

THE BUILDING MATERIALS TRADE

Note.—For information regarding the scope of the Census, instructions given to firms for making returns, and definitions of the terms used in this report, reference should be made to the Introductory Notes on pages v to xviii.

Introductory

This trade comprises firms that were engaged wholly or mainly in the shaping and dressing of stone and the manufacture of artificial stone, tar paving and other materials for building, monumental and road making purposes. The particulars given in this report in respect of dressed stone relate only to firms that were not owners of quarries or other stone workings. Firms that obtained crude mineral from their own quarries and converted it into building stone, road stone, etc., are dealt with in the report on Non-Metalliferous Mines and Quarries (see pages 385 to 402).

Comparability between the results for the two years is impaired by the inclusion in the figures for 1930 of returns made by certain firms that were assigned to the Building and Contracting Trade for 1924. The number of persons employed in 1930 by these firms was about 2,000.

The following table shows the main results of the Censuses of 1930 and 1924 in respect of firms in Great Britain that employed an average of more than ten persons:—

Particulars	Unit	1930	1924
Value of goods made and work done (Gross output)	£'000	13,930	9,599
Cost of materials used	"	6,255	3,788
Paid for work given out to other firms	"	164	49
Net output	"	7,511	5,762
Average number of persons employed	No.	29,731	20,307
Net output per person employed	£	253	284
Power available:—			
Prime movers	H.P.	24,760	15,860
Electric motors driven by purchased electricity	"	33,708	17,872
Number of returns	No.	610	484
Number of establishments	"	750	*

* Not available.

Deficiencies in 1930 aggregates.—The aggregate number of persons employed in 1930 by firms that stated that they employed not more than ten persons on the average was 9,160, the corresponding figure for 1924 being 5,003. The value of the gross output of these firms in 1924 was £1,691,000 and particulars of the items included in this figure are given below :—

	£'000
Stone and slate, dressed	954
Artificial stone, mortar, plaster, hearth surrounds, etc.	212
Paving materials	163
Other products	11
Work done :—	
On roads and buildings	150
On purchased monuments (erection and cutting of inscriptions)	189
Sawing, turning, etc.	12
TOTAL ...	1,691

In addition, 269 firms to which schedules were sent at the 1930 Census and 450 at that of 1924 furnished no information; these firms either had small businesses or had ceased productive operations before the end of the censal year.

In 1924, the small firms employed about 20 per cent. of all employees in this trade; about 32 per cent. of the value of dressed stone recorded on schedules for this trade was produced by these firms, but only 12 per cent. of the total output of artificial stone, etc. and less than 5 per cent. of that of paving materials. The great bulk of the work done on purchased monuments was carried out by the small firms.

Size of firms.—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns :—

Size of firm (average numbers employed)	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
11-24	255	1,796	960	4,318	222
25-49	175	2,607	1,437	5,995	240
50-99	120	3,969	2,133	8,036	265
100-199	43	3,309	1,623	6,065	268
200-299	11	1,189	710	2,638	269
300-749	6	1,060	648	2,679	242
TOTAL * ...	610	13,930	7,511	29,731	253

Regional distribution.—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the areas* into which Great Britain has been sub-divided :—

Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed
	No.	£'000	£'000	No.	£
1 ...	{ 1930 155	4,573	2,377	8,737	272
	{ 1924 121	2,411	1,415	5,231	271
2 ...	{ 1930 59	1,697	857	2,950	290
	{ 1924 36	654	394	1,423	277
3 ...	{ 1930 34	512	279	1,133	247
	{ 1924 23	252	156	627	249
4 ...	{ 1930 34	673	357	1,461	244
	{ 1924 26	868	542	1,399	387
5 ...	{ 1930 62	1,184	646	2,731	237
	{ 1924 43	1,233	747	2,117	353
6 ...	{ 1930 142	3,507	1,947	8,263	236
	{ 1924 131	2,615	1,550	5,616	276
7 ...	{ 1930 22	244	144	647	222
	{ 1924 17	381	233	801	291
8 ...	{ 1930 9	120	63	303	208
	{ 1924 10	162	94	406	232
9 ...	{ 1930 32	598	330	1,233	268
	{ 1924 17	410	233	705	330
10 ...	{ 1930 61	822	511	2,273	225
	{ 1924 60	613	398	1,982	201
TOTAL... { 1930	610	13,930	7,511	29,731	253
 { 1924	484	9,599	5,762	20,307	284

Northern Ireland.—The following table summarises the particulars recorded at the Census of Production taken by the Government of Northern Ireland for 1930 in respect of firms that employed an average of more than five persons. The particulars recorded for 1924 are added but are understood to be incomplete.

Particulars	Unit	1930	1924
Value of goods made and work done (Gross output)	£'000	145	87
Cost of materials used and amount paid for work given out to other firms	„	76	33
Net output	„	69	54
Average number of persons employed	No.	282	235
Net output per person employed	£	245	229
Power available :—			
Prime movers	H.P.	224	186
Electric motors driven by purchased electricity	„	403	86

* For particulars see page xviii.

The principal items included in the gross output value shown above for 1930 were as follows:—

	£'000
Monumental and architectural masonry	29
Artificial stone	37
Mortar and plaster	5
Asphalt and bitumen, and tar and bitumen compounds... ..	64
Goods not specified	6
Work done on monuments	3
Work done on roads, buildings, etc.	1
TOTAL	145

Production

Principal products.—The following table shows the value and, where available, the quantity of building materials and monumental masonry made in 1930 and 1924 for sale:—

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Building Materials Trade			All trades				
	Quantity	Value	Ent-ries	Quantity	Value	Ent-ries	Quantity	Value
Tons	£'000	No.	Tons	£'000	No.	Tons	£'000	
Stone and slate, dressed:—								
Setts and pavement kerbs:—								
✓ Of granite	4,410	9	9	4,696	9	10	1,494	6
✓ Of other stone	6,444	45	9	7,144	47	11	†	†
	*	11	3	*	11	4		
Monumental and architectural masonry:—								
✓ Of granite	23,818	554	77	23,872	555	78	17,267	495
							*	100
✓ Of marble	21,550	494	75	21,805	500	78	1,511	51
							*	236
✓ Of other stone or slate	60,915	540	63	60,915	540	63	†	†
	*	85	30	*	108	51		
Other and unclassified dressed stone or slate	18,237	264	22	19,739	285	30	51,819	671
							*	430
Slate goods (mantelpieces, school slates, etc.)	147	14	...	147	14	2,611†	54†
							*	147†
TOTAL—Dressed stone and slate	2,149	2,202	2,205

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Building Materials Trade			All trades				
	Quantity	Value	Ent-ries	Quantity	Value	Ent-ries	Quantity	Value
	£'000	No.		£'000	No.		£'000	
Hearth surrounds, e.g., slabbed work and other tile and mosaic work, not included above	211	27	...	230	32	...	122†	
Mortar	43	27	...	63	86	...	57	
Plaster (including plaster partitions, figures, models, etc.)	283	27	...	318	37	...	143	
Artificial stone (including concrete blocks, slabs, cement flags, breeze blocks, etc.)	2,928	194	...	3,082	359	...	1,426	
Paving materials:—								
Asphalt and bitumen	1,551	48	...	3,165	70	...	904§	
Crushed stone, slag, clinker, etc.	701	121	...	928	166	...	1,125	
Tar macadam	1,817	88	...	2,241	106	...	2,650	
Other kinds	3	1	...	26	7	...	11	
TOTAL — PRINCIPAL PRODUCTS	9,686	12,255	8,643	

* Quantity not stated.

† Included with "Other and unclassified dressed stone or slate."

‡ So far as separately recorded.

§ Including other bituminous and similar solutions (coal tar products).

The figures shown in the columns headed "All trades" are subject to the following qualifications:—

(1) They do not include masonry and other materials manufactured by builders and contractors for use in their own work. The volume of the output so excluded cannot be estimated but was probably considerable.

(2) Firms that made returns on schedules for the Building Materials Trade were not required to state separately the quantity and value of the building stone, roadstone, etc., which they prepared and used in contract work on buildings and roads. In view of the large amounts recorded for such work (see page 169), it appears that an important output of building materials escaped separate record. Some idea of the extent of the deficiency arising from the absence of record under this head and under (1), above, may perhaps be obtained by a comparison of the tonnage of the goods made of granite in the above table and the tonnage of the retained imports of unmanufactured granite, viz., 596,000 tons in 1930.

(3) They also exclude stone, whether in the crude or dressed form, produced by owners of quarries. Some duplication may be

involved between the value of crude stone as delivered from quarries and that of the dressed stone recorded by firms in the Building Materials Trade, but it is probable that a large part of the crude stone purchased by these firms was imported.

The following table gives particulars of the output in 1930 and 1924 of stone (except slate) recorded on schedules for mines and quarries :—

Kind of goods	1930		1924	
	Quantity	Value	Quantity	Value
	Th. tons	£'000	Th. tons	£'000
Limestone or dolomite :—				
For use as building stone ...	198	327	293	301
For use as paving stone, kerbs, etc.	23	12	11	9
Sandstone and quartzite* :—				
For use as building stone ...	350	539	420	575
For use as kerbs, setts, flags and paving ...	203	298	193	254
Igneous rocks† :—				
For architectural and monumental use ...	55	102	64	110
For use as kerbs and setts ...	220	402	273	563
TOTAL ...	1,049	1,680	1,254	1,812

* For 1924, the classification was "Sandstone," quartzite being included with granite, basalt, etc.

† For 1924, the classification was "Granite, basalt, quartzite, whinstone, etc."

For particulars of the output of dressed slate and of roadstone, etc., at mines and quarries in 1930 and 1924, reference should be made to pages 412 and 388-90 respectively.

Prices.—The average selling values of dressed stone and slate in 1930 and 1924, as calculated from the returns received on schedules for the Building Materials Trade, are shown in the following table. Owing to the lack of quantitative data, these comparisons cannot be extended to the other classes of building materials produced by this trade.

Kind of goods	Average value		1930 as a percentage of 1924
	1930	1924	
	£ per ton	£ per ton	Per cent.
Setts and pavement kerbs of granite ...	2.02	4.23	47.8
Monumental and architectural masonry:—			
Of granite ...	23.24	28.67	81.1
Of marble ...	22.95	33.93	67.6

Volume of production in 1930 and 1924.—The total value of the output in 1924 of goods regarded as "Principal products" and of the Contract and other work done by firms in this trade amounted to £11,177,000, and it is estimated that this sum would be reduced to a figure of about £10,300,000 if re-valued in terms of prices in 1930. On the basis of this estimate, the volume of production of these goods in 1930 was greater by about 59 per cent. than in 1924. In view, however, of the large proportion of the total for which no comparable price factors are available, no high degree of precision is claimed for this estimate.

Exports and imports.—The following table shows the quantities and values of various classes of dressed stone, etc., exported from the United Kingdom in 1930 and 1924, together with particulars of the quantities imported and retained. For the reasons already given, comparison with production is not practicable.

Kind of goods	Exports		Retained imports	
	Quantity	Value	Quantity	Value
	Th. tons	£'000	Th. tons	£'000
Stones and slates, wholly or mainly manufactured :—				
Granite :—				
Setts and pavement kerbs ...	1930 0.2	1	108.6	303
... ..	1924 0.2	1	233.0	613
Monumental and architectural ...	1930 1.5	46	6.5	207
... ..	1924 3.3	89	3.7	82
Marble, other than works of art ...	1930 0.2	15	31.8	703
... ..	1924 *	*	*	*
Other descriptions†	1930 8.7	143	17.1	129
... ..	1924 13.1	189	29.6	585
Asphalt and bitumen ...	1930 *	*	180.8	860
... ..	1924 *	*	264.6	1,370

* Not separately recorded.

† Including grindstones, lithographic stones, millstones and whetstones but excluding slates for roofing purposes.

Contract work, etc.—The total amount recorded as received for contract and job work carried out in 1930 by firms whose returns were made on schedules for the Building Materials Trade was £4,159,000, the corresponding total for 1924 being £2,534,000. The principal kinds of work included in these totals are shown below. In the case of contract and job work the amount received includes the value of the materials prepared by firms and used by them in such work.

Kind of work done	1930	1924
	£'000	£'000
Contract and job work :—		
Work on buildings, etc. (masonry, slating, tiling, plastering, slabbing, etc.)... ..	2,154	572
Work on roads (construction, maintenance or repair) ...	1,850	1,609
Not separately distinguished	—	222
Total—Contract and job work	4,004	2,403
Work done on monuments not made by the firm (erection and cutting of inscriptions)	116†	77†
Work done for the trade or on commission (sawing, turning, etc.)	39	54‡
TOTAL	4,159	2,534

† Includes £1,000 returned on schedules for other trades.

‡ Includes £7,000 returned on schedules for other trades.

Other products.—In addition to the output shown in the table of principal products on pages 166-7, firms that made their returns on schedules for the Building Materials Trade, recorded a sum of £86,000 in respect of other goods made in 1930, the corresponding figure for 1924 being £45,000. These goods are dealt with in the reports on those trades in which the principal output was recorded.

Employment and Wages

Employment.—The following table shows the average numbers of persons employed in 1930 and 1924 :—

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
1930						
Operatives (average for the year)	1,803	26,071	48	255	1,851	26,326
Administrative, technical and clerical staff (as at 18th October)	250	2,869	60	536	310	3,405
TOTAL	2,053	28,940	108	791	2,161	29,731
1924						
Operatives (average for the year)	1,159	17,882	52	229	1,211	18,111
Administrative, technical and clerical staff (as at 18th October)	155	1,844	39	352	194	2,196
TOTAL	1,314	19,726	91	581	1,405	20,307

Wages.—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 98 and 99.

Power

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :—

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS						
Reciprocating steam engines	6,292	3,309	9,601	5,346	952	6,298
Steam turbines	—	90	90	—	90	90
Internal combustion engines :—						
Gas	6,339	291	6,630	6,442	597	7,039
Petrol, kerosene, or other light oils	2,343	306	2,649	625	61	686
Heavy oils	5,410	66	5,476	1,691	—	1,691
Water engines	314	—	314	56	—	56
TOTAL	20,698	4,062	24,760	14,160	1,700	15,860
	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
ELECTRIC GENERATORS						
Driven by						
Reciprocating steam engines	1,078	687	1,765	622	146	768
Internal combustion engines :—						
Gas	264	10	274	207	32	239
Petrol, kerosene, or other light oils	292	50	342	19	—	19
Heavy oils	544	112	656	21	—	21
TOTAL	2,178	859	3,037	869	178	1,047
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ELECTRIC MOTORS						
Driven by						
Electricity generated in same works	2,025	676	2,701	830	237	1,067
Electricity generated in other works under same ownership	2,244	538	2,782	150	60	210
Purchased electricity	30,121	3,587	33,708	16,199	1,673	17,872
TOTAL	34,390	4,801	39,191	17,179	1,970	19,149

Consumption of fuel

The following table shows the quantities of coal, coke and electricity recorded as used in 1930 :—

Kind of fuel used	For power (driving engines)	For other purposes (so far as recorded)	For power and other purposes, not separately distinguished
	Tons	Tons	Tons
Coal	25,055	42,843*	7,012
Coke	5,086	28,513*	10
			B.T.U. (Kw.-hrs.)
Electricity used for all purposes :—			'000
Generated in same works			2,065
Generated in other works under same ownership			4,000
Purchased			17,519
	TOTAL—Electricity		23,584

* These figures were recorded by firms representing 92.5 per cent. of the net output of the whole trade.

TABLES

I. Summary of results

Particulars	Unit	England and Wales	Scotland	Great Britain
Value of goods made and work done (Gross output)	£'000	12,510	1,420	13,930
Cost of materials used	"	5,722	533	6,255
Paid for work given out to other firms... ..	"	118	46	164
Net output	"	6,670	841	7,511
Average number of persons employed	No.	26,225	3,506	29,731
Net output per person employed	£	255	240	253
Power available :—				
Prime movers	H.P.	18,847	5,913	24,760
Electric motors driven by purchased electricity	"	29,568	4,140	33,708

II. Production

Kind of goods made and work done	Unit	England and Wales	Scotland	Great Britain
Stone and slate, dressed :—				
Setts and pavement kerbs :—				
Of granite	Tons	4,410	—	4,410
	£'000	9	—	9
Of other stone { Quantity stated	Tons	6,444	—	6,444
{ Quantity not stated	£'000	45	—	45
	£'000	11	—	11
Monumental and architectural masonry :—				
Of granite	Tons	6,430	17,388	23,818
	£'000	94	460	554
Of marble	Tons	13,537	8,013	21,550
	£'000	445	49	494
Of other stone { Quantity stated	Tons	58,860	2,055	60,915
or slate { Quantity not stated	£'000	537	3	540
	£'000	83	2	85
Other and unclassified dressed stone or slate	Tons	17,888	349	18,237
	£'000	233	31	264
Slate goods not included above (mantel- pieces, school slates, etc.)	£'000	147	—	147
TOTAL—Dressed stone and slate	£'000	1,604	545	2,149

Kind of goods made and work done	Unit	England and Wales	Scotland	Great Britain
Hearth surrounds, e.g. slabbed work and other tile and mosaic work, not included above	£'000	*	*	211
Mortar	£'000	*	*	43
Plaster (including plaster partitions, figures, models, etc.)	£'000	*	*	283
Artificial stone (including concrete blocks, slabs, cement flags, breeze blocks, etc.)	£'000	2,800	128	2,928
Paving materials:— Asphalt and bitumen	£'000	1,476	75	1,551
Crushed stone, slag, clinker, etc. ...	£'000	668	33	701
Tar macadam	£'000	1,786	31	1,817
Other kinds	£'000	3	—	3
TOTAL—Paving materials ...	£'000	3,933	139	4,072
Other products	£'000	86	—	86
Work done:—		Amount received	Amount received	Amount received
Contract and job work—				
Work on buildings, etc. (masonry, slating, tiling, plastering, slabbing, etc.)... ..	£'000	1,985	169	2,154
Work on roads (construction, maintenance or repair) ...	£'000	1,446	404	1,850
Work done on monuments not made by the firm (erection and cutting of inscriptions)	£'000	108	7	115
Work done for the trade or on commission (sawing, turning, etc.)	£'000	33	6	39
Total value of work done ...	£'000	3,572	586	4,158
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) ...	£'000	12,510	1,420	13,930

* Owing to the possible disclosure of particulars relating to individual firms, separate particulars for England and Wales and for Scotland cannot be given.

III. Employment

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1930

Persons employed	Males		Females		Males and females	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
<i>England and Wales:—</i>						
Operatives	1,563	23,437	47	236	1,610	23,673
Administrative, etc.* ...	238	2,650	52	460	290	3,110
TOTAL	1,801	26,087	99	696	1,900	26,783
<i>Scotland:—</i>						
Operatives	274	3,129	2	24	276	3,153
Administrative, etc.* ...	12	219	8	76	20	295
TOTAL	286	3,348	10	100	296	3,448
<i>Great Britain:—</i>						
Operatives	1,837	26,566	49	260	1,886	26,826
Administrative, etc.* ...	250	2,869	60	536	310	3,405
TOTAL	2,087	29,435	109	796	2,196	30,231

* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1930

Week ended	Males and females			Week ended	Males and females		
	England and Wales	Scotland	Great Britain		England and Wales	Scotland	Great Britain
Jan. 18 ...	21,696	3,004	24,700	July 19 ...	24,002	3,252	27,254
Feb. 15 ...	22,130	3,054	25,184	Aug. 16 ...	23,767	3,567	27,334
Mar. 15 ...	22,333	3,152	25,485	Sept. 13 ...	23,795	3,452	27,247
April 12 ...	22,471	3,369	25,840	Oct. 18 ...	23,673	3,153	26,826
May 17 ...	23,140	3,439	26,579	Nov. 15 ...	23,415	2,906	26,321
June 21 ...	23,944	3,401	27,345	Dec. 13 ...	23,013	2,785	25,798
AVERAGE FOR THE TWELVE MONTHS					23,115	3,211	26,326

IV. Power

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS
AND ELECTRIC MOTORS

Power equipment	England and Wales		Scotland		Great Britain	
	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS						
Reciprocating steam engines	4,698	1,469	1,594	1,840	6,292	3,309
Steam turbines	—	—	—	90	—	90
Internal combustion engines :—						
Gas	4,381	273	1,958	18	6,339	291
Petrol, kerosene, or other light oils ...	2,247	302	96	4	2,343	306
Heavy oils	5,121	56	289	10	5,410	66
Water engines	300	—	14	—	314	—
TOTAL	16,747	2,100	3,951	1,962	20,698	4,062
TOTAL OF PRIME MOVERS INSTALLED	18,847		5,913		24,760	
	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
ELECTRIC GENERATORS						
Driven by						
Reciprocating steam engines	718	367	360	320	1,078	687
Internal combustion engines :—						
Gas	237	—	27	10	264	10
Petrol, kerosene, or other light oils ...	292	50	—	—	292	50
Heavy oils	544	112	—	—	544	112
TOTAL	1,791	529	387	330	2,178	859
TOTAL OF ELECTRIC GENERATORS INSTALLED	2,320		717		3,037	
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ELECTRIC MOTORS						
Driven by						
Electricity generated in same works ...	1,841	351	184	325	2,025	676
Electricity generated in other works under same ownership ...	2,094	538	150	—	2,244	538
Purchased electricity	26,317	3,251	3,804	336	30,121	3,587
TOTAL	30,252	4,140	4,138	661	34,390	4,801
TOTAL OF ELECTRIC MOTORS INSTALLED	34,392		4,799		39,191	

V. Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
	Tons	Tons	Tons
Coal used for power*	21,753	3,302	25,055
Coke used for power*	4,233	853	5,086
	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes :—			
Generated in same works	1,935	130	2,065
Generated in other works under same ownership	3,897	103	4,000
Purchased	15,766	1,753	17,519
TOTAL—Electricity	21,598	1,986	23,584

* In addition, 7,012 tons of coal (4,839 tons in England and Wales and 2,173 tons in Scotland) and 10 tons of coke (all in England and Wales) were recorded as used for power and for other purposes, not separately distinguished.