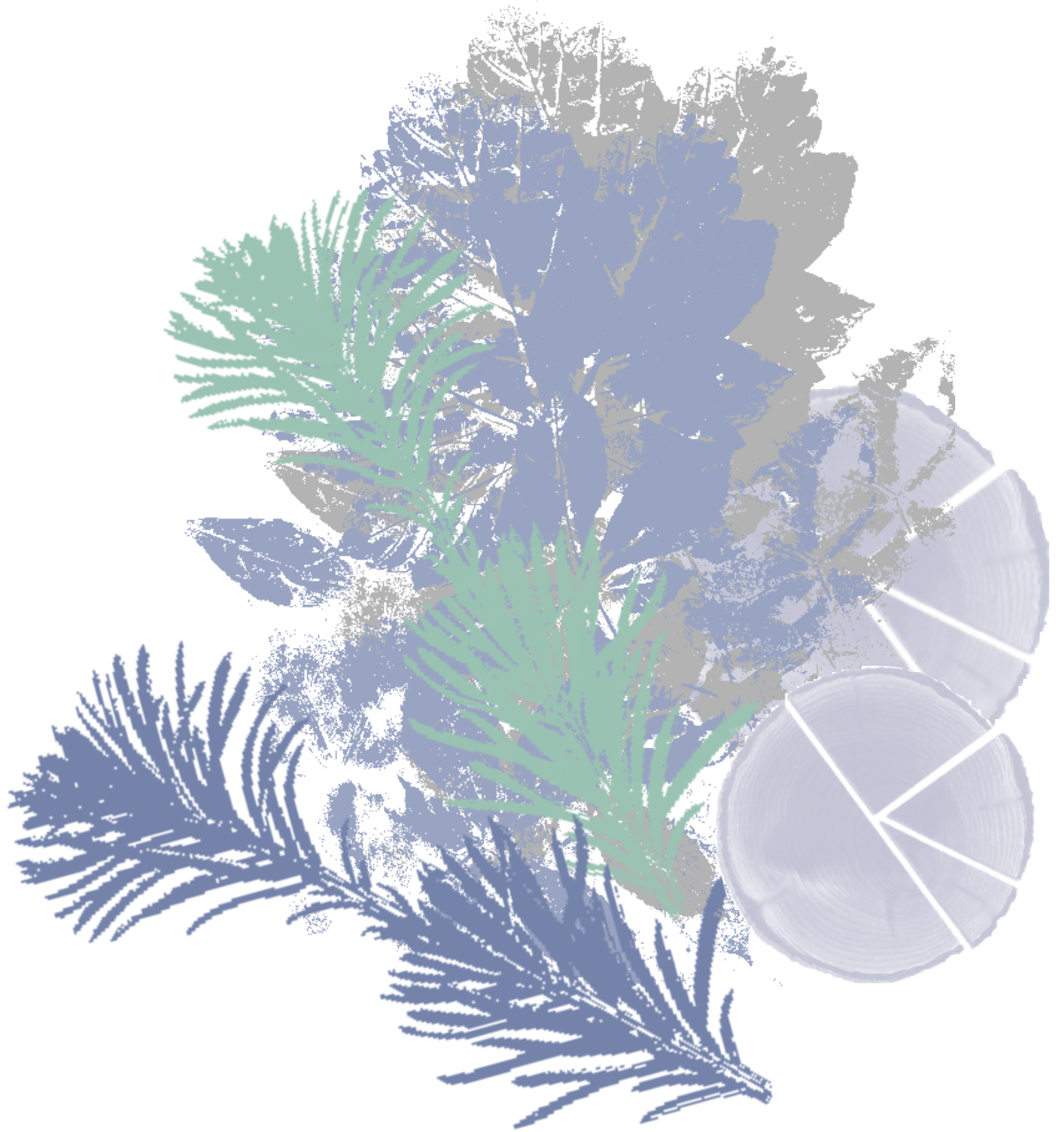


WOOD SUPPLY AND DEMAND 1997

Statistics on Supply and Demand for Home-Grown Timber in Great Britain
1986 - 1997



Forestry Commission

WOOD SUPPLY AND DEMAND 1997

**Report prepared by Forestry Commission HQ Statistics on behalf of
the Sub-Committee on Supply and Demand of the Home Grown
Timber Advisory Committee.**

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CONTENTS

	Page
Acknowledgements, Conversion Factors	iv
<u>Summary Tables 1986-1997</u>	1
<u>Table 1 Deliveries of coniferous roundwood</u>	1
<u>Table 2 Removals of coniferous roundwood</u>	2
<u>Table 3 Deliveries of softwood residues</u>	2
<u>Table 4 Deliveries of broadleaved roundwood</u>	3
<u>Table 5 Removals of broadleaved roundwood</u>	3
<u>A: Removals of Conifer Roundwood</u>	4
<u>Table 6 Private sector softwood removals: Survey Results</u>	4
<u>Table 7 Private sector softwood removals</u>	4
<u>Table 8 Forestry Commission softwood removals</u>	5
<u>B: Sawmill Survey</u>	6
<u>Table 9 Estimates of consumption and production 1994-1997</u>	6
<u>Table 10 Number of sawmills</u>	7
<u>Table 11a Softwood consumption</u>	8
<u>Table 11b Softwood production</u>	8
<u>Table 12a Hardwood consumption</u>	9
<u>Table 12b Hardwood production</u>	9
<u>Table 13a Summary softwood statistics</u>	10
<u>Table 13b Summary hardwood statistics</u>	11
<u>C: Pulp Industry</u>	12
<u>Table 14 Pulpwood exports</u>	12
<u>Table 15 Pulp industry</u>	13
<u>D: Woodbased Panel Products</u>	14
<u>Table 16 Particleboard</u>	14
<u>Table 17 Medium density fibreboard</u>	15
<u>Table 18 Other fibreboard</u>	15
<u>Table 19 Woodbased panel products summary</u>	16
<u>E: Miscellaneous Products</u>	17
<u>Table 20 Softwood round fencing</u>	17
<u>Table 21 Miscellaneous: Uses of British wood</u>	18
<u>F: Conversion Factors</u>	19
<u>Table 22 Conversion factors to WRME</u>	19

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CONVERSION FACTORS

Conversion factors are used to convert between cubic metres (standing, overbark, underbark) and green tonnes. The factors used in converting the figures from sections A and B of this report into the summary tables are shown below:

1m³ coniferous standing = 0.818 green tonnes
1m³ broadleaved standing = 0.90 green tonnes
1m³ underbark softwood = 1.018 green tonnes
1m³ underbark hardwood = 1.143 green tonnes

Further details are given in Section F (page 23).

TABLE 1 Deliveries of Coniferous Roundwood Great Britain

(000 GREEN TONNES)

	Sawmills~	Pulpmills	Woodpanel	British Coal	Fencing*	Miscellaneous*	Pulp Exports	TOTAL
BRITISH ROUNDWOOD								
1986	2,433	605	645	91	-	158	332	4,264
1987	2,618	647	741	68	-	185	396	4,655
1988	2,907	709	763	48	-	200	267	4,894
1989	3,099	794	914	37	-	225	168	5,237
1990	3,180	857	998	32	-	262	59	5,388
1991	2,978	939	1,198	22	-	272	66	5,475
1992	3,191	949	1,216	16	186	179	66	5,803
1993	3,305	1,037	1,285	10	237	173	15	6,062
1994	3,391	1,104	1,407	0	406	136	48	6,492
1995	3,363	1,106	1,699	0	387	134	8	6,697
1996	3,490	853	1,500	0	337	134	0	6,314
1997	3,560	940	1,690	0	323	133	0	6,646
IMPORTS								
1986	-	0	-	7	-	0	0	7
1987	-	0	-	4	-	0	0	4
1988	-	0	-	-	-	0	0	0
1989	-	0	-	-	-	0	0	0
1990	-	0	-	-	-	0	0	0
1991	-	25	2	0	-	0	0	27
1992	-	1	1	0	0	0	0	2
1993	39	36	30	0	0	0	0	105
1994	40	2	65	0	0	0	0	107
1995	50	4	23	0	0	0	0	77
1996	42	0	3	0	0	0	0	45
1997	30	0	0	0	0	0	0	30

- Not available

~Sawmills exclude small sawmills before 1994

*Fencing is included in miscellaneous up to 1991

TABLE 2 Comparison between Removals and Deliveries of British Coniferous Roundwood

(000 GREEN TONNES)

	FC Removal	PW Removal	TOTAL	Deliveries	Balance
1986	2,576	1,211	3,787	4,264	-477
1987	2,737	1,464	4,201	4,655	-454
1988	2,834	1,723	4,557	4,894	-338
1989	2,854	1,848	4,702	5,237	-535
1990	2,831	1,801	4,632	5,388	-756
1991	3,076	1,623	4,699	5,475	-775
1992	3,321	1,701	5,022	5,803	-781
1993	3,388	1,947	5,335	6,062	-727
1994	3,534	2,476	6,010	6,492	-482
1995	3,379	2,708	6,087	6,697	-610
1996	3,723	2,634	6,357	6,314	+43
1997	3,723	2,945	6,668	6,646	+22

FC = Forestry Commission PW = Private Woodland

TABLE 3 Deliveries of Softwood Residues - Great Britain

(000 GREEN TONNES)

	Pulpmills	Wood Panel		Exports	TOTAL
	BRW	BRW	Imports		
1986	95	672	94	42	903
1987	93	862	0	80	1,035
1988	85	835	121	50	1,091
1989	89	1,009	120	50	1,268
1990	116	1,116	110	50	1,392
1991	112	1,150	75	0	1,337
1992	135	1,197	98	0	1,430
1993	144	1,319	143	0	1,606
1994	176	1,368	156	0	1,700
1995	284	1,521	162	0	1,967
1996	305	1,542	160	0	2,007
1997	299	1,744	120	0	2,163

BRW = British Roundwood

TABLE 4 Deliveries of Hardwood Roundwood Great Britain

(000 GREEN TONNES)

	Sawmills~	Pulpmills	Wood Panel	Fencing*	Miscellaneous*	TOTAL
1986	741	210	41	-	124	1,116
1987	503	241	43	-	145	932
1988	543	276	107	-	201	1,127
1989	701	274	102	-	215	1,292
1990	591	272	46	-	215	1,124
1991	638	158	99	-	220	1,115
1992	347	161	69	30 [#]	175	782
1993	272	156	78	30 [#]	175	711
1994	350	190	96	30 [#]	175	841
1995	369	196	113	30 [#]	175	883
1996	288	202	91	30 [#]	175	786
1997	290	198	118	30 [#]	175	811

~Sawmills exclude small sawmills before 1994

*Fencing is included in miscellaneous up to 1991

#Estimate

TABLE 5 Comparison Between Removals and Deliveries of British Hardwood Roundwood

(000 GREEN TONNES)

	FC Removal	PW Removal	TOTAL	Deliveries	Balance
1986	0	1,110	1,110	1,116	-6
1987	0	1,002	1,002	932	+70
1988	109	1,151	1,260	1,127	+133
1989	111	1,165	1,276	1,292	-16
1990	97	1,025	1,122	1,124	-2
1991	97	1,015	1,112	1,115	-3
1992	72	755	827	782	+45
1993	124	750 [#]	874	711	+163
1994	128	750 [#]	878	841	+37
1995	107	750 [#]	857	883	-26
1996	100	750 [#]	850	786	+64
1997	96	750 [#]	846	811	+35

FC = Forestry Commission PW = Private Woodland

Estimate

A: REMOVALS OF CONIFER ROUNDWOOD

PRIVATE SECTOR

Forestry Commission (FC) carry out an annual survey of the 38 largest harvesting companies, to ask for the quantity of private sector removals for the last two years. The 38 companies surveyed were responsible for about two-thirds of the total of private removals.

The FC survey received a 100% response for 1994 (when 33 questionnaires were sent out), but 9 out of the 33 did not respond in 1995. In 1996 the distribution was increased to 38 and 6 out of the 38 did not respond, in 1997 12 companies did not respond. Results for previous years have been revised, as some companies reported errors in their previous figures.

TABLE 6 Private Sector Softwood Removals: Survey Results

Year	% change on previous year	
	FC survey	TGA survey
1994	+23%	+27.2%
1995	+13%	+ 9.5%
1996	- 4%	- 2.8%
1997	+12%	(discontinued)

The table below compares forecast and reported removals for Private Woodlands. The “reported” figures up to 1996 were calculated from the % changes reported in a small survey carried out by the Timber Growers Association (TGA); it was agreed that the FC survey should be used for this purpose from 1997. Forecasts are based on published forecasts for private woods interpolated for the years between the 5 year averages.

TABLE 7 Private Sector Softwood Removals

Year	000 m ³ overbark standing		
	Forecast	Reported	% of forecast
1986	1,810	1,480	82
1987	1,687	1,790	106
1988	1,759	2,106	120
1989	1,780	2,259	127
1990	1,900	2,202	116
1991	1,800	1,984	110
1992	2,200	2,079	95
1993	2,360	2,380	101
1994	2,518	3,027	120
1995	2,700	3,313	123
1996	2,900	3,220	111
1997	3,100	3,600	116

FORESTRY COMMISSION

Forest Enterprise report figures for planned and actual removals and forecasts are available by interpolating between 5-year averages in the 1995 Softwood Assessment. In the table below, planned and actual removals are shown as % of the forecast. Forestry Commission removals in 1997 were the same as those in 1996.

TABLE 8 Forestry Commission Softwood Removals

000 m³ overbark standing

Year	Forecast	Planned		Removals	
	000 m ³ ob	000 m ³ ob	% of forecast	000 m ³ ob	% of forecast
1986	3,187	3,107	97	3,149	99
1987	3,260	3,211	98	3,345	103
1988	3,415	3,457	101	3,464	101
1989	3,435	3,564	104	3,488	102
1990	3,530	3,602	102	3,460	98
1991	3,603	3,872	107	3,760	104
1992	3,682	3,859	105	4,059	110
1993	3,763	3,848	102	4,141	110
1994	3,880	4,100	106	4,320	111
1995*	4,228	4,204	99	4,131	98
1996*	4,360	4,448	102	4,551	104
1997*	4,490	4,458	99	4,551	101

* Figures for 1995, 1996 and 1997 are those for financial years 1995/96, 1996/97 and 1997/98

TOTAL : PRIVATE + FORESTRY COMMISSION

Total softwood removals in 1997 (8,151,000 cubic metres overbark) were 4.7% above 1996; 56% of the total was Forestry Commission.

B: GB SAWMILLS – ANNUAL SURVEY 1997

1. This section gives results for timber consumption and sawnwood production from the Sawmill Survey for 1997, including mills with less than 1000m³ sawnwood production.

Survey Responses

2. In the 1997 Survey 510 questionnaires were sent out and 290 responses were returned, a response rate of 57%. This included 99 questionnaires sent to additional mills identified by liaison with UKFPA. From those 99 we received 15 returns with figures totalling 70,000 m³ ub, and 38 nil returns. Because of the much higher response rate from large mills, the respondents are estimated to have represented 85% of total softwood consumption and 60% of total hardwood consumption. This response rate was about the same as for 1995 and 1996, although the quantity of softwood is lower because we did not receive returns from 2 mills that produced over 25,000 m³ and 6 mills that produced 10,000-25,000 m³.

3. The latest estimates for consumption and production in the last four years, including estimates for non-respondents, are shown in Table 9, expressed in thousand cubic metres underbark for consumption, and thousand cubic metres sawnwood for production. The figures for 1994 –1996 have been revised upwards, to incorporate the additional mills from the UKFPA list, and other amendments identified during processing of 1997 data.

TABLE 9 Estimates of Consumption and Production 1994 - 1997

			1994	1995	1996	1997
Softwood	consumption	000m ³ ub	3,331	3,304	3,428	3,497
	production	000m ³	1,902	1,883	1,917	1,982
Hardwood	consumption	000m ³ ub	306	323	252	254
	production	000m ³	176	188	150	141

Number of Mills

4. Based on all the 1997 survey responses, together with data from the 1996, 1995 or 1994 survey for those who did not respond for 1997, it is estimated that there were 390 sawmills processing British timber in 1997, of which 195 produced at least 1000 m³ sawnwood. Of those 195 mills, 121 processed softwood only, 15 hardwood only, and 59 both hardwood and softwood. Of the 195 smaller mills, 113 processed softwood only, 14 hardwood only, and 68 both hardwood and softwood.

TABLE 10 Number of Sawmills 1997

	Size Category (000m ³ production)					All
	<1	1-5	5-10	10-25	25+	
GB Total	195	114	39	19	23	390
England	132	84	21	10	8	255
Wales	16	8	5	0	5	34
Scotland	47	22	13	9	10	101

All mills with 25+ thousand production have been combined into a single category to avoid disclosing individual returns for England and Wales

Imported Round Timber

5. Imported timber, and sawnwood produced from it, is excluded from all the statistics reported from the survey. The sawmills that responded to the 1997 survey reported total consumption of 29,000 m³ underbark of imported softwood and 3,700 m³ underbark of imported hardwood. Estimates of imported timber used by non-respondents cannot be compiled. The corresponding figures reported for the 1996 survey were 41,000 m³ underbark of imported softwood and 1,000 m³ underbark of imported hardwood.

British Softwood

6. Softwood consumption (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 was 3.50 million m³ underbark and sawn softwood production was 1.98 million m³ sawnwood. This showed a slight increase from 1996.

7. Apparent recovery (calculated as the ratio of production to consumption) was 57% – close to the results for the previous years.

TABLE 11a Softwood consumption

000 m³ underbark

	Size Category (000m ³ production)					All
	<1	1-5	5-10	10-25	25+	
GB Total	78	337	386	502	2,194	3,497
England	53	212	162	245	750	1,423
Wales	3	30	56	0	516	605
Scotland	21	96	168	256	928	1,470

TABLE 11b Softwood production

000 m³ sawnwood

	Size Category (000m ³ production)					All
	<1	1-5	5-10	10-25	25+	
GB Total	44	206	218	286	1,227	1,982
England	30	133	94	142	430	829
Wales	2	16	33	0	282	334
Scotland	12	57	90	144	516	819

British Hardwood

8. Hardwood consumption (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 was 254,000 m³ underbark and total sawn hardwood production was 141,000 m³ sawnwood, little change from 1996. Apparent recovery is 56%, lower than 1996.

TABLE 12a Hardwood consumption

000 m³ underbark

	Size Category (000m ³ total production: hard+soft)				
	<1	1-5	5-10	10+	All
GB Total	22	108	79	45	254
England	19	91	69	45	224
Wales	1	7	0	0	8
Scotland	1	10	10	0	22

TABLE 12b Hardwood production

000 m³ sawnwood

	Size Category (000m ³ total production: hard+soft)				
	<1	1-5	5-10	10+	All
GB Total	11	63	45	22	141
England	10	53	40	22	126
Wales	0	5	0	0	5
Scotland	1	5	5	0	11

Summary

9. Tables 13a and 13b (on the next two pages) give summaries of production and consumption, for softwood and hardwood, for the years 1987 to 1997, together with figures for 1983 and 1980. Before 1994 all Sawmill Survey results excluded mills producing less than 1000 m³ per year (500 m³ for 1980 and 1983).

TABLE 13a Summary Softwood Statistics*

Year	Log Consumption (000 m ³ ub)	Sawnwood Production (000 m ³ sawn)	Apparent Recovery (%)
Scotland			
1980	721	423	59
1983	949	537	56
1987	1,071	623	58
1988	1,204	676	56
1989	1,322	770	58
1990	1,397	812	58
1991	1,405	797	57
1992	1,337	740	55
1993	1,334	781	59

1994	1,431	810	57
1995	1,385	780	56
1996	1,436	795	55
1997	1,470	819	56
England & Wales			
1980	917	514	56
1983	1,190	690	58
1987	1,501	907	60
1988	1,652	926	56
1989	1,722	1,005	58
1990	1,724	1,042	62
1991	1,520	916	60
1992	1,798	1,083	60
1993	1,913	1,116	58

1994	1,900	1,092	57
1995	1,919	1,104	58
1996	1,992	1,122	56
1997	2,028	1,163	57
Great Britain			
1980	1,638	937	57
1983	2,139	1,227	57
1987	2,572	1,530	59
1988	2,856	1,602	56
1989	3,044	1,775	58
1990	3,121	1,854	59
1991	2,925	1,713	59
1992	3,135	1,823	58
1993	3,247	1,897	58

1994	3,331	1,902	57
1995	3,304	1,883	57
1996	3,428	1,917	56
1997	3,497	1,982	57

* Note: Before 1994 all Sawmill Survey results excluded mills producing less than 1000 m³ per year (500 m³ for 1980 and 1983).

TABLE 13b Summary Hardwood Statistics*

Year	Log Consumption (000 m³ ub)	Sawnwood Production (000 m³ sawn)	Apparent Recovery (%)
Scotland			
1980	71	42	59
1983	39	19	49
1987	38	24	63
1988	42	21	50
1989	24	13	53
1990	32	18	56
1991	30	16	53
1992	21	12	57
1993	7	4	50

1994	19	10	53
1995	23	13	57
1996	21	11	52
1997	22	11	50
England & Wales			
1980	871	562	65
1983	624	371	59
1987	402	237	59
1988	433	239	55
1989	590	352	59
1990	485	320	66
1991	528	331	63
1992	282	169	60
1993	231	139	60

1994	287	166	58
1995	299	176	59
1996	231	139	60
1997	232	130	56
Great Britain			
1980	942	604	64
1983	663	390	59
1987	440	261	59
1988	475	260	55
1989	614	364	59
1990	517	338	65
1991	558	347	62
1992	303	181	60
1993	238	143	60

1994	306	176	58
1995	323	188	58
1996	252	150	60
1997	254	141	56

* Before 1994 all Sawmill Survey results excluded mills producing less than 1000 m³ per year (500 m³ for 1980 and 1983).

C: PULP INDUSTRY

Figures for the Pulp Industry were provided by the UK Wood Processors' Association.

Table 14 shows pulpwood exports; no pulpwood was exported in 1997.

TABLE 14 Pulpwood Exports

000 green tonnes

Year	England	Wales	Scotland	Great Britain
1986	49	0	283	332
1987	85	10	301	396
1988	163	0	104	267
1989	95	0	73	168
1990	25	0	34	59
1991	28	0	38	66
1992	21	0	45	66
1993	4	0	11	15
1994	2	0	46	48
1995	0	0	8	8
1996	0	0	0	0
1997	0	0	0	0

Table 15 shows the pulp industry's use of softwood and hardwood roundwood and residues.

TABLE 15 Pulp Industry

000 green tonnes

Year	Capacity		Deliveries (consumption before 1988)								Sources of British Roundwood					
			British RW		Imported RW		Residues		Total		England		Wales		Scotland	
	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard
1986	714	265	605	210	0	0	95	31	700	241	231	192	204	18	170	0
1987	757	302	647	241	0	0	93	24	740	265	258	216	211	21	204	0
1988	794	326	709	276	0	0	85	50	794	326	225	256	204	20	280	0
1989	883	304	794	274	0	0	89	30	883	304	225	244	220	30	349	0
1990	1,074	303	857	272	0	0	116	31	973	303	240	264	221	8	396	0
1991	1,266	303	939	158	25	0	112	19	1,076	177	223	152	240	6	469	0
1992	1,175	181	949	161	1	0	135	20	1,085	181	203	156	242	5	504	0
1993	1,316	178	1,037	156	36	5	144	22	1,217	183	232	153	247	3	558	0
1994	1,356	208	1,104	190	2	3	176	18	1,282	211	184	176	252	14	668	0
1995	1,457*	212	1,106	196	4	0	284	4	1,394	200	197	188	250	8	659	0
1996	1,267	202	853	202	0	0	305	0	1,158	202	175	194	200	8	478	0
1997	1,267	220	940	198	0	0	299	0	1,239	198	161	190	181	8	598	0

* Softwood capacity reclassified from 1995

RW = Roundwood

D: WOODBASED PANEL PRODUCTS

Figures for woodbased panel products were supplied by the Wood Panel Industries Federation.

Particleboard Industry

The figures given in Table 16 are combined totals for Particleboard (wood chipboard and cement bonded particleboard) and for Oriented Strand Board (OSB). In 1997 the Particleboard Industry used 1.6 million tonnes of British Roundwood and 1.3 million tonnes of residues.

Fibreboard

Table 17 gives figures for Medium Density Fibreboard (MDF) manufacturers and Table 18 gives figures for 'other fibreboard' manufacturers. Total fibreboard manufacture in 1997 used 0.2 million tonnes of British Roundwood and 0.7 million tonnes of residues.

Summary

Table 19 gives the totals for this sector, adding figures from Tables 16, 17 and 18.

TABLE 16 Particleboard

000 green tonnes

Year	Capacity	Deliveries (consumption before 1988)									
		BRW		Imported Roundwood		Residues of BRW		Residues (Imported)		Total	
		Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard
1986	1,341	626	39	0	0	543	0	94	0	1,263	39
1987	1,526	724	42	0	0	685	3	0	4	1,409	49
1988	2,212	744	107	0	0	601	0	121	22	1,466	129
1989	2,300	900	102	0	5	677	28	120	21	1,700	151
1990	2,120	979	46	0	0	719	28	110	20	1,808	94
1991	2,340	1,180	99	2	0	745	23	75	32	2,002	154
1992	2,600	1,216	69	1	0	751	25	68	25	2,036	119
1993	2,600	1,161	78	30	3	842	29	78	10	2,111	120
1994	2,600	1,217	96	65	15	910	21	86	10	2,278	142
1995	2,850	1,499	113	23	7	1,053	21	102	11	2,677	152
1996	2,850	1,330	91	3	0	952	23	130	21	2,415	135
1997	2,850	1,500	116	0	0	1,084	37	110	21	2,694	174

BRW = British Roundwood

Notes: Particleboard covers chipboard, oriented strand board and cement bonded particleboard

Residues (Imported) includes recycled wood and residues produced from imported wood

TABLE 17 Medium Density Fibreboard

000 green tonnes

Year	Capacity	Deliveries (consumption before 1988)							
		BRW		Residues of BRW		Residues (Imported)		Total	
		Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard
1986	110	2	0	109	0	0	0	111	0
1987	146	1	0	145	0	0	0	146	0
1988	250	5	0	207	0	0	0	212	0
1989	315	0	0	317	0	0	0	317	0
1990	400	5	0	383	0	0	0	388	0
1991	400	3	0	397	0	0	0	400	0
1992	475	0	0	443	0	30	0	473	0
1993	670	124	0	474	0	65	0	663	0
1994	750	190	0	455	0	70	0	715	0
1995	750	200	0	465	0	60	0	725	0
1996	750	170	0	550	0	30	0	750	0
1997	780	150	0	600	0	10	0	760	0

BRW = British Roundwood

Residues (Imported) includes recycled woodland residues produced from imported wood

TABLE 18 Other Fibreboard

000 green tonnes

Year	Capacity	Deliveries (consumption before 1988)					
		BRW		Residues of BRW		Total	
		Soft	Hard	Soft	Hard	Soft	Hard
1986	54	17	2	20	5	37	7
1987	58	16	1	32	5	48	6
1988	48	14	0	27	5	41	5
1989	30	14	0	15	0	29	0
1990	30	14	0	14	0	28	0
1991	30	15	0	8	0	23	0
1992	3	0	0	3	0	3	0
1993	3	0	0	3	0	3	0
1994	3	0	0	3	0	3	0
1995	3	0	0	3	0	3	0
1996	45	0	0	40	5	40	5
1997	135	40	2	60	3	100	5

BRW = British Roundwood

TABLE 19 Woodbased Panel Products Summary

000 green tonnes

Year	Capacity	Deliveries (consumption before 1988)									
		BRW		Imported Roundwood		Residues of BRW		Residues (Imported)		Total	
		Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard
1986	1,505	645	41	0	0	672	5	94	0	1,411	46
1987	1,730	741	43	0	0	862	8	0	4	1,603	55
1988	2,510	763	107	0	0	835	5	121	22	1,719	134
1989	2,645	914	102	0	5	1,009	28	120	21	2,043	156
1990	2,550	998	46	0	0	1,116	28	110	20	2,224	94
1991	2,770	1,198	99	2	0	1,150	23	75	32	2,425	154
1992	3,078	1,216	69	1	0	1,197	25	98	25	2,512	119
1993	3,273	1,285	78	30	3	1,319	29	143	10	2,777	120
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	23	160	21	3,205	140
1997	3,765	1,690	118	0	0	1,744	40	120	21	3,554	179

BRW = British Roundwood

Residues (Imported) include recycled wood and residues produced from imported wood

E: MISCELLANEOUS PRODUCTS

ROUNDWOOD FENCING MANUFACTURERS

Surveys of roundwood fencing manufacturers have been carried out in 1993, 1994, 1995, 1996 and 1997. 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, but only a very limited coverage of hardwood (just over 2,500 tonnes in total for 1997, compared with the Sub-Committee's estimate of around 30,000 tonnes).

In 1997, questionnaires were sent out to 128 manufacturers and 84 responses were received (66% response); 15 were nil returns. The softwood figures reported by the 69 active respondents to the 1997 survey totalled 180,000 tonnes, a fall of 53,000 tonnes (23%) from the total reported by the 67 active respondents in 1996 (232,000 tonnes). However the 62 companies that supplied data for both the 1996 and 1997 surveys reported an increase of 8,000 tonnes (around 5%) from 145,000 tonnes to 153,000 tonnes.

Based on the 1997 survey, including estimates for non-respondents, it is estimated that in 1997 there were 105 manufacturers using a total of 323,000 tonnes of softwood, a fall of about 4% from 1996. This estimate uses the actual figures (180,000 tonnes) reported for 1997 by the 69 respondents, adds on 128,000 tonnes for the 21 non-respondents who had responded either in 1994, 1995 or 1996, (assuming no change from their previous figure), and adds a further 15,000 tonnes as a rough estimate for 15 companies that have not responded in any year. Adding on 15 nil returns and 8 assumed nil returns for non-respondents brings the total to the distribution list's 128 total.

Figures for the years 1994, 1995, 1996 and 1997, broken down by size category, including estimates for non-respondents, are shown below.

TABLE 20 Softwood Round Fencing

Size category (Green Tonnes p.a.)	000 green tonnes							
	1997		1996		1995		1994	
	Number	000 tonnes	Number	000 tonnes	Number	000 tonnes	Number	000 tonnes
Under 1,000	45	18	56	17	67	17	68	17
1,000-4,999	42	92	43	92	43	77	35	76
5,000-9,999	8	53	13	87	13	115	19	126
10,000+	10	160	8	141	9	178	10	187
Total	105	323	120	337	132	387	132	406

SUMMARY FOR MISCELLANEOUS PRODUCTS

For softwood fencing the figures shown in Table 21 are based on the Fencing Surveys for 1993 to 1997 and Sub-Committee estimate for 1992. For hardwood fencing, the estimate for all years is based on advice by the Sub-Committee. Woodwool figures are reported by the Manufacturer's association. All other figures are estimates by the Sub-Committee. British Coal softwood round mining timber, which used to be shown separately, is now included in the "other" category.

TABLE 21 Miscellaneous: Uses of British Wood

Softwood							000 green tonnes
	Fuelwood	Poles	Woodwool	Fencing	Other	TOTAL	
1992	100	30	8	186*	41	365	
1993	100	30	8	237*	35	410	
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	

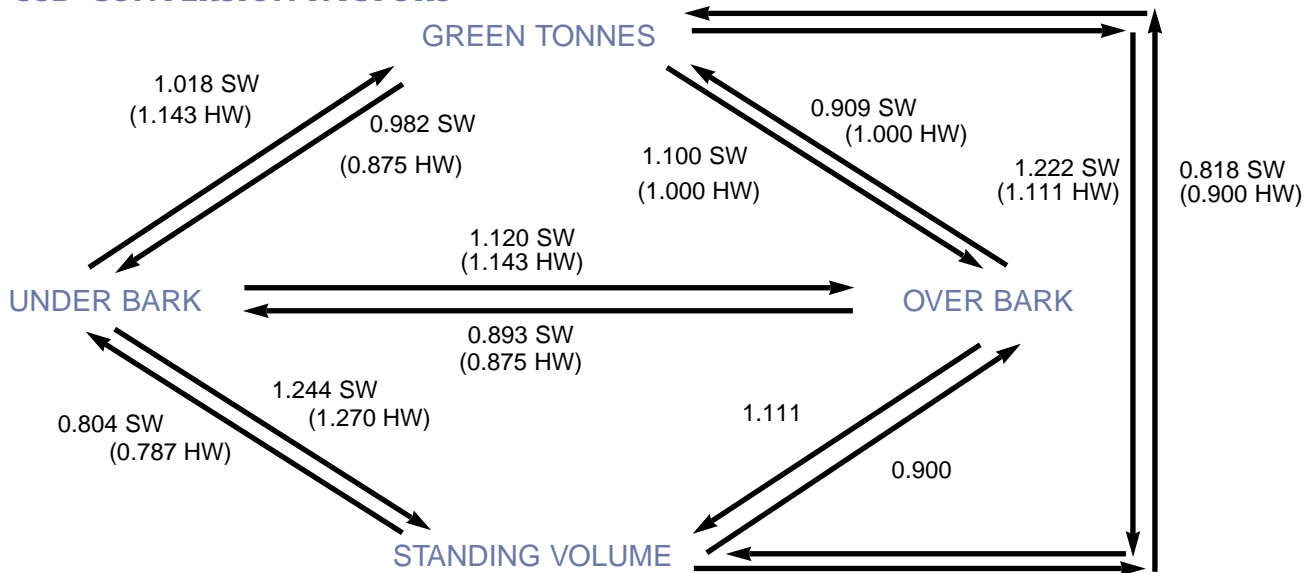
Hardwood							000 green tonnes
	Fuelwood	Poles	Woodwool	Fencing	Other	TOTAL	
1992	150	0	0	30	25	205	
1993	150	0	0	30	25	205	
1994	150	0	0	30	25	205	
1995	150	0	0	30	25	205	
1996	150	0	0	30	25	205	
1997	150	0	0	30	25	205	

* Original survey result for 1993 (not revised to adjust for limited scope of survey), Sub-Committee estimate for 1992

F: CONVERSION FACTORS

Conversion factors were used in this report to convert between cubic metres (standing, overbark, underbark) and green tonnes. These are illustrated in the following diagram (where different factors apply to softwood and hardwood, these are marked SW and HW).

SSD CONVERSION FACTORS



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.

A revised set of factors that indicate the volume of standing tree crop (wood raw material equivalent - WRME) to produce one unit of final product were published in 'Revised Forecasts of the Supply and Demand for Wood in the UK' by Adrian Whiteman (FC Technical Paper 19). The factor for paper products includes 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
Coniferous sawnwood	m ³	2.13
Non-coniferous 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 7.8m³ of wood is required to make one tonne of charcoal, but one tonne of charcoal is equal to about 6 m³ in volume.
 2. The conversion factor for 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.