

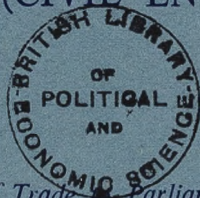
BOARD OF TRADE

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*The Report on the
Census of Production
for 1954*

Volume 12: Industry C

RAILWAYS (CIVIL ENGINEERING)



*Presented by the Board of Trade to Parliament in pursuance of the
Statistics of Trade Act, 1947 (10 & 11 Geo. 6 Ch. 39, Sec. 7)*

LONDON: HER MAJESTY'S STATIONERY OFFICE

1957

PRICE 1s 6d NET

The Report on the Census of Production for 1954

VOLUME 12 INDUSTRY C

RAILWAYS (CIVIL ENGINEERING)

THIS REPORT on the Railways (Civil Engineering) Industry relates to establishments of railway undertakings engaged wholly or mainly in the construction or repair of permanent way, bridges, tunnels and stations, and in other civil engineering work on railway property. One Government undertaking, the Post Office (London) Railway, is included.

Undertakings were asked to return their output in terms of work done in the year of return, valuing that work on the basis of the cost of materials used and wages and salaries paid together with the establishment charges attributable to the work carried out. Similarly, the cost of materials related to materials used, not materials purchased in the year.

This industry is included in minimum list heading 202 in the Standard Industrial Classification relating to Civil Engineering Contracting.

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The following notes describe terms in general use in the tables of the report. More detailed explanations of the terms used and a description of the scope and method of taking the census are given in the separate booklet entitled 'The Report on the Census of Production for 1954 - Introductory Notes' (price 1s. 6d. net).

Industrial Classification: Establishments are classified to industries according to the nature of their output and, as far as possible, in conformity with the Standard Industrial Classification. Certain products are identified as the principal products of individual industries, the principal products for a given industry being of a similar nature or commonly associated in production. The principle of classification normally followed is that an establishment is classified to an industry if its output of the principal products of that industry accounted for a greater proportion of the value of its output than did its output of the principal products of any other industry.

Specialist producers normally comprise those establishments 50 per cent. or more of whose total output by value is accounted for by the characteristic products of the specialist group.

Intermediate products: For some industries figures are given showing the total quantities made during the year of intermediate products, i.e., products which may be further processed in the establishments in which they are produced.

Larger establishments: The information given in the report relates mainly to 'larger establishments', i.e., establishments of firms employing on the average more than 10 persons. In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g., a mine or factory). Offices, warehouses, laboratories and other ancillary places of business situated apart from the producing works are not regarded as separate establishments and are included in the return for the works.

Small firms are those employing on the average 10 or fewer persons.

The estimates for the industry as a whole given in Table 1 are normally obtained by increasing the other items shown in the same proportion as total employment.

Gross output (production) is the total value of goods made and other work done during the year: it is obtained by adjusting the value of sales and work done during the year for changes in the value of stocks of products on hand for sale and work in progress.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used, the amount paid for work given out, and, for 1951 and 1954, any transport payments made. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits.

Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. The value of sales is the net selling value, i.e., the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the f.o.b. value.

Materials and fuel: The total cost of materials and fuel purchased includes all purchases during the year of materials for use in production, and of fuel (includ-

ing oil, gas and electricity) for all purposes: packing materials, including the full cost of returnable cases when first purchased; workshop and office materials; water charges; materials for repairs to buildings, plant and vehicles when carried out by firms' own work-people included in their returns; consumable tools; and parts for machinery purchased as replacements. Purchases of goods for merchanting are excluded. The cost of materials and fuel used, given in Table 2, is obtained by adjusting purchases for changes during the year in the value of stocks.

Stocks: Firms were required to give stocks of materials and fuel, products on hand for sale, and work in progress, at income tax values.

Customs and Excise Duty paid on materials purchased is normally included in the cost of materials. Finished goods are similarly valued as they were sold, duty-paid or duty-free. The net amount of any duty paid is deducted in arriving at net output.

Employment: Total employment includes working proprietors, administrative, technical and clerical employees, and operatives, but excludes outworkers, canteen employees and persons engaged in merchanting or any other activity not covered by a firm's return, who are shown separately as excluded employees. Employees are persons on the pay-roll (i.e., persons whose National Insurance cards were held by employers), whether employed full-time or part-time.

Working proprietors are proprietors of businesses other than limited companies, together with members of their families who worked in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded. For Northern Ireland directors of limited companies (other than those paid by fee only) are also included.

Administrative, technical and clerical employees include directors, other than those paid by fee only (except in Northern Ireland); managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

Operatives include all other classes of employees, i.e., broadly speaking, all manual workers.

Outworkers are persons employed by the firm who work on materials supplied by the firm in their own homes.

Wages and salaries include all overtime payments, bonuses and commissions without any deductions for income tax, insurances, contributory pensions etc. They exclude payments to working proprietors.

Capital expenditure includes expenditure on new building work, and on plant, machinery and vehicles, charged to capital account during the year, including any transport and installation costs involved. It includes expenditure in respect of establishments in Great Britain which had not begun production before the end of the year (which has not previously been included in the Census of Production reports for individual industries).

Symbols used:

- .. for not available
- for nil or negligible (less than half the final digit shown).

Where figures are rounded, e.g., given to the nearest £ thousand, there may be apparent slight discrepancies between the sums of constituent items and the totals shown. In some cases, figures have been combined with others of a similar nature where publication of separate details might disclose information relating to an individual undertaking.

Industry summary

Estimates for the industry as a whole

TABLE 1

	United Kingdom			Scotland	Wales
	1948	1951	1954	1954	1954
	£ million	£ million	£ million	£ million	£ million
Gross output (production)	64.2	69.6	97.6	10.12	5.10
Net output	41.5	45.2	61.5	7.17	3.28
Capital expenditure less disposals (a)	0.6	1.0	2.0	0.05	0.02
Wages and salaries	36.8	36.8	46.6	4.79	2.78
	Thousands	Thousands	Thousands	Thousands	Thousands
Total employment	109.8	95.0	98.3	11.06	6.10

(a) Capital expenditure on new building work and plant, machinery and vehicles (excluding that incurred for establishments not yet in production), less amounts received for plant, machinery and vehicles disposed of.

Summary of returns received

TABLE 2

	Unit	Great Britain	United Kingdom		
		1948	1951	1954	
UNDERTAKINGS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS					
Number of establishments	No.	125	107	105	
Output of undertakings in this industry					
Civil engineering work (a)	£'000	57,744	60,478	83,542	
Goods made and other work done (b)	"	5,424	9,097	13,942	
Gross output (value of work done and goods made)	"	63,168	69,575	97,484	
Cost of materials and fuel used	"	22,303	24,409	36,008	
Net output	"	40,865	45,166	61,475	
Average number of employees {operatives	No.	100,577	87,658	90,434	
{others	"	7,598 (c)	7,280	7,827	
Total employment	"	108,175	94,938	98,261	
Net output per person employed	£	378	476	626	
Wages and salaries	{ of operatives	£'000	32,904	33,100	41,813
	{ of others	"	3,326	3,673	4,769
Capital expenditure					
New building work (d)	"	262	176	827	
Plant and machinery	{ acquisitions (d)	"	226	320	339
	{ disposals	"	8	3	5
Vehicles	{ acquisitions (d)	"	160	559	877
	{ disposals	"	1	5	4
UNDERTAKINGS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS					
Number of returns	No.	10	11 (e)	14	
Total employment	"	39	61 (e)	80	

(a) For details for 1951 and 1954 see Table 5.

(b) For details for 1954 see Table 7.

(c) Number in week ended April 10, 1948.

(d) Excluding expenditure for establishments not yet in production.

(e) Excluding Northern Ireland. No information about small undertakings was collected in Northern Ireland for 1951.

RAILWAYS (CIVIL ENGINEERING)

Analysis by size, 1954

Larger establishments in the United Kingdom

TABLE 3

Average number employed	Establishments	Gross output	Net output	Employees		Wages and salaries		Capital expenditure (a)	Net output per person employed
				Operatives	Others	Operatives	Others		
	Number	£'000	£'000	Number	Number	£'000	£'000	£'000	£
11 - 49	10	590	233	307	23	151	13	13	706
50 - 199	33	3,064	1,956	3,312	252	1,577	155	218	549
300 - 749	7	3,495	2,202	3,636	182	1,557	104	4	577
750 - 999	5	3,867	2,591	3,817	447	1,746	269	45	608
1,000 - 1,499	16	18,259	11,557	17,758	1,748	8,054	1,064	85	592
1,500 - 1,999	22	40,619	24,628	35,913	3,016	16,693	1,857	304	633
2,000 - 2,499	9	18,921	12,284	18,190	1,486	8,366	884	8	624
2,500 and over	3	8,668	6,024	7,501	673	3,670	424	150	737
Total	105	97,484	61,475	90,434	7,827	41,813	4,769	827	626

(a) Capital expenditure on new building works, excluding expenditure for establishments not yet in production.

TABLE 4 - Analysis according to specialisation within the industry, 1954

No specialisation within this industry was distinguished.

Civil engineering work carried out

Larger establishments in the United Kingdom (a)(b)

TABLE 5

	1951			1954				
	New construction	Repair and maintenance	Total	New construction		Repair and maintenance		Total
	Value of work done	Value of work done	Value of work done	Value of work done	Entries	Value of work done	Entries	Value of work done
	£'000	£'000	£'000	£'000	No.	£'000	No.	£'000
Construction, maintenance and repair of								
Permanent way, roads, bridges, signals, tunnels, etc.	2,799	47,006	49,806	3,367	16	62,263	25	65,630
Stations and buildings	629	6,848	7,478	1,109	11	11,678	17	12,787
Electric power and lighting works	-	-	-	132	..	47	..	179
Electrical equipment of track	28	583	611	121	..	1,432	12	1,553
Sea walls, embankments and defences	13	480	492	40	..	727	9	768
Gas mains and works	1	196	197	-	-	217	..	217
Waterworks (reservoirs, aqueducts, wells, mains, hydraulic works)	10	199	209	2	..	209	..	211
Telegraphic and telephonic lines and works (including telegraph and telephone apparatus)	105	1,452	1,556	165	9	1,796	13	1,962
Other civil engineering work	-	129	129	5	..	231	8	235
Total civil engineering work done	3,586	56,892	60,478	4,941	..	78,600	..	83,542(c)

(a) The figures recorded in this table do not include work on railway permanent way, stations, buildings, etc. recorded by undertakings whose returns were made on schedules for other industries.

(b) Excluding the value of parts or equipment made in establishments covered by this industry, recorded in Table 7.

(c) Number of entries - 23.

RAILWAYS (CIVIL ENGINEERING)

TABLE 6 - Sales of principal products of the industry by establishments classified to other industries

This table is not applicable to the industry. See footnote (a) to Table 5.

Goods made and work, other than civil engineering work, done

Larger establishments in the United Kingdom

TABLE 7

	1954	
	Quantity	Value
Railway equipment manufactured for the permanent way	Tons	£'000
Steel rails, points, switchings, crossings, etc.	13,038	535
Chairs, fish plates and sole plates, etc.	5,880	132
Concrete sleepers	No. 564	1
Other concrete products	..	568
Signals, signal boxes, and mechanical and power signalling apparatus	..	438
Electrical signalling apparatus	..	166
Electrical communications equipment	..	45
Other equipment, including pipes, watertroughs, etc.	..	358
Repair work to equipment for the permanent way		272
Total permanent way equipment (including repair work)		2,961
Repairs to wagons, trucks, other rolling stock and vehicles		332
Water pumping machinery and parts		
New construction		1
Repair and maintenance		7
Mechanical handling equipment		
New construction		3
Repair and maintenance		106
Furniture (including repair work)		41
Carpentry work not included elsewhere		211
Recovered serviceable material		5,467
Other descriptions of goods made and work done		755
Waste products sold	Th. tons	
Scrap metal	320	3,168
Scrap timber	..	562
Other	..	328
Total		13,942

TABLE 8 - Total make of intermediate products

This table is not applicable to the industry.

Purchases of materials and fuel, 1954: Larger establishments in the United Kingdom

TABLE 9

	Quantity	Cost
	Th. tons	£'000
Materials		
Cast iron goods	54.7	1,132
Iron and steel		
Bars and rods	6.1	188
Angles, shapes, sections, girders, beams, joists and pillars (not fabricated)	3.8	132
Plates and sheets	2.8	96
Other descriptions, except finished parts and scrap	4.5	228
Steel rails		
Points, switches and crossings	26.8	1,056
Other kinds	296.9	8,566
Fish plates and sole plates	16.0	640
Wood sleepers	2,247.1	4,073
Chaired sleepers (concrete or wood)	1,672.2	4,617
Timber (not fabricated), other than plywood or sleepers		
Hardwood	240.4	169
Softwood	1,336.7	932
Copper in all forms except finished parts and scrap	65	14
Paint, enamel and varnish including emulsion paints, cellulose based paints and lacquers	203.8	291
Bricks	16.3	184
Cement	52.0	189
Roadstone and ballasting	2,242.2	1,639
Sand and gravel	219.5	112
Wire uninsulated		
Copper	266	83
Iron and steel	1,466	90
Insulated electric wires and cables	..	1,136
Electric signalling apparatus and components (other than insulated wires and cables)	..	2,040
Electric communications apparatus and components (other than insulated wires and cables)	..	288
Replacement parts for machinery, plant and vehicles, and consumable tools bought as replacements	..	352
All other purchased materials	..	5,908
Fuel and electricity		
Coal	28.0	106
Coke	5.5	25
Liquid fuels (including creosote/pitch mixtures)		
For use in internal combustion engines		
Motor spirit (petrol) for use in road vehicles and derv. fuel	538	101
Other	1,633	97
For burning in furnaces, boilers, kilns, etc.	183	11
Gas purchased		
From Gas Boards	345	23
From other sources, including other departments of the same undertakings	..	5

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Purchases of materials and fuel, 1954

Larger establishments in the United Kingdom

TABLE 9 (contd.)

	Quantity	Cost
	Th.kWh.	£'000
Fuel and electricity (contd.)		
Electricity purchased (a)		
From Electricity Boards	9,220	64
From other sources, including other departments of the undertakings	12,797	81
All other purchased fuel		33
Total Cost		36,008

(a) The total quantity of electricity generated in undertakings own establishments in this industry in 1954 was 22 Th.kWh.

Average number of employees, and wages, salaries and superannuation payments

Larger establishments in the United Kingdom

TABLE 10

	1951	1954
	Number	Number
Average number of employees		
Operatives	87,658	90,434
Administrative, technical and clerical employees	7,280	7,827
Total	94,938	98,261
Wages and salaries paid to	£'000	£'000
Operatives	33,100	41,813
Administrative, technical and clerical employees	3,673	4,769
Total	36,774	46,582
Wages and salaries per head	£	£
Operatives	378	462
Administrative, technical and clerical employees	505	609
Superannuation and other pension funds for employees and dependents (a)		£'000
Employers contributions	..	544
Employees covered	..	Number
Pension, etc. payments to former employees and dependents (a)	..	£'000
		17

(a) The figures given relate to larger establishments in Great Britain only.

Employment in a specified week (a)

Larger establishments in the United Kingdom

TABLE 11

	1951			1954		
	Males	Females	Total	Males	Females	Total
	Operatives	87,576	607	88,183	88,312	304
Administrative, technical and clerical employees	6,210	1,155	7,365	6,724	1,228	7,952
Total employees	93,786	1,762	95,548	95,036	1,532	96,568

(a) Week ended September 22, 1951, or October 30, 1954.

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