BRITISH TIMBER STATISTICS 2001

Statistics on British timber harvested and used by primary wood processing industries in Great Britain 1994-2001

Prepared by Economics & Statistics Unit of the Forestry Commission in association with the Forestry Commission Advisory Panel (FCAP) Sub-Committee on Supply and Demand.

Economics & Statistics Unit, Forestry Commission
29 August 2002

A National Statistics publication

Official statistics bearing the National Statistics logo are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from political interference.

You can also find National Statistics on the internet – go to www.statistics.gov.uk

Forestry Commission's Statistical Release Practices

The Forestry Commission aims to release statistics as soon as they are available. All of our National Statistics publications are available on our website (www.forestry.gov.uk/statistics) and as hard copies. Release dates are published on our website for the year ahead at six monthly intervals (in June and December) and publications are made available at 12.30 on the day of release.

Forestry Commission's Statistical Revisions Policy

Revisions to statistics can occur when further data become available or errors are corrected. The Forestry Commission will normally revise statistics when the figures next appear in any publication. However, if the revision is significant (i.e. resulting in a major change to the published figures), a note showing the revisions will be published as soon as possible on our website (www.forestry.gov.uk/statistics) and distributed to all known recipients. In addition, the web versions of any current publications affected will be revised.

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

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

Statistician:
Simon Gillam 0131 314 6280
simon.gillam@forestry.gsi.gov.uk

Website:
www.forestry.gov.uk/statistics

CONTENTS

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 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 1994 to 2001, but earlier figures are available from the non-NS publication British Timber Statistics 1999.

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 & Statistics Unit, in association with the Forestry Commission Advisory Panel (FCAP) Sub-Committee on Supply and Demand. We gratefully acknowledge the assistance of all members of the Sub-Committee and of the associations that they represent.

Mr D M Hughes, Chairman
Mr A Christison, UK Forest Products Association
Mr A Smith, UK Forest Products Association
Mr J Viviani, UK Forest Products Association
Mr G Webb, UK Forest Products Association
Mr N Campbell, Forestry & Timber Association (Scotland)
Mr W A Willis, Forestry & Timber Association (England & Wales)
Mr N Purdy, Forest Enterprise
Mr S Smith, Forest Research
Mr R E Selmes, Forestry Commission

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 24).

SUMMARY TABLES 1994-2001

Tables 1 – 4 present a summary of the statistics that appear 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	Pulpwood exports	Total
1994	3,411	1,104	1,407	406	136	48	6,512
1995	3,375	1,106	1,699	387	134	8	6,709
1996	3,472	853	1,500	337	134	0	6,296
1997	3,537	940	1,690	323	133	0	6,623
1998	3,612	844	1,527	353	133	0	6,469
1999	3,907	660	1,613	358	132	24	6,694
2000	3,887	695	1,685	295	132	16	6,710
2001	3,956	729	1,680	297	131	61	6,854

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	6,512	-502
1995	3,379	2,872	6,251	6,709	-458
1996	3,511	2,761	6,272	6,296	-24
1997	3,740	3,101	6,841	6,623	+218
1998	3,950	2,796	6,746	6,469	+277
1999	4,452	2,763	7,215	6,694	+521
2000	4,524	3,248	7,772	6,710	+1,062
2001	4,208	3,647	7,855	6,854	+1,001

[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.

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	246	180	77	205	708
1999	222	191	52	205	670
2000	195	200	50	205	650
2001	191	209	35	205	640

[1] Other includes fencing

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	113	667
1997	803	101	702
1998	708	132	576
1999	670	142	528
2000	650	144	506
2001	640	161	479

[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.

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 first FC survey was for 1994 when 33 questionnaires were sent out. In 1996 the distribution was increased to 38, a further six companies were added for the 1998 survey and two more for the 1999 survey. During the course of the surveys the distribution list is amended as we become aware of closures etc. The response rate for 2001 includes 7 companies that reported no longer harvesting British timber and who have now been removed from the distribution list, and 1 nil return. Twenty one respondents gave data for both 2000 and 2001.

Results are shown in Table 5. The % change on the previous year is calculated using data from those respondents who give figures for two years on their latest return. This % change is used to roll forward the estimated total, which is also expressed as 000 m^3 overbark standing for comparison with forecasts and FC removals.

Table 5 Softwood removals survey

Year	Respondents / survey distribution	Respondents only		% change on previous year	Estimated total [1]	
		Previous year 000 green tonnes	Latest year 000 green tonnes		000 green tonnes	000 m^3 ob standing
1994	33 / 33 (100%)	1,333	1,639	+23%	2,476	3,026
1995	24 / 33 (73%)	1,306	1,515	+16%	2,872	3,510
1996	32 / 38 (84%)	1,601	1,539	- 4%	2,761	3,374
1997	26 / 38 (68%)	1,388	1,559	+12%	3,101	3,790
1998	30 / 43 (70%)	1,563	1,409	-10%	2,796	3,416
1999	39 / 45 (87%)	1,858	1,836	-1%	2,763	3,376
2000	26 / 43 (60%)	1,526	1,794	+18%	3,248	3,969
2001	30 / 42 (71%)	1,782	2,002	+12%	3,647	4,459

[1] Figures have been revised to base the entire series since 1994 on this survey; previous estimates used another survey for the first two years.

Origin of timber

Last year respondents were asked for the first time, to indicate which country, or countries, they had harvested timber from. Of the respondents who reported data for 2001, only one company did not provide a country breakdown. From the returns it is estimated that in 2001, 64.7% of the total softwood removals were harvested in Scotland, 20.5% in England and 14.9% in Wales. The table below includes revisions to the estimates made last year for 1999 and 2000.

Table 6 Origin of softwood

000 m^{3}ob standing

	1999	2000	2001
Great Britain	3,376	3,969	4,459
Scotland	2,292	2,544	2,883
England	699	881	913
Wales	385	544	663

TOTAL: FORESTRY COMMISSION AND NON-FC WOODLANDS

Total softwood removals in 2001 were 1.1% up on 2000; 54% of the total was from Forestry Commission woodlands.

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

000 m^3 overbark standing

Year	Forestry Commission[1]	Non-FC woodlands	Total	% FC
1994	4,320	3,026	7,346	59%
1995	4,131	3,510	7,641	54%
1996	4,292	3,374	7,666	56%
1997	4,572	3,790	8,362	55%
1998	4,829	3,416	8,245	59%
1999	5,443	3,376	8,819	62%
2000	5,530	3,969	9,499	58%
2001	5,144	4,459	9,603	54%

[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 specific factors.

The figures in Table 2 showed that the increase in removals reported since 1998 is not reflected in the statistics for deliveries to wood processing sectors. There are therefore concerns about the survey's estimates of removals from non-FC woodlands.

Table 8 Forecast of softwood availability – Forest Enterprise and private sector

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

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

Note:
In the Table 8 above ‘Private Sector’ refers to all non-FC woodlands including woodlands owned by other public bodies such as local authorities, etc.
.

B: GB SAWMILLS - ANNUAL SURVEY 2001

This section gives results for timber consumption and sawnwood production from the Sawmill Survey for 2001.

Survey Responses

In the 2001 Survey 334 questionnaires were sent out. During the time the survey was running an exercise was carried out to identify closed mills which were still ‘live’ either in the data set or on the distribution list. After removing mills identified during this exercise together with closures reported during the current survey, it is now believed there are 260 active mills currently sawing British timber. A further 13 mills have been added to the distribution list in recent years but have never responded, so no data are available for them. Of the 260 mills, which we believe to be active, responses were received from 172 mills, a response rate of 66%.

The latest estimates for consumption and production in the last eight 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 for sawmills that reported data for the first time in 2001, or who closed before 2001 but who only notified us of their closure during the 2001 survey.

Table 9: Consumption and production 1994 - 2001

	Softwood:		**Hardwood:**	
	consumption (000 m^3 ub)	**production (000 m^3)**	**consumption (000 m^3 ub)**	**production (000 m^3)**
1994	3,351	1,916	303	173
1995	3,315	1,892	317	183
1996	3,411	1,910	247	146
1997	3,474	1,972	247	137
1998	3,548	1,983	215	120
1999	3,838	2,135	194	113
2000	3,818	2,095	171	101
2001	3,886	2,146	167	93

Imported Round Timber

Of the mills covered by the survey (those that saw British timber) it is estimated that 21 mills used imported round timber in 2001, totaling 14,200 m^3 ub softwood and 13,400 m^3 ub hardwood. This is based on responses for 2001 and estimates for non-respondents that had reported using imported round timber in earlier years.

Number of sawmills

Based on all the 2001 survey responses, together with data from previous years for those who did not respond for 2001, it is estimated that there were 260 sawmills processing British timber in 2001, of which 161 produced at least 1,000 m^3 sawnwood. Of those 161 mills, 120 processed softwood only, 11 hardwood only, and 30 both hardwood and softwood. Of the 99 smaller mills, 45 processed softwood only, 12 hardwood only, and 42 both hardwood and softwood.

Table 10: Number of sawmills 1994 - 2001

Size Category (production)	1994	1995	1996	1997	1998	1999	2000	2001
Great Britain	**475**	**433**	**385**	**357**	**325**	**302**	**280**	**260**
<1,000m^3	248	212	182	164	136	128	111	99
1,000 - 4,999m^3	141	136	120	113	111	95	97	90
5,000 - 24,999m^3	65	65	61	57	56	55	47	48
25,000 - 49,999m^3	14	15	15	15	11	10	12	9
50,000m^3+	7	5	7	8	11	14	13	14
Scotland	**121**	**110**	**98**	**96**	**91**	**83**	**82**	**81**
<1,000m^3	58	47	42	42	35	30	29	26
1,000 - 4,999m^3	28	29	24	22	23	22	25	25
5,000 - 24,999m^3	26	25	22	22	23	21	17	19
25,000 - 49,999m^3	5	7	7	6	4	2	4	3
50,000m^3+	4	2	3	4	6	8	7	8
England	**319**	**289**	**255**	**232**	**206**	**192**	**173**	**154**
<1,000m^3	173	150	125	110	90	87	73	62
1,000 - 4,999m^3	106	98	89	84	80	66	66	61
5,000 - 24,999m^3	33	35	33	30	28	30	25	23
25,000 - 49,999m^3	5	4	6	6	5	5	5	4
50,000m^3+	2	2	2	2	3	4	4	4
Wales	**35**	**34**	**32**	**29**	**28**	**27**	**25**	**25**
<1,000m^3	17	15	15	12	11	11	9	11
1,000 - 4,999m^3	7	9	7	7	8	7	6	4
5,000 - 24,999m^3	6	5	6	5	5	4	5	6
25,000 - 49,999m^3	4	4	2	3	2	3	3	2
50,000m^3+	1	1	2	2	2	2	2	2

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 2001was 3.89 million m^3 underbark and sawn softwood production was 2.15 million m^3 sawnwood.

Table 11a : Softwood consumption - 2001

000 m^3 underbark

	Sawmill size category (000 m^3 total production: hard + soft)					
	<1	**1 - <5**	**5 - <25**	**25 - <50**	**50+**	**Total**
GB Total	**42**	**280**	**823**	**626**	**2,115**	**3,886**
Scotland	12	102	379	203	1,100	1,796
England	26	153	341	280	620	1,420
Wales	3	25	103	143	395	670

Table 11b : Softwood production - 2001

000 m^3 sawnwood

	Sawmill size category (000 m^3 total production: hard + soft)					
	<1	**1 - <5**	**5 - <25**	**25 - <50**	**50+**	**Total**
GB Total	**25**	**167**	**478**	**331**	**1,145**	**2,146**
Scotland	7	60	221	112	591	991
England	16	92	201	141	346	795
Wales	2	15	57	79	208	360

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 2001 was 167 thousand m^3 underbark and total sawn hardwood production was 93 thousand m^3 sawnwood.

Table 12a : Hardwood consumption - 2001

000 m^3 underbark

	Sawmill size category (000 m^3 total production: hard + soft)				
	<1	**1 - <5**	**5 - <10**	**10+**	**Total**
GB Total	**14**	**72**	**41**	**40**	**167**
Scotland	1	2	0	0	3
England	11	71	30	40	151
Wales	2	0	11	0	13

Table 12b : Hardwood production - 2001

000 m^3 sawnwood

	Sawmill size category (000 m^3 total production: hard + soft)				
	<1	**1 - <5**	**5 - <10**	**10+**	**Total**
GB Total	**8**	**43**	**23**	**19**	**93**
Scotland	1	1	0	0	2
England	6	42	15	19	82
Wales	1	0	8	0	9

Summary

Table 13 gives summaries of production and consumption, for softwood and hardwood, for the years 1994 to 2001.

Table 13 - Summary sawmill statistics: 1994 – 2001

	Year	Softwood		Hardwood	
		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	1994	3,351	1,916	303	173
	1995	3,315	1,892	317	183
	1996	3,411	1,910	247	146
	1997	3,474	1,972	247	137
	1998	3,548	1,983	215	120
	1999	3,838	2,135	194	113
	2000	3,818	2,095	171	101
	2001	3,886	2,146	167	93
Scotland	1994	1,432	810	12	6
	1995	1,390	784	16	9
	1996	1,440	798	12	6
	1997	1,473	822	13	6
	1998	1,502	832	10	5
	1999	1,612	892	10	5
	2000	1,668	923	8	5
	2001	1,796	991	3	2
England	1994	1,423	826	281	160
	1995	1,373	805	290	168
	1996	1,392	798	226	134
	1997	1,399	817	227	125
	1998	1,441	825	197	109
	1999	1,548	883	176	104
	2000	1,481	820	149	88
	2001	1,420	795	151	82
Wales	1994	497	280	10	7
	1995	551	303	11	7
	1996	579	315	8	5
	1997	602	332	8	5
	1998	606	325	7	5
	1999	678	360	7	5
	2000	668	353	13	9
	2001	670	360	13	9

C: PULP & PAPER INDUSTRY

The statistics for the pulp and paper industry in Tables 14 and 15 just cover the four integrated pulp and paper mills that use British roundwood, and were provided by the UK Forest Products Association.

Table 14 Origin of British roundwood used by the pulp and paper industry

000 green tonnes

Year	Great Britain		Scotland		England		Wales	
	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard
1994	1,104	190	668	0	184	176	252	14
1995	1,106	196	659	0	197	188	250	8
1996	853	202	478	0	175	194	200	8
1997	940	198	598	0	161	190	181	8
1998	844	180	..	..	..	..	..	..
1999	660	191	383	0	107	177	170	14
2000	695	200	479	0	86	188	130	12
2001[1]	729	209	513	0	88	200	128	9

.. Data not available
[1] Figures for 2001 are estimated in collaboration with UKFPA, based on incomplete data

Table 15 Capacity and inputs for the pulp and paper industry

000 green tonnes

Year	Capacity		Deliveries									
			British roundwood[1]		Imported roundwood		Imported chips		Sawmill co-products[2]		Total	
	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard
1994	1,356	208	1,104	190	2	3	..	..	176	18	1,282	211
1995	1,457[3]	212	1,106	196	4	0	..	..	284	4	1,394	200
1996	1,267	202	853	202	0	0	..	..	305	0	1,158	202
1997	1,267	220	940	198	0	0	20	0	279	0	1,239	198
1998	1,590		844	180	0	0	15	0	277	0	1,136	180
1999	1,150	224	660	191	0	0	9	0	295	0	964	191
2000	1,150	224	695	200	0	18	1	0	308	0	1,004	218
2001[4]	..	..	729	209	0	0	0	0	323	0	1,052	209

[1] British roundwood includes all material from forest operations.
[2] Sawmill co-products includes peeled and unpeeled chips, sawdust, slabwood, shavings, postplant chips and peelings.
[3] Softwood capacity was reclassified from 1995.
[4] Figures for 2001 are estimated in collaboration with UKFPA, based on incomplete data
.. Data not available

Table 16 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	1994	1995	1996	1997	1998	1999	2000	2001
Paper & Paperboard	**5,829**	**6,093**	**6,189**	**6,480**	**6,477**	**6,576**	**6,605**	**6,204**
Graphic papers (inc newsprint)	2,588	2,639	2,729	2,809	2,788	2,816	2,847	2,627
Sanitary & household papers	551	567	586	639	635	718	724	738
Packaging materials	2,375	2,534	2,513	2,617	2,590	2,527	2,291	2,190
Other	315	353	361	415	464	515	743	649
Wood pulp	**626**	**639**	**575**	**623**	**583**	**517**	**474**	**492**
Mechanical	502	548	490	537	509	442	411	429
Semi-Chemical	124	91	85	86	75	75	63	63

D: WOODBASED PANEL PRODUCTS

Figures in Table 17 for inputs to the woodbased panel products sector for 2000 and 2001 were supplied by The Wood Panel Industries Federation (WPIF). Previous years figures were supplied by The United Kingdom Forest Products Association (UKFPA).

Table 17 Capacity and inputs for woodbased panel products

000 green tonnes

Year	Capacity	Deliveries to woodbased panel mills										
		British roundwood[1]		Imported roundwood		Sawmill co-products[2]		Imported residues and residues from imported wood[3]		Total		
		Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Recycled wood fibre[4]
1994	3,353	1,407	96	65	15	1,368	21	156	10	2,996	142	..
1995	3,603	1,699	113	23	7	1,521	21	162	11	3,405	152	..
1996	3,645	1,500	91	3	0	1,542	28	160	21	3,205	140	..
1997	3,765	1,690	118	0	0	1,744	40	120	21	3,554	179	..
1998	4,290	1,527	77	0	0	1,711	29	190	29	3,428	135	..
1999	..	1,613	52	0	0	1,522	10	150[#]	0	3,285	62	400
2000[5]	3,665	1,685	50	0	0	1,871	0	143	0	3,699	50	488
2001[5]	3,665	1,680	35	0	5	1,675	0	132	20	3,487	60	675

[1] British roundwood includes all material from forest operations.
[2] Sawmill co-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.
[5] Estimated by The Wood Panel Industries Federation
[#] Estimate
.. Data not available.

Table 18 Production of woodbased panel products

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

$000m^3$

Product	1994	1995	1996	1997	1998	1999	2000	2001
Woodbased Panels (Total)	**2,210**	**2,533**	**2,609**	**2,640**	**2,727**	**2,974**	**3,275**	**3,260**
Particle Board (including OSB)	1,803	2,118	2,164	2,175	2,287	2,442	2,570	2,498
Fibreboard	402	410	440	460	435	527	700	757
Hardboard	2	2	20	48	45	12	0	0
MDF (Medium Density)	400	408	420	412	390	515	700	757
Plywood	5	5	5	5	5	5	5	5

E: MISCELLANEOUS PRODUCTS

ROUNDWOOD FENCING MANUFACTURERS

Surveys of roundwood fencing manufacturers have been carried out for each year since 1993. In preparation for the 1995 survey, many more fencing manufacturers were identified, extending the list from around 70 to around 130. The survey is now believed to give a good coverage of softwood fencing, but only a very limited coverage of hardwood (around 2,800 tonnes in total for 2001, compared with the Sub-Committee's estimate of around 30,000 tonnes).

For 2001, questionnaires were sent out to 127 manufacturers and 84 responses were received (66% response); 11 were nil returns and 18 reported closing down during the year. The softwood figures reported by the 55 active respondents to the 2001 survey totalled 181,000 tonnes. Earlier years figures have been revised in light of information received during the current survey.

Based on the 2001 survey, including estimates for non-respondents, it is estimated that in 2001 there were 80 manufacturers using a total of 297,000 tonnes of softwood, roughly the same as during 2000. This estimate uses the actual figures (181,000 tonnes) reported for 2001 by the 55 respondents, and adds on 116,000 tonnes for the 25 non-respondents who had responded in a previous year, assuming no change from their previous figures.

Table 19 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+	
1994[1]	68	35	19	10	132
1995	66	43	13	9	131
1996	55	43	13	8	119
1997	43	42	8	10	103
1998	41	44	6	8	99
1999	36	39	6	9	90
2000	40	30	6	6	82
2001	39	29	6	6	80

British roundwood purchased **000 green tonnes**

Year	Size category (green tonnes p.a.)				Total
	Under 1,000	1,000-4,999	5,000-9,999	10,000+	
1994[1]	17	76	126	187	406
1995	17	77	115	178	387
1996	17	92	87	141	337
1997	18	92	53	160	323
1998	14	103	42	194	353
1999	11	90	40	217	358
2000	13	70	44	169	295
2001	12	64	43	178	297

[1] 1994 includes estimates for those added to the survey mailing list for 1995

SUMMARY FOR MISCELLANEOUS PRODUCTS

Softwood

For softwood fencing the figures shown in Table 20 are based on the Fencing Surveys. Woodwool figures are reported by the manufacturers. All other figures are estimates by the Sub-Committee.

Table 20 Miscellaneous uses of British softwood roundwood

000 green tonnes

	Fuelwood#	Poles#	Woodwool	Fencing	Other#	Total
1994	100	4	7	406	25	**542**
1995	100	4	5	387	25	**521**
1996	100	4	5	337	25	**471**
1997	100	4	4	323	25	**456**
1998	100	4	4	353	25	**486**
1999	100	4	3	358	25	**490**
2000	100	4	3	295	25	**427**
2001	100	4	2	297	25	**428**

Estimated by Sub-Committee.

Hardwood

No firm data are available for miscellaneous uses of hardwood. The Sub-Committee estimates that, for each year since 1994, around 150,000 green tonnes is used for fuelwood, around 30,000 green tonnes for round fencing and around 25,000 for other uses, a total of 205,000 green tonnes.

F: ROUNDWOOD EXPORTS

Table 21 Pulpwood exports

000 green tonnes

Year	Great Britain	Scotland	England	Wales
1994	48	46	2	0
1995	8	8	0	0
1996	0	0	0	0
1997	0	0	0	0
1998	0	0	0	0
1999	24	24	0	0
2000	16	..	..	..
2001	61	..	..	..

.. Data not available.

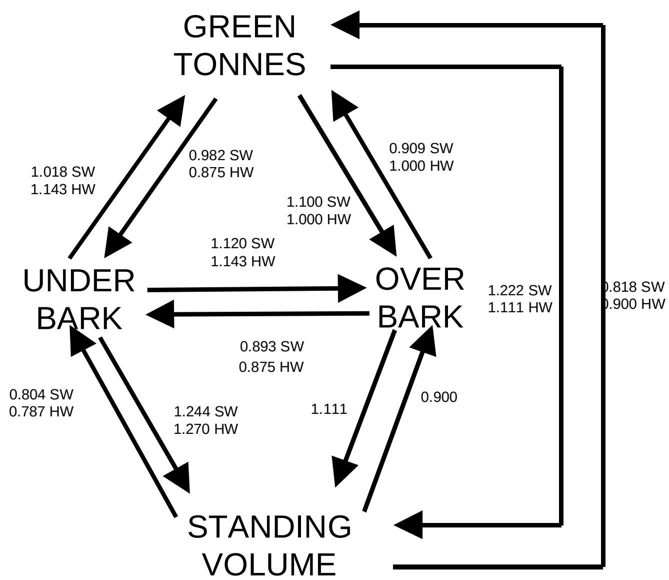
Data are not collected for export of logs.

G. CONVERSION FACTORS

CUBIC METRES AND GREEN TONNES

Conversion factors were used in this report to convert between cubic metres (standing, overbark, 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 22 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.