BRITISH TIMBER STATISTICS 2003

Statistics on British timber harvested and used by primary wood processing industries in Great Britain

Economics & Statistics, Forestry Commission
26 August 2004

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Prepared by:
Economics & Statistics
Forestry Commission
231 Corstorphine Road
Edinburgh EH12 7AT
United Kingdom

Enquiries:
Alister Henderson 0131 314 6337
statistics@forestry.gsi.gov.uk

Statistician:
Sheila Ward 0131 314 6475
sheila.ward@forestry.gsi.gov.uk

Website:
www.forestry.gov.uk/statistics

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INTRODUCTION

This report contains statistics on removals (harvesting) of roundwood (timber) from forests and woodlands in Britain, and deliveries of this British roundwood to sawmills and other primary wood processing industries. It also includes some statistics on production of wood products, including those using imported wood.

Roundwood covers all material from forest operations: logs, small roundwood and wood chipped at the harvesting site. Softwood is timber from conifers, such as spruce, pine, fir and larch. Hardwood is timber from broadleaved trees such as oak, beech, ash and sycamore.

The geographic scope is limited to Great Britain – Scotland, England and Wales. Northern Ireland is currently excluded; trade between Great Britain and Northern Ireland would be treated here as imports and exports.

The quality of data from these statistical systems was assessed against National Statistics (NS) standards in 2000. It was concluded that the surveys and other sources since 1994 largely met NS standards, but that quality was worse in earlier years. The scope of this NS publication is limited to the period 1999 to 2003. Figures for 1994 to 1998 are provided in summary format only, with further detail available in the National Statistics publication British Timber Statistics 2002. Earlier figures are available from the non-NS publication British Timber Statistics 1999. Complete time series will be available on our website www.forestry.gov.uk/statistics.

Statistics for deliveries to primary wood processing industries are for mills that use British roundwood. Imported roundwood is only identified if it is used by processors that also use British roundwood. Processors that only use imported timber and wood products are outside the scope. Secondary processors that use sawnwood or woodpulp to produce other wood products (e.g. furniture or paper) are also outside the scope.

Figures in the tables are individually rounded, so the constituent items may not add to the totals given.

ACKNOWLEDGEMENTS

This report was compiled by the Forestry Commission (Economics and Statistics), in association with the Expert Group on Timber and Trade Statistics (EGTTS). We gratefully acknowledge the assistance of all members of the EGTTS and of the associations that they represent.

CONVERSION FACTORS

Conversion factors are used to convert between cubic metres (standing, overbark, underbark) and green tonnes (delivered weight, including moisture). The factors used in converting the figures from Sections A and B of this report into the Summary Tables are shown below:

1 m^3 softwood standing	= 0.818 green tonnes
1 m^3 hardwood standing	= 0.900 green tonnes
1 m^3 underbark softwood	= 1.018 green tonnes
1 m^3 underbark hardwood	= 1.143 green tonnes

Further details are given in Section G (page 32).

SUMMARY 1994 - 2003

Tables 1 – 4 present a summary of statistics on deliveries and removals (figures for 1999 to 2003 are provided in more detail throughout this report). Table 1 gives the total softwood deliveries to the different sectors, as reported in Sections B – F. This total is then used in Table 2 to compare reported deliveries with the reported softwood removals (Section A). Table 3 summarises deliveries of hardwood as reported in Sections B – F, a figure that is then used to estimate non-FC hardwood removals in Table 4.

Table 1: Deliveries of British softwood roundwood

000 green tonnes

Year	Sawmills	Pulpmills	Woodbased panels	Fencing	Other	Roundwood exports	Total
1994	3,466	1,104	1,407	406	136	48	6,567
1995	3,429	1,106	1,699	387	134	8	6,763
1996	3,583	853	1,500	337	134	0	6,407
1997	3,655	940	1,690	323	133	0	6,741
1998	3,731	844	1,527	353	133	0	6,588
1999	4,027	660	1,613	357	132	24	6,814
2000	4,007	695	1,685	299	132	16	6,834
2001	4,123	668	1,680	297	131	61	6,960
2002	4,194	696	1,456	241	129	133	6,849
2003	4,316	704	1,486	233	129	342	7,210

Chart 1: Deliveries of British softwood roundwood

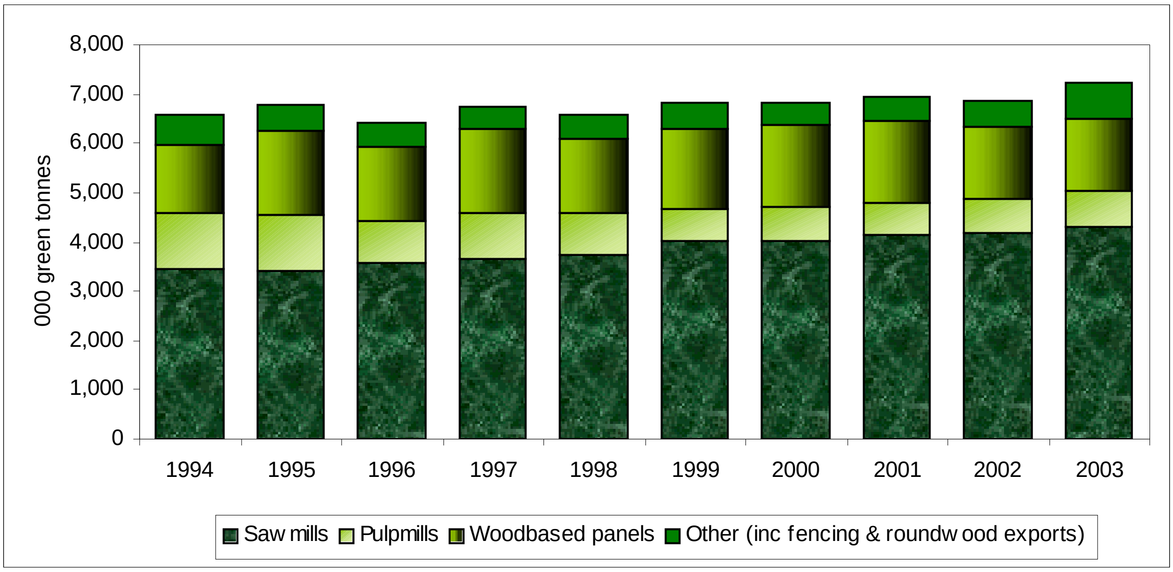


Table 2: Comparison of removals and deliveries of British softwood roundwood

000 green tonnes

Year	Forestry Commission removals	Removals from non-FC woodlands	Total removals	Deliveries	Balance[1]
1994	3,534	2,476	6,010	6,567	-557
1995	3,379	2,844	6,223	6,763	-540
1996	3,511	2,714	6,225	6,407	-182
1997	3,740	2,798	6,538	6,741	-203
1998	3,950	2,593	6,543	6,588	-45
1999	4,452	2,512	6,964	6,814	+150
2000	4,524	2,536	7,060	6,834	+226
2001	4,208	2,851	7,059	6,960	+99
2002	4,265	2,967	7,232	6,849	+382
2003	4,393	3,824	8,217	7,210	+1,007

[1] The difference between reported removals and deliveries. This can be caused by variations in the level of stocks between harvesting and delivery to the wood processor, but a persistent difference indicates that statistics for removals and/or deliveries may be unreliable.

Chart 2a: Comparison of removals and deliveries of British softwood roundwood

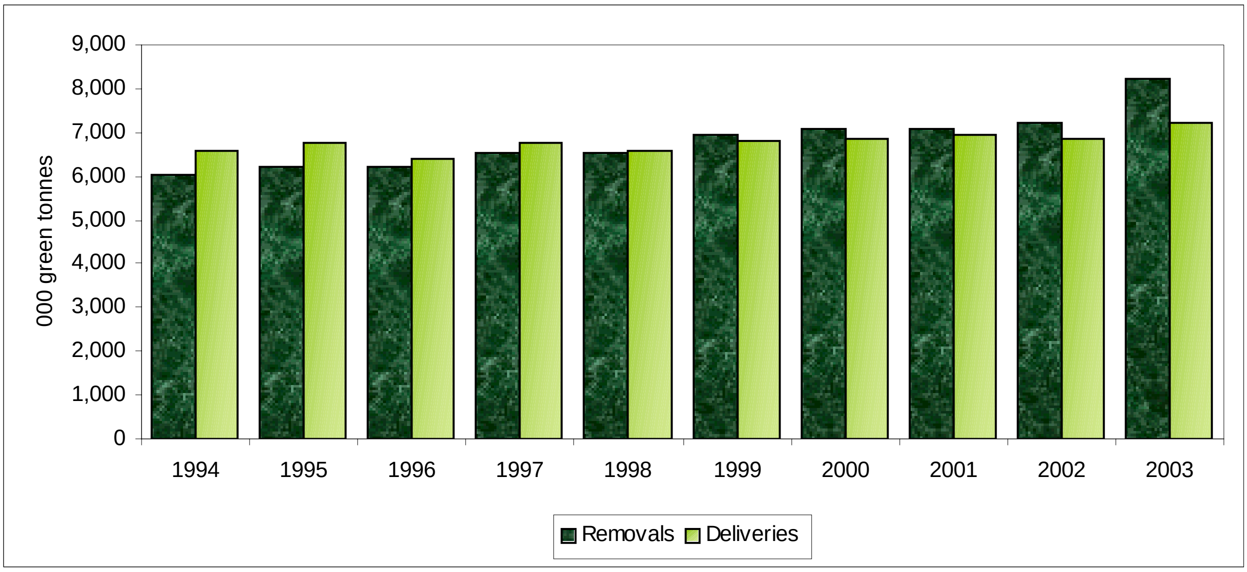


Chart 2b: Comparison of removals and deliveries of British softwood roundwood: Balance

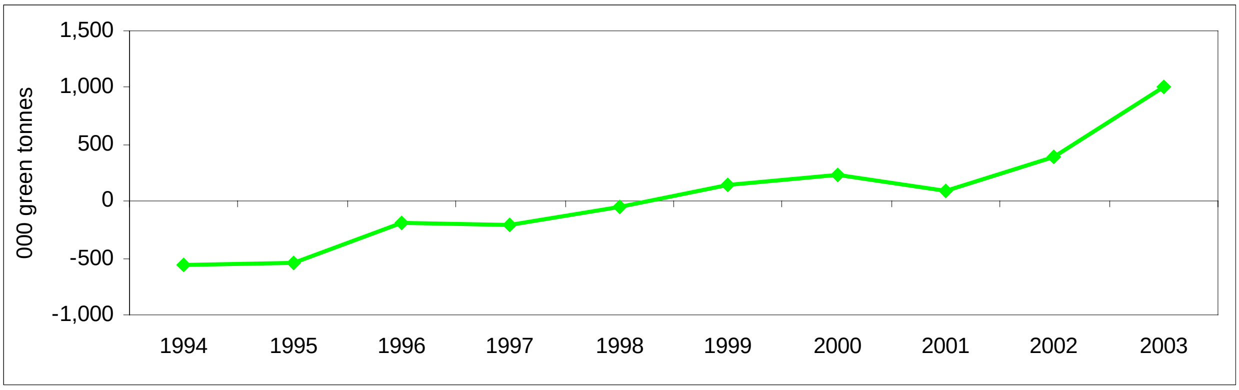


Table 3: Deliveries of British hardwood roundwood

000 green tonnes

Year	Sawmills	Pulpmills	Woodbased panels	Other[1]	Total
1994	346	190	96	205	837
1995	362	196	113	205	876
1996	282	202	91	205	780
1997	282	198	118	205	803
1998	245	180	77	205	707
1999	221	191	52	205	669
2000	195	200	50	205	650
2001	189	209	35	205	638
2002	160	210	43	205	618
2003	136	215	4	205	560

[1] Other includes fencing

Chart 3: Deliveries of British hardwood roundwood

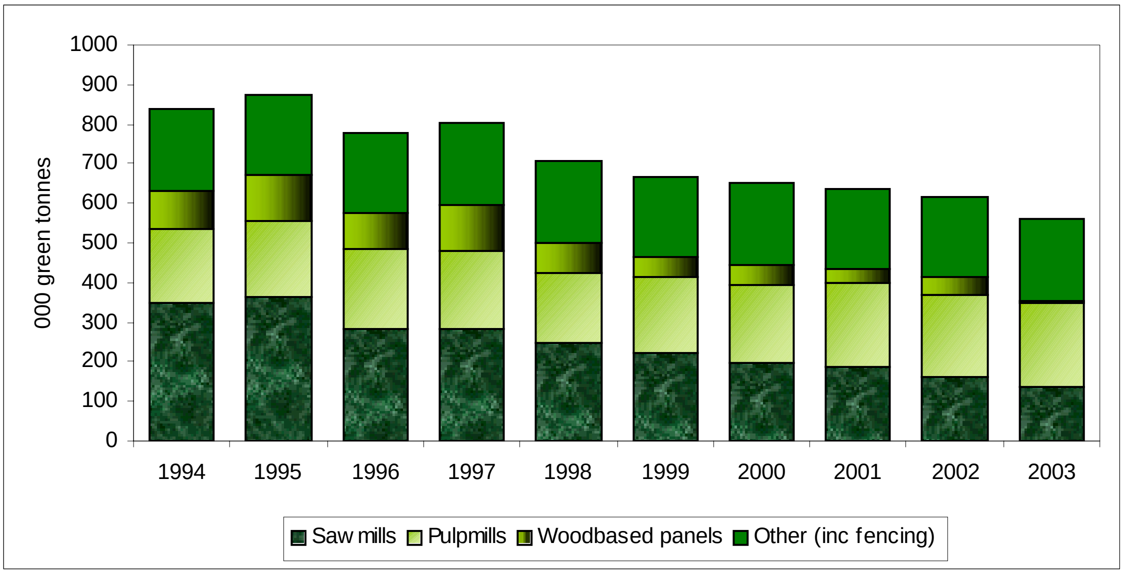


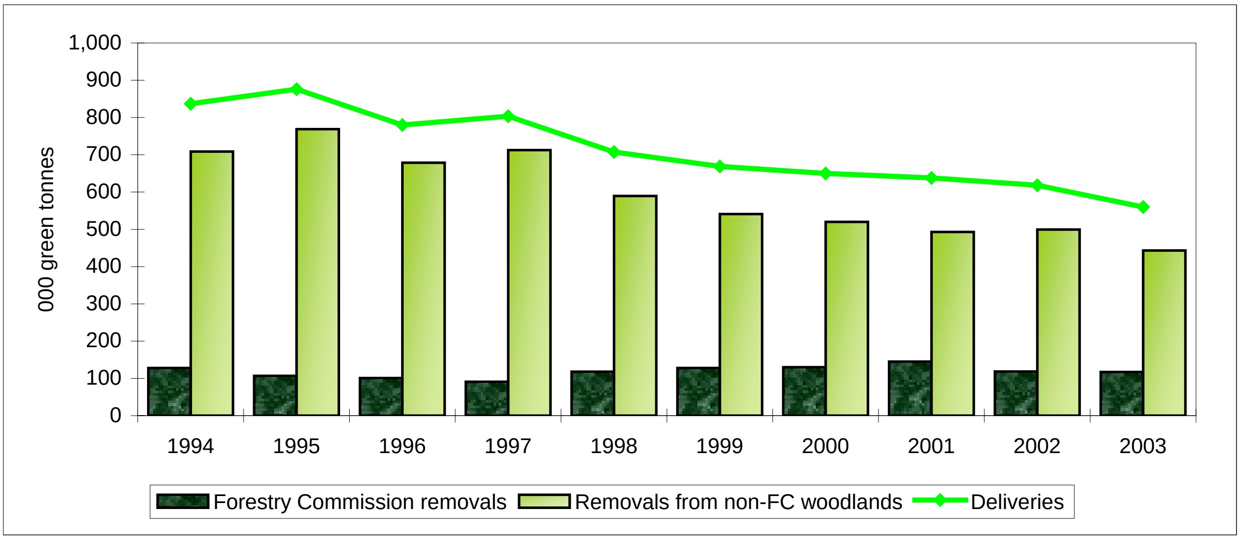
Table 4: Estimation of hardwood removals from non-FC woodlands

000 green tonnes

Year	Deliveries	Forestry Commission removals	Removals from non-FC woodlands[1]
1994	837	128	709
1995	876	107	769
1996	780	101	679
1997	803	91	712
1998	707	118	589
1999	669	128	541
2000	650	130	520
2001	638	145	493
2002	618	118	500
2003	560	117	443

[1] Removals from non-FC woodlands are estimated as Deliveries less FC Removals. There is no survey or data source to obtain data for hardwood removals from non-FC woodland.

Chart 4: Estimation of hardwood removals



A: REMOVALS OF SOFTWOOD ROUNDWOOD

NON-FC WOODLANDS

The Forestry Commission (FC) carries out an annual survey of the largest harvesting companies, to ask for the quantity of softwood removals from non-FC woodlands for the last two years.

The respondents in any year can include nil returns for that year and companies who report that they no longer harvest British timber. During the course of the surveys the distribution list is amended as we become aware of closures etc.

The survey results shown in the table below include figures for the companies that reported data for both years, and include estimates for non respondents who have provided data in other years. The % change from the survey results is used to roll forward the estimated total. The estimated total is also expressed as thousand cubic metres overbark standing for comparison with forecasts and FC removals.

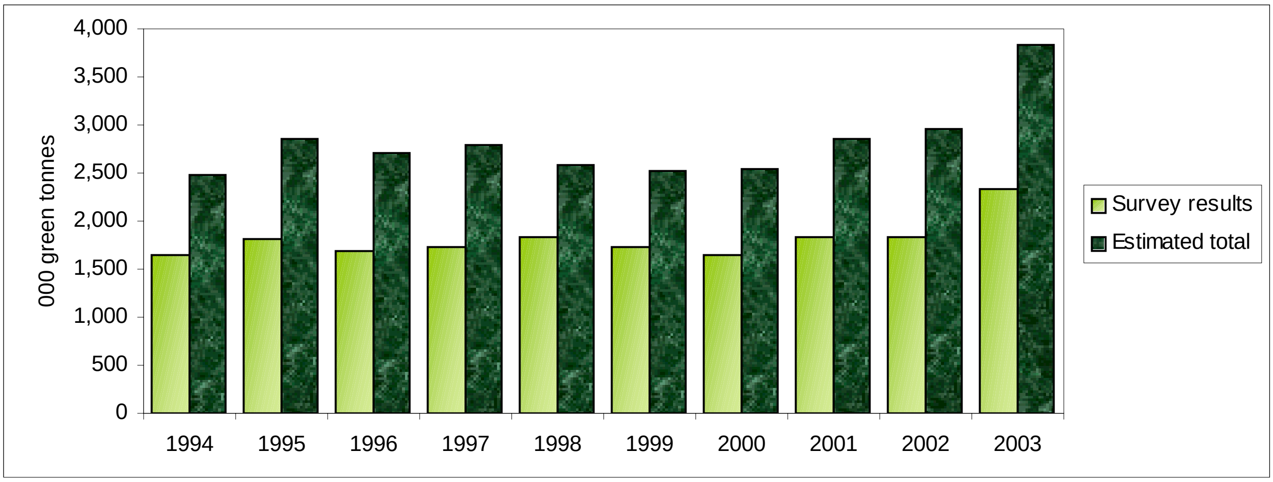
It is estimated that a total of 4.7 million m^3 overbark standing of softwood was removed from non-FC woodlands in 2003. This represents an increase of 29% from the previous year's figure of 3.6 million m^3 overbark standing. Advice from the Expert Group on Timber and Trade Statistics indicates that the quantity of softwood removals from non-FC woodland increased between 2002 and 2003 as a result of a general rise in demand from merchants, the development of sales to Ireland and an increase in exports of pulpwood.

Table 5: Softwood removals survey

Year	Respondents / survey distribution	Survey results [1]		% change on previous year	Estimated total	
		Previous year 000 green tonnes	Latest year 000 green tonnes		000 green tonnes	000 m^3 ob standing
1999	39 / 45 (87%)	1,783	1,727	-3%	2,512	3,070
2000	26 / 43 (60%)	1,631	1,647	+1%	2,536	3,099
2001	30 / 42 (71%)	1,634	1,837	+12%	2,851	3,484
2002	24 / 35 (69%)	1,755	1,827	+4%	2,967	3,626
2003	24 / 33 (73%)	1,816	2,341	+29%	3,824	4,673

[1] Includes estimates for non respondents.

Chart 5: Softwood removals survey



Origin of non-FC softwood

All respondents who reported data for 2003 provided a country breakdown; however estimates had to be made for non-respondents, and for respondents in previous years who did not provide a country breakdown.

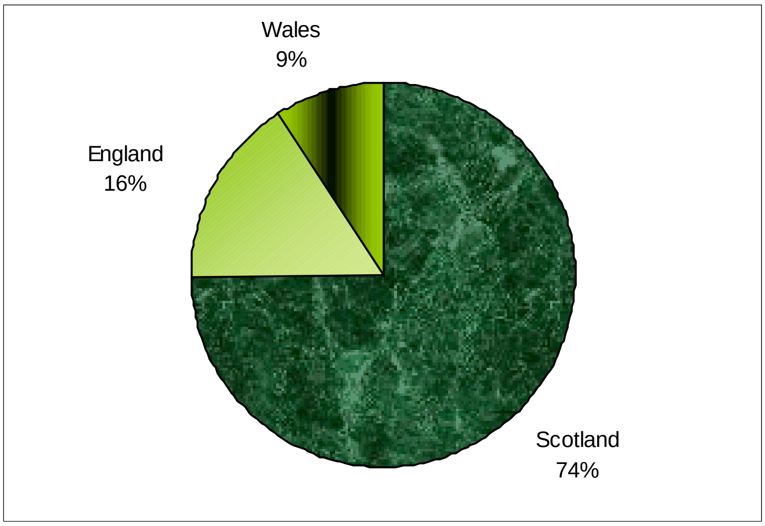
It is estimated that in 2003, 74% of the total non-FC softwood removals were harvested in Scotland, 16% in England and 9% in Wales.

Table 6: Origin of non-FC softwood

percentage of non-FC softwood removals

	1999	**2000**	**2001**	**2002**	**2003**
Great Britain	**100**	**100**	**100**	**100**	**100**
Scotland	67	65	66	77	74
England	20	22	20	14	16
Wales	13	14	14	9	9

Chart 6: Softwood removals survey – origin of non-FC softwood



Certification (non-FC softwood)

Certification, e.g. to the UK Woodland Assurance Standard (UKWAS), demonstrates that an area of woodland is sustainably managed. For the 20 respondents reporting softwood removals from non-FC woodland in 2003, a total of 1.3 million m^3 overbark standing (54%) was certified.

TOTAL: FORESTRY COMMISSION AND NON-FC WOODLANDS

Total softwood removals in 2003 increased by 14% from the previous year; 53% of the total was from Forestry Commission woodlands.

Table 7a: Total softwood removals: Forestry Commission and non-FC woodlands

000 m^3 overbark standing

Year	Forestry Commission[1]	Non-FC woodlands	Total	% FC
1999	5,443	3,070	8,513	64%
2000	5,530	3,099	8,629	64%
2001	5,144	3,484	8,628	60%
2002	5,214	3,626	8,839	59%
2003	5,370	4,673	10,043	53%

[1] Statistics on volumes of Forestry Commission timber harvested are available from administrative records maintained by Forest Enterprise and are converted from recorded quantities of sales to estimated standing volumes using the factors shown in Section G (Figure 1).

Chart 7a: Total softwood removals: Forestry Commission and non-FC woodlands

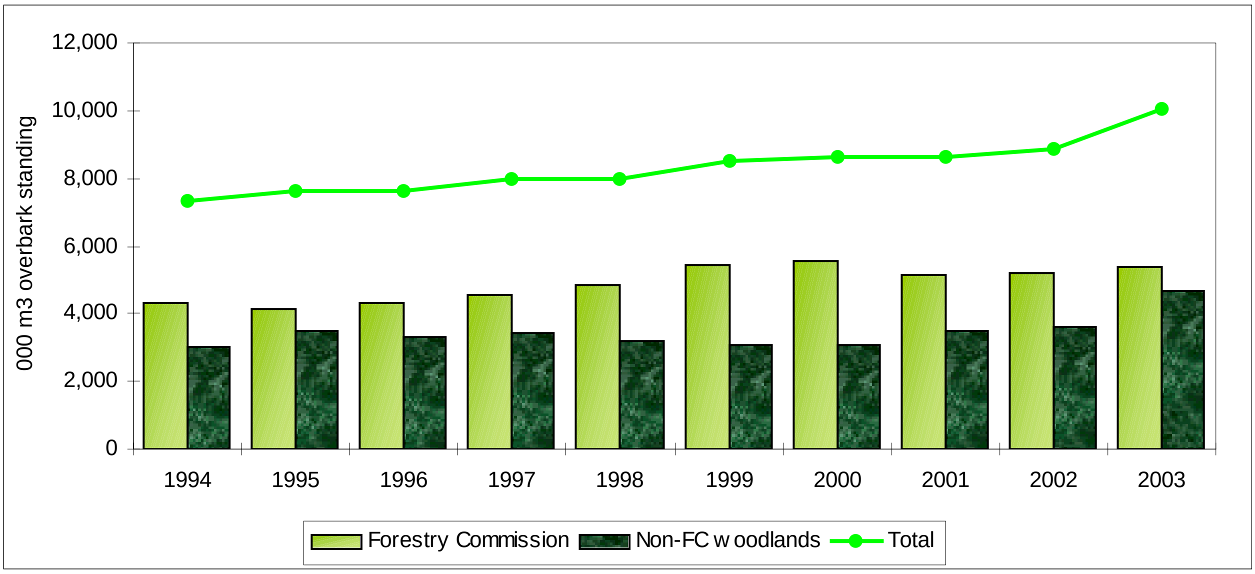


Table 7b: Estimated country breakdown of 2003 softwood removals

000 m^3 overbark standing

	FC[1]	Non-FC[2]	Total
Great Britain	5,370	4,673	10,043
Scotland	2,940	3,482	6,422
England	1,353	766	2,119
Wales	1,076	425	1,501

[1] FC figures are based on administrative records
[2] Estimates for non-FC softwood removals are based on the percentage breakdown shown in table 6.

Chart 7b: Estimated country breakdown of 2003 softwood removals

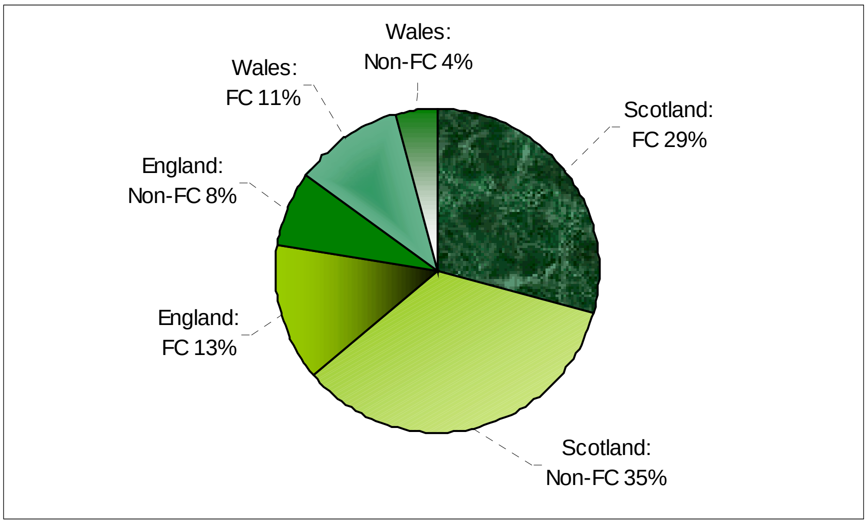


Table 8: Forecast of softwood availability

Forecasts of softwood availability are produced at intervals of approximately 5 years, based on production forecasts for FC woodlands, and data from the National Inventory of Woodland and Trees together with expert advice for non-FC woodlands. No forecasts are currently produced for hardwood availability.

FC softwood removals in recent years have been broadly in line with forecast availability. However, even after the increase in 2003, non-FC softwood removals are still around 20% below the forecast availability level.

000 m^3 overbark standing

	2002 - 2006	2007 - 2011	2012 - 2016	2017 – 2021
Great Britain				
FC woodlands	5,125	5,980	6,244	6,852
Non-FC woodlands	5,746	7,077	8,204	8,630
Total	**10,871**	**13,057**	**14,448**	**15,482**
Scotland				
FC woodlands	2,782	3,477	3,756	4,432
Non-FC woodlands	3,415	4,443	5,351	5,713
Total	**6,197**	**7,920**	**9,107**	**10,145**
England				
FC woodlands	1,378	1,497	1,482	1,414
Non-FC woodlands	1,748	1,966	2,122	2,202
Total	**3,126**	**3,463**	**3,604**	**3,616**
Wales				
FC woodlands	965	1,006	1,006	1,006
Non-FC woodlands	582	669	731	714
Total	**1,547**	**1,675**	**1,737**	**1,720**

Source:
Smith S, Gilbert J and Coppock R (2000), Forestry Commission. Great Britain: New Forecast of Softwood Availability.
In Forestry & British Timber (April 2001)

Chart 8a: Forecast of softwood availability by FC/ non-FC

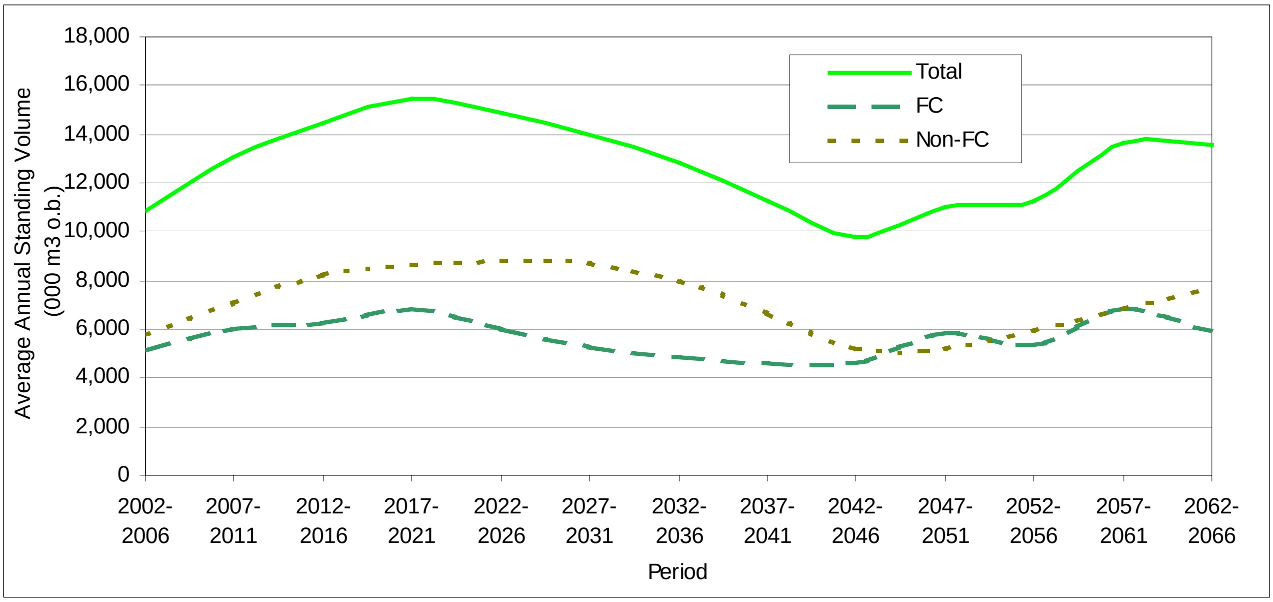
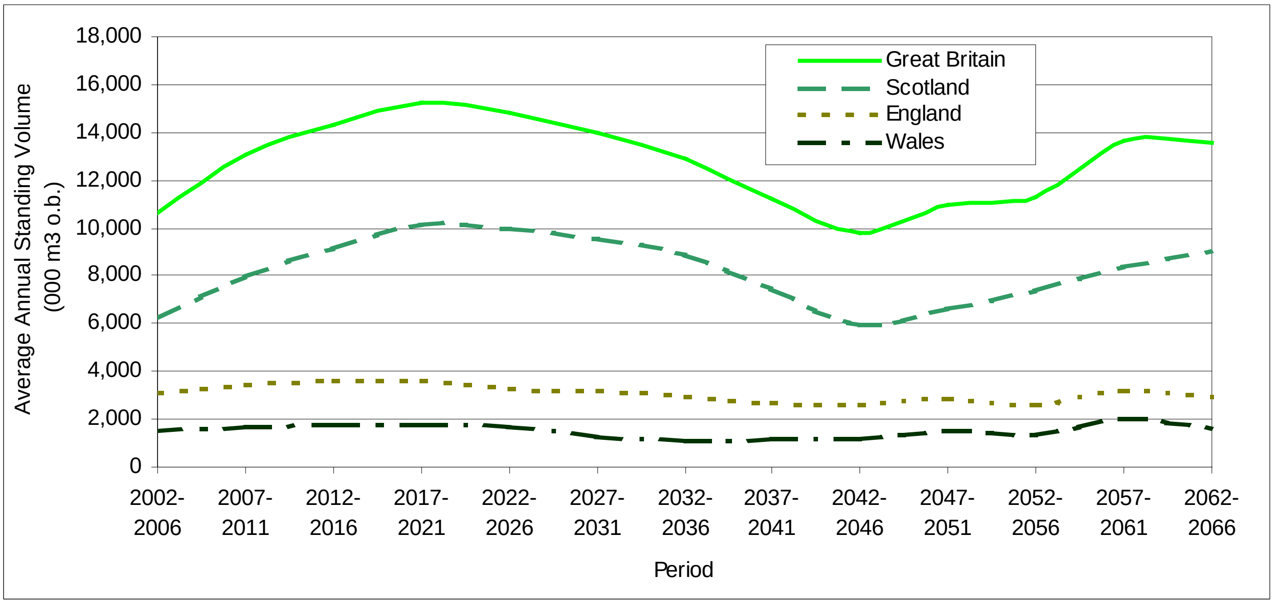


Chart 8b: Forecast of softwood availability by country



Source:
Smith S, Gilbert J and Coppock R (2000), Forestry Commission. Great Britain: New Forecast of Softwood Availability.
In Forestry & British Timber (April 2001)

B: SAWMILLS

This section gives results for timber consumption and sawnwood production from the Sawmill Survey for 2003.

Survey Responses

In the 2003 Survey 260 questionnaires were sent out. Responses were received from 143 mills, a response rate of 55%.

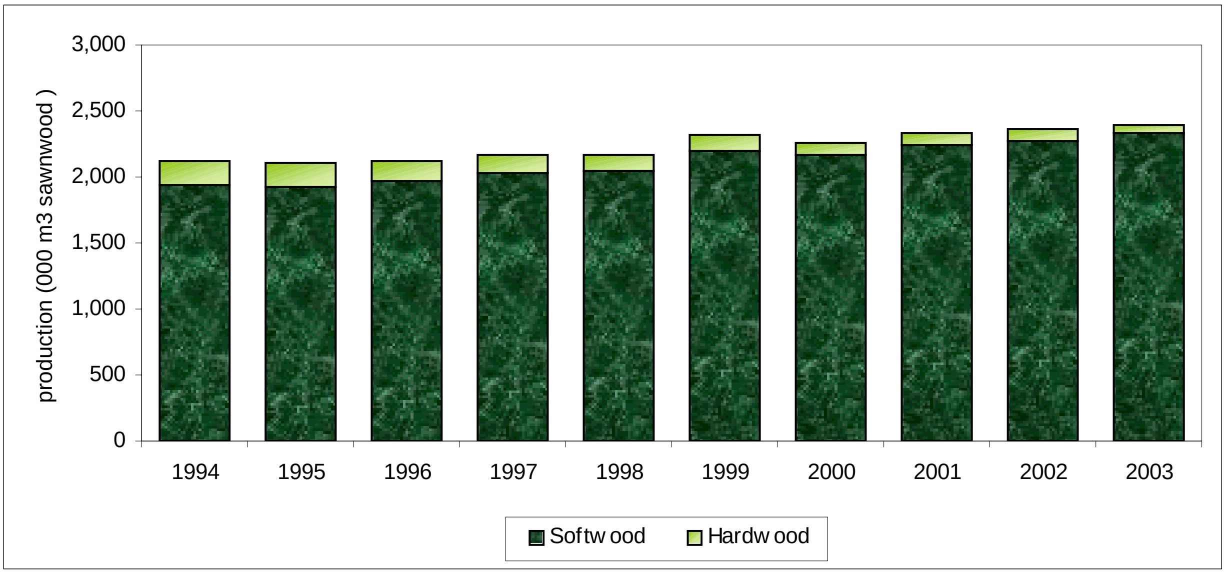
The latest estimates for consumption and sawnwood production in the last five years, including estimates for non-respondents, are shown in Table 9 expressed in thousand cubic metres underbark (ub) for consumption, and thousand cubic metres sawnwood for production. Revisions have been made to historical data.

Sawmills consumed a total of 4.2 million m^3 underbark of British softwood in 2003, an increase of 3% from the 2002 figure of 4.1 million m^3 underbark. Over the same period, hardwood consumption fell by 15%, to 119 thousand m^3 underbark in 2003.

Table 9: Consumption and sawnwood production 1999 - 2003

	Softwood:		Hardwood:	
	consumption (000 m^3 ub)	production (000 m^3)	consumption (000 m^3 ub)	production (000 m^3)
1999	3,956	2,200	193	113
2000	3,936	2,160	170	101
2001	4,050	2,236	165	92
2002	4,120	2,280	140	80
2003	4,240	2,328	119	69

Chart 9: Sawnwood production



Imported Round Timber

Of the mills covered by the survey (those that saw British timber), 14 mills reported using imported round timber in 2003, totalling 500 m^3 underbark softwood and 14,200 m^3 underbark hardwood.

Number of sawmills

Based on all the 2003 survey responses, together with data from previous years for those who did not respond for 2003, it is estimated that there were 234 sawmills processing British timber in 2003, of which 146 produced at least 1,000 m^3 sawnwood.

The number of mills has fallen by around one quarter over the past 5 years, with most of this decline occurring amongst those producing less than 1,000 m^3 sawnwood.

Table 10: Number of sawmills 1999 - 2003

Size Category (based on production)	1999	2000	2001	2002	2003
Great Britain	**310**	**287**	**263**	**242**	**234**
<1,000 m^3	129	111	97	89	88
1,000 - 4,999 m^3	99	101	93	82	78
5,000 - 24,999 m^3	57	49	48	47	42
25,000 - 49,999 m^3	11	13	11	9	11
50,000 m^3+	14	13	14	15	15
Scotland	**88**	**87**	**85**	**81**	**79**
<1,000m^3	30	29	25	22	23
1,000 - 4,999m^3	24	27	27	27	24
5,000 - 24,999m^3	23	19	20	19	18
25,000 - 49,999m^3	3	5	5	4	5
50,000m^3+	8	7	8	9	9
England	**193**	**173**	**151**	**138**	**133**
<1,000m^3	87	73	61	58	58
1,000 - 4,999m^3	68	68	62	53	50
5,000 - 24,999m^3	29	23	20	20	17
25,000 - 49,999m^3	5	5	4	4	4
50,000m^3+	4	4	4	3	4
Wales	**29**	**27**	**27**	**23**	**22**
<1,000m^3	12	9	11	9	7
1,000 - 4,999m^3	7	6	4	2	4
5,000 - 24,999m^3	5	7	8	8	7
25,000 - 49,999m^3	3	3	2	1	2
50,000m^3+	2	2	2	3	2

*** Note:** A sawmill's size category is based on 000 m^3 total sawnwood production i.e. hardwood + softwood.

British Softwood

Consumption of British softwood (in thousand cubic metres underbark) and production (in thousand cubic metres sawnwood) are shown in the following tables, including estimates for non respondents. Total softwood consumption in 2003 was 4.2 million cubic metres underbark and sawn softwood production was 2.3 million cubic metres sawnwood.

Table 11a: Softwood consumption - 2003

000 m^3 underbark

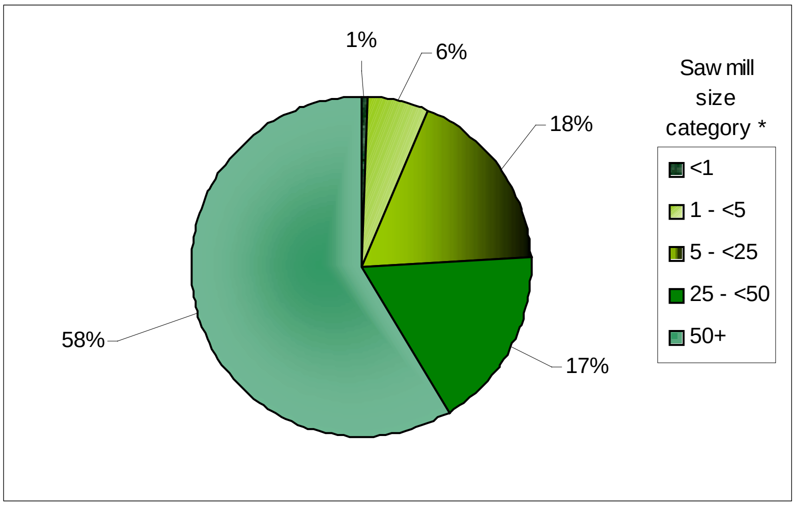
	Sawmill size category *					
	<1	**1 - <5**	**5 - <25**	**25 - <50**	**50+**	**Total**
GB Total	**29**	**244**	**751**	**728**	**2,488**	**4,240**
Scotland	11	92	349	317	1,328	2,097
England	17	128	281	252	702	1,380
Wales	0	24	120	159	459	763

Table 11b: Sawn softwood production - 2003

000 m^3 sawnwood

	Sawmill size category *					
	<1	**1 - <5**	**5 - <25**	**25 - <50**	**50+**	**Total**
GB Total	**17**	**149**	**430**	**400**	**1,333**	**2,328**
Scotland	6	58	198	182	719	1,163
England	10	79	166	133	385	773
Wales	0	12	65	85	230	393

Chart 10: Percentage of softwood consumption by sawmill size category, 2003



*** Note:** A sawmill's size category is based on 000 m^3 total sawnwood production i.e. hardwood + softwood. The above tables show consumption and production of softwood only.

British Hardwood

Consumption of British hardwood (in thousand cubic metres underbark) and production (in thousand cubic metres sawnwood) are shown in the following tables, again including estimates for non respondents. Results for the larger categories are combined, to avoid disclosure of individual returns. Total hardwood consumption in 2003 was 119 thousand cubic metres underbark and total sawn hardwood production was 69 thousand cubic metres sawnwood.

Table 12a: Hardwood consumption - 2003

000 m^3 underbark

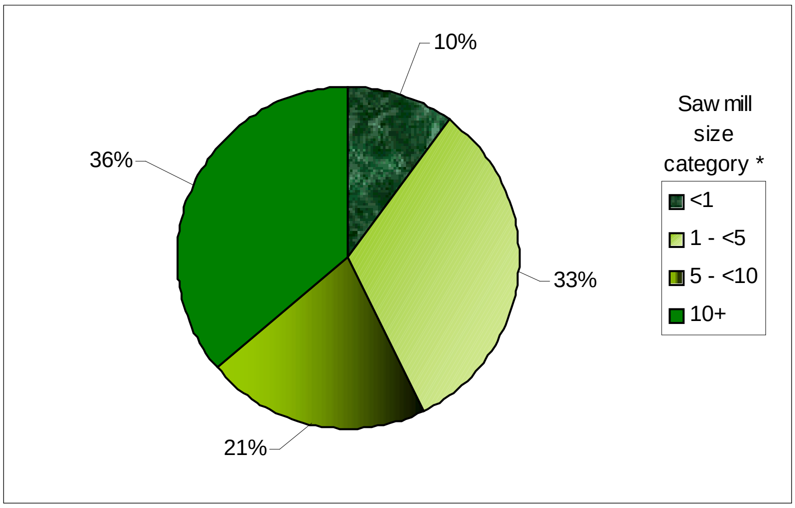
	Sawmill size category *				
	<1	**1 - <5**	**5 - <10**	**10+**	**Total**
GB Total	**12**	**39**	**25**	**43**	**119**
Scotland	1	2	0	0	3
England	11	37	13	43	104
Wales	1	1	11	0	13

Table 12b: Sawn hardwood production - 2003

000 m^3 sawnwood

	Sawmill size category *				
	<1	**1 - <5**	**5 - <10**	**10+**	**Total**
GB Total	**7**	**24**	**15**	**23**	**69**
Scotland	0	1	0	0	2
England	6	23	7	23	59
Wales	0	1	8	0	9

Chart 11: Percentage of hardwood consumption by sawmill size category, 2003



*** Note:** A sawmill's size category is based on 000 m^3 total sawnwood production i.e. hardwood + softwood. The above tables show consumption and production of hardwood only.

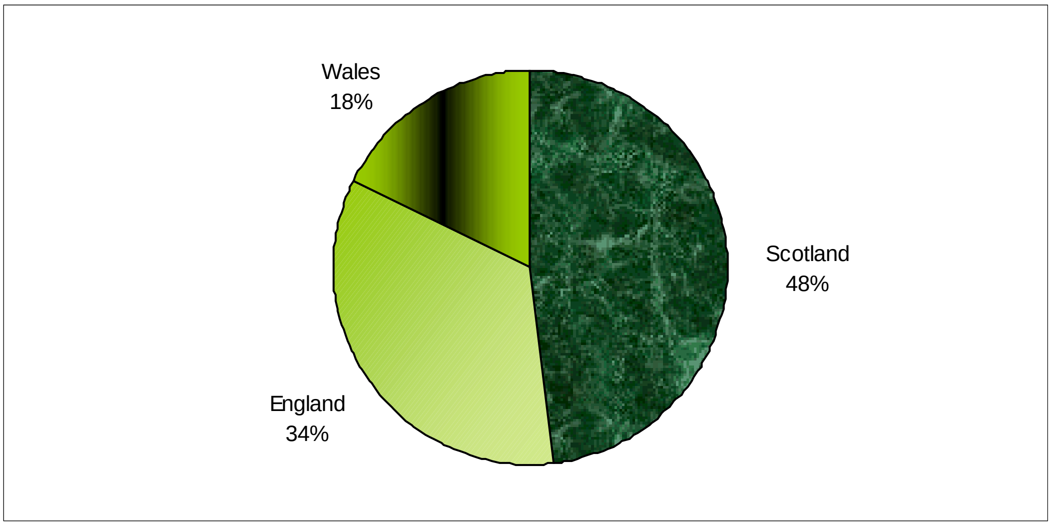
Summary

Table 13 gives summaries of production and consumption, for softwood and hardwood, for the years 1999 to 2003.

Table 13: Summary sawmill statistics 1999 – 2003

		Softwood		Hardwood	
	Year	Log consumption (000 m^3 ub)	Sawnwood production (000 m^3 sawn)	Log consumption (000 m^3 ub)	Sawnwood production (000 m^3 sawn)
Great Britain	1999	3,956	2,200	193	113
	2000	3,936	2,160	170	101
	2001	4,050	2,236	165	92
	2002	4,120	2,280	140	80
	2003	4,240	2,328	119	69
Scotland	1999	1,704	944	10	5
	2000	1,762	974	8	5
	2001	1,949	1,073	3	2
	2002	2,098	1,154	3	2
	2003	2,097	1,163	3	2
England	1999	1,548	882	176	104
	2000	1,470	814	149	87
	2001	1,396	783	150	81
	2002	1,319	746	125	70
	2003	1,380	773	104	59
Wales	1999	703	374	7	5
	2000	703	372	13	9
	2001	705	379	13	9
	2002	703	380	13	9
	2003	763	393	13	9

Chart 12: Sawmills - Total log consumption by country, 2003



Certification

Mills were asked whether they held a chain of custody certificate, the percentage of input volume from certified sources and the percentage of output volume sold as certified. These questions were first asked for the 2002 survey and repeated for the 2003 survey. Excluding nil responses, there were 124 mills providing data for 2003. 34 (27%) reported that they held a chain of custody certificate, although this proportion varied from just 14% of mills producing less than 5 thousand cubic metres sawnwood in 2003 to almost 60% of those producing at least 25 thousand cubic metres sawnwood.

Table 14: Chain of custody certificates [1] – 2003

	Sawmill size category *			
	<5	5 - <25	25+	Total
Total	**79**	**23**	**22**	**124**
Mills holding certificate	11	10	13	34
Mills without certificate	62	11	4	77
Certification status not reported	6	2	5	13

[1] Sawmills responding in 2003, excluding nil responses. These 124 mills accounted for around 80% of the estimated total sawnwood production in 2003.

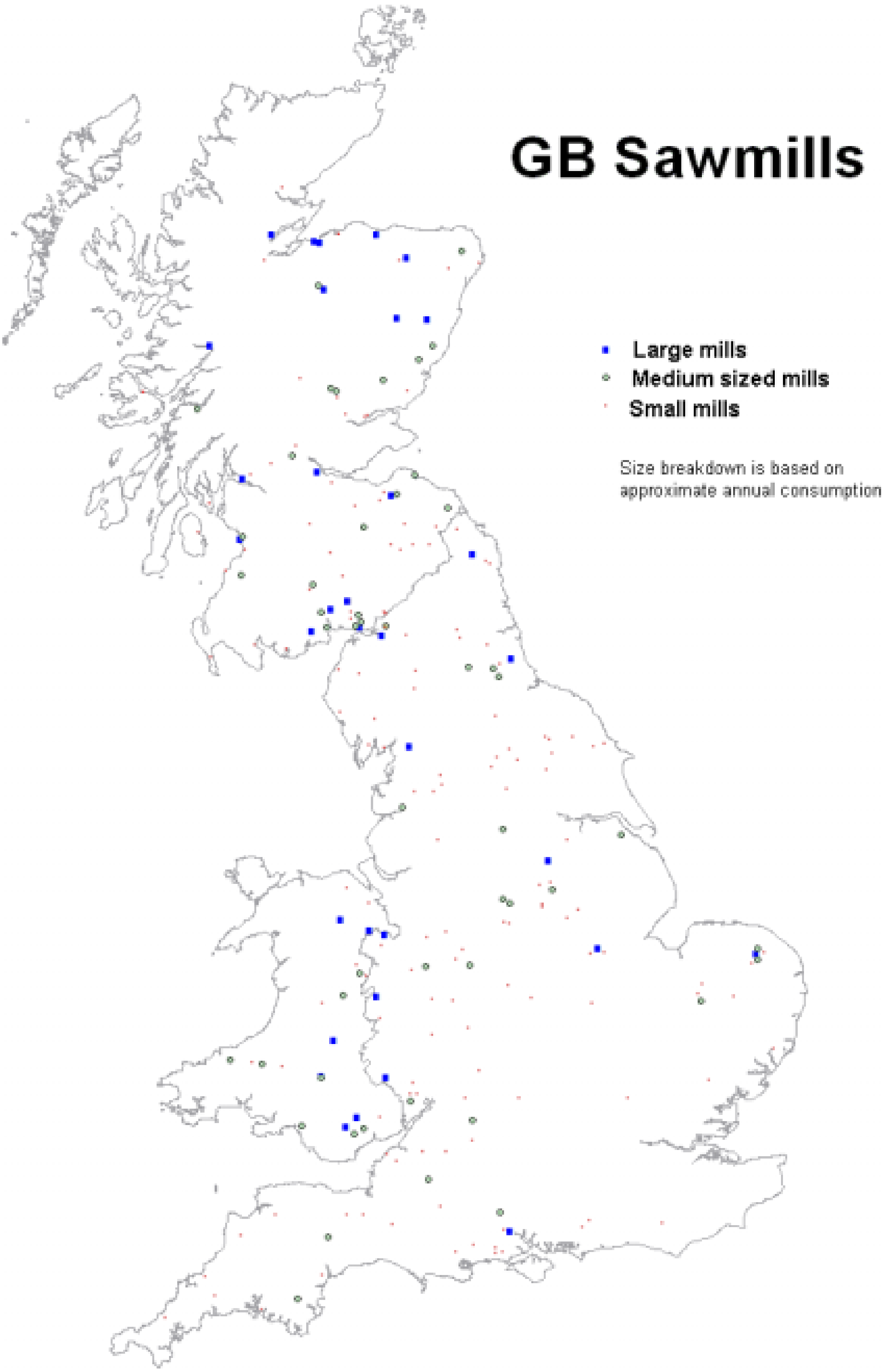
The following table shows the percentage of certified input and output volumes for 2002 and 2003, based on responses received. Certified timber accounted for almost two thirds of consumption and around 50% of sawnwood production in 2003. These proportions varied by size of mill, with larger mills generally reporting higher levels of certified timber than smaller mills.

Table 15: Consumption and production certified 2002 - 2003

		Sawmill size category *			
		<5	5 - <25	25+	Total
% consumption certified	2002	12%	38%	79%	64%
	2003	21%	52%	74%	66%
% production certified [1]	2002	5%	18%	83%	61%
	2003	5%	30%	60%	49%

[1] A number of mills reported 100% certified production in 2002 and 70% certified production in 2003. It is believed that this may have occurred as a result of some confusion over what figure to report rather than any real change in certified volumes output by these mills.

*** Note:** A sawmill's size category is based on 000 m^3 total sawnwood production i.e. hardwood + softwood.


GB Sawmills
Large mills
Medium sized mills
Small mills
Size breakdown is based on
approximate annual consumption

C: PULP & PAPER INDUSTRY

The statistics for the pulp and paper industry in Tables 16 and 17 just cover the integrated pulp and paper mills that use British roundwood, and were provided by the UK Forest Products Association.

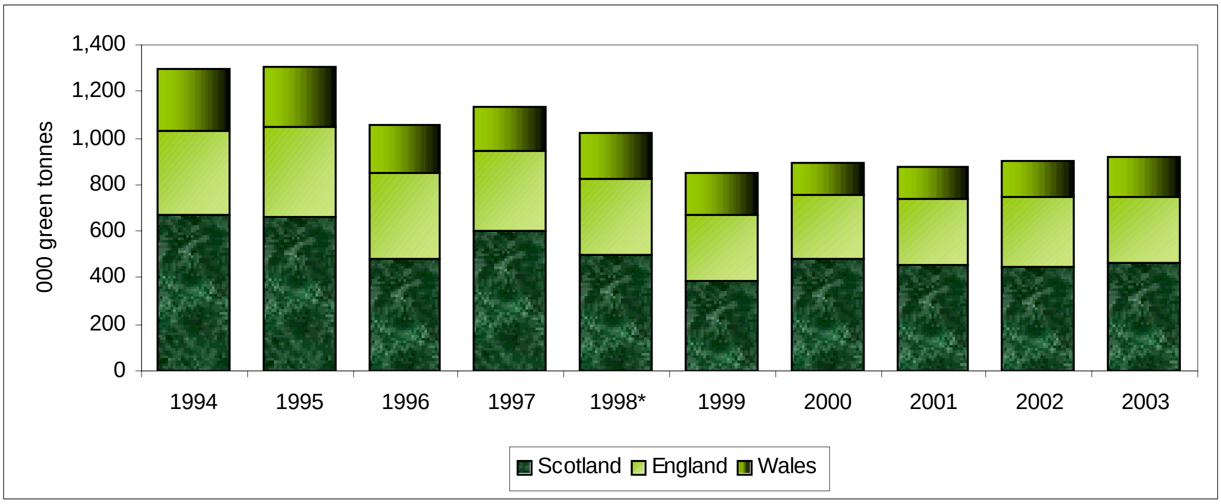
Consumption of British roundwood by the integrated pulp and paper mills was 704 thousand green tonnes of softwood and 215 thousand green tonnes of hardwood in 2003.

Table 16: Origin of British roundwood used by the integrated pulp and paper mills

000 green tonnes

Year	Great Britain		Scotland		England		Wales	
	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard
1999	660	191	383	0	107	177	170	14
2000	695	200	479	0	86	188	130	12
2001	668	209	454	0	86	200	128	9
2002	696	210	448	0	98	200	150	10
2003	704	215	466	0	87	196	151	19

Chart 13: Origin of British roundwood used by the integrated pulp and paper mills



* Country breakdown for 1998 is not available and is estimated from data for other years.

Table 17: Inputs for the integrated pulp and paper mills

000 green tonnes

	1999	2000	2001	2002	2003
British roundwood[1]	**851**	**895**	**877**	**906**	**919**
Soft	660	695	668	696	704
Hard	191	200	209	210	215
Imported roundwood	**0**	**18**	**0**	**0**	**0**
Soft	0	0	0	0	0
Hard	0	18	0	0	0
Imported chips	**9**	**1**	**0**	**0**	**0**
Soft	9	1	0	0	0
Hard	0	0	0	0	0
Sawmill products[2]	**295**	**308**	**323**	**307**	**234**
Soft	295	308	323	307	234
Hard	0	0	0	0	0
Total	**1,155**	**1,222**	**1,200**	**1,213**	**1,153**
Soft	**964**	**1,004**	**991**	**1,003**	**938**
Hard	**191**	**218**	**209**	**210**	**215**

[1] British roundwood includes all material from forest operations.
[2] Sawmill products includes peeled and unpeeled chips, sawdust, slabwood, shavings, postplant chips and peelings.

Chart 14: Inputs for the integrated pulp & paper mills

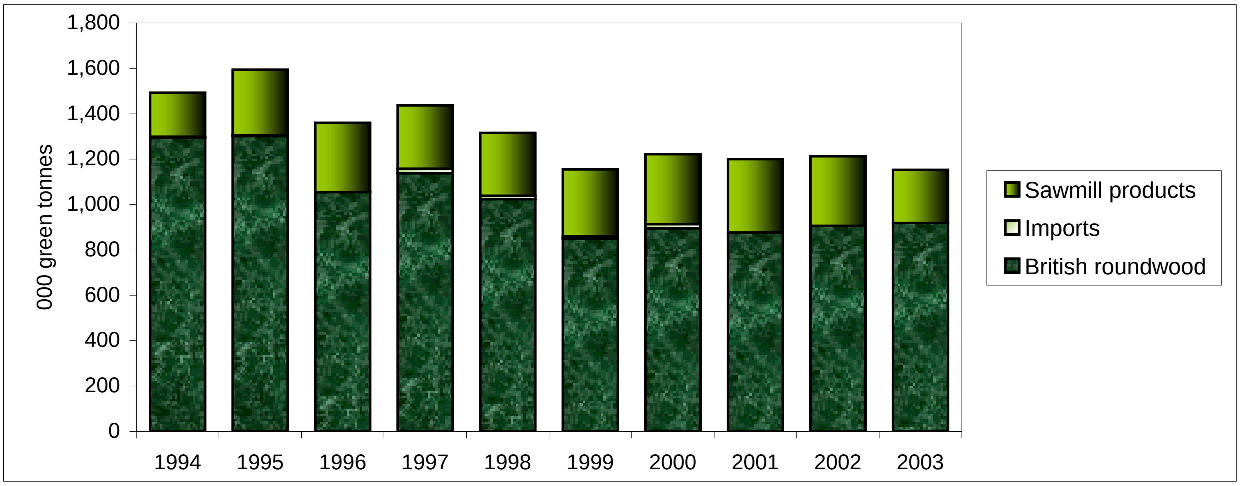


Table 18: Production of pulp and paper

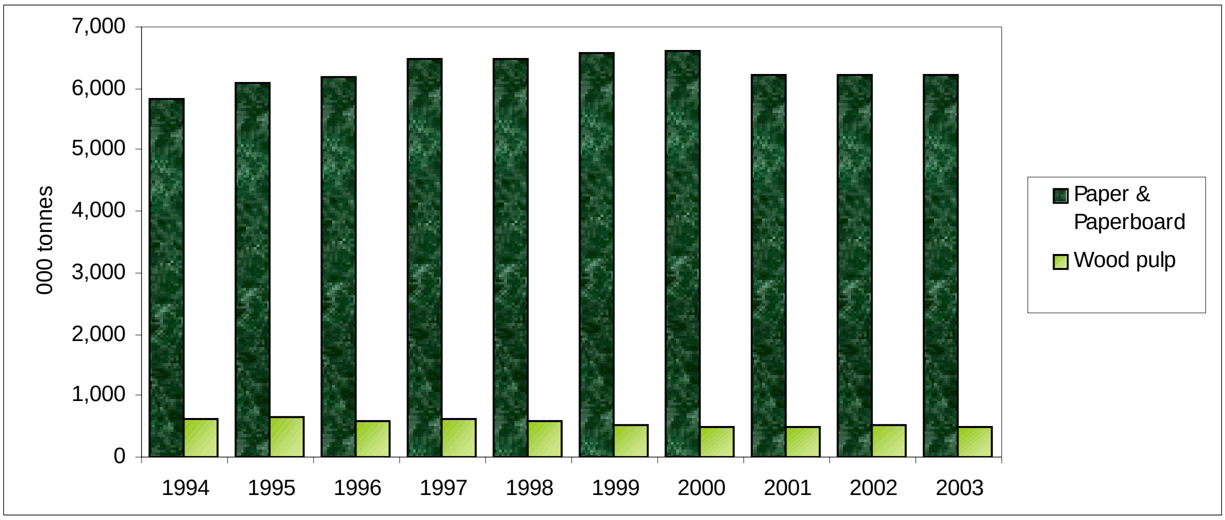
These figures for production of pulp and paper products are supplied by The Paper Federation of Great Britain. They cover all paper production from British mills, not just those using British roundwood.

000 tonnes

Product	1999	2000	2001	2002	2003
Paper & Paperboard	**6,576**	**6,605**	**6,204**	**6,218**	**6,226**
Graphic papers (inc newsprint)	2,816	2,847	2,627	2,526	2,532
Sanitary & household papers	718	724	738	823	808
Packaging materials	2,527	2,291	2,190	2,207	2,240
Other	515	743	649	662	646
Wood pulp [1]	**517**	**474**	**492**	**524**	**504**
Mechanical	442	411	429	444	413
Semi-Chemical	75	63	63	80	91

[1] These figures for wood pulp measure the intermediate product in integrated mills.

Chart 15: Production of pulp & paper



D: WOODBASED PANEL PRODUCTS (UK)

Figures in Table 19 for inputs to the woodbased panel products sector in the UK have been supplied by The Wood Panel Industries Federation (WPIF) since 2000. Previous years figures were supplied by The United Kingdom Forest Products Association (UKFPA).

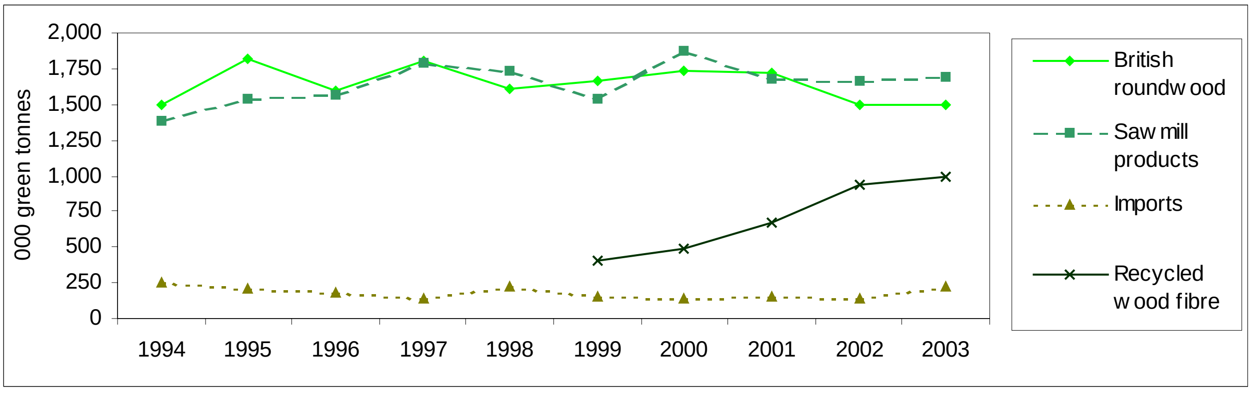
Table 19: Inputs for woodbased panel products

000 green tonnes

	1999	2000	2001	2002	2003
British roundwood[1]					
Total	**1,665**	**1,735**	**1,715**	**1,499**	**1,490**
Soft	1,613	1,685	1,680	1,456	1,486
Hard	52	50	35	43	4
Imported roundwood					
Total	**0**	**0**	**5**	**0**	**0**
Soft	0	0	0	0	0
Hard	0	0	5	0	0
Sawmill products[2]					
Total	**1,532**	**1,871**	**1,675**	**1,669**	**1,686**
Soft	1,522	1,871	1,675	1,669	1,682
Hard	10	0	0	0	4
Imported wood products and products from imported wood[3]					
Total	**150**[#]	**143**	**152**	**134**	**225**
Soft	150[#]	143	132	134	225
Hard	0	0	20	0	0
Recycled wood fibre[4]	**400**	**488**	**675**	**932**	**993**
Total	**3,747**	**4,237**	**4,222**	**4,234**	**4,394**
Soft	**3,285**	**3,699**	**3,487**	**3,259**	**3,393**
Hard	**62**	**50**	**60**	**43**	**8**
Recycled wood fibre[4]	**400**	**488**	**675**	**932**	**993**

[1] British roundwood includes all material from forest operations.
[2] Sawmill products includes peeled and unpeeled chips, sawdust, slabwood, shavings, postplant chips and peelings.
[3] Includes chips and shavings.
[4] Recycled wood fibre is wood fibre recovered from both pre- and post-consumer wood waste for use in wood based panel production.
[#] Estimated by The United Kingdom Forest Products Association

Chart 16: Inputs for woodbased panel products



* Figures for recycled wood fibre are not available prior to 1999

Table 20: Production of woodbased panel products

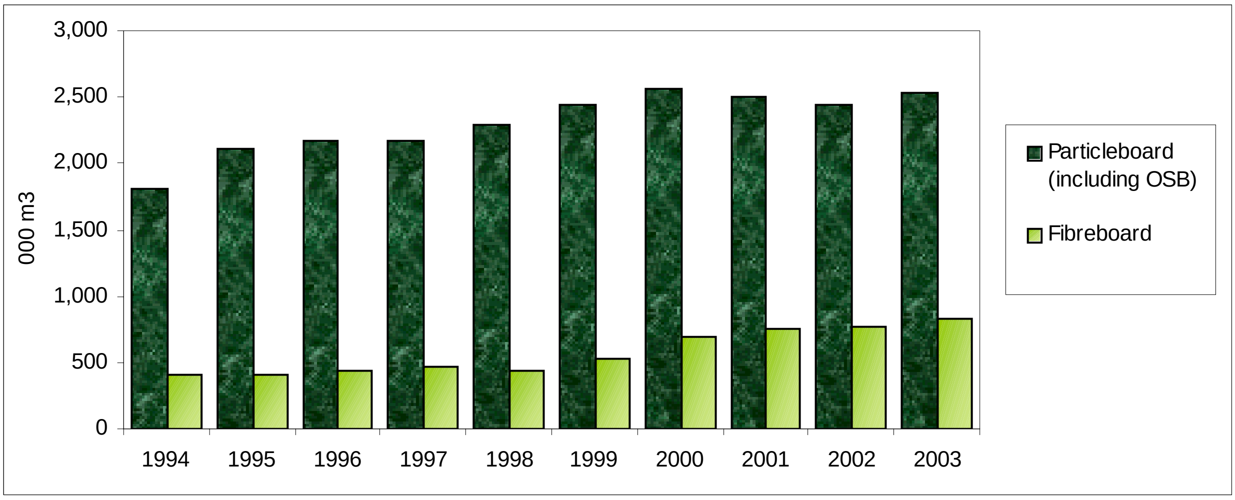
Figures for UK production of woodbased panel products are supplied by The Wood Panel Industries Federation (WPIF).

000m^3

Product	1999	2000	2001	2002	2003
Woodbased Panels (Total)	**2,974**	**3,275**	**3,255**	**3,217**	**3,361**
Particleboard [1]	2,442	2,570	2,498	2,446	2,526
Fibreboard	527	700	757	771	835
Hardboard	12	0	0	0	0
MDF (Medium Density)	515	700	757	771	835
Plywood	5	5	0	0	0

[1] Particleboard includes wood chipboard, cement bonded particleboard and oriented strand board (OSB).

Chart 17: Production of woodbased panel products



E: MISCELLANEOUS PRODUCTS

ROUNDWOOD FENCING MANUFACTURERS

Surveys of roundwood fencing manufacturers have been carried out for each year since 1993. The survey is now believed to give a good coverage of softwood fencing, but only a very limited coverage of hardwood.

For 2003, questionnaires were sent out to 104 manufacturers and 52 responses were received (50% response). Earlier years figures have been revised in light of information received during the current survey.

Based on the 2003 survey, including estimates for non-respondents, it is estimated that in 2003 there were 64 manufacturers using a total of 233 thousand tonnes of softwood.

Table 21: Softwood round fencing - Number of manufacturers

Year	Size category (green tonnes p.a.)				Total
	Under 1,000	1,000-4,999	5,000-9,999	10,000+	
1999	36	39	6	9	90
2000	41	32	6	6	85
2001	39	29	6	6	80
2002	32	21	8	6	67
2003	27	24	7	6	64

Chart 18: Softwood round fencing manufacturers

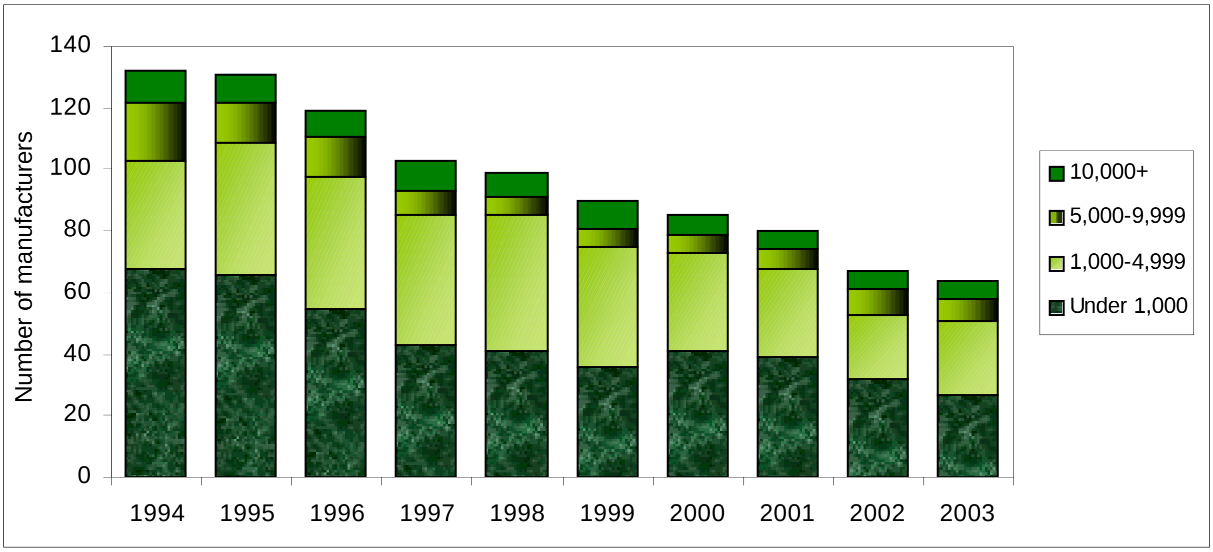
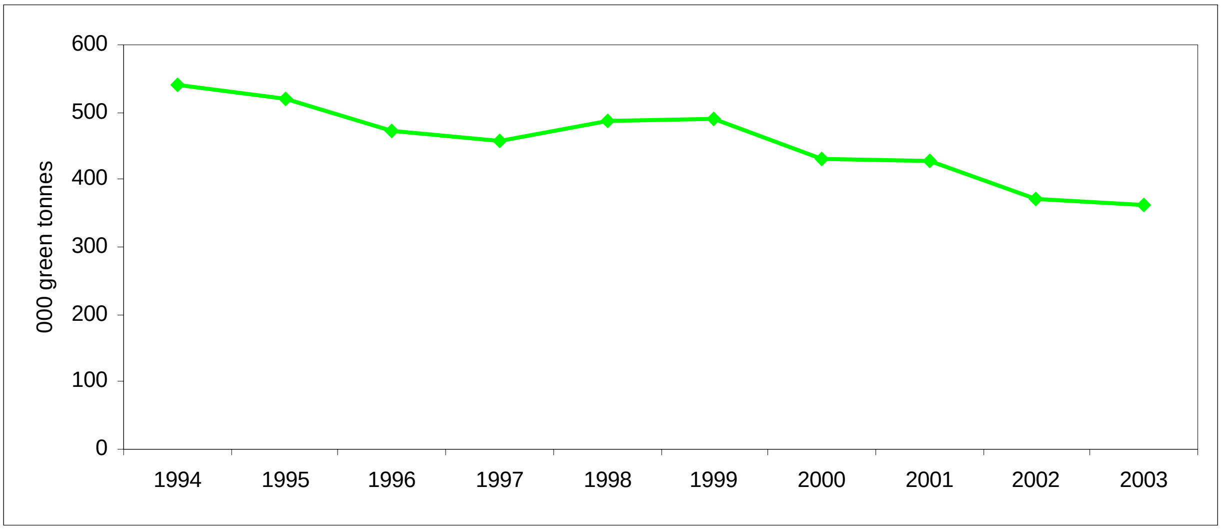


Table 22: British roundwood purchased by softwood round fencing manufacturers

000 green tonnes

Year	Size category (green tonnes p.a.)				Total
	Under 1,000	1,000-4,999	5,000-9,999	10,000+	
1999	10	89	40	218	357
2000	13	73	44	169	299
2001	11	65	43	178	297
2002	10	53	52	126	241
2003	9	53	46	126	233

Chart 19: British roundwood purchased by softwood round fencing manufacturers



Certification

Manufacturers were asked whether they held a chain of custody certificate and the percentage of their input and output volumes which were certified. Excluding nil responses, there were 45 manufacturers providing data in 2003, of which 12 manufacturers (27%) reported that they held a chain of custody certificate.

12 manufacturers recorded input from certified sources, accounting for between 50% and 100% of roundwood consumed. This represents around 36% of total roundwood consumption by manufacturers reporting data in 2003.

9 manufacturers recorded output sold as certified, accounting for between 50% and 100% of production from these manufacturers.

SUMMARY FOR MISCELLANEOUS PRODUCTS

Softwood

For softwood fencing the figures shown in Table 23 are based on the Fencing Surveys. Woodwool figures are reported by the manufacturers. All other figures are estimates.

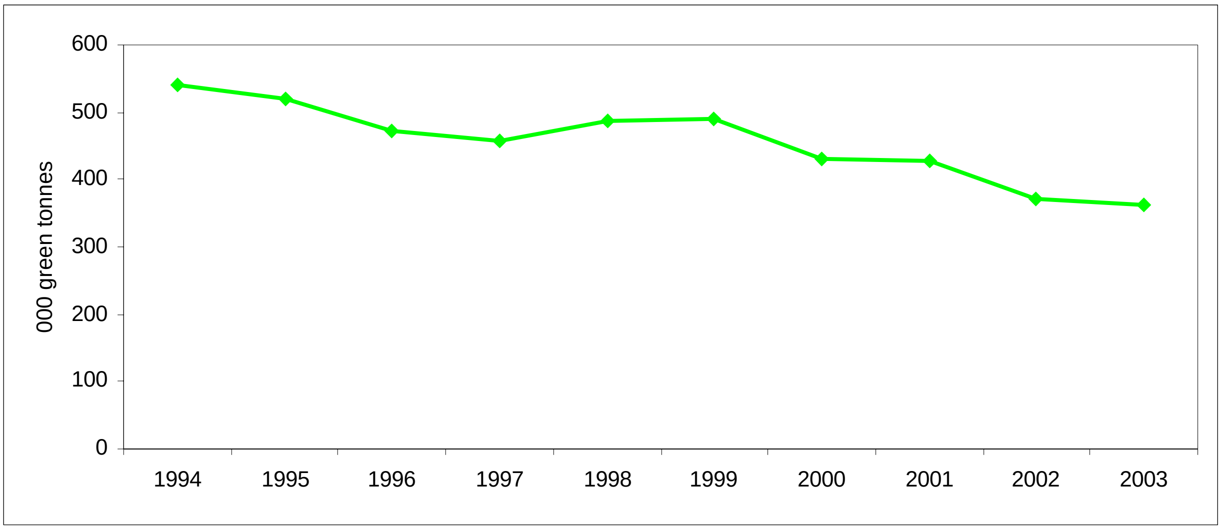
Table 23: Miscellaneous uses of British softwood roundwood

000 green tonnes

	Fuelwood#	Poles#	Woodwool	Fencing	Other#	Total
1999	100	4	3	357	25	**489**
2000	100	4	3	299	25	**431**
2001	100	4	2	297	25	**428**
2002	100	4	0	241	25	**370**
2003	100	4	0	233	25	**362**

Estimated by the former FCAP Sub-Committee on Supply and Demand.

Chart 20: Miscellaneous uses of British softwood roundwood



Hardwood

No firm data are available for miscellaneous uses of hardwood. The former FCAP Sub-Committee on Supply and Demand estimated that, for each year since 1994, around 150 thousand green tonnes is used for fuelwood, around 30 thousand green tonnes for round fencing and around 25 thousand for other uses, a total of 205 thousand green tonnes.

F: ROUNDWOOD EXPORTS *

Pulpwood exports increased from 133 thousand green tonnes in 2002 to 217 thousand green tonnes in 2003. A further 125 thousand green tonnes of logs were estimated to have been exported from GB in 2003.

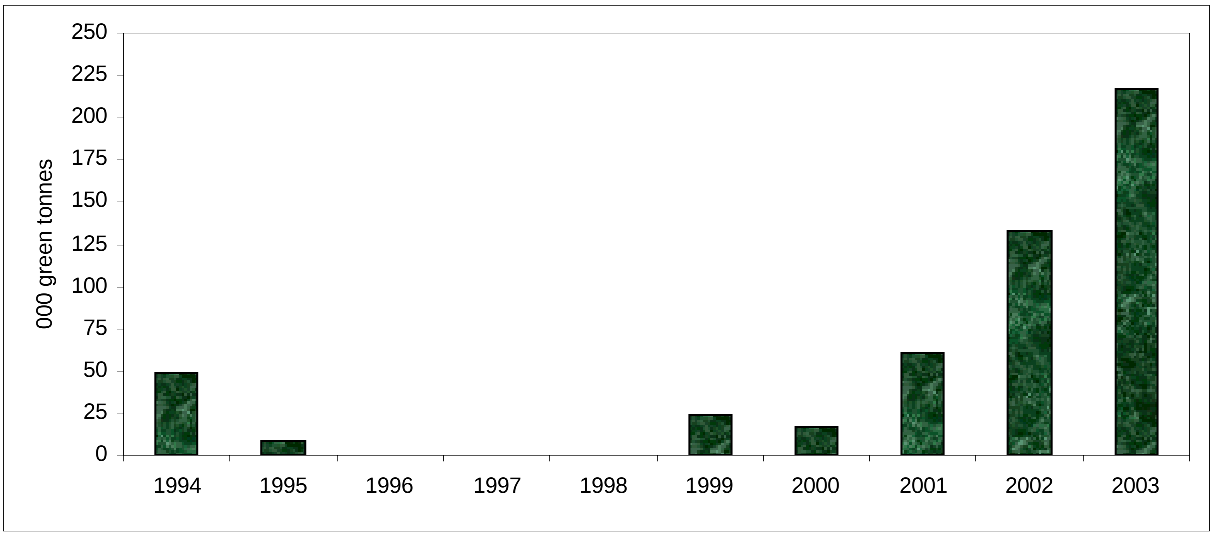
Table 24: Pulpwood exports

000 green tonnes

Year	Great Britain	Scotland	England	Wales
1999	24	24	0	0
2000	16	..	..	..
2001	61	..	..	..
2002	133	123	0	10
2003	217	187	2	28

.. Data not available.

Chart 21: Pulpwood exports



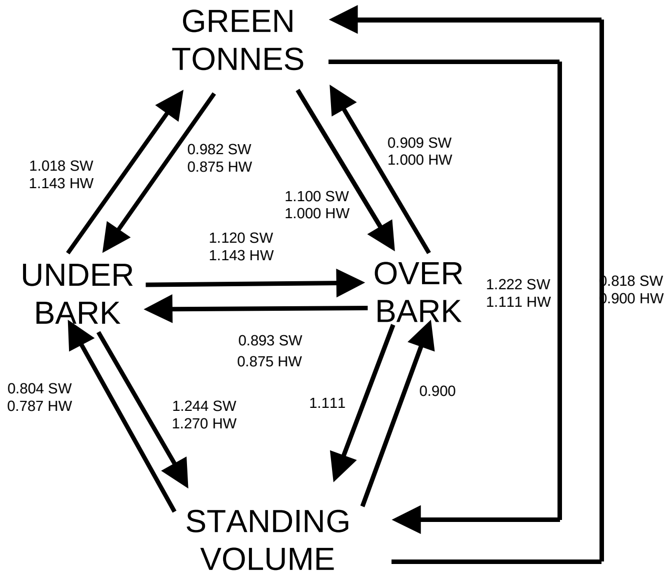
* Note: Roundwood exports include sales from GB to Northern Ireland.

G. CONVERSION FACTORS

CUBIC METRES AND GREEN TONNES

Conversion factors were used in this report to convert between cubic metres (standing, overbark or underbark) and green tonnes (delivered weight, including moisture). These are illustrated in the following diagram (where different factors apply to softwood and hardwood, these are marked SW and HW). Factors are generalised, based on a range of different types of timber and processing methods. They are shown to 3 decimal places to ensure the diagram balances.

Figure 1: Conversion factors between cubic metres and green tonnes



WOOD RAW MATERIAL EQUIVALENT

A revised set of factors that indicates the volume of standing tree crop (wood raw material equivalent - WRME) needed to produce one unit of a final product was published in 'Revised Forecasts of the Supply and Demand for Wood in the UK' by Adrian Whiteman (FC Technical Paper 19, 1996). The factor for paper products includes an allowance for the proportion of recycled paper manufactured in the UK. The factors are shown below:

Table 25: Conversion factors to WRME

Product	Measurement Unit	Factor to WRME
Fuelwood and charcoal	m^3	1.25
Other industrial roundwood	m^3	1.25
Softwood sawnwood	m^3	2.13
Hardwood sawnwood	m^3	2.09
Newsprint	tonnes	)
Printing and writing paper	tonnes	) 4.30
Other paper and paperboard	tonnes	)
Plywood	m^3	3.67
Fibreboard	m^3	2.35
Particleboard	m^3	1.61
Veneer sheets	m^3	3.67

Notes 1. The charcoal conversion factor is for volume to volume. About 7.8 m^3 of wood is required to make one tonne of charcoal, but one tonne of charcoal is equal to about 6 m^3 in volume.
2. The conversion factor for Oriented Strand Board (OSB) is higher than for other types of particleboard, and the average for particleboard has been constructed by assuming that OSB is 25% of the total.