-60	< 0.1	2.4	17	2.4
60-80	< 0.1	1.2	23	1.2
80+	0.0	0.9	37	0.9
Total	0.4	11.1	8	11.6

Part 4 – Tree health

Figure 58 Standing volume of oak by age class

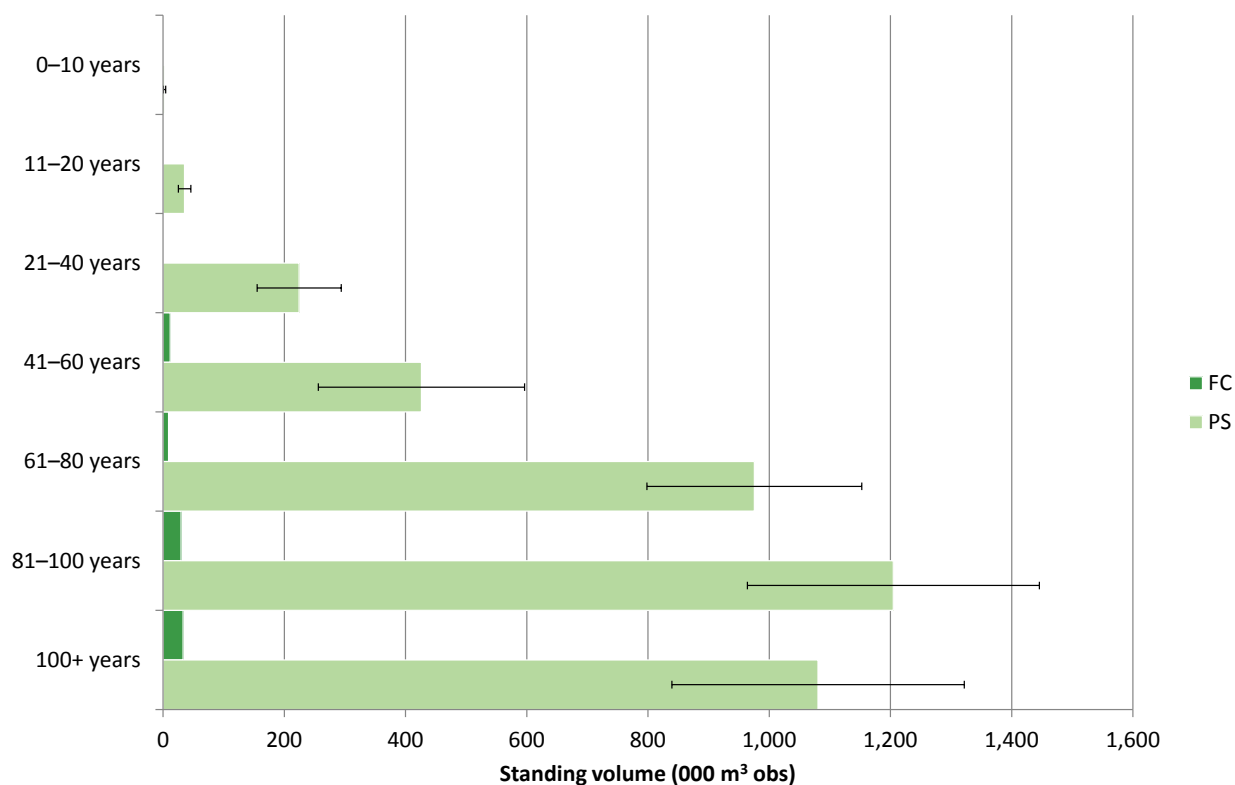


Table 55 Standing volume of oak by age class

Age class (years)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0-10	0	3	77	3
11-20	< 1	36	29	36
21-40	< 1	225	31	225
41-60	12	426	40	438
61-80	9	976	18	984
81-100	30	1,205	20	1,234
100+	33	1,081	22	1,114
Total	84	3,950	10	4,033

Part 4 – Tree health

Figure 59 Standing volume of oak by mean stand dbh class

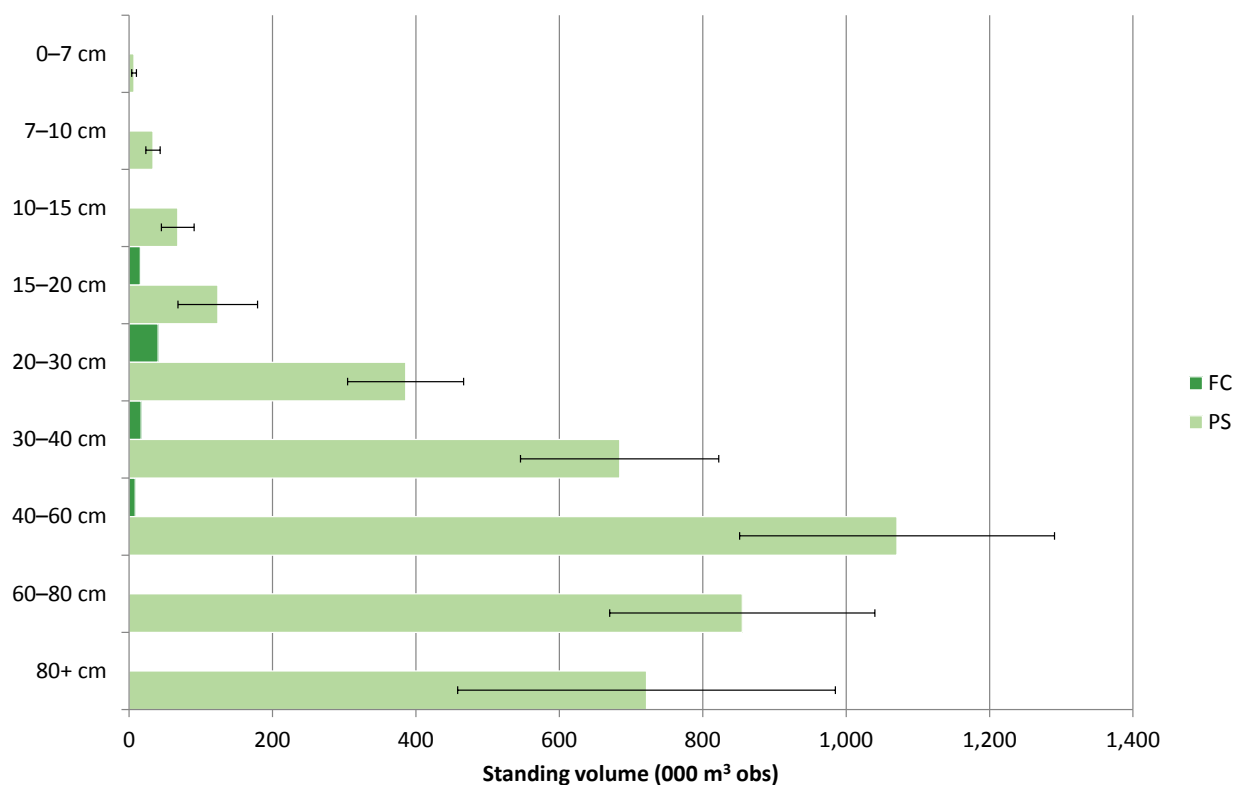


Table 56 Standing volume of oak by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0-7	< 1	7	47	7
7-10	< 1	33	30	34
10-15	1	68	33	69
15-20	16	124	45	140
20-30	40	386	21	426
30-40	17	684	20	701
40-60	9	1,071	21	1,080
60-80	< 1	855	22	855
80+	0	722	37	722
Total	84	3,950	10	4,033

Part 4 – Tree health

Figure 60 Number of oak trees by age class

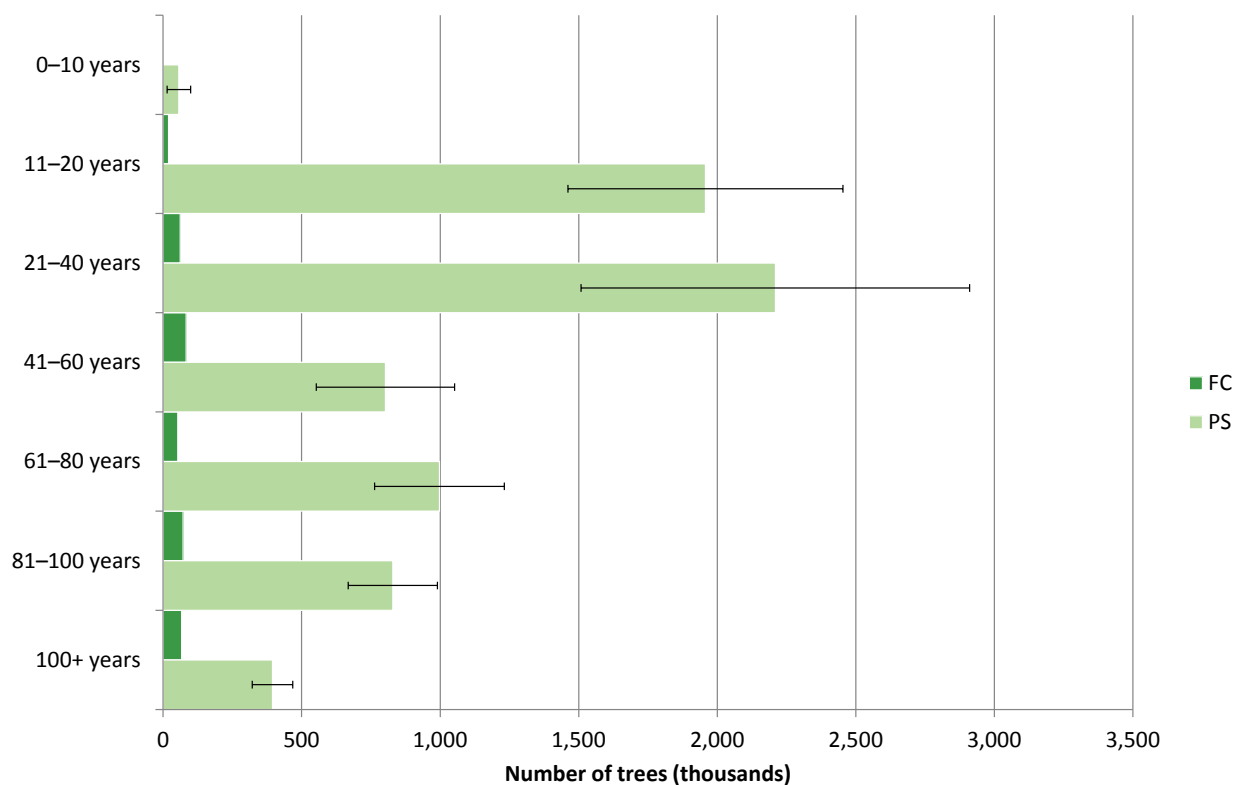


Table 57 Number of oak trees by age class

Age class (years)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0-10	0	57	74	57
11-20	20	1,957	25	1,977
21-40	62	2,209	32	2,271
41-60	84	802	31	886
61-80	53	998	23	1,050
81-100	72	829	19	902
100+	67	395	18	462
Total	358	7,248	13	7,606

Part 4 – Tree health

Figure 61 Number of oak trees by mean stand dbh class

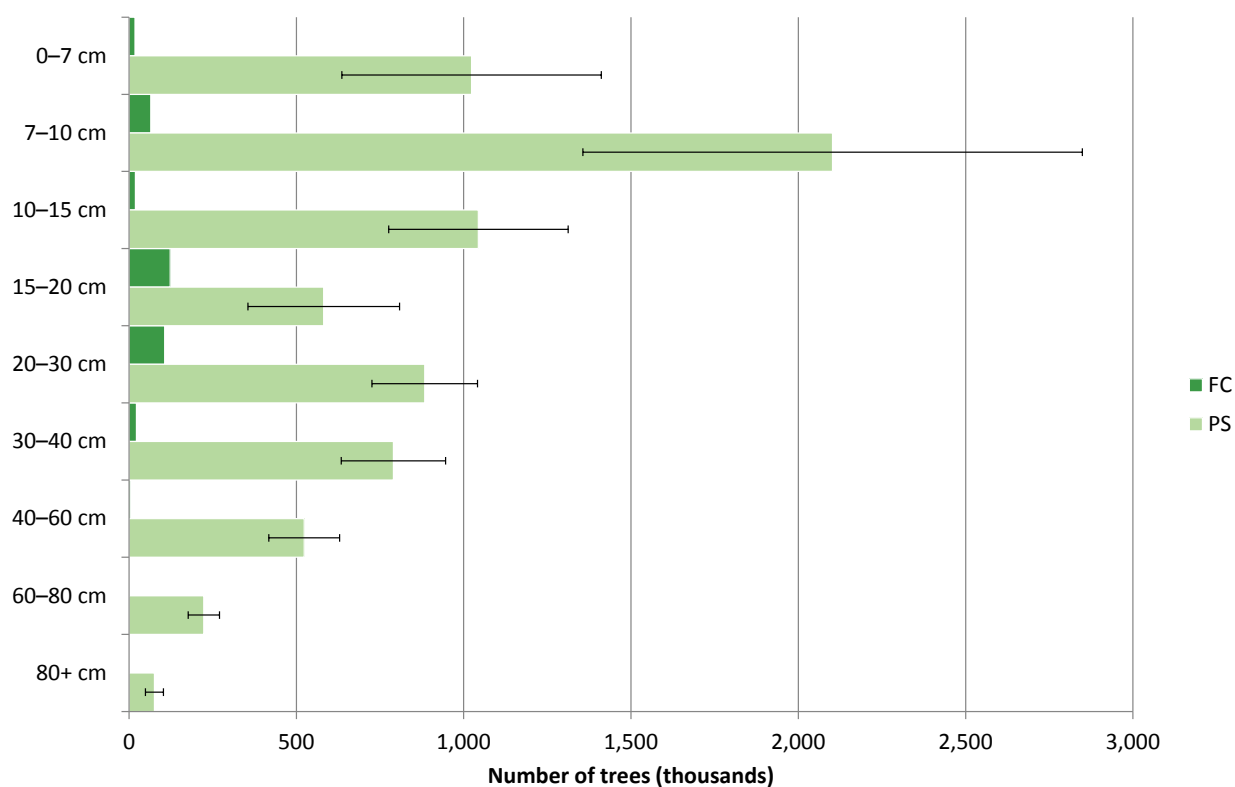
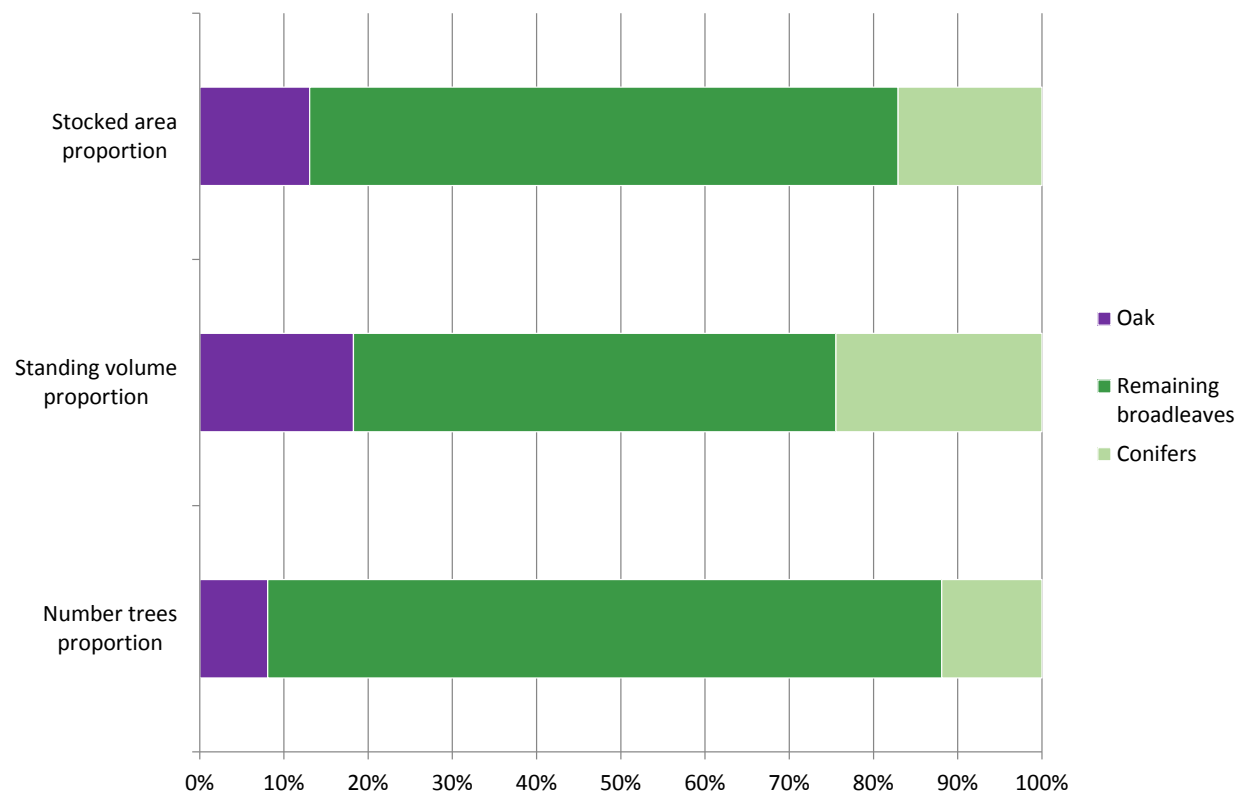


Table 58 Number of oak trees by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0-7	18	1,024	38	1,041
7-10	65	2,102	36	2,167
10-15	19	1,044	26	1,063
15-20	123	582	39	705
20-30	107	884	18	990
30-40	22	790	20	812
40-60	5	524	20	528
60-80	< 1	223	21	223
80+	0	76	35	76
Total	358	7,248	13	7,606

Part 4 – Tree health

Figure 62 Oak as a proportion of woodland



Part 4 – Tree health

Table 59 Stocked area of oak as a proportion of woodland

Aligned area	Stocked area of oak			
	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames	0.4	11.1	8	11.6

Table 59 (cont'd) Stocked area of oak as a proportion of woodland

Aligned area	Stocked area of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of oak in all broadleaves	Percentage of oak in all species
	area (000 ha)	area (000 ha)	(percent)	(percent)
Thames	73.6	88.6	16	13

Table 60 Standing volume of oak as a proportion of woodland

Aligned area	Standing volume of oak			
	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames	84	3,950	10	4,033

Table 60 (cont'd) Standing volume of oak as a proportion of woodland

Aligned area	Standing volume of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of oak in all broadleaves	Percentage of oak in all species
	volume (000 m³ obs)	volume (000 m³ obs)	(percent)	(percent)
Thames	16,691	22,055	24	18

Part 4 – Tree health

Table 61 Number of oak trees as a proportion of woodland

Aligned Area	Numbers of trees of oak			
	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames	358	7,248	13	7,606

Table 61 (cont'd) Number of oak trees as a proportion of woodland

Aligned Area	Number of trees of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of oak in all broadleaves	Percentage of oak in all species
	number of trees (thousands)	number of trees (thousands)	(percent)	(percent)
Thames	82,950	94,267	9	8

Sweet chestnut

Figure 63 Stocked area of sweet chestnut by age class

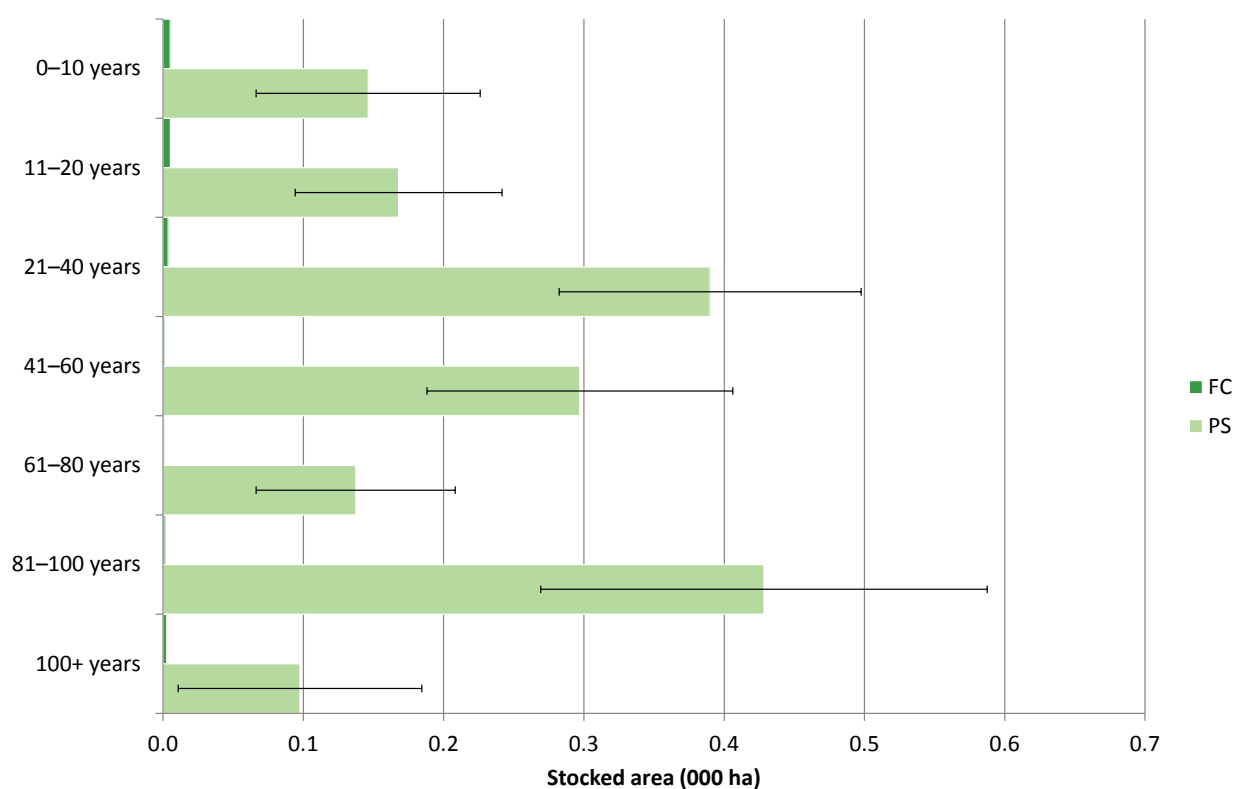


Table 62 Stocked area of sweet chestnut by age class

Age class (years)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0–10	< 0.1	0.1	55	0.2
11–20	< 0.1	0.2	44	0.2
21–40	< 0.1	0.4	28	0.4
41–60	< 0.1	0.3	37	0.3
61–80	< 0.1	0.1	52	0.1
81–100	< 0.1	0.4	37	0.4
100+	< 0.1	< 0.1	89	0.1
Total	< 0.1	1.7	20	1.7

Part 4 – Tree health

Figure 64 Stocked area of sweet chestnut by mean stand dbh class

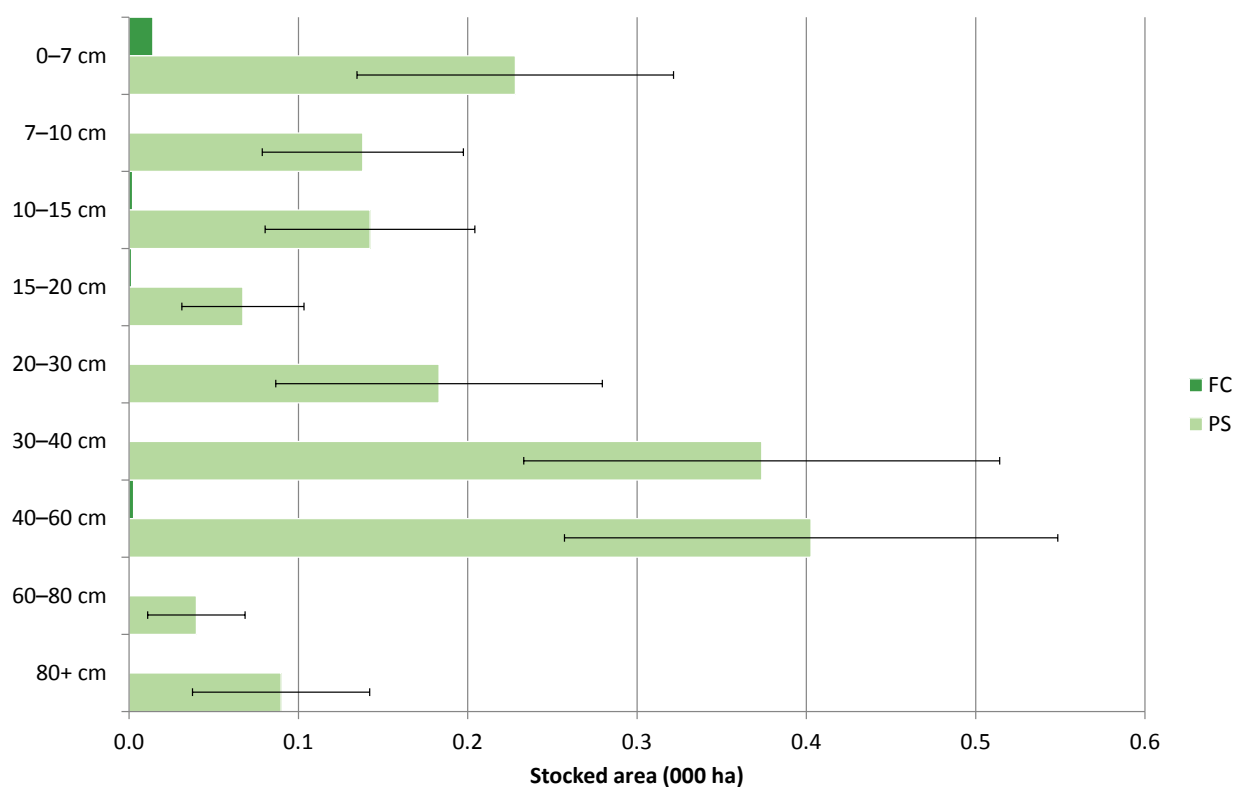


Table 63 Stocked area of sweet chestnut by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0-7	< 0.1	0.2	41	0.2
7-10	< 0.1	0.1	43	0.1
10-15	< 0.1	0.1	44	0.1
15-20	< 0.1	< 0.1	54	< 0.1
20-30	0.0	0.2	53	0.2
30-40	0.0	0.4	38	0.4
40-60	< 0.1	0.4	36	0.4
60-80	0.0	< 0.1	72	< 0.1
80+	0.0	< 0.1	58	< 0.1
Total	< 0.1	1.7	20	1.7

Part 4 – Tree health

Figure 65 Standing volume of sweet chestnut by age class

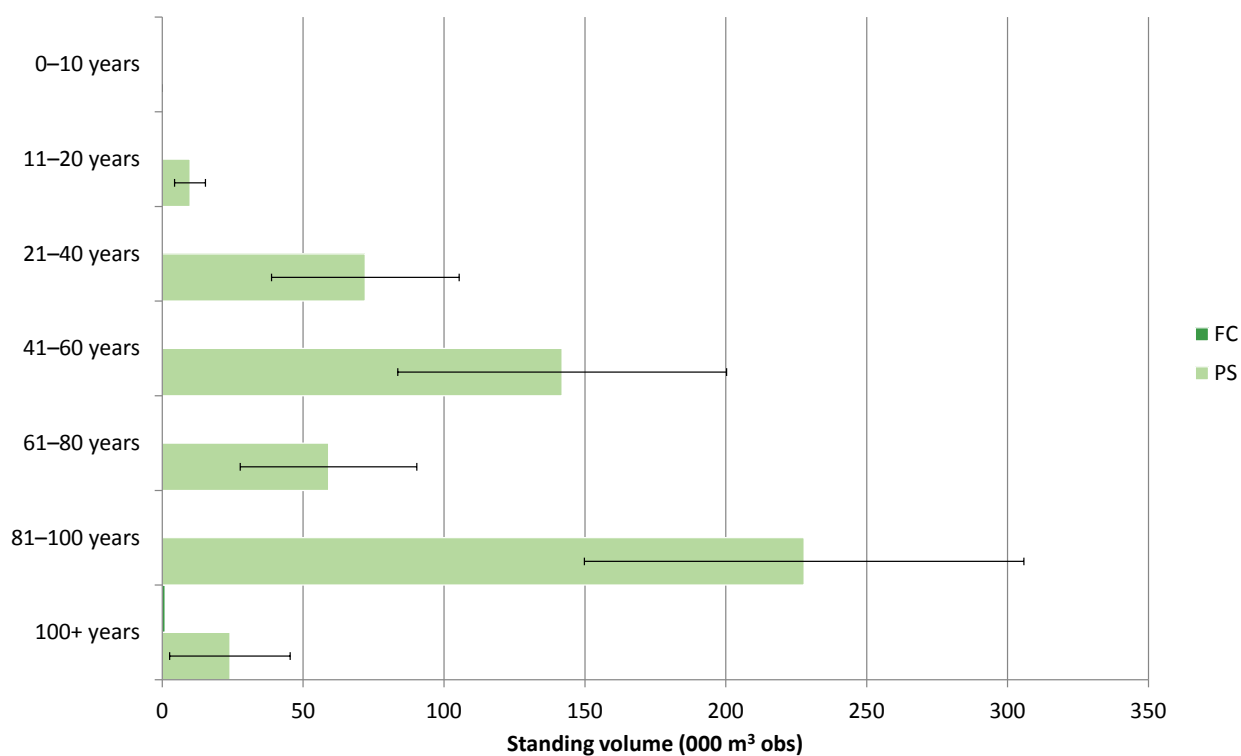


Table 64 Standing volume of sweet chestnut by age class

Age class (years)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0–10	0	0	-	0
11–20	< 1	10	56	10
21–40	< 1	72	46	72
41–60	< 1	142	41	142
61–80	< 1	59	53	59
81–100	< 1	228	34	228
100+	1	24	89	25
Total	2	535	22	537

Part 4 – Tree health

Figure 66 Standing volume of sweet chestnut by mean stand dbh class

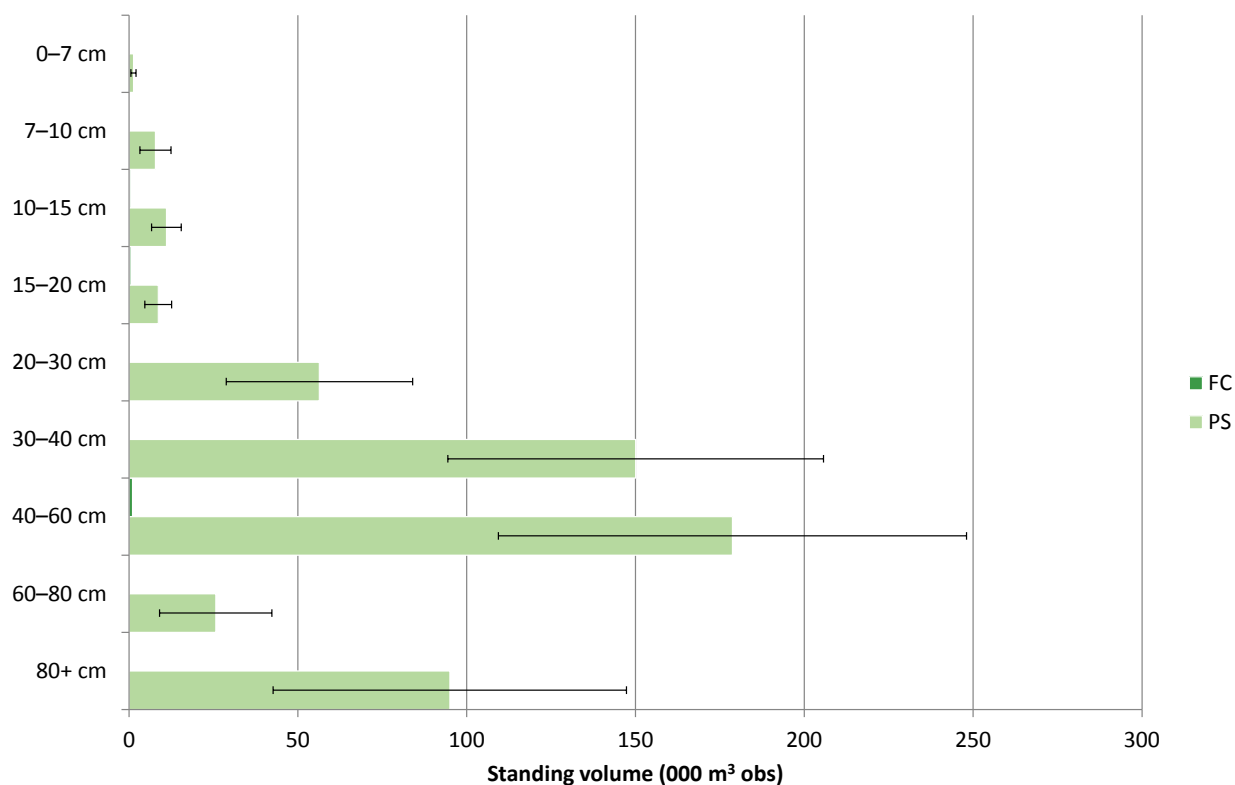


Table 65 Standing volume of sweet chestnut by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0-7	< 1	1	58	1
7-10	< 1	8	59	8
10-15	< 1	11	39	11
15-20	< 1	9	46	9
20-30	0	56	49	56
30-40	0	150	37	150
40-60	1	179	39	180
60-80	0	26	65	26
80+	0	95	55	95
Total	2	535	22	537

Part 4 – Tree health

Figure 67 Number of sweet chestnut trees by age class

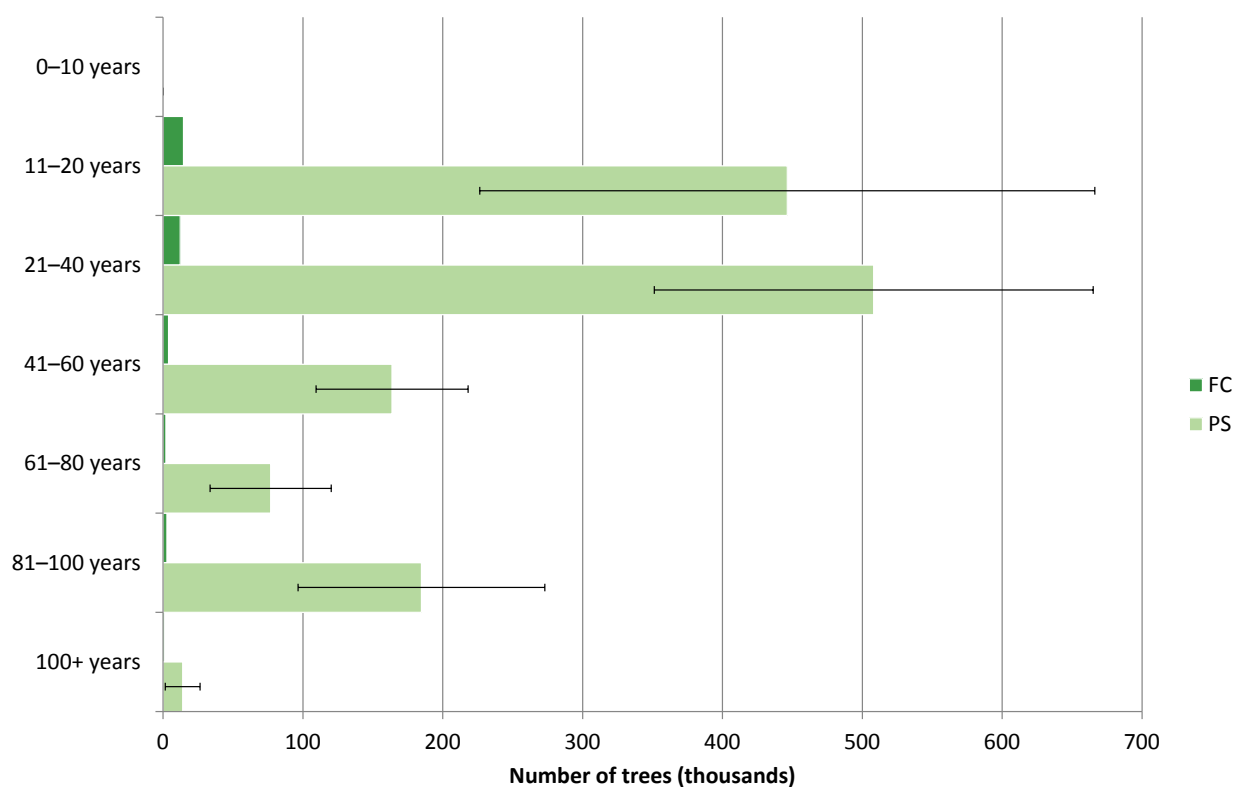


Table 66 Number of sweet chestnut trees by age class

Age class (years)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0–10	0	0	-	0
11–20	15	446	49	461
21–40	12	508	31	520
41–60	4	164	33	168
61–80	2	77	56	79
81–100	3	185	48	188
100+	1	14	89	15
Total	37	1,394	24	1,431

Part 4 – Tree health

Figure 68 Number of sweet chestnut trees by mean stand dbh class

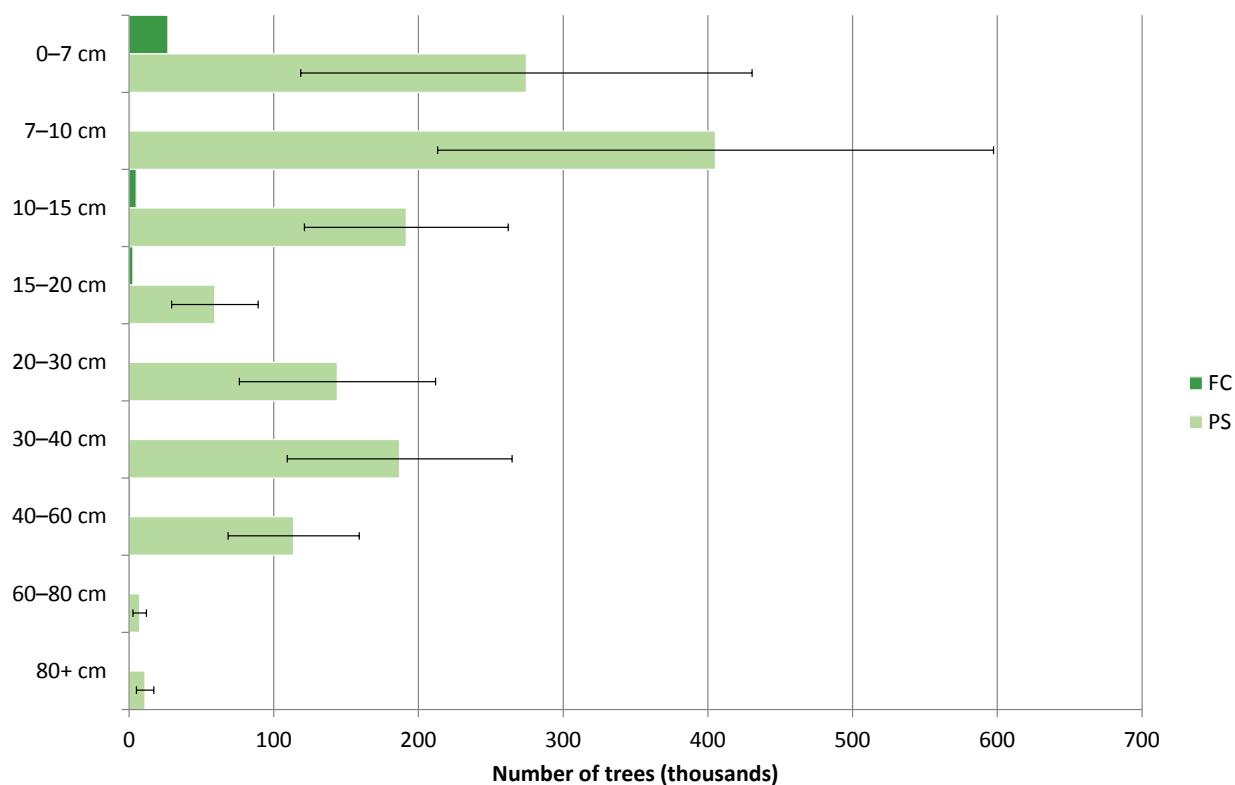
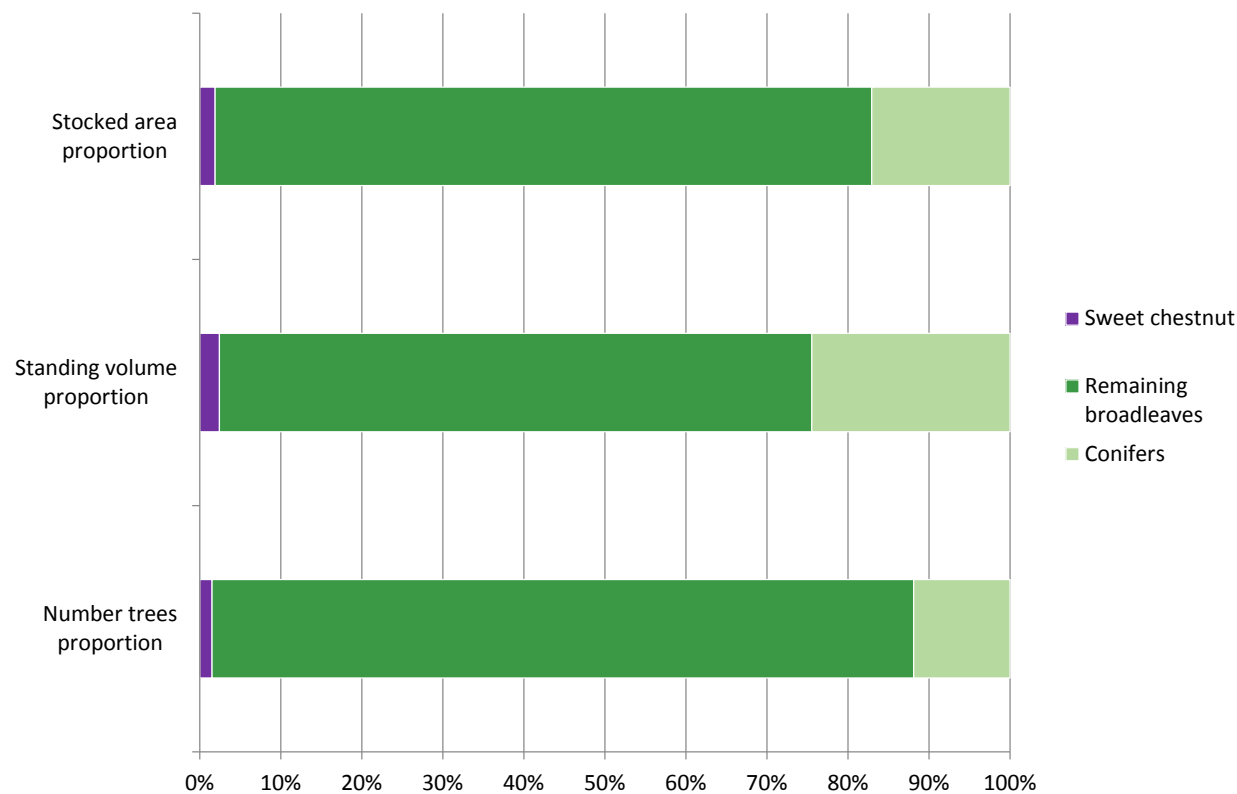


Table 67 Number of sweet chestnut trees by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0-7	27	275	57	302
7-10	< 1	405	47	406
10-15	5	192	37	197
15-20	3	59	51	62
20-30	0	144	47	144
30-40	0	187	42	187
40-60	1	114	40	115
60-80	0	7	64	7
80+	0	11	54	11
Total	37	1,394	24	1,431

Part 4 – Tree health

Figure 69 Sweet chestnut as a proportion of woodland



Part 4 – Tree health

Table 68 Stocked area of sweet chestnut as a proportion of woodland

Aligned area	Stocked area of sweet chestnut			
	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames	< 0.1	1.7	20	1.7

Table 68 (cont'd) Stocked area of sweet chestnut as a proportion of woodland

Aligned area	Stocked area of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of sweet chestnut in all broadleaves	Percentage of sweet chestnut in all species
	area (000 ha)	area (000 ha)	(percent)	(percent)
Thames	73.6	88.6	2	2

Table 69 Standing volume of sweet chestnut as a proportion of woodland

Aligned area	Standing volume of sweet chestnut			
	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames	2	535	22	537

Table 69 (cont'd) Standing volume of sweet chestnut as a proportion of woodland

Aligned area	Standing volume of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of sweet chestnut in all broadleaves	Percentage of sweet chestnut in all species
	volume (000 m³ obs)	volume (000 m³ obs)	(percent)	(percent)
Thames	16,691	22,055	3	2

Part 4 – Tree health

Table 70 Number of sweet chestnut trees as a proportion of woodland

Aligned Area	Numbers of trees of sweet chestnut			
	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames	37	1,394	24	1,431

Table 70 (cont'd) Number of sweet chestnut trees as a proportion of woodland

Aligned Area	Number of trees of all broadleaves and all species			
	Total of all broadleaves	Total of all species	Percentage of sweet chestnut in all broadleaves	Percentage of sweet chestnut in all species
	number of trees (thousands)	number of trees (thousands)	(percent)	(percent)
Thames	82,950	94,267	2	2

Part 4 – Tree health

Larch

Figure 70 Stocked area of larch by age class

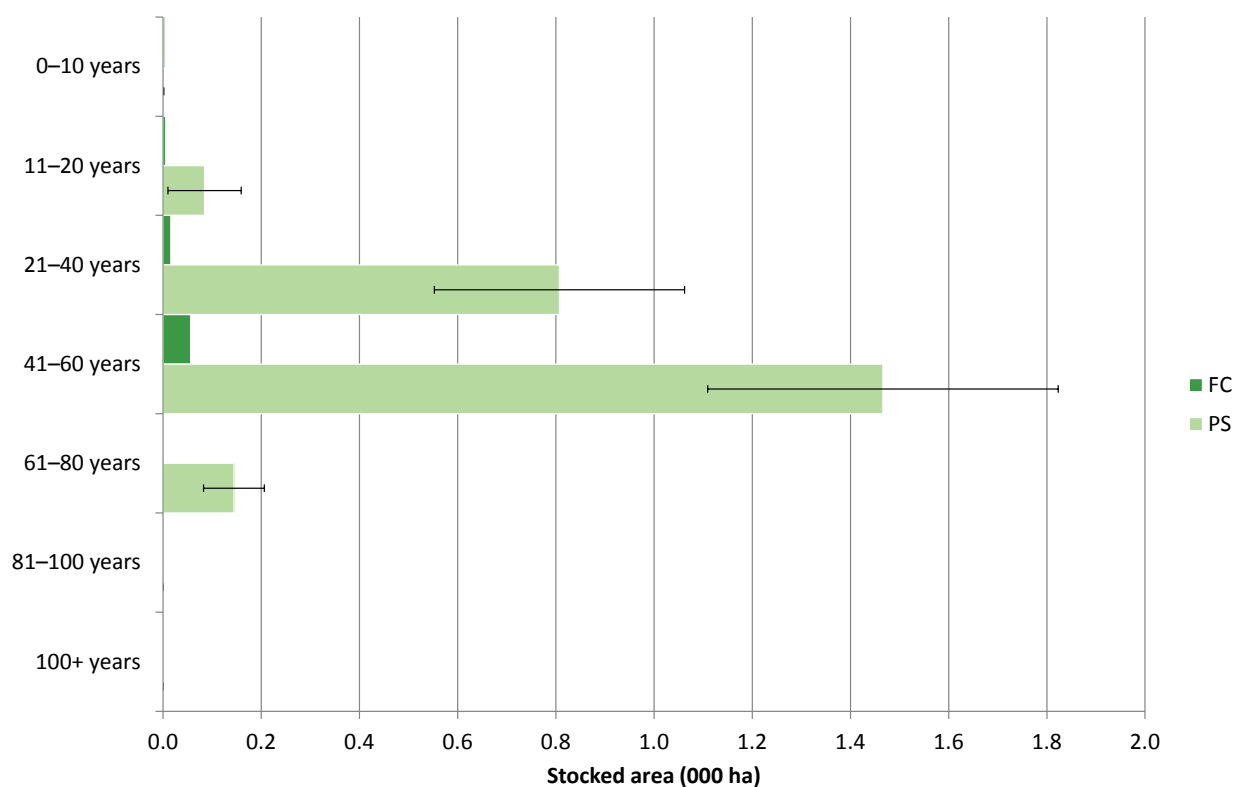


Table 71 Stocked area of larch by age class

Age class (years)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0–10	< 0.1	< 0.1	73	< 0.1
11–20	< 0.1	< 0.1	88	< 0.1
21–40	< 0.1	0.8	32	0.8
41–60	< 0.1	1.5	24	1.5
61–80	< 0.1	0.1	43	0.1
81–100	< 0.1	0.0	-	< 0.1
100+	0.0	0.0	-	0.0
Total	< 0.1	2.5	17	2.6

Part 4 – Tree health

Figure 71 Stocked area of larch by mean stand dbh class

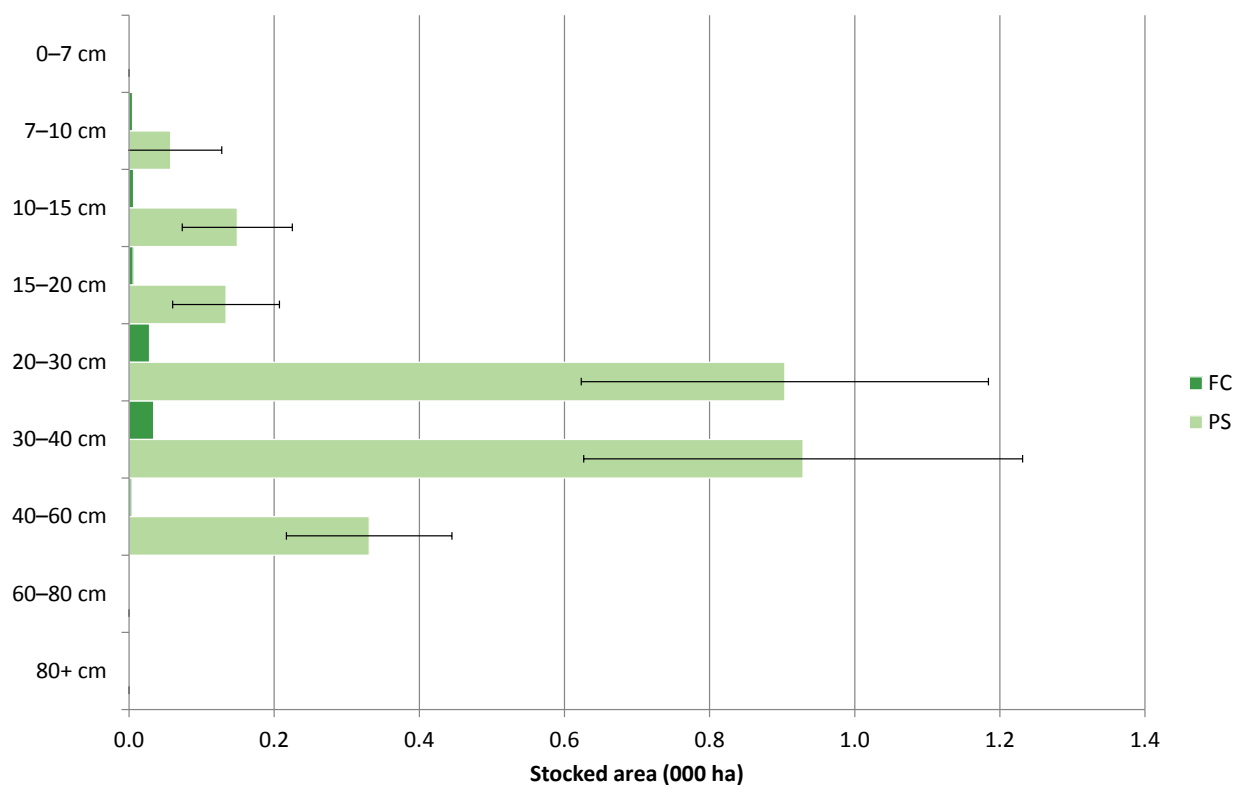


Table 72 Stocked area of larch by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames				
0-7	< 0.1	0.0	-	< 0.1
7-10	< 0.1	< 0.1	124	< 0.1
10-15	< 0.1	0.1	51	0.2
15-20	< 0.1	0.1	55	0.1
20-30	< 0.1	0.9	31	0.9
30-40	< 0.1	0.9	33	1.0
40-60	< 0.1	0.3	34	0.3
60-80	0.0	0.0	-	0.0
80+	0.0	0.0	-	0.0
Total	< 0.1	2.5	17	2.6

Part 4 – Tree health

Figure 72 Standing volume of larch by age class

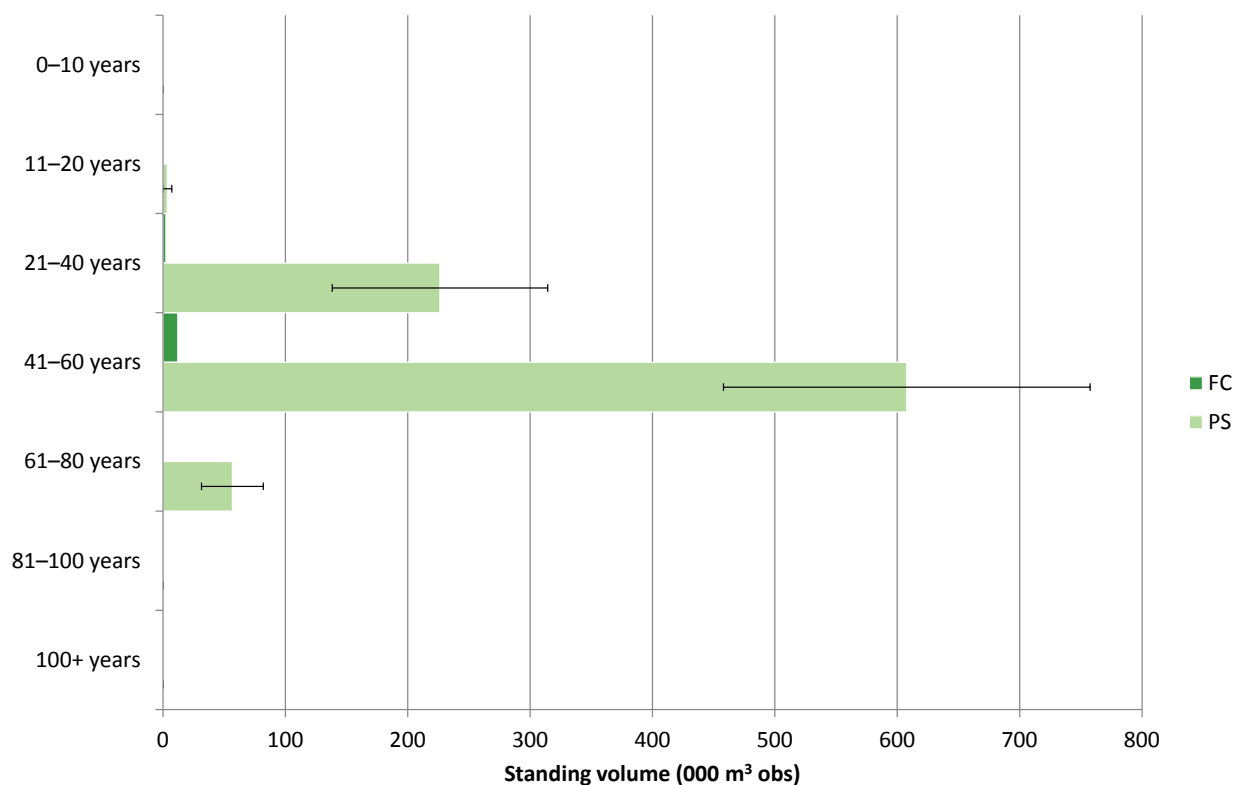


Table 73 Standing volume of larch by age class

Age class (years)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0-10	< 1	< 1	73	< 1
11-20	< 1	3	105	4
21-40	2	226	39	229
41-60	12	608	25	620
61-80	< 1	57	45	57
81-100	< 1	0	-	< 1
100+	0	0	-	0
Total	15	894	19	909

Part 4 – Tree health

Figure 73 Standing volume of larch by mean stand dbh class

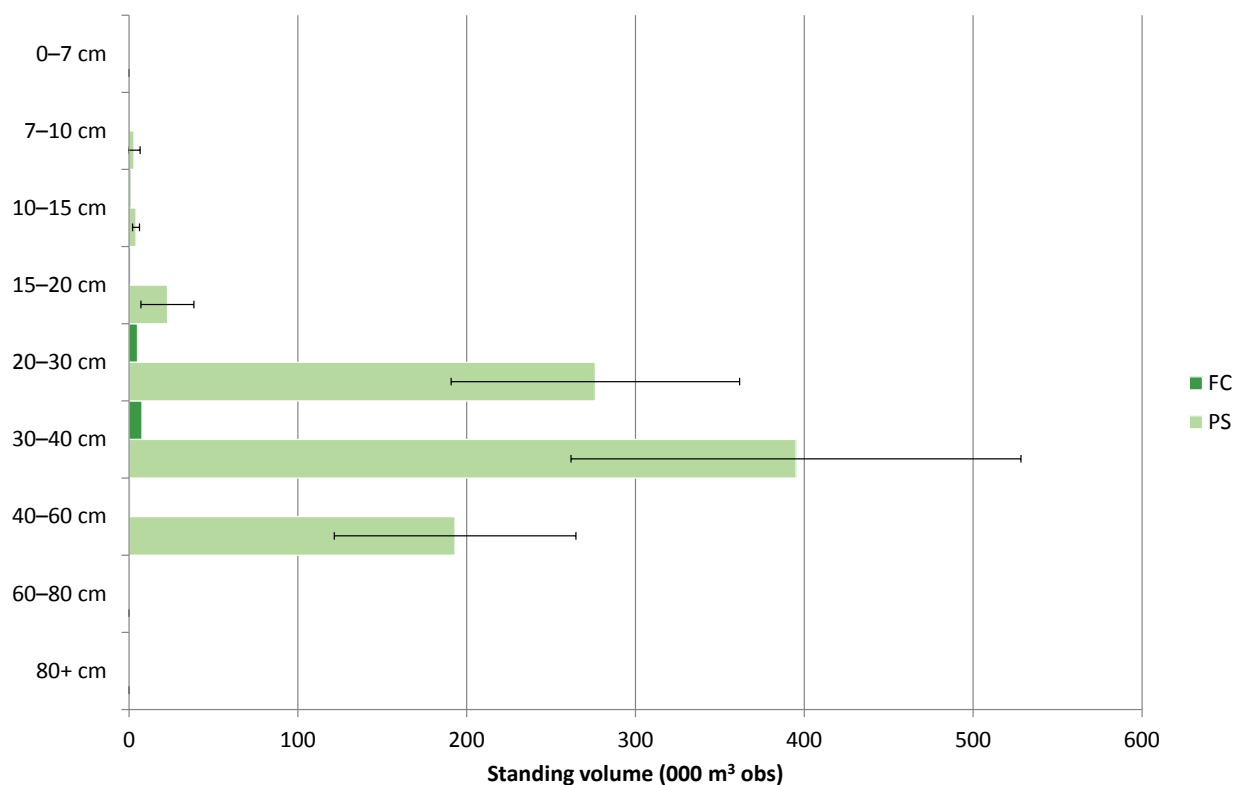


Table 74 Standing volume of larch by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames				
0-7	0	0	-	0
7-10	< 1	3	125	3
10-15	< 1	4	51	5
15-20	< 1	23	69	24
20-30	5	276	31	281
30-40	8	395	34	403
40-60	< 1	193	37	194
60-80	0	0	-	0
80+	0	0	-	0
Total	15	894	19	909

Part 4 – Tree health

Figure 74 Number of larch trees by age class

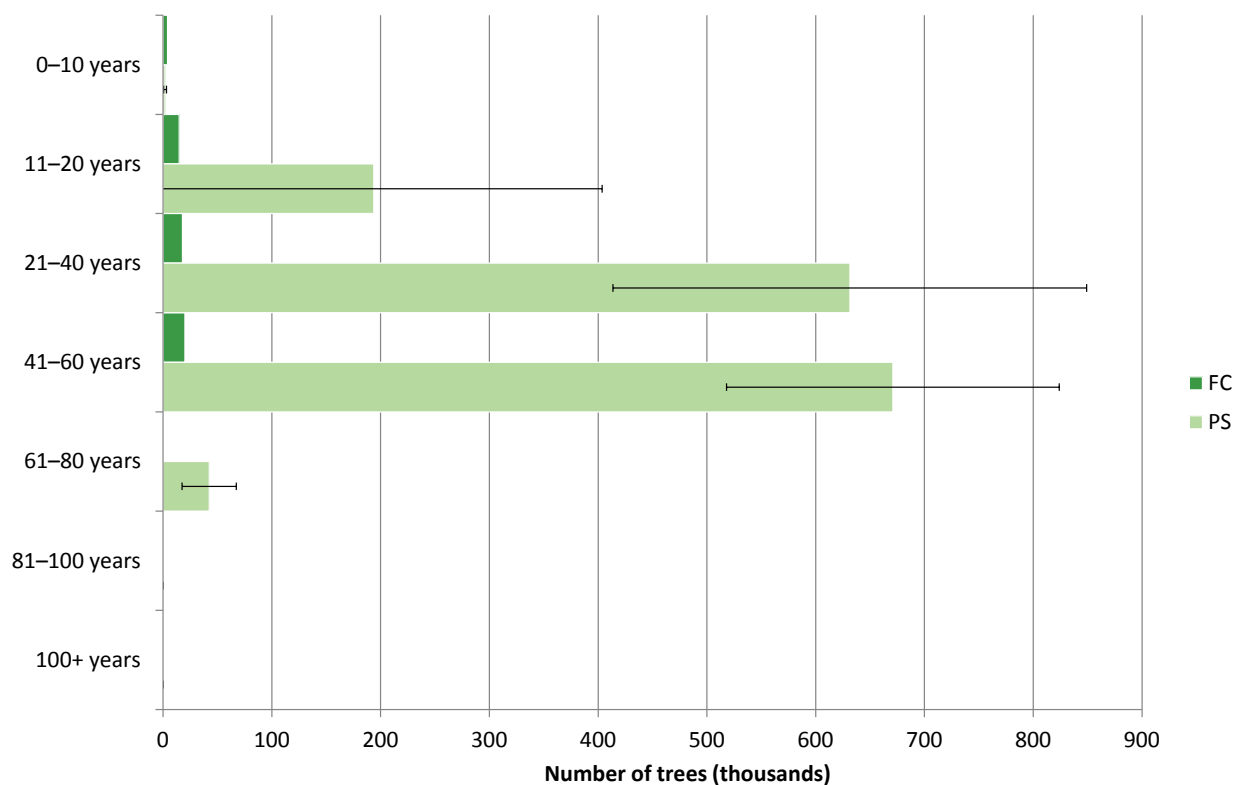


Table 75 Number of larch trees by age class

Age class (years)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0–10	4	2	73	6
11–20	15	194	108	209
21–40	18	631	34	649
41–60	20	671	23	691
61–80	< 1	42	59	43
81–100	< 1	0	-	< 1
100+	0	0	-	0
Total	58	1,540	22	1,598

Part 4 – Tree health

Figure 75 Number of larch trees by mean stand dbh class

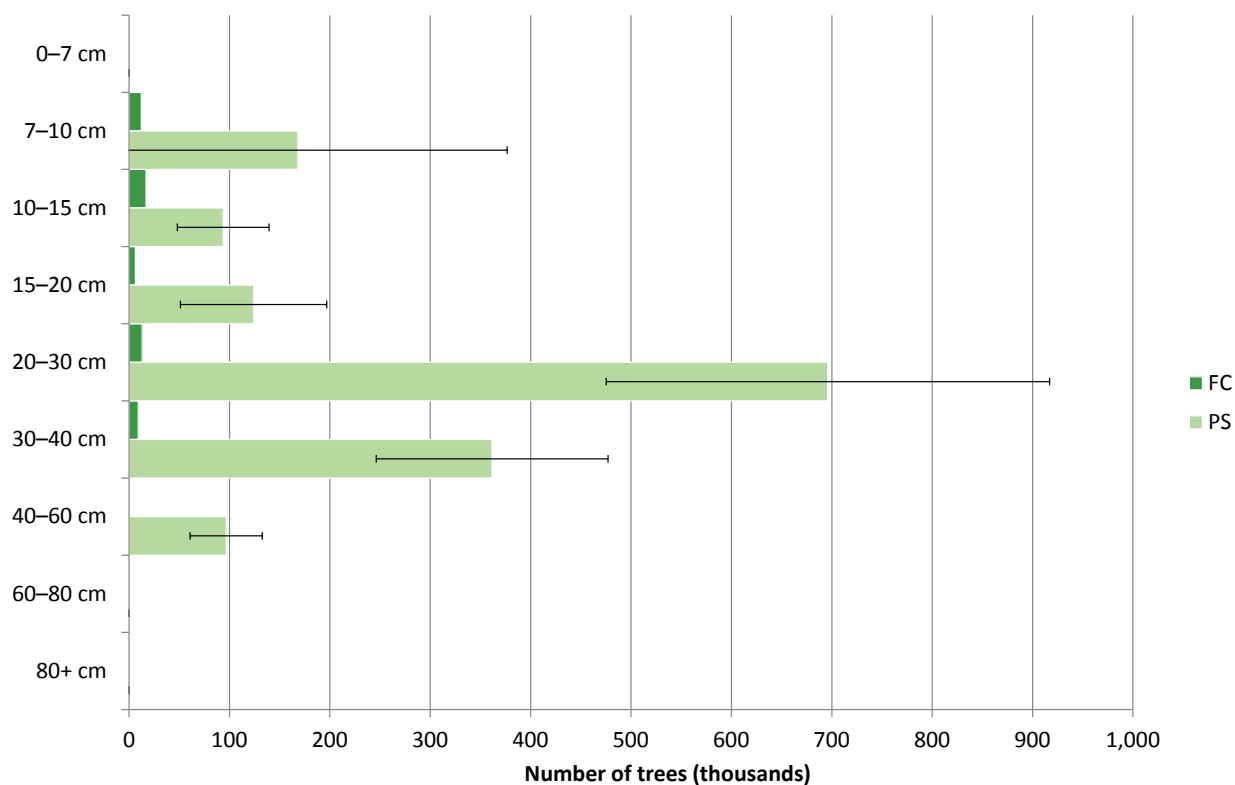
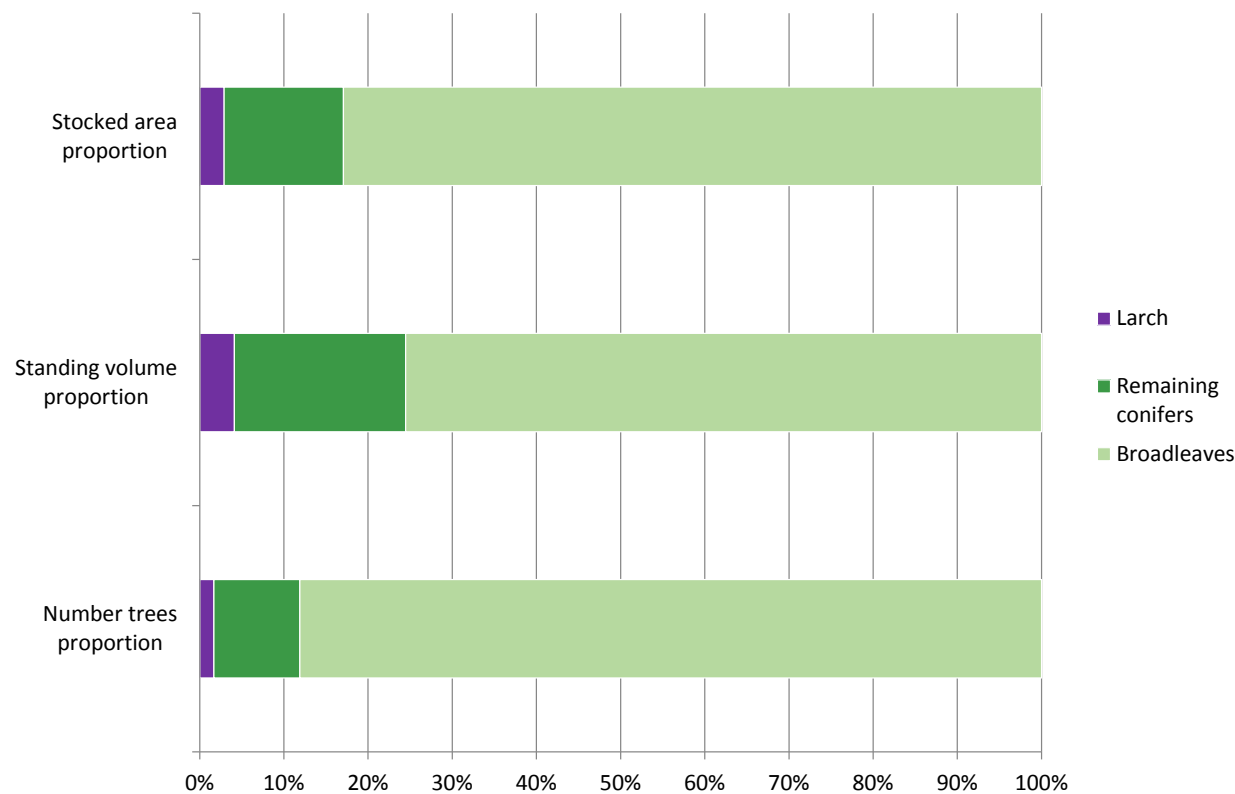


Table 76 Number of larch trees by mean stand dbh class

Mean stand DBH (cm)	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames				
0-7	0	0	-	0
7-10	12	168	124	180
10-15	17	94	49	111
15-20	6	124	59	130
20-30	13	696	32	709
30-40	9	362	32	371
40-60	< 1	97	37	97
60-80	0	0	-	0
80+	0	0	-	0
Total	58	1,540	22	1,598

Part 4 – Tree health

Figure 76 Larch as a proportion of woodland



Part 4 – Tree health

Table 77 Stocked area of larch as a proportion of woodland

Aligned area	Stocked area of larch			
	FC	Private sector		Total
	area (000 ha)	area (000 ha)	SE%	area (000 ha)
Thames	< 0.1	2.5	17	2.6

Table 77 (cont'd) Stocked area of larch as a proportion of woodland

Aligned area	Stocked area of all conifers and all species			
	Total of all conifers	Total of all species	Percentage of larch in all conifers	Percentage of larch in all species
	area (000 ha)	area (000 ha)	(percent)	(percent)
Thames	15.1	88.6	17	3

Table 78 Standing volume of larch as a proportion of woodland

Aligned area	Standing volume of larch			
	FC	Private sector		Total
	volume (000 m³ obs)	volume (000 m³ obs)	SE%	volume (000 m³ obs)
Thames	15	894	19	909

Table 78 (cont'd) Standing volume of larch as a proportion of woodland

Aligned area	Standing volume of all conifers and all species			
	Total of all conifers	Total of all species	Percentage of larch in all conifers	Percentage of larch in all species
	volume (000 m³ obs)	volume (000 m³ obs)	(percent)	(percent)
Thames	5,408	22,055	17	4

Part 4 – Tree health

Table 79 Number of larch trees as a proportion of woodland

Aligned Area	Numbers of trees of larch			
	FC	Private sector		Total
	number of trees (thousands)	number of trees (thousands)	SE%	number of trees (thousands)
Thames	58	1,540	22	1,598

Table 79 (cont'd) Number of larch trees as a proportion of woodland

Aligned Area	Number of trees of all conifers and all species			
	Total of all conifers	Total of all species	Percentage of larch in all conifers	Percentage of larch in all species
	number of trees (thousands)	number of trees (thousands)	(percent)	(percent)
Thames	11,211	94,267	14	2

Appendix A – Aligned area nomenclature

Table 80 Aligned area long and short names

Long name	Short name	Abbreviation
Cumbria and Lancashire	Cumbria and Lancashire	CLA
Devon Cornwall and the Isles of Scilly	Devon and Cornwall	DCS
East Anglia	East Anglia	EAN
East Midlands	East Midlands	EMD
Greater Manchester Merseyside and Cheshire	Gtr Mancs Mersey and Ches	GMC
Hertfordshire and North London	Herts and North London	HNL
Kent South London and East Sussex	Kent S London and E Sussex	KSL
Lincolnshire and Northamptonshire	Lincs and Northants	LNA
North East	North East	NEA
Solent and South Downs	Solent and South Downs	SSD
Thames	Thames	THS
Wessex	Wessex	WSX
West Midlands	West Midlands	WMD
Yorkshire	Yorkshire	YOR

Glossary

Actual production	Timber reported as having been felled and removed from the forest. The Forestry Commission keeps records of actual production for its estate, while estimates for the Private sector come from surveys of harvesting companies and timber processors. These figures are available from Forestry Commission Statistics.
Aerial photograph	Photograph of the ground taken from an elevated/direct-down position, with a camera that is not supported by a ground-based structure.
Age class	A grouping of trees into specific age ranges for classification purposes.
Area (forest/woodland)	Forest and woodland area can be defined in net or gross terms. Net area is the land actually covered by trees (in the National Forest Inventory that is to the drip line of the canopy). Gross area includes both the area covered by trees and the open spaces (<0.5 hectare) within (e.g. rides, glades, ponds).
Availability	A term to describe what timber could potentially be available for harvesting within a forest area.
Biological potential	A term applied to forecast scenarios with the objective of maximising timber production. It typically involves felling stands in the year of maximum MAI and management table thinning. It may not take account of factors that constrain thinning and felling (e.g. wind risk or pest attack). The forecast results set out in this report involve constraints on thinning and times of felling to take account of wind risk.
Broadleaves	Trees and shrubs that belong to the angiosperm division of the plant kingdom (as distinct from the gymnosperm division that includes conifers). Most in the UK have laminar leaves and are deciduous. Sometimes referred to as 'hardwoods'.
Canopy cover	Area covered by a mass of foliage and branches formed collectively by the crowns of trees.
Clearfell area	Area here all the trees have been felled at once. In non-clearfell areas, only some of the trees are felled at any one time.
Clearfelling	Cutting down of an area of woodland (if it is within a larger area of woodland it is typically a felling greater than 0.25 hectare). Sometimes a scatter or small clumps of trees may be left standing within the felled area.
Conifers	Trees and shrubs that belong to the gymnosperm division of the plant kingdom (as distinct from the angiosperm division that includes broadleaves). Conifers mostly have needles or scale-like leaves and are usually evergreen. Sometimes referred to as 'softwoods'.
Cumulative volume production	The total volume of timber that is forecast to be produced over the entire forecast period, including any overdue timber.
DAMS (Detailed Aspect Methodology Score)	A measure of exposure at a particular location. Can be used as a proxy indicator of the risk of catastrophic wind damage to a stand of trees. May be used to influence decisions on thinning and timing of clearfelling where wind is a risk factor.
DBH (diameter at breast height)	The diameter on the stem of a tree at 'breast height', defined as 1.3 m from ground level.
Dothistroma needle blight	A disease of conifers (especially pine) which causes defoliation, losses in yield and, in severe cases, tree death. Also known as red band needle blight.

NFI summary report

Felling plan	A spatial and temporal plan of harvesting activities within a forest or woodland.
Forest (or woodland)	Land predominately covered in trees (defined as land under stands of trees with a canopy cover of at least 20%, or the ability to achieve this, and with a minimum area of 0.5 hectare and minimum width of 20 m), whether in large tracts (generally called forests) or smaller areas known by a variety of terms (including woods, copses, spinneys or shelterbelts).
Forest management plan	A holistic spatial and temporal plan stating the objectives of management together with details of forestry proposals over a period of five years and outlining intentions over a minimum total of 10 years. Such plans allow managers to communicate proposals and demonstrate sustainable forest management. They can be used to authorise thinning, felling and other management operations.
Forest Service	An agency within the Department of Agriculture and Rural Development (DARD) in Northern Ireland responsible for the regulation of forestry and the management of state forests in Northern Ireland.
Forestry Commission	The government department responsible for regulating forestry, implementing forestry policy and managing state forests in England and Scotland. Forestry policy is devolved, with the exception of common issues addressed on a GB or UK basis, such as international forestry, plant health and forestry standards.
Forestry Commission (FC) estate	Forests, woodlands, open land and other property managed by the Forestry Commission.
Great Britain (GB)	England, Scotland and Wales.
Hardwood	The wood of broadleaved trees or the broadleaves themselves.
High forest	Woodland which is not managed as coppice or pollards and which may or may not be managed for timber.
Increment	The increase in volume of a tree or a stand over a year or annualised over a specified period measured either in m ³ per year or in m ³ per hectare per year. See also Mean Annual Increment (MAI).
Interpreted forest type (IFT)	Interpreted forest type is a classification of woodland into woodland types as identified from aerial photography and satellite imagery.
Interpreted open area (IOA)	Interpreted open area is a classification of open spaces within woodlands as identified from aerial photography and satellite imagery.
Like-for-like (restocking)	The restocking of areas of felled trees with trees of the same species and yield class.
Maximising productivity	The management of woodland to maximise volume production by thinning at the MTI.
Mean annual increment (MAI)	The average annual rate of volume production from year of planting to a given year, expressed in m ³ obs per hectare per year. In even-aged stands it is calculated by dividing cumulative volume production by age.
MTT (management table thinning)	A sequence of thinnings prescribed by Forestry Commission yield tables over the life of a forest stand. Management table thinning refers to the pattern of thinning recommended in these yield tables. In standard yield tables the thinnings are set to an intensity which aims to maximise diameter increment whilst also maintaining maximum cumulative volume production
MTI (marginal thinning intensity)	The maximum sustainable intensity of thinning defined as 70% of yield class per hectare per year (m ³ obs/ha/year).

NFI summary report

Maximum MAI (maximum mean annual increment) (MMAI)	The age at which a stand reaches the maximum average rate of volume increment which it can achieve. Felling the stand at this age will ensure that the stand reaches its highest average production per annum for its lifespan, thus optimising the stand in terms of volume production over the long term.
Mean annual increment (MAI)	The average rate of volume production up to a given year, expressed in m ³ per hectare per year. In even-aged stands it is calculated by dividing cumulative volume production by age.
Mensuration	The study of the measurement of lengths, areas, volumes and related quantities. Forest mensuration is concerned with the measurement of trees, woodlands and forests, including standing and felled timber.
National Forest Inventory (NFI)	An inventory run by the Forestry Commission, set up in 2009, to provide a record of key information about GB forests and woodlands.
National Inventory of Woodland and Trees (NIWT)	An inventory run by the Forestry Commission, set up in 1995 and completed in 2002, to provide a record of key information about GB forests and woodlands.
Natural Resources Wales (NRW)	Natural Resources Wales is the largest Welsh Government Sponsored Body - employing 1,900 staff across Wales with a budget of £180 million. NRW was formed in April 2013, largely taking over the functions of the Countryside Council for Wales, Forestry Commission Wales and the Environment Agency in Wales, as well as certain Welsh Government functions.
Overbark	Used as a qualification when the diameter or volume of wood includes the bark.
Overbark standing (OBS)	Timber is defined in this report as the volume of stemwood to 7 cm top diameter in m ³ overbark standing (obs), including stump (above ground) and usable branchwood (of minimum 3 m in length and 7 cm top diameter).
Overdue	Timber contained in stands that are beyond the felling age prescribed by the harvesting scenario at the start of the forecast.
Phytophthora	Fungus-like pathogens that can cause extensive damage and mortality to trees and other plants.
Planned production	The volumes and assortments published in the removals forecast, reflecting the cumulative impact of managing the FC estate (as of 31 March 2012) in accordance with approved forest design and thinning plans.
Potential production	A forecast which will not necessarily transpire. As the private sector estate forecast makes assumptions about future levels of harvest, and the assumptions may not transpire, this forecast is one of potential production.
Private sector estate	Forests and woodlands in the UK not managed by the Forestry Commission, Natural Resources Wales or Forest Service. In the context of the National Forest Inventory, 'Private sector' is used for convenience although it includes land owned or managed by bodies such as local authorities and charities.
Production forecast	A forecast of softwood volume production based on a firm plan of harvesting.
Restocking plan	A spatial and temporal plan describing how felled areas are to be replanted or regenerated.
Satellite imagery	Imagery of the earth taken from space from a satellite.
Softwood	The wood of coniferous trees or the conifers themselves.

NFI summary report

Stand	A distinct area of woodland, generally composed of a uniform group of trees in terms of species composition and spatial distribution, and age and size class distribution.
Standard error (SE)	The measure of the margin of error associated with an estimate as a result of sampling from a population with statistical variability. Larger standard errors indicate less precision in the estimate. Standard errors in this report are quoted in relative terms (i.e. as percentages of the value of the estimate).
Standing volume	The live stemwood and usable branchwood of trees (up to 7 cm top diameter). It excludes roots, below ground stump material, small branches, foliage and deadwood. For Private sector woodland only, it also excludes trees in woodlands of less than 0.5 hectare. Usually expressed as m ³ overbark standing (m ³ obs).
Stemwood	The woody material forming the above ground main growing shoot(s) of a tree or stand of trees. The stem includes all woody volume above ground with a diameter greater than 7 cm overbark. Stemwood includes wood in major branches where there is at least 3 m of straight length to 7 cm top diameter.
Stocked area	The area stocked with living trees. The stocked areas in this report are quoted in gross terms for the FC/NRW estate and in net terms for the private sector estate (see the definition of area above).
Sub-compartment database (SCDB)	A database owned and maintained by the Forestry Commission that holds an inventory of all stands of trees managed by the Forestry Commission (including that formerly managed by Forestry Commission Wales which is now managed by Natural Resources Wales).
Sustainable forest management	The stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity and vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions at local, national and global levels, and that does not cause damage to other ecosystems.
Terminal height	The top height of a stand at which wind damage is expected to reach a level necessitating clearfelling.
Thinning	The periodic harvesting of trees in a woodland, involving the removal of some trees for commercial use and the retention of others for future production or long-term retention.
Thinning plan	A spatial and temporal plan of harvesting activities within a forest or woodland.
Top diameter	The diameter of the smaller (top) end of a length of stemwood, branchwood or log, often used to define different categories of wood products (e.g. sawlogs, roundwood, pulp) and merchantable timber.
Top height	The mean total height of the 100 largest dbh trees per hectare.
UK (United Kingdom)	Great Britain and Northern Ireland.
Windthrow	Uprooting of trees by the wind. Windthrow can be endemic – i.e. that caused by frequently recurring peak winds – or catastrophic – an infrequent occurrence associated with exceptionally strong winds where large areas/numbers of trees are blown down.
Woodland	see Forest.
Yield class (YC)	An index used in the UK of the potential productivity of even-aged stands of trees based on maximum MAI. It reflects the potential productivity of the site for the tree species growing on it.

Aligned area reports in this series

This report is one in a series of reports describing the current stocks in woodland, the economic viability data, timber availability forecasts and estimates of the current stocks within woodland of four species currently at risk from pests and diseases.

Reports are available for:

- England
- Cumbria and Lancashire
- Devon Cornwall and the Isles of Scilly
- East Anglia
- East Midlands
- Greater Manchester Merseyside and Cheshire
- Hertfordshire and North London
- Kent South London and East Sussex
- Lincolnshire and Northamptonshire
- North East
- Solent and South Downs
- **Thames**
- Wessex
- West Midlands
- Yorkshire

The methodology, data sources and assumptions are described in the England report. It is important that the estimates presented in this report are interpreted in the light of the information provided in the England report.

NFI national reports and papers

This series of reports is part of the wider suite of publications from the National Forest Inventory (NFI). NFI reports that contain information relating to this series of reports are:

- NFI woodland area statistics, Great Britain, England, Scotland, Wales (2011)
- Standing timber volume for coniferous trees in Britain (2012)
- 25-year forecast of softwood availability (2012)
- 25-year forecast of standing coniferous volume and increment (2012)
- Preliminary estimates of broadleaved species in British woodlands, with special focus on ash (2012)
- Biomass in live woodland trees in Britain (2014)
- Carbon in live woodland trees in Britain (2014)
- 50-year forecast of softwood availability (2014)
- 50-year forecast of hardwood availability (2014)
- 25-year forecast of softwood availability (2016)

Each theme has a series of associated reports, papers and data, tailored for different audiences and uses.

This report is a supporting document for the Official Statistics report *National Forest Inventory statistics for England and aligned areas* (2017) and provides more detailed results for Thames.

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