Forestry Commission

NFI summary report

# National Forest Inventory statistics for Solent and South Downs


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# Solent and South Downs

## **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 Solent and South Downs

Solent and South Downs (SSD) has a land area of 613,800 hectares making it 12th out of the 14 aligned areas by land area. With 120,886 ha of woodland, SSD ranks 3rd out of 14 in terms of woodland area (20% woodland cover). Some 20% of the woodland is under Forestry Commission ownership or management

Scots pine is the most commonly occurring of the conifer species whether assessed by stocked area (28%), standing volume (29%) or number of trees (22%).

Oak is the most commonly occurring of the broadleaved species when assessed by stocked area (21%) and standing volume (36%). Hazel is the most commonly occurring of the broadleaved species when assessed by number of trees (22%).

Some 22% 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 54% 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 18% of broadleaved sections (PS only) show evidence of thinning.

Across SSD:

- Ash is estimated as 11% of total stocked area (13% of broadleaved stocked area), 11% of standing volume (15% of broadleaved standing volume) and 8% of the number of trees (9% of the number of broadleaved trees).
- Oak is estimated as 17% of total stocked area (21% of broadleaved stocked area), 27% of standing volume (36% of broadleaved standing volume) and 9% of the number of trees (11% of the number of broadleaved trees).
- Sweet chestnut is estimated as 3% of total stocked area (4% of broadleaved stocked area), 4% of standing volume (5% of broadleaved standing volume) and 7% of the number of trees (8% of the number of broadleaved trees).
- Larch is estimated as 2% of total stocked area (9% of conifer stocked area), 2% of standing volume (10% of conifer standing volume) and 1% of the number of trees (8% of the number of conifer trees).

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## Maps



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# Part 1 – introduction and methodology

# 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 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.



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# 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 ± 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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# Part 2 – What our woodlands are like today





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# Part 2 - what our woodlands are like today

# Woodland area statistics

## Woodland area by woodland type

**Figure 1** Woodland area by woodland type

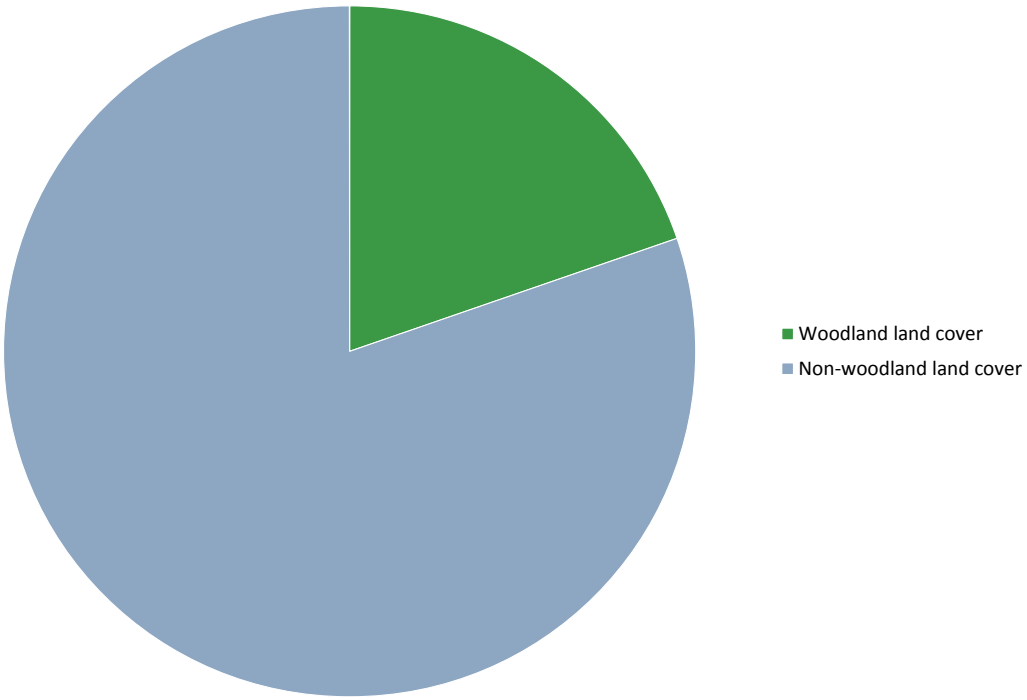


**Table 1** Woodland area by woodland type

| Woodland Type | Area (ha) | % |
|---|---|---|
| Solent and South Downs | | |
| Woodland | 119,587 | 99% |
| Assumed woodland | 903 | 1% |
| Low density | 396 | 0% |
| **Total mapped woodland** | **120,886** | **100%** |
| Non-woodland area | 492,914 | |
| Land area | 613,800 | |
| **Woodland land cover** | | **20%** |
| **Non-woodland land cover** | | **80%** |



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## Woodland area by ownership

**Figure 2** Woodland area by ownership

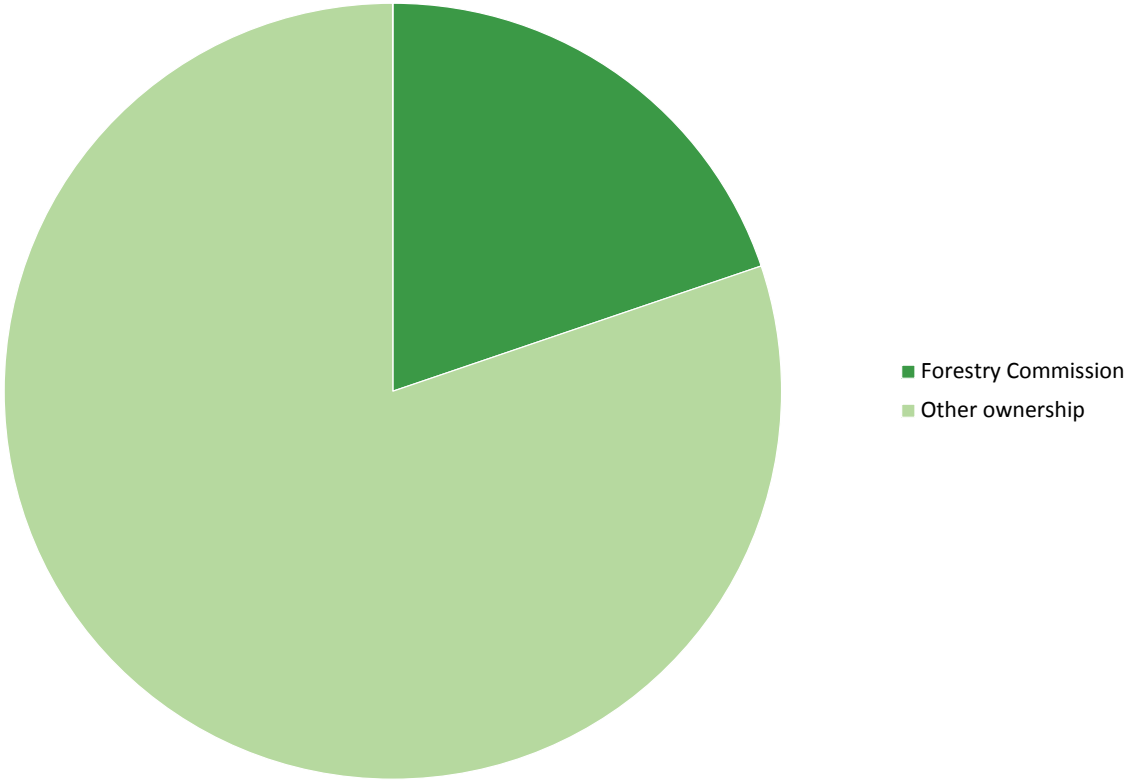


**Table 2** Woodland area by ownership

| Ownership | Area (ha) | % Woodland |
|---|---|---|
| Solent and South Downs | | |
| Forestry Commission | 23,908 | 20% |
| Other ownership | 96,978 | 80% |
| **Total area of woodland** | **120,886** | **100%** |



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## Woodland area by interpreted forest type

**Figure 3** Woodland area by interpreted forest type

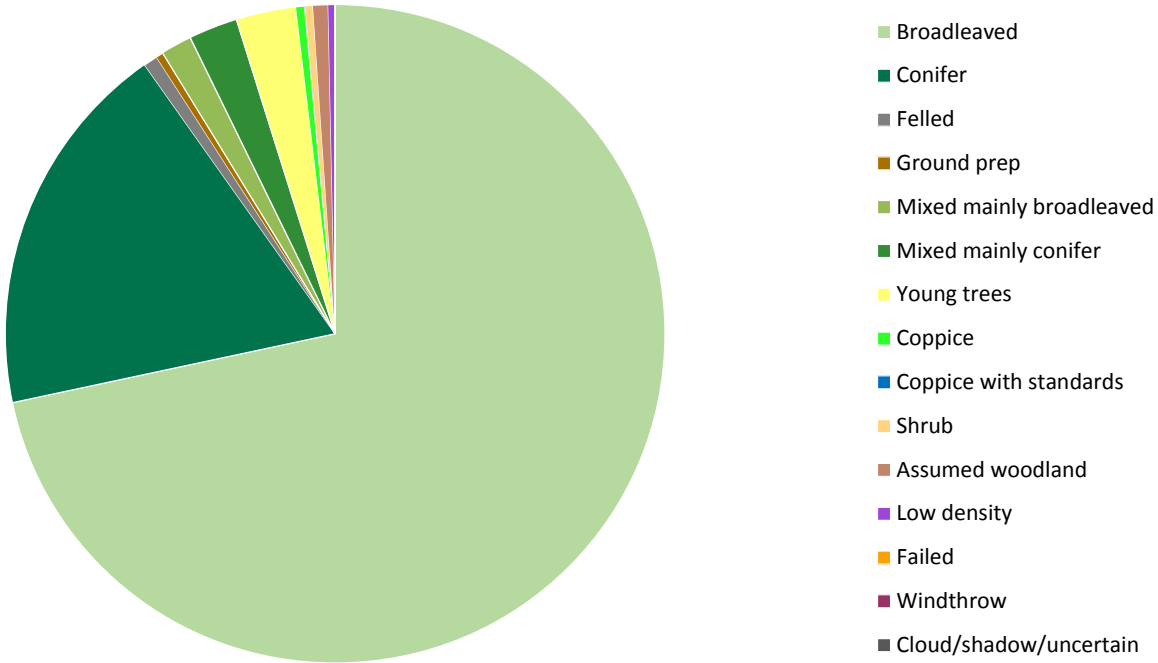


**Table 3** Woodland area by interpreted forest type

| Forest type | Total area (ha) | % of total area |
|---|---|---|
| Solent and South Downs | | |
| Broadleaved | 86,613 | 72% |
| Conifer | 22,430 | 19% |
| Felled | 830 | 1% |
| Ground prep | 433 | 0% |
| Mixed mainly broadleaved | 1,832 | 2% |
| Mixed mainly conifer | 2,891 | 2% |
| Young trees | 3,566 | 3% |
| Coppice | 497 | 0% |
| Coppice with standards | 36 | 0% |
| Shrub | 459 | 0% |
| Assumed woodland | 893 | 1% |
| Low density | 405 | 0% |
| Failed | 0 | 0% |
| Windthrow | 0 | 0% |
| Cloud/shadow/uncertain | 0 | 0% |
| **TOTALS** | **120,886** | **100%** |



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## Woodland area by interpreted forest type and woodland size

**Figure 4** Woodland area by interpreted forest type and woodland size

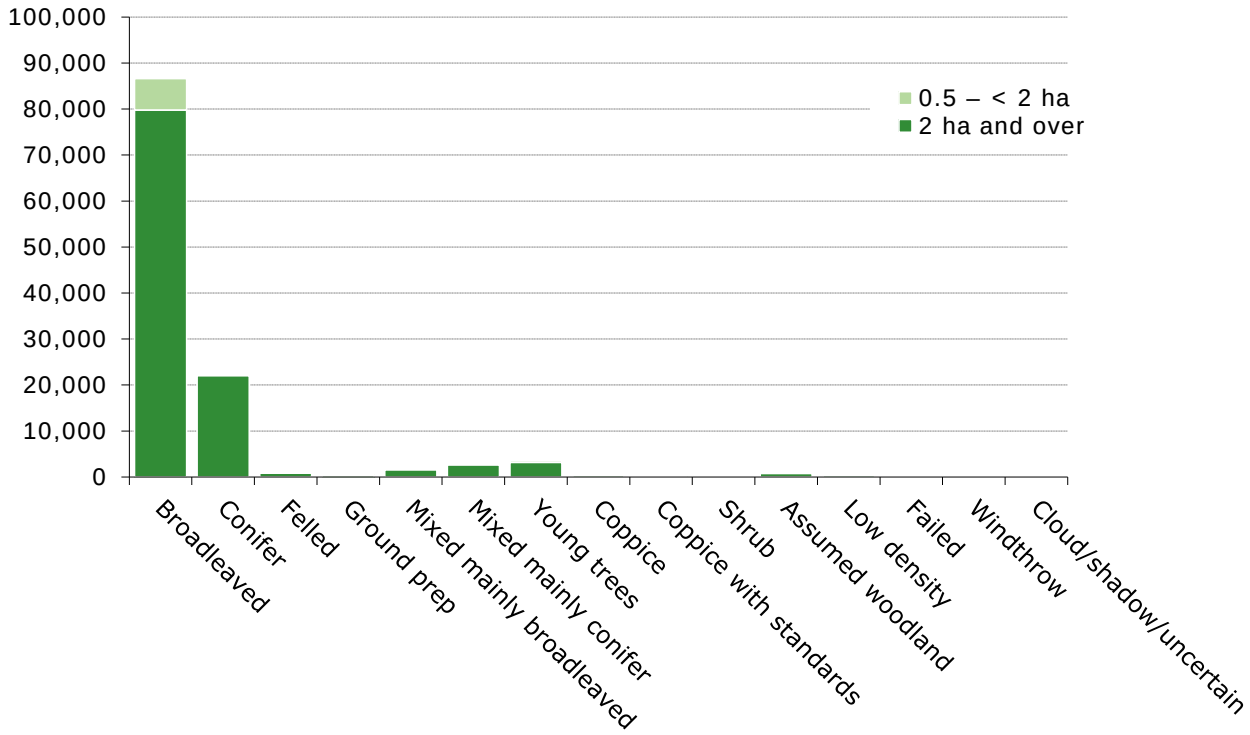


**Table 4** Woodland area by interpreted woodland type and woodland size

| Forest type | Woodland size | | Total area (ha) |
|---|---|---|---|
| | 2 ha and over | 0.5 – < 2 ha | |
| Solent and South Downs | | | |
| Broadleaved | 79,797 | 6,816 | 86,613 |
| Conifer | 22,059 | 371 | 22,430 |
| Felled | 825 | 4 | 830 |
| Ground prep | 414 | 19 | 433 |
| Mixed mainly broadleaved | 1,582 | 250 | 1,832 |
| Mixed mainly conifer | 2,633 | 258 | 2,891 |
| Young trees | 3,162 | 404 | 3,566 |
| Coppice | 494 | 2 | 497 |
| Coppice with standards | 34 | 3 | 36 |
| Shrub | 351 | 107 | 459 |
| Assumed woodland | 776 | 118 | 893 |
| Low density | 387 | 18 | 405 |
| Failed | 0 | 0 | 0 |
| Windthrow | 0 | 0 | 0 |
| Cloud/shadow/uncertain | 0 | 0 | 0 |
| **TOTALS** | **112,514** | **8,371** | **120,886** |



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## Woodland area by interpreted forest type and ownership

**Figure 5** Woodland area by interpreted forest type and ownership

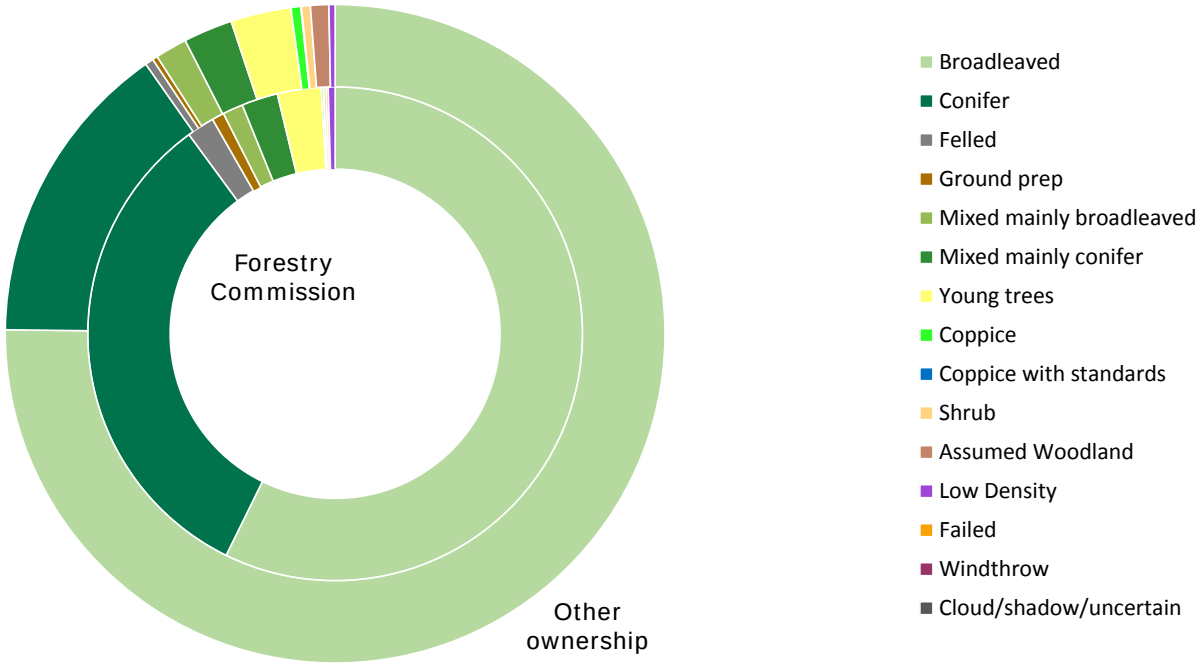


**Table 5** Woodland area by interpreted forest type and ownership

| Forest type | Forestry Commission | | Other ownership | |
|---|---|---|---|---|
| | Area (ha) | % of total area | Area (ha) | % of total area |
| Solent and South Downs | | | | |
| Broadleaved | 13,691 | 57% | 72,922 | 75% |
| Conifer | 7,811 | 33% | 14,619 | 15% |
| Felled | 433 | 2% | 397 | 0% |
| Ground prep | 190 | 1% | 244 | 0% |
| Mixed mainly broadleaved | 319 | 1% | 1,515 | 2% |
| Mixed mainly conifer | 565 | 2% | 2,332 | 2% |
| Young trees | 686 | 3% | 2,872 | 3% |
| Coppice | 30 | 0% | 466 | 0% |
| Coppice with standards | 5 | 0% | 32 | 0% |
| Shrub | 40 | 0% | 419 | 0% |
| Assumed Woodland | 30 | 0% | 870 | 1% |
| Low Density | 107 | 0% | 292 | 0% |
| Failed | 0 | 0% | 0 | 0% |
| Windthrow | 0 | 0% | 0 | 0% |
| Cloud/shadow/uncertain | 0 | 0% | 0 | 0% |
| **TOTALS** | **23,907** | **100%** | **96,978** | **100%** |



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## 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 | |
| Solent and South Downs | | | | | |
| Broadleaved | 13,570 | 66,226 | 121 | 6,696 | 86,613 |
| Conifer | 7,790 | 14,268 | 21 | 350 | 22,430 |
| Felled | 433 | 392 | 0 | 4 | 830 |
| Ground prep | 190 | 224 | 0 | 19 | 433 |
| Mixed mainly broadleaved | 318 | 1,264 | < 1 | 249 | 1,832 |
| Mixed mainly conifer | 559 | 2,074 | 6 | 252 | 2,891 |
| Young trees | 684 | 2,477 | 1 | 403 | 3,566 |
| Coppice | 30 | 464 | 0 | 2 | 497 |
| Coppice with standards | 5 | 29 | 0 | 3 | 36 |
| Shrub | 35 | 316 | 5 | 103 | 459 |
| Assumed woodland | 23 | 752 | 0 | 118 | 893 |
| Low Density | 114 | 273 | 0 | 18 | 405 |
| Failed | 0 | 0 | 0 | 0 | 0 |
| Windthrow | 0 | 0 | 0 | 0 | 0 |
| Cloud/shadow/uncertain | 0 | 0 | 0 | 0 | 0 |
| **Totals** | **23,753** | **88,759** | **154** | **8,219** | **120,886** |

## Woodland area by size class distribution

**Figure 6** Woodland area by size class distribution

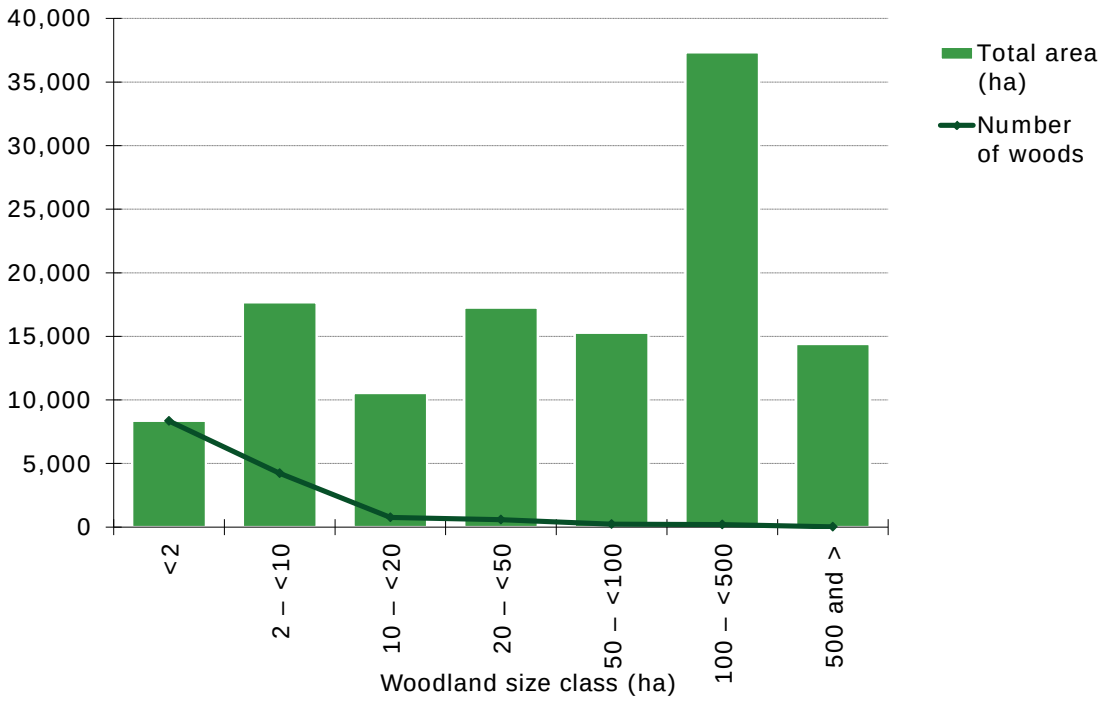


**Table 7** Woodland area by size class distribution

| Size class (ha) | Total area (ha) | Number of woods | % of total area | Mean wood area (ha) |
|---|---|---|---|---|
| Solent and South Downs | | | | |
| <2 | 8,371 | 8,335 | 7% | 1 |
| 2 – <10 | 17,683 | 4,227 | 15% | 4 |
| 10 – <20 | 10,545 | 761 | 9% | 14 |
| 20 – <50 | 17,265 | 586 | 14% | 29 |
| 50 – <100 | 15,285 | 228 | 13% | 67 |
| 100 – <500 | 37,339 | 200 | 31% | 187 |
| 500 and > | 14,397 | 20 | 12% | 720 |
| **All woods** | **120,886** | **14,357** | **100%** | **8** |



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## Open areas in woodland by land use type

**Figure 7** Open areas in woodland by land use type

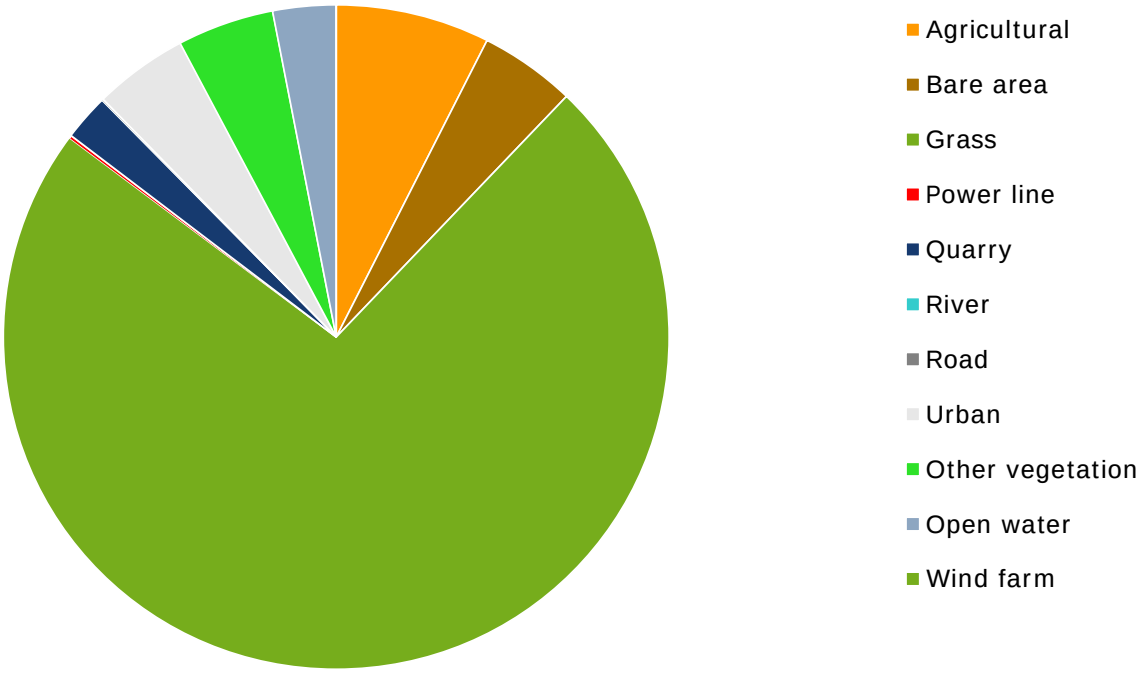


**Table 8** Open areas in woodland by land use type

| Interpreted open area | Total area (ha) | % of total area |
|---|---|---|
| Solent and South Downs | | |
| Agricultural | 291 | 7% |
| Bare area | 182 | 5% |
| Grass | 2,847 | 73% |
| Power line | 5 | 0% |
| Quarry | 87 | 2% |
| River | < 1 | 0% |
| Road | 2 | 0% |
| Urban | 178 | 5% |
| Other vegetation | 183 | 5% |
| Open water | 119 | 3% |
| Wind farm | 0 | 0% |
| **TOTALS** | **3,896** | **100%** |

# Net area under canopy

## Stocked area by species

**Figure 8** Stocked area by principal tree species

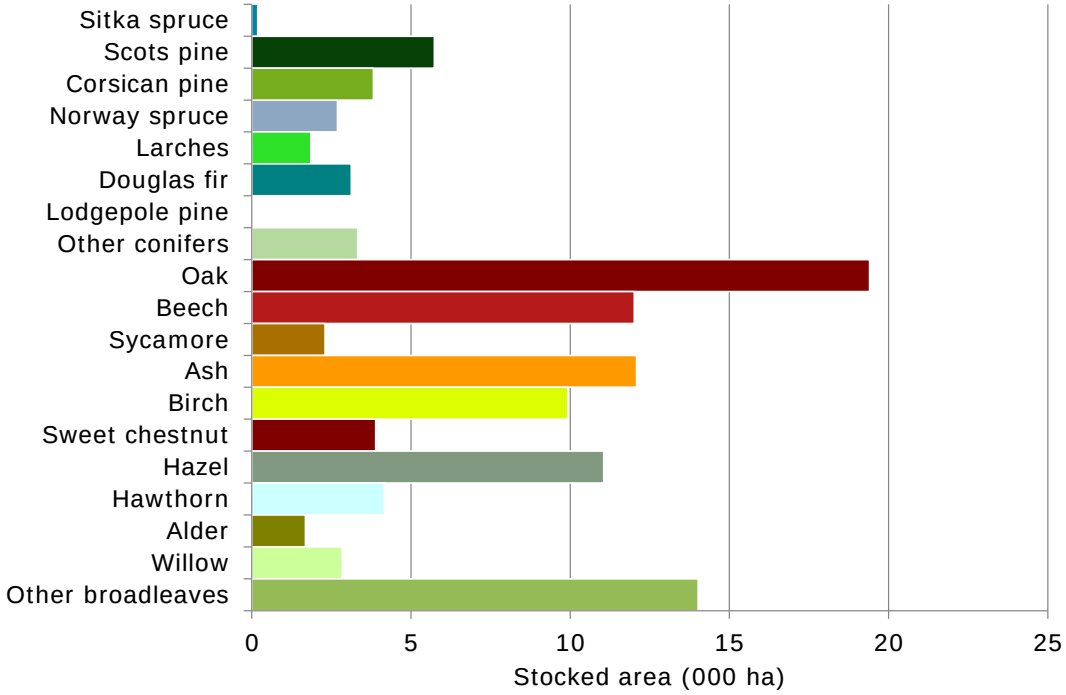




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**Table 9** Stocked area by principal tree species

| Principal species | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Conifers | | | | |
| Sitka spruce | < 0.1 | 0.1 | *73* | **0.2** |
| Scots pine | 2.1 | 3.6 | *15* | **5.7** |
| Corsican pine | 2.6 | 1.2 | *29* | **3.8** |
| Norway spruce | 0.5 | 2.2 | *19* | **2.7** |
| Larches | 0.3 | 1.5 | *19* | **1.9** |
| Douglas fir | 1.2 | 1.9 | *21* | **3.1** |
| Lodgepole pine | < 0.1 | < 0.1 | *101* | **< 0.1** |
| Other conifers | 0.8 | 2.5 | *16* | **3.3** |
| **All conifers** | **7.7** | **13.1** | ***5*** | **20.8** |
| Broadleaves | | | | |
| Oak | 5.4 | 14.0 | *6* | **19.4** |
| Beech | 5.5 | 6.5 | *11* | **12.0** |
| Sycamore | < 0.1 | 2.2 | *16* | **2.3** |
| Ash | 0.3 | 11.7 | *7* | **12.1** |
| Birch | 0.6 | 9.3 | *9* | **9.9** |
| Sweet chestnut | 0.1 | 3.8 | *17* | **3.9** |
| Hazel | < 0.1 | 11.0 | *7* | **11.0** |
| Hawthorn | 0.0 | 4.2 | *12* | **4.2** |
| Alder | < 0.1 | 1.6 | *18* | **1.7** |
| Willow | 0.0 | 2.8 | *16* | **2.8** |
| Other broadleaves | 1.3 | 12.7 | *9* | **14.0** |
| **All broadleaves** | **13.5** | **79.9** | ***2*** | **93.4** |
| All species | | | | |
| **All species** | **21.1** | **93.2** | ***2*** | **114.3** |

**Figure 9** Stocked area by principal conifer species

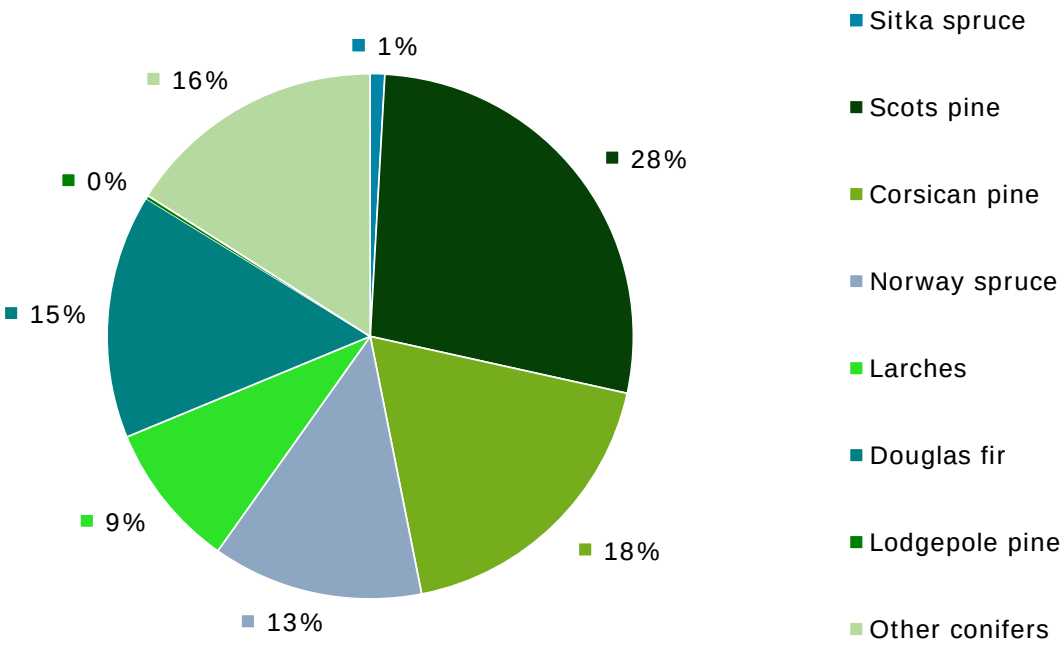
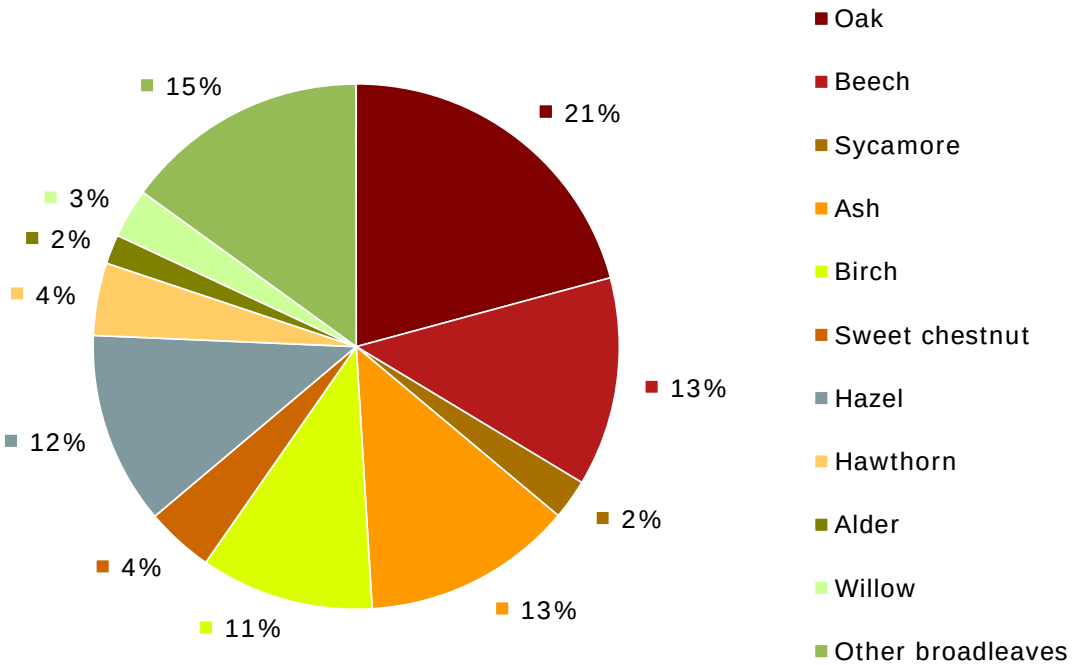



**Figure 10** Stocked area by principal broadleaved species



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## Stocked area by age class

**Figure 11** Stocked area by age class

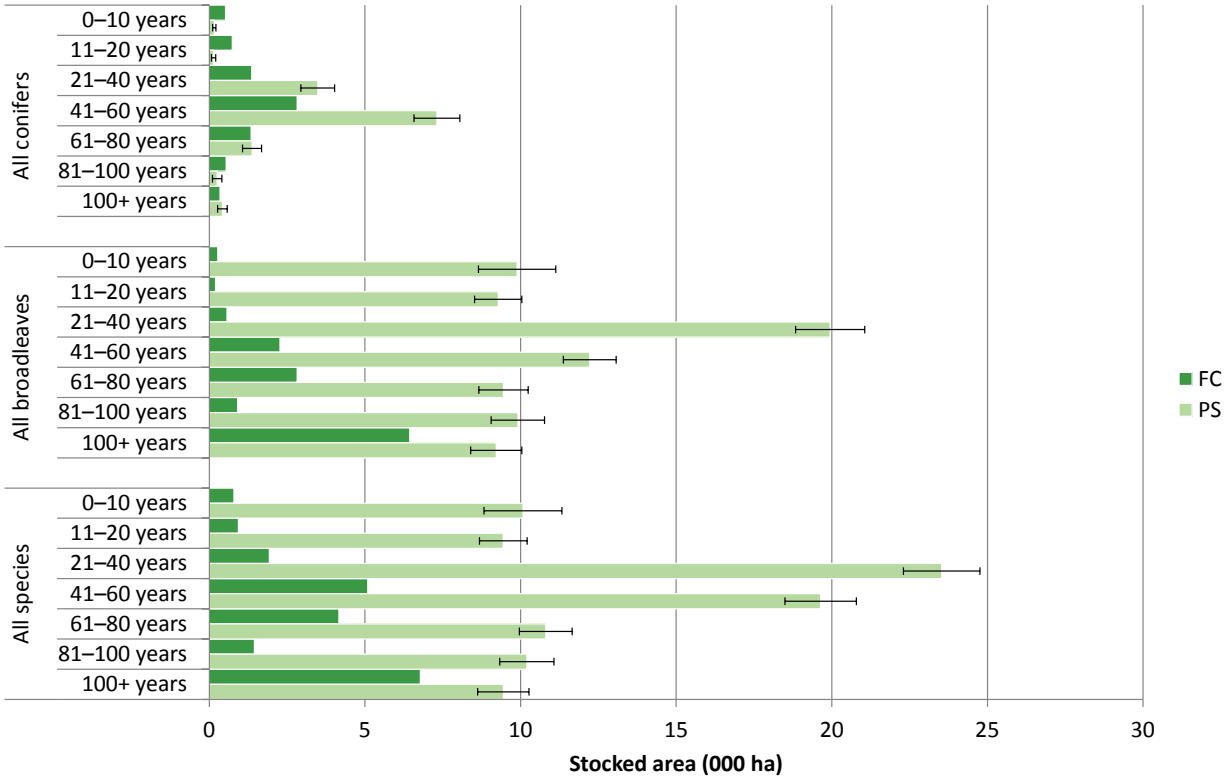

**Table 10** Stocked area by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| All conifers | | | | |
| 0–10 | 0.5 | 0.2 | *33* | **0.7** |
| 11–20 | 0.7 | 0.1 | *51* | **0.9** |
| 21–40 | 1.4 | 3.5 | *16* | **4.8** |
| 41–60 | 2.8 | 7.3 | *10* | **10.1** |
| 61–80 | 1.3 | 1.4 | *22* | **2.7** |
| 81–100 | 0.5 | 0.3 | *60* | **0.8** |
| 100+ | 0.3 | 0.4 | *37* | **0.8** |
| **Total** | **7.7** | **13.1** | ***5*** | **20.8** |
| All broadleaves | | | | |
| 0–10 | 0.3 | 9.9 | *13* | **10.2** |
| 11–20 | 0.2 | 9.3 | *8* | **9.5** |
| 21–40 | 0.6 | 19.9 | *6* | **20.5** |
| 41–60 | 2.3 | 12.2 | *7* | **14.5** |
| 61–80 | 2.8 | 9.5 | *8* | **12.3** |
| 81–100 | 0.9 | 9.9 | *9* | **10.8** |
| 100+ | 6.4 | 9.2 | *9* | **15.7** |
| **Total** | **13.5** | **79.9** | ***2*** | **93.4** |
| All species | | | | |
| 0–10 | 0.8 | 10.1 | *12* | **10.9** |
| 11–20 | 0.9 | 9.4 | *8* | **10.4** |
| 21–40 | 1.9 | 23.5 | *5* | **25.5** |
| 41–60 | 5.1 | 19.6 | *6* | **24.7** |
| 61–80 | 4.2 | 10.8 | *8* | **15.0** |
| 81–100 | 1.4 | 10.2 | *9* | **11.7** |
| 100+ | 6.8 | 9.4 | *9* | **16.2** |
| **Total** | **21.1** | **93.2** | ***2*** | **114.3** |

## Stocked area by mean stand dbh class

**Figure 12** Stocked area by mean stand dbh class

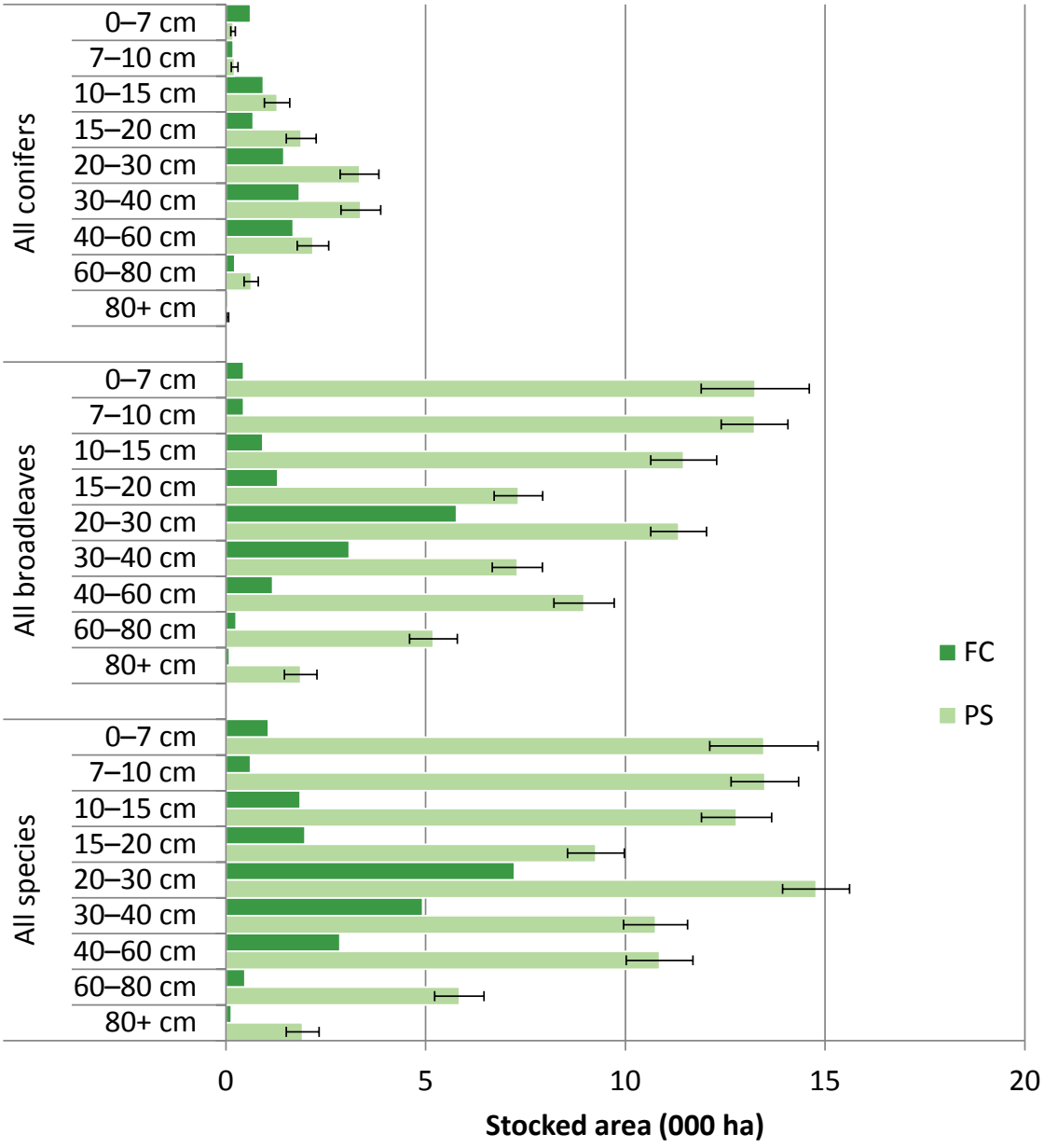




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**Table 11** Stocked area by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| All conifers | | | | |
| 0–7 | 0.6 | 0.2 | *32* | **0.8** |
| 7–10 | 0.2 | 0.2 | *38* | **0.4** |
| 10–15 | 0.9 | 1.3 | *25* | **2.2** |
| 15–20 | 0.7 | 1.9 | *20* | **2.6** |
| 20–30 | 1.5 | 3.3 | *14* | **4.8** |
| 30–40 | 1.8 | 3.4 | *15* | **5.2** |
| 40–60 | 1.7 | 2.2 | *18* | **3.9** |
| 60–80 | 0.2 | 0.6 | *28* | **0.9** |
| 80+ | < 0.1 | < 0.1 | *54* | **< 0.1** |
| **Total** | **7.7** | **13.1** | ***5*** | **20.8** |
| All broadleaves | | | | |
| 0–7 | 0.4 | 13.3 | *10* | **13.7** |
| 7–10 | 0.4 | 13.2 | *6* | **13.7** |
| 10–15 | 0.9 | 11.5 | *7* | **12.4** |
| 15–20 | 1.3 | 7.3 | *8* | **8.6** |
| 20–30 | 5.8 | 11.3 | *6* | **17.1** |
| 30–40 | 3.1 | 7.3 | *9* | **10.4** |
| 40–60 | 1.2 | 9.0 | *8* | **10.1** |
| 60–80 | 0.3 | 5.2 | *11* | **5.4** |
| 80+ | < 0.1 | 1.9 | *22* | **2.0** |
| **Total** | **13.5** | **79.9** | ***2*** | **93.4** |
| All species | | | | |
| 0–7 | 1.1 | 13.5 | *10* | **14.5** |
| 7–10 | 0.6 | 13.5 | *6* | **14.1** |
| 10–15 | 1.9 | 12.8 | *7* | **14.6** |
| 15–20 | 2.0 | 9.3 | *8* | **11.2** |
| 20–30 | 7.2 | 14.8 | *6* | **22.0** |
| 30–40 | 4.9 | 10.8 | *7* | **15.7** |
| 40–60 | 2.9 | 10.9 | *8* | **13.7** |
| 60–80 | 0.5 | 5.8 | *11* | **6.3** |
| 80+ | 0.1 | 1.9 | *21* | **2.1** |
| **Total** | **21.1** | **93.2** | ***2*** | **114.3** |

## Clearfelled area

**Table 12** Clearfelled area

| Clearfelled area | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | 0.5 | 0.5 | *37* | **1.1** |

## Comparison of mapped area estimates and stocked area estimates

**Figure 13** Simplified comparison of mapped area and stocked area

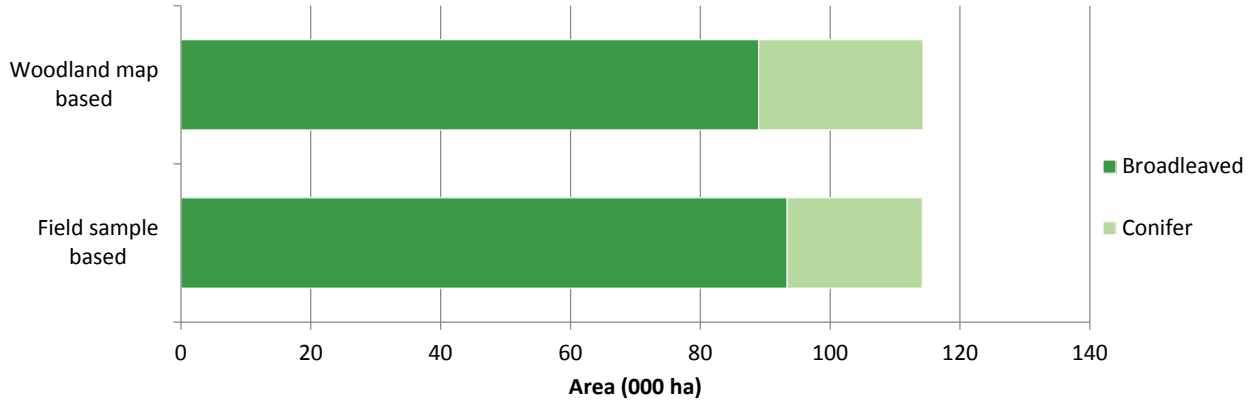



**Table 13** Simplified comparison of mapped area and stocked area

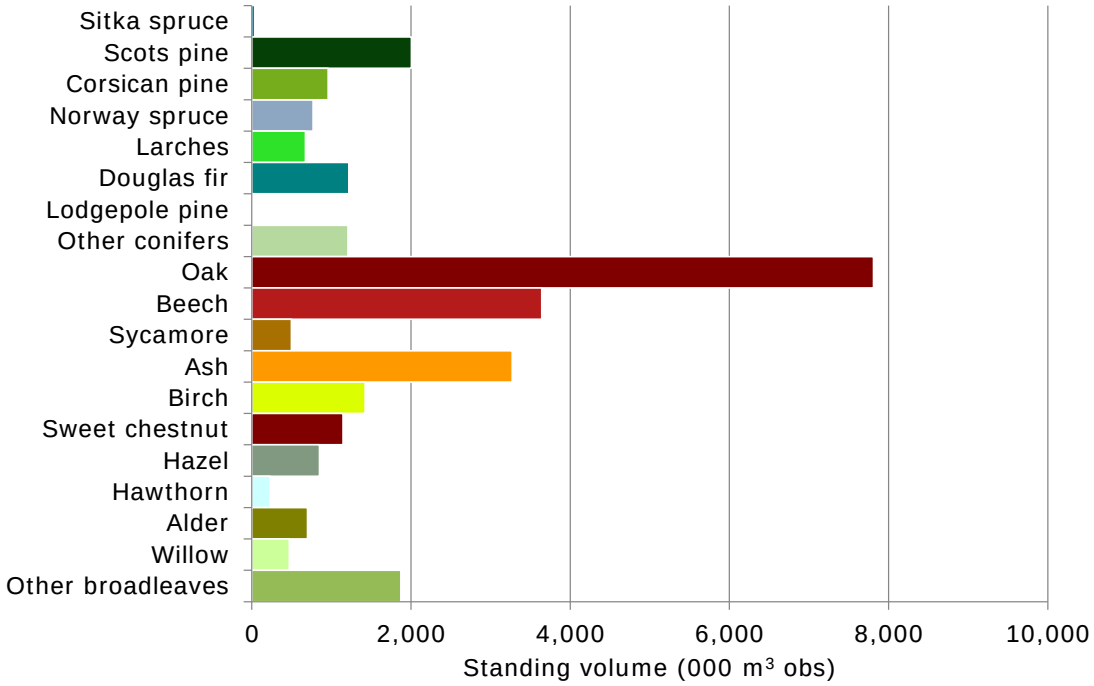
| | Woodland map based | Field sample based |
|---|---|---|
| | area (000 ha) | |
| Solent and South Downs | | |
| Broadleaved | 89.0 | 93.4 |
| Conifer | 25.3 | 20.8 |

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






Go to Part 2

**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 | 13 | 24 | *66* | **37** |
| Scots pine | 682 | 1,322 | *17* | **2,005** |
| Corsican pine | 561 | 399 | *31* | **960** |
| Norway spruce | 142 | 627 | *20* | **769** |
| Larches | 69 | 604 | *20* | **673** |
| Douglas fir | 393 | 827 | *21* | **1,220** |
| Lodgepole pine | 5 | 14 | *101* | **19** |
| Other conifers | 317 | 891 | *19* | **1,209** |
| **All conifers** | **2,183** | **4,713** | ***6*** | **6,896** |
| Broadleaves | | | | |
| Oak | 1,664 | 6,147 | *9* | **7,810** |
| Beech | 1,481 | 2,162 | *13* | **3,644** |
| Sycamore | 7 | 491 | *21* | **499** |
| Ash | 42 | 3,228 | *10* | **3,271** |
| Birch | 79 | 1,345 | *10* | **1,424** |
| Sweet chestnut | 33 | 1,114 | *16* | **1,147** |
| Hazel | 3 | 849 | *10* | **852** |
| Hawthorn | 0 | 232 | *16* | **232** |
| Alder | 17 | 684 | *23* | **700** |
| Willow | 0 | 472 | *25* | **472** |
| Other broadleaves | 231 | 1,642 | *14* | **1,873** |
| **All broadleaves** | **3,558** | **18,297** | ***4*** | **21,855** |
| All species | | | | |
| **All species** | **5,741** | **23,021** | ***3*** | **28,762** |



Go to Part 2

**Figure 15** Standing volume by principal conifer species

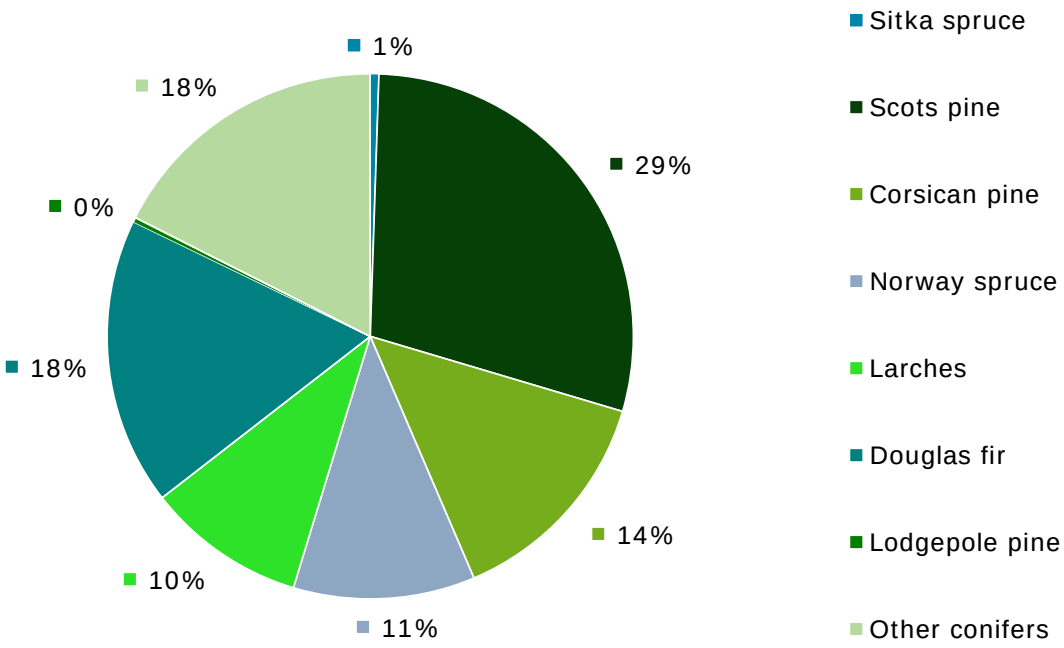
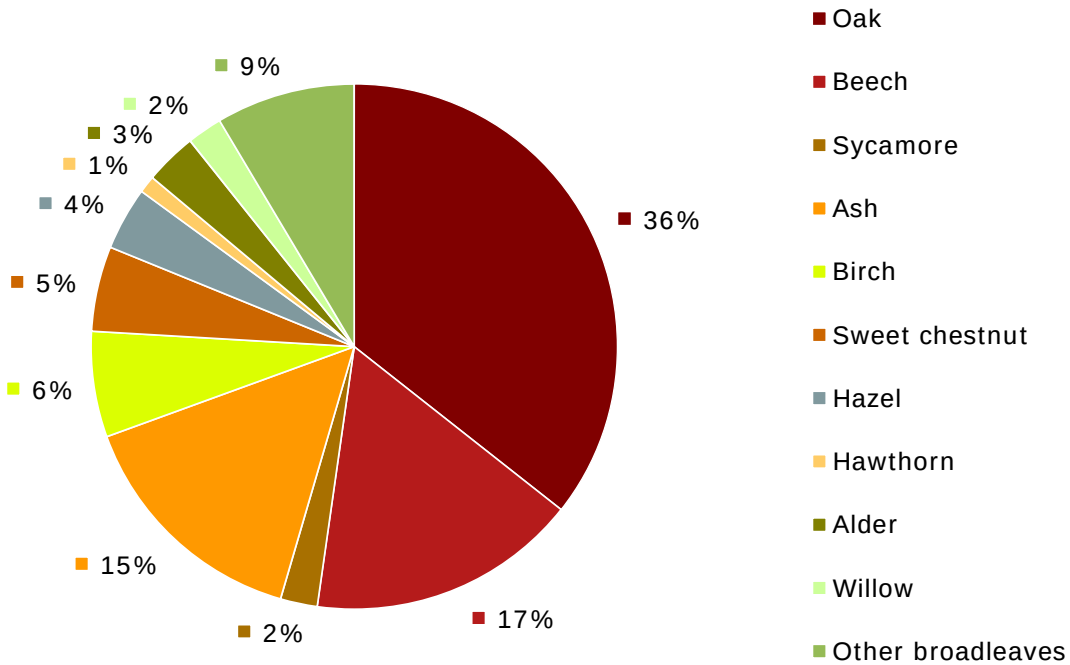



**Figure 16** Standing volume by principal broadleaved species



## Standing volume by age class

**Figure 17** Standing volume by age class

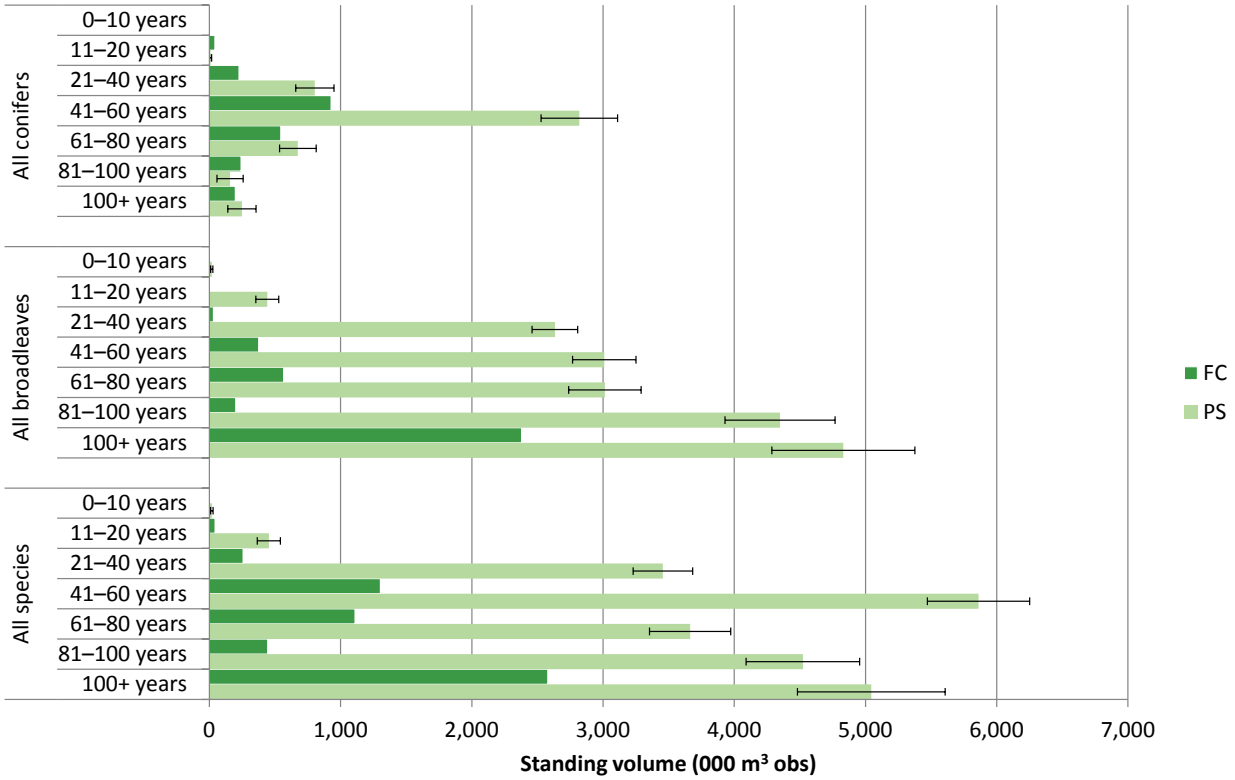
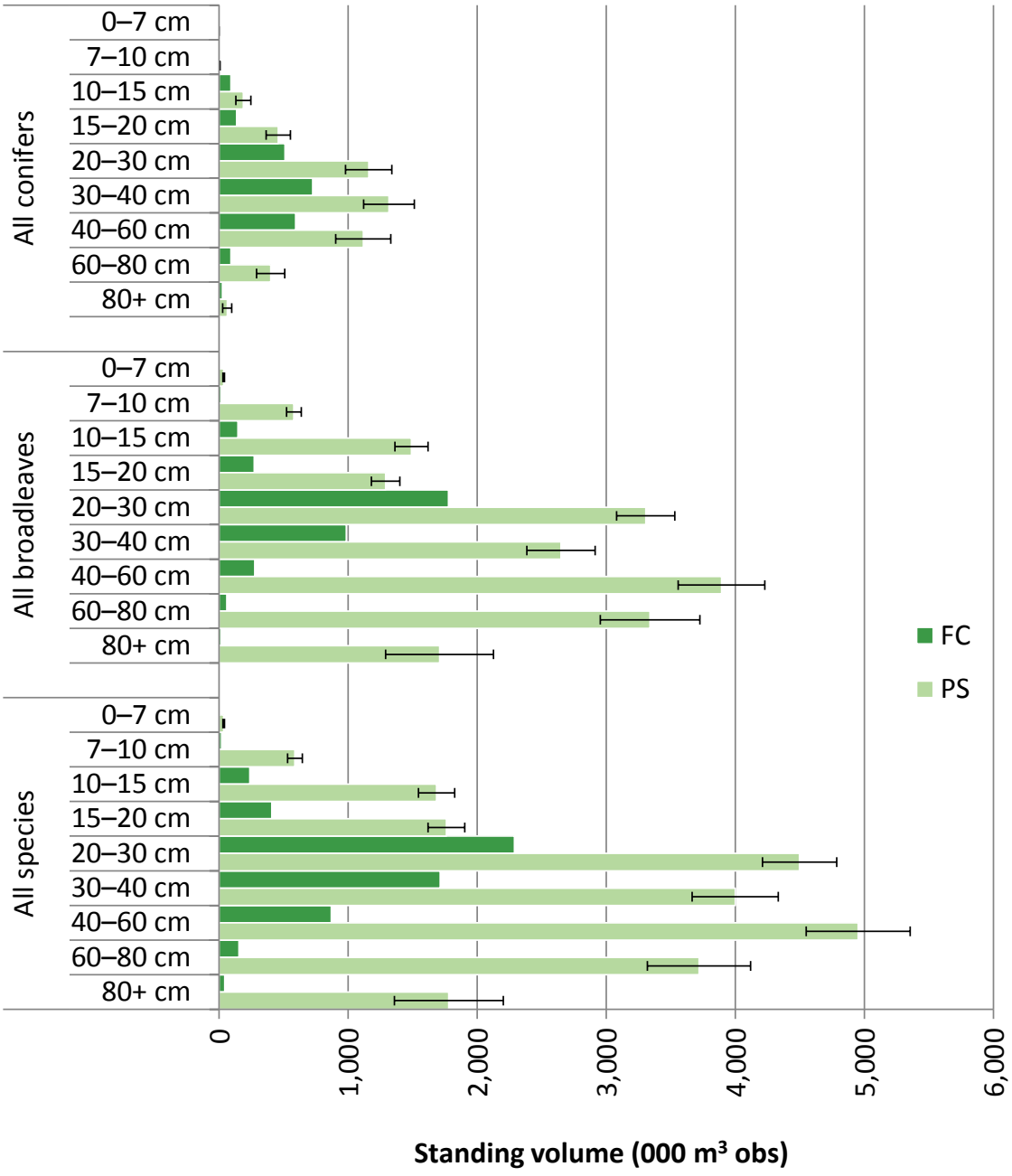


**Table 15** Standing volume by age class

| 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 | 0 | - | **< 1** |
| 11–20 | 42 | 10 | *75* | **52** |
| 21–40 | 226 | 804 | *18* | **1,030** |
| 41–60 | 928 | 2,819 | *10* | **3,747** |
| 61–80 | 545 | 674 | *21* | **1,219** |
| 81–100 | 243 | 157 | *63* | **400** |
| 100+ | 199 | 248 | *44* | **447** |
| **Total** | **2,183** | **4,713** | ***6*** | **6,896** |
| All broadleaves | | | | |
| 0–10 | < 1 | 19 | *46* | **19** |
| 11–20 | 3 | 442 | *20* | **445** |
| 21–40 | 32 | 2,633 | *7* | **2,665** |
| 41–60 | 376 | 3,009 | *8* | **3,385** |
| 61–80 | 566 | 3,014 | *9* | **3,579** |
| 81–100 | 202 | 4,348 | *10* | **4,550** |
| 100+ | 2,380 | 4,831 | *11* | **7,212** |
| **Total** | **3,558** | **18,297** | ***4*** | **21,855** |
| All species | | | | |
| 0–10 | < 1 | 19 | *46* | **19** |
| 11–20 | 45 | 454 | *19* | **499** |
| 21–40 | 258 | 3,456 | *7* | **3,714** |
| 41–60 | 1,304 | 5,861 | *7* | **7,165** |
| 61–80 | 1,111 | 3,664 | *8* | **4,775** |
| 81–100 | 444 | 4,523 | *10* | **4,967** |
| 100+ | 2,579 | 5,044 | *11* | **7,624** |
| **Total** | **5,741** | **23,021** | ***3*** | **28,762** |

## Standing volume by mean stand dbh class

**Figure 18** Standing volume by stand mean dbh class






Go to Part 2

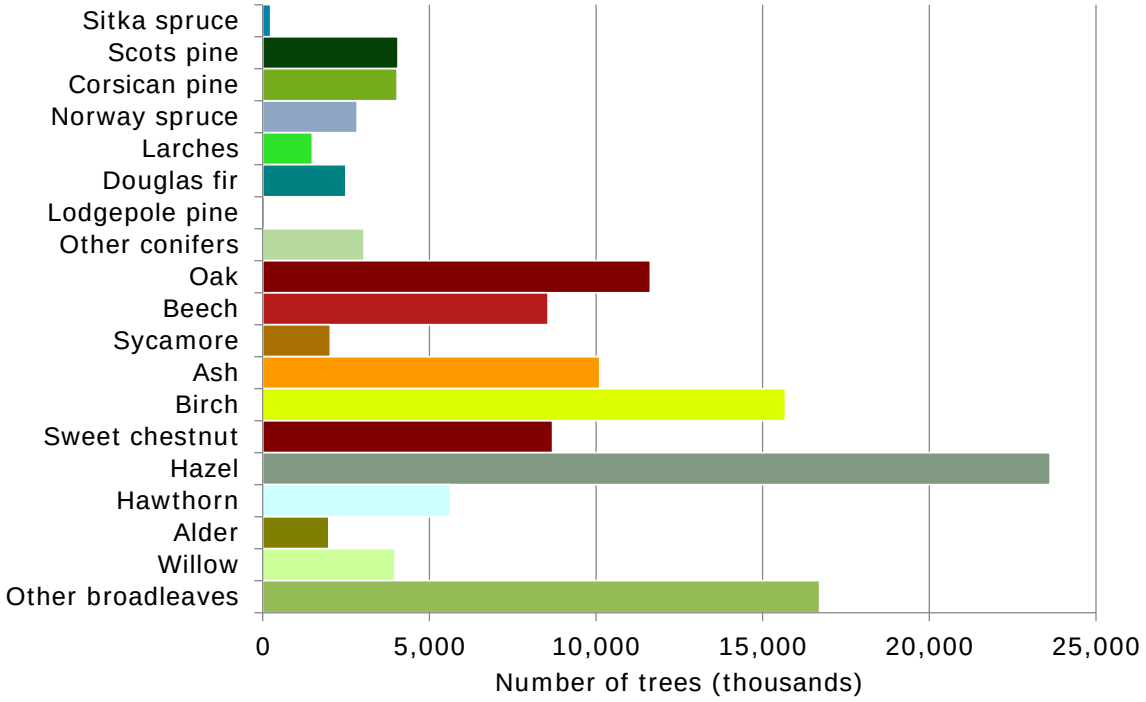
**Table 16** Standing volume by mean stand dbh class

| 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 | *65* | **< 1** |
| 7–10 | 4 | 6 | *34* | **10** |
| 10–15 | 93 | 189 | *31* | **282** |
| 15–20 | 136 | 459 | *20* | **594** |
| 20–30 | 510 | 1,160 | *16* | **1,670** |
| 30–40 | 726 | 1,317 | *15* | **2,043** |
| 40–60 | 594 | 1,118 | *19* | **1,712** |
| 60–80 | 93 | 400 | *27* | **493** |
| 80+ | 27 | 64 | *55* | **91** |
| **Total** | **2,183** | **4,713** | ***6*** | **6,896** |
| All broadleaves | | | | |
| 0–7 | 3 | 36 | *16* | **39** |
| 7–10 | 16 | 580 | *10* | **596** |
| 10–15 | 146 | 1,491 | *9* | **1,637** |
| 15–20 | 273 | 1,291 | *9* | **1,565** |
| 20–30 | 1,778 | 3,306 | *7* | **5,085** |
| 30–40 | 987 | 2,650 | *10* | **3,637** |
| 40–60 | 277 | 3,893 | *9* | **4,170** |
| 60–80 | 61 | 3,340 | *12* | **3,401** |
| 80+ | 17 | 1,709 | *24* | **1,726** |
| **Total** | **3,558** | **18,297** | ***4*** | **21,855** |
| All species | | | | |
| 0–7 | 3 | 36 | *16* | **40** |
| 7–10 | 20 | 588 | *10* | **608** |
| 10–15 | 239 | 1,686 | *8* | **1,925** |
| 15–20 | 409 | 1,762 | *8* | **2,171** |
| 20–30 | 2,289 | 4,498 | *6* | **6,786** |
| 30–40 | 1,713 | 3,999 | *8* | **5,713** |
| 40–60 | 870 | 4,952 | *8* | **5,823** |
| 60–80 | 154 | 3,719 | *11* | **3,873** |
| 80+ | 44 | 1,780 | *24* | **1,823** |
| **Total** | **5,741** | **23,021** | ***3*** | **28,762** |

# Number of measureable trees

## Number of measureable trees by species

**Figure 19** Number of measureable trees by principal tree species






Go to Part 2

**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 | 67 | 165 | *69* | **233** |
| Scots pine | 1,276 | 2,783 | *25* | **4,059** |
| Corsican pine | 2,781 | 1,253 | *34* | **4,033** |
| Norway spruce | 341 | 2,493 | *29* | **2,834** |
| Larches | 297 | 1,197 | *24* | **1,494** |
| Douglas fir | 965 | 1,531 | *26* | **2,496** |
| Lodgepole pine | 21 | 41 | *101* | **62** |
| Other conifers | 548 | 2,492 | *19* | **3,040** |
| **All conifers** | **6,296** | **11,966** | ***9*** | **18,262** |
| Broadleaves | | | | |
| Oak | 4,901 | 6,731 | *9* | **11,632** |
| Beech | 3,660 | 4,903 | *12* | **8,563** |
| Sycamore | 53 | 1,976 | *17* | **2,029** |
| Ash | 439 | 9,674 | *9* | **10,113** |
| Birch | 1,072 | 14,615 | *11* | **15,687** |
| Sweet chestnut | 164 | 8,533 | *26* | **8,697** |
| Hazel | 48 | 23,580 | *8* | **23,628** |
| Hawthorn | 0 | 5,632 | *15* | **5,632** |
| Alder | 153 | 1,830 | *21* | **1,982** |
| Willow | 0 | 3,966 | *22* | **3,966** |
| Other broadleaves | 2,105 | 14,607 | *9* | **16,713** |
| **All broadleaves** | **12,596** | **96,279** | ***4*** | **108,875** |
| All species | | | | |
| **All species** | **18,891** | **108,672** | ***3*** | **127,564** |

## Number of measureable trees by age class

**Figure 20** Number of measureable trees by age class

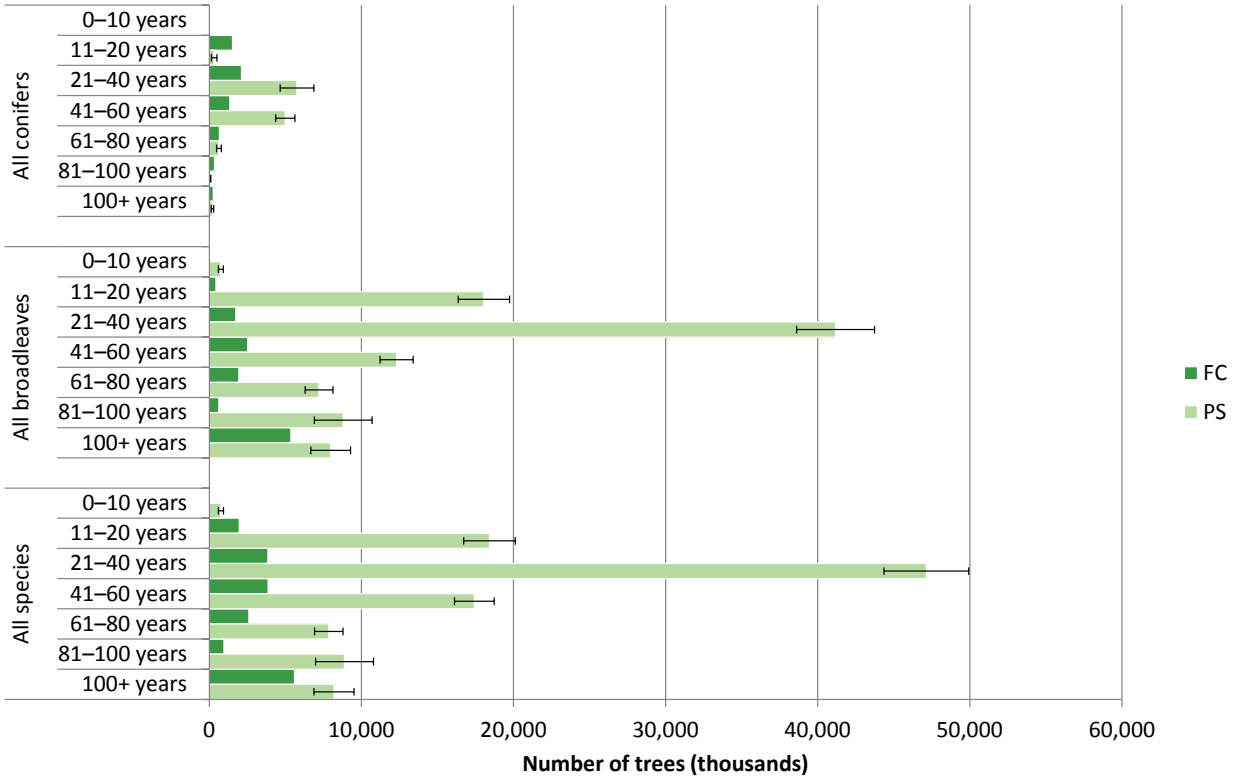





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**Table 18** Number of measureable trees by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| All conifers | | | | |
| 0–10 | 55 | 0 | - | **55** |
| 11–20 | 1,529 | 317 | *58* | **1,846** |
| 21–40 | 2,115 | 5,767 | *19* | **7,882** |
| 41–60 | 1,349 | 4,993 | *13* | **6,342** |
| 61–80 | 662 | 625 | *24* | **1,286** |
| 81–100 | 334 | 59 | *66* | **393** |
| 100+ | 253 | 205 | *36* | **458** |
| **Total** | **6,296** | **11,966** | ***9*** | **18,262** |
| All broadleaves | | | | |
| 0–10 | 2 | 757 | *22* | **759** |
| 11–20 | 439 | 18,046 | *9* | **18,485** |
| 21–40 | 1,733 | 41,175 | *6* | **42,907** |
| 41–60 | 2,517 | 12,314 | *9* | **14,831** |
| 61–80 | 1,935 | 7,210 | *13* | **9,146** |
| 81–100 | 618 | 8,798 | *22* | **9,416** |
| 100+ | 5,351 | 7,979 | *16* | **13,330** |
| **Total** | **12,596** | **96,279** | ***4*** | **108,875** |
| All species | | | | |
| 0–10 | 56 | 760 | *22* | **816** |
| 11–20 | 1,968 | 18,416 | *9* | **20,384** |
| 21–40 | 3,847 | 47,135 | *6* | **50,983** |
| 41–60 | 3,866 | 17,421 | *7* | **21,287** |
| 61–80 | 2,597 | 7,858 | *12* | **10,455** |
| 81–100 | 953 | 8,888 | *21* | **9,841** |
| 100+ | 5,604 | 8,194 | *16* | **13,798** |
| **Total** | **18,891** | **108,672** | ***3*** | **127,564** |

## Number of measureable trees by mean stand dbh class

**Figure 21** Number of measureable trees by mean stand dbh class

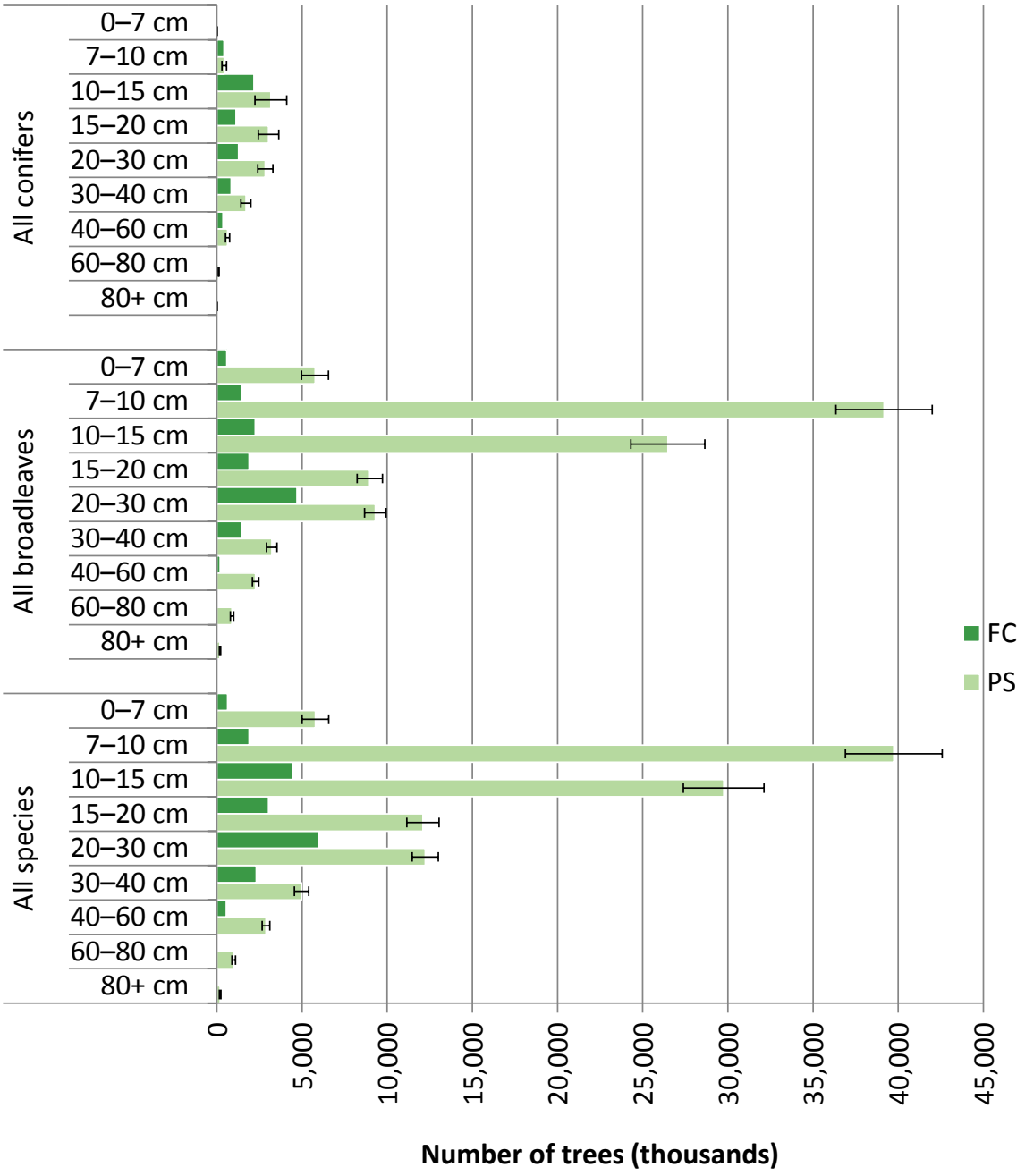

**Table 19** Number of measureable trees by mean stand dbh class

| 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 | 45 | 7 | *61* | **52** |
| 7–10 cm | 421 | 443 | *31* | **864** |
| 10–15 cm | 2,176 | 3,173 | *29* | **5,349** |
| 15–20 cm | 1,134 | 3,037 | *20* | **4,171** |
| 20–30 cm | 1,282 | 2,846 | *16* | **4,128** |
| 30–40 cm | 849 | 1,708 | *17* | **2,557** |
| 40–60 cm | 361 | 636 | *18* | **997** |
| 60–80 cm | 25 | 106 | *26* | **131** |
| 80+ cm | 4 | 9 | *55* | **13** |
| **Total** | **6,296** | **11,966** | ***9*** | **18,262** |
| All broadleaves | | | | |
| 0–7 cm | 590 | 5,767 | *14* | **6,357** |
| 7–10 cm | 1,470 | 39,167 | *7* | **40,636** |
| 10–15 cm | 2,258 | 26,480 | *8* | **28,738** |
| 15–20 cm | 1,898 | 8,980 | *8* | **10,878** |
| 20–30 cm | 4,699 | 9,304 | *7* | **14,003** |
| 30–40 cm | 1,467 | 3,226 | *10* | **4,693** |
| 40–60 cm | 192 | 2,277 | *8* | **2,469** |
| 60–80 cm | 18 | 892 | *11* | **910** |
| 80+ cm | 3 | 187 | *20* | **190** |
| **Total** | **12,596** | **96,279** | ***4*** | **108,875** |
| All species | | | | |
| 0–7 cm | 635 | 5,790 | *14* | **6,426** |
| 7–10 cm | 1,891 | 39,742 | *7* | **41,633** |
| 10–15 cm | 4,434 | 29,755 | *8* | **34,190** |
| 15–20 cm | 3,032 | 12,096 | *8* | **15,128** |
| 20–30 cm | 5,981 | 12,232 | *6* | **18,213** |
| 30–40 cm | 2,316 | 4,974 | *9* | **7,290** |
| 40–60 cm | 553 | 2,889 | *8* | **3,442** |
| 60–80 cm | 43 | 996 | *11* | **1,039** |
| 80+ cm | 7 | 197 | *20* | **204** |
| **Total** | **18,891** | **108,672** | ***3*** | **127,564** |

# Biomass stocks in live woodland trees

## Biomass stocks by species

**Figure 22** Biomass stocks by principal tree species

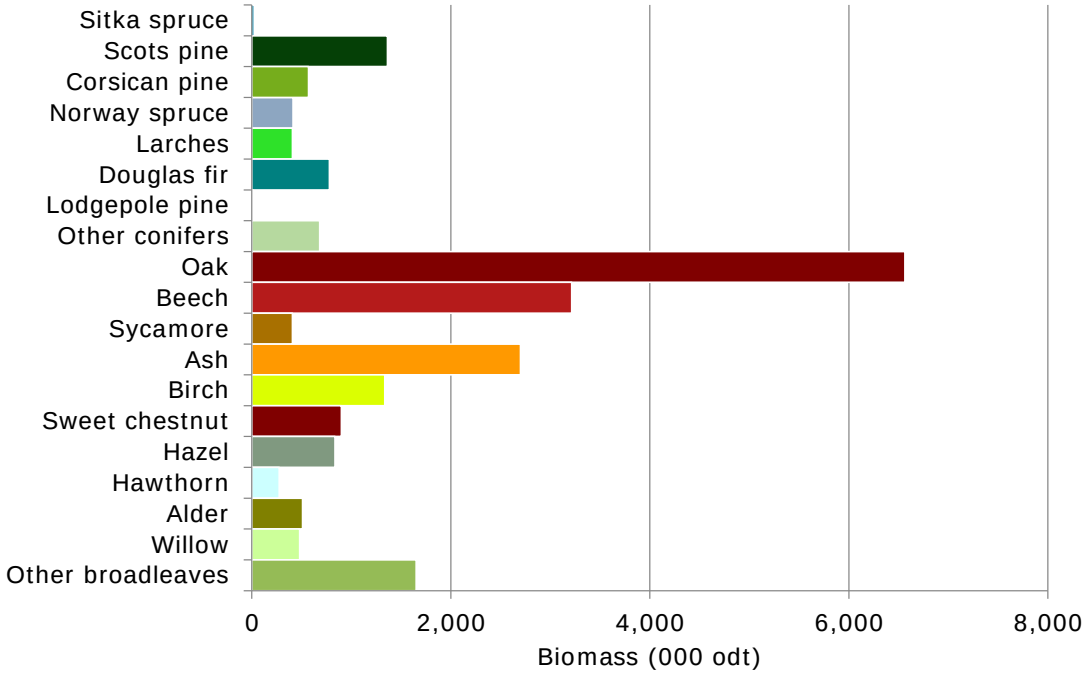

**Table 20** Biomass stocks by principal tree species

| Principal species | FC | Private sector | | Total |
|---|---|---|---|---|
| | biomass (000 odt) | biomass (000 odt) | *SE%* | biomass (000 odt) |
| Conifers | | | | |
| Sitka spruce | 8 | 14 | *66* | **22** |
| Scots pine | 469 | 894 | *16* | **1,363** |
| Corsican pine | 340 | 231 | *31* | **571** |
| Norway spruce | 78 | 338 | *20* | **416** |
| Larches | 44 | 365 | *20* | **409** |
| Douglas fir | 260 | 521 | *21* | **781** |
| Lodgepole pine | 3 | 9 | *101* | **12** |
| Other conifers | 173 | 510 | *19* | **683** |
| **All conifers** | **1,375** | **2,885** | ***6*** | **4,260** |
| Broadleaves | | | | |
| Oak | 1,465 | 5,099 | *8* | **6,564** |
| Beech | 1,393 | 1,823 | *13* | **3,216** |
| Sycamore | 7 | 403 | *21* | **410** |
| Ash | 40 | 2,660 | *10* | **2,700** |
| Birch | 76 | 1,261 | *10* | **1,337** |
| Sweet chestnut | 27 | 874 | *16* | **901** |
| Hazel | 3 | 833 | *9* | **836** |
| Hawthorn | 0 | 275 | *16* | **275** |
| Alder | 14 | 496 | *22* | **510** |
| Willow | 0 | 481 | *24* | **481** |
| Other broadleaves | 206 | 1,445 | *12* | **1,651** |
| **All broadleaves** | **3,231** | **15,602** | ***3*** | **18,833** |
| All species | | | | |
| **All species** | **4,606** | **18,500** | ***3*** | **23,106** |

# Carbon stocks in live woodland trees

## Carbon stocks by species

**Figure 23** Carbon stocks by principal tree species

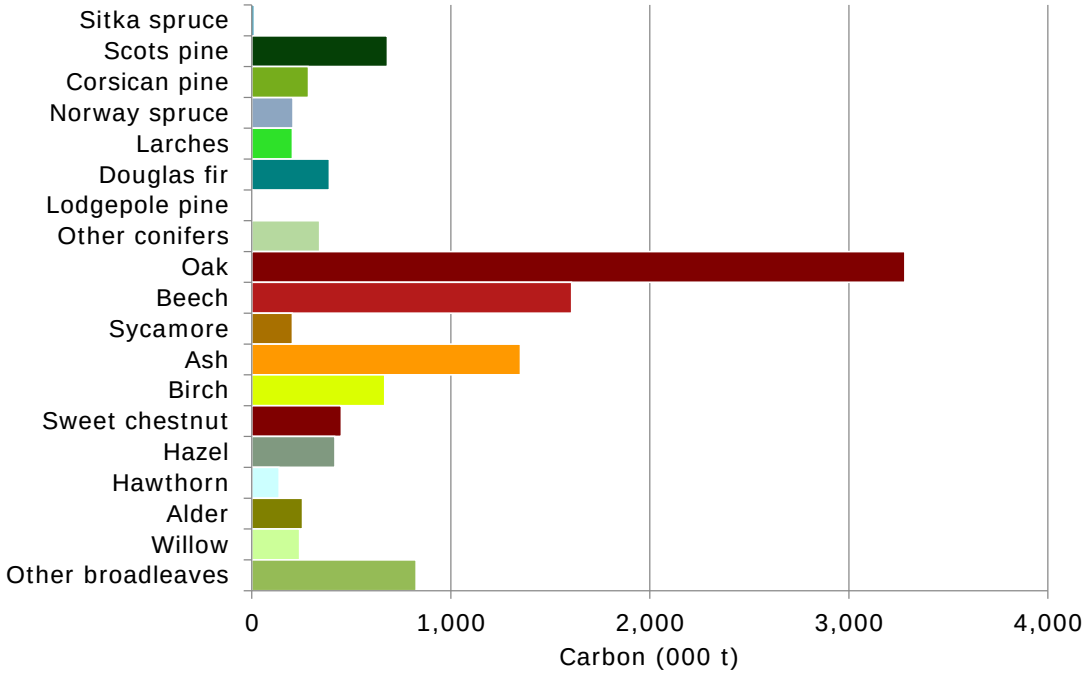




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**Table 21** Carbon stocks by principal tree species

| Principal species | FC | Private sector | | Total |
|---|---|---|---|---|
| | carbon (000 t) | carbon (000 t) | *SE%* | carbon (000 t) |
| Conifers | | | | |
| Sitka spruce | 4 | 7 | *66* | **11** |
| Scots pine | 235 | 447 | *16* | **682** |
| Corsican pine | 170 | 115 | *31* | **285** |
| Norway spruce | 39 | 169 | *20* | **208** |
| Larches | 22 | 182 | *20* | **204** |
| Douglas fir | 130 | 261 | *21* | **391** |
| Lodgepole pine | 2 | 5 | *101* | **6** |
| Other conifers | 86 | 255 | *19* | **341** |
| **All conifers** | **687** | **1,442** | ***6*** | **2,130** |
| Broadleaves | | | | |
| Oak | 733 | 2,549 | *8* | **3,282** |
| Beech | 696 | 912 | *13* | **1,608** |
| Sycamore | 3 | 201 | *21* | **205** |
| Ash | 20 | 1,330 | *10* | **1,350** |
| Birch | 38 | 630 | *10* | **668** |
| Sweet chestnut | 14 | 437 | *16* | **451** |
| Hazel | 1 | 416 | *9* | **418** |
| Hawthorn | 0 | 138 | *16* | **138** |
| Alder | 7 | 248 | *22* | **255** |
| Willow | 0 | 241 | *24* | **241** |
| Other broadleaves | 103 | 723 | *12* | **826** |
| **All broadleaves** | **1,616** | **7,801** | ***3*** | **9,417** |
| All species | | | | |
| **All species** | **2,303** | **9,250** | ***3*** | **11,553** |

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

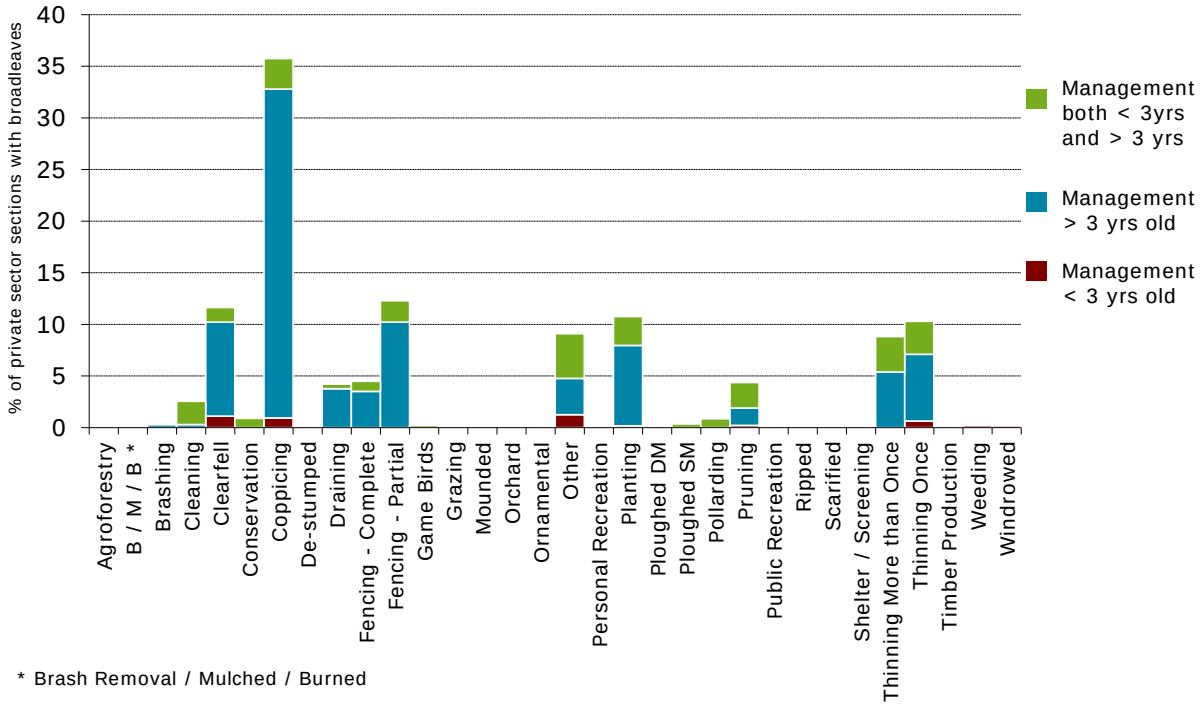
## Sample square distribution

**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 |
|---|---|---|---|---|
| Solent and South Downs | 374 | 369 | 225 | 352 |

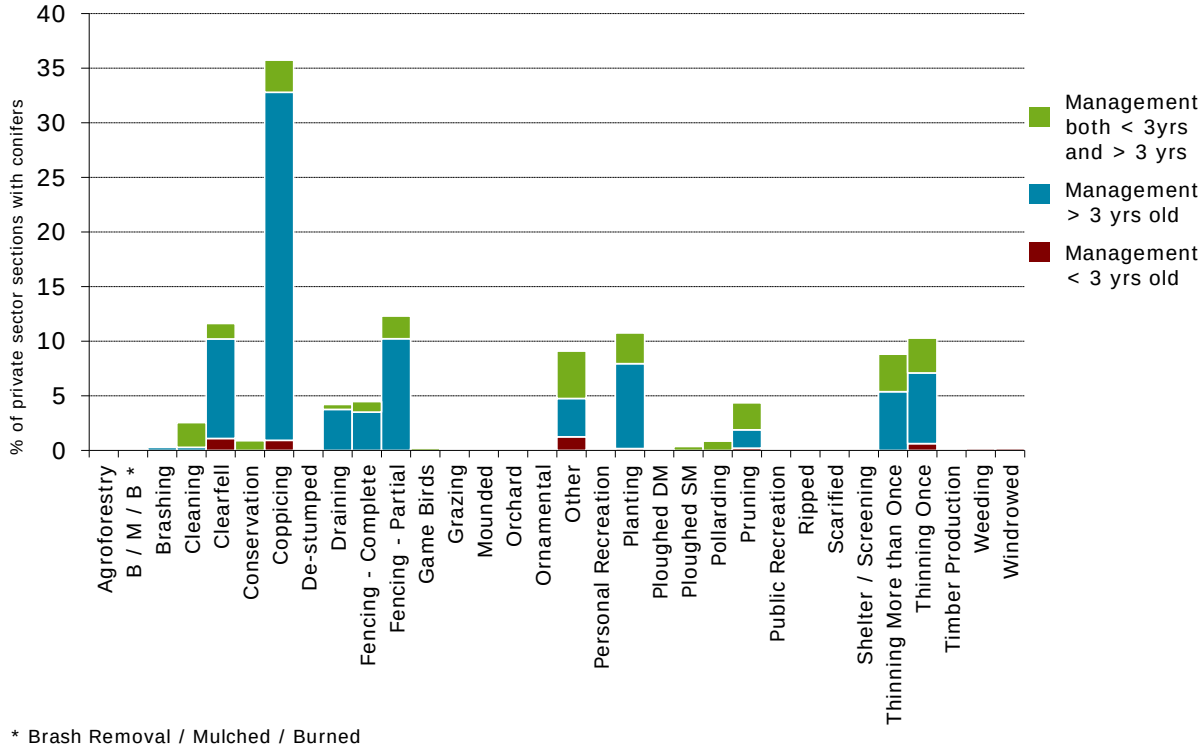
## Evidence of management

**Figure 24** Evidence of management in PS broadleaf sections




* Brash Removal / Mulched / Burned

**Figure 25** Evidence of management in PS conifer sections

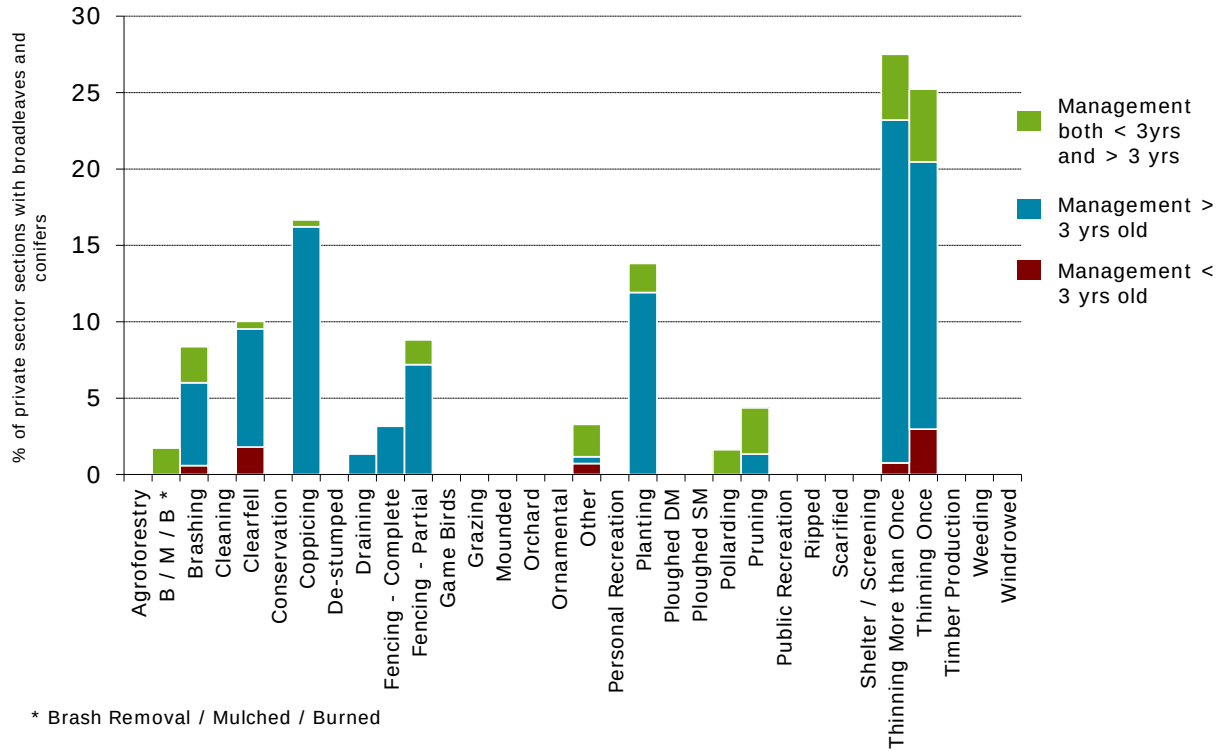



* Brash Removal / Mulched / Burned



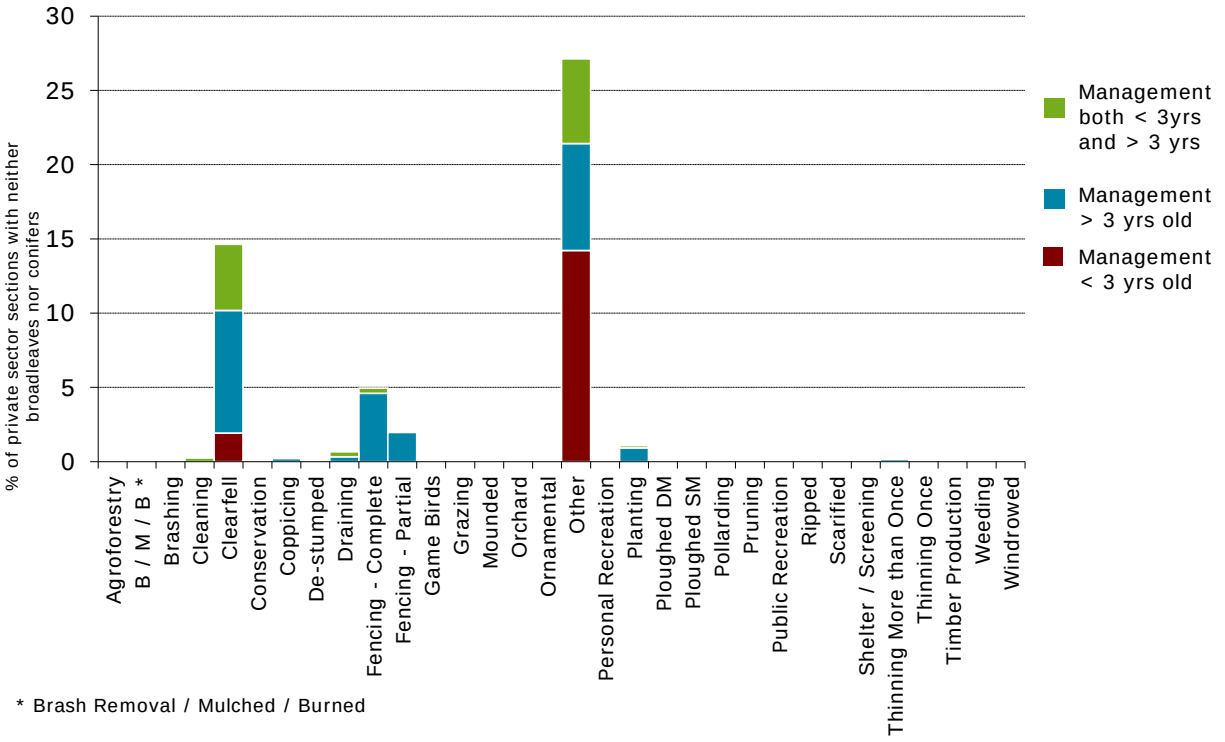
Go to Part 2

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




* Brash Removal / Mulched / Burned

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



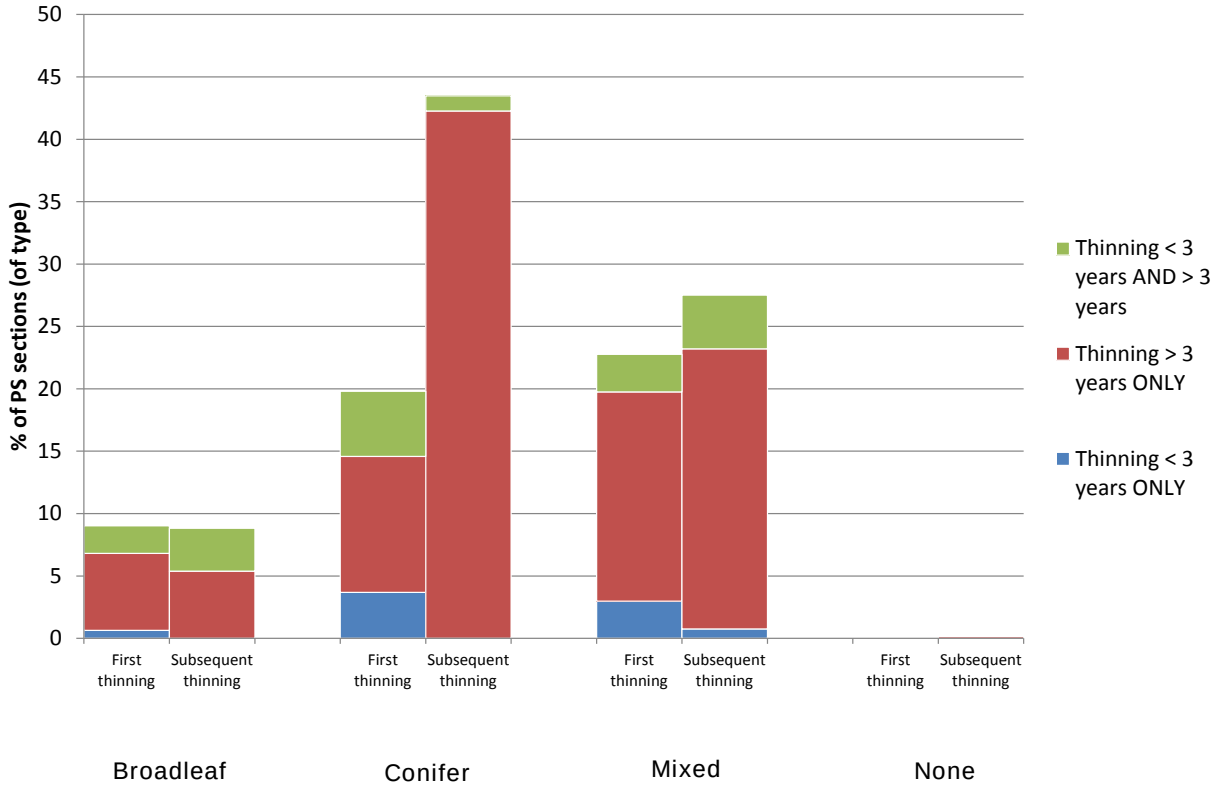

* Brash Removal / Mulched / Burned



Go to Part 2

## Evidence of thinning

**Figure 28** Evidence of thinning

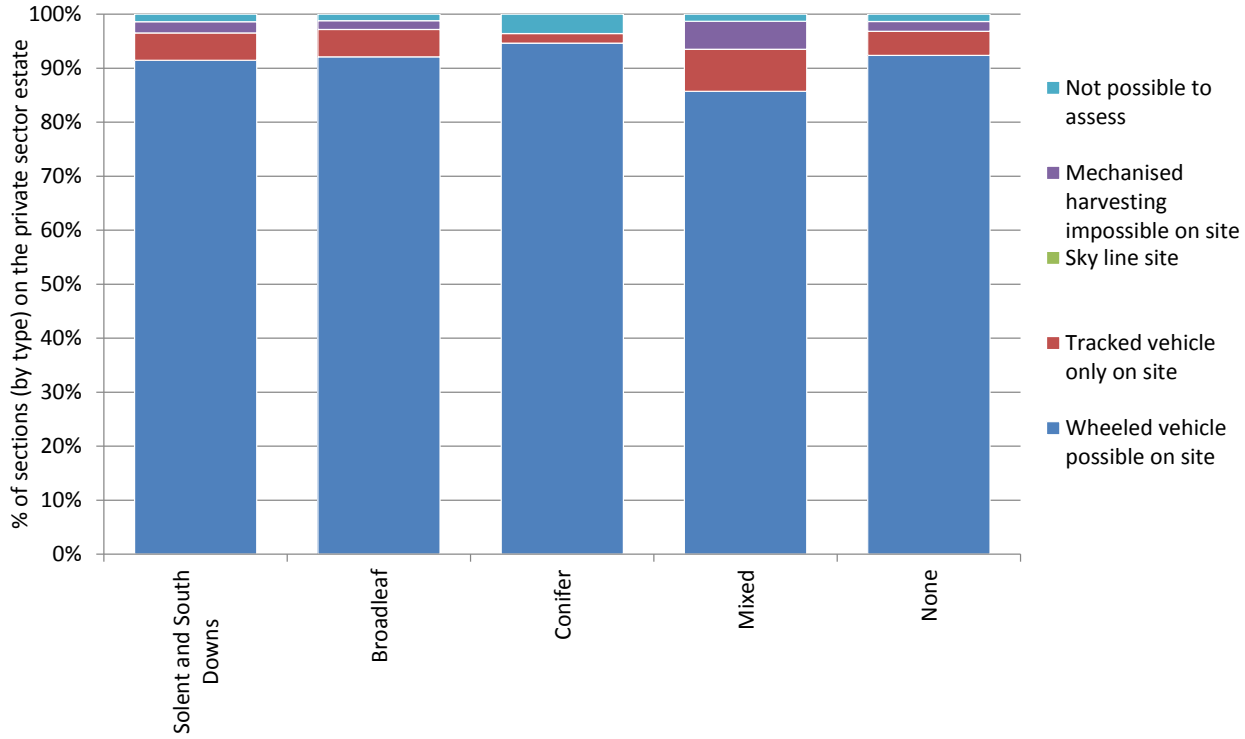





Go to Part 2

## Suitability for harvesting

**Figure 29** Suitability for harvesting

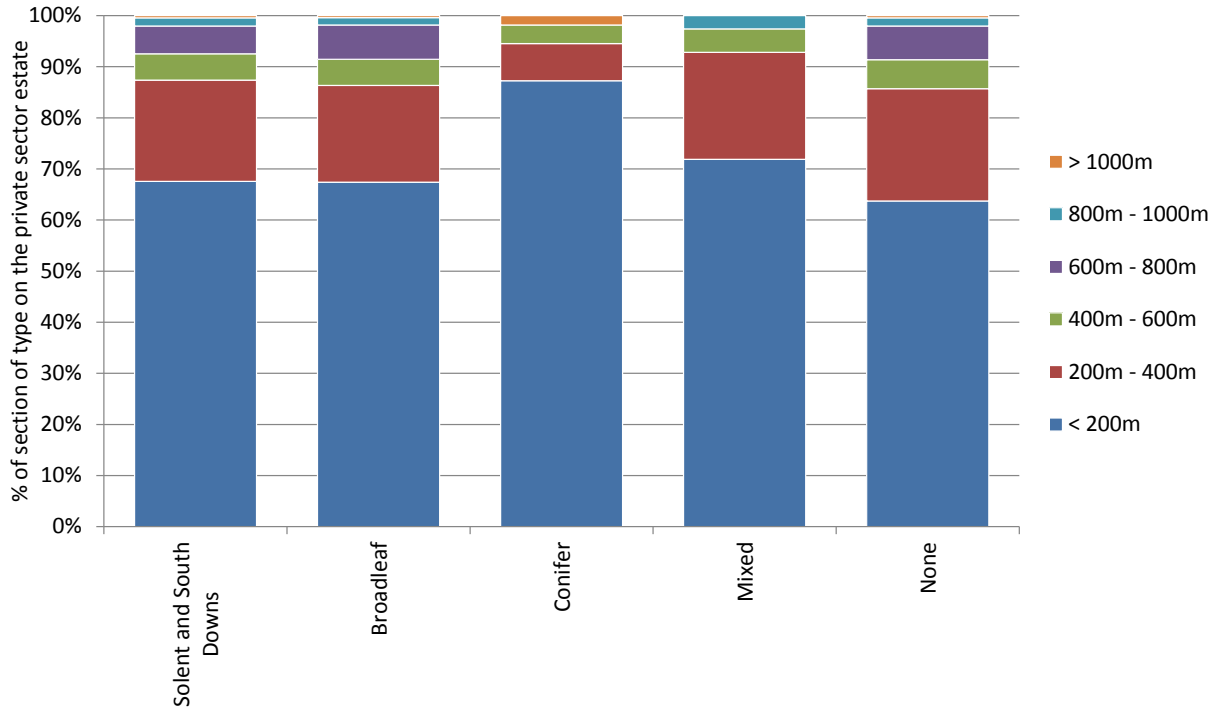





Go to Part 2

## Distance to road

**Figure 30** Distance to road






Go to Part 2

## Type of road or ride

**Figure 31** Road or ride in survey square

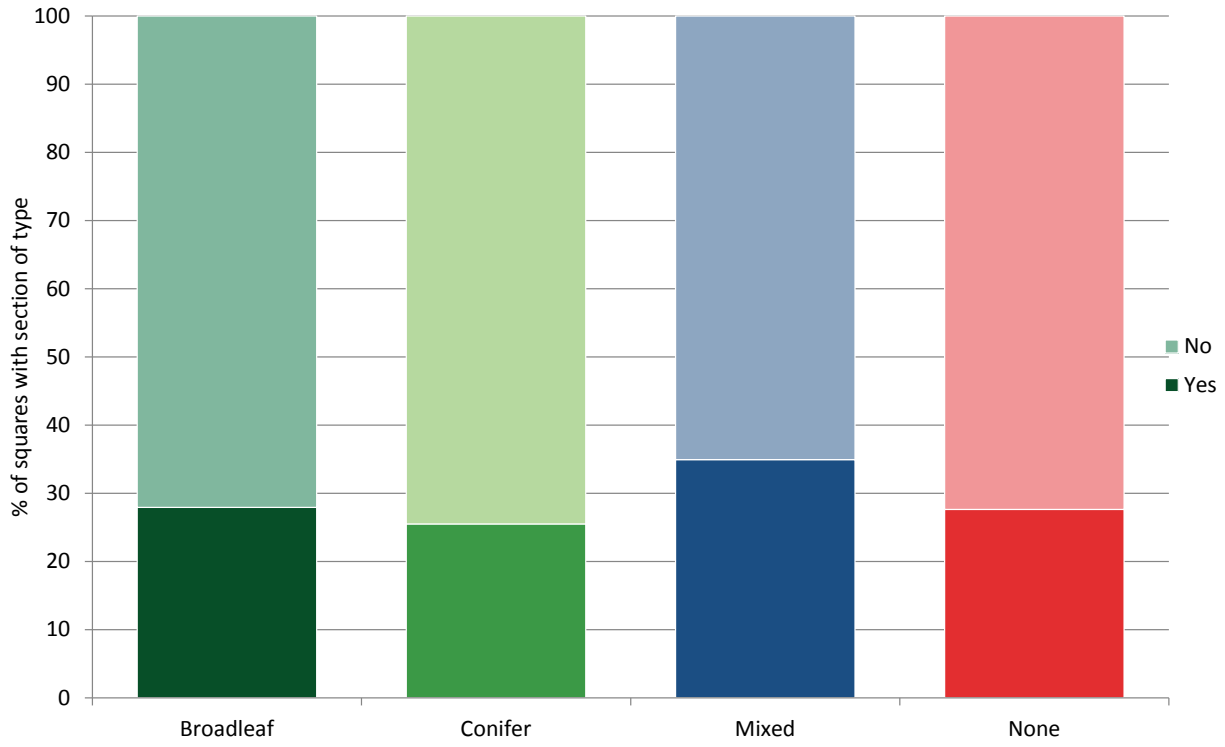
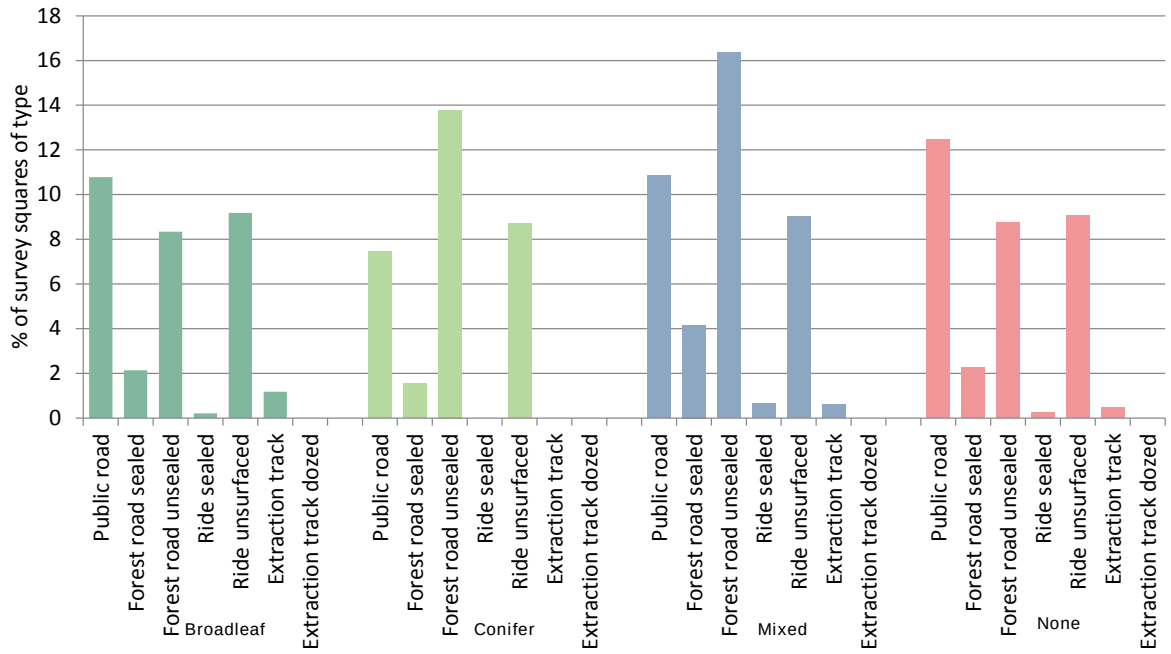



**Figure 32** Type of road or ride in survey square



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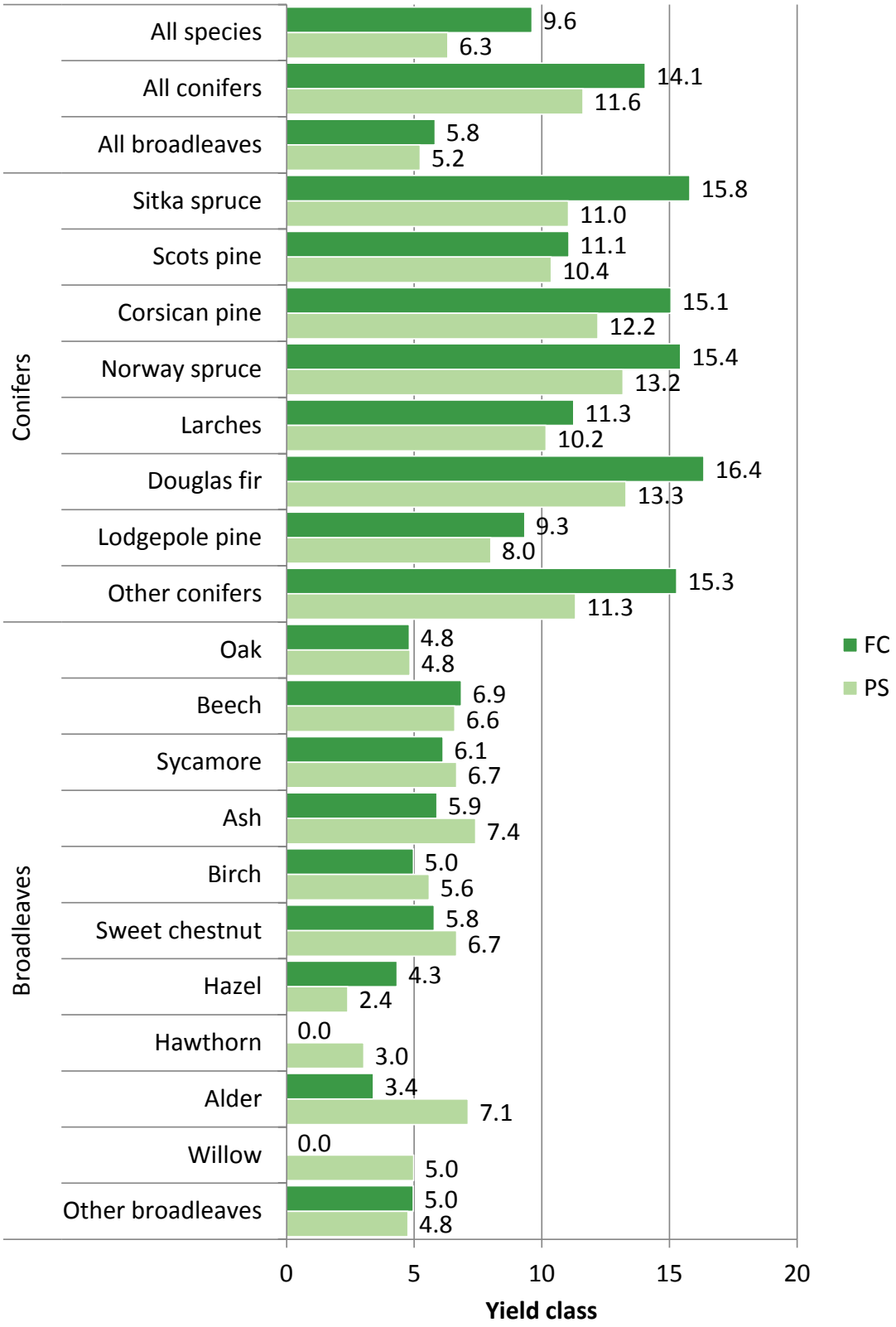
## Mean yield class

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






Go to Part 2

**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 | 15.8 | 11.0 |
| Scots pine | 11.1 | 10.4 |
| Corsican pine | 15.1 | 12.2 |
| Norway spruce | 15.4 | 13.2 |
| Larches | 11.3 | 10.2 |
| Douglas fir | 16.4 | 13.3 |
| Lodgepole pine | 9.3 | 8.0 |
| Other conifers | 15.3 | 11.3 |
| **All conifers** | 14.1 | 11.6 |
| Broadleaves | | |
| Oak | 4.8 | 4.8 |
| Beech | 6.9 | 6.6 |
| Sycamore | 6.1 | 6.7 |
| Ash | 5.9 | 7.4 |
| Birch | 5.0 | 5.6 |
| Sweet chestnut | 5.8 | 6.7 |
| Hazel | 4.3 | 2.4 |
| Hawthorn | 0.0 | 3.0 |
| Alder | 3.4 | 7.1 |
| Willow | 0.0 | 5.0 |
| Other broadleaves | 5.0 | 4.8 |
| **All broadleaves** | 5.8 | 5.2 |
| All species | | |
| **All species** | 9.6 | 6.3 |

# 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 %* |
| Solent and South Downs | | | |
| All conifers | 67 | 1,424 | *17* |
| All broadleaves | 11 | 11,308 | *6* |
| **All species** | **79** | **12,664** | ***6*** |

**Table 25** Stocked area of overdue timber stocks

| | FC | Private sector | |
|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE %* |
| Solent and South Downs | | | |
| All conifers | 0.2 | 2.4 | *16* |
| All broadleaves | < 0.1 | 27.6 | *4* |
| **All species** | **0.3** | **29.8** | ***4*** |

# Part 3 – How our woodlands might change over time

# 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

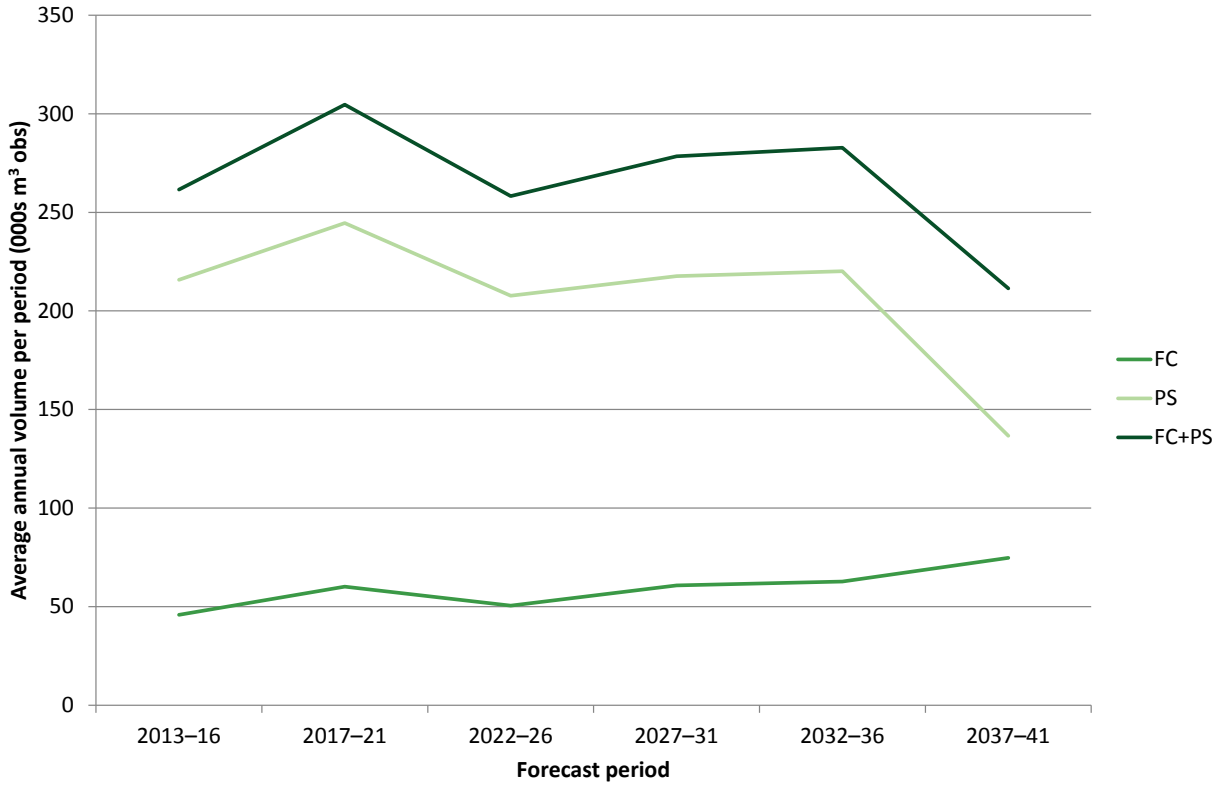


**Figure 35** 25–year forecast of softwood timber availability; average annual volume within period

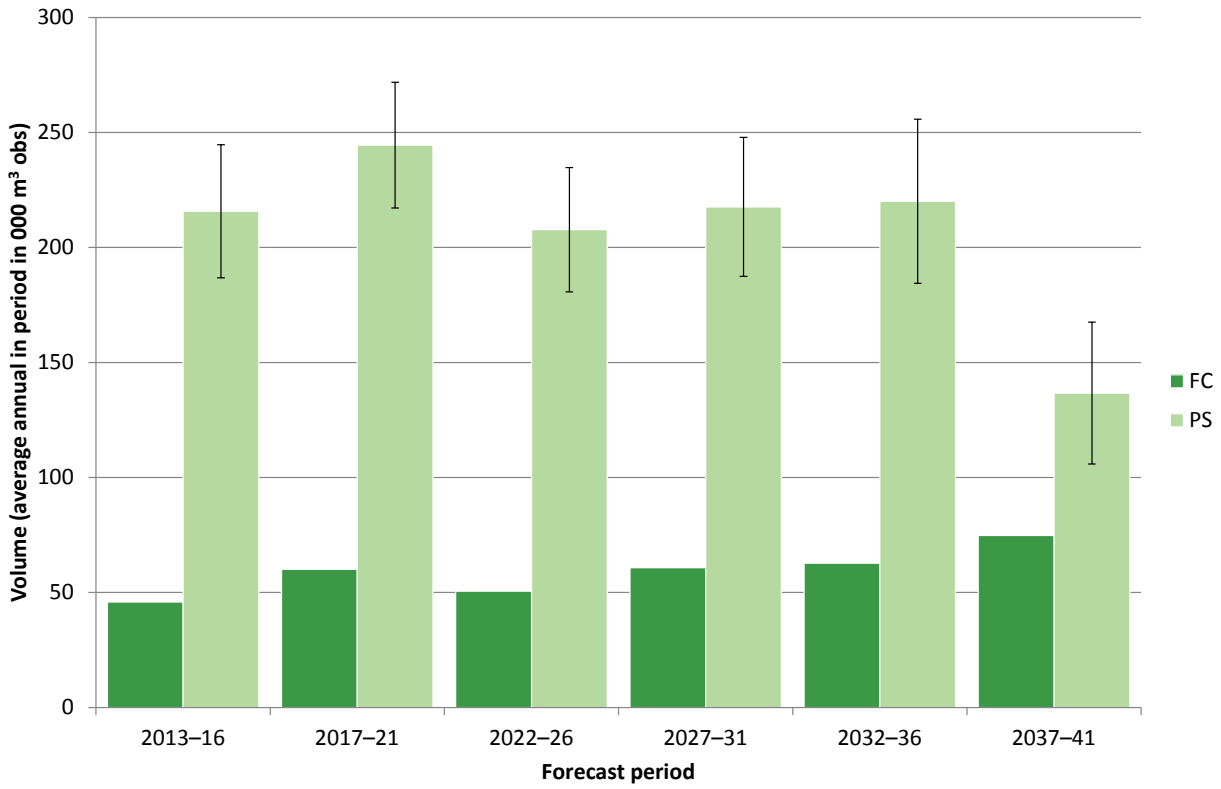



**Table 26** 25–year forecast of softwood availability; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 46 | 216 | *13* | **262** |
| 2017–21 | 60 | 245 | *11* | **305** |
| 2022–26 | 51 | 208 | *13* | **258** |
| 2027–31 | 61 | 218 | *14* | **278** |
| 2032–36 | 63 | 220 | *16* | **283** |
| 2037–41 | 75 | 137 | *23* | **211** |

## 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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **46** | **216** | ***13*** | **60** | **245** | ***11*** |
| Sitka spruce | < 1 | 1 | *70* | < 1 | 3 | *63* |
| Scots pine | 12 | 42 | *25* | 13 | 78 | *25* |
| Corsican pine | 16 | 21 | *50* | 23 | 33 | *52* |
| Norway spruce | 3 | 24 | *24* | 6 | 30 | *22* |
| Larches | 1 | 27 | *23* | 2 | 39 | *30* |
| Douglas fir | 7 | 45 | *31* | 8 | 25 | *21* |
| Lodgepole pine | < 1 | < 1 | *101* | < 1 | 0 | – |
| Other conifers | 6 | 54 | *40* | 7 | 36 | *22* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **51** | **208** | ***13*** | **61** | **218** | ***14*** |
| Sitka spruce | < 1 | < 1 | *85* | < 1 | 2 | *95* |
| Scots pine | 8 | 60 | *29* | 14 | 41 | *23* |
| Corsican pine | 26 | 21 | *57* | 21 | 10 | *38* |
| Norway spruce | 3 | 21 | *28* | 5 | 60 | *37* |
| Larches | 2 | 25 | *23* | 2 | 25 | *32* |
| Douglas fir | 6 | 45 | *36* | 11 | 35 | *42* |
| Lodgepole pine | < 1 | 3 | *101* | < 1 | 0 | – |
| Other conifers | 6 | 31 | *31* | 7 | 45 | *34* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **63** | **220** | ***16*** | **75** | **137** | ***23*** |
| Sitka spruce | 2 | 2 | *43* | 2 | 3 | *33* |
| Scots pine | 11 | 79 | *24* | 18 | 32 | *53* |
| Corsican pine | 27 | 3 | *56* | 26 | 40 | *59* |
| Norway spruce | 4 | 48 | *34* | 5 | 12 | *34* |
| Larches | 2 | 13 | *24* | 3 | 9 | *29* |
| Douglas fir | 11 | 19 | *24* | 14 | 25 | *39* |
| Lodgepole pine | < 1 | 0 | – | < 1 | < 1 | *37* |
| Other conifers | 6 | 56 | *50* | 7 | 14 | *28* |

## 25-year forecast of softwood timber availability % spruce

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

| Solent and South Downs | | Top diameter class (cm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 7–14 | 14–16 | 16–18 | 18–24 | 24–34 | 34–44 | 44–54 | 54+ | Total |
| 2013–16 | FC (%) | 9 | 7 | 7 | 7 | 7 | 6 | 5 | 4 | **7** |
| | PS (%) | 31 | 23 | 19 | 13 | 7 | 4 | 3 | < 1 | **12** |
| 2017–21 | FC (%) | 8 | 10 | 10 | 11 | 10 | 11 | 13 | 12 | **10** |
| | PS (%) | 21 | 21 | 20 | 18 | 13 | 9 | 8 | 2 | **14** |
| 2022–26 | FC (%) | 3 | 4 | 5 | 6 | 7 | 7 | 8 | 7 | **6** |
| | PS (%) | 15 | 17 | 16 | 14 | 10 | 8 | 8 | 2 | **11** |
| 2027–31 | FC (%) | 4 | 3 | 4 | 6 | 10 | 13 | 15 | 17 | **10** |
| | PS (%) | 20 | 22 | 23 | 27 | 31 | 31 | 31 | 26 | **29** |
| 2032–36 | FC (%) | 17 | 9 | 6 | 4 | 7 | 12 | 15 | 21 | **10** |
| | PS (%) | 28 | 26 | 26 | 27 | 27 | 21 | 15 | 8 | **23** |
| 2037–41 | FC (%) | 22 | 15 | 9 | 5 | 7 | 9 | 10 | 7 | **9** |
| | PS (%) | 18 | 16 | 14 | 12 | 11 | 9 | 7 | 2 | **11** |



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## 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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 10 | 30 | *16* | 7 | 23 | *12* |
| 14–16 | 2 | 11 | *14* | 3 | 11 | *13* |
| 16–18 | 3 | 12 | *16* | 4 | 13 | *13* |
| 18–24 | 9 | 42 | *17* | 13 | 49 | *13* |
| 24–34 | 12 | 62 | *19* | 18 | 71 | *16* |
| 34–44 | 6 | 29 | *16* | 8 | 36 | *17* |
| 44–54 | 3 | 13 | *17* | 4 | 16 | *16* |
| 54+ | 2 | 17 | *18* | 3 | 25 | *18* |
| **Total** | **46** | **216** | ***13*** | **60** | **245** | ***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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 7 | 15 | *13* | 6 | 11 | *12* |
| 14–16 | 3 | 8 | *13* | 3 | 6 | *12* |
| 16–18 | 3 | 11 | *15* | 3 | 8 | *13* |
| 18–24 | 12 | 47 | *17* | 12 | 38 | *15* |
| 24–34 | 14 | 65 | *16* | 18 | 70 | *17* |
| 34–44 | 6 | 29 | *17* | 9 | 39 | *17* |
| 44–54 | 3 | 13 | *19* | 5 | 19 | *20* |
| 54+ | 2 | 19 | *20* | 6 | 28 | *22* |
| **Total** | **51** | **208** | ***13*** | **61** | **218** | ***14*** |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 6 | 11 | *12* | 8 | 13 | *15* |
| 14–16 | 3 | 5 | *13* | 3 | 4 | *19* |
| 16–18 | 3 | 6 | *13* | 3 | 5 | *21* |
| 18–24 | 14 | 35 | *15* | 13 | 25 | *26* |
| 24–34 | 19 | 74 | *19* | 22 | 49 | *28* |
| 34–44 | 8 | 44 | *21* | 12 | 22 | *27* |
| 44–54 | 4 | 23 | *23* | 6 | 8 | *37* |
| 54+ | 5 | 23 | *21* | 9 | 11 | *32* |
| **Total** | **63** | **220** | ***16*** | **75** | **137** | ***23*** |

## 25-year forecast of standing volume in conifers

**Figure 36** 25-year forecast of standing volume in conifers

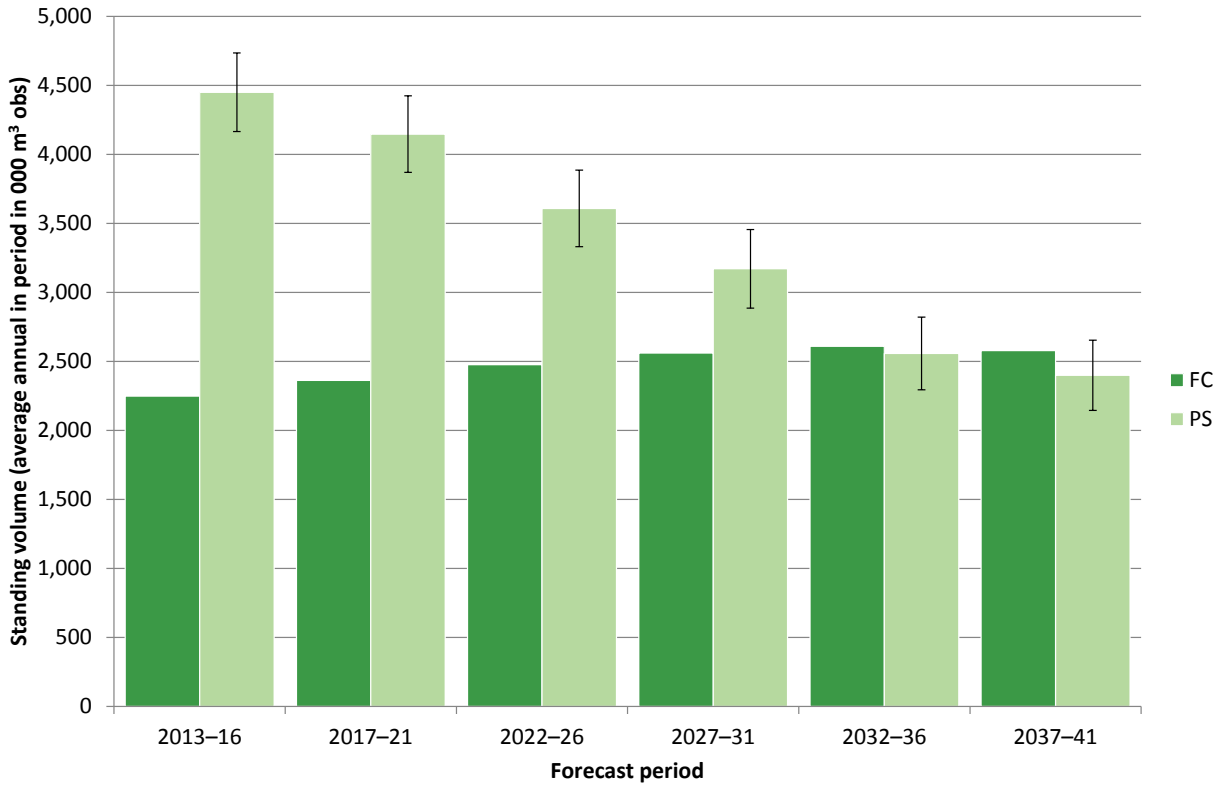



**Table 30** 25-year forecast of standing volume in conifers; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 m³ obs) | volume (000 m³ obs) | *SE%* | volume (000 m³ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 2,248 | 4,450 | *6* | **6,698** |
| 2017–21 | 2,362 | 4,147 | *7* | **6,508** |
| 2022–26 | 2,476 | 3,608 | *8* | **6,085** |
| 2027–31 | 2,561 | 3,171 | *9* | **5,732** |
| 2032–36 | 2,609 | 2,558 | *10* | **5,167** |
| 2037–41 | 2,578 | 2,399 | *11* | **4,977** |

## 25-year forecast of net increment in conifers

**Figure 37** 25-year forecast of net increment in conifers

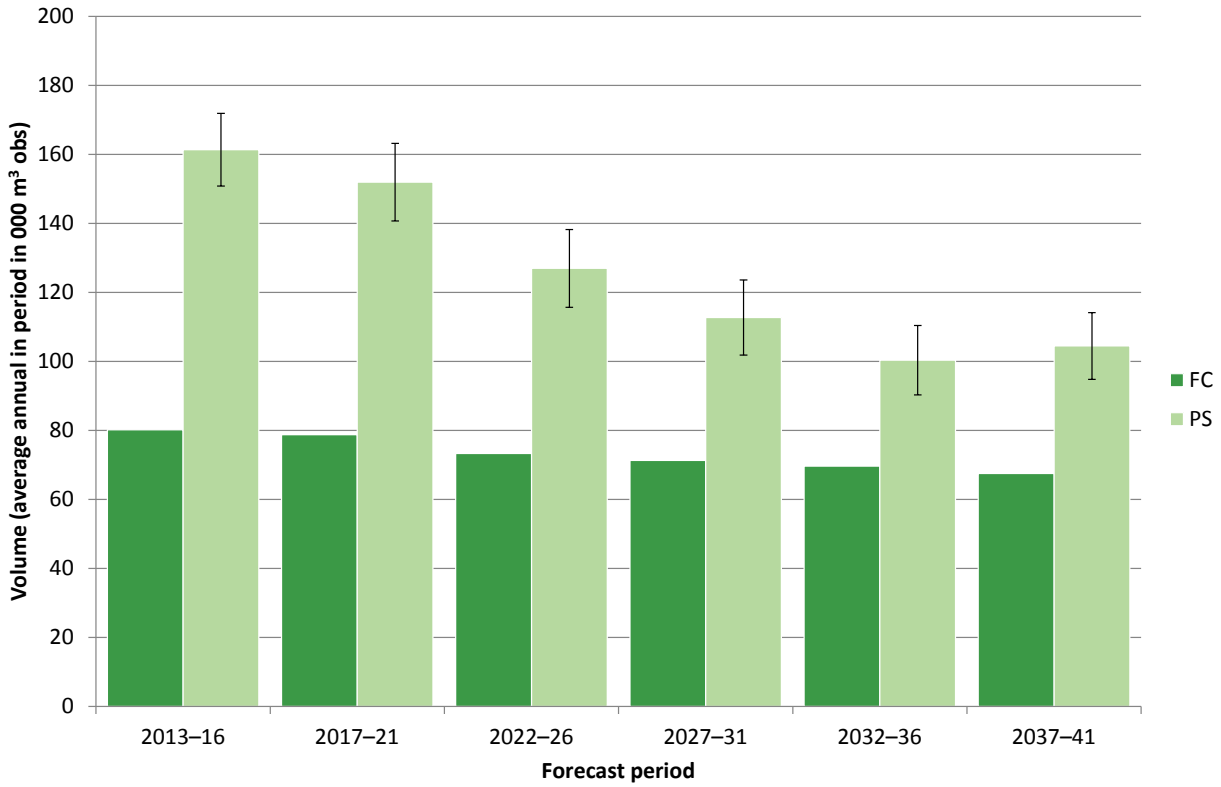
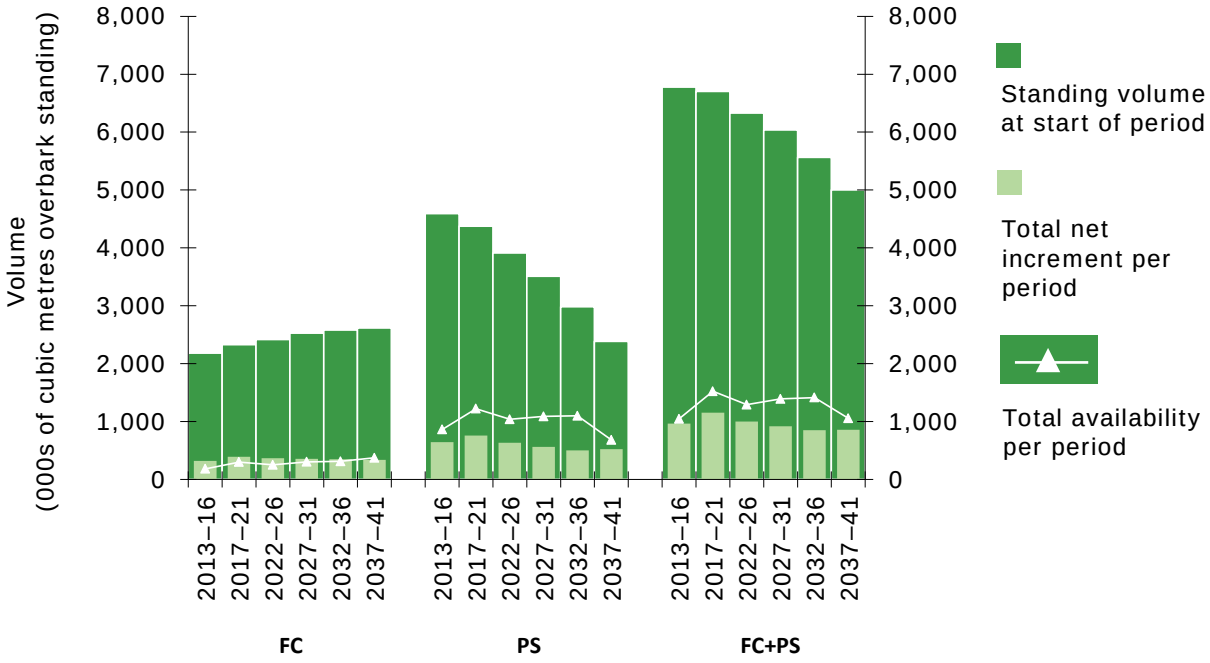



**Table 31** 25-year forecast of net increment in conifers; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 m³ obs) | volume (000 m³ obs) | *SE%* | volume (000 m³ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 80 | 161 | *7* | **242** |
| 2017–21 | 79 | 152 | *7* | **231** |
| 2022–26 | 73 | 127 | *9* | **200** |
| 2027–31 | 71 | 113 | *10* | **184** |
| 2032–36 | 70 | 100 | *10* | **170** |
| 2037–41 | 67 | 104 | *9* | **172** |

## Combined standing volume, net increment and availability

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



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# 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

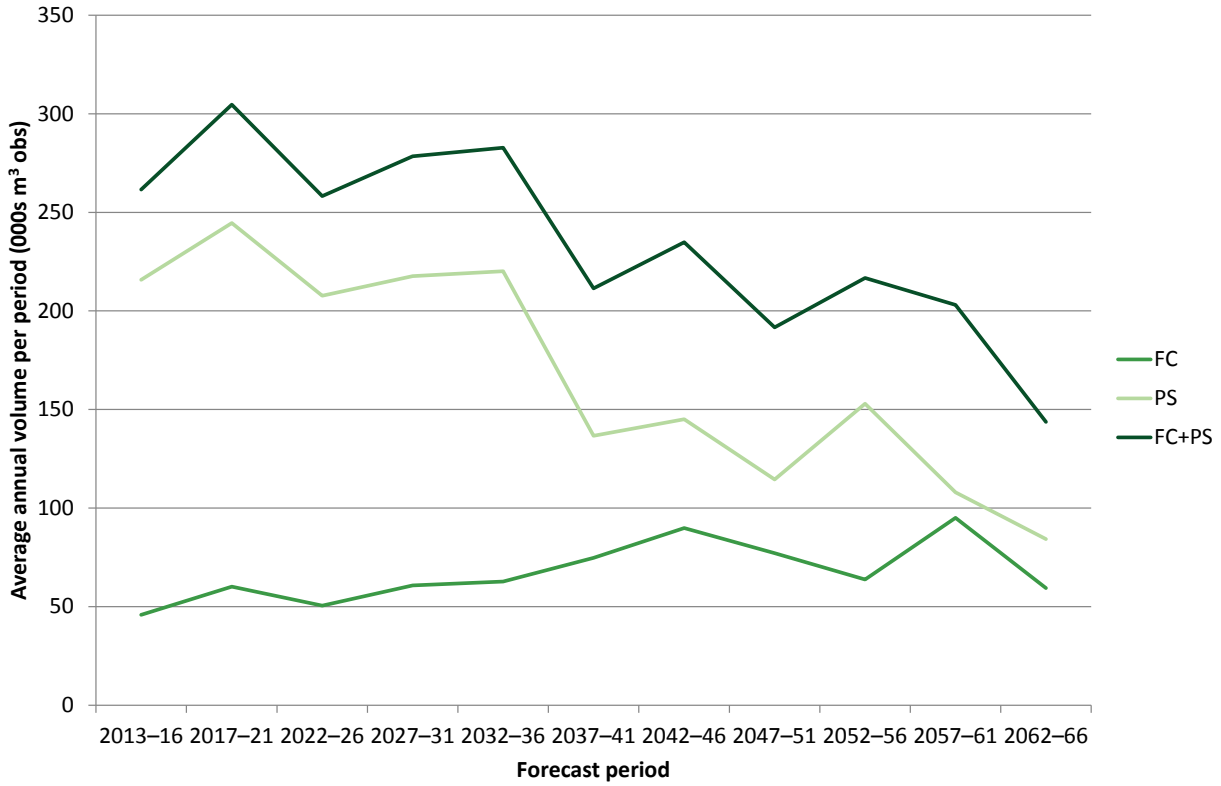


**Figure 40** 50–year forecast of softwood timber availability; average annual volume within period

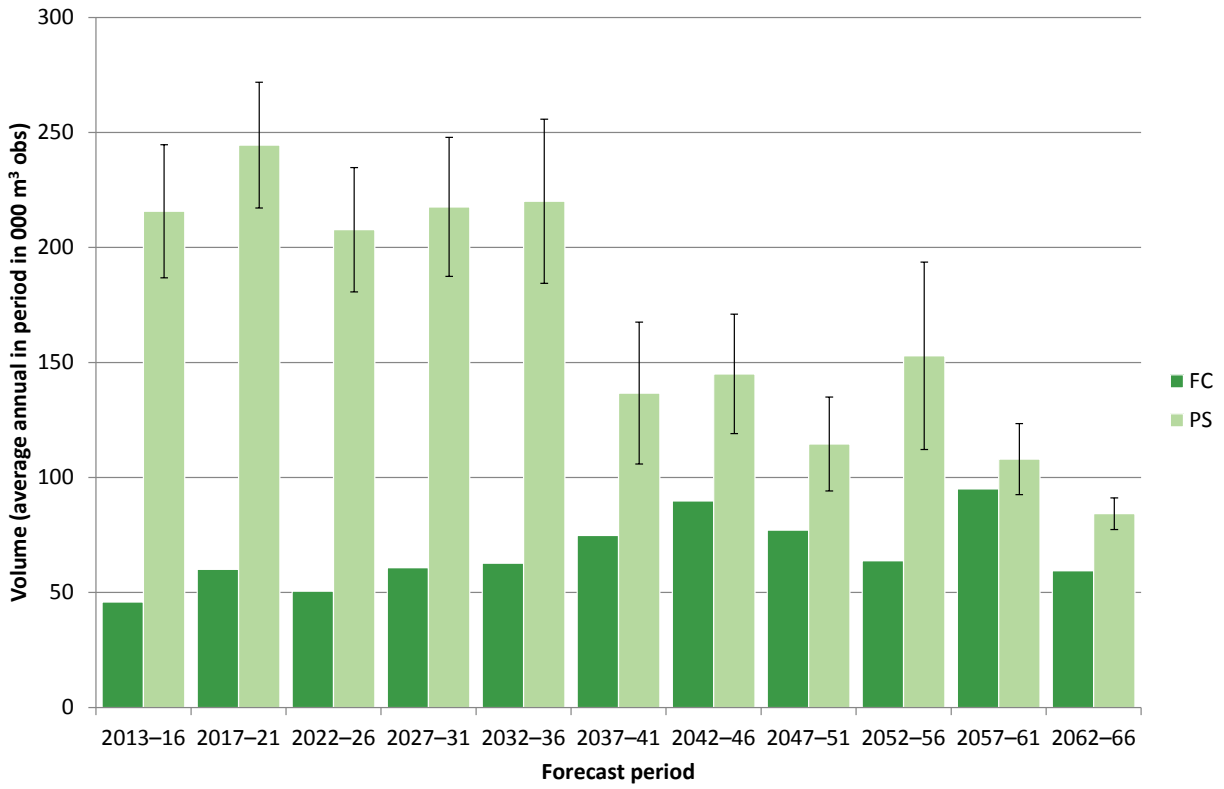



**Table 32** Summary of 50–year forecast of softwood timber availability; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 46 | 216 | *13* | **262** |
| 2017–21 | 60 | 245 | *11* | **305** |
| 2022–26 | 51 | 208 | *13* | **258** |
| 2027–31 | 61 | 218 | *14* | **278** |
| 2032–36 | 63 | 220 | *16* | **283** |
| 2037–41 | 75 | 137 | *23* | **211** |
| 2042–46 | 90 | 145 | *18* | **235** |
| 2047–51 | 77 | 115 | *18* | **192** |
| 2052–56 | 64 | 153 | *27* | **217** |
| 2057–61 | 95 | 108 | *14* | **203** |
| 2062–66 | 59 | 84 | *8* | **144** |

## 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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **46** | **216** | *13* | **60** | **245** | *11* |
| Sitka spruce | < 1 | 1 | *70* | < 1 | 3 | *63* |
| Scots pine | 12 | 42 | *25* | 13 | 78 | *25* |
| Corsican pine | 16 | 21 | *50* | 23 | 33 | *52* |
| Norway spruce | 3 | 24 | *24* | 6 | 30 | *22* |
| Larches | 1 | 27 | *23* | 2 | 39 | *30* |
| Douglas fir | 7 | 45 | *31* | 8 | 25 | *21* |
| Lodgepole pine | < 1 | < 1 | *101* | < 1 | 0 | - |
| Other conifers | 6 | 54 | *40* | 7 | 36 | *22* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **51** | **208** | *13* | **61** | **218** | *14* |
| Sitka spruce | < 1 | < 1 | *85* | < 1 | 2 | *95* |
| Scots pine | 8 | 60 | *29* | 14 | 41 | *23* |
| Corsican pine | 26 | 21 | *57* | 21 | 10 | *38* |
| Norway spruce | 3 | 21 | *28* | 5 | 60 | *37* |
| Larches | 2 | 25 | *23* | 2 | 25 | *32* |
| Douglas fir | 6 | 45 | *36* | 11 | 35 | *42* |
| Lodgepole pine | < 1 | 3 | *101* | < 1 | 0 | - |
| Other conifers | 6 | 31 | *31* | 7 | 45 | *34* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **63** | **220** | *16* | **75** | **137** | *23* |
| Sitka spruce | 2 | 2 | *43* | 2 | 3 | *33* |
| Scots pine | 11 | 79 | *24* | 18 | 32 | *53* |
| Corsican pine | 27 | 3 | *56* | 26 | 40 | *59* |
| Norway spruce | 4 | 48 | *34* | 5 | 12 | *34* |
| Larches | 2 | 13 | *24* | 3 | 9 | *29* |
| Douglas fir | 11 | 19 | *24* | 14 | 25 | *39* |
| Lodgepole pine | < 1 | 0 | - | < 1 | < 1 | *37* |
| Other conifers | 6 | 56 | *50* | 7 | 14 | *28* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **90** | **145** | *18* | **77** | **115** | *18* |
| Sitka spruce | 3 | 3 | *21* | 2 | 4 | *17* |
| Scots pine | 17 | 34 | *43* | 13 | 37 | *46* |
| Corsican pine | 38 | 11 | *62* | 29 | < 1 | *34* |
| Norway spruce | 3 | 45 | *38* | 6 | 14 | *39* |
| Larches | 5 | 6 | *28* | 4 | 6 | *26* |
| Douglas fir | 13 | 28 | *45* | 13 | 14 | *19* |
| Lodgepole pine | < 1 | < 1 | *37* | < 1 | < 1 | *67* |
| Other conifers | 11 | 16 | *19* | 10 | 38 | *26* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All conifers** | **64** | 153 | *27* | **95** | **108** | *14* |
| Sitka spruce | 2 | 6 | *15* | 2 | 7 | *15* |
| Scots pine | 14 | 18 | *17* | 22 | 35 | *39* |
| Corsican pine | 18 | < 1 | *38* | 18 | < 1 | *34* |
| Norway spruce | 4 | 77 | *53* | 12 | 11 | *22* |
| Larches | 2 | 6 | *25* | 2 | 7 | *24* |
| Douglas fir | 14 | 23 | *29* | 17 | 19 | *18* |
| Lodgepole pine | < 1 | < 1 | *67* | < 1 | < 1 | *67* |
| Other conifers | 9 | 22 | *18* | 20 | 29 | *22* |

**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%* |
| Solent and South Downs | | | |
| **All conifers** | **59** | **84** | *8* |
| Sitka spruce | 2 | 7 | *15* |
| Scots pine | 14 | 18 | *14* |
| Corsican pine | 14 | < 1 | *30* |
| Norway spruce | 5 | 17 | *30* |
| Larches | 2 | 4 | *26* |
| Douglas fir | 15 | 15 | *16* |
| Lodgepole pine | < 1 | < 1 | *67* |
| Other conifers | 8 | 22 | *12* |

## 50-year forecast of softwood timber availability % spruce

**Table 34** 50–year forecast of softwood timber availability % spruce

| Solent and South Downs | | Top diameter class (cm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 7–14 | 14–16 | 16–18 | 18–24 | 24–34 | 34–44 | 44–54 | 54+ | Total |
| 2013–16 | FC (%) | 9 | 7 | 7 | 7 | 7 | 6 | 5 | 4 | **7** |
| | PS (%) | 31 | 23 | 19 | 13 | 7 | 4 | 3 | < 1 | **12** |
| 2017–21 | FC (%) | 8 | 10 | 10 | 11 | 10 | 11 | 13 | 12 | **10** |
| | PS (%) | 21 | 21 | 20 | 18 | 13 | 9 | 8 | 2 | **14** |
| 2022–26 | FC (%) | 3 | 4 | 5 | 6 | 7 | 7 | 8 | 7 | **6** |
| | PS (%) | 15 | 17 | 16 | 14 | 10 | 8 | 8 | 2 | **11** |
| 2027–31 | FC (%) | 4 | 3 | 4 | 6 | 10 | 13 | 15 | 17 | **10** |
| | PS (%) | 20 | 22 | 23 | 27 | 31 | 31 | 31 | 26 | **29** |
| 2032–36 | FC (%) | 17 | 9 | 6 | 4 | 7 | 12 | 15 | 21 | **10** |
| | PS (%) | 28 | 26 | 26 | 27 | 27 | 21 | 15 | 8 | **23** |
| 2037–41 | FC (%) | 22 | 15 | 9 | 5 | 7 | 9 | 10 | 7 | **9** |
| | PS (%) | 18 | 16 | 14 | 12 | 11 | 9 | 7 | 2 | **11** |
| 2042–46 | FC (%) | 17 | 14 | 11 | 6 | 4 | 5 | 7 | 7 | **7** |
| | PS (%) | 19 | 26 | 29 | 28 | 34 | 41 | 52 | 38 | **34** |
| 2047–51 | FC (%) | 14 | 15 | 15 | 11 | 8 | 10 | 12 | 11 | **11** |
| | PS (%) | 15 | 20 | 21 | 21 | 17 | 15 | 14 | 5 | **16** |
| 2052–56 | FC (%) | 14 | 13 | 14 | 15 | 9 | 7 | 7 | 9 | **10** |
| | PS (%) | 22 | 27 | 25 | 38 | 61 | 75 | 82 | 77 | **54** |
| 2057–61 | FC (%) | 13 | 13 | 15 | 16 | 16 | 15 | 15 | 15 | **15** |
| | PS (%) | 27 | 23 | 21 | 17 | 9 | 2 | 1 | 1 | **17** |
| 2062–66 | FC (%) | 10 | 12 | 13 | 14 | 13 | 11 | 10 | 12 | **12** |
| | PS (%) | 27 | 27 | 23 | 20 | 33 | 52 | 61 | 63 | **29** |

## 50-year forecast of standing volume in conifers

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

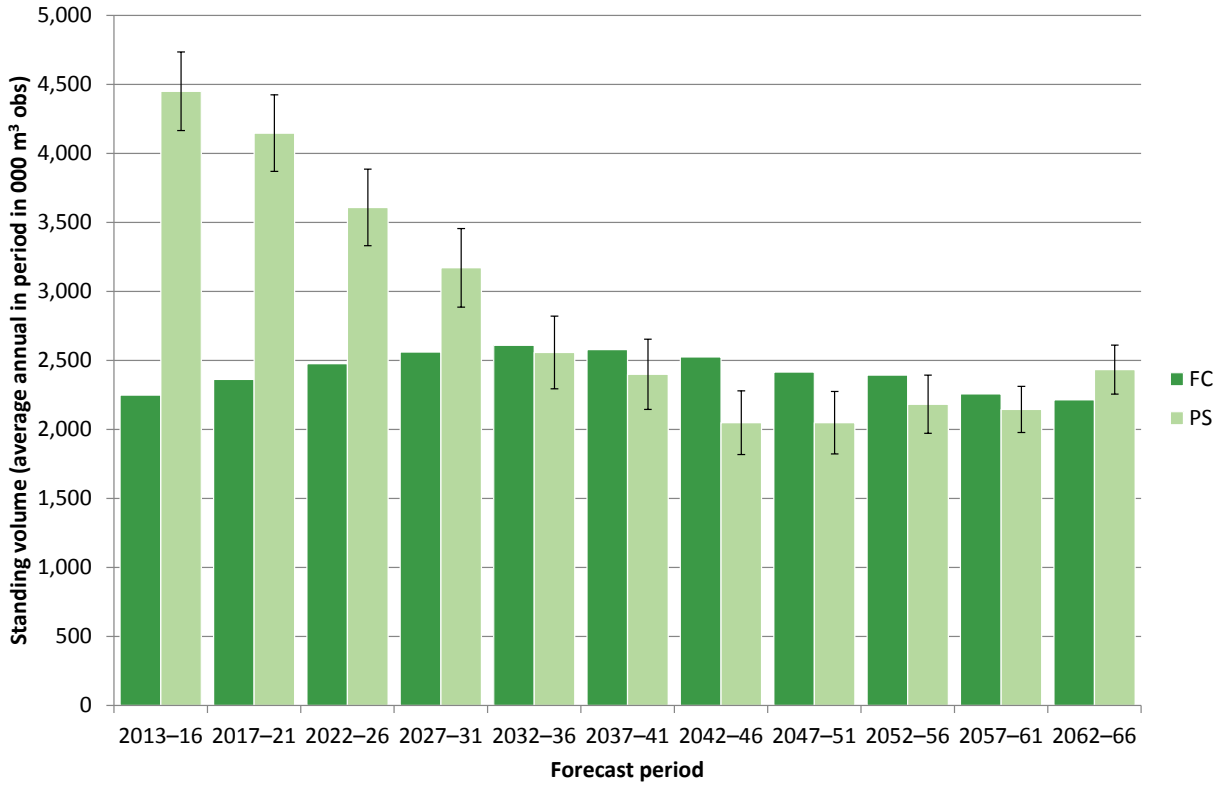



**Table 35** 50–year forecast of standing volume in conifers; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 2,248 | 4,450 | *6* | **6,698** |
| 2017–21 | 2,362 | 4,147 | *7* | **6,508** |
| 2022–26 | 2,476 | 3,608 | *8* | **6,085** |
| 2027–31 | 2,561 | 3,171 | *9* | **5,732** |
| 2032–36 | 2,609 | 2,558 | *10* | **5,167** |
| 2037–41 | 2,578 | 2,399 | *11* | **4,977** |
| 2042–46 | 2,525 | 2,048 | *11* | **4,574** |
| 2047–51 | 2,416 | 2,048 | *11* | **4,464** |
| 2052–56 | 2,393 | 2,182 | *10* | **4,575** |
| 2057–61 | 2,257 | 2,144 | *8* | **4,401** |
| 2062–66 | 2,214 | 2,433 | *7* | **4,647** |

## 50-year forecast of net increment in conifers

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

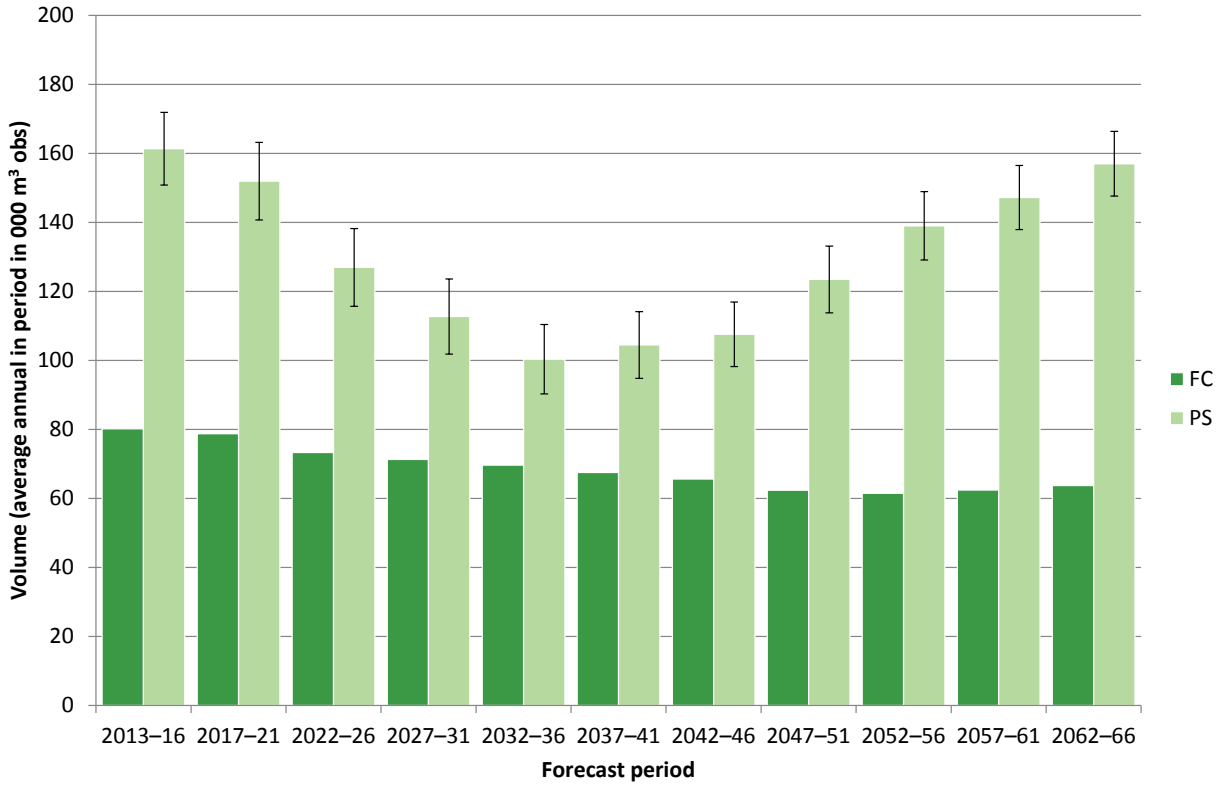
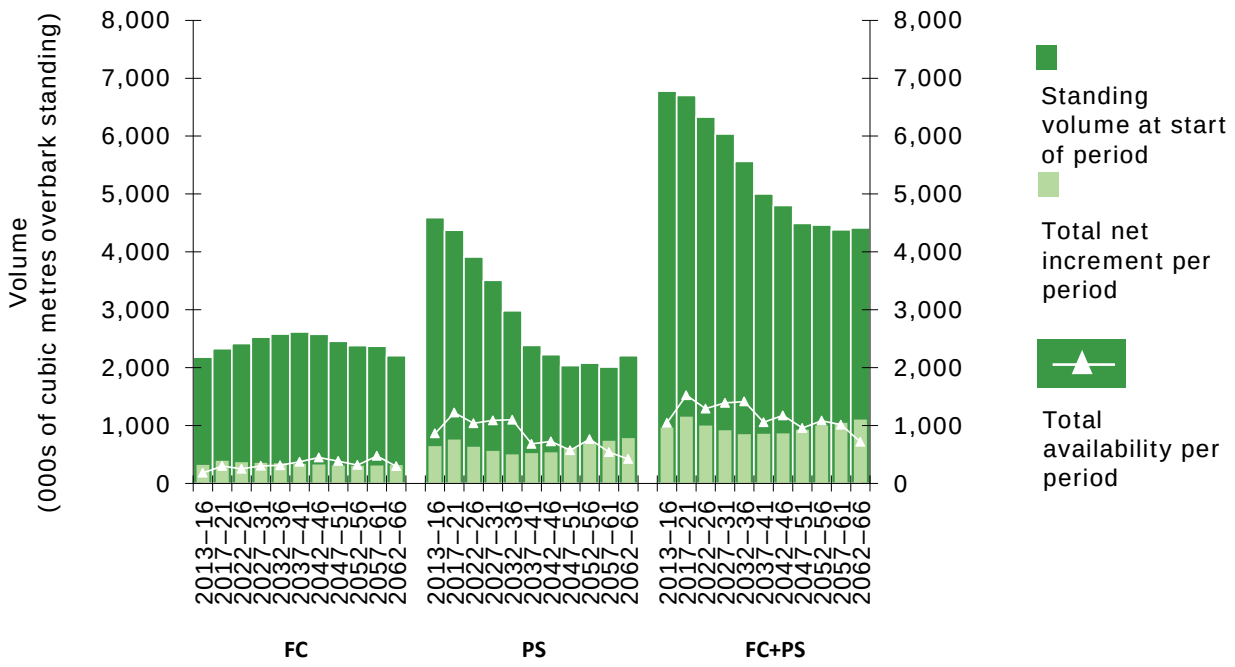



**Table 36** 50-year forecast of net increment in conifers; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 m³ obs) | volume (000 m³ obs) | *SE%* | volume (000m³ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 80 | 161 | *7* | **242** |
| 2017–21 | 79 | 152 | *7* | **231** |
| 2022–26 | 73 | 127 | *9* | **200** |
| 2027–31 | 71 | 113 | *10* | **184** |
| 2032–36 | 70 | 100 | *10* | **170** |
| 3037–41 | 67 | 104 | *9* | **172** |
| 2042–46 | 66 | 108 | *9* | **173** |
| 2047–51 | 62 | 123 | *8* | **186** |
| 2052–56 | 61 | 139 | *7* | **200** |
| 2057–61 | 62 | 147 | *6* | **210** |
| 2062–66 | 64 | 157 | *6* | **221** |

## 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

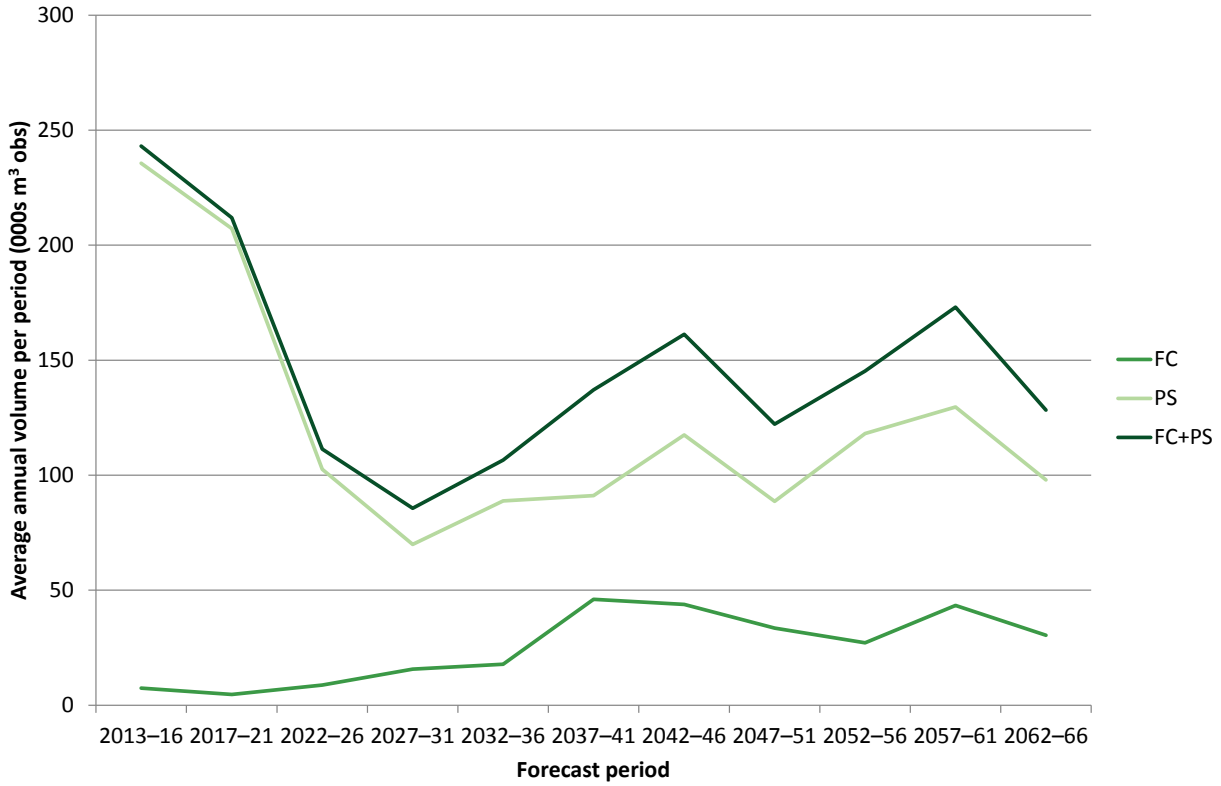


**Figure 45** 50–year forecast of hardwood timber availability; average annual volume within period

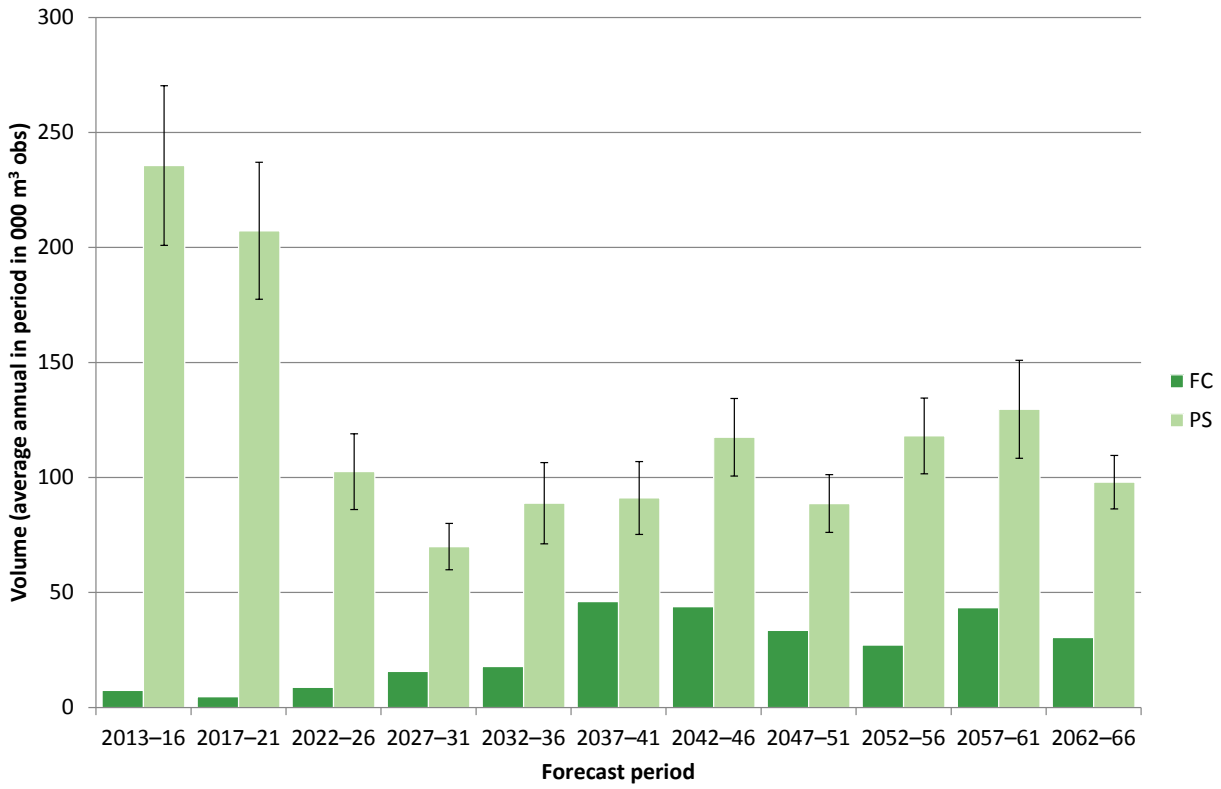



**Table 37** 50–year forecast of hardwood timber availability; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 7 | 236 | *15* | **243** |
| 2017–21 | 5 | 207 | *14* | **212** |
| 2022–26 | 9 | 103 | *16* | **111** |
| 2027–31 | 16 | 70 | *14* | **86** |
| 2032–36 | 18 | 89 | *20* | **107** |
| 2037–41 | 46 | 91 | *17* | **137** |
| 2042–46 | 44 | 117 | *14* | **161** |
| 2047–51 | 34 | 89 | *14* | **122** |
| 2052–56 | 27 | 118 | *14* | **145** |
| 2057–61 | 43 | 130 | *16* | **173** |
| 2062–66 | 30 | 98 | *12* | **128** |

## 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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **7** | **236** | ***15*** | **5** | **207** | ***14*** |
| Oak | 2 | 21 | *24* | < 1 | 53 | *37* |
| Beech | 3 | 28 | *40* | 2 | 30 | *32* |
| Sycamore | < 1 | 8 | *51* | < 1 | 9 | *48* |
| Ash | < 1 | 88 | *25* | < 1 | 41 | *24* |
| Birch | < 1 | 38 | *32* | < 1 | 32 | *25* |
| Sweet chestnut | < 1 | 3 | *37* | < 1 | 3 | *33* |
| Hazel | 0 | 6 | *62* | < 1 | 7 | *57* |
| Hawthorn | 0 | < 1 | *39* | 0 | < 1 | *40* |
| Alder | < 1 | 9 | *78* | < 1 | 3 | *53* |
| Willow | 0 | 1 | *35* | 0 | < 1 | *33* |
| Other broadleaves | < 1 | 32 | *38* | < 1 | 28 | *33* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **9** | **103** | ***16*** | **16** | **70** | ***14*** |
| Oak | 2 | 27 | *29* | 2 | 19 | *34* |
| Beech | 5 | 24 | *37* | 12 | 11 | *22* |
| Sycamore | < 1 | 2 | *39* | < 1 | 1 | *33* |
| Ash | < 1 | 14 | *23* | < 1 | 8 | *23* |
| Birch | < 1 | 18 | *41* | < 1 | 5 | *25* |
| Sweet chestnut | < 1 | 2 | *33* | < 1 | 3 | *32* |
| Hazel | 0 | 4 | *28* | < 1 | 8 | *49* |
| Hawthorn | 0 | < 1 | *41* | 0 | < 1 | *43* |
| Alder | < 1 | < 1 | *59* | < 1 | 4 | *85* |
| Willow | 0 | 1 | *32* | 0 | 4 | *71* |
| Other broadleaves | < 1 | 9 | *26* | < 1 | 7 | *20* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **18** | **89** | ***20*** | **46** | **91** | ***17*** |
| Oak | 3 | 10 | *20* | 7 | 9 | *19* |
| Beech | 12 | 32 | *47* | 36 | 31 | *46* |
| Sycamore | < 1 | 1 | *32* | < 1 | 2 | *37* |
| Ash | < 1 | 19 | *41* | < 1 | 13 | *20* |
| Birch | < 1 | 9 | *37* | < 1 | 10 | *22* |
| Sweet chestnut | < 1 | 3 | *31* | < 1 | 3 | *31* |
| Hazel | < 1 | 4 | *28* | < 1 | 6 | *37* |
| Hawthorn | 0 | < 1 | *28* | 0 | 1 | *20* |
| Alder | < 1 | < 1 | *57* | < 1 | < 1 | *54* |
| Willow | 0 | 1 | *26* | 0 | 2 | *39* |
| Other broadleaves | 1 | 9 | *19* | 1 | 13 | *25* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **44** | **117** | ***14*** | **34** | **89** | ***14*** |
| Oak | 17 | 12 | *23* | 12 | 15 | *41* |
| Beech | 19 | 13 | *32* | 18 | 10 | *29* |
| Sycamore | < 1 | 2 | *31* | < 1 | 3 | *26* |
| Ash | 2 | 16 | *18* | < 1 | 18 | *17* |
| Birch | < 1 | 16 | *27* | < 1 | 10 | *20* |
| Sweet chestnut | < 1 | 25 | *54* | < 1 | 2 | *26* |
| Hazel | < 1 | 9 | *35* | < 1 | 6 | *19* |
| Hawthorn | 0 | 1 | *19* | 0 | 3 | *40* |
| Alder | < 1 | 2 | *37* | < 1 | 1 | *48* |
| Willow | 0 | 4 | *52* | 0 | 1 | *35* |
| Other broadleaves | 4 | 16 | *29* | 2 | 19 | *49* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **27** | **118** | ***14*** | **43** | **130** | ***16*** |
| Oak | 8 | 8 | *17* | 9 | 30 | *46* |
| Beech | 16 | 22 | *48* | 29 | 11 | *20* |
| Sycamore | < 1 | 4 | *36* | < 1 | 4 | *50* |
| Ash | < 1 | 35 | *20* | 1 | 33 | *31* |
| Birch | < 1 | 19 | *35* | 1 | 17 | *28* |
| Sweet chestnut | < 1 | 8 | *51* | < 1 | 4 | *49* |
| Hazel | < 1 | 3 | *25* | < 1 | 3 | *29* |
| Hawthorn | 0 | 1 | *17* | 0 | 1 | *17* |
| Alder | < 1 | 1 | *65* | < 1 | 3 | *66* |
| Willow | 0 | 5 | *52* | 0 | < 1 | *26* |
| Other broadleaves | 2 | 10 | *22* | 2 | 22 | *40* |

**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%* |
| Solent and South Downs | | | |
| **All broadleaves** | **30** | **98** | ***12*** |
| Oak | 8 | 11 | *17* |
| Beech | 18 | 9 | *20* |
| Sycamore | < 1 | 5 | *46* |
| Ash | < 1 | 24 | *25* |
| Birch | 1 | 21 | *23* |
| Sweet chestnut | < 1 | 1 | *44* |
| Hazel | < 1 | 4 | *48* |
| Hawthorn | 0 | 4 | *45* |
| Alder | < 1 | 2 | *59* |
| Willow | 0 | 3 | *57* |
| Other broadleaves | 2 | 15 | *34* |

## 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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 4 | 31 | *27* | 2 | 23 | *13* |
| 14–16 | < 1 | 10 | *21* | < 1 | 8 | *16* |
| 16–18 | < 1 | 11 | *20* | < 1 | 9 | *15* |
| 18–24 | 1 | 40 | *18* | 1 | 38 | *15* |
| 24–34 | < 1 | 54 | *15* | < 1 | 66 | *17* |
| 34–44 | < 1 | 34 | *19* | < 1 | 33 | *19* |
| 44–54 | < 1 | 18 | *22* | < 1 | 16 | *21* |
| 54+ | < 1 | 37 | *26* | < 1 | 15 | *24* |
| **Total** | **7** | **236** | ***15*** | **5** | **207** | ***14*** |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 3 | 16 | *9* | 2 | 22 | *9* |
| 14–16 | < 1 | 4 | *14* | < 1 | 3 | *23* |
| 16–18 | < 1 | 4 | *16* | 1 | 3 | *26* |
| 18–24 | 2 | 15 | *17* | 4 | 11 | *23* |
| 24–34 | 2 | 26 | *19* | 5 | 14 | *21* |
| 34–44 | < 1 | 16 | *21* | 2 | 8 | *25* |
| 44–54 | < 1 | 9 | *24* | < 1 | 4 | *27* |
| 54+ | < 1 | 14 | *35* | < 1 | 5 | *36* |
| **Total** | **9** | **103** | ***16*** | **16** | **70** | ***14*** |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 3 | 28 | *10* | 4 | 30 | *10* |
| 14–16 | 1 | 4 | *17* | 1 | 5 | *13* |
| 16–18 | 1 | 3 | *20* | 2 | 4 | *14* |
| 18–24 | 5 | 10 | *20* | 7 | 11 | *15* |
| 24–34 | 5 | 17 | *30* | 14 | 14 | *26* |
| 34–44 | 2 | 12 | *36* | 9 | 10 | *34* |
| 44–54 | < 1 | 7 | *41* | 5 | 6 | *38* |
| 54+ | < 1 | 8 | *46* | 4 | 11 | *47* |
| **Total** | **18** | **89** | ***20*** | **46** | **91** | ***17*** |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 7 | 30 | *9* | 7 | 24 | *10* |
| 14–16 | 3 | 7 | *12* | 2 | 6 | *8* |
| 16–18 | 3 | 8 | *14* | 2 | 6 | *9* |
| 18–24 | 11 | 24 | *16* | 7 | 17 | *12* |
| 24–34 | 11 | 23 | *24* | 9 | 18 | *24* |
| 34–44 | 5 | 12 | *32* | 3 | 9 | *33* |
| 44–54 | 2 | 6 | *37* | 2 | 5 | *36* |
| 54+ | 3 | 6 | *28* | 1 | 5 | *24* |
| **Total** | **44** | **117** | ***14*** | **34** | **89** | ***14*** |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| 7–14 | 8 | 23 | *10* | 13 | 20 | *11* |
| 14–16 | 2 | 5 | *8* | 4 | 5 | *12* |
| 16–18 | 2 | 6 | *9* | 4 | 5 | *13* |
| 18–24 | 5 | 21 | *12* | 8 | 19 | *15* |
| 24–34 | 6 | 28 | *19* | 8 | 32 | *20* |
| 34–44 | 3 | 15 | *22* | 3 | 19 | *22* |
| 44–54 | 1 | 8 | *27* | 2 | 9 | *26* |
| 54+ | < 1 | 11 | *38* | 1 | 19 | *37* |
| **Total** | **27** | **118** | ***14*** | **43** | **130** | ***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%* |
| Solent and South Downs | | | |
| 7–14 | 9 | 22 | *10* |
| 14–16 | 2 | 6 | *13* |
| 16–18 | 2 | 6 | *14* |
| 18–24 | 6 | 21 | *14* |
| 24–34 | 6 | 24 | *17* |
| 34–44 | 3 | 10 | *19* |
| 44–54 | 1 | 4 | *23* |
| 54+ | < 1 | 5 | *24* |
| **Total** | **30** | **98** | ***12*** |

## 50-year forecast of standing volume in broadleaves

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

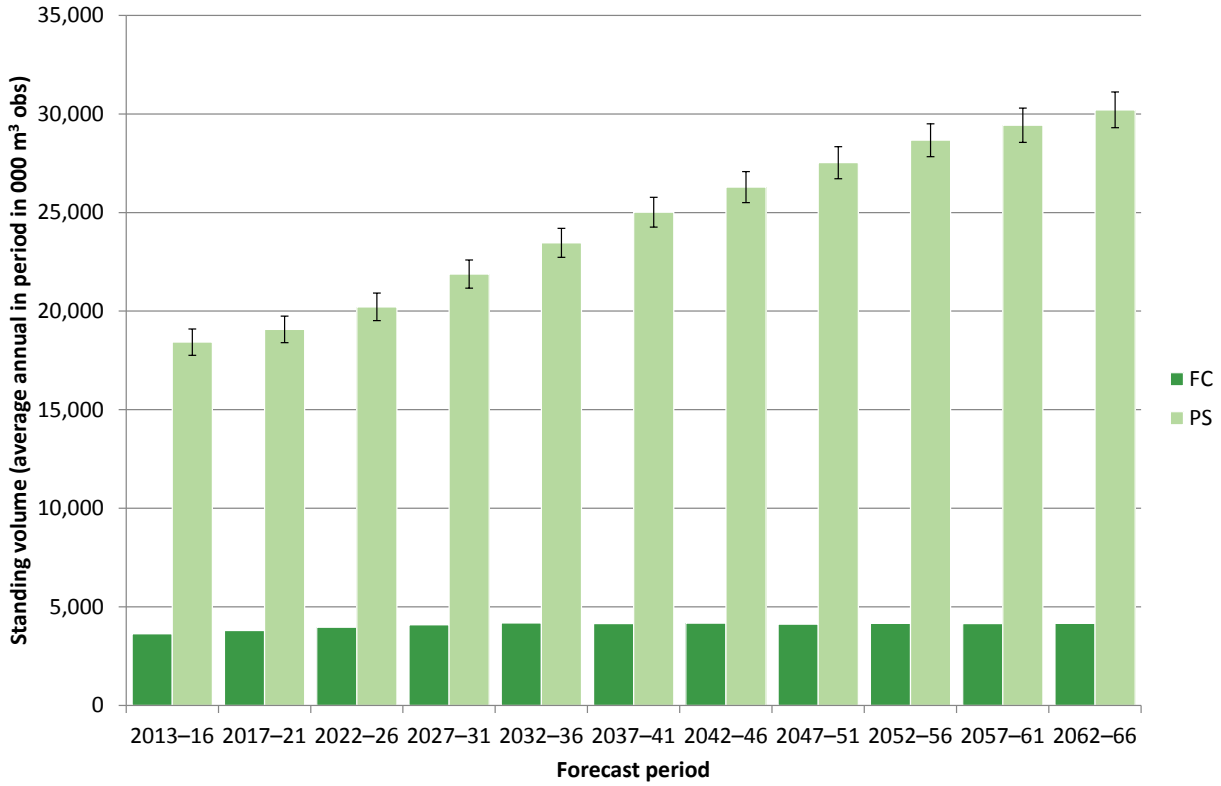



**Table 40** 50–year forecast of standing volume in broadleaves; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 3,637 | 18,428 | *4* | **22,065** |
| 2017–21 | 3,800 | 19,072 | *4* | **22,872** |
| 2022–26 | 3,961 | 20,215 | *3* | **24,176** |
| 2027–31 | 4,090 | 21,880 | *3* | **25,970** |
| 2032–36 | 4,185 | 23,463 | *3* | **27,649** |
| 2037–41 | 4,147 | 25,016 | *3* | **29,164** |
| 2042–46 | 4,169 | 26,290 | *3* | **30,459** |
| 2047–51 | 4,120 | 27,530 | *3* | **31,650** |
| 2052–56 | 4,159 | 28,667 | *3* | **32,826** |
| 2057–61 | 4,153 | 29,431 | *3* | **33,584** |
| 2062–66 | 4,165 | 30,209 | *3* | **34,374** |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **3,637** | **18,428** | ***4*** | **3,800** | **19,072** | ***4*** |
| Oak | 1,674 | 6,235 | *9* | 1,704 | 6,350 | *9* |
| Beech | 1,539 | 2,191 | *13* | 1,650 | 2,224 | *13* |
| Sycamore | 8 | 486 | *21* | 9 | 485 | *21* |
| Ash | 44 | 3,070 | *10* | 47 | 3,085 | *10* |
| Birch | 82 | 1,371 | *9* | 89 | 1,445 | *9* |
| Sweet Chestnut | 34 | 1,151 | *16* | 35 | 1,241 | *16* |
| Hazel | 3 | 912 | *10* | 4 | 1,028 | *9* |
| Hawthorn | 0 | 252 | *16* | 0 | 300 | *15* |
| Alder | 17 | 686 | *23* | 18 | 698 | *23* |
| Willow | 0 | 481 | *23* | 0 | 522 | *21* |
| Other broadleaves | 235 | 1,662 | *13* | 244 | 1,761 | *13* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **3,961** | **20,215** | ***3*** | **4,090** | **21,880** | ***3*** |
| Oak | 1,733 | 6,482 | *9* | 1,764 | 6,680 | *8* |
| Beech | 1,761 | 2,289 | *13* | 1,839 | 2,415 | *13* |
| Sycamore | 10 | 511 | *21* | 10 | 569 | *20* |
| Ash | 50 | 3,229 | *10* | 53 | 3,525 | *10* |
| Birch | 97 | 1,545 | *10* | 104 | 1,730 | *9* |
| Sweet Chestnut | 37 | 1,366 | *16* | 38 | 1,496 | *16* |
| Hazel | 4 | 1,178 | *9* | 4 | 1,336 | *8* |
| Hawthorn | 0 | 372 | *14* | 0 | 454 | *14* |
| Alder | 18 | 731 | *23* | 18 | 765 | *22* |
| Willow | 0 | 595 | *20* | 0 | 670 | *19* |
| Other broadleaves | 251 | 1,983 | *12* | 258 | 2,296 | *12* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **4,185** | **23,463** | ***3*** | **4,147** | **25,016** | ***3*** |
| Oak | 1,789 | 6,905 | *8* | 1,795 | 7,155 | *8* |
| Beech | 1,892 | 2,517 | *13* | 1,835 | 2,566 | *14* |
| Sycamore | 11 | 627 | *19* | 11 | 682 | *19* |
| Ash | 56 | 3,789 | *9* | 58 | 4,066 | *9* |
| Birch | 111 | 1,897 | *9* | 116 | 2,064 | *9* |
| Sweet Chestnut | 39 | 1,623 | *16* | 40 | 1,747 | *16* |
| Hazel | 4 | 1,468 | *8* | 5 | 1,586 | *8* |
| Hawthorn | 0 | 544 | *13* | 0 | 636 | *13* |
| Alder | 19 | 785 | *22* | 19 | 816 | *22* |
| Willow | 0 | 744 | *19* | 0 | 822 | *19* |
| Other broadleaves | 264 | 2,613 | *11* | 269 | 2,920 | *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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **4,169** | **26,290** | ***3*** | **4,120** | **27,530** | ***3*** |
| Oak | 1,791 | 7,382 | *8* | 1,739 | 7,594 | *8* |
| Beech | 1,856 | 2,590 | *14* | 1,862 | 2,709 | *14* |
| Sycamore | 11 | 729 | *18* | 11 | 765 | *18* |
| Ash | 58 | 4,309 | *9* | 55 | 4,519 | *8* |
| Birch | 120 | 2,201 | *9* | 123 | 2,323 | *9* |
| Sweet Chestnut | 41 | 1,810 | *16* | 42 | 1,861 | *16* |
| Hazel | 5 | 1,666 | *8* | 5 | 1,745 | *8* |
| Hawthorn | 0 | 725 | *13* | 0 | 805 | *13* |
| Alder | 19 | 843 | *21* | 19 | 865 | *21* |
| Willow | 0 | 886 | *19* | 0 | 951 | *18* |
| Other broadleaves | 268 | 3,188 | *11* | 264 | 3,426 | *11* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **4,159** | **28,667** | ***3*** | **4,153** | **29,431** | ***3*** |
| Oak | 1,746 | 7,798 | *8* | 1,751 | 7,928 | *8* |
| Beech | 1,885 | 2,827 | *14* | 1,873 | 2,893 | *14* |
| Sycamore | 10 | 787 | *18* | 10 | 807 | *18* |
| Ash | 57 | 4,646 | *8* | 58 | 4,659 | *9* |
| Birch | 127 | 2,431 | *9* | 128 | 2,472 | *9* |
| Sweet Chestnut | 43 | 1,946 | *16* | 41 | 2,021 | *17* |
| Hazel | 5 | 1,810 | *8* | 5 | 1,874 | *8* |
| Hawthorn | 0 | 887 | *13* | 0 | 966 | *13* |
| Alder | 19 | 885 | *21* | 19 | 898 | *21* |
| Willow | 0 | 1,007 | *18* | 0 | 1,065 | *18* |
| Other broadleaves | 266 | 3,670 | *11* | 268 | 3,873 | *11* |

**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%* |
| Solent and South Downs | | | |
| **All broadleaves** | **4,165** | **30,209** | ***3*** |
| Oak | 1,753 | 8,079 | *8* |
| Beech | 1,880 | 3,019 | *13* |
| Sycamore | 11 | 813 | *18* |
| Ash | 56 | 4,673 | *9* |
| Birch | 129 | 2,496 | *9* |
| Sweet Chestnut | 42 | 2,096 | *17* |
| Hazel | 5 | 1,937 | *8* |
| Hawthorn | 0 | 1,035 | *13* |
| Alder | 19 | 906 | *21* |
| Willow | 0 | 1,121 | *18* |
| Other broadleaves | 270 | 4,056 | *11* |

## 50-year forecast of net increment in broadleaves

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

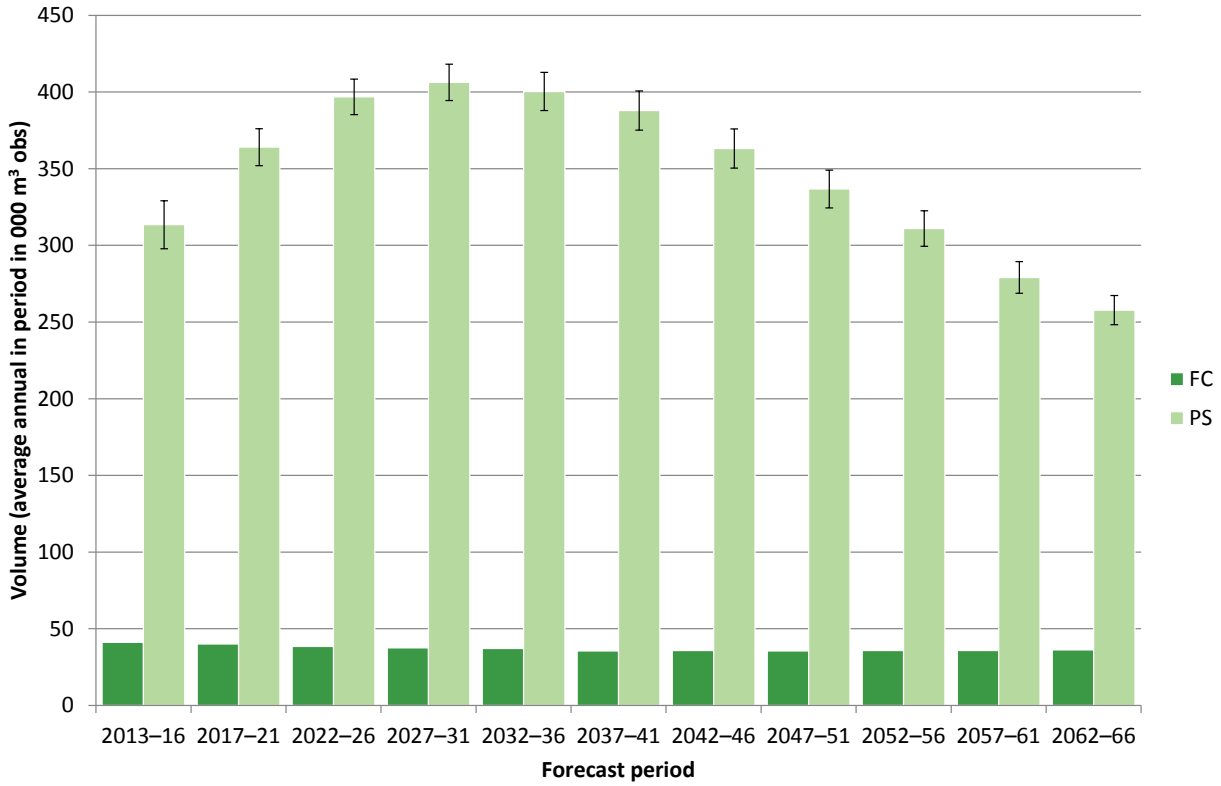



**Table 42** 50–year forecast of net increment in broadleaves; average annual volume within period

| Forecast period | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 m³ obs) | volume (000 m³ obs) | *SE%* | volume (000 m³ obs) |
| Solent and South Downs | | | | |
| 2013–16 | 41 | 313 | *5* | **355** |
| 2017–21 | 40 | 364 | *3* | **404** |
| 2022–26 | 39 | 397 | *3* | **435** |
| 2027–31 | 38 | 406 | *3* | **444** |
| 2032–36 | 37 | 400 | *3* | **437** |
| 3037–41 | 35 | 388 | *3* | **423** |
| 2042–46 | 36 | 363 | *4* | **399** |
| 2047–51 | 36 | 337 | *4* | **372** |
| 2052–56 | 36 | 311 | *4* | **347** |
| 2057–61 | 36 | 279 | *4* | **315** |
| 2062–66 | 36 | 258 | *4* | **294** |


Go to Part 3

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **41** | **313** | ***5*** | **40** | **364** | ***3*** |
| Oak | 7 | 57 | *14* | 7 | 66 | *9* |
| Beech | 27 | 37 | *15* | 26 | 40 | *13* |
| Sycamore | < 1 | 8 | *22* | < 1 | 9 | *17* |
| Ash | < 1 | 46 | *14* | < 1 | 51 | *10* |
| Birch | 2 | 51 | *10* | 2 | 49 | *10* |
| Sweet Chestnut | < 1 | 18 | *26* | < 1 | 25 | *19* |
| Hazel | < 1 | 31 | *11* | < 1 | 33 | *10* |
| Hawthorn | 0 | 9 | *16* | 0 | 13 | *13* |
| Alder | < 1 | 8 | *23* | < 1 | 9 | *19* |
| Willow | 0 | 6 | *97* | 0 | 13 | *23* |
| Other broadleaves | 3 | 43 | *12* | 3 | 56 | *12* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **39** | **397** | ***3*** | **38** | **406** | ***3*** |
| Oak | 7 | 66 | *8* | 8 | 62 | *8* |
| Beech | 25 | 41 | *12* | 24 | 41 | *12* |
| Sycamore | < 1 | 12 | *18* | < 1 | 13 | *19* |
| Ash | < 1 | 61 | *8* | < 1 | 69 | *8* |
| Birch | 2 | 44 | *10* | 2 | 43 | *10* |
| Sweet Chestnut | < 1 | 28 | *18* | < 1 | 28 | *17* |
| Hazel | < 1 | 36 | *9* | < 1 | 35 | *9* |
| Hawthorn | 0 | 16 | *13* | 0 | 18 | *12* |
| Alder | < 1 | 8 | *19* | < 1 | 8 | *18* |
| Willow | 0 | 17 | *17* | 0 | 18 | *17* |
| Other broadleaves | 2 | 66 | *11* | 2 | 70 | *11* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **37** | **400** | ***3*** | **35** | **388** | ***3*** |
| Oak | 8 | 59 | *8* | 8 | 59 | *8* |
| Beech | 24 | 39 | *12* | 22 | 37 | *12* |
| Sycamore | < 1 | 13 | *19* | < 1 | 12 | *20* |
| Ash | < 1 | 70 | *9* | < 1 | 68 | *10* |
| Birch | 2 | 42 | *10* | 2 | 41 | *11* |
| Sweet Chestnut | < 1 | 28 | *17* | < 1 | 27 | *17* |
| Hazel | < 1 | 32 | *9* | < 1 | 28 | *9* |
| Hawthorn | 0 | 19 | *13* | 0 | 19 | *13* |
| Alder | < 1 | 7 | *19* | < 1 | 7 | *21* |
| Willow | 0 | 17 | *17* | 0 | 17 | *17* |
| Other broadleaves | 2 | 72 | *11* | 2 | 71 | *11* |

**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 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **36** | **363** | ***4*** | **36** | **337** | ***4*** |
| Oak | 8 | 56 | *7* | 8 | 54 | *7* |
| Beech | 22 | 34 | *12* | 22 | 34 | *12* |
| Sycamore | < 1 | 11 | *20* | < 1 | 10 | *20* |
| Ash | < 1 | 62 | *10* | < 1 | 56 | *11* |
| Birch | 2 | 40 | *12* | 2 | 36 | *12* |
| Sweet Chestnut | < 1 | 25 | *17* | < 1 | 23 | *18* |
| Hazel | < 1 | 23 | *11* | < 1 | 20 | *12* |
| Hawthorn | 0 | 19 | *13* | 0 | 18 | *13* |
| Alder | < 1 | 6 | *23* | < 1 | 6 | *24* |
| Willow | 0 | 16 | *16* | 0 | 15 | *17* |
| Other broadleaves | 2 | 69 | *12* | 2 | 64 | *12* |

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

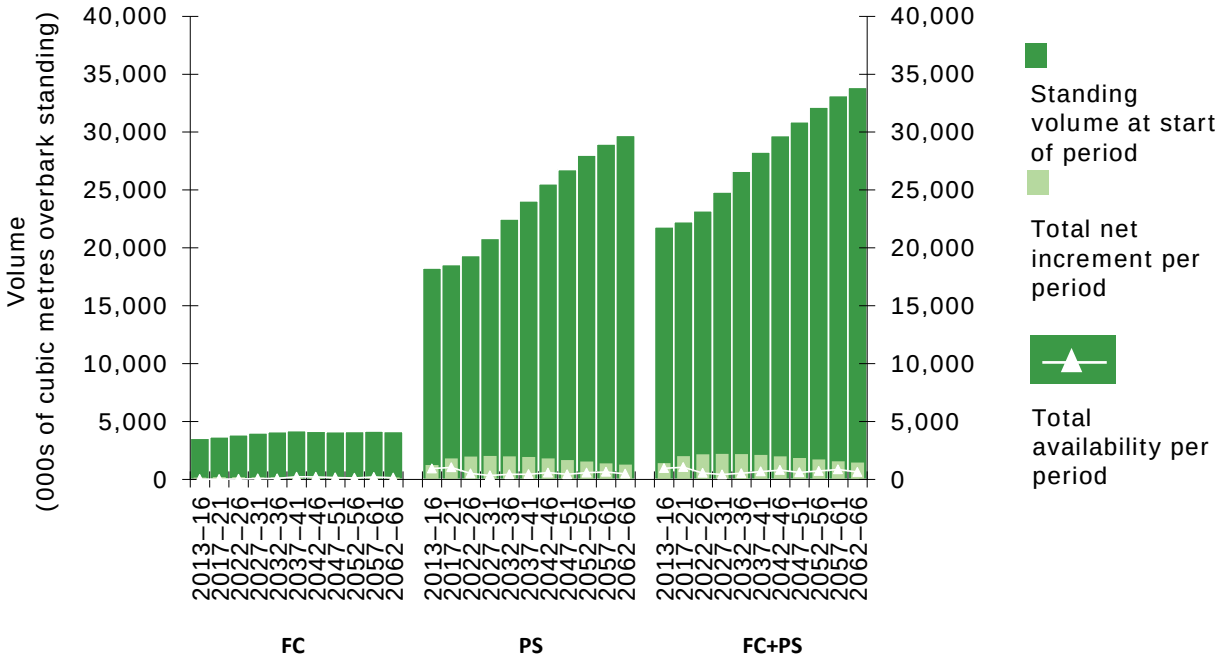
| Principal species | 2052–56 | | | 2057–61 | | |
|---|---|---|---|---|---|---|
| | FC | Private sector | | FC | Private sector | |
| | volume (000 $m^3$ obs) | | *SE%* | volume (000 $m^3$ obs) | | *SE%* |
| Solent and South Downs | | | | | | |
| **All broadleaves** | **36** | **311** | ***4*** | **36** | **279** | ***4*** |
| Oak | 9 | 51 | *7* | 9 | 49 | *7* |
| Beech | 22 | 35 | *11* | 22 | 34 | *12* |
| Sycamore | < 1 | 8 | *20* | < 1 | 7 | *20* |
| Ash | < 1 | 48 | *11* | < 1 | 36 | *10* |
| Birch | 1 | 32 | *12* | 1 | 27 | *11* |
| Sweet Chestnut | < 1 | 21 | *18* | < 1 | 20 | *18* |
| Hazel | < 1 | 17 | *12* | < 1 | 16 | *13* |
| Hawthorn | 0 | 18 | *13* | 0 | 17 | *13* |
| Alder | < 1 | 5 | *26* | < 1 | 5 | *27* |
| Willow | 0 | 14 | *16* | 0 | 13 | *16* |
| Other broadleaves | 2 | 59 | *12* | 2 | 56 | *12* |

**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%* |
| Solent and South Downs | | | |
| **All broadleaves** | **36** | **258** | ***4*** |
| Oak | 9 | 46 | *8* |
| Beech | 22 | 35 | *12* |
| Sycamore | < 1 | 6 | *19* |
| Ash | < 1 | 28 | *9* |
| Birch | 1 | 23 | *11* |
| Sweet Chestnut | < 1 | 18 | *18* |
| Hazel | < 1 | 15 | *12* |
| Hawthorn | 0 | 16 | *14* |
| Alder | < 1 | 4 | *27* |
| Willow | 0 | 13 | *16* |
| Other broadleaves | 2 | 52 | *12* |

## Combined standing volume, net increment and availability

**Figure 48** combined hardwood standing volume, net increment and availability



# Part 4 – Tree health

# Ash

**Figure 49** Stocked area of ash by age class

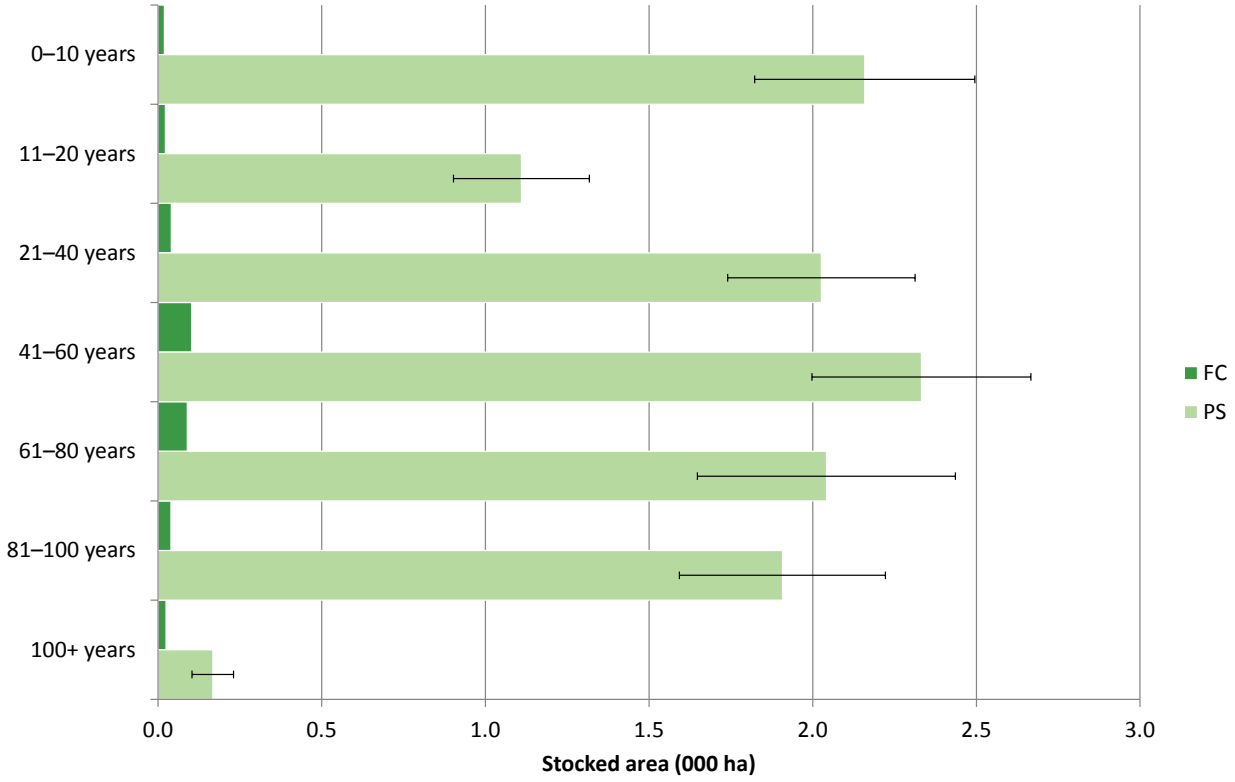



**Table 44** Stocked area of ash by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–10 | < 0.1 | 2.2 | *16* | **2.2** |
| 11–20 | < 0.1 | 1.1 | *19* | **1.1** |
| 21–40 | < 0.1 | 2.0 | *14* | **2.1** |
| 41–60 | 0.1 | 2.3 | *14* | **2.4** |
| 61–80 | < 0.1 | 2.0 | *19* | **2.1** |
| 81–100 | < 0.1 | 1.9 | *16* | **1.9** |
| 100+ | < 0.1 | 0.2 | *38* | **0.2** |
| **Total** | **0.3** | **11.7** | ***7*** | **12.1** |

**Figure 50** Stocked area of ash by mean stand dbh class

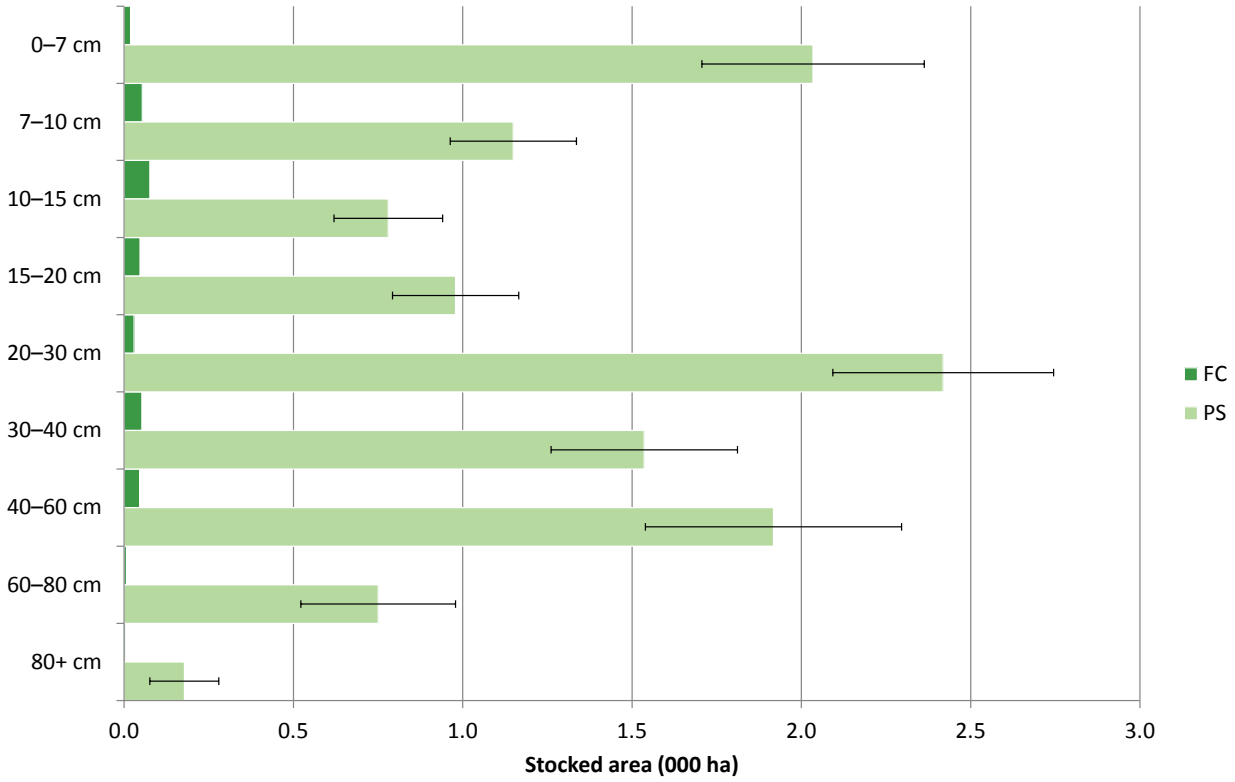



**Table 45** Stocked area of ash by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–7 | < 0.1 | 2.0 | *16* | **2.1** |
| 7–10 | < 0.1 | 1.1 | *16* | **1.2** |
| 10–15 | < 0.1 | 0.8 | *21* | **0.9** |
| 15–20 | < 0.1 | 1.0 | *19* | **1.0** |
| 20–30 | < 0.1 | 2.4 | *13* | **2.4** |
| 30–40 | < 0.1 | 1.5 | *18* | **1.6** |
| 40–60 | < 0.1 | 1.9 | *20* | **2.0** |
| 60–80 | < 0.1 | 0.8 | *30* | **0.8** |
| 80+ | < 0.1 | 0.2 | *57* | **0.2** |
| **Total** | **0.3** | **11.7** | ***7*** | **12.1** |

**Figure 51** Standing volume of ash by age class

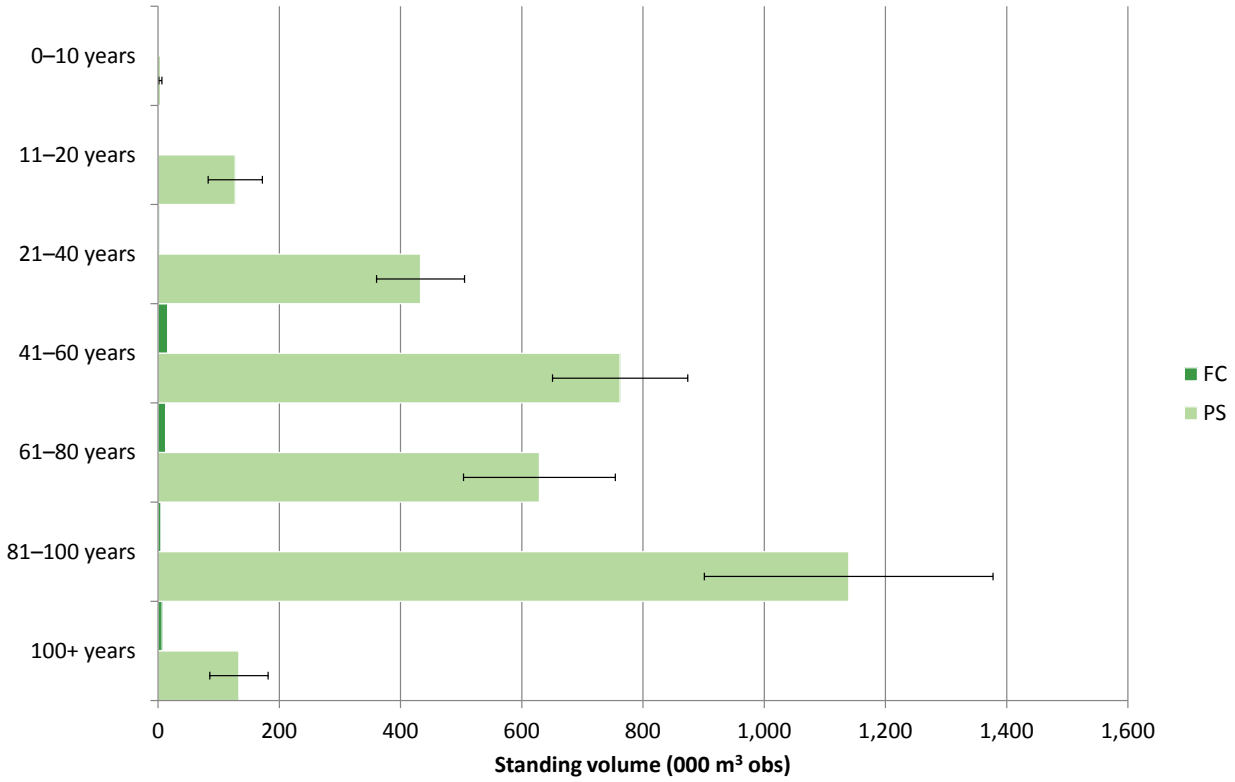



**Table 46** Standing volume of ash by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–10 | < 1 | 4 | *65* | **4** |
| 11–20 | < 1 | 127 | *35* | **128** |
| 21–40 | 2 | 433 | *17* | **435** |
| 41–60 | 16 | 762 | *15* | **778** |
| 61–80 | 13 | 629 | *20* | **642** |
| 81–100 | 5 | 1,139 | *21* | **1,144** |
| 100+ | 7 | 133 | *36* | **140** |
| **Total** | **42** | **3,228** | ***10*** | **3,271** |

**Figure 52** Standing volume of ash by mean stand dbh class

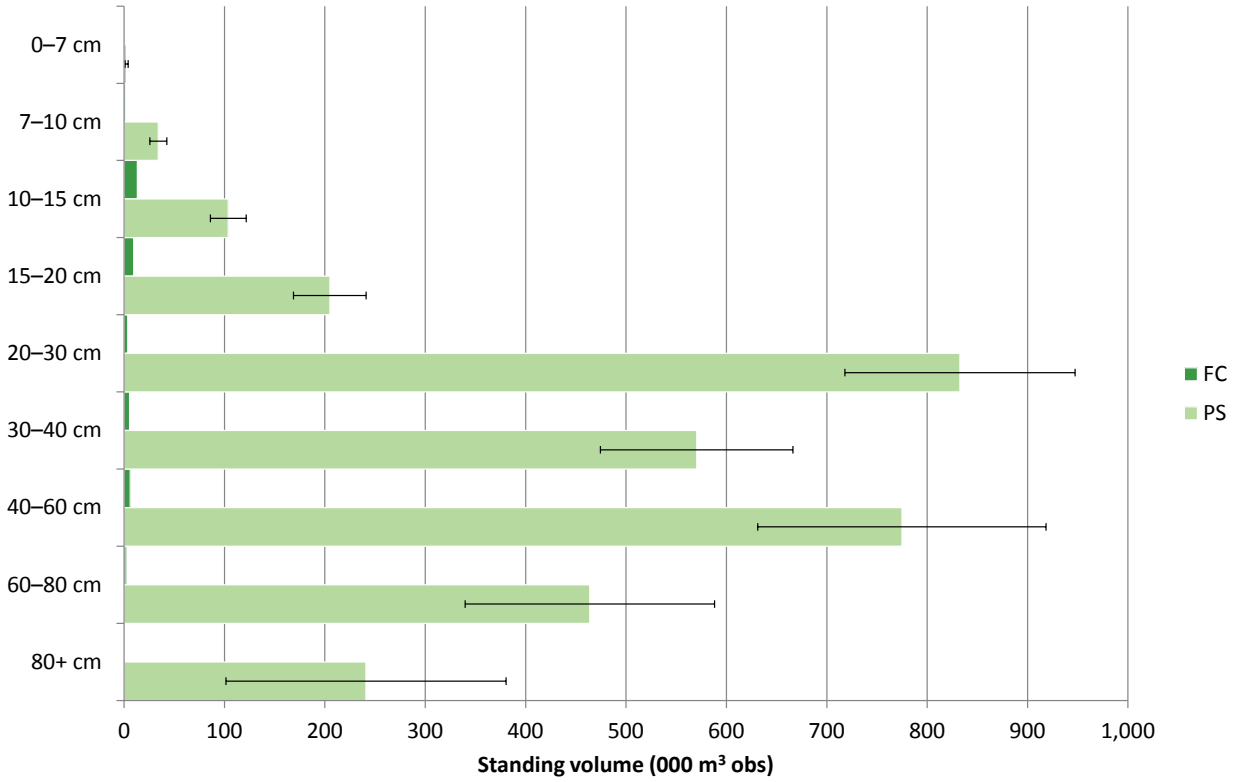



**Table 47** Standing volume of ash by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–7 | < 1 | 3 | *62* | **3** |
| 7–10 | 2 | 34 | *25* | **36** |
| 10–15 | 13 | 104 | *17* | **117** |
| 15–20 | 10 | 205 | *18* | **215** |
| 20–30 | 4 | 833 | *14* | **836** |
| 30–40 | 6 | 570 | *17* | **576** |
| 40–60 | 6 | 775 | *19* | **781** |
| 60–80 | 2 | 464 | *27* | **466** |
| 80+ | < 1 | 241 | *58* | **242** |
| **Total** | **42** | **3,228** | ***10*** | **3,271** |

**Figure 53** Number of ash trees by age class

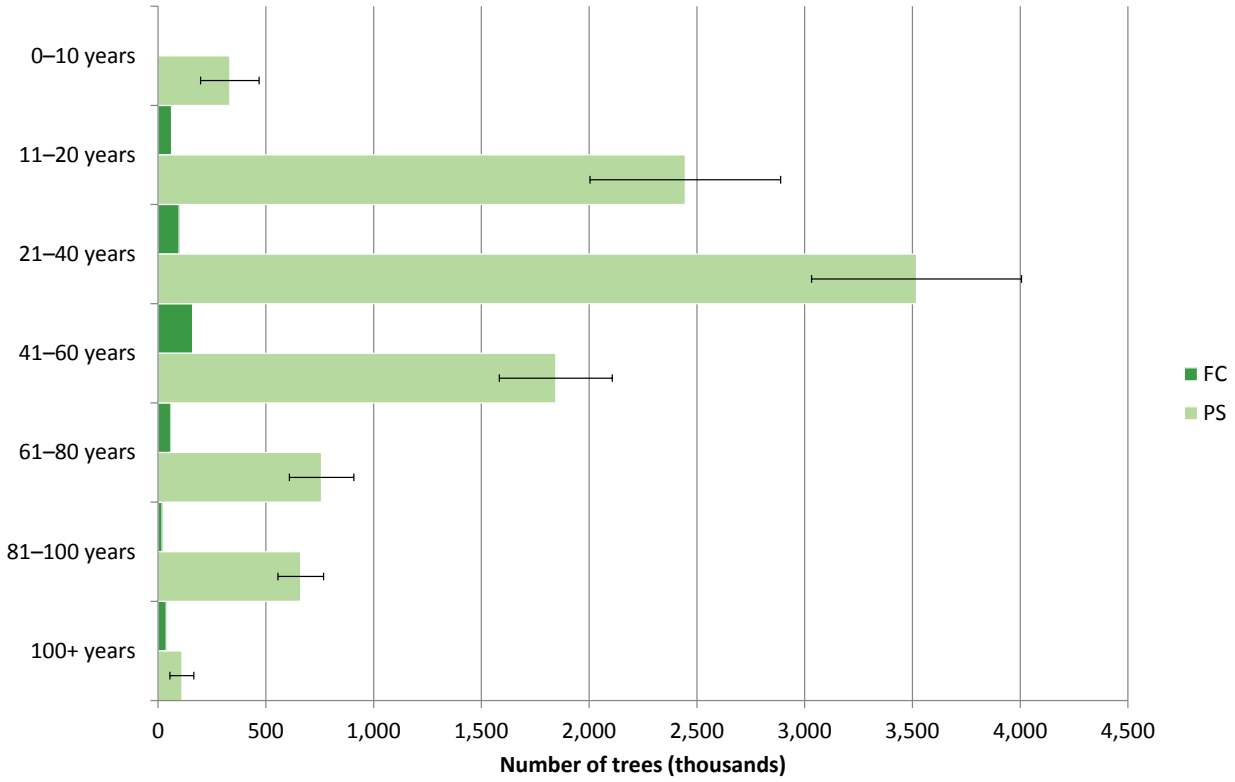



**Table 48** Number of ash trees by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–10 | 2 | 333 | *41* | **335** |
| 11–20 | 62 | 2,446 | *18* | **2,509** |
| 21–40 | 98 | 3,519 | *14* | **3,616** |
| 41–60 | 160 | 1,845 | *14* | **2,006** |
| 61–80 | 59 | 759 | *20* | **818** |
| 81–100 | 19 | 662 | *16* | **681** |
| 100+ | 37 | 111 | *50* | **148** |
| **Total** | **439** | **9,674** | ***9*** | **10,113** |



Go to Part 4

**Figure 54** Number of ash trees by mean stand dbh class

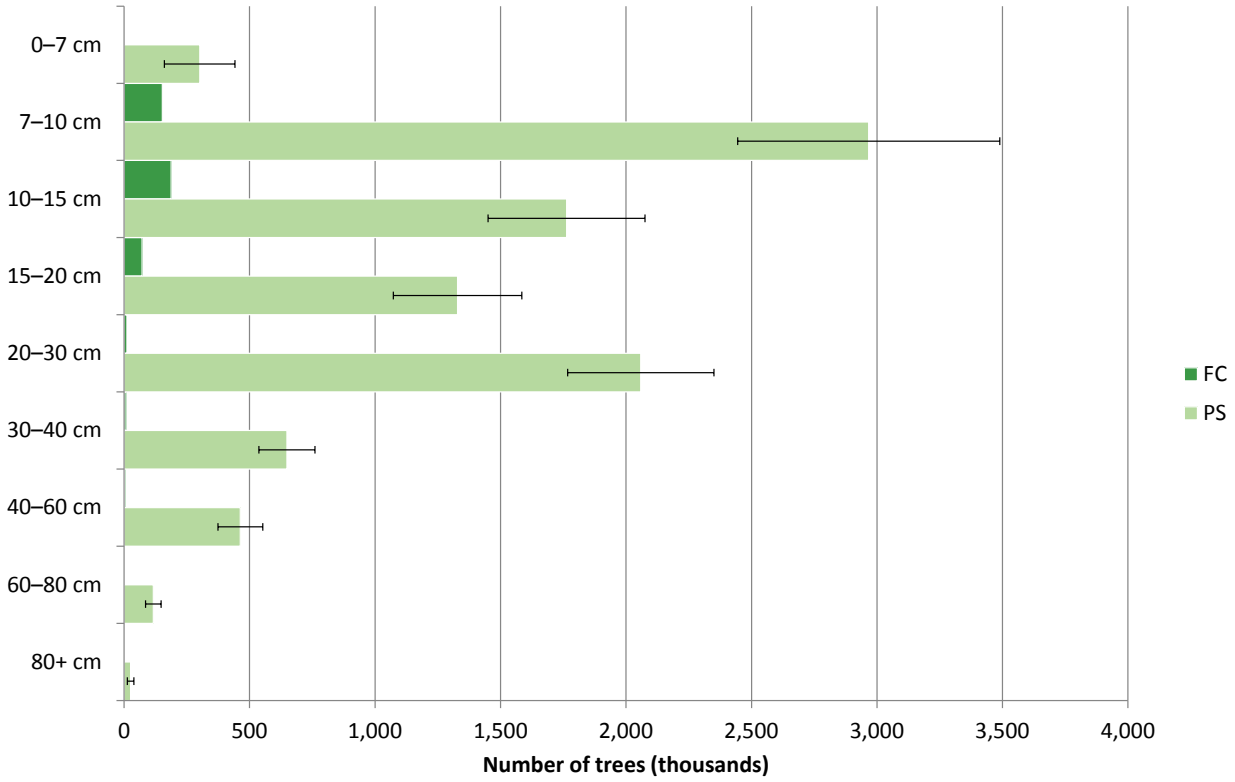


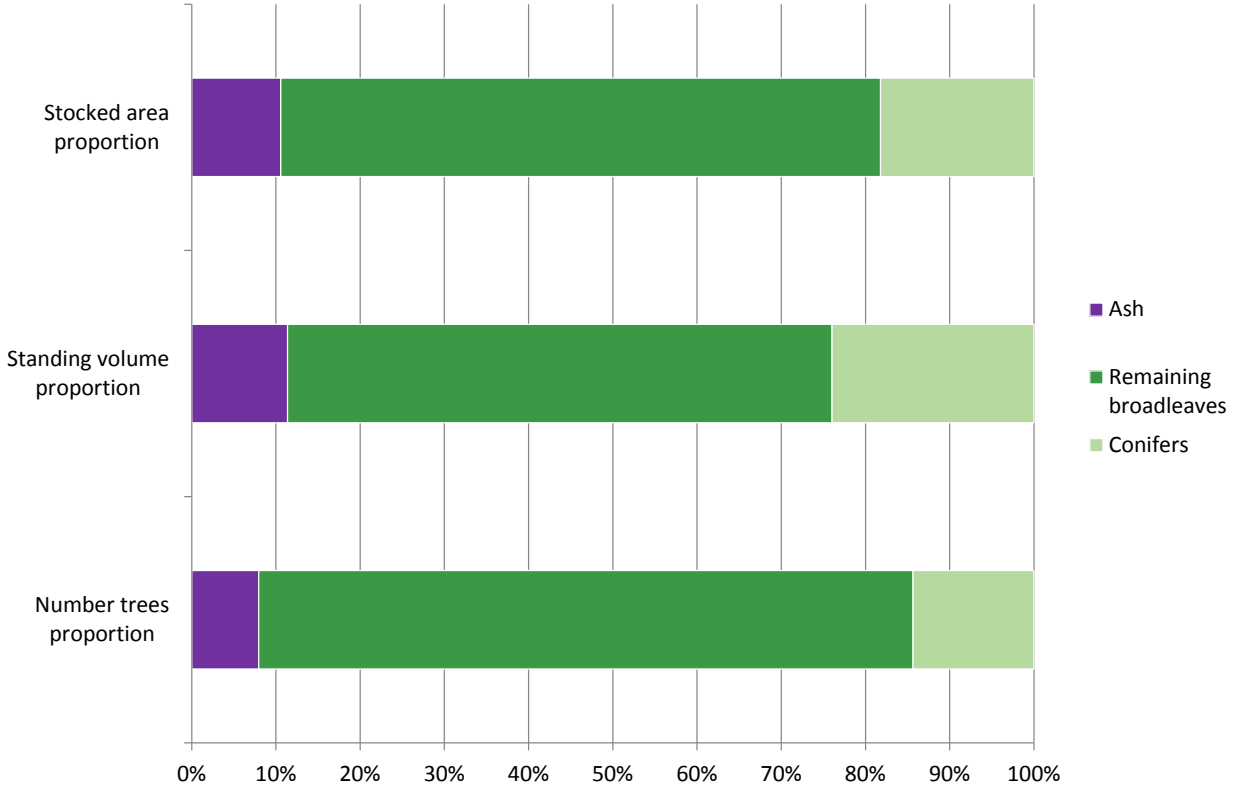

**Table 49** Number of ash trees by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–7 | 2 | 301 | *47* | **303** |
| 7–10 | 153 | 2,967 | *18* | **3,120** |
| 10–15 | 188 | 1,763 | *18* | **1,951** |
| 15–20 | 71 | 1,329 | *19* | **1,400** |
| 20–30 | 12 | 2,059 | *14* | **2,071** |
| 30–40 | 8 | 649 | *17* | **657** |
| 40–60 | 5 | 463 | *19* | **468** |
| 60–80 | < 1 | 117 | *27* | **117** |
| 80+ | < 1 | 26 | *49* | **26** |
| **Total** | **439** | **9,674** | ***9*** | **10,113** |



Go to Part 4

**Figure 55** Ash as a proportion of woodland






Go to Part 4

## **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) |
| Solent and South Downs | 0.3 | 11.7 | *7* | **12.1** |

## **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) |
| Solent and South Downs | 93.4 | 114.3 | 13 | 11 |

## **Table 51** Standing volume of ash as a proportion of woodland

| Aligned area | Standing volume of ash | | | |
|---|---|---|---|---|
| | FC | Private sector | | Total |
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | 42 | 3,228 | *10* | **3,271** |

## **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 $m^3$ obs) | volume (000 $m^3$ obs) | (percent) | (percent) |
| Solent and South Downs | 21,855 | 28,762 | 15 | 11 |



Go to Part 4

## **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) |
| Solent and South Downs | 439 | 9,674 | *9* | **10,113** |

## **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) |
| Solent and South Downs | 108,875 | 127,564 | 9 | 8 |

# Oak

**Figure 56** Stocked area of oak by age class

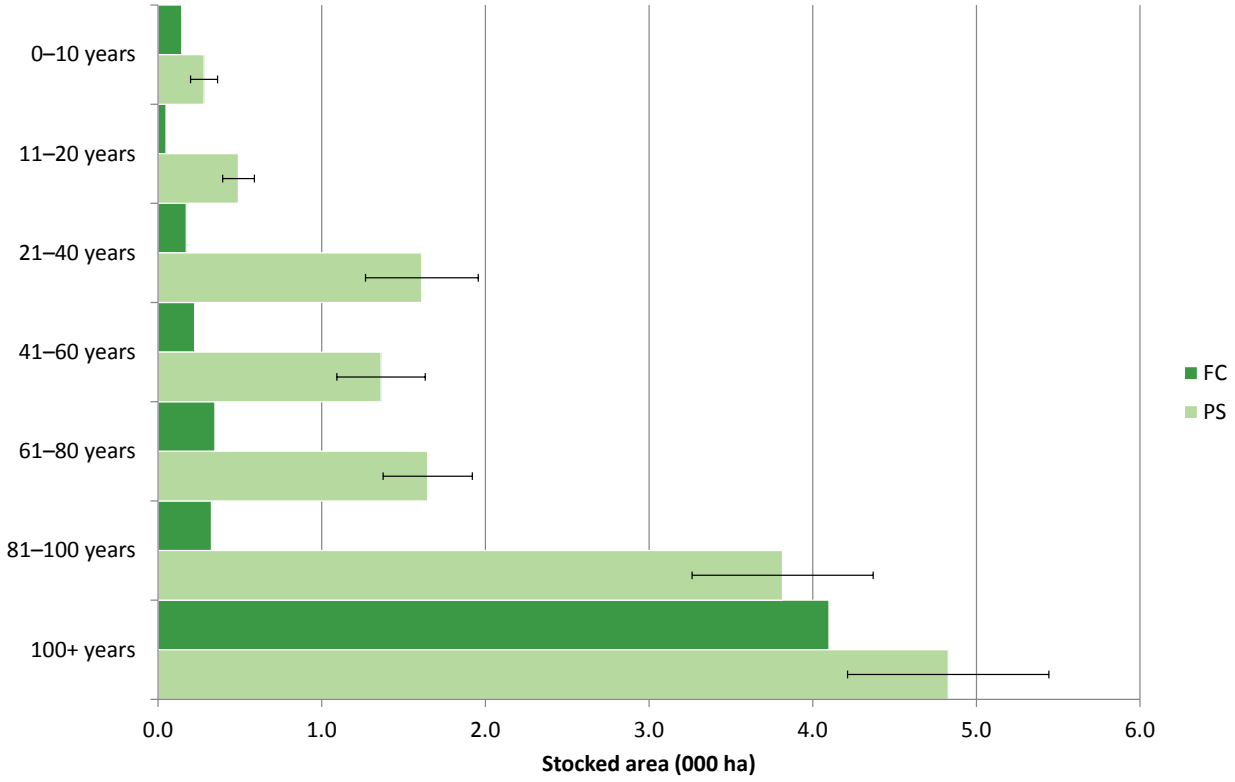



**Table 53** Stocked area of oak by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–10 | 0.1 | 0.3 | *29* | **0.4** |
| 11–20 | < 0.1 | 0.5 | *20* | **0.5** |
| 21–40 | 0.2 | 1.6 | *21* | **1.8** |
| 41–60 | 0.2 | 1.4 | *20* | **1.6** |
| 61–80 | 0.3 | 1.6 | *17* | **2.0** |
| 81–100 | 0.3 | 3.8 | *14* | **4.1** |
| 100+ | 4.1 | 4.8 | *13* | **8.9** |
| **Total** | **5.4** | **14.0** | ***6*** | **19.4** |



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**Figure 57** Stocked area of oak by mean stand dbh class

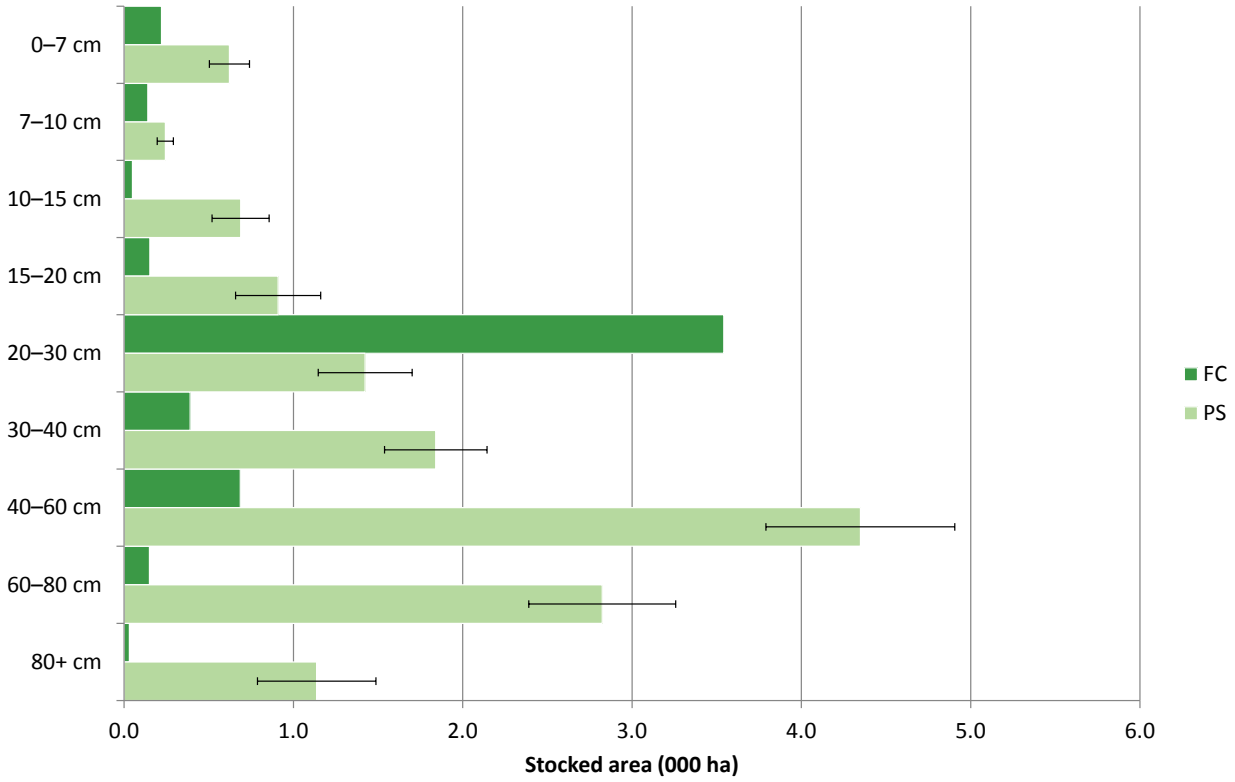


**Table 54** Stocked area of oak by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–7 | 0.2 | 0.6 | *19* | **0.8** |
| 7–10 | 0.1 | 0.2 | *20* | **0.4** |
| 10–15 | < 0.1 | 0.7 | *25* | **0.7** |
| 15–20 | 0.2 | 0.9 | *28* | **1.1** |
| 20–30 | 3.5 | 1.4 | *19* | **5.0** |
| 30–40 | 0.4 | 1.8 | *16* | **2.2** |
| 40–60 | 0.7 | 4.3 | *13* | **5.0** |
| 60–80 | 0.1 | 2.8 | *15* | **3.0** |
| 80+ | < 0.1 | 1.1 | *31* | **1.2** |
| **Total** | **5.4** | **14.0** | ***6*** | **19.4** |



Go to Part 4

**Figure 58** Standing volume of oak by age class

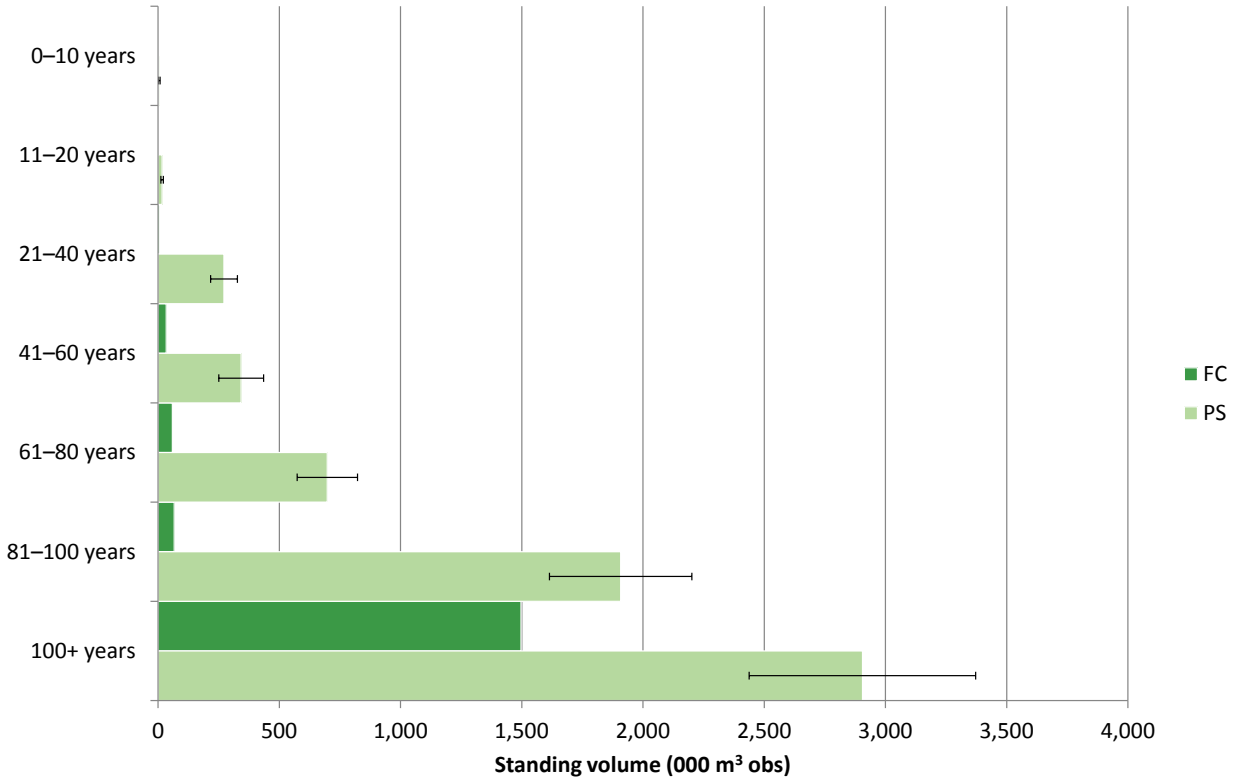


**Table 55** Standing volume of oak by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–10 | 0 | 5 | *78* | **5** |
| 11–20 | < 1 | 17 | *31* | **17** |
| 21–40 | 7 | 272 | *20* | **279** |
| 41–60 | 34 | 343 | *27* | **376** |
| 61–80 | 59 | 698 | *18* | **757** |
| 81–100 | 67 | 1,908 | *15* | **1,974** |
| 100+ | 1,497 | 2,905 | *16* | **4,402** |
| **Total** | **1,664** | **6,147** | ***9*** | **7,810** |

**Figure 59** Standing volume of oak by mean stand dbh class

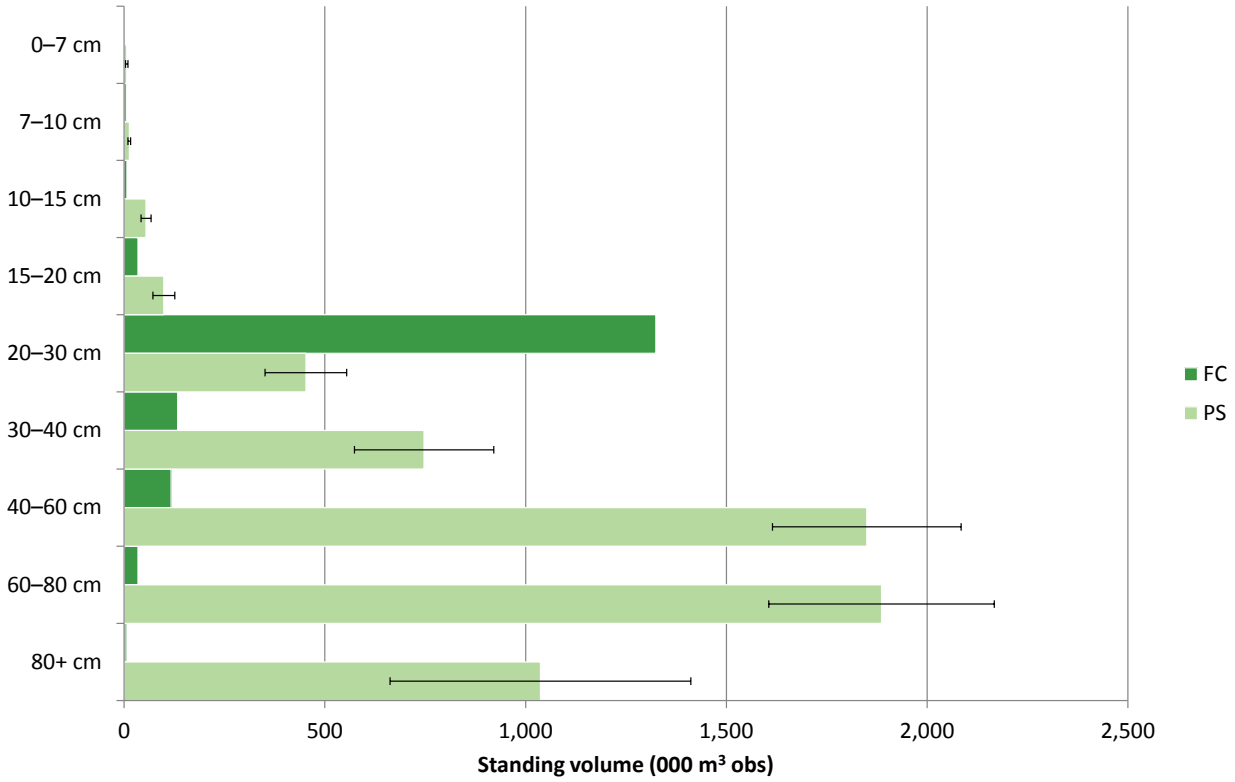


**Table 56** Standing volume of oak by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–7 | 1 | 7 | *43* | **8** |
| 7–10 | 6 | 13 | *25* | **19** |
| 10–15 | 7 | 55 | *23* | **62** |
| 15–20 | 35 | 99 | *27* | **134** |
| 20–30 | 1,324 | 453 | *23* | **1,777** |
| 30–40 | 134 | 747 | *23* | **881** |
| 40–60 | 117 | 1,850 | *13* | **1,967** |
| 60–80 | 35 | 1,886 | *15* | **1,921** |
| 80+ | 5 | 1,037 | *36* | **1,042** |
| **Total** | **1,664** | **6,147** | ***9*** | **7,810** |

**Figure 60** Number of oak trees by age class

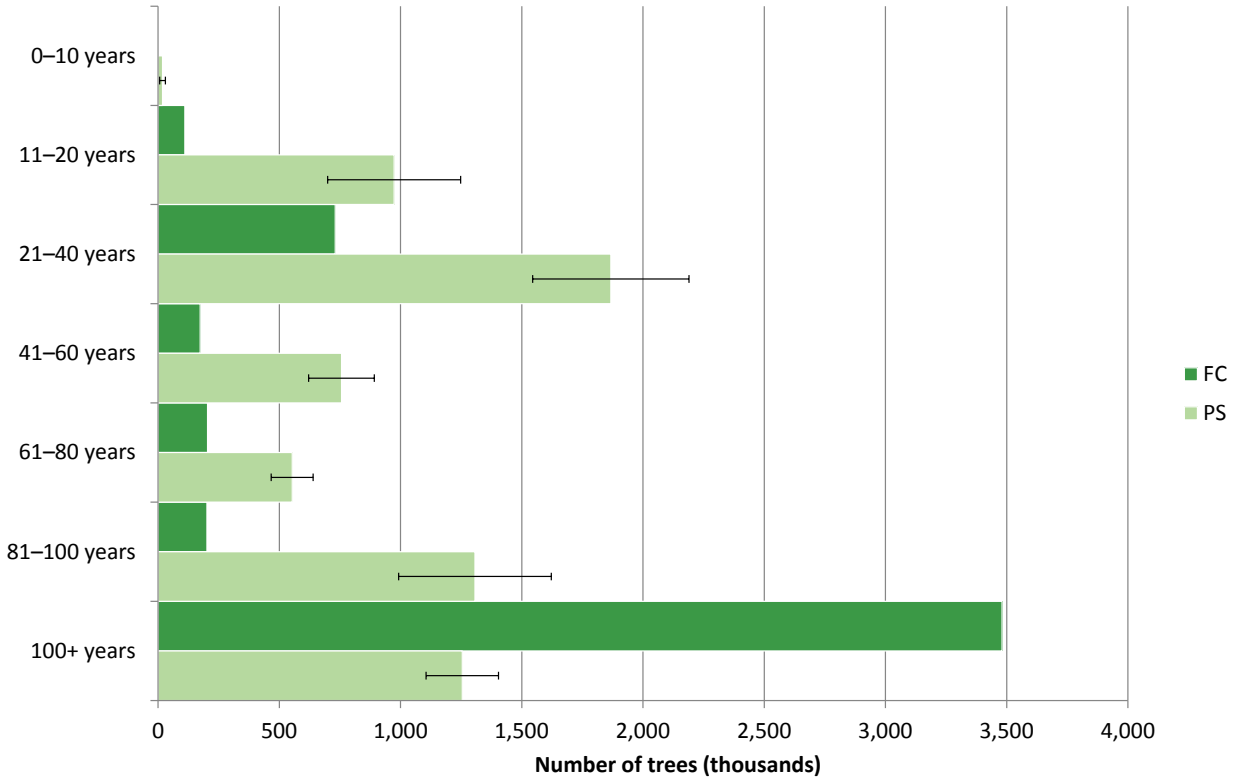


**Table 57** Number of oak trees by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–10 | 0 | 18 | *64* | **18** |
| 11–20 | 110 | 974 | *28* | **1,084** |
| 21–40 | 730 | 1,867 | *17* | **2,598** |
| 41–60 | 174 | 757 | *18* | **931** |
| 61–80 | 204 | 553 | *16* | **758** |
| 81–100 | 201 | 1,307 | *24* | **1,509** |
| 100+ | 3,480 | 1,254 | *12* | **4,735** |
| **Total** | **4,901** | **6,731** | ***9*** | **11,632** |

**Figure 61** Number of oak trees by mean stand dbh class

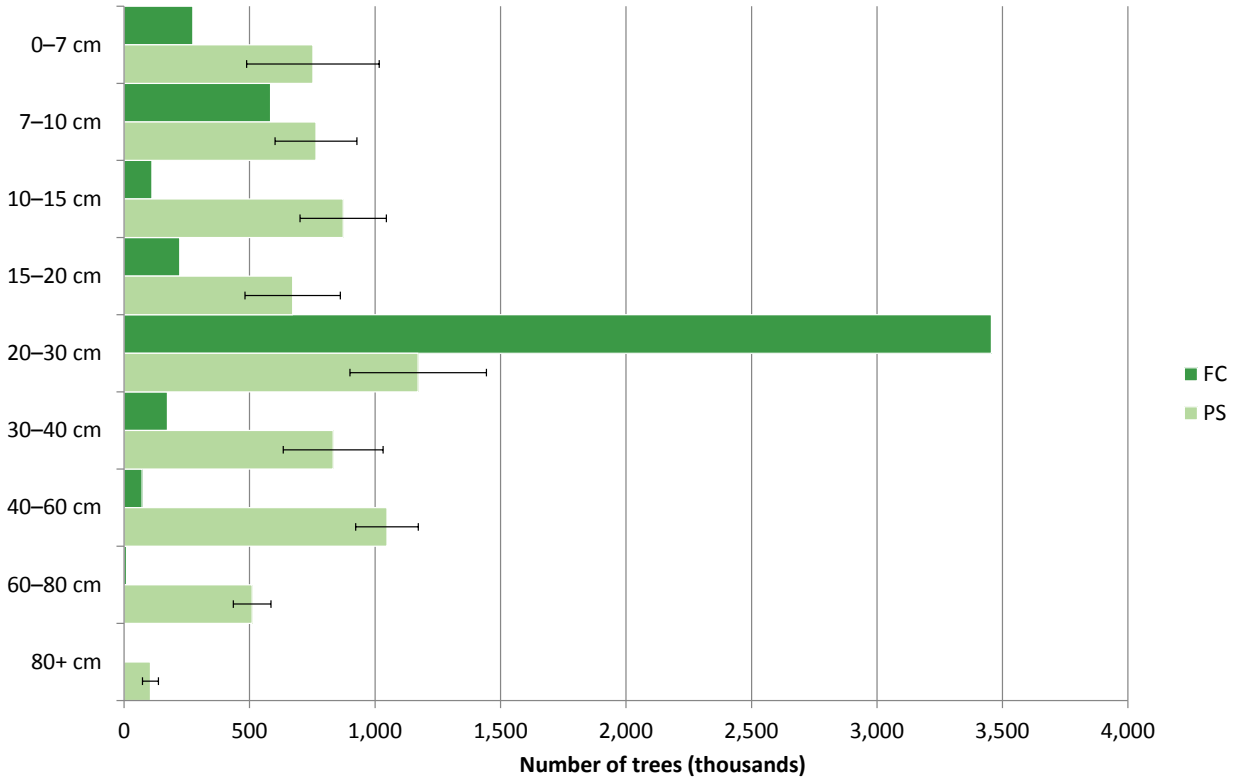


**Table 58** Number of oak trees by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–7 | 274 | 752 | *35* | **1,026** |
| 7–10 | 584 | 765 | *21* | **1,348** |
| 10–15 | 111 | 873 | *20* | **984** |
| 15–20 | 222 | 672 | *28* | **894** |
| 20–30 | 3,455 | 1,172 | *23* | **4,627** |
| 30–40 | 173 | 833 | *24* | **1,006** |
| 40–60 | 72 | 1,048 | *12* | **1,119** |
| 60–80 | 10 | 510 | *15* | **520** |
| 80+ | < 1 | 105 | *30* | **106** |
| **Total** | **4,901** | **6,731** | ***9*** | **11,632** |



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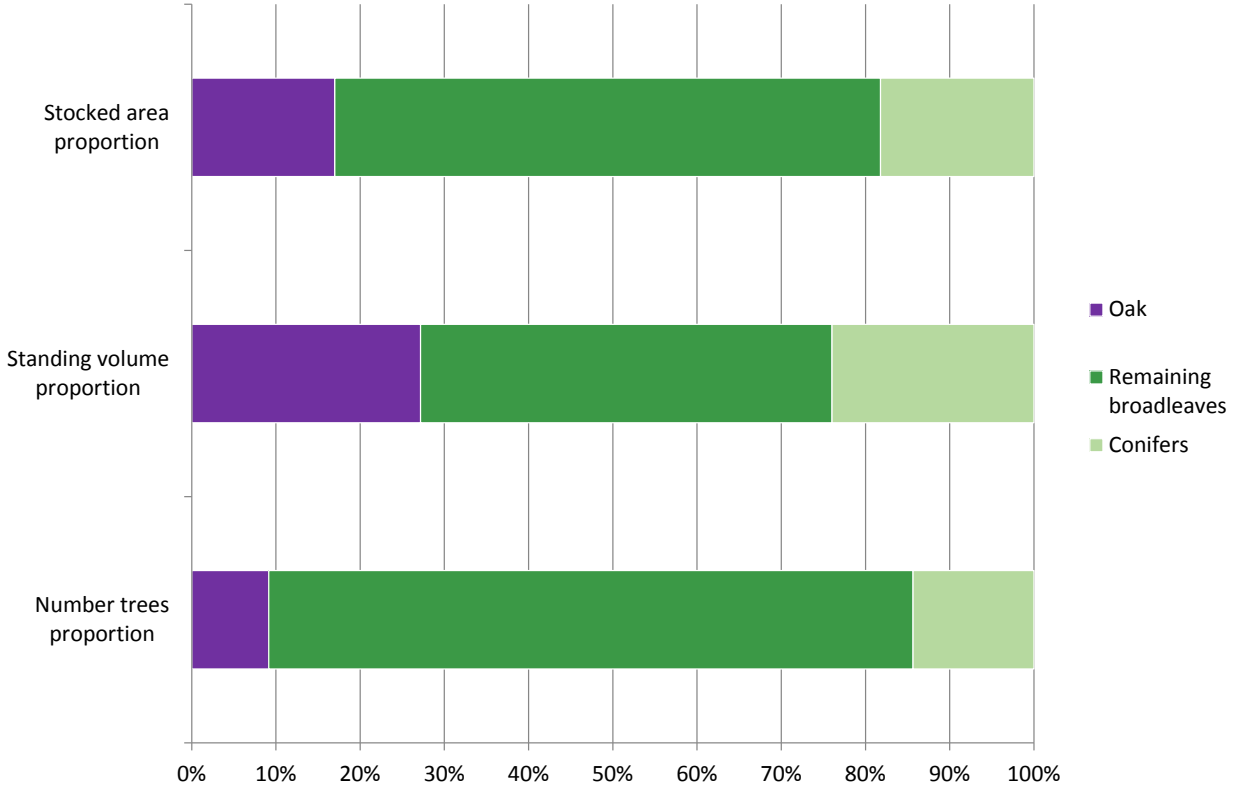
**Figure 62** Oak as a proportion of woodland



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## **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) |
| Solent and South Downs | 5.4 | 14.0 | *6* | **19.4** |

## **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) |
| Solent and South Downs | 93.4 | 114.3 | 21 | 17 |

## **Table 60** Standing volume of oak as a proportion of woodland

| Aligned area | Standing volume of oak | | | |
|---|---|---|---|---|
| | FC | Private sector | | Total |
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | 1,664 | 6,147 | *9* | **7,810** |

## **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 $m^3$ obs) | volume (000 $m^3$ obs) | (percent) | (percent) |
| Solent and South Downs | 21,855 | 28,762 | 36 | 27 |

## **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) |
| Solent and South Downs | 4,901 | 6,731 | *9* | **11,632** |

## **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) |
| Solent and South Downs | 108,875 | 127,564 | 11 | 9 |

# Sweet chestnut

**Figure 63** Stocked area of sweet chestnut by age class

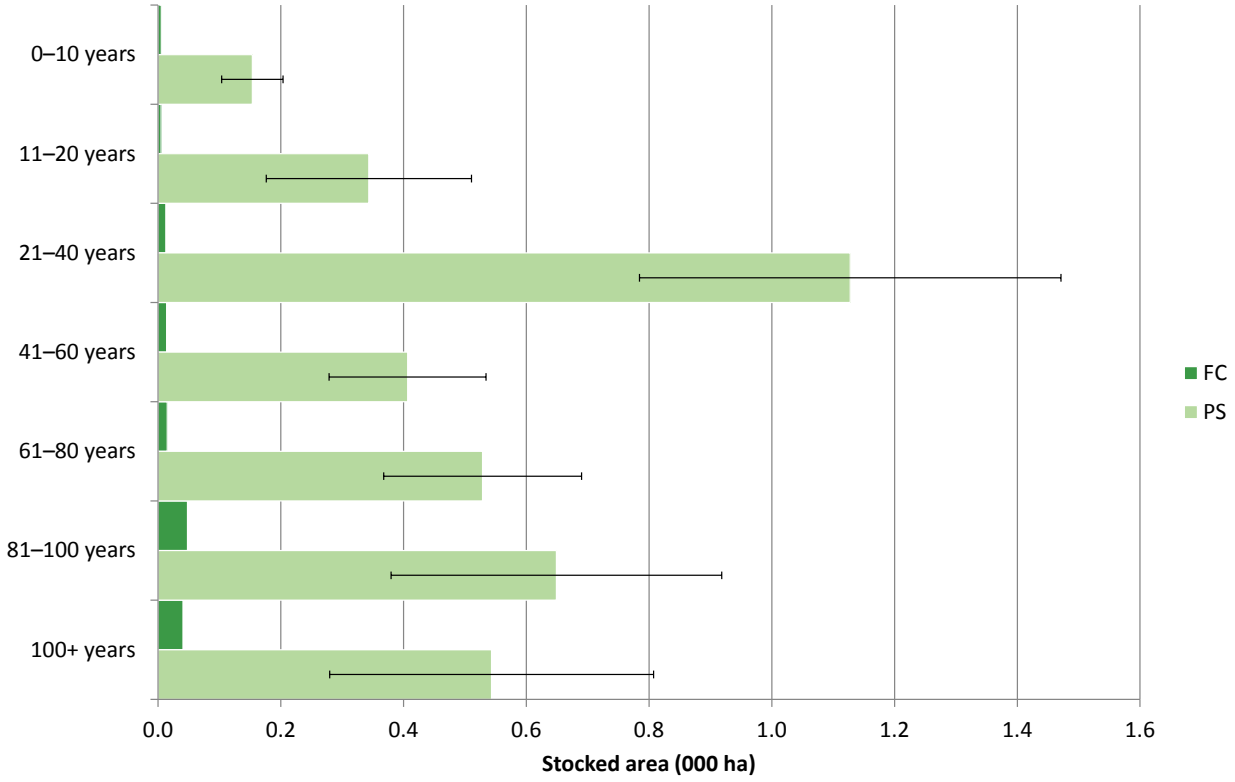


**Table 62** Stocked area of sweet chestnut by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–10 | < 0.1 | 0.2 | *33* | **0.2** |
| 11–20 | < 0.1 | 0.3 | *49* | **0.3** |
| 21–40 | < 0.1 | 1.1 | *30* | **1.1** |
| 41–60 | < 0.1 | 0.4 | *31* | **0.4** |
| 61–80 | < 0.1 | 0.5 | *30* | **0.5** |
| 81–100 | < 0.1 | 0.6 | *42* | **0.7** |
| 100+ | < 0.1 | 0.5 | *49* | **0.6** |
| **Total** | **0.1** | **3.8** | ***17*** | **3.9** |



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

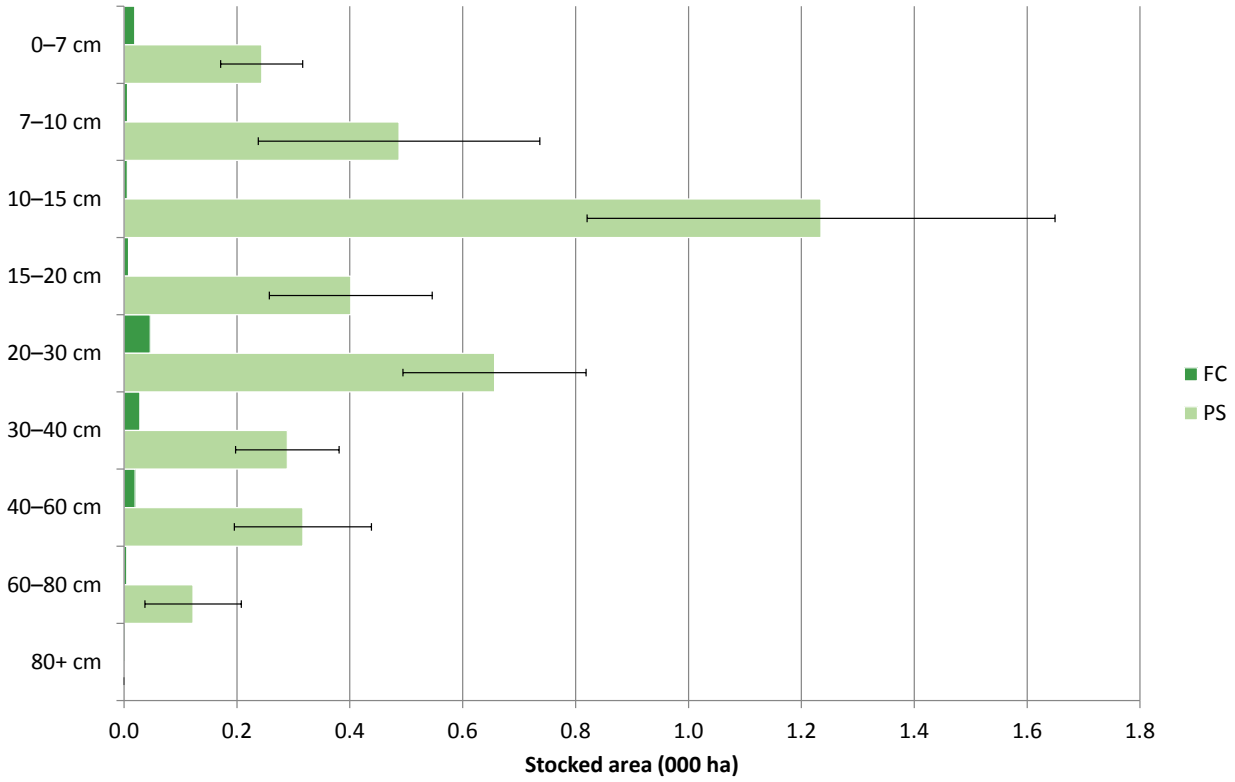


**Table 63** Stocked area of sweet chestnut by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–7 | < 0.1 | 0.2 | *30* | **0.3** |
| 7–10 | < 0.1 | 0.5 | *51* | **0.5** |
| 10–15 | < 0.1 | 1.2 | *34* | **1.2** |
| 15–20 | < 0.1 | 0.4 | *36* | **0.4** |
| 20–30 | < 0.1 | 0.7 | *25* | **0.7** |
| 30–40 | < 0.1 | 0.3 | *32* | **0.3** |
| 40–60 | < 0.1 | 0.3 | *38* | **0.3** |
| 60–80 | < 0.1 | 0.1 | *70* | **0.1** |
| 80+ | < 0.1 | 0.0 | - | **< 0.1** |
| **Total** | **0.1** | **3.8** | ***17*** | **3.9** |

**Figure 65** Standing volume of sweet chestnut by age class

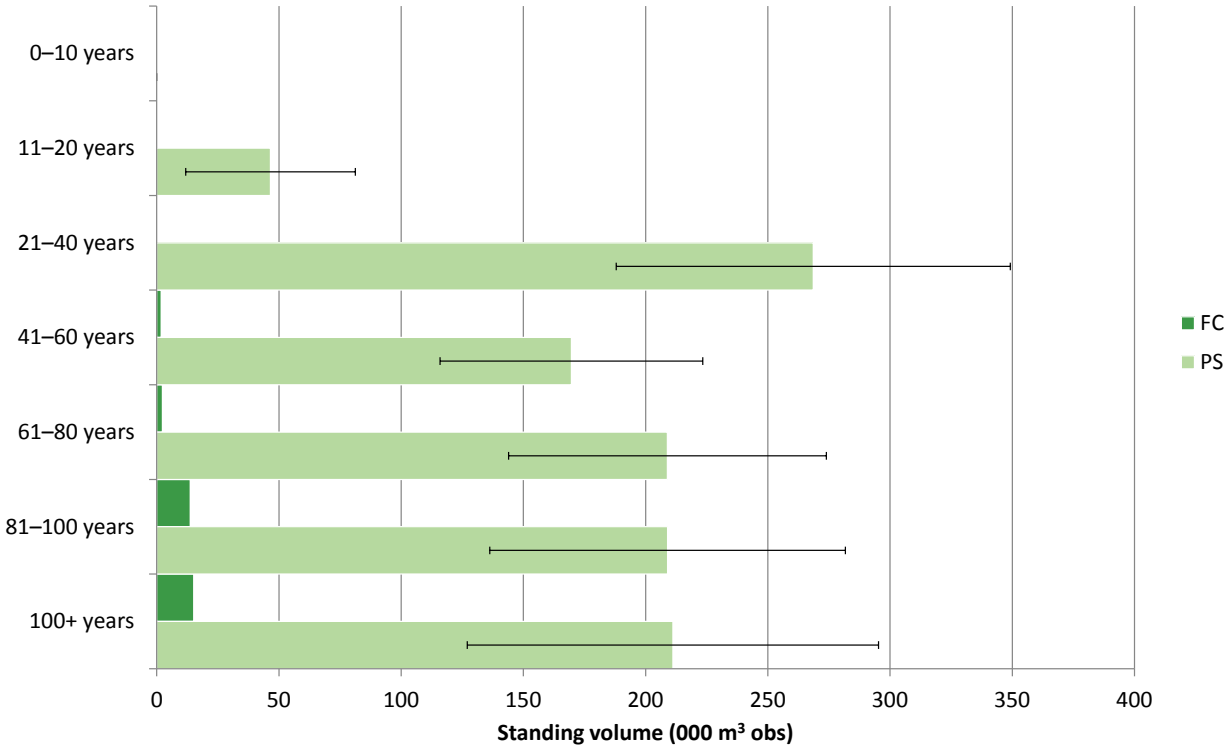


**Table 64** Standing volume of sweet chestnut by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–10 | 0 | 0 | - | **0** |
| 11–20 | < 1 | 47 | *75* | **47** |
| 21–40 | < 1 | 269 | *30* | **269** |
| 41–60 | 2 | 170 | *32* | **171** |
| 61–80 | 2 | 209 | *31* | **211** |
| 81–100 | 14 | 209 | *35* | **223** |
| 100+ | 15 | 211 | *40* | **226** |
| **Total** | **33** | **1,114** | ***16*** | **1,147** |

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

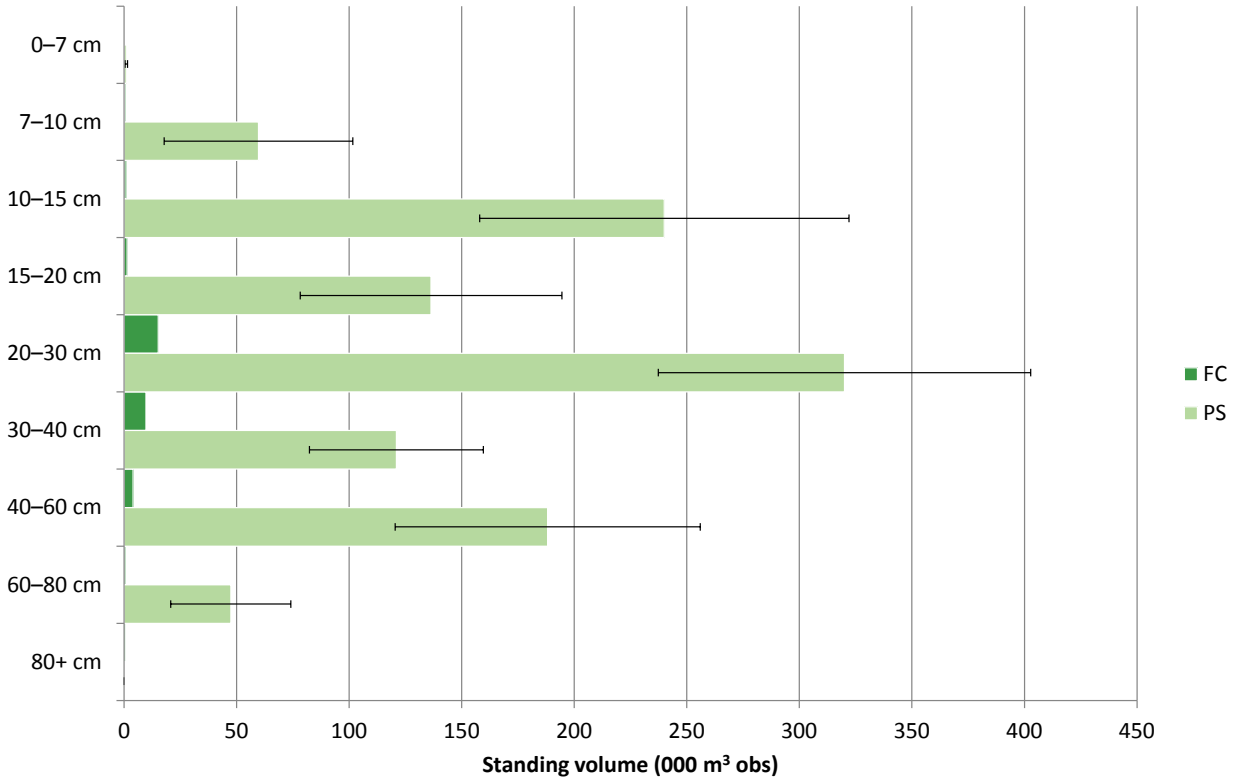


**Table 65** Standing volume of sweet chestnut by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–7 | < 1 | 1 | *52* | **1** |
| 7–10 | < 1 | 60 | *70* | **60** |
| 10–15 | < 1 | 240 | *34* | **241** |
| 15–20 | 1 | 136 | *43* | **138** |
| 20–30 | 15 | 320 | *26* | **335** |
| 30–40 | 10 | 121 | *32* | **131** |
| 40–60 | 4 | 188 | *36* | **192** |
| 60–80 | < 1 | 47 | *56* | **48** |
| 80+ | < 1 | 0 | - | **< 1** |
| **Total** | **33** | **1,114** | ***16*** | **1,147** |



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**Figure 67** Number of sweet chestnut trees by age class

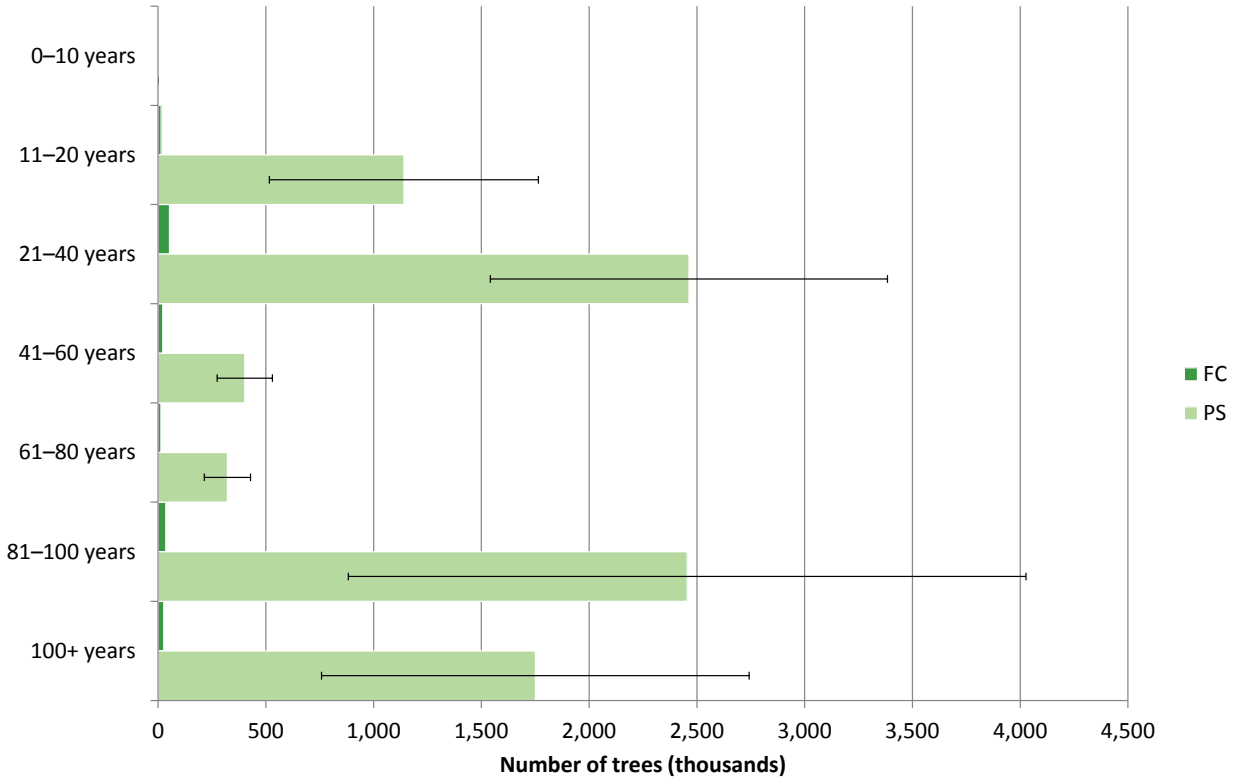


**Table 66** Number of sweet chestnut trees by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–10 | 0 | 0 | - | **0** |
| 11–20 | 14 | 1,141 | *55* | **1,155** |
| 21–40 | 53 | 2,463 | *37* | **2,516** |
| 41–60 | 21 | 402 | *32* | **424** |
| 61–80 | 13 | 322 | *33* | **335** |
| 81–100 | 36 | 2,455 | *64* | **2,491** |
| 100+ | 27 | 1,751 | *57* | **1,777** |
| **Total** | **164** | **8,533** | ***26*** | **8,697** |



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

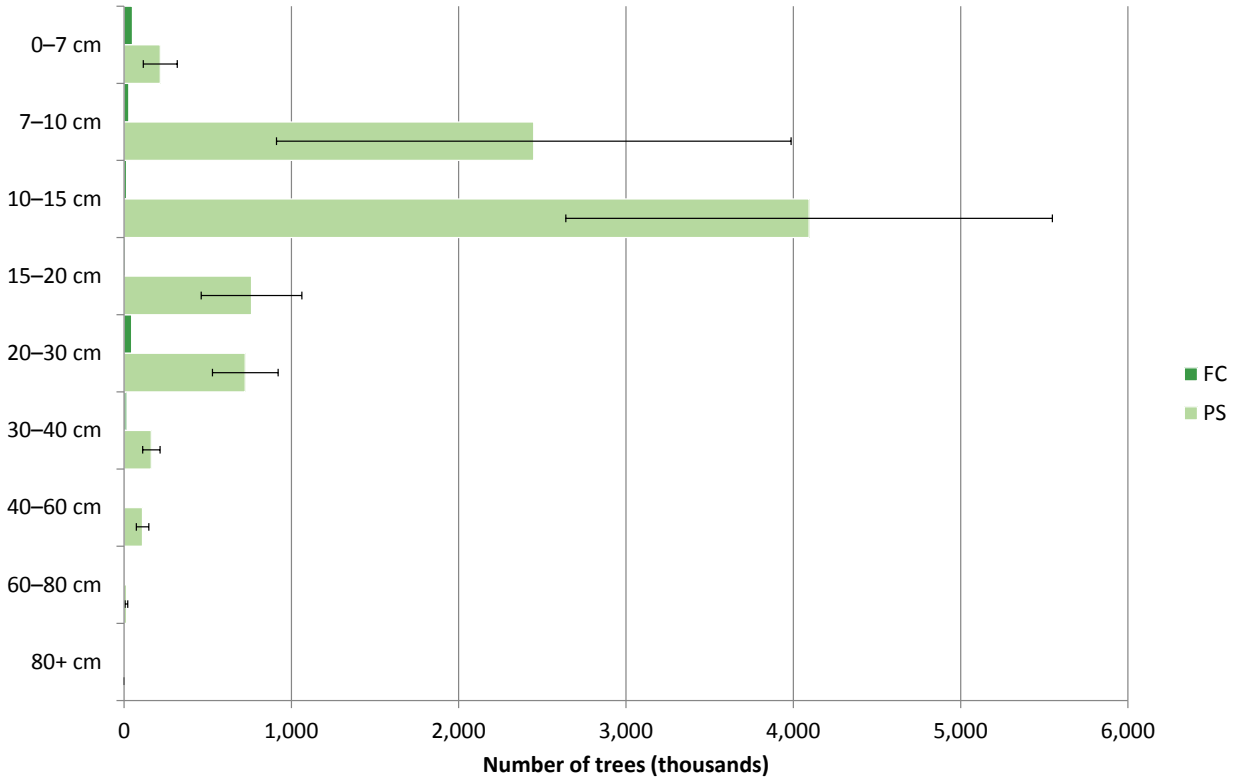


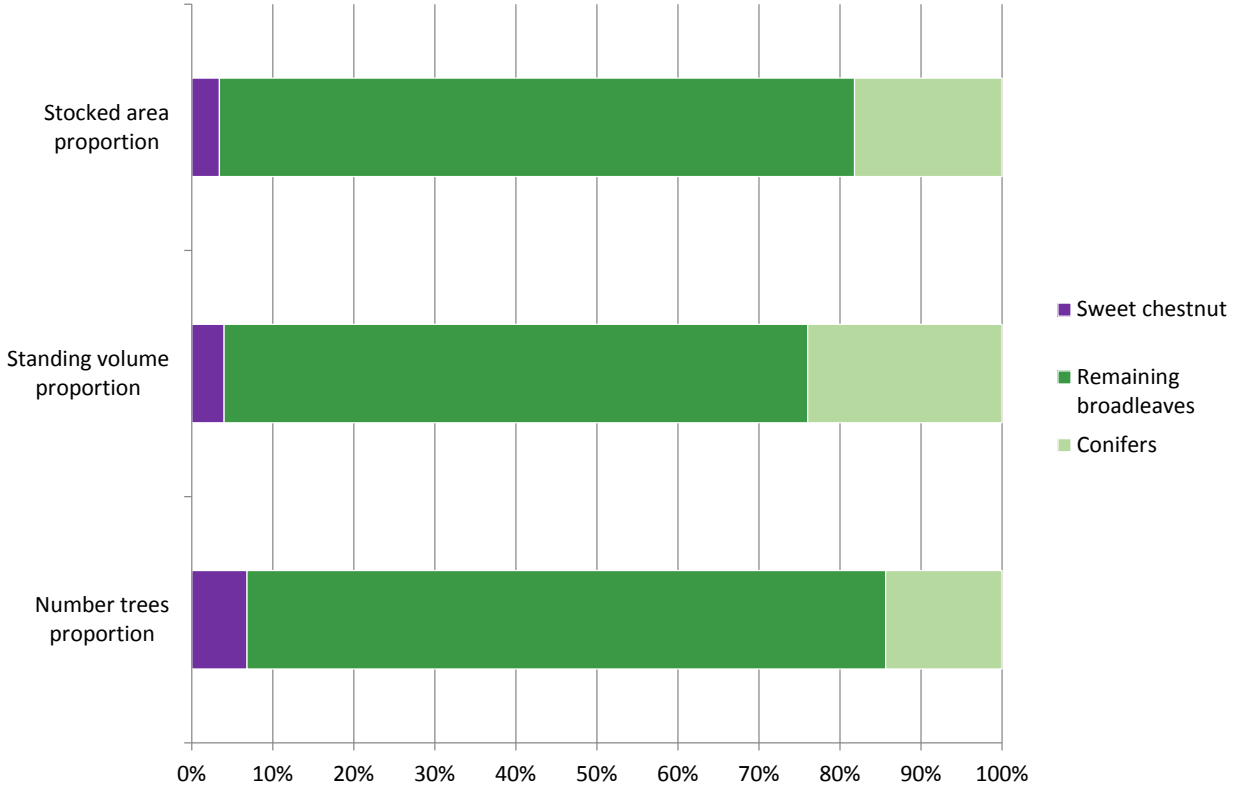

**Table 67** Number of sweet chestnut trees by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–7 | 50 | 216 | *47* | **266** |
| 7–10 | 29 | 2,449 | *63* | **2,478** |
| 10–15 | 15 | 4,094 | *36* | **4,110** |
| 15–20 | 9 | 762 | *40* | **771** |
| 20–30 | 45 | 724 | *27* | **770** |
| 30–40 | 12 | 163 | *32* | **176** |
| 40–60 | 3 | 111 | *34* | **114** |
| 60–80 | < 1 | 14 | *58* | **15** |
| 80+ | < 1 | 0 | - | **< 1** |
| **Total** | **164** | **8,533** | ***26*** | **8,697** |



Go to Part 4

**Figure 69** Sweet chestnut as a proportion of woodland



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## **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) |
| Solent and South Downs | 0.1 | 3.8 | *17* | **3.9** |

## **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) |
| Solent and South Downs | 93.4 | 114.3 | 4 | 3 |

## **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 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | 33 | 1,114 | *16* | **1,147** |

## **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 $m^3$ obs) | volume (000 $m^3$ obs) | (percent) | (percent) |
| Solent and South Downs | 21,855 | 28,762 | 5 | 4 |



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**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) |
| Solent and South Downs | 164 | 8,533 | *26* | **8,697** |

**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) |
| Solent and South Downs | 108,875 | 127,564 | 8 | 7 |

# Larch

**Figure 70** Stocked area of larch by age class

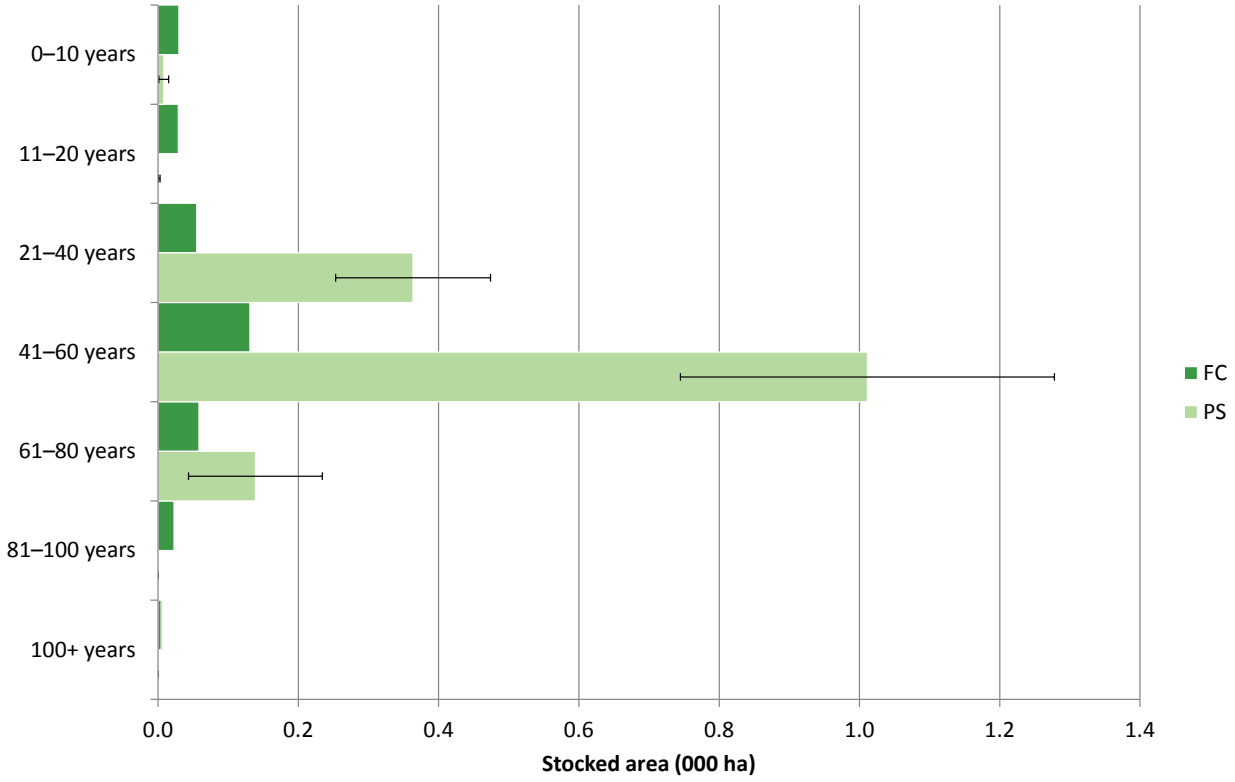


**Table 71** Stocked area of larch by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–10 | < 0.1 | < 0.1 | *85* | **< 0.1** |
| 11–20 | < 0.1 | < 0.1 | *71* | **< 0.1** |
| 21–40 | < 0.1 | 0.4 | *30* | **0.4** |
| 41–60 | 0.1 | 1.0 | *26* | **1.1** |
| 61–80 | < 0.1 | 0.1 | *69* | **0.2** |
| 81–100 | < 0.1 | 0.0 | - | **< 0.1** |
| 100+ | < 0.1 | 0.0 | - | **< 0.1** |
| **Total** | **0.3** | **1.5** | ***19*** | **1.9** |



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**Figure 71** Stocked area of larch by mean stand dbh class

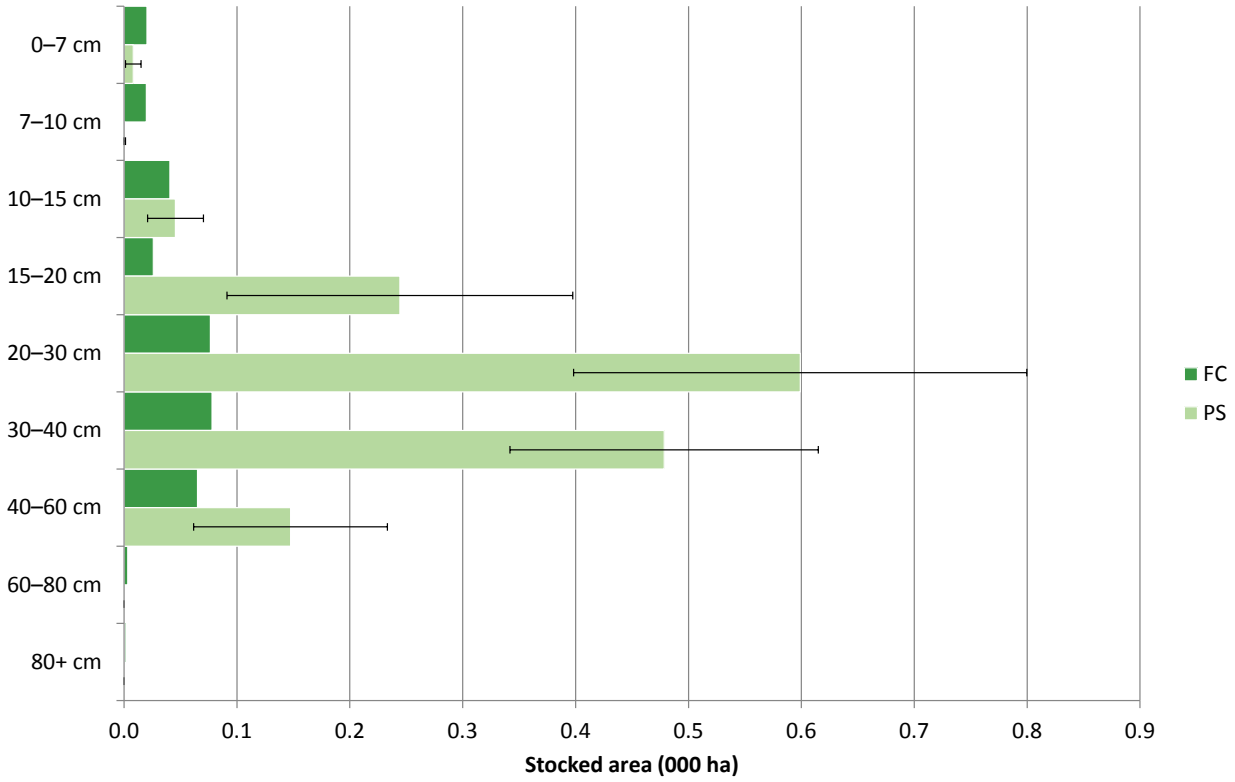


**Table 72** Stocked area of larch by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | area (000 ha) | area (000 ha) | *SE%* | area (000 ha) |
| Solent and South Downs | | | | |
| 0–7 | < 0.1 | < 0.1 | *85* | **< 0.1** |
| 7–10 | < 0.1 | < 0.1 | *90* | **< 0.1** |
| 10–15 | < 0.1 | < 0.1 | *54* | **< 0.1** |
| 15–20 | < 0.1 | 0.2 | *63* | **0.3** |
| 20–30 | < 0.1 | 0.6 | *34* | **0.7** |
| 30–40 | < 0.1 | 0.5 | *29* | **0.6** |
| 40–60 | < 0.1 | 0.1 | *58* | **0.2** |
| 60–80 | < 0.1 | 0.0 | - | **< 0.1** |
| 80+ | < 0.1 | 0.0 | - | **< 0.1** |
| **Total** | **0.3** | **1.5** | ***19*** | **1.9** |

**Figure 72** Standing volume of larch by age class

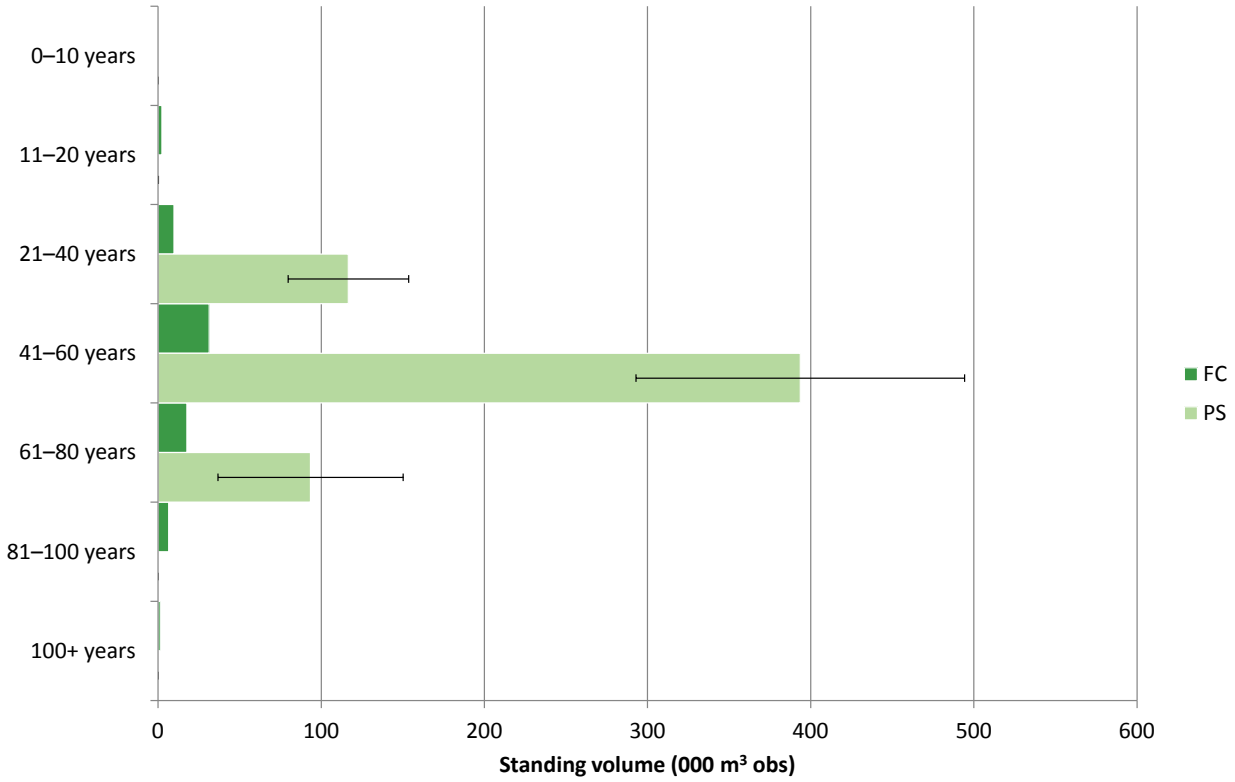


**Table 73** Standing volume of larch by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–10 | < 1 | 0 | - | **< 1** |
| 11–20 | 2 | < 1 | *73* | **2** |
| 21–40 | 10 | 117 | *32* | **126** |
| 41–60 | 31 | 394 | *26* | **425** |
| 61–80 | 18 | 93 | *61* | **111** |
| 81–100 | 7 | 0 | - | **7** |
| 100+ | 1 | 0 | - | **1** |
| **Total** | **69** | **604** | ***20*** | **673** |

**Figure 73** Standing volume of larch by mean stand dbh class

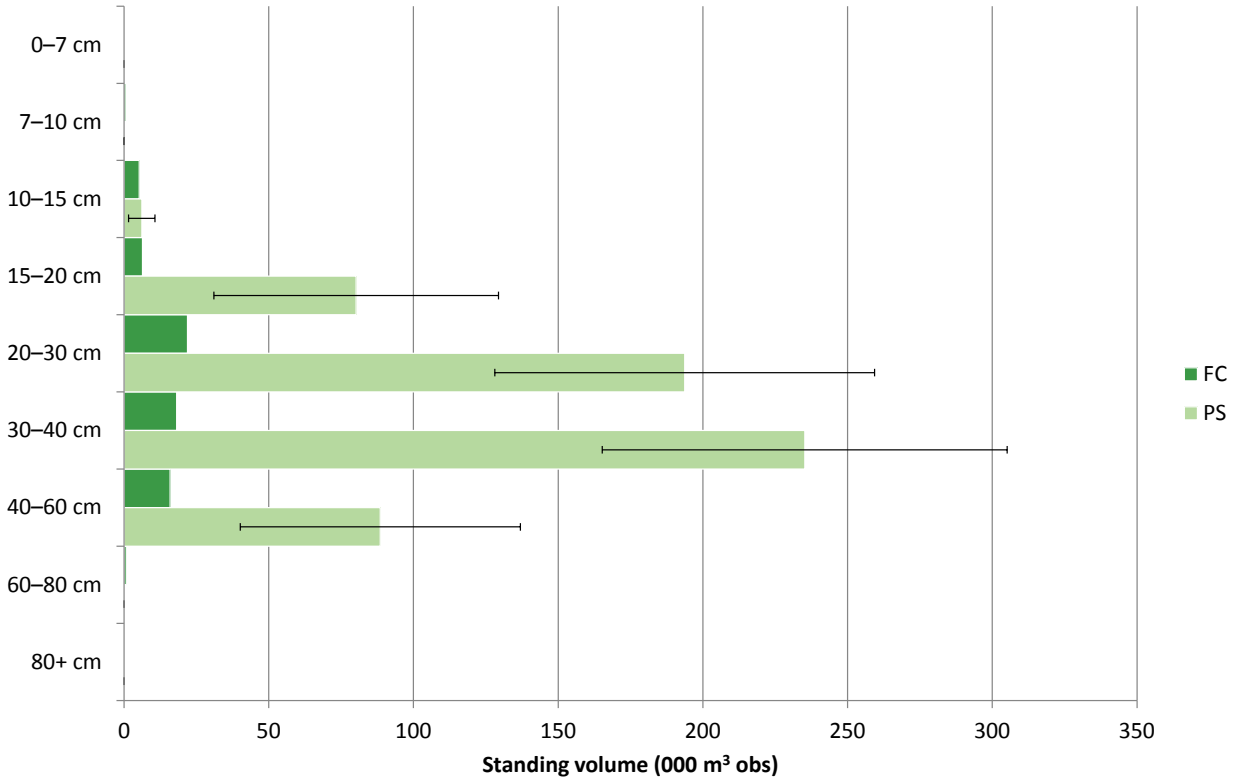


**Table 74** Standing volume of larch by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | | | | |
| 0–7 | < 1 | 0 | - | **< 1** |
| 7–10 | < 1 | < 1 | *90* | **< 1** |
| 10–15 | 5 | 6 | *74* | **11** |
| 15–20 | 6 | 80 | *61* | **87** |
| 20–30 | 22 | 194 | *34* | **216** |
| 30–40 | 18 | 235 | *30* | **253** |
| 40–60 | 16 | 89 | *55* | **104** |
| 60–80 | < 1 | 0 | - | **< 1** |
| 80+ | < 1 | 0 | - | **< 1** |
| **Total** | **69** | **604** | ***20*** | **673** |

**Figure 74** Number of larch trees by age class

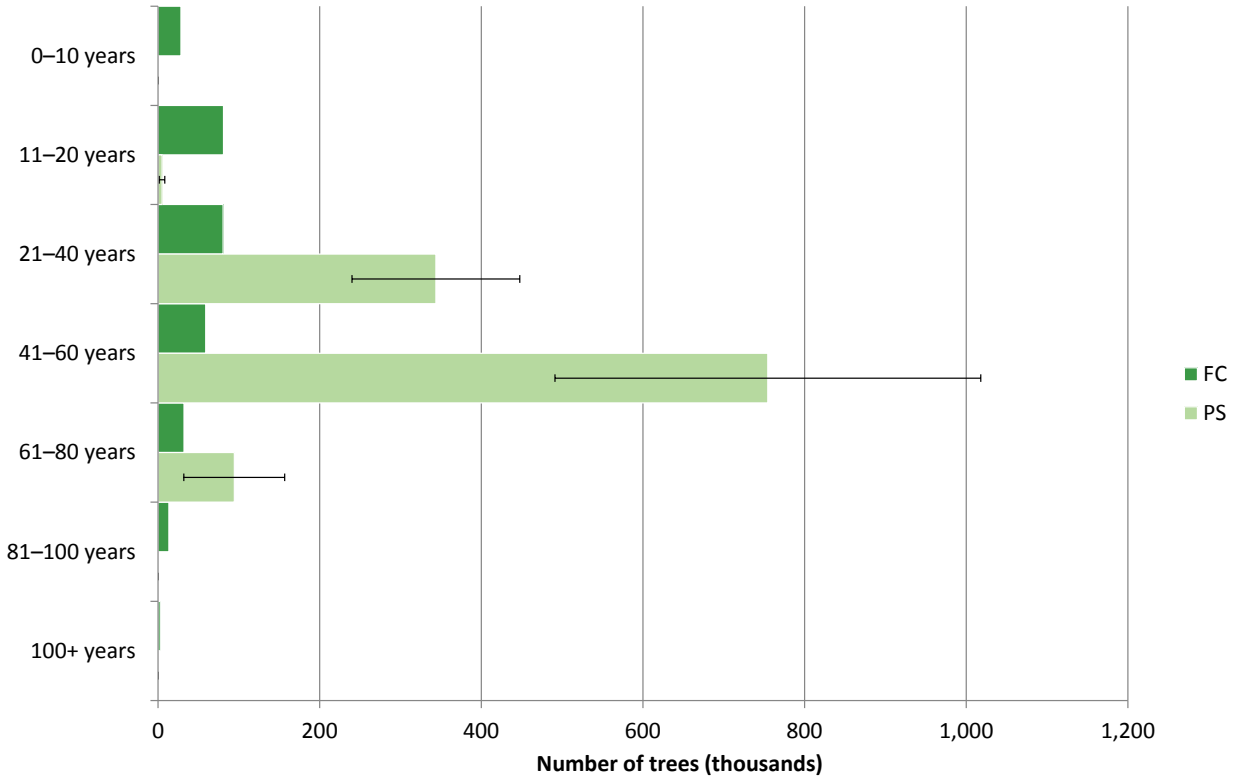


**Table 75** Number of larch trees by age class

| Age class (years) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–10 | 28 | 0 | - | **28** |
| 11–20 | 81 | 5 | *69* | **86** |
| 21–40 | 80 | 344 | *30* | **424** |
| 41–60 | 59 | 754 | *35* | **813** |
| 61–80 | 32 | 94 | *66* | **126** |
| 81–100 | 13 | 0 | - | **13** |
| 100+ | 3 | 0 | - | **3** |
| **Total** | **297** | **1,197** | ***24*** | **1,494** |



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**Figure 75** Number of larch trees by mean stand dbh class

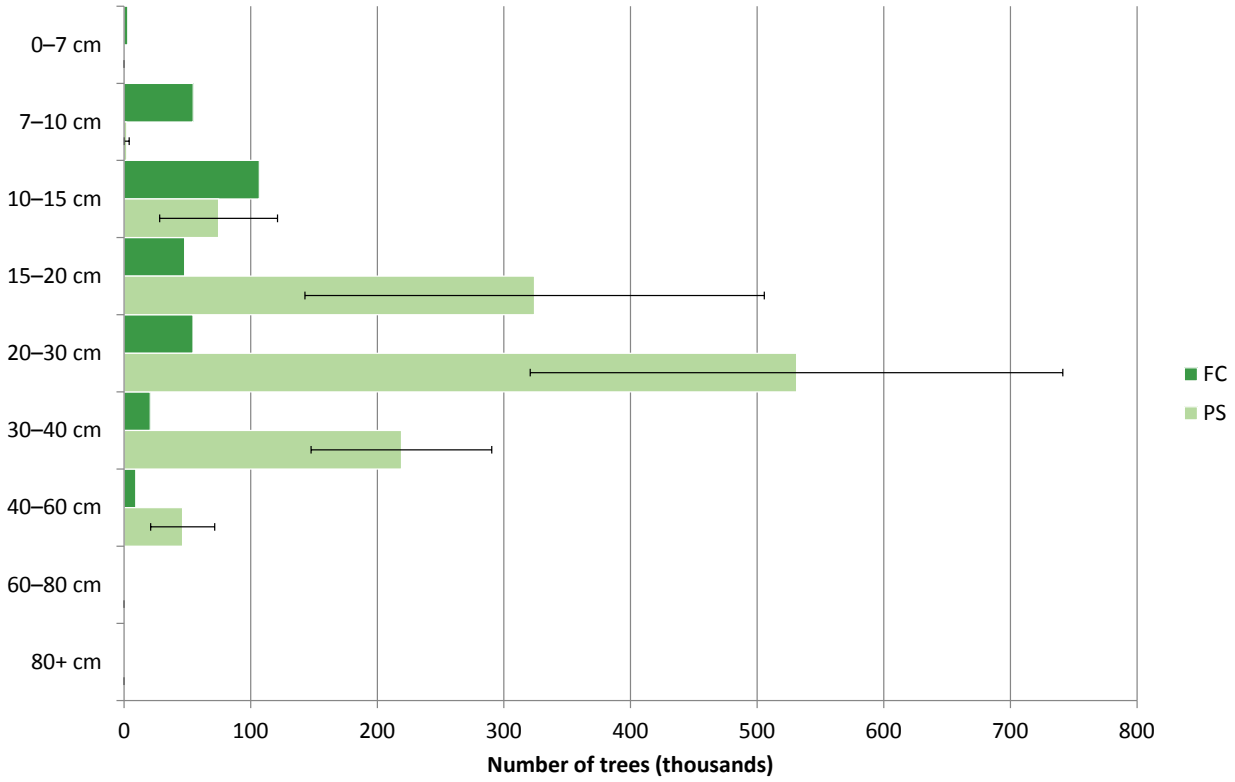
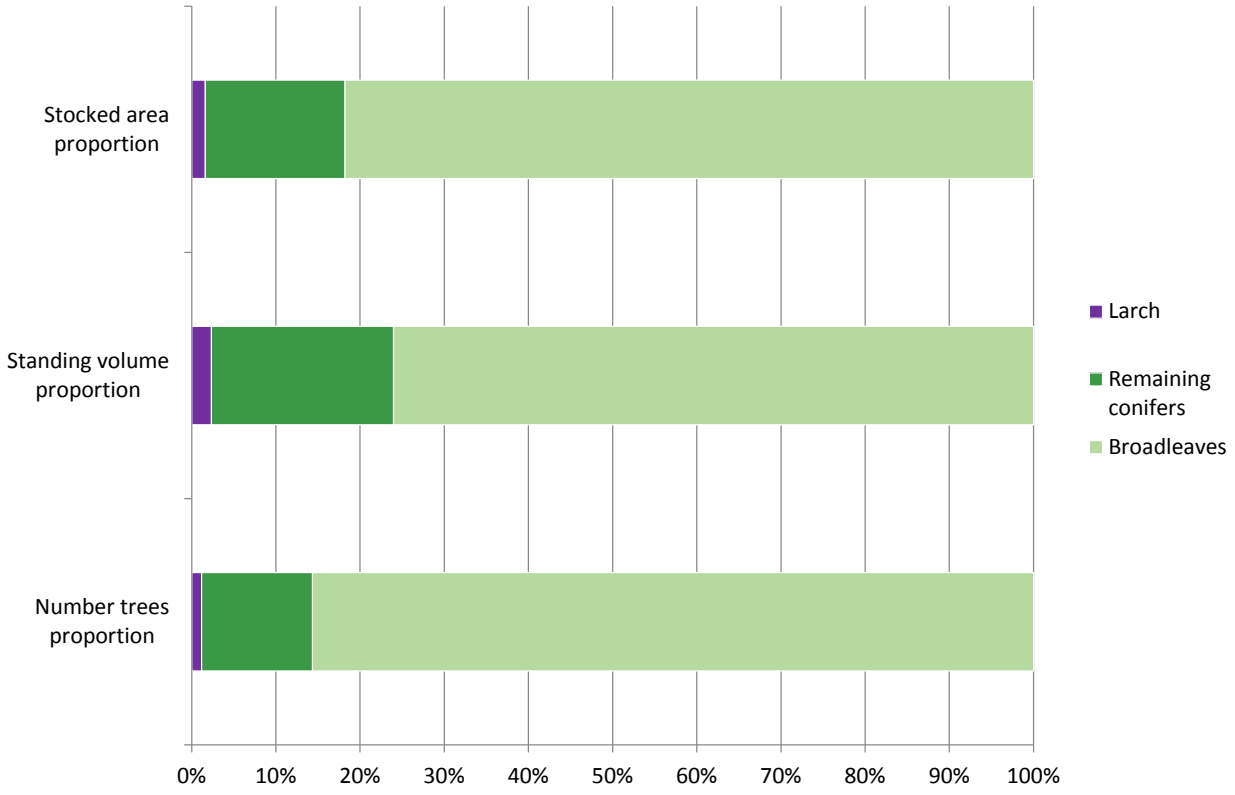



**Table 76** Number of larch trees by mean stand dbh class

| Mean stand DBH (cm) | FC | Private sector | | Total |
|---|---|---|---|---|
| | number of trees (thousands) | number of trees (thousands) | *SE%* | number of trees (thousands) |
| Solent and South Downs | | | | |
| 0–7 | 3 | 0 | - | **3** |
| 7–10 | 55 | 2 | *90* | **57** |
| 10–15 | 107 | 75 | *62* | **181** |
| 15–20 | 48 | 324 | *56* | **372** |
| 20–30 | 54 | 531 | *40* | **586** |
| 30–40 | 21 | 219 | *33* | **240** |
| 40–60 | 9 | 46 | *55* | **56** |
| 60–80 | < 1 | 0 | - | **< 1** |
| 80+ | < 1 | 0 | - | **< 1** |
| **Total** | **297** | **1,197** | ***24*** | **1,494** |

**Figure 76** Larch as a proportion of woodland



## **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) |
| Solent and South Downs | 0.3 | 1.5 | *19* | **1.9** |

## **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) |
| Solent and South Downs | 20.8 | 114.3 | 9 | 2 |

## **Table 78** Standing volume of larch as a proportion of woodland

| Aligned area | Standing volume of larch | | | |
|---|---|---|---|---|
| | FC | Private sector | | Total |
| | volume (000 $m^3$ obs) | volume (000 $m^3$ obs) | *SE%* | volume (000 $m^3$ obs) |
| Solent and South Downs | 69 | 604 | *20* | **673** |

## **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 $m^3$ obs) | volume (000 $m^3$ obs) | (percent) | (percent) |
| Solent and South Downs | 6,896 | 28,762 | *10* | **2** |



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## **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) |
| Solent and South Downs | 297 | 1,197 | *24* | **1,494** |

## **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) |
| Solent and South Downs | 18,262 | 127,564 | 8 | 1 |

# 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. |

| | |
|---|---|
| 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 are 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). |

| | |
|---|---|
| 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. |

| | |
|---|---|
| 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 abve). |
| 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 Solent and South Downs.

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