

1902.

—  
LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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# REPORT

OF THE

## DEPARTMENT OF PUBLIC WORKS,

FOR THE

YEAR ENDED 30 JUNE, 1902.

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*Printed under No. 23 Report from Printing Committee, 4 December, 1902.*

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

THE DEPARTMENT OF PUBLIC WORKS.

(ANNUAL STATEMENT—1901–1902.)

*Printed under No. 23 Report from Printing Committee, 4 December, 1902.*

The Under Secretary for Public Works to The Honorable Edward  
William O'Sullivan, M.P., Secretary for Public Works.

Sir,

Department of Public Works, 25 November, 1902.

I have again the honor to submit, for your information, the Annual Statement relating to the operations of this Department during the year ended 30th June, 1902.

FINANCIAL.

The gross expenditure for the year amounted to £4,432,484 3s. 8d., of which the sum of £3,262,537 17s. 6d. was provided from Loan Funds, and £1,169,946 6s. 2d. from the Consolidated Revenue. This expenditure was distributed as under :—

Head of Service.	Loans.	Revenue.	Total.
	£ s. d.	£ s. d.	£ s. d.
Establishment* ... ..	.....	31,978 12 3	31,978 12 3
Railway Construction ... ..	724,813 19 0	8,989 4 5	733,803 3 5
Tramway Construction ... ..	201,588 4 9	.....	201,588 4 9
Government Architect ... ..	150,006 1 0	92,913 16 11	242,919 17 11
Roads and Bridges ... ..	175,727 2 8	715,873 19 4	891,601 2 0
Public Watering Places ... ..	59,552 16 2	15,593 2 5	75,145 18 7
Water Conservation and Irrigation ... ..	72,876 11 2	6,266 17 4	79,143 8 6
Country Towns Water Supply ... ..	50,695 5 0	3,217 3 1	53,912 8 1
Sewerage Construction ... ..	136,641 5 5	9,739 12 9	146,380 18 2
Harbours and Rivers ... ..	261,474 0 8	66,168 6 6	327,642 7 2
Dredge Service ... ..	.....	116,815 1 6	116,815 1 6
Labour Commissioners ... ..	.....	10,930 18 2	10,930 18 2
Public Wharfs and Resumed Properties ... ..	.....	7,951 14 0	7,951 14 0
Darling Harbour Resumptions ... ..	1,409,742 13 5	83,352 12 6	1,493,095 5 11
Telephone Tunnels ... ..	14,228 18 9	125 5 0	14,354 3 9
Pneumatic Tubes ... ..	4,290 19 6	.....	4,290 19 6
	£ 3,262,537 17 6	1,169,946 6 2	4,432,484 3 8

\* Includes Ministerial, Clerical, Accounts, and General (Messengers, &c.) Staffs.



Compared with the preceding year, these figures show an increase in Revenue Expenditure of £70,978 7s. 4d., and in Loan Expenditure of £1,320,061 6s. 1d., making, together, a total increase of £1,391,039 13s. 5d. If, however, the amount paid on account of the Darling Harbour Resumptions is deducted, it will be found that the actual expenditure is £18,703 less than the preceding year.

The numbers of persons or firms, exclusive of officers and wages-men, with whom the Department had financial transactions during the year was 6,529, while the vouchers dealt with totalled, after being summarised, 66,739, showing a decrease in the former of 41, and an increase in the latter of 2,172.

The following tabulated statement shows the distribution of the year's expenditure under the heads of contracts, wages, salaries, material, &c. :—

Head of Service.	Contracts.	Wages.	Salaries.	Materials, Miscellaneous, Incidentals.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Establishment .....	.....	.....	31,978 12 3	.....	31,978 12 3
Railway Construction .....	72,944 10 9	200,550 9 0	23,746 6 2	436,561 17 6	733,803 3 5
Tramway Construction .....	35,191 14 8	58,998 3 2	3,797 5 10	103,601 1 1	201,588 4 9
Government Architect .....	92,410 8 6	64,686 0 0	17,505 4 7	69,248 4 10	243,849 17 11
Roads and Bridges .....	407,554 18 2	277,800 6 4	47,116 9 0	159,129 8 6	891,601 2 0
Water Conservation and Public Water- ing Places.	36,046 19 9	75,436 18 10	8,550 5 7	34,255 2 11	154,289 7 1
Country Towns Water Supply .....	13,705 1 4	16,254 10 3	4,216 17 11	19,735 18 7	53,912 8 1
Sewerage Construction .....	23,408 1 0	60,220 13 5	9,281 14 1	53,470 9 8	146,380 18 2
Harbours and Rivers .....	61,536 0 1	152,975 9 2	18,153 19 4	94,976 18 7	327,642 7 2
Dredge Service .....	204 3 9	76,173 15 2	4,152 0 0	36,285 2 7	116,815 1 6
Labour Commissioners .....	.....	1,269 3 6	2,386 10 11	7,275 3 9	10,930 18 2
Public Wharfs and Resumed Properties	162 0 0	120 16 10	4,628 10 5	3,040 6 9	7,951 14 0
Darling Harbour Resumptions .....	.....	5,859 11 2	398 18 4	1,486,836 16 5	1,493,035 5 11
Telephone Tunnels .....	.....	8,234 16 8	.....	6,119 7 1	14,354 3 9
Pneumatic Tubes .....	4,190 0 0	68 16 3	.....	32 3 3	4,290 19 6
	£ 747,353 18 0	£ 98,649 9 9	175,912 14 5	2,510,568 1 6	4,432,484 3 8

\* Includes road subsidies to Municipalities, amounts issued to Trustees, officers' equipment and travelling expenses, as well as compensation for land resumed.

In addition to the foregoing expenditure, the Department executed works to the value of £95,215 19s. 1d. on behalf of other Departments, who defrayed the cost of same out of their own Votes.

The number of contracts entered into during the year was 3,641, of an aggregate value of £656,166 1s. 0d., distributed as follows :—

Branch.	Number of Contracts.	Amount.
		£ s. d.
Roads ... ..	3,026	296,587 13 2
Bridges ... ..	158	81,015 0 6
Harbours and Rivers ... ..	34	16,523 12 7
Sewerage Construction ... ..	5	4,134 16 7
Water Conservation ... ..	8	1,710 10 8
Public Watering Places ... ..	63	29,527 6 0
Government Architect ... ..	237	90,712 1 0
Railway Construction ... ..	110	135,955 0 6
	3,641	£656,166 1 0



At the close of the financial year the number of contracts in progress was 769, carrying liabilities to the amount of £354,119 1s. 1d.

Summarised statements of the operations of the Head Office Banking Accounts will be found in the Appendix.

In the following tabulated statement will be found the expenditure disbursed by the Department year by year, for the period of thirteen and a half years ended 30th June, 1902:—

Year.					Loans.			Revenue.			Total.		
					£	s.	d.	£	s.	d.	£	s.	d.
1889	...	...	...	...	1,014,153	13	8	984,818	13	9	1,998,972	7	5
1890	...	...	...	...	780,016	10	11	1,149,514	14	3	1,929,531	5	2
1891	...	...	...	...	1,590,122	12	5	1,535,494	6	8	3,125,616	19	1
1892	...	...	...	...	1,886,845	7	7	1,336,649	14	7	3,223,495	2	2
1893	...	...	...	...	1,532,679	2	10	1,025,228	12	1	2,557,907	14	11
1894 to 30 June, 1895 (18 months)					1,342,662	18	1	1,243,259	7	7	2,585,922	5	8
1895-6	...	...	...	...	757,461	12	1	1,015,024	0	5	1,772,485	12	6
1896-7	...	...	...	...	856,669	8	2	835,500	15	8	1,692,170	3	10
1897-8	...	...	...	...	1,046,258	1	11	769,780	11	2	1,816,038	13	1
1898-9	...	...	...	...	1,352,009	3	6	813,809	11	5	2,165,818	14	11
1899-1900	...	...	...	...	1,379,231	11	6	844,482	11	4	2,223,714	2	10
1900-1901	...	...	...	...	1,942,476	11	5	1,098,967	18	10	3,041,444	10	3
1901-1902	...	...	...	...	3,262,537	17	6*	1,169,946	6	2	4,432,484	3	8
					£ 18,743,124	11	7	13,822,477	3	11	32,565,601	15	6

\* Includes the sum of £1,486,836 16s. 5d. paid on account of Darling Harbour Resumptions.

This statement shows an average annual expenditure of £2,412,266 16s. 0d.

The Reports furnished by the Heads of the various Branches are appended, and it will be seen that they provide an accurate and detailed record of all the work carried on during the past year under your administration. It is therefore unnecessary for me to do more than point out the most conspicuous features of the management of such a large undertaking.

One of the most important developments has been the extension of the day-labour system to nearly all classes of work, with the exception of the smaller road contracts. On the whole, the system has proved most successful in operation, but the result has only been obtained by greatly increasing the work and responsibility of the officers of the Department. The present protracted drought has also interfered with the progress of work in railway, road, and water conservation construction, both the Walgett railway and the Gwydir River diversions having had to be suspended for want of water.

#### RAILWAY AND TRAMWAY CONSTRUCTION BRANCH.

The Engineer-in-Chief, Mr. Deane, reports that the following four important lines of communication have been finished and thrown open for traffic during the year:—Moree to Inverell, 96 miles; Byrock to Brewarrina, 58 miles; The Rock to Green's Gunyah, 24 miles; and Goulburn to Crookwell, 36 miles. This is a total length of 216 miles of new line, and the total length of the lines in the State is now 3,026 miles.

All



All these lines have been completed for sums well within their estimated cost. The first three are of the ordinary light construction adapted to plain country ballasted with earth and unfenced. The Crookwell line crosses the Wollondilly River on a steel bridge of nine spans, the longest of which is 120 feet. The only work done under contract was the erection of station buildings and trucking yards, all the rest having been carried out by day-labour.

The following lines are in various stages of construction :—

Dubbo to Coonamble—95 miles, of which 90 miles are finished to plate-laying.

Gundagai to Tumut—31 miles. The earthworks are nearing completion, and the work in connection with the steel bridge over the Murrumbidgee River is well forward.

Narrabri to Walgett, with Branch to Collarenebri.—This work has had to be partially suspended owing to the severe drought.

Culcairn to Germanton—16 miles. All the rails have been laid, and the bridges and small openings are nearly completed.

Casino to Lismore—18½ miles. The earthworks are finished, with the exception of the tunnel, the excavation of which is well advanced.

Grafton to Casino—67 miles. Good progress has been made with this work since commencement.

Temora to Wyalong—40 miles. This work has just been commenced.

At the new Central Railway Station, Sydney, the work has proceeded vigorously during the year. All the old buildings and the human remains have been removed from the site, and the foundation stone was laid at the corner of Pitt-street and the New Belmore road on the 30th April. The formation of New-street, 2½ chains in width, the extension of Castlereagh-street, and the widening of Hay and Elizabeth streets is well forward. The levelling of the whole site is practically finished, and great improvements have been made to Belmore and Prince Alfred Parks by filling in with the spoil excavated for the foundations.

The Survey and Drafting Staff has been fully employed during the year in carrying out about 2,000 miles of exploration, 1,000 miles of traversing and staking, and about 2,000 miles of levelling.

The following electric tramways have been completed and opened for traffic during the year :—

Kensington to Little Bay—3 miles 50 chains of single track.

Enfield to Mortlake—5 miles 36 chains of single track.

Broken Hill Tramway—3 miles of single track, with a car-house.

The following electric tramways are now in progress of construction :—  
Balmain to Gladesville, Darling-street, Balmain, deviations at the new Central Station, Elizabeth-street, Redfern, and the Folly Point line.

The following steam tramways are in various stages of construction :—  
Parramatta to Baulkham Hills, nearly finished. Manly tramway and car-house, the Penitentiary loop, Newcastle to Carrington, Little Bay to La Perouse, Botany Cemetery extension, and the Merewether Beach extension. The Carrington line will cross the main Northern railway line on a bridge.

The



The round connection from Sydney, *via* Kensington, Little Bay, La Perouse, Botany Cemetery, and back to Sydney, a circuit of 17 miles 38 chains, is now practically completed, and will shortly be open to traffic.

Explorations and inspections have been made at twenty-three projected railway lines, and plans have been prepared of seven others (chiefly alternative schemes to the Tenterfield-Casino line), for submission to the Public Works Committee. Plans of three tramway lines have been prepared for submission to the Committee, and trial surveys have been made for twenty-nine other projected tramway lines.

#### HARBOURS AND RIVERS.

The Principal Engineer for Harbours and Rivers (Mr. Keele) reports that, with a few exceptions, the navigation of the various harbours and rivers has been satisfactorily maintained throughout the year.

The coastal rivers are the natural highways through some of the richest lands in the State, and while there is no direct return from the expenditure incurred in improving their entrances and removing obstructions to navigation along their courses, yet every improvement work makes access to the metropolitan markets easier and cheaper, and thereby induces settlement and brings about the more rapid development of the districts through which the rivers pass.

Of the expenditure incurred for some years past, a considerable portion has been for works immediately within the entrances. In no case, however, have the whole of the works designed for the improvement of the entrance been carried out; all the entrances must, therefore, be considered as being in a transition state, and, until the breakwaters have been projected further seawards, liable to be seriously affected at times by unfavourable weather conditions. As an instance of the improvement which may be expected at all the rivers when the works have been brought to an advanced state, the case of the Richmond is cited. Here the breakwaters have been extended to a greater distance than at any of the other rivers, with the result that during the recent dry weather period, when most of the rivers shoaled more or less at their entrances, the depth maintained on the Richmond bar was greater than ever before, and vessels can now safely navigate the entrance day or night.

Works have been in progress during the year at the following river entrances, viz.:—Tweed, Richmond, Clarence, Bellinger, Nambucca, Macleay, Hastings, Camden Haven, Manning, Cape Hawke Harbour, Newcastle, and at Port Kembla and Bateman's Bay. The training-walls and breakwaters which have been built at these places have been as successful as could have been expected, considering they are only portions, and in some cases very small portions, of the whole scheme of improvement. The following, amongst others, are mentioned as instances of the effect of the walls which have been built in recent years:—At the Tweed there is from 10 feet to 20 feet of water at low tide along the greater part of the wall, where previously there was a tortuous channel having in many places only 2 feet to 6 feet of water. At the Richmond, which had one of the worst bars on the coast, the entrance has been so improved that there is now a permanent channel having from 11 feet to 19 feet of water at low tide. Though the inner works at the Clarence are not yet complete, there is now a depth at low water along the southern training-wall of from 15 to 55 feet,



feet, produced by the scour alone, where before the commencement of the works there was not more than 10 to 11 feet. At the Macleay there is from 16 to 28 feet of water along the northern concave wall and inner portion of southern wall which has been brought about partly by scour and partly by dredging, but which is maintained by the scouring action alone. The works at the Manning have fixed the entrance, and with the exception of the "cross-over" near the upper end of the works there is from 12 to 30 feet at low tide in the channel along the greater part of the northern wall. Along the concave wall at Bateman's Bay there is from 12 to 16 feet at low water where previously there was not more than 9 to 11 feet. The two worst parts of the Moruya River between the entrance and the township have been so improved by training-walls, assisted by dredging, that steamers have for some time past been able to discharge their cargoes at the town wharf instead of lightering them from the Heads as previously. Attached to Mr. Keele's report will be found plans of the different harbour works which have been in progress along the coast, showing the complete scheme and the portion constructed up to 30th June, 1902.

The dredging plant employed by the Harbours and Rivers Branch consists of 11 ladder dredges, 10 sand-pump dredges, 7 combined sand-pump and grab dredges, and 15 steam tugs. The total quantity of mud, sand, clay, indurated sand, ballast, rock, &c., raised during the year amounted to 6,749,112 tons, the average cost being 4.11 pence per ton, the quantity being greater and the cost slightly less than last year, and this notwithstanding that two ladder and two grab dredges were taken over from the Department by the Sydney Harbour Trust.

The services rendered at many of the river entrances by the light draft self-propelled hopper dredge "Antleon" is deserving of special mention. During the year considerable shoaling took place at some of the river entrances, and in giving rapid relief the services of this dredge were invaluable, indeed the calls for her were so numerous that it was as a rule impossible to properly complete one work before she had to be withdrawn to another. The necessity for providing an additional dredge of her type is strongly urged.

The new suction and cutter dredge "Glaucus," now approaching completion at Fitzroy Dock-yard, will be a valuable addition to the dredging plant.

Of the material raised by the dredges working near some of the river entrances, a considerable portion is used for reclaiming low-lying land in the vicinity. The most extensive of these reclamation works is at Newcastle, where what is known as Walsh's Island is being formed largely of the material obtained in deepening the harbour, and which would otherwise have to be towed to sea at a greater cost; this island, when completed, will have an area of about 569 acres available for grazing or other purposes. Other timber work has been done at Bullock Island and Stockton, and at several of the other rivers along the coast.

A number of wharfs have been erected at the different rivers and all the existing wharfs kept in such a state of repair as the funds available would allow.

The work of removing snags and overhanging trees was recommenced on the Darling, Murrumbidgee, and Edwards Rivers, the lengths cleared of all obstructions to navigation being 80 miles, 60 miles, and  $12\frac{1}{2}$  miles respectively, or a total of  $152\frac{1}{2}$  miles. Snagging operations have also been carried on in several of the Northern rivers.

The



The principal lighthouse construction works have been the lighthouse and keeper's quarters at Cape Byron and those at Norah Head. The former was completed during the year, and the light has been exhibited since 1st December, 1901; the contract for the latter lighthouse was cancelled, and arrangements made to complete the work by day labour. All the lighthouses have been kept in a state of repair as far as funds would permit.

The necessary buildings in connection with the pilot station at the new entrance to the Macleay River were erected during the year, and repairs effected to buildings at other stations.

During the year 160 vessels, consisting of war ships, merchant ships, and Government steamers, dredges, punts, &c., representing a total of 204,741 tons, were docked in the Sutherland and Fitzroy Docks at Cockatoo Island. The total cost of the work carried out at these dock-yards was £91,736.

The dry dock at Riley's Hill, Richmond River, was almost completed during the year. This dock has a length of  $214\frac{1}{2}$  feet; width at entrance, 45 feet; and depth on sill at high water, 10 feet. In addition to the Sutherland and Fitzroy Docks in Sydney, the Department now possesses a smaller dock at each of the following rivers:—Tweed, Richmond, Clarence, Macleay, Manning, and Shoalhaven, which are found very useful for the docking and repairs to the dredging and harbour works floating plant, ferry punts, and steamers, as well as privately-owned vessels.

#### ROADS, BRIDGES, AND PUBLIC WATERING PLACES BRANCH.

From the report of the Commissioner and Principal Engineer for Roads, Mr. Hanna, it will be seen that the length of the existing roads in the State is now 46,318 miles, no less than 1,431 miles having been added during the year. The number of culverts is now 39,082, of which 322 are entirely new ones, and the number constructed during the year is 1,918. The total length of causeways is given as 91 miles, no less than 1,128 having been constructed in the year, and the new fencing amounts to 10,081 rods. There are now 134 ferries in operation, and eight punt slips are maintained to carry out the repairs to the ferry punts and boats.

The drought has much increased the cost of the contract work done in this Branch, the unusual hardness of the ground necessitating the use of explosives to a much greater extent than formerly. Although no works of any magnitude have been executed, the mileage, as stated above, has considerably increased. The number of contracts let during the year for road work was 3,040, and 467 of these are still in progress.

The work of the Branch has been carried out by 64 road superintendents, who are assisted in the larger districts by assistants and overseers. The distance traversed by these officers in the execution of their duties amounted to 431,914 miles, at an average cost of 2.42d. per mile. The expenditure on salaries amounted to 7.34 per cent. of the value of the works carried out. An average of 53 foremen, 930 maintenance men, and 193 ferrymen were continuously employed, and 1,958 others were employed more or less intermittently. Including the contractors and their gangs, the average number of wage-earners employed amounted to 9,271.

Relief



Relief work was given to 9,400 other labourers chiefly in the Metropolitan area. The principal works thus executed were the improvements to the Botanical Gardens, formation of the Beach-road at Rushcutter's Bay, formation of Gladesville to Parramatta road, and the widening of the South Head road for the new tramway.

It appears that only 16,000 miles, or about one-third of the roads in the State, are metalled, gravelled, or formed. It is quite plain that all the resources of the Branch must be strained for many years to come if the necessary improvements are to be effected, and in many cases the applications of isolated settlers have to be reluctantly refused. It has been pointed out in every Annual Report for many years past that the cost of maintenance is greatly increased by the common practice of using narrow tyres under heavy waggons, and relief can only be obtained by the passing of the Tyres Bill by Parliament. There is no hope that the wide tyre will be adopted except under compulsion, although all experiments tend to prove that its use is advantageous, and consequently the bulk of the traffic on the roads is impeded at present by the carelessness of the minority.

Mr. Hanna also points out that in the past the protection of river banks has been done by his Branch in order to preserve adjacent roads, but that the riparian proprietors have escaped all contribution to the cost, although they have invariably been greatly benefited. Some systematic method of dealing with such cases is urgently required, and will be considered.

It is also suggested that the provisions of the Truck Act might be suspended in the case of contracts at great distances from a township, where the contractor is, practically speaking, bound to provide the provisions for his men.

Forty-six new bridges, including the Pyrmont Bridge, were completed and opened for traffic during the year. Of these, sixteen were erected to replace decayed structures, and the number of bridges now in the State is 3,008, with a length of 58 miles.

At the end of the year there were twenty-seven bridges (including the Glebe Island Bridge) in course of construction; of these, sixteen are being built to take the place of old structures.

The total length of bridges completed or in course of construction during the year was 2 miles 53 chains. The most important of those completed are the following:—

Pyrmont Bridge.—This bridge was opened for traffic by the State Governor on the 27th June, 1902, or only twenty-one months after the foundation stone was laid. The whole length of the bridge is 1,758 feet, and it forms a connection from Pyrmont to Sydney across an arm of the harbour. A noteworthy feature of the design is the swing span, 223 feet in length and 54 feet wide, weighing 800 tons. This is operated by two 50 horse-power electric motors, which can open or close the span in forty-four seconds at a cost of 1½d. Those who are acquainted with the inconvenience and delay which occurred at the old bridge will appreciate the advantages of the new structure. Separate contracts were let for abutments, side spans, and swing span, and the contractors all carried out their work faithfully and satisfactorily.



Telegraph Point, Wilson's River.—This is a new type of Bascule bridge on the Main North Coast road, between Port Macquarie and Kempsey.

Killawarra Bridge, length 1,083 feet, is over the Manning River just above the head of navigation.

Inverell Bridge, 246 feet in length, connects the town of Inverell with the railway station.

Of the bridges under construction the following are noteworthy :—

Glebe Island Bridge.—This important work is well advanced, and it is hoped that it may be opened for traffic by next July.

Tabulam Bridge, Clarence River, 974 feet in length, is being carried out by day labour.

Cobram Bridge, Murray River, length 571 feet, is being constructed by this Branch, and the cost is to be divided between the States of Victoria and New South Wales. The design provides for a lifting span 58 feet long to accommodate the river traffic.

Luskintyre Bridge, over the Hunter River, is 917 feet in length.

St. Albans, over the Macdonald River, is 370 feet in length; and

The Lane Cove Bridge, for carrying the duplicate water main to the Northern Suburbs, is 483 feet in length.

One hundred and fifty-eight contracts for bridges have been let during the year. The cost of preparation of plans, &c., has amounted to 3·25 per cent. of the value of the work carried out. The cost of repairs during the year amounted to £47,151, the whole of this being done by day labour.

A large amount of miscellaneous work has been done by the Branch in connection with the proposed Sydney Harbour Bridge.

Public watering places have received much attention during the year on account of the drought. 136 new works were completed during the year, and 30 are in course of construction.

The largest tank completed was that at Rocky Waterholes, with a capacity of nearly 3,000,000 gallons, and the deepest artesian bore was at Careunga, 4,080 feet. The additional artesian supply tapped during the year amounted to 17,000,000 gallons per day. Seven of the bores were directed into 96 miles of drains, and the area of land benefited is estimated at nearly 500,000 acres.

The team traffic has had to be suspended on many routes on account of the drought. Since May last water has been carted to White Cliffs from a distance of 15 to 20 miles, at a cost of £200 per week. It has been also found necessary to supply Cobar with water from Warren, a distance of 130 miles by rail, in special tanks built on trucks. The cost of this service to the end of the year was £2,300, but if this expense had not been incurred, the whole of the mines would have shut down.

It is estimated that the daily discharge of all the artesian bores in the State is 51,000,000 gallons per day, and the cost is put at 1d. per gallon. Although the artesian supplies have, as yet, only been perfunctorily utilised, a much greater demand for them will be sure to spring up, and it will be necessary in the near future, to prevent any excessive drain on the supply, to limit the area which may be included in one application.

GOVERNMENT



## GOVERNMENT ARCHITECT'S BRANCH.

The Government Architect, Mr. Vernon, reports that the expenditure in his Branch has been £92,736 2s. 2d. less than in the previous year, owing to the decrease in Loan Expenditure.

During the year the following buildings have been completed :—The School of Biology at Sydney University, the Infectious Ward at Little Bay Hospital, Female Wards, &c., at Rydalmere, Nurses' Quarters at Parramatta, Medical Officers' Quarters at Gladesville, and the Asylum for Insane at Kenmore. The total cost of this last work was £171,012 6s. 6d.

Police buildings of the usual type have been built at seven places. In addition, Police Buildings with a Court-house have been erected at Junee, Nymagee, and Wauchope; Officers' Quarters have been completed at Bourke and Broken Hill; Court-houses with Lockups have been finished at Condobolin, Cumnock, and Collarendabri.

Post offices have been provided for six places, the largest being at Pymont.

Additions and repairs to existing buildings have absorbed large sums of money, the most noteworthy being—Improvements to the Botanical Gardens, additions to Government House, additions to Sydney Hospital, additions to Physics Laboratory at Sydney University, additions to Newcastle Post Office, and to Court-houses at Cootamundra, Braidwood, Moree, and Wagga.

The various properties transferred to the Federal Government, consisting chiefly of custom houses and post offices, are valued at nearly £1,500,000 sterling; but so far the valuation has not been accepted. It is hoped that a complete statement may be ready for presentation next year.

It has often been urged that the type of public building erected in the country is too expensive, and the local court-house is generally selected as the most glaring example of this alleged extravagance. In this connection, Mr. Vernon has made a most interesting return showing that the cost of court-houses erected prior to 1891 was £4 4s. 6d. per head of the population served; but that since that date the cost has diminished to £2 2s. per head, while the design and character of the building has been maintained. It may be hoped that this plain statement will dispose of this mistaken contention for the present time.

The expenditure on repairs during the year amounted to 15s. 6d. per £100 of the value of the properties. It is pointed out that this rate is far too small to prevent serious depreciation of the buildings, and the recommendation that a more liberal provision should be made is entitled to consideration.

This Branch has also carried out the furnishing of "Cranbrook" for the State Governor, the illuminations for the Federal celebrations and the Royal Visit, the alterations of "Marli" for the Federal Government, and the erection of an accommodation house at Kurnell for the convenience of tourists.

## WATER SUPPLY AND SEWERAGE BRANCH.

The Principal Engineer, Mr. Wade, has contributed a concise yet comprehensive report on the operations of this Branch.

On the Gwydir River, in the north-western portion of the State, the work of the diversions is still in progress, although hindered by the drought. On the Macquarie River the important concrete weir at Gin Gin has been completed, after  
three



three years' struggle with floods. A regulator has been placed in the Belaringar Cutting, and another cutting from Crooked Creek to Duck Creek is finished. It is intended to proceed with the construction of several small weirs and regulators on these rivers. On the Lachlan River the important works at Lake Cudgellico for the storage of flood-waters have been completed. This may be said to be the first considerable work for the conservation of water carried out in the State. The large concrete weir at Booberoi has also been finished. On the Murrumbidgee River the cutting into Yanko Creek has been widened and provided with a regulator. On the Murray River the cutting into Tuppal Creek has been finished, together with a cutting into Eagle Creek, this latter is now provided with a regulator. A concrete weir has been constructed at Burrowa.

Water supply works for the important township of Wollongong have been completed, and the works for the township of Tumut and Blayney are well in hand. Small schemes for the supply of water have been completed at the following places:—The Quarantine Station, Sydney Harbour, Thirlmere Consumptive Home, and Jenolan Caves. Small dams to intercept leakage have been built at Junee and Mudgee.

An artesian bore is in progress at Narrabri, and works for the extension of the supply to Hay are being carried out. It is proposed to make extensive additions to the Sydney Water Supply. Designs are completed for the supply of no less than eleven country townships, and in progress for four others. Improvements to ten existing schemes are under consideration.

The work of draining the large swamps of the northern coastal districts is progressing, and promise to prove remunerative by converting large areas of spear-grass and reeds into first-class dairy country. During the year the Duranbah Swamp on the Tweed River has been drained by cutting a canal, and a similar scheme for the drainage of Cooperbrook Swamp on the Manning River is in progress.

The Marrickville drainage scheme has been completed, and the result is that practically a new suburb has been added to Sydney. Drainage schemes, consisting of stormwater channels, have been carried out at Ashfield, Balmain, Botany, Homebush, Moore Park, and Mosman, in the metropolitan district, and at Casino, Blayney, Forbes, and Narrandera.

The following sewerage works have been completed during the year:—Dobroyd, Rockdale, Quarantine Station, Sydney Harbour, Liverpool Asylum, and Narrandera. The Randwick and Kensington sewer is nearly finished, and the Waverley and Coogee sewer is in progress; and Mosman sewer, with septic tank at Balmoral, is also well forward.

The low-level sewerage system of Sydney and suburbs has been continued and extended, and the following sections have been completed:—Pymont, Eastern slope, Erskine-street to Bathurst-street, Circular Quay, Balmain, Annandale and Leichhardt, Ashfield, and Waterview Bay. Of the underground pumping stations, eighteen have been completed, and the machinery has been installed in five of these. All the electrical connections for supplying power to operate the pumps have been made, totalling over 40 miles of wire. It is proposed to extend the system generally as required. Plans are in hand for schemes for Newcastle, Orange, Lismore, and other important country towns.



## LAND VALUATION BRANCH.

The report of the Government Land Valuer, Mr. Sievers, shows that a large amount of work has been done in connection with resumptions during the year. The following table shows the amounts paid during the year in settlement of claims in respect of land resumptions:—

	Compensation.			Interest.			Costs.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Roads and Bridges ... ..	22,966	6	1	4,052	1	5	143	16	1	27,162	3	7
Harbours and Rivers ... ..	2,088	15	11	84	7	10	34	4	0	2,207	7	9
Government Architect ... ..	3,423	5	5	32	19	1	38	2	0	3,494	6	6
Public Watering Places ... ..	82	0	0	.....			250	8	3	332	8	3
Railway Construction ... ..	151,479	13	0	4,344	15	10	846	17	0	156,671	5	10
Country Towns Water Supply and Sewerage and Water Conser- vation.	260	6	0	17	9	5	39	13	9	317	9	2
Sewerage Construction ... ..	10,486	1	8	2,029	15	3	1,230	12	9	13,746	9	8
Miscellaneous ... ..	453	10	6	10	9	5	260	8	9	724	8	8
Darling Harbour and Rocks Resumptions.	1,411,849	5	3	139,150	15	11	14,915	18	0	1,565,915	19	2
Totals ... ..	£ 1,603,089	3	10	149,722	14	2	17,760	0	7	1,770,571	18	7

## GENERAL.

The foregoing report, although of necessity only showing the outline of the larger undertakings, will perhaps indicate the magnitude of the operations annually carried through by this Department. I desire to express my obligation to all the officers for their co-operation in the work, and the satisfactory results obtained may be credited to their zeal and efficiency. In a new country, where the reclamation of the desert is as important as the improvement of commercial routes, the work of many pioneer officers must be arduous in the extreme. It may be claimed that the expenditure entrusted to this Department is faithfully and economically disbursed, and that the whole of the works carried out form valuable additions to the public wealth of the State.

I have, &c.,

J. DAVIS, M. INST. C.E.,  
Under Secretary.



## Railways and Tramways.

### Report of the Engineer-in-Chief for Railway Construction.

Department of Public Works, Railway Construction Branch,  
Engineer-in-Chief's Office, 16 October, 1902.

I BEG to forward the following Report on the work carried out in this Branch for the year ending 30th June, 1902.

H. DEANE,  
Engineer-in-Chief for Railway Construction.

#### RAILWAY CONSTRUCTION.

THE following works have been in progress:—

##### Moree to Inverell.

The second section from Gravesend to Inverell was completed and handed over to the Railway Commissioners on 10th March, 1902; but, by arrangement with the Construction Branch, they ran a goods and passenger service some weeks prior to the taking over.

Earth ballast has been used throughout, with the exception of  $8\frac{1}{2}$  miles of black-soil banks and cuttings at Inverell end, where it was found necessary to substitute stone ballast; stone ballast has also been used in all station yards and at bridge ends.

All the works, except station buildings and trucking yards, have been carried out by day labour.

The estimated cost of the line is £279,500, to which 10 per cent. has been added, making a total of £307,450.

The total expenditure to June 30th, 1902, is £288,608 18s. 2d.

##### Byrock to Brewarrina.

The line was finished on 2nd September, 1901. The estimated cost of the line is £146,350, to which 10 per cent. has been added, making a total of £160,985.

The total expenditure to June 30th, 1902, is £141,171 18s. 1d.

##### The Rock to Green's Gonyah.

The water supplies at the Rock and Green's Gonyah were completed during the year. All other works were completed during the previous year. The line was handed over to the Railway Commissioners on 8th July, 1901. The estimated cost of the line is £65,939, to which 10 per cent. has been added, making a total of £72,533.

The expenditure to 30th June, 1902, is £71,324.

##### Goulburn to Crookwell.

This branch leaves the Great Southern Railway at Goulburn, 134 miles 59 chains from Sydney, and terminates at Crookwell, 70 miles 28 chains, being a length of 35 miles 49 chains.

The works were commenced in May, 1900, and the line was completed and handed over to the Railway Commissioners on the 22nd of April, 1902.

The line passes over hilly country and crosses the Main Dividing Range at McAlister; and in order to reduce the earthworks as much as possible, sharp curves and steep grades have been used. The ruling grade is 1 in 40 with ends 1 in 60 against the load, and the sharpest curve is 10 chains radius.

Concrete culverts have been used extensively on the work, the largest being 10 feet in diameter. The line crosses the Wollondilly River, near Goulburn, with a bridge of two main steel spans, 120 feet each, two steel side spans of 66 feet each, four 24 feet and two 14 feet timber approach spans. The steel spans rest on concrete piers. The erection of steel superstructure was carried out by day labour.

Numerous timber bridges have been built, the largest being a 35 feet under-truss over Woodhouslea Creek.

The line is unfenced except at station-yards. Cattle stops are provided at the intersection of all boundary fences. Station buildings have been erected at Argyle, Kenmore, Norwood, The Forest, Woodhouslea, Roslyn, McAlister, and Crookwell. Trucking yards are provided at Roslyn and Crookwell.

At Crookwell a good water supply has been obtained by excavating a tank of  $2\frac{1}{4}$  million gallons capacity on the edge of creek, the water being pumped from this tank to an elevated 20,000 gallon tank in station yard. The line is laid throughout with 60 lb. T rails on round-topped sleepers, 2,464 to the mile. Earth ballast is used except in station yards, at bridge ends, and about 1 mile of road over a bad formation, where stone and gravel ballast is used.

The station buildings have been carried out by contract, but all other works have been built by day labour.

The estimated cost of the line is £153,945, and the expenditure to 30th June, 1902, £147,048 15s.

Dubbo



### Dubbo to Coonamble Railway.

Good progress has been made with this line during the year.

The rails are laid for a length of 90 miles. The bridges and culverts are nearly finished. A contract was let on the 23rd September, 1901, to Mr. W. H. Hudson for the erection of station buildings at Brocklehurst, Goonoo, Coalbaggie, Balladoran, and Gilgandra, and the works are nearly finished. In May, 1902, a contract was let to Messrs. McCarthy and Allibone for station buildings at Berida, Curben, Gulargambone, Combera, and Coonamble, and the works have just been started. Trucking yards are in course of erection at Gilgandra.

At Coalbaggie Creek an excavated tank has been made and the water diverted into it from the creek and from thence pumped into an elevated tank at Coalbaggie station yard.

At Gilgandra cylinders are being sunk in the bed of the Castlereagh River, from which the water will be pumped to an elevated tank in the station yard.

At Gulargambone and Coonamble water supplies are also under consideration.

With the exception of station buildings, all works on the line are being carried out by day labour.

The estimated cost of the line is £207,285; the total expenditure to 30th June, 1902, £163,468.

### Gundagai to Tumut.

The line commences at Gundagai, 286 miles 53.63 chains from Sydney, and terminates at Tumut, 317 miles 78.94 chains, being a length of 31 miles 25.34 chains.

The earthworks were commenced in February, 1901, and are now approaching completion. Some delay was caused through one owner refusing to allow the works to proceed through his property till the expiration of the legal notice. The country through which the line passes is of an undulating character, and in order to keep the formation as close to the surface as possible, and thus reduce the list of earthworks, sharp curves and steep grades have been used.

The ruling grade is 1 in 50, and the sharpest curve 10 chains radius.

The steel superstructure for the bridge over the Murrumbidgee River has been delivered, the concrete piers for the bridge are built, and the staging for the erection of superstructure is in progress. Work in connection with seventy-six 35 feet timber truss spans in approaches to steel bridge is about two-thirds finished, and has been greatly delayed through want of timber, the contractor for same having failed to supply within anything like contract time.

Pile-driving for the smaller bridges and timber openings has just commenced. Cement concrete culverts have been used, extensively along the line.

Since the last annual report the question of route has been settled, and it has been decided not to take the line *via* Adelong.

All works on this line constructed during the year have been carried out by day labour.

The estimated cost is £161,181, and the total expenditure to 30th June, 1902, £68,361.

### Narrabri to Walgett, with branch to Collarenebri.

This line commences at West Narrabri, 252 miles 36.75 chains from Newcastle, and terminates near Walgett, 357 miles 22 chains. The branch to Collarenebri commences at Burren Junction, 304 miles 3 chains, and terminates at Collarenebri. The permanent survey is completed to Walgett, but owing to the severe drought the surveyors were withdrawn before completing the Collarenebri branch. The works were commenced at Narrabri West in March, 1901. The embankments are formed to within 4 miles of Burren Junction, but work had to be discontinued beyond that point owing to the protracted drought.

The bridges are built to Wee Waa, and good progress is being made with the approach spans to Namoi River bridge. The timber for the truss spans is on the ground, but the work of building and erecting the trusses has not yet been commenced.

The piles have all been delivered for the bridges between Wee Waa and Burren Junction, and pile-driving is in progress.

Great delay has taken place with the supply of sleepers owing to the state of the district from drought, and the want of them has seriously delayed the laying of the rails, which has not been commenced.

In April last a contract was let to Mr. J. Bromley for the erection of station buildings at Round Swamp and Wee Waa, and the contractor has made good progress with the work.

The ruling grade is 1 in 110, and the sharpest curve 22 chains radius.

With the exception of station buildings, all works have been carried out by day labour.

The estimated cost of the line is £503,559, and the expenditure to 30th June, 1902, £87,376.

The sleepers and bridge timber are being obtained direct from the cutters.

### Culcairn to Germanton.

This branch leaves the Great Southern Railway at Culcairn, 355 miles 77.58 chains from Sydney, and terminates at Germanton, 372 miles 59.40 chains, being a length of 16 miles 61.82 chains.

The earthworks are finished.

The bridges and small openings are nearly completed. The line is a surface one, and there are no works of any magnitude. The largest bridges over Billabong Creek, eleven 24 feet T.O's; Mountain Creek, five 24 feet T.O's; Ten-Mile Creek, eight 24 feet T.O's; and Willow-bend Creek, four 24 feet T.O's.

A contract was let on the 4th February, 1902, to Mr. J. Allibone for the erection of station buildings at Morven, Carabobala, Ravona, and Germanton, and the works are in progress.

The rails are laid to Germanton, and the Construction Branch has been hauling goods traffic over the line for some weeks.

60-lb. T rails have been laid on round-topped sleepers, 2,464 to the mile. Earth ballast is used, except in station yards and at bridge ends, where stone ballast is provided.

The



The ruling grade is 1 in 150 with, and 1 in 264 against, the load; the sharpest curve is 30 chains radius.

The line is unfenced, except at station yards. At all boundary fences and road crossings cattle stops are provided.

All works, with the exception of station buildings, have been carried out by day labour. The estimated cost of the line is £53,957, and the total expenditure to 30th June, 1902, £43,278 8s 8d.

### Casino to Lismore.

Steady progress has been made during the year. The earthworks are finished, except excavation of tunnel, which is slow owing to the hard nature of the diorite rock; the full section has been excavated for a length of 134 lineal yards, and the heading for a further length of 47 yards.

The concrete lining is in progress. At the north end of the tunnel some slips took place, which necessitated the removal of a large amount of excavation. Good progress is being made with the bridge work.

A quarry for ballast has been opened out and a crushing plant erected.

All works have been carried out by day labour.

The estimated cost of the line is £123,181; the expenditure to 30th June, 1902, £66,317.

### Grafton to Casino.

This line commences at Grafton, on the north bank of the Clarence River, and terminates at Casino, being a total length of 67 miles.

The works were commenced during the current year and good progress has been made. The earthworks are completed on the first 15 miles of line, and the line is cleared for a further length of 8 miles. Bridge building has only recently been commenced, but a large amount of bridge timber and piles have been ordered.

The following are the most important bridges to be built:—

Sproules' Lagoon	15 miles 32 chains	...	Five 35' timber under trusses.
Saltwater Creek	16 miles 16 chains	...	One 60' truss span, with approach of fifty-four 24' T.O's.
Myall Creek	34 miles 33 chains	...	One 60' truss span, with approach of twelve 14' T.O's.
Myrtle Creek	47 miles 52 chains	...	One 60' truss span, and two 14' T.O's.
Deep Creek	60 miles 0 chains	...	One 60' truss span, with approach of six 24' and eleven 14' T.O's.

Richmond River at Casino—One 180' steel span.  
Two 66' 6" steel spans.  
Six 24' timber spans.  
Two 14' "

On the 1st August, 1901, a contract was let to A. E. Owen for the supply of 50,000 sleepers, which are nearly all delivered.

On the 14th June, 1902, a contract was let to the same contractor for an additional 50,000.

The ruling grade is 1 in 50, and the sharpest curve 10 chains radius. The permanent-way will consist of 60-lb T rails, laid on round-topped sleepers, packed throughout with gravel and broken metal ballast. The works are being carried out by day labour.

The estimated cost of the line is £257,000, and the expenditure to 30th June, 1902, £55,315 18s. 9d.

### Temora to Wyalong Railway.

This line commences at Temora, 291 miles 63 chains from Sydney, and terminates at 332 miles 42 chains, being a total length of 40 miles 59 chains.

The works have only just been commenced, and so far consist of clearing the line of timber.

The line is over flat country and there are no works of any magnitude.

The ruling grade is 1 in 100, and the sharpest curve 30 chains radius.

The estimated cost is £126,810.

The expenditure to 30th June, 1902, £6,722.

### Central Railway Station.

Plans and detail drawings have been prepared in the office for the whole of the retaining walls and shops in Pitt-street, both north and south of the new road in front of the Station, also for the Devonshire-street sub-way and for the whole of the basement floors, including drainage, telephone tunnels, &c. Plans for the work above basement are well in hand. The stress diagrams are completed for the main roof and the detail plans for same are being worked out.

The buildings have all been removed from the resumed area.

The removal of all bodies from the Devonshire-street Cemetery is completed.

Several bodies were removed by relations to different cemeteries, but by far the larger number were removed by the Government to a new cemetery at La Perouse, which is now practically finished, the grounds grassed and planted with shrubs, paths made, and a small sheet of water formed in the centre.

At the Central Station the new street, 165 feet wide, is in progress; also the extension to Castlereagh-street through Railway-place.

The



The excavation to the docks and main building, containing some 80,000 cubic yards, has been taken out and the material removed to Belmore Park, where it forms the tramway embankments and raises the general level of the park.

About 30,000 cubic yards of material from the Castlereagh-street cutting have been utilised in improving the levels of Prince Alfred Park.

Hay and Elizabeth streets, adjoining Belmore Park, have been widened to 80 feet.

The foundation stone at the corner of Pitt-street and the new Belmore-road was laid by the Minister for Public Works on April 30th, 1902.

The estimated cost of the work is £561,600 ; but owing to a number of alterations in the scheme, it is probable this estimate will be exceeded.

### Railway Surveys.

Explorations have been made, and reports, each accompanied by a diagram plan, submitted in connection with the following projected railways :—

Armidale to South Grafton, <i>via</i> Guy Fawkes.	Gadara to Germanton.
Bombala to Eden, <i>via</i> Bondi and Timbillica.	Gunning to Koorawatha.
Belmore-road to George's River.	Glen Innes to South Grafton.
Camden to The Oaks.	Gulgong to Gilgandra.
Casino to The Upper Richmond.	Liverpool to Blayney.
Casino to Coraki.	Molong to Peak Hill.
Crookwell to Burrowa.	Mount Victoria to Eskbank.
Condobolin to Mount Hope.	Richmond to Kurrajong.

Inspections and examinations of the following trial and permanent surveys have been made :—

Flemington to Erskineville and Botany.	Grafton to Casino.
Gregra to Canowindra.	Muswellbrook to Cassilis.
Gilgandra to Curlewis.	Norwood to Kingsdale.
Gunning to Koorawatha.	

Fifteen trial surveys were in hand during the year, four of which were completed in respect to both field and office work ; the field operations of two were finished and nine were in progress at the end of the year. An alternative trial survey from Moree to Boggabilla, *via* Garah and Tuloona, had to be postponed owing to the difficulties due to the drought. Six permanent surveys were proceeded with, three of which were completed on the ground ; the staking of one—the branch to Collarendabri—was suspended in April last, owing to the difficulties due to the drought, and two were merely commenced at the close of the year under review.

The necessary working and legal drawings, viz., working plan and sections, proclaimed plans, and police district copies of the latter, books of reference, and land resumption notice plans, have been prepared of the following lines :—

Grafton to Casino.	Narrabri to Walgett.
Gundagai to Tumut.	Great Western Line Deviation to avoid the Zig Zag.

Heliographic copies of portions of the working plans and sections of the first three of the foregoing lines were supplied to the Engineers on Construction. Lithographic copies in book form of the working plans and sections of the Casino to Lismore, Cobar to the Peak, Culcairn to Germanton, and Gundagai to Tumut, have also been prepared. And similar reproductions of the plans and sections of the Grafton to Casino and Narrabri to Walgett lines were in progress.

The mathematical computations have been done in respect to the bearings and distances of the boundaries of the land resumed for railway purposes, and connections to same, of the Casino to Lismore and Culcairn to Germanton lines.

The computations in reference to the Gundagai to Tumut and Narrabri to Walgett railways were in progress, and those of the Dubbo to Connamble line were completed.

Plans have been made, descriptions written, and books of reference compiled of the undermentioned lines for submission to Parliament, with a view to them being referred to the Public Works Committee :—

Glen Innes to Inverell.	} Alternative lines to the Tenterfield to Casino.
Tenterfield to Casino.	
Glen Innes to South Grafton, <i>via</i> Mann River.	
Glen Innes to South Grafton, <i>via</i> Buccarumbi.	
Guyra to South Grafton direct.	
Guyra to South Grafton, <i>via</i> Coff's Harbour.	
Wagga to Humula.	

Parliament having referred the following lines to the Public Works Committee, wall maps, accompanied by plans and sections, have been prepared and supplied for their use, viz :—

Glen Innes to Inverell.	} Alternative lines to the Tenterfield to Casino.
Tenterfield to Casino.	
Glen Innes to South Grafton, <i>via</i> Mann River.	
Glen Innes to South Grafton, <i>via</i> Buccarumbi.	
Guyra to South Grafton direct.	
Guyra to South Grafton, <i>via</i> Coff's Harbour.	
Wagga Wagga to Humula, <i>via</i> Lake Albert.	



Two lines having been recommended for construction by the Public Works Committee, diagram plans to accompany their reports and schedule plans and descriptions for the use of Parliament have been supplied, viz. :—

Cooma to Bombala.

Manilla to Barraba.

The Railway Commissioners having been requested to report on the undermentioned projected railways, they were supplied with the necessary information, viz., plans, descriptions, and estimates, to enable them to comply therewith :—

Condobolin to Mount Hope.

Glen Innes to Inverell.

Glen Innes to South Grafton, *via* Mann River.

Glen Innes to South Grafton, *via* Buccarumbi.

Guyra to South Grafton direct.

Guyra to South Grafton, *via* Coff's Harbour.

Great Western Railway Deviation to avoid the Zig Zag.

Lockhart to Savernake.

Liverpool to Mulgoa

Murwillumbah to the Tweed Heads.

Nowra to Jervis Bay.

Singleton to Cassilis, with Branch Denman to Muswellbrook.

Tenterfield to Casino.

Wagga Wagga to Humula, *via* Lake Albert.

Wellington to Werris Creek.

Alternative  
lines to the  
Tenterfield  
to Casino.

District plans, &c., were also furnished for the use of the Railway Commissioners whilst selecting station sites on the recently authorised extensions, viz. :—

Manilla to Barraba.

Temora to Wyalong.

Estimates of the following lines have been prepared :—

Condobolin to Mount Hope (Part 1).

Eastern Suburban (Electric).

Great Western Railway Deviation to avoid the Zig Zag.

Gundagai to Tumut, Deviation *via* Adelong.

Guyra to Coff's Harbour.

Lockhart to Savernake.

Mudgee to Dubbo.

Muswellbrook to Cassilis.

Rookwood Necropolis Extension.

Temora to Barellan.

Wagga Wagga to Humula, *via* Lake Albert.

Revised estimates have been made of the undermentioned lines :—

Eden to Bega.

Glen Innes to South Grafton, *via* Buccarumbi.

Glen Innes to South Grafton, *via* Mann River.

Glen Innes to Inverell.

Guyra to South Grafton direct.

Grafton to Casino.

Liverpool to Mulgoa.

Murwillumbah to The Tweed Heads.

Nowra to Jervis Bay.

Singleton to Jerry's Plains.

Tenterfield to Casino.

Wellington to Werris Creek.

Wollongong to Port Kembla.

The lithographic copies of the working plans and sections of the lines recently completed, and of those under construction, have been under revision, preparatory to distribution to the Railway Commissioners' Branch and to other Government offices.

A considerable amount of charting and drafting has been done during the year to illustrate reports of explorations and inspections, and to accompany other official papers.

The following tables show the aggregate of each field operation carried out by the field staff engaged on trial and permanent surveys respectively during the past year :—

#### TRIAL SURVEYS.

Preliminary Exploration.	Preliminary Traverse.	Preliminary Levels.	Staking.	Levels.	Check Levels.	Cross Levels.	Details.	Inspections.
m.	m. c.	m. c.	m. c.	m. c.	m. c.	m. c.	m. c.	m.
2,031	509 34	382 21	307 51	273 30	145 59	254 53	272 74	256

#### PERMANENT SURVEYS.

Staking.	Levels.	Check Levels.	Cross Levels.	Details.	Inspections.
m c.	m. c.	m. c.	m. c.	m. c.	m.
152 62	177 23	179 30	65 9	310 56	134



## DETAILS OF TRIAL SURVEYS.

Title of Line.	Total Length.	Date of Commencement.	Date of Completion.	No. of Surveyors.	Length Surveyed during year.	Length completed.	Remarks.
	m. c.				m. c.	m. c.	
Condobolin to Mount Hope, part 2.	47 0	16 Feb., 1902	.....	1	8 40	8 40	
Flemington to Erskineville and Botany.	9 0	2 Sept., 1901	.....	1	5 0	5 0	Survey not continuous.
G. W. R. Deviation to avoid the Zigzag.	8 55	1 May, 1901	31 July, 1901	1	3 60	13 56	Includes alternative lines.
Gilgandra to Curlewis .....	100 0	21 Jan., 1902	.....	1	15 40	15 40	
Grafton to Casino .....	67 0	9 Jan., 1900	31 Jan., 1902	3	83 75	131 55	Includes alternative lines
Gregga to Canowindra .....	36 9	21 Nov., 1901	.....	1	23 18	23 18	in connection with permanent staking.
Gunning to Koorawatha .....	90 0	11 " 1901	.....	1	30 40	30 40	
Gulgong to Gilgandra .....	70 0	16 June, 1902	.....	1	.....	.....	Preliminary work commenced.
Guyra to Inverell .....	60 0	26 Nov., 1901	.....	1	35 0	35 0	
Jerry's Plains to Denman .....	27 66	1 Sept., 1901	6 Nov., 1901	1	27 66	27 66	
Lockhart to Saverlake .....	59 20	19 June, 1901	31 Oct., 1901	1	59 20	59 20	
Manilla to Barraba .....	30 40	16 April, 1902	.....	1	19 0	19 0	In connection with permanent survey.
Molong to Peak Hill .....	70 0	9 June, 1902	.....	1	4 72	4 72	
Moree to Mungindi .....	74 20	17 July, 1901	14 Jan., 1902	1	84 14	84 14	Includes alternative route via Garah.
Muswellbrook to Cassilis .....	83 5	9 Jan., 1901	19 Sept., 1901	2	21 1	83 5	

## DETAILS OF PERMANENT SURVEYS.

Title of Line.	Total Length.	Date of Commencement.	Date of Completion.	No. of Surveyors.	Length Surveyed during year.	Length completed.	Remarks.
	m. c.				m. c.	m. c.	
Grafton to Casino .....	67 0	23 Jan., 1901	30 Mar., 1902	3	30 47	67 0	
G.W.R. deviation to avoid Zigzag	8 55	2 Aug., 1901	30 Nov., 1901	1	8 55	8 55	
Gundagai to Tumut .....	31 25	1 Dec., 1900	24 Aug., 1901	2	4 55	31 25	
Manilla to Barraba .....	30 40	16 April, 1902	.....	1	9 70	9 70	
Narrabri to Walgett, with branch to Collarenebri.	154 0	22 Jan., 1901	.....	2	75 23	104 65	Main line completed on the 21st April, 1902. Survey of branch suspended.
Temora to Wyalong .....	42 0	19 June, 1902	.....	1	4 0	4 0	

## TRAMWAY CONSTRUCTION.

The following tramways were completed and opened for traffic during the year:—

Belmore Park to Fort Macquarie (electric). That portion from Circular Quay *via* Pitt-street to Belmore Park, and from Belmore Park *via* Castlereagh-street to Circular Quay. Length, 3 miles 25 chains, single track, opened for traffic 8th December, 1901.

Kensington to Little Bay (steam), 3 miles 60 chains, single track, opened for traffic 9th December, 1901.

Broken Hill (steam), including engine-shed, car-shed, and coal-stage, 3 miles, single track, opened for traffic, 1st September, 1901.

Enfield to Mortlake (steam), 5 miles 36 chains 40 links, single track, including the removal, re-erection, and extension of engine and car shed, opened for traffic 6th September, 1901.

Queen's Wharf to Dawes' and Miller's Point (electric), 47½ chains, double track, and a circular loop of 17½ chains, opened for traffic 9th August, 1901.

Mitchell-road, Alexandria (electric), 1 mile 30 chains, single track, opened for traffic 2nd January, 1902.

Works in connection with the following Tramways have been in progress during the year:—

Car-shed and offices at Fort Macquarie.

Balmain to Gladesville (electric), to southern end of Parramatta River bridge, 2 miles 14 chains, single track.

Parramatta to Baulkham Hills (steam), 4 miles 50 chains, single track, including the erection of engine-shed and coke-stage at Baulkham Hills.

Little Bay to La Perouse and Cemetery (steam), 3 miles 40 chains, single track.

Botany Cemetery Extension (steam), 1 mile 66 chains, single track.

Penitentiary Loop, 10 chains, single track.

Darling-street, Balmain (electric), 55 chains, double track.

Sydney Central Station Tramways (electric), 2 miles 60 chains, single track.

Elizabeth-street, Redfern (electric), 1 mile 27 chains, double track.

Manly (steam) 1 mile 23 chains, single track, including engine and car-house.

Newcastle to Carrington (steam), 1 mile 75 chains, single track.

Extension to Merewether Beach, Patrick-street (steam), 1 mile 10 chains, single track.

Folly Point, junction at Falcon-street.



Plans, estimates, and descriptions of the following Tramways have been prepared for submission to the Public Works Committee :—

Extension to Bellevue Hill.  
Addison-road to Dulwich Hill.  
Abercrombie-street to Erskineville.

Trial Surveys, Estimates, and Reports have been made of the following tramway proposals:—

Spit to Manly.  
East Maitland to West Maitland.  
Gladesville, through Ryde and Marsfield to Epping.  
Balmain to foot of Darling-street.  
Leichhardt to Petersham Railway Station.  
    "        Balmain.  
Gore Hill to the Council Chambers, Longueville.  
    "        "        Fig-tree Wharf, Lane Cove River.  
Extension to Folly Point.  
Waverley Cemetery to Bronte.  
Dover-road to Watson's Bay.  
Marrickville-road to Sharp-street, Canterbury.  
Wallsend to West Wallsend.  
Redhead to Belmont.  
Broadmeadow to Waratah.  
Johnstone-street, Annandale.  
George-street West *via* Regent-street to Redfern-street.  
Field of Mars *via* Chatswood.  
    "        "        Lindfield.  
    "        "        Roseville.  
    "        "        Drummoyne.  
Pymble to head of navigation, Lane Cove River and Field of Mars.  
Duplication of Dover-road Tramway.  
Cook's River to Lady Robinson's Beach.  
Carlingford to Dural.  
Sutherland to Cronulla Beach.  
Extension to Balmoral Beach.  
Hamilton *via* Georgestown to Waratah.

Belmore Park to Fort Macquarie (Electric).

This tramway has been carried out as described in last year's Annual Report.

The permanent way between Belmore Park and Circular Quay was completed and opened for traffic on the 8th December, 1901.

The tracks connecting Circular Quay with Fort Macquarie finished 26th January, 1902. The turn-outs into the car-house are expected to be completed early in July.

The following contracts for material have been let in addition to those already enumerated in last year's Report:—

Hardwood timber	...	...	...	...	O'Neil & Goldsmith
Louvring of car-house	...	...	...	...	Wunderlich Co.
Electric lighting of car-house	...	...	...	...	Brush Electric Co.
"	"	"	...	...	Lawrence & Hanson.
"	"	"	...	...	Siemens Bros.
"	"	"	...	...	Edison & Swan.
Loftus-street Junction	...	...	...	...	Clyde Engineering Co.
Track lay-out, car-house	...	...	...	...	W. & A. McArthur, Ltd.
Tar-paving of tracks to the car-house	...	...	...	...	Bell & White.
Sleepers	...	...	...	...	From South Coast.

The car-house at Fort Macquarie is of brick with sandstone facings, and will accommodate 72 cars of the largest type now in use. It is designed so as to be in keeping with the surroundings, and in no way detracts from the appearance of the residence of the Governor General, which is close at hand. Ample office accommodation for the running staff has been provided for at the north end of the building.

The turn-outs to the car-house are of 60-lb. rails, laid on sleepers and ballast.

## Broken Hill Tramway (Steam).

This tramway, which was fully described in last year's Annual Report, was completed with the exception of the motor and car sheds on 1st September, 1901.

Enfield to Mortlake (Steam).

This tramway a description of which will be found in last year's Annual Report was completed, with the exception of the engine shed at Enfield and the coke shed at Mortlake, on the 6th September, 1901. Engine shed, &c., was finished 20th April, 1902.

Kensington to Little Bay (Steam).

The tramway, as described in last year's Annual Report, was completed and handed over for traffic on the 9th December, 1901.

Since the completion of the above a waiting shed and a carriage siding, 120 feet in length, have been provided at Little Bay.

Little



### Little Bay to La Perouse (Steam).

This tramway is a continuation of the Kensington to Little Bay Tramway, which connects with the Botany Cemetery Tramway with a branch line to La Perouse where a balloon loop and a siding have been provided, thus saving the delay of shunting.

A triangle has been put in at 46c from Little Bay, at the junction of the Botany to La Perouse and Little Bay to La Perouse Tramways, thus enabling trams if required to proceed to Botany from Little Bay or vice versa without going to La Perouse.

This tramway runs for the most part by a 3-chain road through Crown lands, the distances being as under.

Little Bay Terminus to the junction of the Botany Cemetery Line being 1 mile 25 chains 50 links, and the branch line to La Perouse, a distance of 1 mile 2 chains 2 links.

The track is laid with 60-lb. rails on sleepers, with check rails on all sharp curves, sandstone from the cuttings being used for ballast.

For the purpose of preventing the sand from drifting the cuttings and banks, where necessary, have been turfed.

It is anticipated that this line will be completed early in August next and handed over for traffic in conjunction with the Botany Cemetery Line, thus completing the circuit from Sydney, *via* Kensington, Little Bay, La Perouse, and Botany; and again back to Sydney, a total distance of 17 miles 58 chains.

### Botany Cemetery Extension (Steam).

This tramway, a description of which will be found in last year's Annual Report, was completed on the 1st July, 1901.

It was, as already stated, primarily constructed for the purpose of removing the bodies, &c., from the Devonshire-street Cemetery in connection with carrying out the works for the Sydney Central Station.

This line will be handed over for traffic in conjunction with the Little Bay to La Perouse Tramway, which, it is anticipated, will be opened for traffic early in August.

A loop, with 150 feet clear standing room, has been provided near the Bunnerong-road.

### Queen's Wharf to Dawes' and Miller's Point (Electric).

A description of the route of this tramway, and particulars as to contracts, &c., will be found in last year's Annual Report.

This line was completed and handed over for traffic on the 9th August, 1901.

### Mitchell-road, Alexandria.

This tramway, a description of which will be found in last year's Annual Report, was completed and opened for traffic on the 12th January, 1902.

The junction at Raglan-street with the existing Botany Tramway has been made, and will be put in by the Railway Commissioners when sufficient power is available for the Botany Tramway to be converted from steam to electric.

The whole of the work in connection with this tramway has been carried out by day labour.

### Balmain to Gladesville (Electric).

This tramway branches off the Balmain Tramway at Darling-street, and continues along Weston-road over the Iron Cove Bridge and along Birkenhead-road to the southern side of the Parramatta Bridge, being a distance of 2 miles 14 chains single track.

The permanent way consists of 83-lb. grooved rails on sleepers with 91-lb. rails on all curves of a less radius than 3 chains.

The work, which is being carried out by day labour, will, it is anticipated, be completed early in November.

Loops with 150 feet clear standing room and 11 feet centres have been provided at 36 chains, 62 chains, 1 mile 9 chains, 2 miles 1 chain, and one of 10 chains clear standing room at 1 mile 30 chains.

In addition to this, the first 10 chains of this tramway have been duplicated.

The opening of this line has been considerably delayed owing to the alterations and additions rendered necessary to the Iron Cove Bridge, which it was found was not built in the first instance sufficiently strong to carry a tramway.

Stiffening plates to the wrought-iron cross girders and 12-inch x 14-inch ironbark longitudinal girders have been placed under the rails.

That portion of the bridge occupied by the tramway has been re-decked and top-dressed with tarred metal.

Ornamental cast-iron brackets for carrying the overhead trolley-wire have also been affixed to the sides of the bridge.

The following contracts for material have been let in connection with the work:—

Sleepers ... ..	T. R. Hodgson
Blue metal ballast ... ..	South Coast Quarries
Junction at Gladesville... ..	Vale & Sons
Wooden poles ... ..	John Smith
Feeder cables ... ..	R. W. Cameron & Co.
Overhead material ... ..	W. Hoskins, jun.

Parramatta



### Parramatta to Baulkham Hills (Steam).

This tramway, a description of which was given in last year's Annual Report, is almost completed, and it is anticipated will be ready for traffic about the middle of August.

It was originally intended to stop this line at the 4-mile 20-chain peg on the Windsor-road; but, in order to get a better site for the engine-shed and car-shed, the line has been extended for some 10 chains along the Windsor-road; thence for some 7 chains along the Castle Hill road, where it runs on to resumed property 500 feet x 200 feet, where the engine and car-shed, capable of accommodating four motors and six cars, is being erected.

Loops have been put in at Parramatta Railway Station; opposite the Woollen Mills; and at the terminus, Castle Hill road.

The whole of the works in connection with this tramway have been carried out by day-labour.

### Sydney Central Station (Tramways).

The tramway deviations required in connection with the new Sydney Central Station have been in progress during the year. The total length of single track is about 2 miles 60 chains.

The permanent way, which is laid with 83-lb. rails on sleepers, and 91 lb. rails on all curves of a less radius than 3 chains is being carried out by day labour.

The following list gives the names of the firms and the particulars of materials being supplied in connection with the carrying out of the work:—

Curve No. 1	...	...	...	...	...	Vale & Sons.
Curve No. 2A	...	...	...	...	...	Clyde Engineering Co.
Curve No. 2B	...	...	...	...	...	Clyde Engineering Co.
Curve No. 3	...	...	...	...	...	Clyde Engineering Co.
Curve No. 17	...	...	...	...	...	Fitzroy Dock.
Double crossover roads, New-street	...	...	...	...	...	Vale & Sons.
Wrought and cast ironwork for centre poles	...	...	...	...	...	Clyde Engineering Co.
Mannesmann poles	...	...	...	...	...	Noyes Bros.
Fittings for Mannesmann poles	...	...	...	...	...	Clyde Engineering Co.
Sleepers	...	...	...	...	...	South Coast District.

### Darling-street, Balmain (Electric).

This tramway is an extension of the present Balmain Steam Tramway.

Starting at Gladstone Park it runs along Darling-street by double track to Nicholson-street, a distance of 55 chains.

The construction of the permanent way which was commenced on the 24th February, 1902, is being carried out by day labour.

The tracks consist of 83-lb. grooved rails, laid on sleepers with blue metal ballast.

The overhead material is being erected by day labour. The trolley wire is circular, with a sectional area equal to No. 000, B. & S. gauge.

The following list gives the names of the firms and the particulars of the materials being supplied:—

Overhead material	...	...	...	...	...	W. Hoskins, jun.
"	...	...	...	...	...	Noyes Bros.
Blue metal ballast	...	...	...	...	...	South Coast Quarries.
Poles (wooden)	...	...	...	...	...	John Smith.
Joint boxes	...	...	...	...	...	Pope, Maher, & Co.
Trolley-wire	...	...	...	...	...	R. W. Cameron & Co.
Return feeders	...	...	...	...	...	R. W. Cameron & Co.

On account of the excessive grade it was thought advisable to delay the extension of this tramway to the wharf until the matter had been submitted to the residents through the Balmain Council.

Six schemes, some requiring extensive resumptions of private property in order to get a workable grade, have been submitted to them, and are now under consideration.

### Elizabeth-street, Redfern (Electric).

This tramway commences at Devonshire-street, and runs along Elizabeth-street to the "Zetland Hotel," a distance of 1 mile 27 chains double track.

The construction of the Permanent Way, which was commenced on the 28th May last, is being carried out by day labour.

The tracks consist of 83-lb. grooved rails on sleepers.

It was originally intended to construct this tramway from Cleveland-street to the "Zetland Hotel" only, but in order to complete the Sydney Central Station scheme, that portion between Devonshire-street and Cleveland-street is being constructed in conjunction with the above tramway.

The trolley-wire is circular with a sectional area equal to No. 000, B. and S. gauge.

The poles between Devonshire-street and Cleveland-street are of rolled steel of the Mannesmann type, and between Cleveland-street and the "Zetland Hotel," wooden poles are used.



The following list gives the names of the firms and particulars of materials being supplied:—

Sleepers	...	...	...	...	...	South Coast District.
Mannesmann poles	...	...	...	...	...	Noyes Brothers.
Wrought and cast Ironwork for poles	...	...	...	...	...	Clyde Engineering Company.
Wooden poles	...	...	...	...	...	John Smith.
Blue metal ballast	...	...	...	...	...	South Coast Quarries.
Junction at Devonshire-street	...	...	...	...	...	Fitzroy Dock.
Cleveland-street diamond crossing	...	...	...	...	...	"
Overhead material	...	...	...	...	...	W. Hoskins, junior.
"	...	...	...	...	...	R. W. Cameron & Company.
"	...	...	...	...	...	Noyes Brothers.
Joint boxes	...	...	...	...	...	Pope, Maher, & Company.

### Manly Tramway (Steam).

Commences on the Esplanade, running thence via the Corso, East Steyne, Carlton-street and Pittwater-road to the Curl Curl Lagoon, a distance of 1 mile 23 chains, single track.

Shunting loops have been provided at the Esplanade and at the terminus.

The track is laid with 83-lb. rails on sleepers with 91-lb. rails on all sharp curves, and is expected to be completed early in August.

It is intended to provide an Engine and Car-house at the terminus capable of housing four motors and six cars.

The following contracts have been let:—

Sleepers	...	...	...	...	...	South Coast District.
Blue metal ballast	...	...	...	...	...	South Coast Quarries.
Turn-out to engine and car-house	...	...	...	...	...	Fitzroy Dock.

### Newcastle to Carrington (Steam).

This tramway leaves the Plattsburg tramway in Hunter-street and continues thence over the Carrington Bridge, along Denison-street, Smart-street, Young-street, Robinson-street and Bourke-street to Hargrave-street; from Hargrave-street it continues down Bourke-street, thence along William-street, Darling-street and Hargrave-street, by joining the line again at Bourke-street, thus forming a loop, a distance of 1 mile 75 chains, single track.

The permanent way is constructed of 83-lb. grooved rails on sleepers, with 91-lb. rails on all sharp curves.

Some considerable delay has been occasioned in the completion of this line, owing to the fact that it has been considered inadvisable to cross the four railway tracks at Young-street connecting with the dyke on the level.

Arrangements are being made to overcome this difficulty by crossing these lines by means of an overhead bridge.

This tramway, which was commenced on the 20th March, 1902, is being carried out by day labour, and the undermentioned contracts for the supply of materials have been let to the following firms:—

Ballast	...	...	...	...	...	Hugh Fitzsimmons.
Junction at Hunter-street	...	...	...	...	...	Morison & Bearby.
Junction at Bourke and Hargrave Streets	...	...	...	...	...	Sandford & Co.
Double-crossing, Great Northern Railway	...	...	...	...	...	Permanent Way Branch, Newcastle.
Sleepers	...	...	...	...	...	From South Coast District.

### Merewether Beach (Steam).

The first section of this tramway leaves the existing Plattsburg line in Hunter-street at Darby-street, and continues along Darby-street by a single track to Patrick-street, a distance of 1 mile 10 chains.

The permanent way, which was commenced on the 8th June, 1902, is laid with 83-lb. rails on sleepers.

The first portion of the line for about 8 chains is of double track and a loop 5 chains in length has been provided at the terminus.

The following contracts have been let:—

Blue metal ballast	...	...	...	...	...	Hugh Fitzsimmons.
Junction at Hunter-street	...	...	...	...	...	Fitzroy Dock.
Borehole Coal Co's. Line	...	...	...	...	...	Fitzroy Dock.
Sleepers	...	...	...	...	...	From South Coast District.

### Wooden Tramway Poles.

A contract for the supply of Span and Anchor Poles has been let to J. S. Gam, of Mayfield. These are now being delivered, and are stacked at Alexandria Siding.

### Permanent Way Material.

Tenders are being invited both in the States and in London for the supply of 30 miles of rails (83 and 91 lbs. per yard), and fastenings for stock.

The standard Switches and Crossings with the necessary moving gear required for stock, have been supplied during the year by Fitzroy Dock, Vale & Sons, and The Clyde Engineering Co.



## Store Account.

The Comptroller of Stores, Mr. J. H. Parry, has carried on the following operations in the store during the year. They have been necessarily very heavy, the total value of material imported and purchased locally being £251,000, consisting chiefly of rails and fastenings for both railway and tramway extensions, the quantities being as follows:—74,948 60-lb. rails, 138,244 fishplates, 382,600 bolts and nuts, 1,722,720 spikes, 9,740 83-lb. tramway rails, 23,988 fishplates for same, 115,192 sleepers, 7,018 joint boxes, 2,470 check rails, 12 pumps and 12 B.P. tanks for water supply, 12 20-ton cart weighbridges, copper cable and trolley wire, and a large number of smaller items for electric tramways.

The issues to the various extensions have also been correspondingly large, the quantities being as follows:—61,328 60-lb. rails, 102,700 fishplates, 352,620 bolts and nuts, 1,383,591 spikes, 8 B.P. tanks, 10 20-ton cart weighbridges, 4 pumps, 572 100-lb. rails, 90 fishplates, 2,236 bolts and nuts for same, 5,000 83-lb. tramway rails, 10,574 fishplates and 41,493 bolts and nuts for same, 4,033 joint boxes, 15,014 sleepers, 1,085 91-lb. rails, 1,010 fishplates, 1,162 check rails, 58 tons of copper cable, 2½ tons of trolley wire, and a large number of smaller items for the electric tramways, the total value being £124,531.

These have to be entered in store books under separate headings. The principal portion of the material is kept at Clyde Depôt, the smaller items for the electric tramways being kept at the store, 49 George-street, city.

This will give a fair idea of the magnitude of the operations of the Branch.

## Staff.

The following staff has been employed during the year:—

1 Engineer-in-Chief.	35 Draftsmen.
1 Principal Assistant Engineer.	1 Custodian of plans.
5 Supervising Engineers.	3 Assistants in plan room.
12 Assistant Engineers in charge of work.	5 Cadets.
11 Assistant Engineers on construction.	4 Clerks.
21 Surveyors.	9 Paymasters.
1 Chief Draftsman.	16 Timekeepers.
1 Draftsman in charge of survey work.	46 Inspectors.

## RETURN of Expenditure on Tramway Construction from 1 July, 1901, to 30 June, 1902.

Work.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, amount of expenditure to 30 June, 1902.	If finished, actual amount of expenditure.
		£ s. d.	£ s. d.	£ s. d.
Addison-road.....	1891	20 16 11	20 16 11	.....
Ashfield to Druiitt Town.....	1890	.....	.....	13,596 12 7
Alterations to Car-house, North Sydney.....	1897	46 16 0	.....	6,110 0 4
Alexandria to St. Peters.....	1897	.....	.....	23 2 0
Bondi Extension.....	1889	.....	.....	12,949 4 11
Botany to Little Bay Hospital.....	1899	.....	.....	56 8 0
Balmain to Gladstone Park.....	1891	.....	.....	3,018 12 0
Balmain to Forest Lodge.....	1890	7,763 5 0	.....	32,800 12 8
Balmain to Drummoyne.....	1891	.....	.....	180 4 6
Balmain to Gladesville.....	1901	14,159 9 2	15,170 14 10	.....
Balmain Extension to Darling-street Wharf.....	1901	3,152 15 10	3,237 10 9	.....
Belmore Park to Fort Macquarie, via Castlereagh-street.....	1900	92,573 12 8	108,354 18 5	.....
Botany Cemetery Tramway Extension.....	1900	2,917 3 7	7,131 19 7	.....
Broken Hill.....	1900	8,331 11 5	.....	20,756 2 8
Burwood Extended to Belmont.....	1901	183 15 0	183 15 0	.....
Bronte Beach.....	1902	0 11 11	.....	0 11 11
Botany to La Perouse.....	1890	.....	.....	9 6 10
Blue's Point.....	1900	.....	.....	1 0 0
Bourke-street to Botany.....	1891	.....	.....	8 18 0
Battery Housing, North Sydney Power House.....	1900	.....	.....	2,809 6 6
Bellevue Hill.....	1900	.....	.....	8 0 0
City Cable.....	1890	.....	.....	96 15 3
Castlereagh-street to Fort Macquarie.....	1900	.....	.....	644 13 2
Conversion Scheme.....	1900	.....	.....	73,042 7 10
Circular Quay to Redfern.....	1899	.....	.....	149 2 4
Cook's River.....	.....	2 15 0	.....	2 15 0
Campbelltown to Appin.....	1892	.....	.....	5 11 0
Carlingford to Dural.....	1900	180 12 2	391 5 10	.....
Conversion of Steam Trams into Electrical.....	1900	.....	.....	62,749 0 0
Day-street.....	1893	.....	.....	25 4 7
Dawes Point to Miller's Point.....	1899	5,746 16 8	.....	12,747 16 0
Dover-road to Vacluse.....	1901	.....	.....	2 11 8
Dover-road to Lighthouse.....	1902	1,748 11 6	1,805 19 5	.....
Dulwich Hill to Old Canterbury road.....	1901	3 0 0	.....	3 0 0
Erskine and King streets.....	1892	.....	.....	88 5 1
Elizabeth-street.....	1900	317 11 4	339 16 6	.....
Electric Trams.....	1892	.....	.....	496 17 4
Enfield to Mortlake.....	1900	8,070 11 2	.....	24,131 19 2
Five Dock to Abbotsford.....	1892	.....	.....	5,533 3 2
Field of Mars Extension.....	1900	.....	.....	30 15 10
Folly Point.....	1900	841 8 0	860 1 0	.....
Carried forward.....£	.....	146,061 3 4	137,496 18 3	272,078 0 4



## RETURN of Expenditure on Tramway Construction from 1 July, 1901, to 30 June, 1902—continued.

Work.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, amount of expenditure to 30 June, 1902.	If finished, actual amount of expenditure.
		£ s. d.	£ s. d.	£ s. d.
Brought forward .....	£ .....	146,061 3 4	137,496 18 3	272,078 0 4
Fort Macquarie.....	1899	.....	.....	29 13 5
George and Harris streets Electric Tramway .....	1898	3,808 14 2	.....	222,100 10 5
Gore Hill .....	1898	.....	.....	6,058 3 0
Glenmore-road .....	1901	20 0 0	21 0 0	.....
Gladesville to Field of Mars .....	1902	0 14 8	0 14 8	.....
Gore Hill to Lane Cove .....	1902	0 7 11	0 7 11	.....
General Charges .....	.....	.....	.....	6,836 8 10
Hunter-street to Circular Quay.....	1894	.....	.....	3 10 0
Harris-street .....	1899	.....	.....	168 15 0
Johnstone-street, Annandale .....	1901	8 18 11	8 18 11	.....
King-street to Ocean-street .....	1891	.....	.....	193,647 10 10
Kensington Extension to Rifle Range .....	1893	54 1 6	.....	14,463 10 1
Kensington and Long Bay .....	1901	.....	.....	14,166 17 5
Kensington to Little Bay .....	1901	7,709 1 0	.....	11,002 15 7
Leichhardt to Five Dock .....	1889	.....	.....	19,823 14 0
Lane Cove Road .....	1891	.....	.....	42,653 0 1
Longueville .....	1900	.....	.....	7 2 0
Lambton to Mayfield .....	1901	15 17 0	17 7 0	.....
La Perouse to Botany .....	1901	.....	.....	1 2 8
Little Bay to La Perouse .....	1901	4,097 3 2	4,097 3 2	.....
Leichhardt to Balmain .....	1902	60 4 8	60 4 8	.....
Market-street to George-street Post Office .....	1896	.....	.....	45 6 0
Marrickville to Dulwich Hill .....	1899	.....	.....	7,297 17 6
Marrickville, via Addison-road .....	1900	.....	.....	2 0 0
Military-road, North Sydney.....	1892	.....	.....	17,023 18 5
Military-road to The Spit .....	1894	.....	.....	12,515 15 3
Mitchell-road, Alexandria .....	1892	9,784 17 0	.....	10,177 3 8
Mosman's Bay .....	1894	.....	.....	10,554 6 4
Manly .....	1901	5,922 12 4	5,955 14 10	.....
Merewether to The Beach .....	1894	90 17 2	92 12 2	.....
Marrickville to Canterbury, via Sharpe-street.....	1901	19 14 6	19 14 6	.....
North Sydney Cable .....	1889	.....	.....	2,620 19 10
Newcastle-Waratah.....	1900	113 18 3	.....	5,115 4 9
Newcastle-Plattsburg .....	1899	.....	.....	54 5 5
Newtown-Cook's River .....	1890	.....	.....	12,533 17 4
Newcastle-Merewether .....	1890	.....	.....	15,559 14 4
Newcastle-Tighe's Hill .....	1890	.....	.....	19,276 12 10
Newcastle-City .....	1899	.....	.....	15,679 9 1
Newcastle-Adamstown .....	1894	.....	.....	8,523 17 5
Newcastle—Extension of Tram Car-shed.....	1899	494 1 4	.....	1,306 17 11
Newcastle-Carrington .....	1901	3,487 18 4	3,487 18 4	.....
Neutral Bay .....	1896	81 8 0	.....	9,429 18 1
Ocean-street, Woollahra .....	1890	.....	.....	3 15 0
Pitt-street .....	1900	.....	.....	103 8 8
Paddington .....	1890	40 5 4	539 2 6	.....
Parramatta to Baulkham Hills .....	1901	18,794 10 4	.....	19,158 16 9
Parramatta to Dural .....	1898	.....	.....	10 15 6
Phillip-street to Fort Macquarie .....	1901	71 14 2	71 14 2	.....
Petersham to Leichhardt .....	1902	22 18 6	22 18 6	.....
Penitentiary Tramway.....	1902	125 9 5	125 9 5	.....
Rose Bay Electric .....	1894	.....	.....	19,871 1 10
Rose Bay to Dover-road.....	1899	220 19 11	.....	11,443 18 3
Rose Bay to Watson's Bay .....	1899	.....	.....	57 7 11
Redfern to Moore Park .....	1890	.....	.....	18,557 9 3
Regent-street .....	1892	.....	.....	803 13 5
Redhead to Belmont .....	1894	.....	.....	5 5 0
Randwick Loop .....	1900	69 6 5	.....	6,206 2 10
Rail Presses .....	.....	.....	.....	240 7 11
South Head and Watson's Bay .....	1890	.....	.....	192 7 9
Stockton to Waratah .....	1892	.....	.....	1 10 0
Stockton to Saltash .....	1892	4 8 11	4 8 11	.....
St. Peters to Cook's River .....	1899	.....	.....	18,387 12 6
Spit-road .....	1901	66 0 1	66 0 1	.....
Spit to Manly .....	1902	73 3 3	73 3 3	.....
Sutherland to Cronulla Beach .....	1901	5 0 0	5 0 0	.....
Transmission of power to North Sydney .....	1899	.....	.....	2,532 16 9
Tunnel under the Harbour.....	1899	.....	.....	124 0 0
Waverley Extension .....	1899	.....	.....	4,028 2 2
Waverley to Bronte.....	1902	8 14 0	8 14 0	.....
Woolwich to Field of Mars.....	1889	.....	.....	331 4 11
Willoughby Extension (Electric) .....	1896	16 4 9	.....	18,044 11 2
Wallsend to West Wallsend .....	1901	148 8 2	149 13 8	.....
Willoughby to Field of Mars Cemetery .....	1901	69 3 3	69 3 3	.....
Waverley to Coogee.....	1901	20 5 0	20 5 0	.....
Yass to Yass Railway Station .....	1889	.....	.....	23,170 7 11
Yass Bridge .....	1889	.....	.....	5,645 10 1
Totals.....	£ .....	201,588 4 9	152,414 7 2	1,099,708 0 8

SUMMARY of Expenditure from 1st July, 1901, to 30th June, 1902.

Loans, £201,588 4s. 9d.



## TOTAL Expenditure on Tramway Construction to 30 June, 1902.

Year.	Loan Votes.	Expenditure.	Year.	Loan Votes.	Expenditure.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1879 .....		15,227 10 8	1892 .....	75,000 0 0	83,260 11 5
1880 .....	600,000 0 0	29,008 19 5	1893 .....	120,000 0 0	133,094 12 0
1881 .....		108,026 14 8	1894, to 30 June, 1895..	100,000 0 0	116,357 11 1
1882 .....		190,979 0 7	1895-6 .....	50,000 0 0	6,562 2 2
1883 .....	400,000 0 0	200,835 18 7	1896-7 .....	130,500 0 0	12,140 1 4
1884 .....		105,308 18 10	1897-8 .....	50,000 0 0	80,016 16 8
1885 .....		64,657 17 6	1898-9 .....	75,000 0 0	174,605 16 8
1886 .....		88,509 18 7	1899-1900 .....	137,749 0 0	115,741 8 1
1887 .....		49,509 4 11	1900-1901 .....	179,100 0 0	212,191 2 4
1888 .....			1901-1902 .....	120,000 0 0	201,588 4 9
1889 .....	150,000 0 0	5,546 12 6			
1890 .....		25,453 14 5			
1891 .....		82,808 19 4			
			Totals..... £	2,187,349 0 0	2,101,431 16 6

## RETURN of Expenditure on Railway Construction from 1 July, 1901, to 30 June, 1902.

Work.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, amount of expenditure to 30 June, 1902.	If finished, actual amount of expenditure.
		£ s. d.	£ s. d.	£ s. d.
Bega to Eden .....	1897	5 5 0	5 5 0	
Berrigan to Finley .....	1897			35,074 17 3
Byrock to Brewarrina .....	1899	3,375 0 3		141,171 18 1
City Extension .....	1901	179,186 10 4	196,431 12 10	
Casino to Lismore .....	1900	53,474 14 1	66,317 18 6	
Clyde to Carlingford (Rosehill) .....	1900	5,949 11 3		8,644 16 10
Culcairn to Germanton .....	1901	42,281 2 6	43,278 3 8	
Cobar Mines .....	1901	8,668 8 4		13,667 6 5
Dubbo to Coonamble .....	1900	121,709 6 2	103,468 7 7	
Goulburn to Crookwell .....	1899	61,306 0 10		147,048 15 0
Gundagai to Tumut .....	1883	52,002 8 1	68,361 19 4	
Grafton to Casino .....	1900	54,076 11 4	55,315 18 9	
Inverell to Glen Innes .....	1883	5 0 0	9,266 1 9	
Jerilderie to Berrigan .....	1895			42,626 10 9
Koorawatha to Grenfell .....	1899	4,203 6 7		99,787 13 1
Kiama, &c., Jervis Bay .....		24 0 0		
Land Resumptions .....	1896	2,025 16 0	12,328 2 4	
Land Claims—Old lines .....	1898	228 18 3	1,673 13 9	
Muswellbrook to Cassilis .....	1883	1,200 2 2	2,441 2 8	
Moree to Inverell .....	1883	29,910 18 8		288,608 18 2
Narrabri to Walgett .....	1901	84,305 0 5	87,376 9 11	
Narrabri to Moree .....	1883			146,557 10 8
Nevertire to Warren .....	1897	51 2 0		38,159 18 8
Parkes to Condobolin .....	1895	784 0 11		118,836 19 3
Rock to Green's Gunyah .....	1899	4,582 4 1	71,324 0 8	
Rookwood Cemetery (repairing line) .....	1900	21 15 6	265 0 0	
Rookwood Cemetery (extension) .....	1895	91 14 7		7,252 14 11
Rosehill to Carlingford .....	1900			22,500 0 0
South Grafton to Glen Innes .....	1883	76 3 7	14,350 7 1	
Trial Surveys (a) .....		8,126 7 10		
Tamworth to Manilla .....	1897	415 14 2		80,295 16 6
Temora to Wyalong .....	1902	6,721 16 1	6,721 16 1	
Salaries, Equipment, Increased cost of Living, Allowances to Officers, &c. ....		724,813 19 0	798,925 14 11	1,189,633 18 7
Suspense Account .....		8,261 9 5		
Compensation, W. Benjamin .....		293 3 8		
" W. P. Costello .....		22 15 0		
" R. F. Crone .....		30 0 0		
" Grace Denham .....		8 0 0		
" Grace Denham .....		20 0 0		
" Ye Foor .....		30 0 0		
" H. T. Clark .....		10 0 0		
" W. R. Cupitt .....		2 0 0		
" H. Tasker .....		1 0 0		
" F. Tunnock .....		5 0 0		
" J. P. Cooper .....		3 3 0		
" J. Bolger .....		7 10 0		
" W. and E. Ifould .....		2 0 0		
" Jane Teelow .....		13 17 0		
" W. Edwards .....		2 0 0		
" W. Suttor .....		4 0 0		
H. Deane (travelling expenses) .....		23 6 4		
Services of other Departments .....		250 0 0		
Total .....		£ 759,923 12 3	798,925 14 11	1,189,633 18 7

(a) For details see Statement attached.

## SUMMARY of Expenditure from 1st July, 1901, to 30th June, 1902.

	£ s. d.
Loans .....	724,813 19 0
Consolidated Revenue .....	8,989 4 5
Services for other Departments .....	26,120 8 10
Total .....	£759,923 12 3

TOTAL



## TOTAL Expenditure, Railway Construction, to 30 June, 1902.

Year.	Votes.			Total.	Expenditure.						Total.		
	Loan.	Revenue.	Other Departments.		Loan.		Revenue.		Services for other Departments.				
	£	£	£	£	£	s.	d.	£	s.	d.	£	s.	d.
1857-8.....	1,020,000	.....	.....	1,020,000	51,467	6	0	.....	.....	.....	51,467	6	0
1859.....	.....	.....	.....	.....	73,659	7	11	.....	.....	.....	73,659	7	11
1860.....	88,370	.....	.....	88,370	210,687	0	2	.....	.....	.....	210,687	0	2
1861.....	8,320	.....	.....	8,320	250,017	12	7	.....	.....	.....	250,017	12	7
1862.....	1,476,059	.....	.....	1,476,059	248,245	7	10	.....	.....	.....	248,245	7	10
1863.....	29,907	.....	.....	29,907	311,787	8	5	.....	.....	.....	311,787	8	5
1864.....	552,107	.....	.....	552,107	348,707	11	8	.....	.....	.....	348,707	11	8
1865.....	94,800	.....	.....	94,800	356,234	7	11	.....	.....	.....	356,234	7	11
1866.....	639,000	.....	.....	639,000	494,165	7	8	.....	.....	.....	494,165	7	8
1867.....	1,033,000	.....	.....	1,033,000	536,327	1	5	.....	.....	.....	536,327	1	5
1868.....	7,131	.....	.....	7,131	538,480	16	5	.....	.....	.....	538,480	16	5
1869.....	70,000	.....	.....	70,000	444,361	2	11	.....	.....	.....	444,361	2	11
1870.....	179,000	.....	.....	179,000	436,756	12	11	.....	.....	.....	436,756	12	11
1871.....	300,124	.....	.....	300,124	282,215	17	7	.....	.....	.....	282,215	17	7
1872.....	137,257	.....	.....	137,257	131,014	8	3	.....	.....	.....	131,014	8	3
1873.....	1,901,500	.....	.....	1,901,500	81,063	6	8	.....	.....	.....	81,063	6	8
1874.....	317,000	.....	.....	317,000	348,180	18	4	.....	.....	.....	348,180	18	4
1875.....	75,000	.....	.....	75,000	471,895	4	10	.....	.....	.....	471,895	4	10
1876.....	1,999,000	.....	.....	1,999,000	647,272	5	3	.....	.....	.....	647,272	5	3
1877.....	1,167,352	.....	.....	1,167,352	589,439	19	1	.....	.....	.....	589,439	19	1
1878.....	.....	.....	.....	.....	793,351	4	7	.....	.....	.....	793,351	4	7
1879.....	5,866,000	.....	.....	5,866,000	946,380	2	6	.....	.....	.....	946,380	2	6
1880.....	412,000	.....	.....	412,000	1,430,042	15	0	.....	.....	.....	1,430,042	15	0
1881.....	6,921,000	.....	.....	6,921,000	1,652,978	16	6	.....	.....	.....	1,652,978	16	6
1882.....	500,000	.....	.....	500,000	1,695,070	13	3	.....	.....	.....	1,695,070	13	3
1883.....	1,245,000	.....	.....	1,245,000	2,111,057	9	2	.....	.....	.....	2,111,057	9	2
1884.....	13,013,500	.....	.....	13,013,500	2,871,684	6	10	.....	.....	.....	2,871,684	6	10
1885.....	.....	.....	.....	.....	2,489,776	12	7	.....	.....	.....	2,489,776	12	7
1886.....	1,988,000	.....	.....	1,988,000	2,048,706	13	5	.....	.....	.....	2,048,706	13	5
1887.....	.....	.....	.....	.....	1,275,118	15	11	.....	.....	.....	1,275,118	15	11
1888.....	905,500	.....	.....	905,500	660,885	16	0	.....	.....	.....	660,885	16	0
1889.....	.....	.....	.....	.....	257,022	14	1	.....	.....	.....	257,022	14	1
1890.....	606,825	.....	.....	606,825	151,788	11	10	.....	.....	.....	151,788	11	10
1891.....	.....	10,349	.....	10,349	601,507	17	8	10,348	18	3*	611,856	15	11
1892.....	287,389	6,629	.....	294,018	970,030	10	0	6,628	12	0*	976,659	2	0
1893.....	146,075	7,035	.....	153,110	849,184	13	4	7,035	0	0	856,219	13	4
1 Jan., 1894, to 30 June, 1895	163,800	.....	.....	163,800	474,763	6	10	.....	.....	.....	474,763	6	10
1895-6.....	267,325	.....	.....	267,325	208,154	8	5	.....	.....	.....	208,154	8	5
1896-7.....	144,450	1,517	8,424	154,391	175,426	12	7	1,516	8	11*	8,423	13	5
1897-8.....	305,175	3,747	13,692	322,614	147,318	7	2	3,746	16	11	13,691	12	7
1898-9.....	366,614	3,148	4,987	374,749	177,293	12	4	2,188	11	5	4,987	7	11
1899-1900 .....	77,992	3,245	6,130	87,367	317,541	7	5	4,428	7	0	6,129	19	8
1900-1901 .....	244,660	2,239	9,928	256,827	481,503	14	6	5,863	16	3	9,927	6	6
1901-1902 .....	283,551	2,728	26,121	312,400	724,813	19	0	8,989	4	5	26,120	8	10
Totals .....	£ 44,839,783	40,637	69,282	44,949,702	30,369,382	4	9	50,745	15	2	69,280	8	11
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\* Paid from General Establishment Salaries Vote.



## RETURN of Expenditure (Trial Surveys) from 1 July, 1901, to 30 June, 1902.

Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	Total Expenditure to 30 June, 1902.	Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	Total Expenditure to 30 June, 1902.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
Allandale to Wollombi .....		1,023 10 10	Guyra to Inverell .....	685 6 8	1,605 8 0
Armidale to the Coast .....		106 17 6	Guyra to South Grafton .....		7,994 12 7
Ashfield to Glebe Island .....		46 3 6	Guyra to Coff's Harbour .....	227 17 8	2,411 11 9
Armidale to Coff's Harbour .....	27 6 6	27 6 6	Grafton to Tweed River .....		6,716 5 8
Barmedman to Hillston .....		2,136 7 0	Grafton to Glen Innes .....		527 10 6
Bowling to Burrowa .....		669 16 1	Grafton to Lismore .....		154 5 8
Blacktown to Blayney .....		233 11 8	Grafton to Casino .....		93 18 1
Bega to Eden .....	20 10 0	8,356 5 4	Goulburn to Crookwell .....		242 14 6
Bega to Tathra .....		18 17 1	Grenfell to Forbes .....		2 10 0
Bombala to Bendoek .....		829 12 8	Grenfell to Wyalong .....		357 12 6
Bombala to Eden .....	128 19 1	345 0 8	Gulgong to Dubbo .....		1,512 2 1
Byrock to Brewarrina .....		2,313 4 2	Gulgong to Walgett .....		8 8 4
Bowral to Robertson .....		1,686 14 10	Gulgong to Coonamble .....		12 10 0
Bourke to Hungerford .....		729 2 7	Gulgong to Gilgandra .....	4 7 6	4 7 6
Bourke to Barrington .....		1,849 2 6	Glenrich to Coff's Harbour .....		990 17 4
Bourke to Queensland Border .....		674 4 4	Grong Grong to Ariah .....		317 3 2
Ballina to Pearce's Creek .....		363 5 0	Gregra to Cudal .....		3 0 0
Broken Hill to Cobar .....		27 18 4	Gundagai to Tumut .....		4 0 0
Broken Hill to Condobolin .....		29 19 6	Gilgandra to Cudlewis .....	417 17 4	423 17 4
Broken Hill to Menindie .....		101 10 10	Gregra to Canowindra .....	660 1 0	707 17 9
Broken Hill Tramway .....		16 0 0	Germanton to Tumut .....	43 16 8	43 16 8
Broken Hill to Cockburn .....		53 2 6	Goulburn to Kingsdale .....	22 12 5	22 12 5
Barraba to Inverell .....		13 9 5	Gunning to Koorawatha .....	588 11 5	588 11 5
Berrigan to Finley .....		68 0 4	Gadara to Germanton .....	18 8 1	18 8 1
Borings for Bridge, North Sydney .....		325 19 3	General charges .....		9,687 15 2
Belmore to Liverpool .....		669 16 4	Homebush to Longnose Point .....		154 13 7
Braemar to Mittagong .....	7 0 0	7 12 4	Hay to South Australian Border .....		2,939 2 11
Bogan Gate to Bullock Wharf .....		3 5 0	Hillston to Temora .....		12 18 4
Bogan Gate to Bulbodney .....		1,796 14 2	Hill Top Deviation .....		1 16 0
Bomerah to Coonamble .....		28 13 7	Hungerford to Barrington .....		12 10 8
Bexhill to Cooper's Creek .....		664 17 8	Inverell to Bengalla .....		7 19 0
Burringbar to Cudgera .....		150 12 8	Jerilderie to Deniliquin .....		684 14 9
Byangum to McKenzie's Crossing .....		254 3 8	Jerilderie to Berrigan .....		2,036 8 6
Berry to Kangaroo Valley .....		3 6 0	Jervis Bay to Moruya .....		9 15 3
Booyong to Ballina .....		19 16 8	Jerry's Plains to Denman .....	434 8 1	434 8 1
Cootamundra to Temora .....		468 3 9	Kentucky to Inverell .....		1,467 18 10
Cowra to Forbes .....		4 0 0	Kiama to Jamberoo .....		296 15 5
Cowra to Canowindra .....		608 17 2	Kempsey to Coff's Harbour .....		56 17 0
Cooma to Bombala .....	16 5 0	3,150 7 6	Kempsey to South Grafton .....		30 15 0
Cooma to Bendoek .....		125 3 7	Koorawatha to Wyalong .....		3,613 2 2
Cooma to Grenfell .....		37 0 6	Koorawatha to Grenfell .....		2,498 4 8
Cooma to Mount Kosciuszko .....		21 8 4	Lismore-Tweed to the Pocket .....		356 14 6
Cooma to Victorian Border .....		130 5 2	Lismore to Brunswick River .....		597 19 4
Cobar to Wilcannia .....		2,765 1 11	Lake Cudgellicio to Barmedman .....		2 18 0
Cobar to Cockburn .....		3 13 4	Locksley Deviation .....		997 7 1
Cobar to The Peak .....		472 19 2	Liverpool-Mulgoa .....	24 17 2	1,487 9 10
Cassilis to Dubbo .....		36 10 0	Liverpool-Blayney .....	33 2 4	33 2 4
Casino to Tenterfield .....	217 11 2	8,698 9 6	Lockhart-Savernake .....	518 13 6	532 11 10
Casino to Lismore .....		199 12 7	Molong to Parkes .....		957 17 6
Coonong to Hopefield .....		629 13 11	Molong to Forbes .....		142 18 7
Coonong to Urana .....		1 11 4	Marrickville to Liverpool .....		1,139 18 2
Coonamble to Menindie .....		4 0 0	Muswellbrook to Cassilis .....		310 14 1
Coonamble to Walgett .....		20 18 8	Mudgee to Gulgong .....		465 19 8
Coonamble to Werris Creek .....		15 10 0	Mudgee to Walgett .....		6,199 17 3
Coolamon to Ariah .....		761 4 10	Mudgee to Coonamble .....		124 9 6
Clarence Siding .....		16 5 2	Maitland to South Grafton .....		13,544 0 6
Colo Valley .....		20 0 0	Moss Vale to Robertson .....		50 19 6
Condobolin to Broken Hill .....		2,337 16 3	Marwillumbah to Tweed Heads .....	14 0 0	1,074 3 11
Condobolin to Cudgellicio .....		38 14 0	Morpeth to Grafton .....		11 8 4
Condobolin to Eusabolog .....		157 6 11	Monaro to the Coast .....		2,682 9 5
Condobolin to Mount Hope .....	443 15 10	443 15 10	Murray Hut to Tocumwal .....		277 14 6
Cudgellicio to Hillston .....		11 4 6	Moree to Inverell .....		7,112 11 9
Culcairn to Germanton .....		461 9 6	Moree to Bogabilla .....	93 7 2	847 10 8
Culcairn to Upper Murray .....		77 17 4	Moree to Collarendabri .....		42 4 4
Connecting Overland Railway, Tweed .....		39 0 0	Moree to Mungindi .....	722 3 9	783 15 7
Chinderah to Tweed Heads .....		272 13 0	Manilla to Barraba .....	177 19 10	256 9 0
Crookwell to Burrowa .....	2 18 0	2 18 0	Marulan to Braidwood .....		18 17 10
Cudal to Canowindra .....	20 16 8	20 16 8	Molong to Bulbedney .....	11 16 8	11 16 8
Camden to The Oaks .....	2 3 8	2 3 8	Norwood to Kingsdale .....	104 16 3	104 16 3
Dubbo to Forbes .....		17 10 0	North Shore Railway to Harbour .....		1,501 9 7
Dubbo to Werris Creek .....		3,063 17 0	North Shore to Milson's Point .....		3 13 6
Dubbo to Parkes .....		1,161 11 4	Narrabri to Walgett .....		2,096 7 6
Dubbo to Coonamble .....		3,592 16 9	Narrabri to Pilliga .....		157 1 10
Dubbo to Walgett .....		9 0 0	Narrabri to Mercadool .....		32 1 4
Darling Island Extension .....		1,453 12 5	Narrabri to Collarendabri .....		1,469 12 7
Jargan's Creek Deviation .....		1,639 1 0	Nowra to Moruya .....		7 3 9
Eastern Suburban .....	178 14 2	1,154 9 5	Neverire to Coonamble .....		714 11 2
Eveleigh to Botany .....		317 0 6	Neverire to Warren .....		1,135 16 1
Erskineville to Botany .....	580 17 8	580 17 8	Narrandera to Borellan .....		5 10 3
Forbes to Condobolin .....		130 17 2	Nyngan to Bourke .....		8 6 8
Fairfield to Prospect .....		0 4 4	Narramine to Coonamble .....		57 17 0
Finnigan's Siding Loop .....		21 0 4	Newcastle to Singleton .....		136 4 4
Flemington to Bankstown .....		27 12 8	Orange to Forbes .....		6 16 8
Flemington to Erskineville and Botany .....	14 3 4	14 3 4	Parkes to Condobolin .....		2,682 7 10



RETURN of Expenditure (Trial Surveys) from 1 July, 1901, to 30 June, 1902.—*continued.*

Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	Total Expenditure to 30 June, 1902.	Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	Total Expenditure to 30 June, 1902.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
Parkes to Wellington .....		41 13 4	Tamworth to Manilla .....		442 4 5
Parkes to Narromine .....		36 12 4	Tamworth to Inverell .....		2 0 0
Parkes to Forbes .....		18 2 6	Tamworth to Nundle .....	8 12 8	44 12 8
Parkes to Bulbodney, via Peak Hill...		19 3 4	Trial Bay to Kempsey .....		758 6 4
Petersham to Field of Mars .....		735 15 2	Tweed to Duranbar .....		399 18 5
Petersham to Eastwood .....		381 5 8	Tweed to Pocket .....		12 14 4
Pennant Hills to Dural .....		237 6 7	Tweed to Crabb's Creek .....		243 12 6
Piper's Flat to Sunny Corner .....		367 1 6	Tweed to Dungay Creek .....		215 12 8
Pieton to Mittagong .....		1,071 9 8	Tweed to Terranora .....		332 8 0
Parramatta to Dural .....		270 15 1	Uralla to Inverell .....		886 12 10
Parramatta to Singleton .....		53 10 1	Upper Murray .....		74 2 7
Pearce's Creek to Ballina .....		466 13 11	Wellington to Forbes .....		17 10 0
Perth to Rockley .....		4 3 4	Wellington to Mudgee .....		2 10 0
Ryde to Chatswood .....		320 14 6	Wellington to Werris Creek .....	28 15 0	937 13 7
Ryde to Ryde Station .....		125 2 9	Wellington to Gulgong .....		635 0 0
Ryde to St. Leonards .....		6 0 0	Wilcannia to Silverton .....		1,371 11 9
Richmond to Kurrajong .....	25 15 4	45 3 5	Wilcannia to Cockburn .....		791 17 4
Richmond to Wallerawang .....		4 19 8	Wilcannia to Broken Hill .....		68 0 0
Rookwood Cemetery Extension .....		92 6 4	Wilcannia to Tibooburra .....		102 11 0
Rock to Brookong .....		57 9 6	Wood's Flat to Forbes .....		5 10 0
Rock to Green's Gunyah .....		2,642 8 8	Wood's Flat to Forbes, via Eugowra ..		30 15 0
Rock to Murray-street .....		1,448 6 4	Wagga to Tumberumba .....		284 1 11
Rydal to Jenolan Caves .....		14 12 2	Wagga to Humula .....	128 18 2	294 5 5
Rouse Hill to Dural .....		556 18 4	Woolabra to Collarenebri .....		1,853 12 1
Rosehill to Dural .....		3 11 0	Warren to Conamble .....		156 14 2
Sutherland to Kurnell .....		319 16 7	Wollongong to Port Kembla .....	34 11 3	87 0 2
Shellharbour to Jamberoo .....		289 9 4	Wyalong to Hillston .....	10 15 0	2,160 2 8
Singleton to Jerry's Plains .....	23 13 8	831 7 8	West Maitland to Taree .....		327 3 4
Stanmore to Glebe Island .....		15 2 0	Werris Creek to Gunnedah .....		1 10 4
Stockton to S. Itash .....		10 0 0	Walcha Road to Walcha .....		435 18 1
Temora to Barmadman .....		140 18 5	Wyong to Singleton .....		48 15 1
Temora to Hillston .....		5,900 5 10	Young to Grenfell .....		90 9 2
Temora to Gunbar .....	34 13 4	3,025 10 8	Young to Grenfell and Forbes .....		1,742 15 11
Temora to Wyalong .....	38 4 2	55 14 2	Yass to Cootamundra .....	17 11 8	17 11 8
Tempe to Balmain .....		1,002 6 7	Zig Zag .....	1,309 13 0	3,927 0 10
Tempe to Long Nose Point .....		90 5 8			
Tamworth to Bingera .....		68 3 1		£ 8,126 7 10	201,629 1 6
Tamworth to Barraba .....		2,278 12 11			



## Government Architect's Report.

The Government Architect to The Under Secretary for Public Works.

Department of Public Works, Government Architect's Branch, Sydney, 5 November, 1902.

I HAVE the honor to submit the following report of the operations of this Branch for the twelve months ended 30th June, 1902.

Expenditure under all heads has been as follows:—

	£	s.	d.
Loans ... ..	150,906	1	0
Consolidated Revenue ... ..	92,943	16	11
Services, other Departments ... ..	36,936	15	3
	£280,786	13	2

The expenditure has been £92,736 2s. 2d. less than in the previous year, accounted for partly by decrease in Loan expenditure, and partly on Revenue Account; while the expenditure on services to other Departments has somewhat increased.

Of the expenditure, no less than £63,835 is in connection with the Commonwealth Celebrations and the subsequent Royal visit.

During the year the erection of the following buildings has been brought to a completion, viz.:—

<i>Sydney University.</i>	£	s.	d.
School of Biology ... ..	9,871	4	3

### *Hospitals.*

Little Bay—New Ward for Infectious Diseases ... ..	1,614	11	1
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### *Institutions for Insane.*

Gladesville—Medical Officer's Quarters ... ..	1,536	16	8
Rydalmere—Wards for Females ... ..	13,543	15	11
Rydalmere—Steam Cooking Plant ... ..	1,609	0	8
Kenmore ... ..	171,012	6	6
Parramatta—Nurses Quarters ... ..	1,893	8	4

### *Police Buildings.*

Acacia Creek ... ..	1,082	9	3
Bourke—Superintendent's Quarters ... ..	1,545	3	11
Broken Hill—Officers' Quarters ... ..	1,717	8	1
Bulyeroi ... ..	1,184	12	7
Bora Creek ... ..	1,076	18	10
Eden ... ..	1,332	8	0
June, and Court-house ... ..	1,061	12	3
Kempsey ... ..	943	14	5
Kunopia ... ..	887	13	5
Nymagee, and Court-house ... ..	3,381	7	3
Wiseman's Ferry ... ..	1,474	2	1
Wauchope, and Court-house... ..	1,475	8	7

### *Miscellaneous.*

Kurnell—Accommodation House .. ..	887	18	3
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### *Post Offices.*

Pymont ... ..	4,525	13	5
Ultimo ... ..	808	2	7
Berrigan ... ..	1,383	18	11
Hillgrove ... ..	1,531	1	6
Milparinka ... ..	1,058	16	0
Tibooburra ... ..	1,128	0	6

### *Court-houses.*

Condobolin, and Lock-up ... ..	6,589	9	3
Cumnock, and Lock-up ... ..	1,938	12	6
Collarendabri, and Lock-up ... ..	1,631	13	5

Expenditure



Expenditure has, during the year, been incurred in general repairs and improvements to a large number of buildings and miscellaneous services; also towards the completion of existing buildings, among which may be mentioned:—

<i>Miscellaneous.</i>				£	s.	d.
Botanical Gardens—Improvement of Boundaries ...	...	...	...	2,313	16	11
Federal Celebrations—Decorations and Illuminations ...	...	...	...	49,725	4	8
Royal Visit—Decorations and Illuminations ...	...	...	...	14,109	15	4
Installation of Electric Light—Plants generally ...	...	...	...	3,568	11	0
Parliamentary Buildings—Repairs, Additions, &c....	...	...	...	3,783	9	2
Richmond College—Electric Light ...	...	...	...	2,610	3	10
Adapting "Marli" for Federal Government ...	...	...	...	828	14	10
<i>Vice-Regal Residences.</i>						
Government House—Additions, &c. ...	...	...	...	24,007	3	1
<i>Public Buildings Generally.</i>						
Lands Office, Sydney—Additional Fittings...	...	...	...	946	12	2
Public Works Department—Additional Fittings ...	...	...	...	1,473	0	3
<i>Sydney University.</i>						
Department of Physics—Additions ...	...	...	...	7,730	8	2
Fisher Library... ..	...	...	...	2,003	19	1
<i>Hospitals.</i>						
Sydney Hospital—Additions...	...	...	...	6,327	4	7
Balmain Cottage Hospital ...	...	...	...	1,000	0	0
Forbes ...	...	...	...	2,000	0	0
Grafton—Operating Theatre...	...	...	...	1,900	0	0
<i>Post Offices.</i>						
Broken Hill—Additions ...	...	...	...	2,315	2	0
Newcastle ...	...	...	...	17,491	7	4
<i>Court-houses.</i>						
Cootamundra ...	...	...	...	5,371	19	6
Braidwood ...	...	...	...	5,161	16	2
Gundagai—Additions...	...	...	...	2,553	4	4
Millthorpe, and Police Station ...	...	...	...	1,595	16	11
Moree ...	...	...	...	5,998	5	4
Narrandera ...	...	...	...	2,248	7	6
Nyngan ...	...	...	...	3,020	19	4
Temora...	...	...	...	2,587	8	9
Wagga ...	...	...	...	12,150	12	5
<i>Gaols.</i>						
Darlinghurst—Electric Light Station ...	...	...	...	2,158	10	2

It is not proposed in this Report to deal with the capital value of transferred properties, for the reason that the valuations made by the State have not yet been accepted by the Federal Government, and therefore no financial settlement has yet taken place. It is hoped that next year a complete statement can be furnished.

A large amount of work has been carried out under the day-labour system, with varying results. Under the Regulation made during the year, practically all the men have been engaged through the State Labour Board, to which again a certain proportion is supplied through the Trades Hall agency. This forbids the responsible officer in charge of the works, or his foreman, from choosing suitable men; and though no general complaint can be made of the men engaged under the system alluded to, in many instances inability and want of application are not ascertained until after employment, and consequent loss to the Department.

The Regulation also preventing the employment of men well tried on one work from being engaged on a subsequent one, while it has been faithfully observed, is to an extent detrimental, and adds considerably to the work of the officers responsible.

It is recognised, however, that State labour works cannot be carried out on precisely the same lines as those of a building contractor, and I have to report that the Branch has endeavoured, faithfully and loyally, to carry out the Minister's wishes and directions in dealing with this somewhat difficult subject.

It is sometimes urged that country buildings of a more expensive character than is necessary are frequently erected, and I have the honor to submit a statement of the result of a somewhat close investigation, which, in the case of Court-houses, may be confidently put forward as showing that this is not the case. It is quite true that the Works Department is called upon to provide, to the full, accommodation asked for by other Departments, and for which the former cannot be made responsible.

In the case of these Court-houses, buildings containing extensive accommodation are erected in comparatively-speaking small towns, but this, I understand, is to meet the requirements of the Justice Department.

With regard to the Police, the type of building erected has, from long experience, resolved itself into the adoption of at once an economical class of building, and also one complete in every respect for police and lock-up purposes; and I do not see where it is possible to make any reduction in this class of building.

The



The few Lands Offices built contain the accommodation required by the Lands Department and no more.

The result of this investigation into the comparative cost of Court-houses erected prior to 1891, and since that date, and calculated *per capita* of population of 1891 and 1901, respectively, shows the reduction in cost of no less than 50 per centum; while at the same time the design, accommodation, and the substantial character of these buildings has been well maintained. The particulars upon which this statement is made are as follows:—

*Court-houses Erected prior to 1891.*

Year.	Place.	Cost.	Population, 1891.	Cost per head.
		£		£ s. d.
1880	Bathurst ... ..	24,954	9,162	2 14 5 $\frac{1}{2}$
1882	Bombala ... ..	4,600	1,101	4 3 6 $\frac{1}{2}$
1886	Burrowa ... ..	6,000	767	7 16 5 $\frac{1}{2}$
1889	Campbelltown ... ..	10,700	2,381	4 9 10 $\frac{1}{2}$
1882	Carcoar ... ..	4,470	562	7 19 0 $\frac{3}{4}$
1887	Cobar ... ..	4,900	1,189	4 2 5
1888	Cooma ... ..	9,500	1,729	5 9 10 $\frac{1}{2}$
1886	Deniliquin ... ..	10,000	2,273	4 7 11 $\frac{3}{4}$
1890	Dubbo ... ..	11,900	4,555	2 12 3
1880	Forbes ... ..	5,720	3,011	1 17 11 $\frac{3}{4}$
1887	Goulburn ... ..	28,000	10,916	2 11 3 $\frac{1}{2}$
1880	Grafton ... ..	7,998	4,445	1 15 11 $\frac{3}{4}$
1884	Hillston ... ..	4,000	734	5 8 11 $\frac{3}{4}$
1887	Inverell ... ..	6,800	2,534	2 13 8
1889	Silverton ... ..	5,000	1,397	3 11 6 $\frac{3}{4}$
1880	Yass ... ..	10,000	1,770	5 12 11 $\frac{3}{4}$
1886	Wollongong ... ..	10,600	3,041	3 9 8 $\frac{1}{2}$
1886	Young ... ..	14,000	2,740	5 2 2 $\frac{1}{4}$

Average cost per head, £4 4s. 5 $\frac{1}{2}$ d.

*Court-houses Erected since 1891.*

Year.	Place.	Cost.	Population, 1891.	Cost per head.
		£		£ s. d.
1892	Hay ... ..	7,423	3,800	1 19 0 $\frac{1}{2}$
1896	Parramatta ... ..	13,985	12,500	1 2 4 $\frac{1}{2}$
1896	West Maitland ... ..	12,157	7,550	1 12 2 $\frac{1}{2}$
1896	Nowra ... ..	3,793	2,060	1 16 9 $\frac{3}{4}$
1899	Bourke ... ..	9,505	3,350	2 16 8 $\frac{3}{4}$
1899	Parkes ... ..	5,547	3,200	1 14 8
1901	Braidwood ... ..	5,162	1,551	3 6 6 $\frac{3}{4}$
1901	Nyngan ... ..	2,780	1,455	1 18 2 $\frac{1}{2}$
1901	Wagga Wagga ... ..	12,150	5,108	2 7 6 $\frac{3}{4}$
1901	Cootamundra ... ..	5,372	2,424	2 4 3 $\frac{1}{4}$
1901	Moree ... ..	6,016	2,298	2 12 4 $\frac{1}{2}$
1901	Temora ... ..	2,653	1,603	1 13 1

Average cost per head, £2 1s. 11 $\frac{1}{2}$ d.

During the year, the ownership of the whole of the Post Offices, and certain of the Custom-houses, passed over to the Federal Government, and by arrangement between that and the State Government, this Branch has been engaged in carrying out works on these buildings for the Federal Government; and, judging from the instructions already received, it is probable that the whole of the Post Offices throughout the State will shortly be placed in a state of thorough repair, while many needed improvements are being rapidly added.

The arrangements for undertaking these works, and those of the Military Department, by the State Public Works Department for the Federal Government, are the result of considerable amount of negotiations, which includes also the repayment to the State, at a mutually agreed rate, for the professional and other services given. The Department has also accepted the conditions laid down by the Federal Government for the procedure to be followed in respect to these works, conditionally upon their not interfering in any way with those of the Department itself. The work is therefore proceeding smoothly, and, I trust, efficiently, though it has been found that, owing to the fact of the arrangements not being perfected, payments to the contractors for work done for the Commonwealth have, in some cases, been somewhat delayed.

The repairs to the buildings remaining in the hands of the State are not progressing altogether satisfactorily; and I have to repeat, at the cost of a charge of tediousness, the urgent need of more liberal consideration on the Estimates for this necessary work.

The



The year closed shows a slightly better percentage of expenditure than the previous ones, as seen by the following table:—

Year.	Vote.	Capital Value of Buildings.	Percentage of Expenditure.
	£	£	£ s. d.
1889	70,000	3,801,130	1 16 10
1890	65,000	3,834,464	1 13 10 $\frac{1}{4}$
1891	65,000	3,930,741	1 13 0 $\frac{3}{4}$
1892	62,000	4,037,233	1 10 8 $\frac{1}{2}$
1893	23,350	4,081,058	0 11 5 $\frac{1}{4}$
1894-5	46,000	4,134,223	1 2 2 $\frac{3}{4}$
1895-6	41,000	4,219,853	0 18 5
1896-7	32,000	4,322,879	0 14 9 $\frac{3}{4}$
1897-8	37,423	4,393,712	0 17 0 $\frac{1}{2}$
1898-9	38,750	4,462,000	0 17 4 $\frac{1}{4}$
1899-1900	19,020	4,693,312	0 8 1 $\frac{1}{4}$
1900-1901	22,900	4,898,923	0 9 4 $\frac{1}{2}$
1901-1902	27,850	3,594,990*	0 15 6
The yearly expenditure upon repairs, &c., should be ...			2 0 0

\* The capital value is reduced by the omission of the value of transferred properties, as valued by the State, viz., £1,454,839.

In further illustration of the necessity for systematic and periodical attention to existing buildings, I submit the accompanying diagrams which show, perhaps, more clearly than an ordinary statement the deficiency of the Votes as compared with requirements on the above scale. The capital value is constantly accruing, and the increasing age of the buildings necessitates greater attention.

This Branch has been actively engaged in carrying out innumerable small works of repairs to the buildings and tenements taken over by the Government, included in what is known as the "Rocks Resumption." Although these works are all of a minor character, and refer particularly to matters of sanitation, I am in a position to state they have resulted in a great improvement to the poorer quarters of this property.

The arrival of the first State Governor necessitated some special arrangements being made for a suitable house, as it was determined that Government House should be retained for the use of the Governor-General. After much consideration the Government decided to lease the house at Rose Bay, known as "Cranbrook," for a period of five years.

The Hon. the Premier instituted a Committee, consisting of the Principal Under Secretary, the Under Secretary for Public Works, and myself, to suitably furnish this residence for the reception of the Governor and his family; this has been done in a liberal, though careful, manner.

In doing this it was found that the property itself had been very much neglected, and also required a considerable amount of expenditure upon it, particularly with regard to sanitation.

Although the gross expenditure of the year is less than in former years, there appears to be no diminution in the work of the Branch, and in the general details. I may safely state that, owing to the large development of the day-labour system, and the various internal changes of the Department, the work is continuous and heavy.

In speaking of this, I would like to say that I have been supported throughout by the loyal assistance of the whole of my staff.

W. L. VERNON,  
Government Architect.



RETURN of Expenditure on Public Works carried on by Government Architect's Branch from 1 July, 1901, to 30 June, 1902.

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
SYDNEY.						
Audit Office.....	Repairs.....	1901	9 4 2	71 14 7	.....	80 18 9
Admiralty House.....	.....	.....	323 8 2	356 0 8	.....	684 8 10
".....	Additions.....	.....	.....	278 3 7	.....	278 3 7
".....	Gas Lighting.....	.....	.....	137 4 6	.....	137 4 6
Art Gallery.....	Additions.....	1895	.....	18,329 19 5	62,133 2 0	.....
Advisory Board Office.....	Furniture.....	1901	10 10 0	.....	.....	10 10 0
Arbitration Court Offices.....	.....	1902	9 3 5	11 12 2	.....	20 15 7
Australian Ambulance Association's Office—Electric Light	Installation.....	.....	.....	5 1 3	.....	5 1 3
Belmore Police Barracks.....	Repairs.....	1901	.....	4 5	.....	0 4 5
Botanic Gardens—Dwarf Wall and Iron Railings.....	Erection.....	1900	.....	556 10 3	.....	2,313 16 11
".....	Construction.....	1901	.....	147 7 10	.....	147 7 10
".....	General Additions.....	.....	.....	157 12 1	.....	157 12 1
".....	Repairs.....	.....	25 3 10	139 14 8	.....	164 18 6
Board of Exports.....	.....	.....	.....	0 15 0	.....	0 15 0
Bathurst-street Fruit Fumigation Chamber.....	Erection.....	1902	.....	378 6 7	378 6 7	.....
Chancery Square Courts.....	Repairs.....	1901	.....	151 5 1	.....	151 5 1
Custom House, Sydney.....	Additions.....	1898	.....	1,379 18 7	29,687 16 11	.....
".....	Repairs.....	1901	.....	100 7 9	.....	100 7 9
".....	Furniture.....	.....	16 11 4	.....	.....	16 11 4
Clerk of the Peace Office.....	Repairs.....	.....	0 8 1	6 11 11	.....	7 0 0
Crown Law Office.....	Additions.....	.....	.....	6,862 11 10	6,895 18 6	.....
".....	Repairs.....	.....	7 5 0	36 0 9	.....	43 5 9
Central Police Court.....	.....	.....	2 16 9	174 19 2	.....	177 15 11
Centennial Park—Entrance Gates.....	Erection.....	.....	.....	61 11 8	.....	61 11 8
".....	Repairs.....	.....	.....	27 3 10	.....	27 3 10
Cable Huts—Milson's, Dawes, and Blue's Points.....	Erection.....	.....	.....	203 15 6	.....	6 3 15 6
Colonial Secretary's Office.....	Repairs.....	.....	10 6 9	193 15 2	.....	213 1 11
Coroner's Office.....	.....	.....	.....	2 19 6	.....	2 19 6
Cement Testing Office.....	.....	.....	.....	115 2 7	.....	115 2 7
Darlinghurst Gaol.....	.....	.....	.....	702 11 1	.....	702 11 1
".....	Additions.....	.....	.....	179 14 5	.....	179 14 5
".....	Electric Light Installation.....	1899	.....	231 13 2	.....	2,158 10 2
".....	Maintenance.....	1901	.....	50 9 10	.....	50 9 10
".....	Reception-house.....	.....	.....	148 1 1	.....	148 1 1
".....	Police Station.....	1902	.....	8 12 10	.....	8 12 10
".....	Court-house.....	.....	.....	3,954 10 6	3,954 10 6	.....
District Court.....	Additions.....	1901	.....	30 3 10	.....	30 3 10
Darling Harbour Grain Elevator.....	Repairs.....	.....	.....	36 4 5	.....	36 4 5
Distribution of Decorative Materials.....	Erection.....	.....	.....	128 4 9	.....	128 4 9
Domain—Buildings.....	Incidental.....	.....	.....	128 4 9	.....	128 4 9
".....	Repairs.....	.....	.....	32 10 1	.....	32 10 1
Decorations and Illuminations, Federal Celebrations.....	Erection.....	1900	.....	3 0 3	.....	3 0 3
".....	Royal Visit.....	.....	.....	688 12 5	.....	49,722 4 5
Electoral Office.....	.....	1901	.....	5,404 7 5	.....	14,109 15 4
Equity Court.....	Repairs.....	.....	2 10 1	22 17 3	.....	25 7 4
Erskine-street Lock-up.....	.....	1902	4 4 10	54 0 8	.....	58 5 6
Electric Light Station—Public Buildings.....	.....	.....	.....	1 0 10	.....	1 0 10
".....	Extension of Plant.....	Maintenance.....	.....	3,777 8 3	.....	3,777 8 3
".....	New Workshops.....	Additions.....	.....	1,375 0 0	.....	3,568 11 0
".....	Sub-Station, Chancery Square.....	Erection.....	.....	6 8 9	.....	.....
Fisheries Office.....	Erection and Fittings.....	1902	.....	749 13 9	749 13 9	.....
Friendly Societies Office.....	Repairs.....	1901	.....	0 5 1	.....	0 5 1
Free Public Library.....	.....	.....	.....	1 5 8	.....	1 5 8
".....	Lending Branch.....	.....	.....	68 2 4	.....	63 2 4
Fort Phillip Signal Station.....	.....	.....	.....	11 5 9	.....	11 5 9
Federal Government Office, "Marli," Macquarie-street, City	.....	.....	.....	87 6 0	.....	87 6 0
Government Printing Office.....	Lift.....	.....	.....	502 14 10	.....	502 14 10
".....	Erection.....	1902	.....	326 0 0	.....	326 0 0
".....	Additions.....	1901	.....	45 10 8	.....	45 10 8
".....	Repairs.....	.....	.....	447 7 11	.....	447 7 11
".....	Electrical Plant.....	.....	.....	287 6 8	.....	287 6 8
General Post Office.....	Maintenance.....	.....	.....	75 9 7	.....	75 9 7
".....	Additions.....	1897	.....	1,850 4 0	76,137 11 1	.....
".....	Repairs.....	1901	.....	272 14 2	.....	272 14 2
".....	Government Savings Bank.....	.....	.....	1,090 17 7	.....	1,090 17 7
Government Labour Bureau.....	Fittings.....	.....	.....	49 13 11	.....	56 19 7
Government Statistician's Office.....	Repairs.....	.....	7 5 8	25 7 1	.....	45 2 4
George-street Police Station, (No. 3).....	.....	.....	19 15 3	2 13 9	.....	2 13 9
Government Architect's Workshops.....	.....	.....	.....	21 6 11	.....	21 6 11
".....	Plant.....	.....	.....	303 8 4	.....	303 8 4
Government House (Commonwealth).....	Erection.....	.....	.....	4,376 17 11	.....	20,055 5 1
".....	Additions.....	1900	.....	350 9 1	.....	3,951 18 0
".....	Repairs, &c.....	1901	3,601 8 11	83 8 11	.....	83 8 11
".....	Electric Light Installation.....	.....	.....	31 0 4	.....	31 0 4
".....	Maintenance.....	.....	.....	2,419 3 11	2,419 3 11	.....
".....	Alterations, &c.....	1902	.....	2,308 19 2	2,308 19 2	.....
".....	Furniture.....	.....	.....	277 19 3	.....	277 19 3
".....	Rent, &c.....	1901	.....	447 1 5	.....	483 10 0
Health Board Office.....	Alterations and repairs.....	.....	36 8 7	263 13 5	.....	263 13 5
Hordern's Buildings—Taking down walls of.....	Demolishing.....	.....	.....	13 0 9	.....	32 7 5
Inspector-General of Police—Office.....	Repairs.....	.....	19 6 8	.....	.....	.....
".....	Erection.....	1889	.....	11 1 5	.....	.....
Justice Department.....	Repairs.....	1901	.....	19 12 7	.....	19 12 7
Lands Office, Sydney.....	.....	.....	11 8 2	436 12 0	.....	448 0 2
".....	Additions.....	.....	.....	946 12 2	.....	946 12 2
".....	Maintenance.....	.....	.....	301 16 1	.....	301 16 1
Land and Income Tax Office (Custom House Building).....	Repairs.....	.....	.....	18 18 9	.....	18 18 9
".....	Furniture, &c.....	.....	.....	950 19 0	.....	950 19 0
Military Department.....	Repairs.....	1902	.....	16 13 1	.....	16 13 1
Mines Department (Lands Office Buildings).....	Additions.....	1901	.....	60 4 9	.....	60 4 9
".....	Repairs.....	.....	.....	23 3 5	.....	23 3 5
".....	New Offices.....	.....	.....	11 1 5	.....	.....
Moorecliff Eye Hospital.....	Erection.....	1898	.....	405 19 2	405 19 2	.....
Museum.....	Repairs.....	1902	.....	49 5 4	.....	49 5 4
Mint, Royal.....	Additions.....	1901	.....	5 11 6	.....	5 11 6
Morgue—North (Circular Quay).....	.....	.....	.....	42 12 10	.....	42 12 10
".....	Repairs.....	.....	.....	3 13 8	.....	3 13 8
".....	.....	.....	.....	3 17 9	.....	3 17 9
Naval Stores (Old).....	.....	.....	.....	4 8 4	.....	4 8 4
Navigation Department (Custom House Building).....	Fittings.....	.....	.....	116 17 6	.....	116 17 6
Observatory.....	Repairs.....	.....	.....	203 9 10	.....	203 9 10
Old-age Pensions Office.....	.....	.....	24 14 2	121 9 5	.....	146 3 7
Ormond House.....	.....	.....	.....	5 3 5	.....	5 3 5
Public Instruction Department.....	.....	1902	.....	13 10 2	.....	13 10 2
Prince Alfred Hospital—New Pavilions.....	Erection.....	1901	.....	3,276 6 9	3,276 6 9	.....
".....	Alterations to Administrative Block.....	.....	.....	1,847 12 1	1,847 12 1	.....
".....	General Additions.....	1902	.....	402 4 9	402 4 9	.....



## RETURN OF EXPENDITURE ON PUBLIC WORKS, &amp;c.—continued.

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
SYDNEY—continued.			£ s. d.	£ s. d.	£ s. d.	£ s. d.
Public Parks and Gardens—Electric Light	Maintenance	1901		375 15 6		375 15 6
Public Works Department	Repairs			920 0 7		
" Lifts	Furniture		552 19 8			1,473 0 3
" Electric Light	Maintenance			439 11 10		439 11 10
Parliamentary Buildings	"			238 7 3		238 7 3
"	Additions			370 14 1		370 14 1
"	Repairs		172 17 10	2,475 14 11		2,648 12 9
" Electric Light Renewal	"			764 2 4		764 2 4
" New Houses	Erection	1896			297 12 3	
Phillip-street, 72A	Repairs	1901		6 10 3		6 10 3
Public Service Board	"		4 1 2	53 13 1		57 14 3
Probate Offices	"		9 17 11	9 5 9		19 3 8
Public Service Association	"		3 2 10	2 7 10		5 10 8
Patents Office	"		5 13 3	32 0 8		37 13 11
Public Service Tender Board	"		0 12 3	23 1 10		23 14 1
Prisons Department	Furniture	1902	0 4 9			0 4 9
Public Wharfs Office	Repairs	1901		2 4 7		2 4 7
Quarantine Station—Buildings	Additions	1899		2,144 9 2	8,644 8 9	
"	Repairs	1901		260 12 9		260 12 9
" Boundary Wall	Erection			2,151 16 1	2,514 9 6	
" Dépôt, Woolloomooloo	Repairs			4 11 2		4 11 2
" Disinfecting Station	Erection			355 9 5		355 9 5
Queen's Statue	Repairs			1 10 0		1 10 0
Richmond-terrace	"		16 15 5	132 0 7		148 16 0
"	"			42 18 3		42 18 3
"	"			197 14 1		197 14 1
Registrar-General's Office	"		6 10 8	199 15 7		206 6 3
" Electric Light	Maintenance			40 15 8		40 15 8
Royal Society	Illuminations			2 1 11		2 1 11
Royal Agricultural Society's Show-grounds—Pavilion for Mines Department	Repairs	1902		18 8 9		18 8 9
Royal Agricultural Society's Show-grounds—Police Buildings	Erection	1901		1,099 4 6		1,099 4 6
Sydney Hospital—Reconstruction of Floors and Ceilings	Additions			85 12 2		611 3 1
Sydney Theatres	Inspection	1902		5,716 1 6		5,716 1 6
Supreme Court	Repairs	1901	9 10 10	1 19 0		1 19 0
Stamps Office	"			122 8 11		131 19 9
" Stamp Printing Press	Erection			23 10 7		26 10 7
Stores Department	Repairs			154 0 0		154 0 0
" Sobraon," N.S. Ship—Electric Light Installation	Repairs		11 19	2 3 1		13 5 10
"	Additions			24 4 0		24 4 0
"	Maintenance			7 9 6		7 9 6
State Governor's Offices	Alterations, &c.			365 6 4		365 6 4
" Arrival	Decorations	1902		122 5 6	122 5 6	
" Orderlies' Quarters, Young-street	Rent	1901		36 0 0		36 0 0
"	Furniture		28 2 0			28 2 0
Sydney Town Hall	Decorations	1901		16 8 7		16 8 7
Sydney Harbour Trust Office	Repairs			19 6 4		19 6 4
" Electric Light Installation	Erection			34 13 2		190 13 9
Shelter-sheds for Waterside Workers, Miller's Point	"	1902		502 0 8	502 0 8	
" Erskine-street	Additions & alterations			242 5 6		
Treasury	Repairs	1901		510 16 11	437 3 8	948 0 7
" Electric Light	Maintenance			76 9 0		76 9 0
Technological Museum	Repairs			5 15 0		5 15 0
University of Sydney	Additions		226 16 10	324 3 1		550 19 11
"	"			230 5 0		230 5 0
" Chemical Laboratory	Fitting up machinery	1899		65 6 4		872 18 7
" Department of Physics	Additions	1900		3,288 16 6		7,730 8 2
" School of Biology	Erection			2,989 3 1		9,871 4 3
" Fisher Library	"	1902		2,003 19 1	2,003 19 1	
Victoria Park Lodge	Repairs	1901		4 2 9		4 2 9
Water Police Court	"		1 6 0	41 9 2		42 15 2
William-street Post and Telegraph Office	"			10 6 6		10 6 6
SUBURBS.						
ASHFIELD.						
Post and Telegraph Office	Repairs	1901		6 15 0		6 15 0
Police Station	"			9 3 9		9 3 9
BALMAIN.						
Court-house and Lock-up	"			12 12 8		12 12 8
Post and Telegraph Office	"			0 5 0		0 5 0
Cottage Hospital	Additions			1,000 0 0		1,000 0 0
BILOELA.						
Gaol	Repairs			282 6 6		282 6 6
BURWOOD.						
Post and Telegraph Office	Additions			30 2 6		30 2 6
" Turret Clock	Erection			25 10 0	55 10 0	
Court-house and Lock-up	Cost of land			926 13 5		926 13 5
COAST HOSPITAL, LITTLE BAY.						
Storekeeper's Quarters	Erection			686 4 4		933 4 4
Coast Hospital, Little Bay	Additions			1,026 12 11	1,026 12 11	
"	Repairs		122 18 9	218 15 9		341 14 6
"	Additions			87 6 10		87 6 10
" Contour Survey	"			110 5 0		110 5 0
" New Ward for Infectious Diseases	Erection	1902		1,614 11 1		1,614 11 1
CALLAN PARK.						
Hospital for Insane	Additions	1901		473 8 10		473 8 10
"	Repairs			689 17 7		689 17 7
CAMPERDOWN.						
Post and Telegraph Office	"			4 7 5		4 7 5
CROYDON.						
Post and Telegraph Office	Additions			22 15 6		23 8 0
CLYDE.						
Metallurgical Works	Repairs			1 10 7		1 10 7
CHATSWOOD.						
Post and Telegraph Office	Cost of land			1,033 15 1		1,033 15 1
CONCORD.						
Lock-up	Incidental	1902		0 12 6		0 12 6
DULWICH HILL.						
Post and Telegraph Office	Repairs	1901		0 13 7		0 13 7
"	Cost of land			2 17 5		2 17 5
ENMORE.						
Post and Telegraph Office	Repairs	1902		2 2 4		2 2 4
EDGECLIFFE.						
Post and Telegraph Office	"			104 0 0		104 0 0
GLEBE.						
Court-house	"	1901	7 1 3	17 12 7		24 13 10
Post and Telegraph Office	"	1902		5 1 7		5 1 7



RETURN OF EXPENDITURE ON PUBLIC WORKS, &c.—*continued.*

Work.	Whether Con- structing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expendi- ture.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
SUBURBS— <i>continued.</i>						
GLADESVILLE.						
Hospital for Insane	Repairs	1901		452 9 0		452 9 0
" " Medical Officers' Quarters	Erection	"		292 5 0		1,536 16 8
" " Laundry and Kitchen	Additions	"		2,762 0 0	2,762 0 0	
HORNSBY.						
Post and Telegraph Office	Erection	"		1,237 15 0	1,237 15 0	
KOGARAH.						
Post and Telegraph Office	Repairs	"		0 1 9		0 1 9
KURNELL.						
Accommodation House	Erection	"		887 18 3		887 18 3
MANLY.						
Post and Telegraph Office	Repairs	1902		9 15 0		9 15 0
MARRICKVILLE.						
Police Station	"	"		0 17 9		0 17 9
MILLER'S POINT.						
Post and Telegraph Office	"	1901		9 11 6		9 11 6
NORTH SYDNEY.						
Post and Telegraph Office	"	"		0 3 6		0 3 6
" " Turret Clock	Erection	"		15 0 0		247 10 0
Hospital	"	1902		4,562 7 6	4,562 7 6	
NEWTOWN.						
Court-house and Police Station	Repairs	1901		51 12 7		51 12 7
Post and Telegraph Office	Additions	"		13 4 10		13 4 10
" " Turret Clock	Erection	1899		10 5 0		234 0 0
NEWINGTON.						
Benevolent Asylum	Repairs	1901		245 6 7		245 6 7
" " Dining-room	Additions	"		195 7 0		330 7
" " "	"	"		635 13 2		635 13
PARRAMATTA.						
Gaol	Repairs	"		437 5 8		437 5 8
" " Electric Light	Maintenance	"		577 9 6		577 9 6
" " Governor and Deputy-Governor's quarters	Erection	"		98 6 1		98 6 1
Court-house and Police Station	Repairs	"		1,967 0 0	1,967 0 0	
Hospital for Insane—Nurses' quarters	Erection	1900		122 16 3		122 16 3
" " "	Repairs	1901		466 15 0		1,893 8 4
" " No. 4 Ward	Repairs	1901		515 9 5		515 9 5
" " Laundry	Additions	1902		1,726 0 0	1,726 0 0	
" " "	"	"		389 7 3	389 7 3	
Cottage Homes	Additional land	1900		653 17 6		1,109 19 6
" " "	Additions	1901		40 1 9		40 1 9
Post and Telegraph Office	Repairs	"		82 14 10		82 14 10
Benevolent Asylum (Macquarie-street)	Furniture	1902	3 5 9			3 5 9
" " (George-street)	Repairs	1901		65 1 1		65 1 1
Hospital	Additions	"		150 13 5		150 13 5
Lock-up	Repairs	"		950 0 0	2,000 0 0	
" " "	"	"		2 5 9		2 5
PADDINGTON.						
Court-house and Police Station	"	"		18 2 0		18 2 0
PYRMONT.						
Post and Telegraph Office	Erection	1899		43 11 7		4,525 13 5
" " "	Additional cost of land	1902		27 11 10		27 11 10
PYMBLE.						
Post and Telegraph Office	Cost of land	"		0 1 6	0 1 6	
ROOKWOOD.						
Benevolent Asylum	Additions	1901		4,605 5 8	4,605 5 8	
" " "	Repairs	"		122 8 8		122 8 8
" " Irrigation Works	Maintenance	"		143 19 9		143 19 9
" " Electric Light	Installation	"		773 3 8	1,042 15 1	
Necropolis—Fencing	Erection	"		130 16 0		130 16 0
ROZELLE.						
Post and Telegraph Office	Additions	1902		7 10 0		7 10 0
Lock-up	"	1901		33 19 6		33 19
RYDALMERE.						
Hospital for Insane	Revision survey	"		84 0 0		84 0 0
" " "	Additions	"		260 7 10		260 7 10
" " "	Repairs	"		45 16 0		45 16 0
" " Steam Cooking Plant	Erection	"		758 0 8		1,609 0 8
" " Wards for Females	"	1900		9,858 4 3		13,543 15 11
" " "	Furniture	1902	319 17 0			319 17 0
" " Closets	Erection	1901		296 7 6		296 7 6
RANDWICK.						
Lock-up	Additions	1902		245 17 3		245 17 3
Post and Telegraph Office	Repairs	1901		44 5 6		44 5 6
" " "	Additions	1902		39 9 2		39 9 2
Penitentiary for Petty Offenders and Prison for Females	Erection	1901		1,055 11 10	1,066 13 3	
REDFERN.						
Court-house	Repairs	"		4 1 10		4 1 10
Post and Telegraph Office	"	"		4 0 0		4 0 0
RYDE.						
Police Buildings	"	1902		1 3 6		1 3 6
SOUTH HEAD (WATSON'S BAY).						
Shaftesbury Reformatory	"	1901		37 7 0		37 7 0
ST. PETER'S.						
Post and Telegraph Office	Additions	"		24 19 0		24 19 0
SURRY HILLS.						
Police Barracks	Cost of land	1902		2 5 0	2 5 0	
ULTIMO.						
Post and Telegraph Office	Erection	1901		308 2 7		808 2 7
WAVERTLEY.						
Post and Telegraph Office	Repairs	"		6 15 5		6 15 5
COUNTRY.						
ALBURY.						
Police Officers' Quarters	Repairs	1901		123 6 3		123 6 3
Post and Telegraph Office	"	1900		68 3 9		168 15 0
Gaol	"	1901		20 6 3		20 6 3
Court-house	"	"		24 13 6		24 13 6
Lands Office	"	"		0 15 0		0 15 0
Government Architect's Office	Incidental	"		8 10 10		8 10 10
ARMIDALE.						
Court-house	Repairs	"		34 8 8		34 8 8
Government Architect's Office	Incidental	"		11 9 6		11 9 6
Old Telegraph Office (Government Offices)	Repairs	"		19 3 5		19 3 5
West—Lock-up	"	1902		17 13 6		17 13 6
Lands Office	"	1901		19 2 0		19 2 0
Police Buildings	"	"		366 9 1		366 9 1
Post and Telegraph Office	"	"		146 17 6		146 17 6
Gaol	"	"		21 15 4		21 15 4
ARALUEN.						
Police Station	"	"		11 10 0		11 10 0



## RETURN OF EXPENDITURE ON PUBLIC WORKS, &amp;c.—continued.

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
ADELONG. Court-house and Police Station.....	Repairs .....	1902	.....	9 5 0	.....	9 5 0
ANGLEDOOL. Court-house .....	" .....	1901	.....	3 7 6	.....	3 7 6
ACACIA CREEK. Police Station .....	Erection .....	1902	.....	1,082 9 3	.....	1,082 9 3
ASHFORD. Police Station .....	Repairs .....	1901	.....	13 17 11	.....	13 17 11
ADAMINABY. Court-house .....	Additions .....	"	.....	4 0 0	.....	4 0 0
BATHURST. Decorations and Illuminations .....	Erection .....	"	.....	29 13 8	.....	29 13 8
Gaol .....	Additions .....	"	.....	342 8 5	.....	342 8 5
" .....	Repairs .....	"	.....	579 8 10	.....	579 8 10
" Electric Light .....	Maintenance .....	"	.....	37 5 7	.....	37 5 7
Telegraph Office .....	Repairs .....	"	.....	9 9 5	.....	9 9 5
Post Office .....	" .....	"	.....	4 8 7	.....	4 8 7
Court-house .....	" .....	"	.....	65 14 5	.....	65 14 5
Government Architect's Office .....	Incidental .....	1902	.....	3 0 4	.....	3 0 4
Police Superintendent's Quarters .....	Repairs .....	"	.....	261 0 0	.....	261 0 0
BALRANALD. Court-house .....	" .....	"	.....	1 10 0	.....	1 10
BERRIMA. Post and Telegraph Office .....	Additions .....	"	.....	106 7 0	.....	106 7 0
Gaol .....	" .....	1901	.....	768 2 5	768 2 5	.....
" .....	Repairs .....	"	.....	259 10 4	.....	259 10 4
" Electric Light .....	Maintenance .....	"	.....	30 0 0	.....	30 0 0
BOURKE. Roads Office .....	Repairs .....	"	.....	2 10 0	.....	2 10 0
Gaol .....	" .....	"	.....	2 3 1	.....	2 3 1
Court-house .....	" .....	"	.....	12 6 0	.....	12 6 0
Post and Telegraph Office .....	Additions .....	"	.....	33 7 6	.....	33 7 6
Police Superintendent's Quarters .....	Erection .....	1900	.....	94 15 0	.....	1,545 3 11
BROKEN HILL. Police Officers' Quarters .....	Additions .....	1901	.....	1,717 8 1	.....	1,717 8 1
Gaol .....	Repairs .....	"	.....	1 7 6	.....	1 7 6
Police Barracks .....	" .....	1902	.....	9 4 9	.....	9 4 9
Post and Telegraph Office .....	Additions .....	1900	.....	463 17 5	.....	2,315 2 0
" Turret Clock .....	Erection .....	"	.....	173 2 10	278 2 10	.....
Government Architect's Office .....	Incidental .....	1901	.....	3 4 1	.....	3 4 1
BROADWATER. Police Station .....	Repairs .....	1902	.....	12 7 4	.....	12 7 4
BINGARA. Court-house .....	Furniture .....	1901	1 16 1	.....	.....	1 16 1
BARRABA. Post Office .....	Repairs .....	1902	.....	56 0 0	.....	56 0
Court-house .....	" .....	"	.....	5 10 0	.....	5 10
BOMBALA. Court-house .....	" .....	1901	.....	2 11 0	.....	25 11
Lock-up Gaol .....	" .....	1902	.....	4 18 0	.....	4 18
BINALONG. Court-house .....	" .....	"	.....	125 1 0	.....	125 1 0
BERRY. Post and Telegraph Office .....	Additions .....	1901	.....	9 17 0	.....	9 17 0
BULLI. Court-house .....	" .....	1902	.....	51 1 2	.....	51 1 2
BEGA. Court-house and Gaol .....	" .....	1901	.....	13 16 9	.....	13 16 9
Labour Settlement—Public Hall .....	" .....	"	.....	20 0 0	.....	20 0 0
BUNGENDORE. Lock-up and Police Station .....	Repairs .....	"	.....	61 12 0	61 12 0	.....
BOWRAL. Post and Telegraph Office—Clock .....	Erection .....	1900	.....	25 9 0	.....	111 5 6
Court-house .....	Repairs .....	1901	.....	20 7 6	.....	20 7 6
BARRINGUN. Police Station .....	Additions .....	"	.....	36 3 0	.....	33 3 0
BALLINA. Post and Telegraph Office .....	" .....	1900	.....	233 18 0	323 19 11	.....
BURROWA. Post and Telegraph Office .....	Repairs .....	1901	.....	3 3 0	.....	3 3 0
BERRIGAN. Post and Telegraph Office .....	Erection .....	"	.....	165 10 6	.....	1,333 18 11
BOGAN GATE. Court-house .....	Repairs .....	1902	.....	5 5 0	.....	5 5 0
BCLYKROL. Police Station .....	Erection .....	1901	.....	170 15 10	.....	1,184 12 7
BOGGABILLA. Court-house .....	Additions .....	"	.....	22 15 0	.....	22 15 0
BLACKVILLE. Police Station .....	Repairs .....	"	.....	0 6 0	.....	0 6 0
BINGARA. Post and Telegraph Office .....	Additions .....	"	.....	112 4 6	.....	112 4 6
BARMEDMAN. Police Station .....	Repairs .....	1902	.....	29 19 0	.....	29 19 0
BRAIDWOOD. Court-house .....	Erection .....	1899	.....	3,476 3 8	5,161 16 2	.....
Lock-up Gaol .....	Repairs .....	1902	.....	100 0 0	.....	100 0 0
BORA CREEK. Police Station .....	Erection .....	1901	.....	1,076 18 10	.....	1,076 18 10
BURRAGA. Court-house .....	Additions .....	"	.....	409 2 9	.....	409 2 9
BETHUNGRA. Police Station .....	" .....	"	.....	79 10 0	.....	79 10 0
BURROWA. Court-house .....	Repairs .....	1902	.....	121 16 0	121 16 0	.....
Lock-up Gaol .....	Additions .....	1901	.....	667 13 1	.....	667 13 1
BUNDAERA. Court-house and Police Station .....	" .....	"	.....	456 10 6	.....	453 10 6
CAMPBELLTOWN. State Nursery .....	Repairs .....	"	.....	6 0 6	.....	6 0 6
Court-house .....	" .....	"	.....	2 11 8	.....	2 11 8
COOTAMUNDRA. Court-house .....	Additions .....	1899	.....	1,449 10 0	5,371 19 6	.....
Lock-up Gaol .....	" .....	1900	.....	27 11 0	.....	129 13 0
Government Architect's Office .....	Incidental .....	1901	12 16 9	25 12 9	.....	38 9 6
Police Station .....	Additions .....	"	.....	253 5 0	.....	253 5 0
CAMDEN. Court-house and Police Barracks .....	" .....	1902	.....	7 0 0	.....	7 0 0
COWRA. Court-house .....	Repairs .....	1901	.....	11 3 0	.....	11 3 0
Police Buildings .....	Cost of land .....	"	.....	47 7 2	47 7 2	.....



## RETURN OF EXPENDITURE ON PUBLIC WORKS, &amp;c.—continued.

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
CORAKI.						
Court-house and Lock-up .....	Additions .....	1901 .....		24 18 0		200 10 0
CUMNOCK.						
Court-house and Lock-up .....	Erection .....	1900 .....		105 15 4		1,938 12 6
CASINO.						
Lock-up Gaol .....	Repairs .....	1902 .....		1 18 6		1 18 6
CATHCART.						
Police Station .....	Additions .....	" .....		5 5 0		5 5 0
COOPERNOOK.						
Court-house and Lock-up .....	" .....	1901 .....		6 9 6		6 9 6
CARCOAR.						
Post and Telegraph Office .....	" .....	" .....		199 0 0		199 0 0
Court-house .....	Repairs .....	" .....		3 10 0		39 10 0
Police Buildings and Gaol .....	" .....	" .....		58 0 0		58 0 0
CONDOLIN.						
Court-house and Lock-up .....	Additions .....	1900 .....		2,142 7 9		6,589 9 3
COROWA.						
Post and Telegraph Office .....	Repairs .....	1902 .....		0 15 0		0 15 0
COPELAND.						
Post and Telegraph Office .....	" .....	1901 .....		17 2 0		102 10 0
COONAMBLE.						
Court-house .....	" .....	1902 .....		4 5 0		4 5 0
CRESSNOCK.						
Court-house .....	" .....	" .....		3 11 6		3 11 6
CUDGEN.						
Police Station .....	" .....	1901 .....		12 3 2		12 3 2
CLARENCE TOWN.						
Court-house and Police Buildings .....	Additions .....	1902 .....		40 0 0		40 0 0
COOLAMON.						
Court-house and Lock-up .....	Repairs .....	1901 .....		26 15 0		26 15 0
CANDELO.						
Post and Telegraph Office .....	" .....	" .....		0 11 0		0 11 0
CARRATHOOL.						
Police Station .....	" .....	" .....		3 10 0		3 10 0
Court-house and Police Buildings .....	Additions .....	" .....		32 0 0		32 0 0
COJLAH.						
Post and Telegraph Office .....	" .....	" .....		51 0 0		51 0 0
CARGO.						
Police Station .....	" .....	" .....		52 3 0		52 3 0
COBAR.						
Court-house .....	Repairs .....	" .....		2 0 0		2 0 0
COBARGO.						
Court-house .....	" .....	" .....		2 0 0		2 0 0
Post and Telegraph Office .....	Additions .....	" .....		26 12 0		168 12 6
COOMA.						
Police Buildings .....	" .....	" .....		55 10 0		55 10 0
Court-house .....	Repairs .....	" .....		183 10 0		183 10 0
COBAR.						
Police Station .....	Additions .....	" .....		8 0 0		8 0 0
Lock-up Gaol .....	Repairs .....	1902 .....		14 0 0		14 0 0
CUNDELTOWN.						
Court-house .....	" .....	" .....		20 10 0		20 10 0
Post and Telegraph Office .....	" .....	1901 .....		16 17 0		16 17 0
CARRINGTON.						
Post and Telegraph Office .....	" .....	" .....		0 10 0		0 10 0
CARROLL.						
Police Station .....	Additions .....	" .....		281 1 1		383 12 1
COLLARENDABRI.						
Court-house and Lock-up .....	Erection .....	" .....		1,631 13 5		1,631 13 5
DURBO.						
Gaol .....	Repairs .....	" .....		24 0 0		24 0 0
Government Architect's Office .....	Incidental .....	" .....		62 13 7		62 13 7
Post and Telegraph Office .....	Repairs .....	" .....		1 0 0		1 0 0
DENILQUIN.						
Court-house .....	" .....	" .....		198 16 0		198 16 0
Gaol .....	" .....	" .....		3 2 6		3 2 6
DENMAN.						
Court-house and Police Buildings .....	Additions .....	" .....		391 5 6		391 5 6
DRAKE.						
Police Station .....	Repairs .....	" .....		9 10 0		9 10 0
DALGETY.						
Court-house and Police Station .....	" .....	1902 .....		111 0 0	111 0 0	
EUSTON.						
Court-house .....	" .....	" .....		4 10 0		4 10 0
ELLENBOROUGH.						
Police Station .....	Additions .....	1901 .....		18 11 0		18 11 0
EMMAVILLE.						
Police Station .....	" .....	1902 .....		87 0 0		87 0 0
EDEN.						
Custom-house .....	Repairs .....	1901 .....		3 15 10		3 15 10
Lock-up .....	Erection .....	" .....		861 8 0		1,332 8 0
FREDERICKTON.						
Police Station .....	Repairs .....	" .....		12 4 0		12 4 0
FORBES.						
Hospital .....	Erection .....	" .....		2,000 0 0	2,000 0 0	
Court-house .....	Repairs .....	" .....		42 15 8		42 15 8
Gaol .....	" .....	" .....		0 17 1		0 17 1
Lands Office .....	" .....	1902 .....		74 15 0		74 15 0
" Caretaker's Quarters .....	Erection .....	1901 .....		47 9 11		476 16 5
FORSTER.						
Post and Telegraph Office .....	Cost of land .....	" .....		0 11 11	0 11 11	
Court-house .....	Repairs .....	" .....		16 6 6		16 16 6
GRAFTON.						
Gaol .....	" .....	" .....		35 15 0		35 15 0
Court-house .....	" .....	1902 .....		70 19 0		70 19 0
Post Office .....	" .....	" .....				
Lands Office .....	Repairs .....	1901 .....		1 8 6		1 8 6
Police Station .....	" .....	" .....		5 0 0		5 0 0
Government Architect's Office .....	Incidental .....	" .....		2 0 8		2 0 8
Works Department Office .....	" .....	" .....		2 12 0		2 12 0
GRAFTON, SOUTH.						
Post and Telegraph Office—Clock Tower .....	Erection .....	" .....		217 1 11		217 1 11
Hospital—Operating Theatre .....	" .....	1902 .....		1,000 0 0	1,000 0 0	
Decorations .....	" .....	1901 .....		1 7 6		1 7 6
GULGOON.						
Court-house .....	Additions .....	1902 .....		19 14 11		19 14 11
Police Buildings .....	Repairs .....	1901 .....		44 5 0		149 5 0
GILGANDRA.						
Police Station .....	" .....	" .....		7 10 0		7 10 0
Court-house .....	Cost of land .....	" .....		3 12 6	3 12 6	



## RETURN OF EXPENDITURE ON PUBLIC WORKS, &amp;c.—continued.

Work.	Whether Con- structing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished actual amount of Expendi- ture.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
GUNDAGAL.						
Court-house	Additions	1901		877 16 0	2,553 4 4	
Police Officers' Quarters	"	"		81 19 5		398 19 5
Gaol	Repairs	1902		6 0		6
Post and Telegraph Office	"	"		2 10 0		2 10
GUNNING.						
Police Officers' Quarters	"	1901		2 10 0		2 10 0
GOSFORD.						
Court-house and Police Station	"	"		31 12 6		31 12 6
Post and Telegraph Office	"	"				
GOULBURN.						
Police Barracks	"	"		0 17 0		0 17
Lock-up	"	"				
Gaol	"	"		145 0 7		145 0 7
" Electric Light Plant	Maintenance	"		94 6 9		94 6 9
Court-house	Repairs	"		113 1 1		113 1 1
Police Superintendent's Quarters	"	1902		0 10 9		0 10 9
Government Architect's Office	Incidental	1901		3 12 4		3 12 4
Police Station	Repairs	"		0 14 0		0 14 0
"	"	"		0 15 6		0 15 6
Lands Office	"	"		0 12 6		0 12 6
GRETA.						
Police Station	Additions	1902		129 0 0		129 0 0
GUNNEDAH.						
Post and Telegraph Office	"	1901		279 2 8		675 8 2
GRANVILLE.						
Post and Telegraph Office	Repairs	1902		0 7 1		0 7 1
GULARGAMBONE.						
Police Station—Temporary Cell	Erection	1901		30 0 0		30 0 0
GRENFELL.						
Court-house	Repairs	"		12 18 0		12 18 0
Lock-up Gaol	Additions	"		510 16 8	670 16 8	
GERMANTON.						
Post and Telegraph Office	"	"		16 12 6		16 12 6
GLADSTONE.						
Lock-up	Repairs	"		3 10 0		3 10 0
GUNNING.						
Court-house	"	"		16 15 0		138 9 8
GUYRA.						
Court-house	"	"		0 10 0		0 10 0
HOWLONG.						
Post and Telegraph Office	"	"		0 12 6		0 12 6
HAY.						
Gaol	"	1902		14 13 9		14 13 9
Court-house	"	1901		38 16 6		38 16 6
Post and Telegraph Office	Additions	1900		108 8 0		310 13 0
" " Turret Clock	Erection	1901		135 0 0	186 0 0	
Lands Office	Repairs	"		2 11 6		2 11 6
HILL END.						
Court-house	"	"		0 10 0		0 10 0
HILLSTON.						
Post and Telegraph Office	Additions	"		70 7 5		455 7 5
Lock-up Gaol	Repairs	1902		1 13 4		1 13 4
HUMULA.						
Police Station—Temporary Cell	Erection	1901		25 3 2		25 3 2
HILGROVE.						
Post and Telegraph Office	"	1900		659 13 6		1,534 1 6
INVERELL.						
Lock-up Gaol	Additions	1901		772 4 10		772 4 10
ISLINGTON.						
Police Station	Cost of land	"		295 19 6		295 19 6
JENOLAN CAVES.						
Accommodation House	Additions	"		16 12 0		16 12 0
JERILDERIE.						
Court-house	Repairs	"		91 17 6		91 17 6
JUNEE.						
Court-house and Police Station	Erection	"		1,061 12 3		1,061 12 3
JERRY'S PLAINS.						
Court-house	Repairs	"		80 7 6		80 7 6
KENMORE.						
Hospital for Insane	Erection	1894		726 13 9		171,012 6 6
"	Repairs	1901		8 18 1		8 18 1
KEMPSEY.						
Police Buildings	Erection	"		511 10 8		943 14 5
KEMPSEY WEST.						
Court-house	Additions	"		12 13 0		12 13 0
Post and Telegraph Office	Repairs	"		15 1 6		15 1 6
Police Buildings	"	"		2 11 0		2 11 0
KUNOPIA (BOOM).						
Police Station	Erection	"		522 10 3		887 13 5
KIAMA.						
Post and Telegraph Office	Repairs	"		187 15 0		187 15 0
Police Station	"	"		9 15 0		9 15 0
Court-house	Additions	"		49 9 0		49 9 0
KATOOMEA.						
Court-house and Police Buildings	Repairs	"		83 2 9		83 2 9
LITHGOW.						
Post and Telegraph Office	"	"		70 9 4		70 9 4
LISMORE.						
Court-house	Additions	"				
Post and Telegraph Office	Repairs	1901		33 19 8		33 19 8
LISMORE SOUTH.						
Police Station	Cost of land	1902		120 0 0		120 0 0
Post and Telegraph Office	Additions	1901		154 17 0		154 17 0
LAMETON.						
Lock-up	Repairs	1902		13 12 0		13 12 0
Post and Telegraph Office	Additions	"		67 13 1	67 13 1	
LIVERPOOL.						
Benevolent Asylum	Repairs	1901		270 18 7		270 18 7
"	Additions	"		130 8 6		130 8 6
" " Sewerage	Construction	1900		2,333 5 2	2,436 19 7	
" " Stormwater Channels	"	1901		175 18 10	175 18 10	
" " Railway Station	Drainage	1902		18 18 1	18 18 1	
MOLONG.						
Post and Telegraph Office	Additions	1900		100 6 1		1,229 9 10
Court-house	Repairs	1901		5 0 0		5 0 0
MEREWETHER.						
Post and Telegraph Office	Additional cost of land	"		8 10 6		8 10
MILLTHORPE.						
Court-house and Police Station	Erection	"		1,595 16 11	1,595 16 11	



## RETURN OF EXPENDITURE ON PUBLIC WORKS, &amp;c.—continued.

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
MITTAGONG.						
Court-house	Repairs	1901		116 10 6		116 10 6
Post and Telegraph Office	"	1902		26 7 0	26 7 0	
MURRUMBURRAH.						
Police Quarters	"	"		17 2 0		17 2 0
Post and Telegraph Office	"	1901		5 0 0		5 0 0
MOSS VALE.						
Court-house	"	1902		1 8 0		1 8 0
MENINDIE.						
Court-house	"	"		2 10 0		2 10 0
MILPARINKA.						
Police Station	Additions	"		53 15 0		53 15 0
Post and Telegraph Office	Erection	1900		289 13 0		1,058 18 0
Court-house	Repairs	1901		1 6 10		1 6 10
MORUYA.						
Court-house	"	1902		199 0 0		199 0 0
MURRURUNDI.						
Post and Telegraph Office	Additions	"		14 0 0	14 0 0	
MOUNT KOSCIUSKO.						
Shelter Sheds	Erection	"		63 12 0	63 12 0	
MACLEAN.						
Court-house	Repairs	"		53 5 0		53 5 0
MONGARLOWE.						
Police Station	Additions	1901		5 7 6		5 7 6
MICHELAGO.						
Court-house and Lock-up	Repairs	"		1 0 0		1 0 0
MOAMA.						
Lock-up	Additions	"		2 9 8		2 9 8
Court-house	Repairs	"		10 15 0		10 15 0
MAITLAND.						
Gaol	Additions	"		188 11 11		188 11 11
" Electric Light	Maintenance	"		922 18 7		922 18 7
MAITLAND, EAST.						
Court-house	Repairs	"		36 15 1		36 15 1
Post and Telegraph Office	"	1902		41 7 0		41 7 0
Lands Office	"	"		8 5 0		8 5 0
Police Barracks	Additions	1901		6 19 6		6 19 6
Police Station	"	"		242 9 3		242 9 3
MAITLAND, WEST.						
Show Grounds	Incinerations	"		14 1 7		14 1 7
MUDGE.						
Roads Office	Repairs	1902		6 2 4	6 2 4	
Gaol	"	"		8 18 1		8 18 1
Court-house	Additions	1901		7 12 0		7 12 0
Post and Telegraph Office	"	"		153 1 9		153 1 9
MUSWELLBROOK.						
Court-house	"	"		1,440 10 0	1,440 10 0	
MOREE.						
Lock-up Gaol	Additions	1902		20 4 6		20 4 6
Government Architect's Office	Incidental	1901		34 18 4		34 18 4
Court-house	Erection	"		0 2 10		0 2 10
"	Furniture	"	18 6 8	4,986 18 7	5,998 5 4	
Post and Telegraph Office	Repairs	"		18 6 8		18 6 8
Land and Survey Office	Additions	1902		1 10 0		1 10 0
NARROMINE.						
Court-house	Repairs	"		653 0 0	653 0 0	
Police Station	"	1901		25 5 0		25 5 0
NIMITYELLE.						
Court-house	Additions	"		34 0 0		34 0 0
NEWCASTLE.						
Hospital for Insane	Repairs	"		4 0 0		16 0 0
Court-house	"	"		336 12 1		336 12 1
Post and Telegraph Office (New)	Erection	1899		73 16 9		73 16 9
Government Architect's Office	Incidental	1901		8,341 5 5	17,491 7 4	
Hunter-street Police Station	Repairs	"		4 0 5		4 0 5
Police Barracks, Scott-street.	"	"		57 11 0		98 16 0
Custom-house	"	1902		7 0 0		7 0 0
Boatmen's Quarters	"	1901		9 10 0		9 10 0
Water Supply and Sewerage Board Office (Customs House Building).	"	"		7 10 0		7 10 0
Police Barracks, Watt-street.	"	1902		26 15 0		26 15 0
Telegraph Office	"	1901		1 8 0		1 8
Hospital	Additions	1900		6 10 0		6 10 0
Powder Magazine	"	1901		2,596 1 6		5,935 8 3
Morgue	Repairs	1902		4 10 0		4 10 0
Post and Telegraph Office (Old)	"	1901		1 0 0		1 0 0
NARRANDERA.						
Court-house	Additions	"		3 11 0		3 11 0
Police Station	"	"		2,248 7 6	2,248 7 6	
Court-house (Temporary)	"	"		156 17 9		156 17 9
NYNGAN.						
Court-house	Erection	"		3,005 11 0	3,020 19 4	
Police Station	Repairs	"		2 0 0		2 0 0
NYMAGEE.						
Court-house and Police Station	Erection	"		3,381 7 3		3,381 7 3
Post and Telegraph Office	Additions	1902		71 5 0	71 5 0	
Police Station (Old)	Repairs	"		20 0 0		20 0 0
NARRABRI.						
Court-house	"	"		4 9 0		4 9 0
ORANGE.						
Government Architect's Office	Incidental	1901		10 11 3		10 11 3
Police Barracks	Repairs	"		4 3 7		4 3 7
Lock-up Gaol	"	1902		0 5 5		0 5 5
OBLEY.						
Court-house	Additions	"		159 2 6		159 2 6
PORT MACQUARIE.						
Court-house	Repairs	"		0 16 0		0 16 0
PARKES.						
Post and Telegraph Office	"	1901		2 5 0		2 5 0
PICTON.						
Post and Telegraph Office	Repairs	"		96 0 0		96 0 0
Court-house	Footpath	"		8 16 0		8 16 0
PENRITH.						
Post and Telegraph Office	Repairs	1902		114 0 0	114 0 0	
PLATTSBURG.						
Police Barracks	"	1901		2 5 0		2 5 0
PATERSON.						
Post and Telegraph Office	"	1902		4 0 0		4 0 0
QUIRINDI.						
Post and Telegraph Office	Additions	"		56 15 6		56 15 6



## RETURN OF EXPENDITURE ON PUBLIC WORKS, &amp;c.—continued.

Work.	Whether Con- structing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expendi- ture.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
RYLSTONE. Court-house .....	Repairs .....	1901 .....	.....	1 7 7	.....	1 7 7
ROBERTSON. Court-house .....	" .....	1902 .....	.....	166 1 4	.....	166 1 4
RICHMOND. Agricultural College .....	Additions .....	1901 .....	.....	50 17 10	.....	50 17 10
" .....	Repairs .....	" .....	.....	13 16 4	.....	13 16 4
" .....	Electric Light Installation .....	Additions .....	.....	1,760 6 4	2,610 3 10	.....
" .....	Laundry—Machinery .....	1901 .....	.....	105 7 6	.....	105 7 6
" .....	Irrigation Beds .....	1900 .....	.....	105 18 2	.....	123 10 8
ROCKLEY. Court-house .....	" .....	1902 .....	.....	47 13 0	47 13 0	.....
SUNNY CORNER. Court-house .....	Repairs .....	1901 .....	.....	0 14 3	.....	0 14 3
STOCKINBINGAL. Police-station .....	" .....	" .....	.....	0 15 0	.....	0 15 0
SINGLETON. Court-house .....	" .....	" .....	.....	59 15 0	.....	59 15 0
" .....	Post and Telegraph Office .....	1902 .....	.....	3 1 0	.....	3 1 0
SCONE. Court-house .....	" .....	1901 .....	.....	53 4 9	.....	53 4 9
STUART TOWN. Court-house .....	" .....	" .....	.....	41 10 0	.....	41 10 0
SUTTON FOREST. Governor's Country Residence, "Hill View" .....	" .....	" .....	2 6 10	82 6 1	.....	84 12 11
TENTERFIELD. Lock-up Gaol .....	" .....	" .....	.....	8 13 6	.....	8 13 6
TAMWORTH. Gaol .....	" .....	" .....	.....	2 16 2	.....	2 16 2
" .....	Lands Office .....	Additions .....	1900 .....	54 2 1	.....	84 14 3
" .....	Government Architect's Office .....	Incidental .....	1901 .....	13 2 8	.....	13 2 8
" .....	Post and Telegraph Office .....	Repairs .....	1900 .....	111 15 10	.....	252 14 0
" .....	Court-house .....	Additions .....	" .....	88 9 1	.....	827 12 7
TOCUMWAL. Police Station .....	Repairs .....	1902 .....	.....	24 5 6	.....	24 5 6
TAREE. Lock-up Gaol .....	" .....	" .....	.....	1 0 0	.....	1 0 0
" .....	Post and Telegraph Office .....	1901 .....	.....	6 17 6	.....	6 17 6
" .....	Court-house .....	" .....	.....	29 15 3	.....	29 15 3
TOWAMBA. Police Station .....	" .....	1902 .....	.....	191 5 0	.....	191 5 0
TUENA. Police Station .....	" .....	1901 .....	.....	1 5 0	.....	1 5 0
" .....	Court-house—Fencing .....	Erection .....	1902 .....	71 10 0	71 10 0	.....
TEMORA. Court-house .....	" .....	1901 .....	.....	2,587 8 9	2,587 8 9	.....
TIBBOOBURRA. Court-house .....	Additions .....	1902 .....	.....	260 16 6	.....	260 16 6
" .....	Police Station .....	Repairs .....	" .....	7 10 0	.....	7 10 0
" .....	Post and Telegraph Office .....	Erection .....	1900 .....	953 10 6	.....	1,128 0 6
WILCANNIA. Lock-up Gaol .....	Repairs .....	1901 .....	.....	0 16 3	.....	0 16 3
" .....	Court-house .....	1902 .....	.....	6 10 0	.....	6 10 0
" .....	Police Station .....	Additions .....	" .....	394 10 0	394 10 0	.....
WELLINGTON. Gaol .....	Alterations .....	1901 .....	.....	23 0 0	.....	23 0 0
" .....	Police Station .....	Additions .....	1902 .....	9 10 0	.....	9 10 0
" .....	Court-house .....	Repairs .....	" .....	15 15 0	.....	15 15 0
WYALONG. Post and Telegraph Office .....	" .....	1901 .....	.....	2 7 6	.....	2 7 6
" .....	Lock-up .....	Additions .....	" .....	65 0 3	.....	942 17 9
" .....	Hospital .....	" .....	.....	200 0 0	750 0 0	.....
" .....	Court-house .....	1902 .....	.....	12 16 3	.....	12 16 3
WILBERFORCE. Police Quarters .....	Repairs .....	" .....	.....	47 9 0	.....	47 9 0
WOODBURN. Court-house and Lock-up .....	Additions .....	1901 .....	.....	200 14 0	.....	200 14 0
WALGETT. Court-house .....	Repairs .....	1902 .....	.....	16 5 6	.....	16 5 6
" .....	Lands Office .....	1901 .....	.....	1 0 0	.....	1 0 0
" .....	Police Boatshed .....	Erection .....	1902 .....	39 7 0	.....	39 7 0
WALCHA. Lock-up .....	Cost of Land .....	" .....	.....	202 9 7	.....	202 9 7
WINDSOR. Post and Telegraph Office .....	Repairs .....	" .....	.....	2 2 6	.....	2 2 6
" .....	Court-house .....	1901 .....	.....	12 13 0	.....	12 13 0
" .....	Police Station (Old Gaol) .....	" .....	.....	1 12 0	.....	1 12 0
WAGGA WAGGA. Court-house .....	Erection .....	1898 .....	.....	6,584 3 9	12,150 12 5	.....
" .....	Post and Telegraph Office .....	Repairs .....	1901 .....	7 10 0	.....	7 10 0
" .....	Lock-up .....	Additions .....	" .....	723 3 3	.....	723 3 3
" .....	Drill Hall .....	Repairs .....	1902 .....	6 3 0	.....	6 3 0
" .....	NORTH—Police Station .....	Cost of Land .....	" .....	97 11 3	.....	97 11 3
WARRIALDA. Court-house .....	Repairs .....	1901 .....	.....	4 7 6	.....	4 7 6
WARATAH. Police Station .....	Additions .....	1902 .....	.....	8 13 0	.....	8 13 0
WISEMAN'S FERRY. Police Station .....	Erection .....	1901 .....	.....	198 17 3	.....	1,474 2 1
WENTWORTH. Court-house .....	Repairs .....	1902 .....	.....	8 16 0	.....	8 16 0
WALLSEND. Post and Telegraph Office .....	" .....	" .....	.....	18 12 6	18 12 6	.....
" .....	Police Station .....	Additions .....	" .....	88 10 0	.....	88 10 0
WALLERAWANG. Court-house .....	Repairs .....	" .....	.....	1 14 6	.....	1 14 6
WOLLONGONG. Gaol .....	" .....	1901 .....	.....	3 5 8	.....	3 5 8
" .....	Court-house .....	" .....	.....	35 13 6	.....	35 13 6
WOONONA. Post and Telegraph Office .....	Survey .....	" .....	.....	0 7 0	.....	0 7 0
WOOLABRA. Police Station .....	Additions .....	1902 .....	.....	16 16 0	.....	16 16 0
" .....	Temporary Cell .....	Erection .....	1901 .....	40 12 6	.....	40 12 6
WOMBEYAN CAVES. Accommodation House .....	Repairs .....	1890 .....	.....	358 7 0	.....	1,579 6 7
WINGHAM. Court-house .....	" .....	1901 .....	.....	2 12 0	.....	2 12 0
" .....	Post and Telegraph Office .....	1902 .....	.....	2 5 0	.....	2 5 0
WAUCHOPE. Court-house and Police Station .....	Erection .....	1901 .....	.....	1,475 8 7	.....	1,475 8 7



RETURN OF EXPENDITURE ON PUBLIC WORKS, &c.—*continued.*

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
COUNTRY— <i>continued.</i>			£ s. d.	£ s. d.	£ s. d.	£ s. d.
WOLLOMBLI.						
Police Station and Court-house .....	Repairs .....	1901	.....	81 10 0	.....	81 10 0
YASS.						
Police Officers' Quarters .....	" .....	1902	.....	93 5 0	.....	93 5 0
Court-house .....	" .....	1901	.....	50 6 0	.....	50 6 0
Lock-up Gaol .....	" .....	"	.....	7 9 4	.....	7 9 4
YOUNG.						
Police Buildings .....	" .....	"	.....	58 14 0	.....	58 14 0
Post and Telegraph Office .....	" .....	"	.....	2 10 0	.....	2 10 0
Gaol .....	" .....	"	.....	152 19 1	.....	152 19 1
YARRANGOBILLY CAVES.						
Accommodation House .....	Additions .....	"	.....	226 19 11	.....	1,269 3 6
MISCELLANEOUS.						
Ballot-boxes .....	.....	1901	.....	239 10 6	.....	239 10 6
Polling Booths .....	.....	"	.....	54 10 4	.....	54 10 4
Fuel and Light .....	.....	"	.....	4,405 0 11	.....	4,405 0 11
Salaries and Travelling Expenses.....	.....	"	.....	20,488 15 4	.....	20,488 15 4
Public Buildings generally—Wages and Materials.....	.....	"	.....	8,661 16 9	.....	8,661 16 9
Contingencies.....	.....	"	.....	2 5 0	.....	2 5 0
Contingencies.....	.....	"	.....	403 7 1	.....	403 7 1
Lighting, Government Street and Park Lamps .....	.....	"	.....	1,058 3 2	.....	1,058 3 2
Plague Contingencies .....	.....	"	.....	5 14 6	.....	5 14 6
Tasmanian Government—Loan of Electrical Machinery .....	.....	"	.....	19 13 4	.....	19 13 4
Norfolk Island Cable Station .....	Erection.....	1902	.....	1,781 7 4	1,781 7 4	.....
" Administration—Supply of Cement .....	.....	"	.....	10 12 6	.....	10 12 6
Lismore Municipal Council—Return of Contribution towards Post Office Clock .....	.....	1901	.....	100 0 0	.....	100 0 0
Compensation and Gratuities—						
Annie Roy, Compassionate Allowance .....	.....	"	.....	29 0 0	.....	29 0 0
M. Peterson, Loss of husband at Sydney Art Gallery .....	.....	"	.....	10 4 0	.....	10 4 0
W. R. Carter, Loss of Wooden Partition .....	.....	"	.....	5 0 0	.....	5 0 0
Hocking Bros., Loss of time, Narrandera Court-house Contract .....	.....	"	.....	173 11 5	.....	173 11 5
Totals .....	.....		£	9,464 18 2	271,321 15 0	301,916 12 9
						463,664 9 2

## SUMMARY OF EXPENDITURE from 1 July, 1901, to 30 June, 1902.

	£ s. d.
Loans.....	150,906 1 0
Consolidated Revenue.....	92,943 16 11
Services for other Departments .....	36,936 15 3
Total .....	£280,786 13 2



## GOVERNMENT ARCHITECT'S BRANCH.

## Votes and Expenditure.

Year.	Votes.				Expenditure.			
	Loans.	Revenue.	Services for other Departments.	Total.	Loans.	Revenue.	Services for other Departments.	Total.
					£ s. d.	£ s. d.	£ s. d.	£ s. d.
1863 .....	10,000	89,157	...	99,157	.....	.....	.....	95,052 10 2
1864 .....	16,351	112,504	...	128,855	.....	.....	.....	81,792 0 11
1865 .....	56,850	51,910	...	108,760	.....	.....	.....	51,063 19 8
1866 .....	.....	78,336	...	78,336	.....	.....	.....	52,118 4 4
1867 .....	.....	128,336	...	128,336	.....	.....	.....	73,202 6 4
1868 .....	24,000	65,107	...	89,107	.....	.....	.....	85,903 1 10
1869 .....	7,000	83,087	...	90,087	.....	.....	.....	96,313 9 0
1870 .....	31,548	83,997	...	115,545	.....	.....	.....	65,304 3 2
1871 .....	12,000	54,437	...	66,437	.....	.....	.....	67,651 6 5
1872 .....	6,000	95,464	...	101,464	.....	.....	.....	54,329 17 7
1873 .....	82,000	135,438	...	217,438	.....	.....	.....	96,875 11 9
1874 .....	133,000	172,729	...	305,729	.....	.....	.....	148,650 0 5
1875 .....	11,000	174,562	...	185,562	.....	.....	.....	199,982 6 7
1876 .....	.....	466,793	...	466,793	.....	.....	.....	129,803 3 6
1877 .....	160,000	686,645	...	846,645	.....	.....	.....	164,889 17 11
1878 .....	.....	314,981	...	314,981	.....	.....	.....	208,394 14 9
1879 .....	.....	272,053	...	272,053	.....	.....	.....	457,317 1 5
1880 .....	.....	155,530	...	155,530	.....	.....	.....	633,274 8 8
1881 .....	.....	157,512	...	157,512	.....	.....	.....	421,896 13 7
1882 .....	.....	86,780	...	86,780	.....	.....	.....	355,552 15 8
1883 .....	.....	300,891	...	300,891	.....	.....	.....	367,377 18 5
1884 .....	395,203	307,721	...	702,924	.....	.....	.....	408,436 4 6
1885 .....	.....	418,788	...	418,788	.....	.....	.....	428,831 5 8
1886 .....	143,740	240,563	...	384,303	.....	.....	.....	376,521 18 8
1887 .....	.....	177,856	...	177,856	.....	.....	.....	281,033 12 11
1888 .....	559,175	146,661	...	705,836	.....	.....	.....	259,136 13 6
1889 .....	225,800	164,908	...	390,708	.....	.....	.....	225,574 16 9
1890 .....	232,700	170,356	...	403,056	.....	.....	.....	267,801 6 6
1891 .....	.....	169,993	...	169,993	.....	.....	.....	334,253 7 6
1892 .....	65,987	186,606	...	252,593	.....	.....	.....	300,587 6 1
1893 .....	88,357	59,255	...	138,612	.....	.....	.....	222,147 16 5
1 January, 1894, to 30 June, 1895 ..	136,635	110,262	...	246,897	113,928 13 8	93,059 2 8	.....	206,987 16 4
1 July, 1895, to 30 June, 1896 .....	134,700	56,228	...	190,928	141,672 13 10	65,508 7 3	.....	207,181 1 1
1 July, 1896, to 30 June, 1897 .....	221,916	50,000	23,721	295,637	166,183 0 0	60,249 2 10	23,720 3 10	250,152 6 8
1 July, 1897, to 30 June, 1898 .....	228,210	50,000	16,587	294,797	166,516 17 8	62,597 9 5	16,586 3 0	245,700 10 1
1 July, 1898, to 30 June, 1899 .....	271,173	62,253	10,148	343,574	195,777 2 6	75,212 3 9	10,148 4 0	281,137 10 3
1 July, 1899, to 30 June, 1900 .....	206,556	54,720	17,602	278,878	231,311 16 10	65,513 7 11	17,602 15 7	314,428 0 4
1 July, 1900, to 30 June, 1901 .....	108,675	58,628	26,818	194,121	205,611 16 9	141,082 6 10	26,818 11 9	373,512 15 4
1 July, 1901, to 30 June, 1902 .....	115,250	65,381	36,937	217,568	159,906 1 0	92,943 16 11	36,936 15 3	280,786 13 2
Totals .....	£ 3,683,826	6,307,338	131,813	10,122,977	1,371,908 2 3	656,165 17 7	131,812 13 5	9,171,006 13 10



## Harbours and Rivers.

### Report of the Principal Engineer for Harbours and Rivers.

Department of Public Works, Harbours and Rivers Branch,

Sydney, 29 September, 1902.

Sir,

I have the honour to report upon the work carried out in the Harbours and Rivers Branch during the year ended 30 June, 1902.

As a result of the construction of training walls and breakwaters, and the extensive dredging operations in the various harbours and rivers along the coast, the navigation has, with a few exceptions, been satisfactorily maintained.

The continued dry weather, with the consequent lack of upland water, has, however, had its effect in a reduced scouring action in the river beds; indeed, since some of the improvement works were started, there has been little or no assistance from freshes or floods in removing deposits from the rivers. It must also be remembered that in not one river have the whole of the works designed for its improvement been yet carried out in their entirety; all the entrances must therefore be considered as being in a transition state, and likely to be seriously affected, at times, by weather conditions.

On the completion of the whole of the works comprised in each scheme, it is confidently expected that permanent deep water will be maintained on the bars and in the lower and, at present, more or less unstable portions of the rivers. As an instance of the benefit derived from the works, when brought to an advanced state, the case of the Richmond might be cited. Here the north and south breakwaters have been projected to within 1,102 feet and 827 feet respectively of the points fixed by the late Sir John Coode for their extremities, and the result has been that, while most of the river entrances have shoaled to a greater or less extent during the dry weather period, the Richmond has had a greater permanent depth on the bar than ever before, and no difficulty has been experienced day or night in navigating the entrance.

A considerable portion of the expenditure on Harbour Improvements for some years past has been on works immediately within the entrances, and in every case the results in permanently deepening the channels have been all that could reasonably be expected.

The following comparison of the condition of the lower channels before the wall works were commenced, and at the present time, may not be out of place:—

*Tweed River.*—The channel in the lower course of the river was very tortuous, and had in many places from 2 feet to 6 feet in depth of water only, so that all goods had to be transhipped at the Heads and conveyed up and down the river in flat-bottomed punts; now, however, as the result of the scour induced by the training walls, assisted by some dredging, there is a channel along the greater part of the wall with a depth varying from 10 feet to 20 feet at low tide.

*Richmond River.*—Previous to the initiation of the improvement works the entrance was in a most unsatisfactory condition. Owing to the prevalence and strength of floods and gales, and the absence of any works for training the current or fixing the entrance, the Richmond had one of the most uncertain and dangerous bars on the coast; vessels were sometimes wrecked, others temporarily stranded or bar-bound for very considerable periods, all of which acted very injuriously on the shipping trade and the development of the district. Now there is a permanent channel from 11 feet to 19 feet deep at low water, a safe entrance, and the prospect of further improvements as the breakwaters are extended.

*Clarence River.*—The inner works, though incomplete, have been entirely successful, there being now along the south training wall a depth of water at low tide of from 15 to 55 feet, where previously there was not, at any point, more than 10 feet or 11 feet. The main obstacle at the Clarence, at present, is the bar, which cannot be permanently improved until the north and south breakwaters are constructed.

*Bellinger River.*—This river is different from most others on the coast in not having a rocky headland at either side of its entrance, the nearest rocks being about 1 mile to the southward. Owing to the unstable nature of the shore through which the river discharges, the entrance, previous to the construction of any works, was constantly shifting north and south along the coast up to half mile each way, according to weather conditions. In addition to this, the waters of the two arms, coming into conflict with each other near the entrance, caused the formation of extensive sandbanks, which were, doubtless, augmented by material washed into the entrance by heavy seas. In the channel there were long lengths with less than 5 feet of water. So far as the walls have been constructed the results have been satisfactory, the entrance has been fixed, and good water maintained along the greater portion of the southern wall; a permanent safe entrance cannot, of course, be expected, until the breakwaters have been built.

*Nambucca River.*—The necessity for improvement works was to be seen in the number of vessels which were constantly being bar-bound, often for very long periods. Both the bar and the flats inside constantly shifted, seldom remaining the same for more than two or three months at a time, the depth on the bar very often being as little as from 3 feet to 5 feet at low water, and, in the inner channels, 2 or 3 feet, for considerable distances. The channel along the concave side of the north-western wall has not yet been opened up by the dredge, but the effect of the north training wall has been to create and maintain a fairly good channel along its southern side, and straight out over the bar, the depth on which averages about 7 feet at low water.

*Macleay River.*—Previous to the commencement of the works the entrance at Grassy Head was used, but at the new entrance, through which the shipping now passes, there is now a depth along the northern concave training wall, and inner portion of the southern wall, of from 16 feet to 28 feet of water, which has been brought about partly by dredging and partly by scour, but which is now maintained by the scouring action alone.

Hastings



*Hastings River.*—The original survey shows the depth in the channel near, where the southern training wall (the only one yet constructed) now stands, to be from 5 feet to 8 feet. During the progress of the works, and since, there has been maintained a much greater depth, along the northern side of the wall, than before.

*Camden Haven.*—The entrance to Camden Haven is by a tortuous and uncertain channel; within the entrance there is a large bight, in which are numerous sandbanks dividing the waters into a number of channels, the one previously used for navigation purposes having a minimum depth of about 7 feet. The depth between the two training walls which have been constructed is now from 7 feet to 11 feet. As in the cases of other rivers the obstacle to navigation is at the sea end of the works, where the extension of the walls is essential.

*Manning River.*—There is no outer headland to the Manning entrance, the result being that the bar was one of the worst on the coast, as proved by the number of wrecks—it constantly shifted its position, and the changes both in depth and position took place very rapidly. The wall constructed has fixed the entrance and improved the channel, so that, with the exception of the "cross-over" near the upper end of the works, there is from 12 feet to 30 feet of water along the greater portion of the wall.

*Newcastle Harbour.*—The effect of the improvement works at this harbour is so well known that to more than mention them is unnecessary.

*Bateman's Bay.*—Owing to the great width of the bay, the velocity of the river current on entering the bay is soon reduced, and its scouring power lost, the result being the existence of a bar, the water on which periodically became so shoal as to necessitate extensive dredging. The scour induced by the concave training wall has so improved the depth that there is 12 feet to 16 feet at low tide along the whole length of the wall constructed, where previously there was not more than 9 feet to 11 feet.

*Moruya River.*—Previous to the commencement of the improvement works inside the entrance, the two worst parts of the river were a length of about  $1\frac{1}{2}$  mile immediately inside the entrance, and another  $1\frac{1}{4}$  mile extending down stream from the township. This latter portion has been improved by the construction of a training wall, and the dredging of a channel along its concave side. This work has been entirely successful, there being good water throughout its whole length, so that steamers are now able to discharge their cargoes at the town wharf, instead of having to lighter them from the Heads, as previously. A length of 2,841 feet of the lower wall was also constructed, resulting in an increased scour, and consequent deep channel.

In connection with the dredging operations during the year, the valuable work done by the light-draft self-propelled hopper dredge "Antleon" should be noted. The indifferent state of some of the river entrances made the calls for the services of this dredge so great that it was impossible for her to properly complete one work before she was withdrawn to another. In giving rapid relief at the entrances excellent work has been done, and the addition of one or more dredges of her type to our fleet cannot be too strongly urged.

The various harbour and river improvement works carried out during the year will now be described in detail in their order along the coast, commencing at the north. The work in connection with lighthouses, Fitzroy dockyard, dredge service will then be dealt with.

## Twiced River.

*Harbour Works.*—The stone for the construction of the breakwaters and training wall has been obtained from the quarry opened at Point Danger, where blocks of columnar basalt can be obtained of almost any size. During the year 79,503 tons of stone were quarried, the cost on the trucks ready for hauling to the walls being £5,374 1s. 5d., or 16'22d. per ton. The total output of stone from this quarry to 30th June amounted to 101,513 tons, of which 82,088 tons were deposited in the walls, and 19,425 tons in the railway approach to the western or No. 2 wall. A second 10-ton locomotive crane has been added to the quarrying plant, and will, when erected, greatly facilitate the work there.

*Northern Breakwater.*—No work was done on this breakwater after the end of December; the stone deposited up to that date from 1st July was 47,607 tons, extending the wall 383 feet, at a cost of £3,477 14s. 1d., or 17'53d. per ton. The total length of the breakwater is 860 feet and contains 69,617 tons of stone, the cost of which was £7,790 5s. 1d., or 26'85d. per ton.

*Southern Breakwater.*—The stone for the southern breakwater is conveyed by railway to the western wall, where a suitable wharf and 10-ton steam derrick crane provide the means for depositing the stone on punts for shipment to the southern side of river; similar appliances are there provided for lifting the stone on to the trucks which convey it to the breakwater. By May, the bridge and embanked approach to the western wall, also the wharves and cranes on either side of the river had been erected, and between that date and 30th June, 3,028 tons of stone were towed across and deposited in place, extending the breakwater 350 feet from the southern end of the crane wharf. The expenditure during the year was £3,545 13s. 1d., or a total to date of £6,236 14s. 11d.

*Western, or No. 2 Wall.*—The lower portion of this wall was constructed some years back with stone obtained from the quarry at Cave Point; it has now been raised to a height of 11 feet above low water, and top width of 10 feet for a length of 1,260 feet from the southern end of the crane wharf. The cost of the 9,443 tons of Point Danger stone used was £1,062 14s. 7d. Up to date, 22,199 tons have been deposited in this wall at a cost of £3,140 15s. 6d., or 34'04d. per ton. The above works have been carried out by day labour, the average number of men employed being sixty-one and of horses six.

*State of Entrance.*—Throughout the year the bar has carried a good navigable depth (about 10 feet at high water), but the west crossing, near the mouth of Terranora Creek, shoaled during the past half year. Arrangements have been made for the blasting and removal of the indurated sand-patch near the entrance.

*Lavender Creek Improvements.*—Owing to the very insanitary condition of the portion of Lavender Creek, which runs through the township of Murwillumbah, a scheme was adopted for its improvement, consisting of the diversion of the creek at a point about 2,400 feet above the original outlet, and filling the old course of the creek with material dredged from the river, and constructing new concrete and earth drains to convey the drainage to the river. The work was commenced in August, and by December the cutting of the new creek outlet, and the bridge spanning it, were completed, the expenditure amounting to £767 11s. 3d. Owing to delay in obtaining an indemnity against damage or loss in carrying out the works from the owners of properties adjoining the creek, and the necessity for resuming certain lands, the filling in of the creek was not commenced up to 30th June, 1902.

*Dredging*



*Dredging.*—The sand-pump dredge "Actor" was employed cutting a channel through Condong Flats. This channel has now an average depth of 10 feet at low water by a width of 100 feet for a distance of  $1\frac{1}{4}$  miles, and a width of 50 feet through the remainder of the flat. During the year 258,222 tons of sand were raised at a cost of 2'49d. per ton.

The grab-dredge "Alpha" was engaged in Terranora Creek throughout the year, and has practically completed the necessary deepening there; 64,732 tons were raised at a cost of 5'92d. per ton.

The sand-pump dredge "Dorus" arrived from the Macleay River on 19th June, and on 26th of the same month commenced dredging new channel in the main river, from abreast Terranora Creek towards the crane wharf at the western wall, 15,800 tons being lifted at a cost of 2'76d. per ton.

*Terranora Creek.*—A shoal patch in the main channel through the Broadwater was deepened by blasting the shale (of which it was composed) at a cost of £86 11s., the material being removed by the dredge "Alpha." The creek has now a navigable depth of 6 feet at low water, from the Dry Dock to Bingham Point.

*Wharves.*—A wharf was built at Condong, by contract, at a cost of £225 1s. 4d., and wharves are in course of construction at Murwillumbah, South Murwillumbah, and near the Dry Dock at Terranora.

Minor repairs were effected to the wharves at Cudgen, Murwillumbah, Tumbulgum, and Tweed Heads, at a total cost of £157 1s. 9d.

*Snagging.*—A total of £130 9s. 3d. was expended in the snagging and clearing of the north arm of the Tweed River, also Stott's Creek, and Condong Creek and Flat.

*Durunbar Swamp.*—A drainage cutting was made through this swamp to Tedday's Creek, at a cost of £1,969 14s. 11d., and Tedday's Creek was cleared with an expenditure of £61 13s. 8d. The whole area from Durunbar to Condong has now been drained (partly by private owners) and land previously worthless, is now selling for £5 per acre.

### Brunswick River.

Repairs were effected to the Signal Master's cottage, and the signal mast removed to Tweed Heads, at a cost of £28 15s. 11d.

### Byron Bay.

*Lighthouse at Cape Byron.*—See under heading "Lighthouses."

*Jetty, Byron Bay.*—New landing steps were erected on the eastern side of jetty, an additional 800-gallon tank supplied for steam crane, and the jetty kept in a state of repair.

### Richmond River.

*Harbour Works.*—The carrying out of the scheme of improvements proposed by the late Sir John Coode has been continued during the year by day labour, the principal works being the extension of the north and south breakwaters, and middle training wall. The average number of men employed throughout the year was 159.

*Riley's Hill Quarry.*—The whole of the stone for the harbour works has been obtained at the Riley's Hill quarry, some 19 miles up stream from the entrance. The total quantity of stone quarried and loaded into punts during the year for the north and south breakwaters, and middle training wall, together with hand stone and ballast, for various other works, amounted to 116,661 tons, and cost on the average 28'57d. per ton. In addition to the above, some 8,400 tons of spoil were supplied to sundry places. The cost of towing the stone from Riley's Hill quarry to the works at the river entrance was £4,569 2s. 11d. for the year, or 9'42d. per ton.

Owing to the outer ends of the breakwaters getting into positions more exposed to the heavy seas than previously, the size of the stones used in their construction has had to be increased, and as the present quarry is rapidly becoming exhausted, some resource has to be exercised to obtain suitable stone of the required size. It is proposed, however, to open a new quarry at the back of the Riley's Hill Dry Dock, where there are indications of the existence of good stone.

*North Breakwater.*—During the year 63,320 tons of stone were hauled by locomotive and tipped into the breakwater, which was extended 438 feet, the total length being 3,398 feet beyond the original high-water mark, or 898 feet from the end of the first section; the cost of hauling and tipping for the year being £3,578 2s. 8d., or 13'56d. per ton, and the cost of the stone in place, including quarrying, towing, hauling and tipping 51'55d. per ton. On three occasions during the year, the rough weather washed back the tip-head and flattened the side-slopes, the total length re-built being 31 feet. No stones under one ton in weight are now being allowed in the work.

*South Breakwater.*—The quantity of stone hauled by horses, and deposited in place was 45,994 tons, extending the breakwater 186 feet, or to a distance of 7,728 feet from original high-water mark, or 1,173 feet past the first section, the cost of hauling and tipping for the year being £3,469 13s. 2d., or 18'10d. per ton, and the cost of the stone in place including quarrying, towing, hauling and tipping 56'09d. per ton. As in the case of the north breakwater, this wall was also flattened and shortened by the heavy seas, and a total of 276 feet has had to be raised to the proper level. Since April, the weight of the stones used has been increased, the minimum being 4 tons.

*Middle Wall.*—The extension of this wall was commenced in April, with a view to improving the scour in the new channel to the north of the wall. Stones too small for the two breakwaters are being used, the work being carried out by back-handing the stones from the southern breakwater on a down-grade line of 1 in 40; 318 feet of wall of an average height of 15 feet above low-water have been thus constructed. The eastern end of wall was also extended 150 feet by depositing stone in place from the punts. The total quantity of stone deposited in the wall during the year was 3,869 tons at a cost, including all expenses, of £740 4s. 8d., or 45'92d. per ton.

*Dock at Riley's Hill.*—The dock at Riley's Hill was almost finished at the end of the year, the only work remaining to be done being the concrete lining and altars at the eastern end, the erection of crane on wharf, and the installation of the duplicate pump and boiler. The dimensions of the dock are as follows:—Extreme length, 214½ feet; length of floor, 210 feet; width of entrance, 45 feet; width between copes, 53 feet; depth of water on sill at high water, S.T., 10 feet. The dock is excavated out of the



the rock, walls where necessary being of concrete; entrance gates are of timber, zinc sheathed. The pumping machinery consists of two 8-inch centrifugal pumps, each capable of discharging 1,000 gallons per minute, and, together, of emptying the dock in seven hours. The dock wharf is 56 feet x 20 feet, provided with a 5-ton hand-power derrick crane.

*Dredging.*—Valuable work has been done by the dredges "Alcides" and "Dictys" in cutting the new channel through the indurated sand-patch on the northern side of the middle wall. This channel, which is 200 feet wide, is so far complete that it has been in use since 10th June; the ruling depth is 11 feet at low water, but in a few shoal places there is only 9 feet; these, however, will shortly be removed. The greater part of the hard material removed by the "Alcides" was first broken up by the diver with dynamite, the total amount of material lifted by this dredge during the year being 47,760 tons, at a cost of 19 78d. per ton. The material has been deposited at Oyster Point and on the south side of the middle wall; more recently it has been pumped into the Ballina swamps by the dredge "Dictys." This latter dredge, which has cutting gear at the end of the suction pipe, specially designed to deal with stiff clay, indurated sand, &c., also worked at the new channel until April, excavating and discharging over the middle wall 13,800 cubic yards of indurated sand, besides a quantity of loose sand. From 1st May to 30th June she was engaged filling up Ballina swamps, and has pumped 8,300 tons of silt ashore. Altogether, the "Dictys" raised 32,420 tons of material, the average cost being 26 71d. per ton.

The grab-dredge "Zeta" worked from 5th July to 2nd October at McPherson's Flat, lifting 7,910 tons of clay, sand, and stones, after which she was employed as follows:—At entrance to Riley's Hill Dock, lifting 1,162 tons of stone and mud, drawing piles, and removing coffer-dam; at Ballina, deepening dock and in front of wharf, 2,160 tons; and between Wardell and Broadwater. After an overhaul of her machinery she lifted 4,010 tons of stiff clay at Buckendoon and Swan Bay. The total quantity raised for the year was 27,842 tons, at a cost of 10 78d. per ton. The grab-dredge "Mu" worked in the South Arm, Cameron Spit, Tomki, Oakey Creek, and Blanche's Spit, and lifted, during the year, 34,030 tons, at a cost of 6 23d. per ton, the material being landed on top of banks by means of buckets running on a wire rope.

The grab-dredge "Lambda" was employed in Leycester and Terrania Creeks, the quantity of material lifted being 22,109 tons, costing 5 90d. per ton. A number of snags were also removed by this dredge. Teven Creek and North Creek Canal were deepened by punt No. 52; 27,921 tons of material, principally gravel, being landed on the banks.

No. 1 punt, with drag-dredging gear, worked in Leycester and Bungawalbin Creeks, and removed 6,932 cubic yards of sand, clay, and snags.

*Snagging.*—The snagging punt, No. 2, was employed in North Arm, and Bungawalbin Creek during the year.

*Foreshore Reclamation, Ballina.*—Hand-stone, from Riley's Hill Quarry, has been deposited on the line of reclamation wall, in front of the several streets, preparatory to the frontages to private property being dealt with.

*General.*—The wharf at Cherry-street, Ballina, constructed by day labour, was practically finished. Repairs to North Woodburn wharf and shed were effected, and one of the backstays of the south wall crane wharf re-braced, and three additional piles driven. Minor repairs were also carried out at the following wharfs:—Tatham, North and South Woodburn, Tuckey, Swan Bay, East and South Gundarimba, McGuinis'-lane, Wardell, Broadwater, East Coraki, North Codrington, Wyrallah, South Lismore, Bungawalbin, and Steve Kings. A small landing place for ferry steamers was erected at Bungawalbin. The drain from Pimlico to Emigrant Creek was completed by contractors on 31st March. Various surveys were made during the year in connection with harbour and other works.

### Clarence River.

*Harbour Works.*—The principal work carried out at the Clarence River has been the continuation of the Iluka training-wall, in connection with the improvements to the entrance. The work is being done by day labour, the average number employed during the year being 220.

*Woodford Island Quarry.*—The whole of the stone used during the year, in the construction of the training-wall, was obtained from the Woodford Island Quarry, which is situated some 17 miles up the river, and from whence the stone is towed in punts to the works at the entrance. During the year, 139,986 tons were quarried and loaded into punts, 138,573 tons of which were used in the Iluka training-wall, 1,395 tons in the Goodwood Island wall, and 18 tons for repairs to Cowper wharf approach. The stone cost 40 04d. per ton loaded into punts at the quarry, as against 41 54d. for the previous returns from this quarry. As nearly half the stone had to be spalled small enough to handle, and two of the cranes in use could only lift up to 4 tons, and the other two 9 and 10 tons respectively, it was necessary to break the stone up very small, which added greatly to the cost of both quarrying and loading. The quarry was enclosed with a two-railed fence, and a drain cut from the quarry to the river down to half-tide level so as to allow the quarry to be worked to as low a level as possible. The water supply gave out in January, since which the water for use on the works has been punted from Iluka.

*Iluka Training-wall.*—The construction of this wall was continued throughout the year, and 138,573 tons of stone were deposited, 63,950 tons by hand and 74,623 tons by crane. This wall was built by hand up to high-water mark between chainages from Trigonometrical Station 5:—

400 feet to	500 feet	...	...	...	...	...	...	...	= 100 feet
4,315	" 4,660	"	...	...	...	...	...	...	= 345 "
5,335	" 6,269	"	...	...	...	...	...	...	= 934 "
6,785	" 6,935	"	...	...	...	...	...	...	= 150 "
Or a total length of									1,529 "

Also, from high-water mark to 6 feet above from 400 feet to 741 feet or 341 feet, and from bottom to 3 feet above high-water mark from 294 feet to 775 feet on line from Trigonometrical Station 7 towards Trigonometrical Station 5, or 481 feet. The wall was completed by the crane from chainage 741 feet to 2,595 feet, and from 3,823 feet to 6,255 feet, or a total of 4,286 feet. The cost of stone in place in the wall was 52 13d. per ton.

Goodwood



*Goodwood Island Training wall.*—1,395 tons of stone were placed in this wall to repair subsidences.

*Angourie Quarry Line.*—324 pairs of 24-foot rails and the corresponding number of sleepers were picked up from the old Angourie Quarry line, and stacked on the Freeburn Island wharf for use on the training-walls and in quarry as required.

*Dredging.*—In August-September, and again in April, May, and June, the sand-pump hopper-dredge "Antleon" was engaged deepening the south and east channels, the total quantity removed being 72,250 tons, at a cost of 4'53d. per ton.

The ladder-dredge "Minos" lifted 218,680 tons of mud and sand from the crossing above Lawrence, at a cost of 3'87d. per ton, cutting a channel 150 feet wide, 4,616 feet long, with an average depth of 16 feet at low water.

The grab-dredge "Omega" lifted 5,340 tons of sand in Sportsman's Creek, and 35,325 tons in King's Creek, excavating 4,470 feet of channel, 48 feet wide, to a depth of 5 feet at low water. She also lifted 235 tons of mud and blasted rock at Macdonald's Rocks, South Arm, and Ashby Dock. The total quantity raised by "Omega" was 40,900 tons, at a cost of 4'00d. per ton.

*Alumny Creek.*—The water hyacinths which had grown up again after the creek had been cleared during the previous year were removed from the whole length of the creek at a cost of £106 14s. 2d. The work of clearing out the reeds and other obstructions from the bed of the creek was carried out at a cost of £103 18s., preparatory to the deepening of the creek when the necessary legal documents have been signed by the land-holders.

*Cowan Creek, South Grafton.*—A sum of money was granted to the South Grafton Municipal Council, who cleared this creek of the obstructions to the tidal flow, at a cost of £20, so as to remove the nuisance caused by the stagnant water.

*McDonald's, South Arm.*—The cutting of a channel was started by the dredge "Omega," and about 190 tons of mud and soft rock were placed against the bank.

*Wharfs.*—Additions and repairs were effected to the wharfs at Cowper, Iluka (Fish Wharf), Yamba, South and North Grafton, Upper Southgate, Copmanhurst, and Maclean, at a total cost of £753 15s. 5d.

*Borings at Entrance, &c.*—At the request of the Public Works Committee, a number of borings were put down on the line of the proposed Southern Breakwater and in the channel, to ascertain the depth to the rock surface. This and other survey work cost £158 9s. 11d.

*Ashby Dock.*—The dry dock was occupied for 240 days during the year, as under:—

	Dockings.	Days.
Harbour Works tug, launch, and punts	14	91
Dredges, tug, and punts	2	17
Roads Department punts and launches	14	123
Steam-tug "Conqueror"	2	9
Total	32	240

*The Bar.*—The southern channel carried 11 ft. 6 in. at low water during July, and from 9 to 10 feet during August, and from 8 ft. 6 in. to 12 feet in September, and reduced gradually to 7 feet at the end of December, when it was closed to navigation. The eastern channel was closed till October, after the "Antleon" had worked on it, when there was 10 ft. 6 in. at low water; it was reduced to 8 ft. 6 in. in December, increased to 10 ft. 6 in. in February, but shoaled again to 9 ft. 3 in. at end of March, after which it was improved by the "Antleon" to 14 ft. 6 in. on 10th June, but had shoaled again to 10 feet by the end of the month.

*Woolgoolga and Coff's Harbour.*—Repairs to the jetties, and also to the boilers and engines of steam cranes, were carried out at a cost of £223 4s.

### Bellinger River.

*Harbour Works.*—The construction of the training-walls and breakwaters was continued under the three years' contract entered into on 19th March, 1900.

The whole of the stone used was obtained from the new quarry opened by the contractor, on Nambucca Forest Reserve, No. 111, a railway line, 1 mile long, conveying the stone to the river bank at a point some 4 miles from the entrance, and from whence it was towed in punts to the walls. The stone is paid for under two rates, viz.:—(a) Blocks, all sizes, up to half a ton in weight, 3s. per ton; and (b) blocks half a ton and upwards in weight, but 50 per cent. 5 tons and over, 4s. 6d. per ton. During the year 15,636 tons of class (a), and 21,187 tons of class (b), or a total of 36,823 tons, were deposited in the various walls at a cost of £7,112 10s. 6d. The following table shows the distribution of the stone and the lengths added to the walls:—

	Weight of stone.	Length.
South training-wall and breakwater	23,916 tons	693 feet
North training-wall	2,200 "	raised only
Inner training-wall, west	5,536 "	1,260 feet
Inner training-wall, east	2,196 "	220 "
Barrier Bank, North Arm	190 "	raised only
North training-wall, extension...	2,785 "	890 feet
Total	36,823 "	3,063 "

The Bellinger River entrance, together with others on the coast, has suffered through the continued dry weather and consequent lack of upland water; the depth on the bar has varied during the year, the maximum being 8 feet at low water, and the average about 5½ feet. At present it is 5 feet with the channel straight out, but inclined to the north.

*Wharfs, &c.*—The approach to the Bellinger Heads wharf was raised and gravelled at a cost of £26, and minor repairs effected to the wharf, which cost £2. A drain was cut at the Bellinger Heads new Public School, at a cost of £9 15s.

*Dredging.*



*Dredging.*—The grab-dredge "Beta" was engaged at the following places, viz.:—Bennet's, McChrystal's, Woods', McGeary's, and Spillett's Flats on the North Arm of the river, and at Bourke's and Martell's Flats on the South Arm, and cut a total length of about 3,400 feet of channel 40 feet wide, raising 28,930 tons of material, at a cost of 5·86d. per ton. The sand-pump dredge "Theta" was employed in various places in the North and South Arms near their junction, cutting about 5,200 feet of channel, removing 189,492 tons of sand, &c., at a cost of 2·45d. per ton. A favourable opportunity offering, the bar hopper-dredge "Antleon" was sent to work at the Bellinger River entrance, but after removing 9,750 tons, at a cost of 10·91d. per ton, it became impracticable to continue owing to the tortuous channel in which the vessel was required to work.

### Nambucca River.

The works authorised by the Act of 1899, for the improvement of the entrance, are the following:—

- Construction of a north-western wall.
- Extension of northern training-wall.
- Construction of northern breakwater.
- Diverting Warrell Creek.

On 12th October, 1900, a three years' contract was let for the construction of the walls in the above works. The whole of the stone used during the year was obtained from the quarry on Reserve No. 16, near the root of the northern training-wall, opened by the contractors under a previous contract. The output for the past twelve months has been considerably above the stipulated quantity of 3,000 tons per month, notwithstanding the pooriness of the quarry and the immense amount of material which has to be run to waste. The stone is of two classes, viz.:—(a) Blocks under half ton in weight, but one-half 56 lb. and over; and (b) blocks half ton and over in weight, but one-half 4 tons and over; and is paid for at the following rates:—(a) tipped in northern training-wall, 3s. 3d. per ton; tipped in north-western training-wall, 3s. 3d. per ton; and discharged direct from punts into north-western and Warrell Creek walls, 2s. 9d. per ton; and (b) tipped into northern breakwater, 3s. 8d. per ton. The output of stone for the year has been:—

To northern training-wall and breakwater (b) ... ..	14,188 tons
(a) ... ..	108 "
	<hr/> 14,296 tons
To north-western training-wall (a) ... ..	26,037 "
	<hr/>
Total ... ..	40,333 tons

at a cost of £6,604 3s. 9d. The advance of the north wall and breakwater for the year was 176 feet, the total length now being 2,350 feet; while the north-western wall was increased by 2,264 feet, the total length being 3,772 feet. Owing to the hard nature of the material encountered where Warrell Creek was to be diverted, it was decided to allow that portion of the work to remain in abeyance for the present.

The depth of water on the bar has varied from 5 feet to 8½ feet at low tide during the year, the average being 6¾ feet. The present depth is 6 feet, with the channel straight out.

*Wharfs, &c.*—The new wharf and landing-stage at Macksville were completed at a cost of £391 18s. 8d., of which £144 10s. 2d. was spent during the previous year. The removal of the goods shed from the old wharf at Bowraville, and re-erection of the same on the wharf at Dever's, and cutting of approach to latter wharf, was completed at a total cost of £222 18s. 8d., of which £175 13s. 2d. was returned last year. Minor repairs to the Bowra and Macksville wharfs were effected at a cost of £5 8s.

*Dredging.*—The principal work done by the sand-pump dredge "Alesus" was the opening of the channel along the concave side of the north-western wall, and which (when once the river currents can operate) should be maintained at a navigable depth without any assistance from the dredge. Other work done was the deepening of the channel from Eichman's to the Government Wharf, and a little at the site of the Warrell Creek diversion. The total length of channel excavated was about 3,460 feet, the material lifted amounting to 261,629 tons, and costing 2·77d. per ton. The grab-dredge "Iota" was engaged in Bowra Arm cutting through various flats; she raised during the year 40,945 tons of material, at a cost of 4·05d. per ton, the length of channel excavated being about 4,800 feet.

### Macleay River.

*Harbour Works.*—The works under construction at the mouth of the Macleay River are those authorised by the Act of 1899, and consist of portions of the training-walls and breakwaters on either side of the entrance. The whole of the stone used in the construction of the walls has been obtained from the quarries opened by the Department about three-quarters of a mile south of the works on land resumed for the purpose, the stone being conveyed on trucks to the walls on the southern side of the entrance, and punted and then trucked on the northern side.

Fair progress was made during the year with the works, which are being carried out by day labour, the average number of men employed being 59.

The output of stone from the quarries was 58,764 tons, of which 56,813 tons were deposited in the walls, extending them as follows:—Southern wall, 20,862 tons, extension 200 feet, total length, 2,860 feet; northern wall, 33,525 tons, extension 771 feet, total length, wall, 1,582 feet; lining bank, 3,950 feet; eastern wall, 2,330 tons, total length, 2,360 feet; Shark Island, 96 tons, total length, 600 feet. The remaining 1,951 tons quarried were used for roads. The cost for the year was £7,967 5s. 10d., equal to 32·54d. per ton. The quarry has worked well up to the present, but is given out at the north-eastern corner, and crane roads will shortly have to be shifted.

Two 60-ton barges, to be used in connection with the harbour works, were built by contract, at a cost of £763 18s. 6d.

The channel has kept good water, nearly 20 feet, from near top of Shark Island to the wharf; below wreck of "Coraki" there has always been nearly 40 feet. The bar has varied during the year from 6 feet to 9½ feet at low water, the average being 7 feet; the present depth is 6½ feet. A second channel



channel has opened round the end of north wall during the last three months, carrying 18 feet at low water, near the end of wall, but it is not navigable, only having 3 feet at low water in places. The shoal at Shark Island was reduced to 5 feet at low water, to improve which the dredge "Antleon" worked for three weeks, and now the "Fitzroy" is cutting through 150 feet wide by 11 feet deep at low water.

*Wharfs.*—Repairs were effected to the Stewarts' Point Wharf, at a cost of £182 2s. 10d., of which £167 12s. 10d. was returned last year. An amount of £92 16s. was expended on the erection of a wharf, &c., at Rainbow Reach; and a further sum of £153 18s. 3d. on repairs to various wharfs on the Macleay River.

*Dredging.*—The sand-pump dredge "Antleon" was engaged on the bar, and at the Shark Island Shoal, on two occasions, between July and November, lifting 99,050 tons of sand, at a cost of 3·52d. per ton. The dredge "Dorus" also worked at the Shark Island Shoal during May and June, raising 35,500 tons, at a cost of 4·01d. per ton.

The ladder-dredge "Fitzroy" was employed in cutting channels through shoals, deepening in front of wharfs, &c., dredging 200,480 tons, the cost being 4·62d. per ton.

*Kempsey Dock.*—Several punts were overhauled, and the s.s. "Phoenix" hull inspected at this dock during the year.

### Hastings River.

*Harbour Works.*—The only work authorised by the Act of 1899 is the extension of the southern training wall to a distance of 2,700 ft. from the shore. The work done during the year was the completion of a contract entered into on 5th March, 1901, the price paid being 3s. 8d. per ton for stone 1 cwt. and upwards in weight, but half over 1 ton, deposited in the wall. The stone was obtained from quarries opened by the contractor, about 1 mile distant, from which it was conveyed by rail to the wall and tipped. Work was suspended on 31st October, the output of stone for four months being 17,313 tons, extending the wall 267 ft., or to a total distance of 2,596 ft. Very little subsidence has taken place in the wall since the works were stopped eight months back.

The depth on the bar has varied from 5½ feet to 8 feet at low water, the average being 7 feet; the present depth is 6½ feet, and channel almost straight out.

*Wharfs.*—Repairs were carried out by contract to Morton's Creek Wharf, at a cost of £45 15s., and by day labour to Port Macquarie wharf, at a cost of £5 2s. 10d.

*Dredging.*—The combined grab and sand-pump "Eta" was engaged cutting channels at various places in the main river, lifting 61,494 tons of material, at a cost of 5·84d. per ton. From January 6th to March 10th, the dredge was under repairs, receiving a thorough overhaul.

### Camden Haven.

*Harbour Works.*—The scheme of improvements at Camden Haven Inlet comprises (a) stone training walls extending in a north-easterly direction from the deeper and more stable portion of the river to the ocean, thus cutting off the whole of the large bight and giving a direct course to the sea, and (b) the cutting of a channel through the tongue of land projecting from the northern shore. The inner portions of the walls and the cutting were well advanced at the end of last year; the works in progress at that time were suspended in September, 1901, and were only recommenced on 21st June, 1902. The whole of the stone for these walls was obtained from the Government quarry, about 3 miles up the river. The stone is lowered from the quarry down an incline on trucks to the wharf and conveyed thence in punts to the walls and discharged in place. The output of stone for the period the works were under construction was 4,970 tons, at a cost of £1,192 6s. 7d., or 57·58d. per ton. Of this quantity, 1,030 tons were discharged in the south wall, 560 tons in the north wall, and 3,380 tons in Payne's Point Wall. The work was carried out by day labour, the average number of men employed being 31.

The depth on the bar has varied from 4½ feet to 7½ feet at low water, the average being 5½ feet; the present depth is 4½ feet, but owing to the unfinished condition of Payne's Point Wall when work was suspended a shoal formed at the end of the wall, having only 1½ feet of water at low tide; as a consequence the traffic has been seriously inconvenienced.

*Wharf.*—A wharf and approach were constructed by contract at Laurieton, at a cost of £369, and a landing stage added by day labour for £33 0s. 3d.

*Dredging.*—The combined sand-pump and grab-dredge "Delta" was engaged cutting channels at Green's Point Crossing, between training walls and Gogley's Flat, removing 113,780 tons of sand, &c., at a cost of 3·52d. per ton.

The bar hopper-dredge "Antleon" removed 6,000 tons from the entrance, at a cost of 10·22d. per ton.

### Manning River.

*Harbour Works.*—The scheme of improvements which has been under construction during the year is that proposed by the late Sir John Coode, with some modifications. The works authorised comprise a training wall on either side of the river and portions of the northern and southern breakwaters. The whole of the stone for the works has been obtained from the Government quarry at Crowdy Head, about 5 miles distant, whence it has been conveyed by rail to the northern breakwater and training wall and tipped. During the year good progress was made with the works, which are now being carried out by day labour. The average number of men employed was seventy-two.

19,331 tons were tipped into the northern breakwater, at a cost of 4·3d. per ton, extending it 188 feet. 37,745 tons were deposited in the northern training wall, the extension being 3,909 feet. The southern breakwater and southern training wall are also to be constructed with stone from Crowdy Head; and to this end a loading wharf, with a 10-ton steam derrick crane, will be provided at each side of the river, and the stone conveyed across in punts. During the year the wharf and crane for the northern side were completed. The contract for the construction of the three wooden barges, to be used as mentioned above, was completed, the expenditure for the year being £2,130 6s. 6d.

*Wharfs.*—A wharf and approach were constructed at Lansdowne, at a cost of £338 10s., and repairs effected to the Cundletown Wharf at £28 15s. 5d., and to the Glenthorn Wharf at £106 16s. 8d.



*Dredging.*—The bar hopper-dredge "Antleon" removed 69,250 tons of sand from the entrance, at a cost of 6.11d. per ton.

The "Pluto" was employed deepening various channels in the river during the year, and raised 132,340 tons of spoil, at a cost of 6.78d. per ton.

### Cape Hawke Harbour.

*Harbour Works.*—The scheme of improvements proposed for Cape Hawke Harbour consists of a northern and a southern training wall and breakwater, and a light training wall extending from near the entrance up stream past Cockatoo Island and the Wollomba River junction to the western end of Wallis Island. The only portion of the scheme undertaken up to the present has been the southern breakwater, and a length of training wall extending from the root of the breakwater along the southern shore. The whole of the stone for the work, which has been carried out under contract, has been obtained from a quarry opened up by the contractors at the head, about 1 mile south of the entrance. This is the only stone that can be got within a reasonable distance. It is, however, of inferior quality, and so situated as to necessitate very extensive stripping. The prices paid were, as a consequence, comparatively high, being 4s. 3½d. for stone 1 ton and upwards in weight, and 2s. 9d. per ton for stone 1 cwt. to 1 ton and the ballast on roads. The works were stopped in December, 1901, up to which time—from 1st July—the contractor tipped 29,353 tons of stone in the breakwater, extending it 86 feet, or a total distance of 1,637 feet, while 6,214 tons were deposited in the training wall, the extension being 420 feet. The expenditure for the year was £3,171 12s. 8d.

*Dredging.*—The dredge "Kappa" was employed till November raising 5,845 tons of blasted rock and clay from the Channel, at Failford, costing 27.06d. per ton. She was then removed to the Hawkesbury River, and the sand-pump dredge "Sigma" was sent to cut the Cockatoo Channel, &c., and dredged 37,791 tons, at a cost of 7.21d. per ton.

### Port Stephens.

Snagging was carried out in the Myall River, at a cost of £199 1s. 11d., and a road approach and culvert at Bungwall Wharf, at a cost of £51 15s. 6d.

*Dredging.*—The dredge "Rho" worked in Myall River deepening various channels, and raised 204,085 tons of silt, at a cost of 1.99d. per ton.

### Newcastle Harbour.

*Entrance Works.*—The works in course of construction at the entrance to Newcastle Harbour are authorised by the Newcastle Harbour Improvement Act of 1895, and consist of a northern breakwater, a southern guide wall, and repairs and extension to the existing southern breakwater. The stone for the works is obtained from the quarry opened by the Government near Waratah, about 5 miles distant, whence it is conveyed by rail to the southern breakwater and guide wall, or to the Bullock Island Wharf for the northern breakwater; the stone for this last work is deposited in punts at the wharf by a 30-ton steam derrick crane, towed across the harbour to a wharf at Stockton where it is lifted into the trucks which convey it to the breakwater.

*Northern Breakwater.*—During the year this breakwater was extended 230 feet, the total length being now 1,568 feet 9 inches. The stone used amounted to 38,698 tons, and cost £8,821 6s. 6d., or 54.5d. per ton.

*Southern Breakwater.*—During the severe gale on 2nd July, 1901, this breakwater was washed back 63 feet, and again between 29th April and 2nd May, 90 feet. These washaways have been made good and an additional length of 30 feet 3 inches added, making the total 4,419 feet. The quantity of stone tipped was 26,965 tons, and cost £5,189 12s., or 46.2d. per ton.

*Southern Guide Wall.*—This wall was extended 26 feet 4 inches up to September, when the length originally proposed, 1,000 feet, was reached, and work stopped. The stone tipped during the year was 2,200 tons, at a cost of £328 16s. 6d., or 36d. per ton.

The above works at the entrance have been carried out by day labour, the average number of men employed during the year being seventy-nine.

*Reclamations, Dredging, &c.*—11,143 tons of small stone were received from the Waratah quarry and used in the construction of the retaining wall round the new island (Walsh's) being reclaimed in the North Harbour. A further 4,781 tons were used in the reclamation wall at the back of jetties Nos. 3, 4, and 5 at Stockton.

The sand-pump dredge "Castor," stationed at the western side of Walsh's Island, pumped ashore all the silt brought from the various ladder dredges, and disposed of 663,160 tons, at a cost of 1.71 d. per ton. The total expenditure for the year on the North Harbour Reclamation was £4,000. It having been proved cheaper to use the material raised by the dredge in Newcastle Harbour in reclaiming low-lying lands than to send it to sea, an amount has been provided annually for the work. When completed the above reclamation at Walsh's Island will have an area of some 569 acres of useful land, suitable for grazing and other purposes. At the Bullock Island jetties 87,595 tons of ballast were discharged from 172 vessels and used in reclaiming about 5 acres of land to the north of Cowper-street. 51,886 tons were discharged from 108 vessels at the Stockton jetties and used partly to cover the sand pumped ashore by the suction dredges and partly for reclaiming low-lying land in the vicinity of Fullerton-street. A number of privately-owned allotments were filled in, the owners paying 2d. per ton for the ballast. 5,280 tons of stone were obtained from vessels, and 2,230 tons sent in from the quarry and used for backing, and 11,789 tons of sand and loam were discharged from vessels and used for filling and blinding at the Crane Wharf, Ballast Jetties, and Mooring Dolphins in the Basin—the average price for the stone being 10d. per ton. The total quantity of ballast discharged ashore during the year was 156,650 tons from 280 vessels, or an average of 550 tons per vessel. The expenditure on the ballast appliances was £1,460 12s. 6d.

The sand-pump dredge "Juno" was employed up to the end of January and in June deepening the Basin at Bullock Island, using the sand raised in reclaiming low-lying land at the back of the Crane Wharf. During this period she raised 204,520 tons at a cost of 5.99d. per ton. From February till



till May the "Juno" was under extensive repairs, and the "Neptune" took up the work of deepening the Basin, raising 42,650 tons of sand, at a cost of 6'74d. per ton. During the year about 4½ acres of land were thus reclaimed.

The rock-drill "Cliona" was put in commission, and in February started work at the entrance to the Basin. 6,330 tons of rock were broken up at a cost of £778 3s. 1d., and lifted by the grab-dredge "Nu," and removed at a total cost of 4s. 8d. per ton.

The ladder-dredge "Newcastle" was engaged in maintaining deep water in the harbour, and deepening the North Channel from 27 feet to 31 feet at low water, and raised during the year 440,250 tons of mud and sand, at a cost of 5'23d. per ton.

The ladder-dredge "Samson" worked in the North Channel, Inner Basin, &c., lifting 384,850 tons of mud and sand, at a cost of 3'92d. per ton. Most of the material raised was towed to the dredge "Castor," and pumped ashore at Walsh's Island.

The ladder-dredge "Hunter" was employed principally in the Inner Basin and at Stockton, the material dredged amounting to 279,090 tons, and costing 4'30d. per ton.

The ladder-dredge "Vulcan" worked at various flats in Newcastle Harbour, lifting an aggregate of 81,850 tons, at 7'59d. per ton.

The grab-dredge "Nu" lifted 40,320 tons of blasted rock and other material, at a cost of 11'76d. per ton.

The sand-pump dredge "Jupiter" worked most of the year as a self-loading dredge, lifting 470,600 tons, at a cost of 1'85d. per ton. For three months she replaced the "Castor" at Walsh's Island.

*Wharfs and Shipping Appliances.*—The wharfs round the Harbour, measuring 18,700 feet, were kept in good order, at a cost of £2,826 2s. 10d.

Repairs were effected to the Sulphide Corporation Wharf, Bullock Island, at a cost of £500 5s. 7d. Extensive alterations were carried out to wharf, New Ferry landings, Market Wharf, and passenger waiting rooms erected, at a cost of £1,571 12s. 11d.

The scheme proposed a few years back for additional wharfage and coal-shipping appliances at the Inner Basin, Bullock Island, comprised the construction of 1,300 feet of strong timber wharf, the supply and erection of six 12-ton movable hydraulic cranes, the electric lighting of wharf and cranes, installation of an additional 250 h.p. pumping-engine at the power-house, together with all necessary pressure and return water pipes, and also the deepening of the Basin and the approach thereto, so as to accommodate the largest vessels frequenting the port. During the year the second section (700 feet) of the above wharf was completed, the total length being now 1,300 feet, the expenditure for the year being £7,386 5s. 9d. The erection of the six cranes was also completed, tested, and found to work satisfactorily. The pressure and return water pipes have also been laid from the power-house to the wharf, the total expenditure in connection with the cranes and pipes being £4,887 4s. 1d. The above cranes by Armstrong, Whitworth, and Company have a hoist of 60 feet, and an overhang of the wharf of 29 feet 6 inches, the radius of jib being 42 feet 6 inches.

Each crane will be fitted with three enclosed arc lamps, the wharf and railway yard at the back being lighted with additional lamps on poles. During the year a 20-kilowatt generating set was supplied and erected, and a switchboard and thirty-three arc lamps supplied, at a cost of £590 7s. 9d. Tenders were received for the supply and erection of the cables, conduits, and fittings required to complete the installation. The concrete foundation and bed for new engine were constructed, and the engine erected during the year, at a cost of £3,171 12s. 8d.

Considerable dredging has already been done in the "Basin," there being now from 22 feet to 28 feet along the face of the wharf at L.W.S.T., and a width sufficient for vessels going to and from the wharf. As already mentioned, this deepening is still proceeding, and ultimately the whole "Basin" will be dredged to 26 feet or 28 feet.

The timbers and other materials required for the foundations of the 15-ton steam derrick crane imported for the Stockton Wharf were delivered on the site during the year, the expenditure being £175 8s. 1d. A waiting shed, 10 feet x 9 feet, was erected on the Dyke Wharf for the Navigation Department, at a cost of £17 9s. 4d.

A receiving room for explosives, with covered way, &c., was erected at the Boat Harbour Pilot Station, Newcastle, for the Mercantile Explosives Department, at a cost of £112 15s. 4d.

*Plague Prevention.*—For the year 12,005 rats were brought in and burnt at the incinerator. Men were also employed laying poison under the various wharfs, the expenditure for the year amounting to £177 5s. 10d.

*Coal for Northern Rivers.*—Arrangements were made for the despatch of 12,639 tons of coal, in 212 cargoes, the value of the shipments being £6,673 18s. 1d.

The average number of men employed on the works in and around Newcastle (exclusive of those in the dredge service) during the year was 173 by day labour and 8 by contract.

### Hunter River.

*Wharfs.*—A wharf and approach were constructed by contract at Nelson's Plains, at a cost of £907 12s. 8d. Minor repairs were effected to the Miller's Forest Wharf, at a cost of £38 9s. 2d.

*Dredging.*—The combined grab and sand-pump dredge "Gamma" was employed since August cutting channels through various shoals, pumping the dredgings on to the river bank; the total quantity of sand removed was 93,366 tons, at a cost of 3'69d. per ton.

The ladder-dredge "Vulcan" was engaged at Lower Hexham, and various other flats in the vicinity of Morpeth, &c., removing 87,330 tons, at 6'96d. per ton.

### Lake Macquarie.

Two punts for Lake Macquarie improvements were built during the year, the expenditure being £518 18s. 4d.

Alterations were carried out to the Cockle Creek Wharf, at a cost of £8 15s. 4d.

*Dredging.*—The "Gamma" worked at Swansea till the beginning of August, dredging 21,075 tons, at a cost of 3'43d. per ton.

Hawkesbury



## Hawkesbury River.

*Nepcan River.*—The river was snagged for a distance of about 3 miles above Penrith Bridge, and a channel cut through a submerged rocky reef, giving a depth of 4 feet at summer level, the channel being marked by two iron beacons. Total cost, £108 1s. 8d.

*Mangrove Creek.*—Several snags were removed from the Channel, and a quantity of earth which had accumulated at the back of Pemberton's Wharf taken away.

*Wiseman's Ferry.*—A patch of submerged rock in the vicinity of the jetty was blown up and removed.

Beacons were erected at Point Frederick, Woy Woy, Cockle and Kincumber Creeks.

*Wyong Creek.*—The entrance to this Creek was deepened, at a cost of £20 18s.

*Pittwater.*—Repairs have been effected to the approach to the Bayview Wharf, at a cost of £20 14s. 7d. Beacon piles have been driven at Saltham Point, Bricklayer's Point, and Newport. The roadway from the wharf to the lighthouse at Barranjoey has been repaired, at a cost of £102 18s.

*Dredging.*—The ladder-dredge "Titan" was engaged deepening Mangrove Creek, and cutting an approach and basin at Brooklyn Wharf, removing from the two places a total of 66,480 tons, at a cost of 6'16d. per ton.

At Gosford the combined grab and sand-pump dredge "Sigma" for some time worked at the entrance to a creek, which, for sanitary reasons, required deepening, and removed 4,124 tons, at a cost of 41'73d. per ton. The material met with being found unsuitable for a sand pump to deal with, the "Sigma" was replaced by the ladder-dredge "Titan," in May, and 5,040 tons of clay were raised, at a cost of 13'61d. per ton. The "Sigma" then removed to Kincumber Creek, and, after deepening the approach, cut a channel some distance up the creek, removing 21,591 tons of mud and clay, at a cost of 16'96d. per ton. This dredge being required elsewhere, the grab-dredge "Kappa" was sent to complete the work, and has succeeded in removing 14,475 tons of clay and stiff mud, at a cost of 10'39d. per ton.

## Sydney Harbour, &amp;c.

*Manly Beach.*—The sand-pump dredge "Jupiter" was hired to the Sydney Harbour Trust for a few days, and removed 3,700 tons of sand from alongside the Manly Wharf.

*Watson's Bay.*—The low-lying portion of Camp Cove Reserve has been filled in with material obtained from the road in the vicinity; the funds, amounting to £98 15s. 7d. for the work, were provided by the Lands Department.

*Clark Island.*—The rustic sea-wall, on the south-western side of the island, was completed in July; 1,530 tons of filling were used for reclamation purposes, and portion of the area top-dressed, the total expenditure being £180 17s. 6d. The boat landing was repaired, and an iron-beacon erected on the south-eastern point, at a cost of £15 14s. 1d.

*Mosman's Bay.*—A quantity of ballast was placed at the back of the dyke to strengthen it. An area of about 8 square chains of the reclaimed area was raised to the required height with material excavated for the tramway loop. An expenditure of £27 17s. 4d. was incurred on this reclamation.

*Glebe Island.*—The Abattoir-road approach to the Glebe Island causeway was commenced in July and completed in December, the expenditure for the year being £1,069 3s. 2d. A start was made in October with the work of stone-facing the abutments to the Glebe Island causeway, and up to December, when the work was handed over to the Roads and Bridges Branch, £428 16s. had been expended. 4,893 tons of filling were received from various sources, and deposited on the south-eastern side of the island.

*Cockatoo Island.*—The new wharf at the Dock Stores was completed by contract early in the year, the expenditure being £930 1s. 1d. Repairs were effected to the Parramatta steamers jetty and to the wharf at Sutherland Dock, while those required to the Fitzroy Dock Wharf are still in progress, the cost for the year being £88 8s. 6d. During the year the work in connection with the extension and improvement of the workshops at the Fitzroy Dockyard has been continued, and good progress made, the expenditure amounting to £3,829 6s. 10d.

*Spectacle Island.*—The new wharf, crane, and tramway for the Naval Authorities, built by contract, was completed, and a new flagstaff erected in place of the old one. Expenditure for the year, £414 12s. 8d.

The Filled Shell Magazine described in last year's report was completed in August, the total cost being £2,729 9s. 7d. A sum of £34 14s. was also expended in sanitary work.

A contract was let on 16th June for the erection of a new Quick-firing Ammunition Store for £3,159. The building is to be constructed with brick walls, tiled roofs, porch, and covered way, and will contain 5,630 square feet of floor space, exclusive of that occupied by the tramway. Two new turntables will be provided, and a new tramway laid through the building connected with the existing lines.

Sundry structural repairs were effected to the main magazine by day labour, at a cost of £25.

*Parramatta River.*—The sand-pump and cutter-dredge "Groper" was engaged for nine months on the exceptionally hard task of deepening Duck River, the material met with being composed of stiff clay and ironstone; a large portion of the material remaining to be removed will require to be blasted before further dredging is carried out. The quantity raised was 97,066 tons, at a cost of 6'44d. per ton. Since March the "Groper" has been hired to the Sydney Harbour Trust to dredge a channel from Ryde to the steamers' terminus.

*Miscellaneous.*—A fence was erected round the drain at the foot of the Victoria-street Cliff, Woollloomoolco. A drain parallel with the canal has been excavated on the western side of the Government land at Long Cove. Other minor works were carried out.

*Coogee Bay Baths.*—These baths formerly consisted of two basins in the rock divided by a seam of shale; the seam has been removed and a breakwater built on the southern side of the baths. A pathway from the beach has been also formed at the foot of the cliff. The funds for these improvements amounting to £709 12s. 11d. were provided by the Lands Department.



### Botany Bay, &c.

*Alexandria (Shea's Creek) Canal*.—Repairs have been effected where necessary to the stonework on the banks of the canal, and the drains, flood-gates, fences, &c., maintained. The dredge "Ulysses" was engaged during July and August deepening the head of the canal, after which she cut a channel under the Ricketty-street bridge; she then proceeded to the junction of the canal with Cook's River, deepening the channel until December. In March she resumed work below Ricketty-street bridge, and was engaged there to the end of June. The total amount of dredging done by the "Ulysses" was 122,383 tons, at a cost of 4'49d. per ton.

*Cook's River*.—Above Dam:—The grab dredge "Omicron" worked from July to February between the dam and the railway bridge. In March she was dismantled and taken through the bridge, and, after undergoing repairs, commenced operations at the mouth of Wolli Creek, throwing up a bank on the railway reserve. Total amount dredged, 39,314 tons, at a cost of 6'53d. per ton. Below Dam:—The stone facing on the southern bank of the river, which was discontinued in July, was restarted in April, the stone for the purpose being obtained from the quarry at Baldface, George's River. During the year 700 lineal feet of facing were completed near the mouth of Muddy Creek, making a total of 1,200 feet in a northerly direction from the mouth of the creek. The expenditure on stone facing, &c., for the year was £1,276 7s. 9d. A footway was constructed at the dam, at a cost of £44 8s. 7d., and two beacon piles placed in position to mark the new channel at the entrance to the river. This channel was cut by the dredge "Neptune," 63,035 tons of sand, &c., being removed at a cost of 3'04d. per ton.

*George's River*.—The dredge "Ulysses" was engaged from January to the middle of March cutting various channels at Upper and Lower Salt Pans, and at Como, the quantity raised being 21,592 tons, at a cost of 8'30d. per ton. Beacons have been fixed on the piles along the river, as required by the Navigation Department, at a cost of £37 6s. 2d.

*Botany Bay*.—Sundry repairs were effected to the Long Wharf at Botany, at a cost of £372 0s. 8d. The approach to the Kurnell Wharf having been damaged by the heavy seas, about 60 feet of the outer end of the embankment was replaced by timber on piles, and the end of approach faced with large stone, at a cost of £266 13s. 11d.

### Port Hacking.

*Wharf*.—General repairs have been effected to the wharf and approach at Port Hacking; four fender piles were driven and two mooring buoys placed in position; total cost, £264 2s. 10d.

*Dredging*.—The sand-pump dredge "Dorus" was employed till March cutting channels through the inner bar to the fish hatchery; the quantity of sand, &c., disposed of was 332,017 tons, at a cost of 2'46d. per ton.

### Wollongong Harbour.

The work of maintaining the coal staiths, railway lines, cranes, &c., at Belmore Basin has been attended to, the expenditure for the year being £500 6s. 4d.

The dredge "Neptune" removed 650 tons of coal and rubbish which had accumulated in front of the wharfs in the Basin, at a cost of 48'04d. per ton.

### Port Kembla.

The work authorised by the Port Kembla Harbour Act of 1898 consists in the construction of an eastern breakwater 2,500 feet long and the necessary shipping appliances. Cost not to exceed £200,000, plus 10 per cent. The quarry from which the stone is obtained is from the hill to the south of the harbour and about 3,500 feet from the root of the breakwater. Here large blocks of augite andesite can be obtained suitable for the work. The building of the breakwater was commenced on 2nd August, 1901, the 10-ton steam traveller being the only crane used. On 18th November the first 30-ton crane was started, and on the 25th March the second. Drilling holes for blasting was done with No. 4 Rand drills, and the motive power up to the end of January was steam and from that time compressed air; two drills have been in constant use for the last three months, and the principal explosives used have been lithyte, rackarock, and blasting powder. The output of stone for the year (11 months only) was 94,897 tons at a cost of 26'47d. per ton, deposited in the breakwater. The whole of the stone quarried with the exception of that which had to be forked up (which latter was run to spoil or used on roads—was sent to the breakwater, the length of which is 784 feet from point of commencement. A length of 250 feet from the root is on a ledge of rock, from which the depth gradually increases to 24 feet at the end, at low water; the top of the breakwater is 20 feet above low water and its width on top about 16 feet. As it is considered inadvisable to much longer put the small stone in the eastern breakwater it is under consideration to build a retaining wall round the bay and also to start the northern breakwater, in both of which works the smaller stone could safely be used.

### Lake Illawarra.

The mouth of the lake to the north of Windang Island was opened at a cost of £42 0s. 5d., so that the fishing industry in the lake might be maintained.

### Kiama.

*Men's Baths*.—A 9-inch stop valve, built in a concrete chamber, was fixed at the baths for scouring purposes, the shower-bath enclosed, and the north wall extended in concrete, and steps built.

### Shoalhaven and Crookhaven Rivers.

*Harbour Works*.—Owing to the small amount of money available, the commencing of the training walls for the improvement of the lower course of the Crookhaven River was deferred.

*Dredging*.—The dredge "Archimedes" was employed in the canal between the two rivers, and also in the Crookhaven River, below Greenwell Point, cutting about 4,400 ft. of channel to a depth of 10 ft., and lifted 156,960 tons, at a cost of 5'89d. per ton.

Bateman's



### Bateman's Bay.

*Harbour Works.*—The construction of the training wall was continued during part of the year; the stone for this work is obtained at the quarry opened by the Government about 2 miles up stream, whence it is conveyed in punts to the wall and thrown out by hand. Owing to want of funds operations were suspended in the middle of October, 1901, and not begun again until the end of April, 1902. During the five and a half months 17,434 tons were deposited in place, at a cost of 38'54d. per ton. At the end of last year (30th June, 1901), the end of the wall was at chainage 2,051 ft.; since that date the following work was done:—

To finished height	... 332 ft., or to chainage 2,383 ft.
„ 4½ ft. above L.W.	... 200 ft., „ „ 2,583 ft.
„ 3½ ft. „ „	... 100 ft., „ „ 2,683 ft.
„ 3 ft. „ „	... 35 ft., „ „ 2,718 ft.
„ various heights	... 82 ft., „ „ 2,800 ft.

As considerable erosion of the shore was taking place near the inner end of the wall, stone is being placed there when the bar is too rough to work at the outer end of the wall.

*Dredging.*—The dredge “Neptune” was engaged between September and February on the bar. She removed 230,500 tons, cutting a channel 150 ft. wide and 1,240 ft. long, with an average depth of 14 ft. at low water, at a cost of 2'29 pence per ton. This channel is gradually silting up again, having now only a depth of 7½ ft. at low water. There is, however, good water along the whole length of the wall, which should be extended considerably if the bar is to be permanently improved.

### Moruya River.

*Harbour Works.*—No work has been done during the year to the south training wall referred to in last year's report, for want of funds. The crossing below the wall carries only about 6 feet at high tide, and the regular steamers are delayed, and occasionally stick at this place; the “Antleon” was sent to deepen the channel, but owing to a defect in the hopper door was compelled to return to Sydney for repairs, after having removed only 1,200 tons, at a cost of 56'33d. per ton. There is good water along the whole length of the wall constructed (2,841 feet) and its further extension is necessary to ensure permanent deep water down to the river entrance.

*Wharf.*—A new wharf with a deck area of 840 square feet was erected about 130 ft. down stream from the existing town wharf, at a cost of £199 8s. 4d.

*Dredging.*—The sand-pump dredge “Tau” cut out a basin about 10 ft. deep at low water, and about 300 ft. square, to allow steamers at the town wharf to swing; the quantity of sand pumped behind the dyke was 101,480 tons. She then proceeded to the lower part of the river and dredged a channel near the down stream end of the south training wall, deepening the cut to 12 feet at low water with a width of 75 feet, the quantity of sand lifted and deposited behind the training wall being 53,625 tons. The total quantity raised by this dredge for the year was 154,745 tons, at a cost of 2'67d. per ton.

### Miscellaneous Works, South Coast.

*Wagonga Inlet.*—The wharf at Warooma under construction by contract last year was completed, the expenditure for this year being £31 5s. 2d.

*Bermagui.*—Longitudinal struts between the piles and fenders on face of wharf were put in by contract. A few minor repairs were also effected to the crane.

*Tathra.*—The timber approach to the wharf at this place was enlarged and repairs effected by contract at a cost of £489 6s. 4d. The existing baths were enlarged at an expenditure of £88 13s. 10d.

*Merimbula.*—The contract let in June, 1900, for the construction of a wharf and approach, with 5-ton crane and goods shed at Merimbula was completed during the year. The contract was for £5,637, but additional works, as lengthening jetty 20 feet, culverts, stone causeways, heavier rails for tramway, &c., increased the cost by £513, which amount has been approved. The expenditure for the year was £2,677 5s. 1d.

*Eden.*—Two additional trucks were supplied to the wharf at this place.

### Snagging, Inland Rivers.

*Darling River.*—Operations were re-commenced in November. Two gangs were engaged in the removal of snags, overhanging trees, and burning-off of same, about 80 miles of river being thus cleared, 57 of which were between Menindie and Wilcannia, and 23 miles above Wentworth. The expenditure for the year was £2,319 12s. 6d., and the average number of men employed, 22.

*Murrumbidgee River.*—A gang of men commenced operations in March at Balranald, 178½ miles below Hay, and worked from this point to 238½ miles below Hay, clearing 60 miles of all obstacles to navigation, at a cost of £609 4s. 2d. Average number of men employed, 16.

*Edwards River.*—Operations were started in March, commencing at Deniliquin and working down stream and clearing 12½ miles, at a cost of £715 13s. 10d. The average number of men employed was 18.

### Lighthouses.

*Cape Byron.*—The construction of new lighthouse, keeper's quarters, &c., was completed during the year by the contractors, the total amount paid to whom was £10,040 9s. 3d. The lighthouse was opened and the light exhibited on 1st December, 1901.

*Richmond River.*—A contract was let for re-covering the roofs of quarters with tiles and the verandahs with corrugated iron. Work is still in progress.

*Seal Rocks.*—New stables, oil and paint store, together with repairs to the lighthouse, are being carried out by day labour.

*Port Stephens.*—A contract was let for the re-covering of the roofs of quarters with tiles and the verandahs and offices with corrugated iron.



*Norah Head.*—The contract let on 26th February, 1901, for the erection of lighthouse, quarters, flagstaff, &c., at Norah Head, as described in last year's report, was, in consequence of the unsatisfactory progress made by the contractor, cancelled on the 4th January, 1902, and arrangements made to complete the work by day labour.

*Hornby.*—The iron railing on balcony and stairs to the tower of the lighthouse was renewed by contract, at a cost of £52.

*Signal Station, South Head.*—A contract was entered into for repairs and additions, the work being now almost completed.

*Macquarie.*—A contract was let for painting and necessary repairs to lighthouse and keeper's quarters in April, but was subsequently cancelled, and fresh tenders are now being invited.

*Montagu Island.*—The re-covering of the roofs of the keeper's quarters with tiles and the verandahs with galvanized iron, together with other repairs and additions, were done by contract, at an expenditure of £544 19s. A new flagstaff was also erected, by day labour, at a cost of £90.

*Miscellaneous.*—Repairs were effected at Point Perpendicular and Green Cape lighthouses, by day labour, at a cost of £100.

The lighthouse mechanic has been engaged during the year in carrying out new works and effecting repairs and renewals at the following lighthouses along the coast, viz., Macquarie, Smoky Cape, Baranjoey, Port Stephens, Seal Rocks, Cape Byron, Ulladulla, South Solitary, Montagu, Fingal Head, Clarence Head, Crowdy Head, Tacking Point, and Nelson Head.

### Pilot Stations.

*Macleay River.*—On 24th September a contract was let for the erection of a new pilot station, near the entrance to the Macleay River, consisting of pilot's quarters, quarters for four boatmen, two boatsheds, with boat slips, footbridge across creek, flagstaff, signal house, &c.; the work was completed on 23rd May, 1902, at a cost of £3,972 12s. 8d.

*Clarence River.*—Two cottages, for the use of boatmen, are under construction, the work being done by the pilot's crew.

*Manning River.*—A boatman's cottage is in course of construction, by day labour, estimated cost, £300.

*Port Phillip.*—Painting, and some minor repairs, in connection with this signal station, were effected by contract, at a cost of £37 10s. 9d.

### Annual Inspection of Lighthouses, &c.

In September, 1901, the usual annual inspection was made of the lighthouses and pilot stations, with the Superintendent of Navigation, the whole being reported upon by the Architect, and plans, sketches, estimates, &c., for repairs, &c., prepared.

### Fitzroy Dockyard.

The following is a detailed statement of the various works carried out at the Fitzroy Dockyard and the cost:—

#### EXPENSES in connection with the working of the Dockyard.

	£	s.	d.	£	s.	d.
General working Expenses ... ..	3,486	15	10			
Repairs to machinery (Sutherland Dock) ... ..	1,315	6	0			
Electric lighting, repairs, &c. ... ..	304	5	0			
				5,106	6	10
Docking and repairing H.M. Ships (labour) ... ..	680	2	4			
" " other vessels " ... ..	706	9	3			
Material used in docking ... ..	158	16	0			
				1,545	7	7
Improvements to the Dockyard—						
Removal of rocks... ..	577	18	4			
New pattern shop ... ..	843	12	8			
Machine shop ... ..	85	7	3			
Extension of works ... ..	2,076	11	10			
Tram Shed ... ..	198	13	3			
Foundry ... ..	26	2	3			
Cockatoo wharfs ... ..	21	1	3			
				3,829	6	10
Dredge Service—docking and repairs—						
To dredges ... ..	19,184	0	5			
To tugs ... ..	3,802	12	10			
To punts and barges ... ..	6,624	15	6			
Sand-pump dredge "Glaucus" construction ... ..	5,798	18	6			
Tug "Burunda" construction ... ..	4,539	8	5			
Tug "Vimmang" " ... ..	1,326	2	5			
Reclamation pipes ... ..	1,173	4	8			
Inspection, &c. ... ..	68	7	3			
				42,517	10	0
Harbours and Rivers Branch—						
"Eva" ... ..	2	16	0			
"Helen" ... ..	289	2	1			
"Lillian" ... ..	781	10	7			
"Swift" ... ..	534	12	3			
"Vivandiero" ... ..	15	17	4			
"Wollombi" construction ... ..	2,216	18	9			
Country wharfs ... ..	79	13	6			



Harbours and Rivers Branch (*continued*)—

	£	s.	d.	£	s.	d.
Harbour surveys, gear, &c. ... ..	117	12	1			
Head Office (repairs, &c.) ... ..	12	3	3			
Tweed River improvements ... ..	181	18	7			
Richmond River improvements... ..	856	5	3			
Clarence River improvements ... ..	572	0	0			
Coff's Harbour improvements ... ..	133	4	7			
Woolgoolga Harbour improvements ... ..	58	5	11			
Macleay River improvements ... ..	155	3	9			
Camden Haven improvements ... ..	90	5	9			
Manning River improvements ... ..	498	6	3			
Newcastle Harbour Works ... ..	155	17	5			
Lake Macquarie ... ..	42	19	0			
Glebe Island improvements ... ..	7	7	3			
Spectacle Island reclamation ... ..	56	6	0			
Rodd Island reclamation ... ..	202	7	2			
Clarke Island reclamation ... ..	17	6	6			
Port Kembla Harbour Works ... ..	348	4	4			
South Coast District ... ..	25	17	8			
Ashby Dry Dock... ..	10	4	2			
Murphy's Tree Excavator ... ..	34	13	10			
Hungerford's New Bucket ... ..	63	8	0			
Lighthouses (repairs and sundries) ... ..	369	12	4			
Harbour Works (cranes, &c.) ... ..	218	3	7			

8,168 3 2

## Other Branches of the Public Works Department—

Roads and Bridges ... ..	1,900	16	2
Government Architect ... ..	2,628	6	1
Water Supply and Water Conservation ... ..	4,035	6	10
Railway Construction ... ..	1,701	10	11
Tramway Construction ... ..	4,528	12	10
Public Watering Places ... ..	32	7	4
Potts' Hill, Prospect Dam ... ..	30	3	1
Gin Gin Weir ... ..	653	9	9
Macquarie River improvements ... ..	252	7	8
Lake Cudgellico... ..	180	12	6

15,943 13 2

## Department of Navigation—

Pilot Service ... ..	1,347	15	0
"Ajax" ... ..	1,461	12	7
"Captain Cook" ... ..	646	1	2
"Carrington" ... ..	243	17	10
"Gladys" ... ..	68	16	11
"Nea" ... ..	76	0	1
"Premier" ... ..	914	6	0
"Sol" ... ..	37	7	10
"Victoria" ... ..	1,275	7	9

6,071 5 2

## Board of Health—

Cement, &c. ... ..	423	4	5
P. H. O. Launch ... ..	48	0	9
Quarantine tender ... ..	98	16	11

570 2 1

## Mercantile Explosives Department—

Newcastle Receiving House ... ..	10	14	3
"Kate" .. ..	191	5	1
Powder hulks ... ..	84	13	9

286 13 1

## Department of Justice—

"Argus" ... ..	120	7	10
"Biloela" ... ..	146	1	10
H.M. Gaols ... ..	128	17	10
Trial Bay Prison ... ..	3	12	4

398 19 10

## Mines Department—

"Golden Fleece" ... ..	65	8	6
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65 8 6

## H.M. Customs—

Nos. 1 and 2 Launches ... ..	177	19	6
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## Defence Department—

"Ohm" ... ..	125	2	9
"Miner" ... ..	53	1	1
"Acheron" ... ..	80	15	0

258 18 10

## Department of Education—

N.S.S. "Sobraon" docking, &c. ... ..	2,965	11	5
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## Fisheries Department—

Ice Chest ... ..	0	12	0
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Naval Depot—	£	s.	d.	£	s.	d.
Machinery, &c. ... ..				21	8	4
Lunacy Department—						
“Mabel” ... ..	0	12	9			
“Psyche” (construction) ... ..	483	5	5	483	18	2
Harbour Trust—						
Dredge “Charon” ... ..	167	7	11			
“Chi” ... ..	39	5	8			
“Pi” ... ..	47	3	4			
“Sydney” ... ..	623	9	8			
Rock-drill “Poseidon” ... ..	556	5	6			
Tug “Achilles” ... ..	178	5	11			
“Dawn” ... ..	152	13	10			
“Dayspring” ... ..	174	4	10			
“Aurora” ... ..	161	7	3			
“Europa” ... ..	82	2	9			
“Octopus” ... ..	145	5	7			
“Scylla” ... ..	71	4	0			
5-ton floating crane ... ..	2	15	11			
30 “Leila” ... ..	0	16	1			
Punts ... ..	20	14	7			
Dalgety’s Wharf ... ..	17	17	6			
Darling Island improvements ... ..	4	19	10			
Circular Quay ... ..	820	19	8			
Sydney Wharfs ... ..	1	12	11			
	56	0	5	3,324	13	2
Total ... ..	£91,735	17	8			

The following is a summary list of the vessels docked during the year 1901-2 :—  
Sutherland Dock.

Class.	No.	Tonnage.	Dues.	Expenses.
			£ s. d.	£ s. d.
H.M. Ships .....	11	24,063	612 1 9	612 1 9
H.M. Troopships .....	3	17,612	107 5 7	107 5 7
Merchant Ships .....	25	94,455	4,526 4 9	510 16 3
U.S. Warships .....	4	20,845	282 10 4	282 10 4
Government Plant .....	34	7,549	97 17 1	97 17 1
Total .....	77	164,524	5,625 19 6	1,610 11 0

#### Fitzroy Dock.

Class.	No.	Tonnage.	Dues.	Expenses.
			£ s. d.	£ s. d.
H.M. Ships .....	9	11,015	401 12 7	401 12 7
Merchant Ships .....	7	17,636	573 8 1	82 4 9
Government Plant .....	67	11,566	135 7 6	135 7 6
Total .....	83	40,217	1,110 8 2	619 4 10

The average number of men employed at the dockyard during the year was 400.

#### Dredging Operations.

Mention has already been made in this report of the work performed by the various dredges in each district.

During the year eleven ladder dredges, seventeen sand-pump, and ten grab dredges have been engaged raising 6,749,112 tons of material at a cost of 4.11 pence per ton. The quantity raised during the year is greater than in the preceding year, and the cost per ton is slightly less. The number of dredges employed has been reduced by two ladder and two grab dredges, the Sydney Harbour Trust having taken over the control of the dredges “Sydney,” “Charon,” “Chi,” and “Pi.”

The new suction dredge “Glaucus,” under construction at Fitzroy Dock, is nearing completion, and being fitted with cutter gear, and the powerful machinery from the s.s. “Thetis,” should prove a useful acquisition to the service. The hull of the s.s. “Thetis” was sold during the year to Messrs. J. Fenwick & Co.

The construction of the iron screw steam-tug “Burunda” is approaching completion, as also is the wooden screw steam-tug “Wollumbi.” The wooden tug “Yimman” was completed during the year.

The absence of heavy rain has deprived the bar harbours of the benefits derived from freshets in creating a scour, and consequently most urgent demands for the services of the “Antleon” have continually been made. So serious has the difficulty become that the trade of the rivers has in some instances been suspended, and in others shipping is carried on under most adverse conditions. From the six bars operated upon the “Antleon” has removed and dumped at sea a total of 257,500 tons of sand. In last year’s report attention was drawn to the urgent necessity of adding another vessel of the “Antleon” type to the fleet, and it is to be regretted that the sum which the Minister authorised being placed on the estimates is not yet made available.

The following statements show the results of each vessel’s operations.



STATEMENT of Ladder Dredge Expenditure for twelve months ending 30 June, 1902.

Ladder Dredge.	Where working.	Material dealt with.	Tons.	Hours dredging.	Hours working.	Expenditure.	Cost per ton.	Cost per hour dredging.	Cost per hour working.	Percentage working hours.							Remarks.
										Dredging.	Coaling.	Removals.	Bad weather.	Waiting for punts.	Repairs.	Other causes.	
"Samson" .....	Newcastle .....	Mud and sand .....	384,850	1,746	2,389	£ s. d. 4,719 12 8	d. 2'94	£ s. d. 2 14 1	£ s. d. 1 19 6	73	3	5	3	1	15	...	Extensive repairs.
"Newcastle" .....	do .....	Mud and sand .....	440,250	1,560	2,398	7,719 10 3	4'21	4 19 0	3 4 5	65	3	3	1	3	25	...	
"Hunter" .....	do .....	Sand and ballast .....	279,090	2,499	3,341	3,710 5 0	3'19	1 9 8	1 2 3	75	3	7	2	4	8	1	
"Vulcan" .....	Newcastle & Hunter River	Sand, clay, and shell	168,910	1,360	2,390	3,314 14 3	4'71	2 8 9	1 7 9	57	...	11	...	14	16	2	
"Aleides" .....	Richmond River .....	Rock and sand .....	47,760	1,652	2,393	3,197 19 6	16'07	1 18 9	1 6 9	69	3	8	...	...	20	...	
"Ulysses" .....	Cook's River and George's River.	Mud, sand, and clay..	143,975	1,526	2,376	2,771 8 11	4'62	1 16 4	1 3 4	64	4	17	...	3	8	4	
"Fitzroy" .....	Macleay River .....	Mud, sand, and shingle	200,480	1,295	2,398	3,140 15 5	3'76	2 8 6	1 6 3	54	3	8	...	3	30	2	Extensive repairs.
"Minos" .....	Clarence River .....	Mud, sand, and clay...	218,680	1,882	2,365	2,515 12 9	2'76	1 6 9	1 1 3	79	3	7	...	1	10	...	
"Pluto" .....	Manning River .....	Rock, clay, sand, and mud.	132,340	956	2,391	2,752 10 0	4'99	2 17 7	1 3 0	40	2	12	1	...	45	...	
"Archimedes" .....	Shoalhaven .....	Sand, shell, and mud	156,960	1,433	2,380	2,430 17 10	3'72	1 13 11	1 0 5	60	3	6	1	2	27	1	
"Titan" .....	Hawkesbury River and Gosford.	Mud, sandstone, and pipeclay.	71,520	1,434	2,391	1,628 2 10	5'46	1 2 8	0 13 7	60	4	13	...	1	20	2	
Totals .....			2,244,815	17,343	27,212	37,901 9 5											
Averages .....							4'05	2 3 8	1 7 10	63	3	9	1	3	20	1	

STATEMENT of Sand-pump Dredge Expenditure for twelve months ending 30 June, 1902.

Sand-pump Dredge.	Where working.	Material dealt with.	Estimated tons pumped.	Hours pumping.	Hours working.	Expenditure.	Cost per ton pumping.	Cost per hour pumping.	Cost per hour working.	Percentage working hours.							Remarks.
										Pumping.	Coaling.	Removals.	Bad weather.	Silt to sea.	Repairs.	Other causes.	
"Neptune" .....	Cook's River, Batesman's Bay, Wollongong, and Newcastle.	Sand .....	336,835	1,170	2,725	£ s. d. 4,319 2 0	d. 3'08	£ s. d. 3 13 10	£ s. d. 1 11 8	43	2	8	3	21	22	1	231,350 tons deposited at sea.
"Juno" .....	Newcastle .....	Sand .....	204,520	988	2,474	5,086 17 11	5'97	5 3 0	2 1 1	40	...	7	...	...	53	...	Extensive repairs. 257,100 tons deposited at sea or at reclamation.
"Jupiter" .....	Manly Beach & Newcastle	Sand .....	474,300	1,134	2,395	3,674 8 11	1'86	3 4 10	1 10 8	47	4	4	4	25	14	2	
"Castor" .....	Newcastle .....	Sand and mud .....	782,105	1,739	2,971	5,565 13 10	1'71	3 4 0	1 18 9	61	...	7	1	...	30	1	Deposited at sea.
"Antleon" .....	Camden Haven, Macleay River, Clarence River, Manning River, Mortuya, and Bellinger River.	Sand .....	257,500	561	2,547	5 526 16 8	5'15	9 17 0	2 3 5	71	...	9	...	...	18	2	
"Actor" .....	Tweed River .....	Stones, quartz, & sand	258,222	1,527	2,486	2,673 18 11	2'40	1 15 0	1 1 6	61	4	13	...	...	20	2	
"Dorus" .....	Port Hacking, Macleay River, and Tweed River	Sand .....	383,317	972	2,418	3,964 2 1	2'48	4 1 7	1 12 9	40	4	27	1	...	20	8	
"Dictys" .....	Richmond River .....	Indurated sand .....	32,420	1,493	2,573	3,607 8 7	26'71	2 8 4	1 8 0	58	1	14	...	...	26	1	
"Alesus" .....	Nambucca River .....	Shingle, gravel, & sand	261,629	1,340	2,392	3,012 19 5	2'76	2 5 0	1 5 2	56	3	20	...	...	21	...	
"Groper" .....	Duck Creek, Parramatta River at Ermington.	Clay, ironstone, sand, and shell.	252,434	1,804	2,387	3,579 16 6	3'40	1 19 8	1 10 0	76	2	7	...	...	14	1	
Totals .....			3,243,282	12,728	25,263	41,011 4 10											
Averages .....							3'03	3 4 5	1 12 6	55	2	12	1	4	24	2	



STATEMENT of Combined Sand-pump and Grab Dredge Expenditure for twelve months ending 30 June, 1902.

Combined Sand-pump and Grab Dredge.	Where working.	Material dealt with.	Estimated tons dealt with.	Hours dredging.	Hours working.	Expenditure.	Cost per ton.	Cost per hour dredging.	Cost per hour working.	Percentage of working hours.							Remarks.
										Dredging.	Coaling.	Removals.	Bad weather.	Silt to sea.	Repairs.	Other causes.	
"Gamma" .....	Lake Macquarie & Hunter River.	Sand and shell .....	114,441	1,503	2,392	£ s. d. 1,633 6 1	d. 3'43	£ s. d. 1 1 9	£ s. d. 0 13 8	63	2	21	...	...	10	4	
"Delta" .....	Camden Haven .....	Sand and gravel .....	113,780	1,707	2,388	1,667 4 3	3'52	0 19 6	0 14 0	71	1	14	1	...	12	1	
"Eta" .....	Port Macquarie .....	Sand, mud, and clay...	61,494	1,532	2,382	1,496 7 2	5'84	0 19 6	0 12 7	64	2	10	...	...	22	2	
"Theta" .....	Bellinger River .....	Sand and shingle .....	189,492	1,548	2,376	1,937 10 2	2'45	1 5 0	0 16 4	65	2	14	...	...	19	...	
"Sigma" .....	Gosford, Kincumber, Cape Hawke.	Sand, shell, mud, and stiff clay.	63,506	1,382	2,916	3,251 10 1	12'29	2 7 1	1 2 4	46	4	25	...	...	10	9	
"Rho" .....	Myall River .....	Sand and mud .....	204,085	1,321	2,382	1,683 6 2	1'98	1 5 6	0 14 1	56	3	23	1	...	15	2	
"Tau" .....	Moruya .....	Sand and shell .....	154,745	1,219	2,392	1,723 3 3	2'67	1 8 3	0 14 5	51	1	21	...	...	23	4	
		Totals .....	901,543	10,212	17,228	13,392 7 2											
		Averages .....					3'57	1 6 3	0 15 7	60	2	18*	...	...	17	3	

STATEMENT of Grab Dredge Expenditure for twelve months ending 30 June, 1902.

Grab Dredge.	Where working.	Material lifted.	Estimated tons lifted.	Hours dredging.	Hours working.	Expenditure.	Cost per ton.	Cost per hour dredging.	Cost per hour working.	Percentage of working hours.							Remarks.
										Dredging.	Coaling.	Removals.	Bad weather.	Waiting for punts.	Repairs.	Other causes.	
"Alpha" .....	Tweed River .....	Sand and mud .....	64,732	2,313	4,854	£ s. d. 1,595 19 6	d. 5'92	£ s. d. 0 13 10	£ s. d. 0 6 7	47	8	10	1	...	33	1	
"Beta" .....	Bellinger River .....	Sand, shingle, & gravel	28,930	1,706	2,389	706 3 7	5'86	0 8 3	0 5 11	71	...	10	...	...	19	...	
"Zeta" .....	Richmond River .....	Hard clay, rock, sand, mud, &c.	27,842	1,784	2,405	870 8 7	7'50	0 9 9	0 7 3	74	2	7	...	1	13	3	
"Iota" .....	Nambucca River .....	Gravel .....	40,945	1,627	2,394	686 6 0	4'02	0 8 5	0 5 9	68	1	4	...	...	26	1	
"Kappa" .....	Cape Hawke, Kincumber..	Stiff clay, rock, mud, shell, &c.	20,320	1,578	2,440	871 0 2	10'29	0 11 0	0 7 2	65	2	14	...	2	13	4	
"Lambda" .....	Richmond River .....	Sand and snags .....	22,109	1,834	2,378	543 5 4	5'90	0 5 11	0 4 7	77	1	2	2	...	16	2	
"Mu" .....	do .....	Indurated sand .....	34,030	1,162	2,394	883 7 0	6'23	0 15 2	0 7 5	49	...	13	2	...	33	3	
"Nu" .....	Newcastle .....	Sand, mud, rock, &c...	40,320	2,685	4,023	1,688 15 10	10'05	0 12 7	0 8 5	67	1	5	1	7	17	2	
"Omicron" .....	Cook's River .....	Mud, clay, and sand...	39,344	1,554	2,380	1,071 6 1	6'53	0 13 9	0 9 0	65	2	16	...	...	17	...	
"Omega" .....	Clarence River .....	Sand, mud, rock .....	40,900	1,300	2,369	673 18 6	3'95	0 10 4	0 5 8	55	1	7	...	...	35	2	
		Totals .....	359,472	17,543	28,026	9,590 10 7											
		Averages .....					6'40	0 10 11	0 6 10	64	2	9	...	1	22	2	



STATEMENT of Tag Expenditure and Work for twelve months ending 30 June, 1902.

Tug.	Where employed.	Tons towed.	Miles run towing.	Miles run special service.	Total working hours.	Hours attending.	Cost of towing.	Cost of special service.	Cost per ton.	Cost per mile towing.	Cost per mile special service.	Cost per hour working.	Cost per hour attending.	Percentage of time.					Remark
														Steaming.	Coaling.	Repairs.	Bad weather.	Other causes.	
							£ s. d.	£ s. d.	d.	s. d.	s. d.	s. d.	s. d.						
"Ceres".....	Newcastle .....	383,400	9,976	.....	2,723	2,500	1,593 5 5	.....	1'00	3 2	...	11 8	12 9	74	2	8	3	13	
"Orestes".....	do .....	435,100	8,015	761	2,464	2,074	1,993 14 3	136 12 2	1'10	5 0	3 7	17 3	20 7	71	2	16	3	8	
"Galatea".....	Newcastle & Hunter River	195,170	10,528	2,841	3,583	3,037	1,538 4 6	477 2 6	1'89	2 11	3 4	11 3	13 3	66	3	15	2	14	
"Dooribang" ...	Richmond River, Clarence River, Sydney, and Newcastle.	147,268	10,843	608	3,012	2,591	1,409 17 3	70 17 4	2'30	2 7	2 4	9 10	11 5	74	3	14	...	9	
"Dione".....	Manning River.....	132,220	4,467	.....	2,507	1,418	987 11 7	.....	1'79	4 5	...	7 11	13 11	44	2	43	...	11	
"Cyclops".....	Sydney & Shoalhaven	131,760	5,185	594	2,532	1,975	1,316 0 3	163 5 8	2'40	5 1	5 6	11 8	15 0	53	5	22	1	19	
"Phoenix".....	Shoalhaven and Macleay River.	57,202	6,549	50	2,474	2,269	1,015 3 7	6 7 5	4'26	3 1	2 7	8 3	9 0	57	4	8	...	31	
"Athena".....	Macleay River .....	190,696	3,890	.....	2,412	1,705	689 8 4	.....	0'87	3 7	...	5 9	8 1	55	2	29	...	14	
"Ganymede" ...	Newcastle .....	8,490	143	7,091	2,641	2,448	24 17 8	746 4 5	0'70	3 6	2 1	5 10	6 4	44	1	7	...	48	
"Callisto".....	Clarence River.....	201,320	6,960	.....	2,665	2,375	952 0 7	.....	1'13	2 9	...	7 2	8 0	77	4	11	...	8	
"Vesta".....	Newcastle .....	.....	.....	1,953	908	764	.....	147 8 10	...	...	1 6	3 3	3 10	63	1	16	...	20	
"Oberon".....	Cook's River and Sydney	20,370	449	5,375	2,805	2,543	52 9 3	540 10 5	0'62	2 4	2 0	4 3	4 8	65	3	9	...	23	
"Ariel".....	Cape Hawke and Brisbane Water.	20,820	4,582	.....	2,493	1,986	332 15 8	.....	3'84	1 5	...	2 8	3 4	65	3	20	...	12	
"Helen".....	Sydney and Camden Haven.	790	312	7,374	3,018	2,872	33 11 5	713 17 4	10'20	2 2	1 11	4 11	5 2	61	3	5	...	31	
"Yimmang".....	Newcastle .....	.....	.....	1,687	861	861	.....	*1,770 7 10	...	...	21 0	41 1	41 1	69	...	...	...	31	
	Totals .....	1,924,606	71,899	28,334	37,098	31,418	11,938 19 9	4,772 13 11											
	Averages.....	.....	.....	.....	.....	.....	.....	.....	1'49	3 4	3 4	9 0	10 8	63	2	15	1	19	

\* Includes cost of new hull and transferring machinery, £1,572 3s. 11d.

COMPARATIVE Statement of quantity and cost of work done by Ladder Dredges (including towing), for periods as stated.

Ladder Dredge.	1 July, 1900, to 30 June, 1901. Dredging, Towing, and Repairing.			1 July, 1901, to 30 June, 1902. Dredging, Towing, and Repairing.			Remarks.
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Samson," at Sydney and Newcastle .....	312,300	4,679 19 7	3'60	384,850	6,280 11 2	3'92	
"Newcastle," at Newcastle .....	495,500	5,420 5 4	2'63	440,250	9,602 14 1	5'23	
"Hunter," at Newcastle.....	263,350	8,942 4 10	8'15	279,090	5,004 5 2	4'30	
"Vulcan," at Newcastle and Hunter River.....	143,460	4,793 19 5	8'02	168,910	5,110 17 4	7'26	{ Newcastle .....
"Alcides," at Richmond River.....	80,020	4,389 10 11	13'16	47,760	3,936 5 6	19'78	{ Hunter River.....
"Ulysses," at Manning River, Duck River, Cook's River, and George's River.	88,595	2,772 7 8	7'51	143,975	3,036 8 10	5'06	{ Cook's River .....
"Fitzroy," at Macleay River.....	218,400	3,511 18 1	3'58	200,480	3,861 2 0	4'62	{ George's River .....
"Minos," at Clarence River .....	156,520	3,027 5 10	4'64	218,680	3,524 13 4	3'87	
"Pluto," at Manning River .....	252,820	3,226 10 7	3'06	132,340	3,740 1 7	6'78	
"Archimedes," at Shoalhaven .....	87,840	2,092 19 7	5'72	156,960	3,855 4 7	5'89	
"Titan," at Leichhardt Canal, Hawkesbury River, and Gosford...	49,895	2,127 19 3	10'24	71,520	1,992 8 3	6'69	{ Hawkesbury River .....
							{ Gosford .....

	Tons.	Cost.	£ s. d.	Pence per ton.
Newcastle .....	81,520	2,578 19 1		7'59
Hunter River.....	87,330	2,531 18 3		6'96
Cook's River .....	122,383	2,290 2 3		4'49
George's River .....	21,592	746 6 7		8'30
Hawkesbury River .....	66,480	1,706 11 10		6'16
Gosford .....	5,040	285 16 5		13'61



COMPARATIVE Statement of quantity and cost of work done by Sand-pump Dredges (including towing), for periods as stated.

Sand-pump Dredge.	1 July, 1900, to 30 June, 1901.			1 July, 1901, to 30 June, 1902.			Remarks.
	Dredging, Towing, and Repairing.			Dredging, Towing, and Repairing.			
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Neptune," at Manly Beach, Rose Bay, Botany Bay, Cook's River, Bateman's Bay, Wollongong, and Newcastle.	296,150	3,172 15 7	2'57	336,835	4,323 5 11	3'08	<div><div>Tons. £ s. d. Pence per ton.</div><div>Cook's River..... 63,025 798 0 6 3'04 Bateman's Bay ..... 230,500 2,197 6 11 2'29 Wollongong ..... 650 130 1 11 48'04 Newcastle ..... 42,650 1,197 16 7 6'74</div></div>
"Juno," at Newcastle.....	144,700	2,629 2 8	4'36	204,520	5,102 16 5	5'99	<div><div>Tons. £ s. d. Pence per ton.</div><div>Manly Beach ..... 3,700 47 11 0 3'08 Newcastle..... 470,600 3,626 17 11 1'85</div></div>
"Jupiter," at Sydney Heads, Manly Beach, and Newcastle.....	275,550	4,835 12 10	4'21	474,300	3,674 8 11	1'86	
"Castor," at Newcastle .....	663,160	3,280 7 6	1'19	782,105	5,574 19 8	1'71	<div><div>Tons. £ s. d. Pence per ton.</div><div>Camden Haven Bar ..... 6,000 255 9 4 10'22 Macleay Bar ..... 99,030 1,452 0 4 3'52 Clarence Bar ..... 72,250 1,364 13 7 4'53 Manning Bar ..... 69,250 1,764 5 1 6'11 Moruya Bar..... 1,200 281 13 5 56'33 Bellinger Bar ..... 9,750 443 4 11 10'91</div></div>
"Antleon," at Moruya Bar, Macleay Bar, Manning Bar, Port Macquarie Bar, Camden Haven Bar, Clarence Bar, and Bellinger Bar.	292,850	4,260 19 1	3'49	257,500	5,561 6 8	5'18	<div><div>Tons. £ s. d. Pence per ton.</div><div>Port Hacking ..... 332,017 3,407 17 0 2'46 Macleay River..... 35,500 593 6 11 4'01 Tweed River..... 15,800 181 12 8 2'76</div></div>
"Actor," at Tweed River .....	269,122	3,746 0 4	3'34	258,222	2,676 18 11	2'49	
"Alesus," at Nambucca River .....	108,630	2,653 14 5	5'86	261,629	3,016 9 5	2'77	
"Dorus," at Rose Bay, Leichhardt Canal, Port Hacking, Macleay River, and Tweed River.	233,683	3,160 17 0	3'25	383,317	4,182 16 7	2'62	
"Dictys," at Richmond River .....	11,189	2,839 5 0	60'90	32,420	3,607 8 7	26'71	
"Groper," at Mosman's Bay, Rose Bay, Duck River, Parramatta River, at Ermington.	255,555	4,551 12 7	4'28	252,434	3,579 16 6	3'40	<div><div>Tons. £ s. d. Pence per ton.</div><div>Duck River ..... 97,066 2,605 0 2 6'44 Parramatta River, at Ermington 155,368 974 16 4 1'51</div></div>

COMPARATIVE Statement of quantity and cost of work done by Combined Grab and Sand-pump Dredges (including towing), for periods as stated.

Combined Grab and Sand-pump Dredge.	1 July, 1900, to 30 June, 1901.			1 July, 1901, to 30 June, 1902.			Remarks.
	Dredging, Towing, and Repairing.			Dredging, Towing, and Repairing.			
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Gamma," at Lake Macquarie, and Hunter River .....	95,450	1,634 17 5	4 11	114,441	1,736 11 1	3'64	{ Lake Macquarie ..... 21,075 301 5 8 3'43 Hunter River ..... 93,366 1,435 5 5 3'69
"Delta," at Camden Haven .....	119,190	1,608 14 9	3'24	113,780	1,669 14 3	3'52	{ Gosford ..... 4,124 717 0 8 41'73 Kincumber Creek ..... 21,591 1,525 11 6 16'96 Cape Hawke ..... 37,791 1,135 4 1 7 21
"Eta," at Port Macquarie.....	82,347	1,611 9 6	4'70	61,494	1,496 7 2	5'84	
"Theta," at Bellinger River .....	111,859	2,165 11 4	4 65	189,492	1,937 10 2	2'45	
"Sigma," at Hawkesbury River, Gosford, Cape Hawke, and Kincumber Creek.	257,471	3,843 10 9	3'58	63,506	3,377 16 3	12'77	
"Rho," at Myall River.....	169,312	1,552 5 10	2'20	204,085	1,691 11 2	1'99	
"Tau," at Moruya .....	219,200	1,519 17 9	1'66	154,745	1,723 3 3	2'67	



COMPARATIVE Statement of quantity and cost of work done by Grab Dredges (including towing), for periods as stated.

Grab Dredge	1 July, 1900, to 30 June, 1901.			1 July, 1901, to 30 June, 1902.			Remarks.
	Dredging, Towing, and Repairing.			Dredging, Towing, and Repairing.			
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Alpha," at Tweed River .....	35,784	1,481 15 5	9'94	64,732	1,595 19 6	5'92	
"Beta," at Bellinger River .....	31,500	634 6 3	4'83	28,930	712 3 7	5'91	
"Zeta," at Richmond River .....	19,679	1,032 9 1	12'59	27,842	1,251 2 11	10'78	
"Iota," at Nambucca River .....	37,180	604 14 9	3'90	40,945	691 6 0	4'05	
"Kappa," at { Cape Hawke .....	46,954	1,884 2 8	9'63	20,320	1,285 8 5	15'18	{ Cape Hawke .....
"Kappa," at { Kincumber Creek .....							{ Kincumber Creek .....
"Lambda," at Richmond River .....	16,805	608 11 9	8'69	22,109	543 5 4	5'90	Tons. £ s. d.
"Mu," at Richmond River.....	41,225	842 11 11	4'91	34,030	883 7 0	6'23	...
"Nu," at Newcastle .....	25,460	1,213 8 4	11'44	40,320	1,975 11 6	11'76	...
"Omicron," at Cook's River .....	72,932	874 1 6	2'88	39,344	1,071 6 1	6'53	...
"Omega," at Clarence River .....	26,980	701 0 5	6'24	40,900	682 3 6	4'00	...
							Pence per ton. d.

AVERAGE Cost of Dredging and Towing, for periods as stated.

Class of Dredge.	1 July, 1900, to 30 June, 1901.								1 July, 1901, to 30 June, 1902.																	
	Tons dredged.	Hours dredging.	Dredging only.			Dredging and Towing.			Tons dredged.	Hours dredging.	Dredging only.			Dredging and Towing.												
			Expenditure.	Average cost per ton.	Average cost per hour.	Expenditure.	Average cost per ton.	Expenditure.			Average cost per ton.	Average cost per hour.	Expenditure.	Average cost per ton.												
Ladder .....	2,417,630	16,172	£ 41,784	s. 6	d. 5	4'15	£ 2 11	s. 8	52.412	11	0	5'20	2,244,815	17,343	£ 37,901	s. 9	d. 5	4'05	£ 2 3	s. 8	49,944	11	10	5'34		
Sand-pump .....	2,549,589	11,796	34,426	8	11	3'24	2 18	4	35.130	7	0	3'31	3,243,282	12,728	41,011	4	10	3'03	3 4	5	41,300	7	7	3'06		
Combined Grab and Sand-pump .....	1,054,829	11,641	12,733	16	4	2'89	1 1	11	13,936	7	4	3'17	901,543	10,212	13,392	7	2	3'57	1 6	3	13,632	13	4	3'63		
Grab .....	414,704	19,601	11,029	2	9	6'38	0	11	3	12,376	12	4	7'45	359,472	17,543	9,590	10	7	6'40	0	10	11	10,691	13	10	7'14
	6,436,752	59,210	99,973	14	5	3'73	1	13	9	113,855	17	8	4'25	6,749,112	57,826	101,895	12	0	3'62	1	15	3	115,569	6	7	4'11



## Surveys.

During the year the following surveys have been made:—

Harbour and River ... ..	7
Wharf ... ..	7
Miscellaneous ... ..	19
Total ... ..	33

Appended are returns of the expenditure for the year, also plans showing the progress of the works in connection with the various Harbour Works.

The Under Secretary for Public Works.

THOMAS W. KEELE,  
Principal Engineer for Harbours and Rivers.

RETURN of Expenditure on Public Works by Harbours and Rivers Branch from 1 July, 1901, to 30 June, 1902.

Work.	Whether Constructing or under Repair.	When Commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.
<b>DREDGE SERVICE—</b>					
Excavation of Silt by Dredges.....	Annual Service...	1901	115,002 12 9	.....	115,002 12 9
Landing Silt, forming Ground, and Special Dredging .....	Improving .....	1899	1,326 9 6	.....	86,890 10 9
New Sand-pump Dredge for Harbour Reclamation, and other works.....	Constructing.....	"	8,569 18 0	17,291 4 6	.....
<b>SYDNEY DISTRICT—</b>					
Circular Quay Improvements .....	Improving .....	1888	36 1 7	.....	114,518 19 0
Carreening Cove and Neutral Bay Reclamation .....	" .....	1894	246 19 8	.....	1,753 16 1
Clark and Shark Islands Reclamation, &c.....	" .....	1901	590 4 4	.....	590 4 4
Duck River Deepening .....	" .....	1899	3,409 17 4	.....	6,493 15 8
Darling Harbour Wharf Extension, including cost of Railway Connection, Land Resumptions, &c. ....	Constructing.....	1881	987 18 10	.....	738,955 14 8
Glebe Island Improvements, Levelling, &c. ....	Improving.....	1898	1,742 15 10	29,178 8 2	.....
Long Cove Reclamation, Wharfage, &c., including Land Resumptions .....	" .....	1890	2,089 14 5	.....	56,078 11 11
Mosmans Bay Reclamation .....	" .....	1899	158 12 6	.....	2,658 12 6
Naval Ordnance Depot, Spectacle Island .....	" .....	1898	154 2 11	1,863 8 10	.....
Parramatta River Improvements.....	" .....	1899	64 5 8	.....	11,908 19 8
Rents for Harbour Reclamation Works .....	Constructing.....	1898	*3,125 3 7	.....	8,765 12 10
Rozelle Bay Reclamation, Roadway, &c. ....	Improving.....	1899	40 12 1	.....	2,969 17 11
Rose Bay Reclamation—Lyne Park .....	" .....	"	522 4 9	.....	11,427 10 1
Sea-wall, Snail's Bay.....	Constructing....	1898	9 12 8	.....	1,504 15 5
Shea's Creek and Cook's River—Wharf and Bridge at Ricketty-street .....	Improving.....	"	109 4 9	.....	574 10 9
Shea's Creek and Cook's River—Maintenance .....	Annual Service...	1901	529 7 2	.....	529 7 2
Shea's Creek and Cook's River—Works, including land compensation .....	Improving .....	1887	1,239 14 5	320,063 19 9	.....
Spectacle Island—Erection of Shell Magazine and Wharf, including Reclamation and Water Supply.....	Constructing.....	1900	1,831 4 7	5,965 12 11	.....
Woolloomooloo Bay Wharf, Cargo Sheds, &c., east side .....	" .....	1897	†1,500 13 3	.....	37,507 3 3
Wharf, Blackwall, Brisbane Water .....	" .....	1901	170 7 2	.....	170 7 2
" Port Hacking .....	Repairs .....	"	201 8 7	201 8 7	.....
" Glebe Island for Cattle Shipping .....	Constructing.....	1899	28 13 10	.....	1,561 11 11
" Jetty Pontoon, Waiting Shed, &c., east side, Circular Quay .....	" .....	1900	15 8 4	.....	2,985 19 3
<b>Wharfs, &amp;c.—</b>					
Botany Long Wharf .....	Repairs .....	1901	365 8 6	.....	365 8 6
Blackwattle Wharf .....	" .....	"	2 8 1	.....	2 8 1
Brisbane Water—Erecting Beacon Piles .....	Improving.....	"	106 15 10	.....	106 15 10
Boat of 5-ton Crane .....	Repairs .....	"	5 14 5	.....	5 14 5
Bay View Wharf—Approach .....	" .....	"	20 14 7	.....	20 14 7
Conveyance Men to Cockatoo .....	" .....	"	6 0 0	.....	6 0 0
Circular Quay—Maintenance .....	Repairs .....	1901	3 12 5	.....	3 12 5
Clark Island—Boat Landing .....	" .....	"	7 11 1	.....	7 11 1
Como Wharf—Piles .....	" .....	"	12 2 0	.....	12 2 0
Cement Testing .....	" .....	"	343 7 10	.....	343 7 10
Darling Harbour Wharf—Maintenance .....	Repairs .....	"	25 1 8	.....	25 1 8
Dawes' Point—Removal of Rubbish .....	" .....	"	29 14 11	.....	29 14 11
Field of Mars Wharf .....	Repairs .....	"	9 8 5	.....	9 8 5
Farm Cove—Boat Landing Moorings .....	" .....	"	5 1 7	.....	5 1 7
Gladesville Wharf—Extension .....	Improving.....	1900	14 10 6	.....	493 17 11
Garden Island—Bath .....	Repairs .....	"	20 0 11	.....	28 17 2
" Lift .....	" .....	1901	6 3 3	.....	6 3 3
" Workshop Machinery .....	" .....	"	39 15 7	.....	39 15 7
" New Piles .....	Improving.....	"	72 11 0	.....	72 11 0
George's River—Beacons .....	" .....	"	88 18 8	.....	88 18 8
Kurnell Bay—Buoy .....	" .....	"	3 0 0	.....	3 0 0
Kurnell Wharf and Approach.....	Construction....	1900	952 7 5	.....	1,047 17 2
Launch "Leila" .....	Repairs .....	1901	45 11 6	.....	45 11 6
Launch "Harrier" .....	" .....	"	1 14 7	.....	1 14 7
Lake Illawarra—Cutting at Entrance.....	Improving.....	"	41 1 0	.....	41 1 0
Lady Robinson's Beach—Fascine Bank.....	" .....	"	15 0 0	.....	15 0 0

\* £766 12s. 10d. charged to Vote "Dredges, Tugs, Punts, and Barges." † £419 10s. 5d. charged to Vote "Wharfs, Jetties, and Landings."



## Expenditure on Public Works by Harbours and Rivers Branch—continued.

Work.	Whether Constructing or under Repair.	When Com- menced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
SYDNEY DISTRICT—continued.					
Wharfs, &c.—continued.					
Man-o'-war Steps .....	Repairs .....	1901	£ 1 6 8	£ .....	£ 1 6 8
Mangrove Creek—Staking Channel .....	Improving .....	"	53 11 4	.....	53 11 4
" Clearing .....	" .....	"	8 0 0	.....	8 0 0
Manly Wharf, Circular Quay—Painting .....	Improving .....	"	7 4 0	.....	7 4 0
Nepean River—Snagging .....	" .....	"	108 1 8	.....	108 1 8
Pymont Wharf—Latrines .....	Repairs .....	"	6 1 7	.....	6 1 7
" Maintenance .....	" .....	"	2 19 1	.....	2 19 1
Princes' Stairs—Damaged by s.s. "Carabella" .....	" .....	"	0 5 1	.....	0 5 1
Pemberton's Wharf, Mangrove Creek—Shed .....	" .....	"	1 15 0	.....	1 15 0
Point Frederick, Brisbane Water—Beacon .....	" .....	"	22 13 5	.....	22 13 5
Port Hacking Wharf—Buoys .....	" .....	"	45 14 10	.....	45 14 10
Pittwater Pile Beacons—erection .....	Improving .....	"	52 4 2	.....	52 4 2
Ryde Wharf .....	Repairs .....	1900	34 7 2	.....	100 5 4
Sylvania—Boat Landing .....	" .....	"	3 3 7	.....	32 17 7
Store—Removal of .....	" .....	1901	111 8 5	.....	111 8 5
Track to Barranjoey Lighthouse .....	Repairs .....	"	104 18 3	.....	104 18 3
White Star Wharf—Repairs Brow .....	" .....	"	19 9 4	.....	19 9 4
Woolloomooloo Bay—Departure of Troops .....	" .....	1900	36 3 10	.....	225 9 2
Watson's Bay Ferry Jetty, Circular Quay .....	Repairs .....	1901	28 19 7	.....	28 19 7
Wiseman's Ferry Jetty—Removal of rock .....	" .....	"	3 18 0	.....	3 18 0
" " Passenger Jetty .....	Repairs .....	"	41 6 0	.....	41 6 0
SOUTH COAST AND WOLLONGONG DISTRICT—					
Bermagui—Wharf and Approaches .....	Improving .....	1899	216 6 7	1,880 2 5	.....
Bateman's Bay—Training Wall .....	Constructing .....	"	2,793 0 1	11,027 3 6	.....
Crookhaven River—Improvements .....	Improving .....	1901	213 18 6	213 18 6	.....
Harbour Works—Maintenance, Wollongong .....	" .....	1895	422 8 3	4,504 16 11	.....
Kiama Harbour Works—Maintenance .....	" .....	1901	8 11 0	.....	8 11 0
Port Kembla Harbour .....	" .....	1898	16,464 14 3	43,834 5 6	.....
Wharf, Merimbula—Crane and Shed .....	Constructing .....	1899	* 2,291 13 11	4,891 13 11	.....
" Narooma and Approaches .....	" .....	1900	* 74 14 9	234 14 0	.....
" Tathra .....	" .....	1901	* 346 8 5	346 8 5	.....
Wharfs, &c.—					
Bega River—Opening up mouth .....	Improving .....	"	3 7 6	.....	3 7 6
Bermagui Wharf—Additions .....	" .....	"	214 11 3	.....	211 11 3
Eden Wharf—Trucks, construction .....	Constructing .....	"	49 6 8	.....	49 6 8
Moruya Wharf—Crane erection .....	Improving .....	"	21 5 0	.....	21 5 0
" " Extension .....	" .....	"	184 17 8	.....	184 17 8
Merimbula Wharf—Fencing in .....	" .....	"	7 19 8	.....	7 19 8
Tathra Wharf—Repairs .....	Repairs .....	"	0 3 9	.....	0 3 9
Ulladulla Harbour .....	" .....	"	0 6 0	.....	0 6 0
" Wharf—Repairs .....	" .....	"	1 3 0	.....	1 3 0
Wollongong Wharf—Damaged by s.s. "Allowrie" .....	" .....	"	5 19 1	.....	5 19 1
HUNTER RIVER AND NEWCASTLE DISTRICT—					
Extra Mooring Accommodation, Newcastle Harbour .....	Constructing .....	1897	3,705 1 0	.....	27,237 13 11
Ferry Landings, Alterations, &c. .....	Improving .....	1901	1,174 16 5	1,174 16 5	.....
Newcastle Harbour Works—Maintenance .....	" .....	1897	3,042 8 11	14,654 2 2	.....
" Stockton, and Bullock Island—Reclaiming land and Ballast Appliances .....	" .....	1901	1,104 15 6	1,104 15 6	.....
Newcastle Ocean Beach Reserve—Improvements .....	" .....	"	1,000 0 0	.....	1,000 0 0
North Harbour Reclamation, Newcastle .....	" .....	1894	† 5,622 12 1	45,392 0 11	.....
Queen's Wharf—Reconstruction .....	Constructing .....	1900	* 543 3 4	.....	6,001 16 7
Wharf and Shipping Appliances, Newcastle, including cost of Steam Cranes, &c. .....	Improving .....	1858	33 035 16 5	511,721 5 8	.....
Wharf, Nelson's Plains, and Approach .....	Constructing .....	1900	905 9 2	.....	917 15 1
Workshops Extension and providing Extra Machinery .....	" .....	"	.....	27 0 0	.....
Wharfs, &c.—					
Cockle Creek Wharf .....	Repairs .....	1901	8 3 1	.....	8 3 1
Central Macdonald Wharf .....	Survey .....	"	5 0 10	.....	5 0 10
Dyke Electric Plant .....	Repairs .....	"	1 2 4	.....	1 2 4
Forster Wharf—Crane .....	" .....	"	9 8 5	.....	9 8 5
" .....	" .....	"	1 2 6	.....	1 2 6
Glenoak Wharf and Approach .....	" .....	1900	44 0 0	.....	389 10 0
Macdonald River Wharf—Construction .....	Constructing .....	1901	23 18 3	.....	23 18 3
Mead's Crossing, Wallamba River—Removal of Rocks .....	Improving .....	1900	332 0 3	.....	334 11 3
Myall River—Snagging .....	" .....	1901	207 18 10	.....	207 18 10
Market-street Wharf—Alterations .....	" .....	"	5 12 0	.....	5 12 0
Millers Forest Wharf .....	Repairs .....	"	38 9 2	.....	38 9 2
No. 3 Wharf, damaged by tug "Hero" .....	" .....	"	5 11 4	.....	5 11 4
Newcastle Wharf—Soundings .....	" .....	"	8 14 1	.....	8 14 1
Newcastle Dock—Survey .....	" .....	"	64 9 6	.....	64 9 6
Odd-street Drain, Maitland—Clearing .....	" .....	"	82 11 7	.....	82 11 7
Queen's Wharf, damaged by ship "Agnes Oswald" .....	Repairs .....	"	1 15 2	.....	1 15 2
Regatta Ground, Foster—Jetty .....	Constructing .....	"	95 1 0	.....	95 1 0
Raising sunken Punt at Swansea .....	" .....	"	2 18 2	.....	2 18 2
Raymond Terrace Boat Harbour—Filling up .....	" .....	"	89 10 7	.....	89 10 7
Stockton Boat Harbour—Clearing out .....	" .....	"	20 9 6	.....	20 9 6
Sulphide Wharf, Bullock Island .....	Repairs .....	"	352 19 5	.....	352 19 5
Stockton Crane .....	" .....	"	42 12 4	.....	42 12 4
Salt Ash Wharf .....	" .....	"	3 9 5	.....	3 9 5
Toneurry Wharf Crane .....	" .....	"	7 1 0	.....	7 1 0
Wallis Creek, East Maitland—Clearing .....	" .....	"	190 3 3	.....	190 3 3

\* Charged to Vote "Wharfs, Jetties, and Landings." † £1,641 0s. 2d. charged to "Dredge Service."



## Expenditure on Public Works by Harbours and Rivers Branch—continued.

Work.	Whether Constructing or under Repair.	When Com- menced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.
<b>LAKE MACQUARIE DISTRICT—</b>					
Lake Macquarie Harbour Works.....	Constructing.....	1877	79 1 5	93,420 14 9	.....
Wharf, Teralba (Jetty).....	".....	1900	402 4 3	.....	557 0 7
Wharfs, &c.—					
Opening up Channel, Lake Macquarie to Wyong Creek..	Improving.....	1901	20 18 0	.....	20 18 0
<b>CLARENCE RIVER DISTRICT—</b>					
Alumny Creek—Clearing.....	".....	"	113 18 6	113 18 6	.....
Improvements at Heads .....	Improving and constructing.	1862	31,179 0 1	434,891 10 5	.....
Removal of Rocks, South Arm, Clarence River.....	Improving.....	1901	15 6 8	15 6 8	.....
Wharfs, &c.—					
Alumny Creek—Clearing Hyacinth .....	".....	"	71 17 5	.....	71 17 5
Ashby Dock .....	Repairs .....	"	13 2 1	13 2 1	.....
Coff's Harbour Jetty—Maintenance .....	".....	"	66 11 0	.....	66 11 0
" " Trucks .....	".....	"	68 16 9	.....	68 16 9
" " Crane .....	".....	"	84 7 10	.....	84 7 10
Charlesworth Wharf .....	".....	"	5 0 0	.....	5 0 0
Copmanhurst Wharf .....	".....	"	10 18 4	.....	10 18 4
Cowper Wharf .....	".....	"	100 19 2	.....	100 19 2
Cowan Creek—Clearing Hyacinth .....	".....	"	20 0 0	.....	20 0 0
Gears Lane Wharf .....	Repairs .....	"	12 0 0	.....	12 0 0
Grafton (North) Wharf .....	".....	"	37 6 6	.....	37 6 6
Grafton (South) Wharf .....	".....	"	160 18 3	.....	160 18 3
Iluka Fish Wharf—Strengthening.....	Improving .....	1900	114 10 6	292 6 11	.....
Maclean Wharf.....	Repairs .....	1901	3 12 1	.....	3 12 1
Palmer's Island Wharf .....	".....	"	10 0 0	.....	10 0 0
Southgate (Upper) Wharf .....	".....	"	125 7 11	.....	125 7 11
Tatham Wharf .....	".....	"	0 12 7	.....	0 12 7
Woolgoolga Jetty—Maintenance .....	".....	"	72 12 10	.....	72 12 10
" " Crane .....	".....	"	42 13 6	42 13 6	.....
<b>HASTINGS RIVER—</b>					
Improvements .....	Improving.....	1895	4,526 10 8	.....	24,719 2 8
Wharf, Port Macquarie .....	Constructing.....	1901	4 1 2	4 1 2	.....
Wharfs, &c.—					
Removal of Rocks, Wauchope.....	".....	"	5 11 7	.....	5 11 7
<b>MANNING RIVER—</b>					
Improvements.....	Improving.....	1895	12,275 1 8	79,546 17 5	.....
Dock .....	Repairs .....	1901	66 15 2	.....	66 15 2
Wharf at Head of Lansdown River .....	Constructing.....	"	333 10 0	.....	333 10 0
Wharfs, &c.—					
Coopersnook Wharf .....	Repairs .....	"	50 12 7	.....	50 12 7
Cundletown Wharf .....	".....	"	28 15 5	.....	28 15 5
Driving Guide, Tablee, at entrance to Kahrwah River.....	".....	"	18 6 1	.....	18 6 1
Engineer's Residence—Additions .....	Repairs .....	"	3 4 0	.....	3 4 0
Glenthorn Wharf .....	".....	"	102 4 5	.....	102 4 5
" " Landing Stage .....	".....	"	4 5 7	.....	4 5 7
Passengers Jetty, at foot of Tarec-street .....	".....	"	9 11 0	.....	9 11 0
<b>TRIAL BAY—</b>					
Trial Bay Prisons—Erection of Quarters, Land, &c.....	Constructing ....	1898	67 17 5	.....	4,012 0 9
<b>NAMBUCCA RIVER—</b>					
Bowra Wharf—Shed erected at Dever's Wharf .....	Improving ....	1900	179 3 2	.....	231 2 5
Improving Entrance .....	".....	1895	7,387 2 1	24,114 11 4	.....
Macksville Wharf .....	Constructing.....	1901	458 14 5	.....	458 14 5
<b>MACLEAY RIVER—</b>					
Improving Entrance .....	Improving.....	1896	10,173 19 11	60,705 13 10	.....
Pilot Station at New Entrance .....	Constructing.....	1900	3,875 5 3	3,915 17 9	.....
Wharf at Stewart's Point.....	".....	1901	182 2 10	.....	182 2 10
Wharfs, &c.—					
Bob's Creek—Clearing .....	".....	"	2 0 0	.....	2 0 0
Bowra Wharf—Approaches.....	Repairs .....	"	1 8 0	.....	1 8 0
"Coraki" Steamship—Removal of Wreck .....	".....	"	26 5 10	.....	26 5 10
Fernmount Wharf.....	Repairs .....	"	0 14 0	.....	0 14 0
Frederickton Wharf .....	".....	"	0 13 11	.....	0 13 11
Macksville Old Wharf—Removal .....	".....	"	2 0 0	.....	2 0 0
Macleay River—Dock .....	Repairs .....	"	169 18 10	.....	169 18 10
" " Wharfs—Maintenance .....	".....	"	121 16 8	.....	121 16 8
" " " .....	".....	"	153 18 3	.....	153 18 3
Raleigh Old Wharf .....	".....	"	2 17 6	.....	2 17 6
Taylor's Arm, Maloney's Flat—Removal of Tree.....	".....	"	2 0 0	.....	2 0 0
Warrell Creek—Clearing .....	".....	"	2 0 0	.....	2 0 0
Wharf at Two and a-half Miles above Raleigh.....	Repairs .....	"	3 0 0	.....	3 0 0
Wharf at New Road to Rainbow Reach .....	".....	"	88 5 0	.....	88 5 0
<b>BELLINGER RIVER—</b>					
Improvements.....	Improving .....	1890	7,501 17 8	46,179 1 7	.....
Wharf at Cahill's .....	Constructing.....	1901	39 5 3	39 5 3	.....
Wharfs, &c.—					
Bellinger Heads Wharf .....	Repairs .....	"	3 8 0	.....	3 8 0
" " Approach and Alterations .....	Improving .....	1900	26 14 0	.....	189 16 3
Drainage Swamp, near Public School, at Heads .....	".....	1901	9 15 0	.....	9 15 0
Office Repairs .....	Repairs .....	"	10 0 0	.....	10 0 0



Expenditure on Public Works by Harbours and Rivers Branch—*continued.*

Work.	Whether Constructing or under Repair.	When Com- menced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished actual amount of Expenditure.
<b>CAMDEN HAVEN—</b>			£ s. d.	£ s. d.	£ s. d.
Improvements at Entrance .....	Improving .....	1896	1,858 18 10	23,575 6 11	.....
Wharf at Laurieton .....	Constructing.....	1901	378 11 1	.....	378 11 1
Wharfs, &c.—					
Laurieton Wharf, Boat Landing—Construction .....	" .....	"	20 11 5	.....	20 11 5
<b>RICHMOND RIVER—</b>					
Dredge Dock .....	" .....	1897	3,863 14 5	10,819 13 6	.....
Flood Relief Works, <i>via</i> Evans' River.....	Improving .....	1895	6 4 11	9,040 5 2	.....
Improving Entrance .....	" .....	1878	25,504 18 5	335,850 11 0	.....
Snagging, &c., Tributaries, Richmond River .....	" .....	1894	*2,048 19 11	12,076 12 3	.....
Wharf at Cherry-street, Ballina .....	" .....	1901	182 19 0	182 19 0	.....
" Oakley Creek—Extension.....	" .....	"	188 19 3	188 19 3	.....
Wharfs, &c.—					
Ballina Wharf Crane.....	Repairs .....	"	2 17 2	.....	2 17 2
" .....	" .....	"	1 7 4	.....	1 7 4
Bungawalbyn Landing Stage—Construction.....	Constructing.....	"	40 15 7	.....	40 15 7
Byrnes' Creek, East Wardell—Drainage .....	" .....	"	3 6 9	.....	3 6 9
Broadwater Wharf .....	Repairs.....	"	5 14 3	.....	5 14 3
Coraki Wharf—Damaged by North Coast Company .....	" .....	"	3 7 0	.....	3 7 0
" .....	" .....	"	32 0 10	.....	32 0 10
Codrington (North) Wharf .....	" .....	"	0 4 9	.....	0 4 9
Duck Creek Bank Protection .....	" .....	"	10 0 0	.....	10 0 0
Engineer's Residence .....	" .....	"	106 9 0	.....	106 9 0
Emigrant Creek, at Pimlico Clearing .....	" .....	"	81 7 0	.....	81 7 0
Gundurimba (East) Wharf .....	Repairs .....	"	52 4 1	.....	52 4 1
" (South) .....	" .....	"	18 8 10	.....	18 8 10
Launch "Widge Widge"—Driving .....	" .....	"	61 1 8	.....	61 1 8
Lismore Wharf Crane .....	Repairs .....	"	8 13 11	.....	8 13 11
" (North) Wharf.....	" .....	"	5 19 4	.....	5 19 4
" (South) .....	" .....	"	4 17 0	.....	4 17 0
McInnes Lane Wharf .....	Constructing.....	"	24 18 0	24 18 0	.....
Oakey Creek Wharf—Additions .....	" .....	"	32 8 7	.....	32 8 7
" Crane.....	Repairs .....	"	71 18 2	.....	71 18 2
Richmond River Wharfs—Maintenance.....	" .....	"	43 15 2	.....	43 15 2
Swan Bay Wharf .....	" .....	"	4 18 6	.....	4 18 6
Steve King's Plains Wharf .....	" .....	"	26 6 3	.....	26 6 3
South Arm—Landing Silt.....	Improving .....	"	145 11 3	.....	145 11 3
Teven Creek, Landing Place for Cane .....	Constructing.....	"	28 9 0	.....	182 3 9
Tucki Wharf .....	Repairs .....	"	11 15 4	.....	11 15 4
Temperley's Oil Engine .....	" .....	"	0 7 0	.....	0 7 0
Woodburn (South) Wharf .....	" .....	"	11 6 11	.....	11 6 11
" (North) .....	" .....	"	110 12 0	.....	110 12 0
" Crane erection .....	Constructing.....	"	97 13 3	97 13 3	.....
Wardell Wharf .....	Repairs .....	"	16 10 9	.....	16 10 9
Wyrallah Wharf .....	" .....	"	10 10 2	.....	10 10 2
<b>TWEED RIVER—</b>					
Cape Byron Lighthouse and Quarters .....	Constructing.....	1897	10,766 18 10	18,852 17 6	.....
Improvements.....	Improving.....	1890	16,669 14 10	70,282 1 10	.....
Tweed River and Tributaries—Snagging .....	" .....	"	240 3 6	.....	266 19 7
Construction of Works to prevent erosion of Shore, Byron Bay .....	Constructing.....	1901	302 7 2	302 7 2	.....
Lavender Creek—Improvements .....	Improving .....	"	763 7 9	763 7 9	.....
Dock.....	Constructing.....	1898	152 15 10	.....	5,869 5 2
Murwillumbah New Wharf .....	" .....	1901	5 0 0	5 0 0	.....
Wharfs, &c.—					
Byron Bay Moorings.....	Repairs .....	"	158 8 8	.....	158 8 8
" Jetty .....	" .....	"	20 15 2	.....	20 15 2
" Boat Landing.....	Constructing.....	"	20 7 6	20 7 6	.....
Condong Wharf and Approach—Construction .....	" .....	"	225 1 4	.....	225 1 4
Cudgen Wharf—Mooring Piles .....	" .....	"	25 14 5	.....	25 14 5
" .....	Repairs .....	"	45 4 8	.....	45 4 8
Launch "Mi Mi"—Driving .....	" .....	"	37 14 0	.....	37 14 0
Murwillumbah Wharf Site—Survey .....	" .....	"	2 4 8	.....	2 4 8
" .....	Repairs .....	"	50 1 6	.....	50 1 6
" (South) Wharf—Construction .....	Constructing.....	"	62 18 9	62 18 9	.....
" Creek—Removing Hyacinth .....	" .....	"	7 9 0	.....	7 9 0
Tweed Heads Wharf.....	Repairs .....	"	2 7 9	.....	2 7 9
Tumbulgum .....	" .....	"	40 1 3	.....	40 1 3
Terranora Dock—Maintenance .....	" .....	"	17 4 8	.....	17 4 8
" Landing Stage .....	Constructing.....	"	4 12 9	4 12 9	.....
<b>MORUYA RIVER—</b>					
Improving Entrance—Fascine Banks, Dykes, &c.....	Improving.....	1888	89 14 5	31,063 15 9	.....
<b>DARLING, MURRUMBIDGEE, AND MURRAY RIVERS—</b>					
Improvements .....	" .....	1856	4,362 13 0	247,863 5 8	.....
<b>COCKATOO ISLAND—</b>					
Dock Establishment—Contingencies .....	Annual Service...	1901	8,853 10 10	.....	8,853 10 10
Electric Light—Maintenance .....	" .....	"	546 17 11	.....	546 17 11
Fitzroy Dock—Extension and Appliances .....	Improving .....	1898	6,943 17 8	19,833 19 7	.....
Wharf, East Side .....	Constructing.....	1901	†967 14 3	.....	967 14 3
Wharfs, &c.—					
Fitzroy Dock Wharf—Repairs .....	Repairs .....	"	5 0 0	.....	5 0 0
Hulk "Oceanic"—Docking .....	" .....	"	22 1 1	.....	22 1 1
Hungerford's Grab Bucket .....	" .....	"	63 8 0	.....	63 8 0
Inquiry .....	" .....	"	1 1 0	.....	1 1 0

\* £171 8s. 7d. charged to "Dredge Service" and £881 2s. 4d. to "Richmond River Improvements."

† Charged to Vote "Wharfs, Jetties, and Landings."



\* For items under this heading see Schedule marked "B."

† For items under this heading see Schedule marked "A."

NOTE.--Items under the heading of "Wharfs" charged to Vote "Works Generally."

\* Of this amount, £513 4s. 1d. charged to Vote "Works Generally," and £1,022 11s. 2d. to Vote "Repairs to Lighthouses."

† Items under this heading charged to Vote "Preliminary Harbour and River Surveys."



## HARBOURS AND RIVERS VOTES AND EXPENDITURE.

Year.	Votes.				Expenditure.			
	Loans.	Revenue.	Other Departments.	Total.	Loans.	Revenue.	Other Departments.	Total.
	£	£	£	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Previous to 1859...	.....	.....	.....	.....	.....	.....	.....	95,765 10 8
1859.....	5,000	18,139	.....	23,139	.....	.....	.....	16,183 19 4
1860.....	96,317	33,833	.....	130,150	.....	.....	.....	31,134 1 11
1861.....	53,815	29,293	.....	83,108	.....	.....	.....	52,314 4 9
1862.....	31,600	30,477	.....	62,077	.....	.....	.....	84,280 19 5
1863.....	95,275	33,604	.....	128,879	.....	.....	.....	53,318 16 11
1864.....	62,812	35,810	.....	98,622	.....	.....	.....	80,830 9 5
1865.....	13,900	28,708	.....	42,608	.....	.....	.....	58,347 6 8
1866.....	49,000	37,687	.....	86,687	.....	.....	.....	53,678 15 0
1867.....	10,000	42,654	.....	52,654	.....	.....	.....	70,840 7 10
1868.....	26,100	40,689	.....	66,789	.....	.....	.....	83,204 11 10
1869.....	84,000	42,268	.....	126,268	.....	.....	.....	81,279 12 9
1870.....	71,900	38,791	.....	110,691	.....	.....	.....	65,675 14 5
1871.....	13,356	33,175	.....	46,531	.....	.....	.....	67,425 7 11
1872.....	55,397	48,620	.....	104,017	.....	.....	.....	67,121 3 9
1873.....	164,560	74,071	.....	238,631	.....	.....	.....	111,160 12 6
1874.....	7,000	91,110	.....	161,319	.....	.....	.....	137,749 17 1
1875.....	36,000	57,884	.....	93,884	.....	.....	.....	222,913 19 6
1876.....	135,000	290,294	.....	425,294	.....	.....	.....	175,189 8 4
1877.....	.....	218,377	.....	218,377	.....	.....	.....	186,916 18 0
1878.....	.....	189,821	.....	189,821	.....	.....	.....	218,001 4 11
1879.....	1,086,768	179,651	.....	1,266,419	.....	.....	.....	247,110 1 10
1880.....	150,000	126,826	.....	276,826	.....	.....	.....	275,913 18 7
1881.....	130,000	157,744	.....	287,744	.....	.....	.....	313,217 0 1
1882.....	500,000	130,749	.....	630,749	.....	.....	.....	596,332 7 4
1883.....	155,000	163,253	.....	318,253	.....	.....	.....	733,620 0 0
1884.....	935,200	147,694	.....	1,082,894	.....	.....	.....	698,458 6 2
1885.....	.....	169,840	.....	169,840	.....	.....	.....	689,171 14 10
1886.....	609,853	150,909	.....	760,762	.....	.....	.....	817,631 16 11
1887.....	.....	135,612	.....	135,612	.....	.....	.....	595,743 8 8
1888.....	511,500	147,761	.....	659,261	122,811 10 2	134,682 11 4	.....	257,494 1 6
1889.....	132,600	178,048	.....	310,648	339,364 2 0	140,115 13 9	.....	479,479 15 9
1890.....	459,000	175,443	.....	634,443	254,760 15 7	166,833 6 8	.....	421,594 2 3
1891.....	.....	207,022	.....	207,022	257,885 19 9	200,012 15 2	.....	457,898 14 11
1892.....	82,000	255,927	.....	337,927	189,095 15 9	233,532 8 1	.....	422,628 3 10
1893.....	78,650	152,529	.....	231,179	161,192 13 10	169,168 19 11	.....	330,361 13 9
1 January, 1894, to 30 June, 1895.	215,700	246,666	.....	462,366	267,099 11 10	229,205 2 1	.....	496,304 13 11
1 July, 1895, to 30 June, 1896.	327,600	140,238	.....	467,838	202,816 17 0	152,120 8 5	.....	354,937 5 5
1 July, 1896, to 30 June, 1897.	297,000	120,150	13,596	432,746	235,039 12 7	123,347 19 9	13,595 3 10	371,982 16 2
1 July, 1897, to 30 June, 1898.	443,000	119,825	11,833	574,658	276,707 17 7	119,383 0 2	11,832 0 4	407,922 18 1
1 July, 1898, to 30 June, 1899.	192,350	124,494	11,093	327,937	403,605 2 6	136,007 11 1	11,092 15 3	550,705 8 10
1 July, 1899, to 30 June, 1900.	518,550	123,469	85,125	727,144	393,834 6 9	137,026 14 4	85,124 12 2	615,985 13 3
1 July, 1900, to 30 June, 1901.	268,950	128,903	55,404	453,257	420,444 8 5	238,014 13 10	55,403 17 6	713,862 19 9
1 July, 1901, to 30 June, 1902.	279,350	142,870	19,991	442,211	261,474 0 8	182,983 8 0	19,990 6 9	464,447 15 5
Totals ...£	8,449,303	5,043,057	197,042	13,689,402	3,586,132 14 5	2,362,434 12 7	197,038 15 10	13,331,138 0 2



## SCHEDULE A.

## HARBOURS AND RIVERS.

REPAIRS, &amp;c., to Lighthouses, charged to Votes "Repairs to Lighthouses" and "Works Generally."

Works.	Amount.	Works.	Amount.
	£ s. d.		£ s. d.
Barranjoey Lighthouse.....	13 13 4	Point Perpendicular Lighthouse .....	61 1 6
" " wall .....	6 5 8	Plant .....	124 15 10
Clarence Heads Lighthouse.....	13 4 5	Richmond River Heads Lighthouse .....	158 13 11
Crowdy Head " .....	10 16 2	Solitary Island " .....	15 1 10
Fingal Head " .....	10 2 2	Seal Rocks " .....	51 19 8
Green Cape " .....	93 4 2	Smoky Cape " .....	29 0 10
Incidental .....	7 8 10	South Head Signal Station .....	2 18 9
Kiama Lighthouse.....	5 9 11	Tacking Point Lighthouse .....	8 4 9
Macquarie Lighthouse and quarters .....	233 17 2	Ulladulla Light .....	4 13 5
Montague Island Lighthouse .....	605 10 11	Watson's Bay Light .....	12 0 10
Nelson Head " .....	3 14 2	Wollongong Lighthouse .....	7 10 0
Nobby's Lighthouse .....	1 6 5		
Port Stephens Lighthouse .....	55 0 7	Total .....	£1,535 15 3

## SCHEDULE B.

## HARBOURS AND RIVERS.

ITEMS charged to Vote "Preliminary Harbour and River Surveys."

Works.	Amount.	Works.	Amount.
	£ s. d.		£ s. d.
Bellina Foreshores .....	73 6 5	Plant .....	221 15 5
Brisbane Water .....	248 19 1	Port Kembla Harbour .....	17 7 6
Cockatoo Island—New Wharf .....	6 6 0	Port of Forster .....	10 17 0
Cook's River, at entrance.....	182 17 2	Richmond River Harbour .....	67 6 0
George's River Weir.....	69 1 8	Rose Bay—Proposed Pier .....	15 6 6
Hunter River Flood Prevention Scheme .....	173 10 9	Sydney Harbour .....	8 6 0
Hen and Chicken Bay Reclamation .....	4 18 0	Woolloomooloo Bay Ba'hs .....	2 18 6
Incidental .....	132 15 8	Wagonga River, at entrance .....	9 11 6
Kiama—proposed Sea Wall.....	5 18 6	Wollongong Harbour .....	28 6 6
Lane Cove Reclamation .....	8 1 0		
Newcastle Harbour .....	92 10 7	Total .....	£1,428 10 9
Norah Head Coast .....	48 11 0		



# Roads, Bridges, and Public Watering Places Branch.

## Report of the Commissioner and Principal Engineer.

I have the honour to submit the following report on the works carried out by this Branch during the year ending 30th June, 1902, together with a tabulated statement of the expenditure and other statistical information.

### EXPENDITURE.

The total expenditure of the Branch on roads, bridges, ferries, public watering places, and artesian boring, dealt with by the Branch was £972,927. Of that amount, a sum of £731,467 was derived from revenue, and £235,280 from loan funds, while £6,180 was for sundry services to other Departments.

Of the sum available from Loan Votes for roads and bridges, &c., £151,265 remained unexpended on 30th June, and was carried forward.

Road works absorbed £554,112, bridges £232,281, ferries £18,459, works for the conservation of water £75,146, miscellaneous works, £15,290, salaries, supervision, equipment, travelling expenses, rents, &c., £71,459, and services for other Departments £6,180.

The total expenditure of the Branch may also be classified as follows:—

Contracts £424,914, day labour under the supervision of the Departmental officers £313,673, stores and materials £127,688, supervision, including salaries, equipment, rents, cleaning, lighting, wages of overseers, &c., £71,459, and expenditure within Municipalities, including subsidies, amounted to £32,493.

The liabilities on contracts not completed on 30th June was £107,592, of which £87,780 was for roads and bridges, and £19,812 for Public Watering Places.

Of the total expenditure, contracts absorbed 43·67 per cent.; wages, 32·52 per cent.; stores, materials, and sundries, 13·13 per cent.; supervision, equipment, travelling, rents, &c., 7·34 per cent.; and subsidies to Municipalities, 3·34 per cent.

The following table shows the total expenditure of the Branch each year from 1st July, 1895, to 30th June, 1902, and the percentage absorbed under these headings:—

Year.	Total Expenditure.	Wages.	Contracts.	Stores, Materials, and Sundries.	Supervision.	Municipal.
	£	per cent.	per cent.	per cent.	per cent.	per cent.
1895-6 .....	689,853	22·40	61·90	2·90	8·20	4·60
1896-7 .....	676,209	21·66	50·34	7·74	8·82	11·44
1897-8 .....	525,874	30·69	54·74	3·04	8·61	2·92
1898-9 .....	645,569	25·10	55·64	7·66	8·38	3·22
1899-0 .....	678,605	27·30	53·84	7·15	8·19	3·52
1900-1 .....	940,475	30·79	46·59	11·99	7·03	3·60
1901-2 .....	972,927	32·52	43·67	13·13	7·34	3·34

Exclusive of Pymont Bridge, referred to elsewhere, the total number of bridges opened was 45, and their cost, excluding engineering and incidental expenses, £64,030.

Twenty-seven bridges, estimated to cost £180,822, were in course of construction on 30th June. Of that sum, £98,010 is for the Glebe Island Bridge.

A sum of £47,151 has been expended in the repair of existing bridges. This work is all done by day labour, which is found to give the best results in this class of work.

The following table gives the cost of repairs and renewals since July 1st, 1895:—

Year.	Cost of Repairs.	Renewals.	Length in feet.	Cost.	Total cost of repairs and renewals.
	£ s. d.			£ s. d.	£ s. d.
1895-6 .....	19,360 0 0	31	2,453	10,013 14 2	29,373 14 2
1896-7 .....	29,297 19 11	53	5,135	36,850 4 7	66,148 4 6
1897-8 .....	33,809 6 10	28	3,235	24,164 10 0	57,973 16 10
1898-9 .....	46,107 6 2	38	6,793	42,797 18 8	88,905 4 10
1899-0 .....	49,203 0 0	35	4,440	47,408 16 1	96,611 16 1
1900-1 .....	29,183 3 2	33	4,881	46,525 15 3	75,708 18 5
1901-2 .....	47,150 14 1	16	1,871	10,914 5 4	58,064 19 5

The cost of working ferries for the year was £13,895, and the revenue derived therefrom £6,446.

The total number of works for the conservation of water now under the control of the Branch is 461, and 30 are in course of construction. The cost of these has been £1,543,403, including all expenses, of which £903,888 was derived from loans, and £639,515 from revenue.

The cost of the 136 works completed during the year, or in progress on 30th June, was £114,331, of which £61,621 was expended during the twelve months. Including all expenses of management, supervision, &c., the total expenditure of the Branch for the year in water conservation was £75,146.

The



The revenue derived from rents of tanks, wells, dams, and artesian bores amounted to £5,055. Those in charge of collectors were subsidised to the amount of £2,025. The expense of managing the various works for the supply and conservation of water was £10,650, and the revenue derived therefrom £7,541. The net working cost to the Department has, therefore, only been £3,109.

As the tanks and dams have a storage capacity of about 2,561,500,000 gallons (the works of this year having added 61,500,000 gallons), and the daily flow from the artesian bores is 51,200,000 gallons. This result is considered highly satisfactory, more especially as, owing to the severe drought, the charges were made very low, and a large quantity of water was distributed free.

A sum of £2,300 was expended in supplying districts suffering from a water famine.

#### STATISTICS.

##### Roads.

The length of roads dealt with during the year was 46,348 miles, and their number 4,027. They are classified as follows:—

	No.	Length.
Scheduled roads receiving a regular annual expenditure ...	1,733	31,022 miles.
Municipal roads subsidised by the Department ...	508	1,336 "
Unclassified roads receiving grants as required... ..	1,786	13,990 "
	4,027	46,348 "

Thirty-two scheduled roads, having a length of 226 miles, and 19 unclassified roads, having a length of 118 miles, are under the control of trustees, acting under the general supervision of Departmental officers.

##### Bridges.

Excluding the Pymont and Glebe Island, there are 3,251 bridges, having 8,824 spans, and a combined length of 305,659 feet, or 57 miles 70½ chains on roads dealt with by the Branch.

Including those erected to replace old structures, 45 new bridges having one iron span, 16 truss spans and 168 beam spans, and a total length of 7,225 feet have been completed and opened for traffic during the year at a cost of £64,030.

Of these, 16 bridges, with 55 spans and having a length of 1,868 feet, superseded others previously erected at the same sites, so that the net increase for the year was 29 bridges, having 132 spans and a length of 5,357 feet.

On 30th June 11 bridges at new sites and 15 to replace old structures were in course of construction. These have a length of 6,816 feet, made up of 6 iron spans, 11 truss spans, and 145 beam spans, and their estimated cost amounts to £82,812.

The total length of bridges completed or in course of construction during the year was thus 14,041 feet, or 2 miles 52¾ chains.

The Pymont Bridge has a total length of 1,758 feet, including approaches. The bridge itself is 1,209 feet long, and the remaining length is made up of 12 side spans.

The material used in the construction of the bridges opened for traffic comprised 31,791 lineal feet of round piles and girders, 107,287 cubic feet of hewn and sawn timber, 346 tons of ironwork, 1,438½ cubic yards of concrete, 263 lineal feet of Monier cylinders, and 458 lineal feet of Monier pile-armour.

##### Culverts.

The culverts on the roads in charge of the Branch number 39,082, of which 797 are arched in stone, brick, or concrete; 344 have stone, brick, or concrete walls, with timber or iron decking; 25,280 are built wholly of timber, and 12,661 are earthenware pipes of various diameters.

The total length of these culverts is 559,936 feet, or 106 miles 4 chains. The net increase during the year was in number 322, and in length 10,239 feet, or 1 mile 75 chains; but, including old structures replaced, 1,770 culverts were built.

##### Causeways.

Eleven hundred and twenty-eight causeways were laid down during the year. The total number now in use is 21,947, having a length of 496,321 feet, or 94 miles.

##### Buildings.

There are 224 buildings, the property of the Government, in use as stores, engine-sheds, and dwellings at ferries, tanks, bores, &c.

##### Punts.

One hundred and thirty-four punts and boat-ferries are in operation. The Department owns 3 steam-launches, 120 punts, and 208 boats of all descriptions. Of the punts, 12 are iron and 108 timber; eight are worked by steam, 1 by oil-engine, 96 by hand-gearing, and 15 without gearing.

Three punts and 10 boats were built during the year, while 65 punts and 52 boats were overhauled and repaired. Eight punt slips are in use.

##### Public Watering Places.

During the year 32 tanks, 7 dams, 20 wells, and 11 artesian bores were completed and made available for use, but unfortunately in several cases the tanks and dams have remained empty, no rain having fallen since they were completed. On 30th June 13 tanks, 1 dam, 6 wells, and 10 bores were in progress.

Of the 461 works for obtaining and conserving of water in operation, 32 are in charge of caretakers and collectors, 168 are under lease, 17 are under trustees, 7 are under the Artesian Wells Act, controlled by residents, and the remainder are open watering-places where no fees are charged.

During



During the year 43 licenses under the Water Rights Act were applied for. Of these 23 have been granted, 2 have been refused, and 13 were under consideration on 30th June.

The tanks and dams completed during the year have a total storage capacity of 61,500,000 gallons. The largest of these is the Rocky Waterholes Tank, which has a capacity of 2,813,600 gallons and cost £1,527.

The artesian bores completed have a total yield per day of 17,780,000 gallons. Of these the Orel bores Nos. 1 and 2 are the largest. No. 1 bore was sunk 2,728 feet at a cost of £3,365, and yields a supply of 3,000,000 gallons per day, while No. 2 bore is 3,100 feet deep; it cost £3,723 and yields 4,000,000 gallons.

The deepest bore completed during the year was at Careunga; it was sunk 4,080 feet at a cost of £7,515, and yields 800,000 gallons per day. In two cases no water was found, viz., at Hungerford and Willara, where bedrock was reached at 283 feet and 302 feet respectively. The first of these was sunk at the instance of the Queensland Government, who contributed half of the cost.

At the Grafton bore work was discontinued after reaching a depth of 3,700 feet. In November the tools became fast, and all efforts to dislodge them were unsuccessful. In this bore a large supply of natural gas, which burnt with a bright clear flame and was under high pressure, was tapped at a depth of 3,100 feet.

At Bidura, where Mr. Pittman, the Government Geologist, had discovered indications of artesian water, a bore was sunk 1,275 feet to the bedrock, but was only partially successful. No water was found at the depth named, but at the 750 feet level a useful pumping supply suitable for stock was obtained.

Of the artesian bores being put down, three are for the purpose of supplying towns with water for domestic and other purposes, and seven are being provided for travelling stock and as public watering places. Ten are being sunk under the provisions of the Artesian Wells Act of 1897; of these seven are completed and provide a supply of 12,180,000 gallons per day. The water is distributed by means of drains totalling 96 miles in length exclusive of the length cut by residents. The area benefited aggregates about 463,000 acres of occupied land, and is held by 107 settlers whose holdings range from 610 acres to 140,000 acres.

The regulations governing the issue of leases have not been altered. Leases are all submitted to public tender. Lessees have certain rights of agistment and depasture, and are entitled to charge for the watering of cattle, sheep, &c., at fixed rates. Owing to the severity of the drought and the distress resulting from it, it has been again found necessary to throw open many of the watering places to the public free of charge, and in such cases the lessees have been recouped the resulting loss.

#### *Labour Statistics.*

An average of 53 foremen and overseers, 940 maintenance men, and 103 ferrymen, caretakers, &c., were regularly employed during the year; while an average of 60 foremen and overseers, 543 maintenance men and 1,352 ferrymen, caretakers, &c., had intermittent employment. Of contractors and contractors' men the monthly average was 6,217. The average of all classes of wage-earners more or less regularly employed was thus 9,271.

The number of individuals who were relieved from distress by obtaining casual employment on relief works was about 7,500 in the Metropolitan District, and about 1,900 in all other districts, or a total of 9,400. The works undertaken for this purpose were generally small, but of a permanent or useful character. The most important were the extension and improvement of the Botanic Gardens at a cost of £3,500; the construction of the beach road at Rusheutters' Bay, £2,000; the reopening of Gladesville to Pittwater Road, £2,500; and the widening of the South Head Road for tramway extension, £3,000.

#### *General Statistics.*

The contracts let during the year numbered 3,263, of which 3,042 were for road works, 158 for bridges, and 63 for public watering-places. The total value was £359,431, including those let prior to 30th June, 1901; 3,201 were completed prior to 30th June, 1902, and 467 were in progress on that date.

The number of letters, reports, minutes, &c., registered at the district offices was 46,006, and at head office, 34,402. The number of vouchers submitted for payment by the district offices was 26,912, and the number passed at head office from all sources was 29,483.

The requisitions received at head office for the issue of material, stores, plant, &c., numbered 5,403, the value of the articles issued being £38,165 14s. 11d., made up as follows:—

Number.										Value.		
										£	s.	d.
Roads ...	...	...	...	...	...	4,329	...	...	...	25,370	19	1
Bridges...	...	...	...	...	...	744	...	...	...	6,738	17	3
Public Watering-places	...	...	...	...	...	330	...	...	...	6,055	18	7
5,403										£38,165	14	11

#### *STAFF.*

The State is divided into sixty-four road districts, each presided over by a Road Superintendent, who in some of the more important districts is provided with an assistant, or clerk, and one or more foremen. Their duties embrace the construction and supervision of the roads, bridges, ferries, and works for the conservation or supply of water within their districts; they control all the labour employed, issue certificates for all payments, and report on all proposals for expenditure.

The greatest length of scheduled road under the direct supervision of any Road Superintendent is 829 miles, and the least 177 miles. Including unclassified and subsidised roads, and roads under trustees, the actual mileage directly or indirectly under their control ranges from 1,402 miles to 239 miles.

Road Superintendents are responsible for the examination and proper maintenance of 3,251 bridges, and about 39,000 culverts, some of them of considerable size. They also control 134 ferries, and most of the tanks, dams, wells, and artesian bores, together with the caretakers, ferrymen, and others employed thereon.

In



In addition to the inspection of contracts, and supervision of roads, ferries, public watering-places, &c., the Road Superintendents have to devote a considerable amount of their time to inquiring into and reporting upon applications for expenditure. Such applications usually come from individuals or small groups of residents more or less isolated from leading thoroughfares, and, with a limited sum available, great judgment and patient inquiry are necessary to determine the extent to which assistance can be given, and to separate genuine cases from bogus ones. It is no unusual thing to receive petitions, containing from twenty to fifty signatures, asking for expenditure on roads of access, which on inquiry it is found will serve only one or two individuals, the whole value of whose holdings do not nearly reach the amount required to give them access.

That so little protest has been made against the decisions arrived at is a satisfactory proof of the tact, judgment, and independence of the officers dealing with them.

In the execution of their duties Road Superintendents travelled 279,025 miles by road and 79,296 miles by rail, their assistants travelled 92,943 miles by road and 33,881 miles by rail, and foremen, overseers, &c., travelled 62,943 miles by road and 10,752 miles by rail. The total distance travelled by all district officers was thus 434,914 miles by road and 123,929 miles by rail, in all 558,843 miles. The cost to the Department was 2·42 pence per mile.

The greatest distance travelled in one district was 25,479 miles, and the average for all districts was 8,732 miles.

In comparison with last year the mileage travelled shows an increase of 6,276 miles, and a decrease in cost of one-fifth of a penny per mile.

In the Head Office designs were drawn by the bridge staff, and tenders invited for sixty-five bridges estimated to cost £94,405.

Numerous sketches and calculations, and about 100 preliminary estimates for works not proceeded with were also made.

A considerable amount of work was done in connection with the preparation of plans, estimates, sketches, calculations, &c., for the approaches to the proposed Sydney Harbour Bridge.

The expenditure in salaries equalled 3·52 per cent. on the value of the works carried out.

In the general drawing office a large amount of work has been done in examining and checking proposals sent in by district officers, and supplying plans and information asked for by them.

This Branch undertakes the survey and preparation of plans for resumptions required by other Departments for the erection of public buildings such as police stations, post offices, &c., the resumptions for the new railway station approaches were also carried out.

Sixteen resumptions were made, eight of which were for other Departments. These involved the preparation of 150 plans.

In connection with the Darling Harbour and Rocks resumptions seven large detail plans covering the whole area and giving the results of the surveys, searches, and inquiries into title, and 2,076 plans of individual properties were prepared.

The resumption of the approaches to the Central Railway Station involved the preparation of ten large detail plans and 108 small ones.

One hundred and six plans were prepared in connection with Public Watering Places.

One hundred and thirty-six proposals for the resumption of land for road deviations were investigated, and the Department of Lands asked to take the necessary action under the Public Roads Act. That Department was also asked in fifty cases to take action for the reservation of areas at Public Watering Places.

## WORKS.

### Roads.

The work of the Branch has been carried out under very exceptional disabilities. The difficulty of obtaining tenders for works, and the increased cost of contracts resulting from the severe drought and the changed labour conditions have been very considerable. The necessity for providing work to relieve distress, and the general adoption of the day-labour system have greatly increased the number of inspectors, foremen, and others employed.

The office work in the districts has also been increased, and a much closer and more constant supervision by the Road Superintendents has been involved. Notwithstanding these difficulties and increased expenses the cost of supervision is only 0·11 per cent. higher than last year, while it is still 0·85 per cent. lower than for the year 1899-0. This result of the year's operations cannot but be regarded as highly satisfactory, and can only be accounted for by the extreme attention paid by all officers to details of management with the object of reducing its cost.

The resources of the Department have been largely directed towards maintaining the roads in efficient repair, and as far as possible extending the means of access to them. No road works of special magnitude have been carried out, but the mileage has been considerably extended. In all new works, the policy hitherto adopted has been followed, of having them carried out on such lines as will render them of permanent value. In the many cases where the location of the roads is unsatisfactory, deviations have been selected and established prior to extensive improvements being undertaken, and temporary work likely to be subsequently superseded has as far as possible been avoided.

The severe drought which existed throughout the year rendered it difficult to completely carry out the functions of the Branch. Metalling and gravelling could not be done with any advantage, as without rain the material would not set and blinding was useless. Roads already metalled were, for a like reason, very difficult to maintain, and it was impossible to keep a good surface, more especially as in many districts a special strain was placed on these roads by the unusually heavy traffic in fodder.

Owing to the hardness of the ground, light formation could not be carried out at a reasonable cost and it was not unusual to have recourse to explosives to remove material that under usual conditions was easily worked with picks and shovel. In many places the absence of water for the men and horses, and of feed for the latter, rendered it quite impossible to secure labour for carrying out works. Tenders were frequently invited three or four times without any satisfactory result, and the work had to be deferred.



Other contracts actually let were seriously delayed, and under the circumstances the penalties for overtime could not be strictly enforced.

In addition to this the ordinary labour market was disturbed by the partial interruption of private enterprises, and a large number of men were thrown out of employment for whom, in accordance with the policy of the Government, it was necessary to find work. This involved the inauguration of schemes which, although highly necessary and useful, might have been constructed more cheaply if deferred to a more suitable season and carried out gradually.

During the year the net increase in metalled or gravelled road was 776 miles; of formed road 460 miles; of road cleared and drained 152 miles, and of cleared road 758 miles. The length of bush or untouched road was decreased by 714 miles. The total increase in mileage of all kinds of road under Road Superintendents, as compared with last year, was 1,431½ miles.

Of the 46,348 miles of road now in charge of the Branch, 9,282 are metalled or gravelled, 6,522 formed, 5,392 cleared and drained, 11,314 cleared only, and 13,838 miles are unimproved, except for minor repairs carried out to render them fairly trafficable.

The work done during the year includes 26,830 chains of construction, 39,356 chains of forming, 60,816 chains of clearing, and 26,920 chains of draining, while 404,679 cubic yards of maintenance metal and gravel were obtained and spread, or stacked for future use. 1,918 culverts of all classes and 1,128 causeways were constructed, and 10,081 rods of fencing erected.

In connection with ferries three new punts and ten boats have been built, and sixty-five punts and fifty-two boats overhauled and repaired. The number of punt and boat ferries is 134.

### Bridges.

Forty-six new bridges, including that at Pymont, were completed and opened during the year at a cost of £176,500, and twenty-seven, including the Glebe Island Bridge estimated to cost £180,822, were in course of construction on 30th June, 1902.

Amongst the bridges completed and opened for traffic the following are worthy of special notice:—

*Bridge, Telegraph Point, Wilson's River.*—This bridge is on the main North Coast road between Port Macquarie and Kempsey. The Wilson River is navigable some distance above it, and to provide for river traffic a Bascule Bridge of a type not previously erected in the State has been constructed by day labour. Five of the piers are of Monier cylinders with steel bracing, and four are of piles protected with Monier casings.

*Wyong Bridge, Wyong Creek.*—This bridge has one composite truss span of 92 feet and 174 feet of beam spans. The two main piers consist of Monier cylinders with steel bracing.

*Killawarra Bridge, Manning River.*—This bridge has five 90 feet timber truss spans and 633 feet of beam spans, and is just above the head of navigation on the Manning River.

*Bridge, McIntyre River, at Inverell.*—This bridge connects the town of Inverell with the railway station of the Moree-Inverell line, and consists of two 91 feet composite truss spans and 64 feet of beam spans, the main piers consisting of Monier cylinders with steel bracing.

*Pymont Bridge.*—The foundation stone of this structure was laid by the Hon. E. W. O'Sullivan on 6th September, 1899, and the bridge was formally opened for traffic by His Excellency the State Governor, Sir Harry H. Rawson, K.C.B., in the presence of a large concourse of people, on 27th June, 1902, a period of twenty-one months being thus occupied in construction.

As the work is one of considerable importance, I deem it advisable to make special reference to some of the more salient features connected with it, in order that proper record may appear in the departmental report. At the outset, in 1891, competitive designs were invited, the first premiated one being for a steel structure, at an estimated cost of £293,700; no further steps were taken, however, until the whole question was remitted to the Parliamentary Standing Committee on Public Works, when a design submitted by the Department was recommended for adoption and ultimately approved.

The work as actually carried out provided for timber side spans, in lieu of steel, with a full roadway of 54 feet at the swing span, and two fairways of 70 feet each for vessels, as against 38 feet and two fairways of 60 feet in the premiated design; and has been completed within the estimated cost of £112,500.

The total length of the structure and its approaches is 1,758 feet, the bridge itself spanning a distance of 1,209 feet, of which total the swing span represents 223 feet, the remainder being covered by the twelve side spans, each of 82 feet 4 inches. The swing span, weighing 800 tons, is carried on a pivot which has its foundation on a caisson of 42 feet diameter sunk to a depth of 62 feet. Its floor space is 12,000 superficial feet, as against 10,600 on the Newcastle-on-Tyne Bridge, and the roadway is 4 feet wider than that on the Tower Bridge of London. The swing itself, which is operated by two 50 h.p. electrical motors supplied with power from the Ultimo power-house, can be opened or closed in forty-four seconds, at a cost of five farthings for the double operation, which includes the opening and closing of the gates as well as the swing. Compared with the tedious method of hand-power in the old structure the advantage is obvious.

In view of the diversity of the work to be executed, it was determined, with the object of securing better competition, to let the contracts in three sections, namely, timber side spans; pivot and swing span; and masonry, &c., in connection with the abutments, the whole to proceed simultaneously.

The successful tenderers were Mr. McClure, Messrs. J. McCormick and Sons, and Messrs. Farley and McCarthy, respectively, all of whom have performed their work with satisfaction; and it can be safely said that the results derived from thus dividing the contracts have thoroughly justified the experiment.

During the progress of the work the resumption of the Darling Harbour foreshores was assented to by Parliament, and subsequently, the Sydney Harbour Trust, a newly-created body to administer the wharf properties, &c., so acquired, desired that under the changed conditions provision should be made for a roadway at the water's edge. This involved certain modifications in the design for the Sydney approach, the work necessary to effect the alterations being carried out by day labour.

Of the bridges in progress the following are the most important:—

*Tabulam Bridge, Clarence River.*—This bridge consists of five composite truss spans of 105 feet each on concrete piers, eleven beam spans of 35 feet each, and two of 30 feet each, having a total length of 974 feet. The work is being carried out by day labour, and is now nearing completion.



*Cobram Bridge, Murray River.*—This bridge was designed and is being constructed by this Branch, but the cost of the bridge itself is being defrayed by the Government of Victoria, while the approaches on the New South Wales side are being paid for by this State. The bridge will have a total length of 571 feet, consisting of two composite truss spans of 104 feet each, seven beam spans 35 feet each, and two 30 feet each, while a steel lifting span of 58 feet, of the improved type recently used at Hinton and Murwillumbah, is provided for the river traffic. A contract at £12,660 has been let for this work, but considerable difficulty has been encountered in obtaining suitable foundations for the piers, and this will add to the cost.

The work of erection is now well advanced and the bridge will be available for traffic in a few months.

*Luskintyre Bridge, Hunter River.*—This bridge consists of two steel truss spans 199 feet each, nineteen 35 feet and two 30 feet plain beam spans. It has a total length of 917 feet. The main piers consist of iron cylinders 4 feet 6 inches and 6 feet diameter.

*St. Albans Bridge, Macdonald River.*—This bridge consists of two composite truss spans of 118 feet each, and two 35 feet and two 30 feet plain beam spans, having a total length of 370 feet.

The main river pier is constructed of iron cylinders, the remainder of the piers being of timber.

*Lane Cove Bridge, carrying pipe line.*—This bridge consists of two steel arch spans of 190 feet each, and four 15 feet and two 16 feet side spans. The total length overall is 483 feet. This bridge will carry the duplicate water main to the northern suburbs, and is also designed to carry foot traffic.

*Glebe Island Bridge.*—Operations in connection with this work have proceeded steadily, and with the two iron side spans, which recently arrived from England, in position, matters are taking a definite shape.

The bank on the Sydney side has been pitched on the slopes, and finished with the exception of the gap adjoining the city end, which cannot be touched at present, as a fairway will have to be maintained for the shipping traffic through the old bridge. This will not, however, retard the throwing open of the new bridge for traffic so soon as the other portions shall have been completed, as the intention is to span this gap with a temporary structure, and then proceed with the filling in.

On the Glebe Island side the work of stone facing the bank has been well advanced, the whole length being nearly completed.

A certain amount of delay has occurred in obtaining the swing span and other ironwork, which is being imported; but it is hoped that by pushing on, the bridge will be available for traffic by July next. Estimated cost is £98,010, and the expenditure to 30th June was £62,605 18s. 9d.

The use of Monier pipes instead of sheathing for protecting piles from the ravages of the *teredo navalis* continues to give satisfaction, and Monier cylinders are also being largely used.

The stock of timber for bridges has been kept up to requirements, a sum of £2,763 having been expended in replenishing it during the year.

The stock at Cockatoo Island now stands as follows:—

		Ironbark and Hardwood.			Round Piles.
Stock on 1st July, 1901	...	352,548 super. ft.	...	...	3,998 lin. ft.
Quantity added during year	...	235,259 "	...	...	230 "
Quantity issued during year	...	364,321 "	...	...	1,948 "
Stock on 30th June, 1902	...	225,486 "	...	...	2,369 "

The timber inspected before export to New Zealand, by arrangement with the Government of that Colony, was as follows:—

Ironbark, hewn and sawn	...	...	...	...	1,441,490 super. ft.
Tallow-wood	...	...	...	...	238,574 "
Blue gum and brush box	...	...	...	...	161,269 "
Hardwood squared sleepers (119,916)	...	...	...	...	2,798,040 "
Round piles	...	...	...	...	94,112 lin. ft.

In addition, a large number of sleepers for the railways of this State were inspected and passed.

The Ulmarra punt (hull and machinery) was completed, and new boiler and engines were supplied for the Taree punt; the punt itself was not, however, ready for use at the end of the year.

#### Repairs to Bridges.

During the year a sum of £47,150 14s. 1d. was expended in repairs to bridges, the work being carried out by day labour under the Departmental overseers, a system which gives the best results in this class of work.

Prior to 1897-6, no special sum was set apart for repairs; but since that year the expenditure under this head has been kept separate, as also has the expenditure in renewals or complete replacing of bridges past repair, which enables the following table to be given:—

Year.	Cost of Repairs.	Bridges Renewed.	Length in feet.	Cost.	Total Cost of Repairs and Renewals.
	£ s. d.			£ s. d.	£ s. d.
1895-6	19,360 0 0	31	2,453	10,013 14 2	29,373 14 2
1896-7	29,277 19 11	53	5,135	36,850 4 7	66,148 4 6
1897-8	33,809 6 10	28	3,235	24,164 10 0	57,973 16 10
1898-9	43,107 6 2	38	6,793	42,797 18 8	88,905 4 10
1899-0	49,203 0 0	35	4,440	47,408 16 1	96,611 16 1
1900-1	29,183 3 2	33	4,811	46,525 15 3	75,708 18 5
1901-2	47,150 14 1	16	1,871	10,914 5 4	58,064 19 5



## SCHEDULE A.

NEW BRIDGES erected where no previous bridge existed from 1st July, 1901, to 30th June, 1902.

Name.	Length in feet.	Number of Spans.			Cost.
		Iron.	Truss.	Beam.	
Araluen .....	93	.....	.....	3	£ s. d. 356 10 0
Billabong Creek, at Jerilderie .....	179	.....	.....	5	1,501 0 8
Black Creek, at Holmes' Crossing .....	144	.....	I	2	1,856 11 0
Bogan River, near Peak Hill .....	95	.....	.....	3	530 6 8
Broughton Creek, at Far Meadow .....	194	.....	.....	6	618 0 0
Charlyong River .....	294	.....	I	6	2,221 10 0
Coldstream River .....	370	.....	2	4	7,290 14 4
Coombing Creek .....	64	.....	.....	2	451 15 0
Darby's Falls .....	184	.....	.....	6	1,739 15 6
Duckmaloi River, at Edith .....	94	.....	.....	3	926 3 10
Farmer's Creek, at Lithgow .....	74	.....	.....	2	529 7 6
Fish River, at Delaney's Falls .....	250	.....	.....	7	1,637 3 2
Gil Gil Creek .....	243	.....	.....	8	1,617 12 2
Gum Creek, at Hay .....	64	.....	.....	2	269 10 0
Heifer Creek .....	54	.....	.....	2	212 17 7
Killansar Creek .....	74	.....	.....	2	397 11 9
Killawarra .....	633	.....	5	6	7,021 5 4
Korn's Crossing Footbridge .....	176	.....	I	.....	194 15 3
Macintyre River, at Inverell .....	246	.....	2	2	4,653 5 5
" " Wallangra .....	180	.....	.....	5	364 12 6
Macquarie River, Binghi .....	144	.....	.....	4	1,191 1 5
" " Scabbing Flat .....	209	.....	.....	6	1,973 6 6
Mongarlowe .....	93	.....	.....	3	88 18 9
Munmurra .....	224	.....	I	4	1,854 18 6
Perrott's Creek, at Jamberoo .....	34	.....	.....	1	154 14 0
Telegraph Point .....	404	I	I	7	8,521 12 7
Uriarra .....	214	.....	.....	7	1,704 18 7
Wetalebah .....	64	.....	.....	2	326 3 6
Wyang Creek .....	266	.....	I	4	3,605 13 0
	5,357	I	15	114	53,115 14 6

## SCHEDULE B.

BRIDGES erected from 1st July, 1901, to 30th June, 1902, to replace previous bridges.

Name.	Length in feet.	Number of Spans.			Cost.
		Iron.	Truss.	Beam.	
Alumny Creek .....	159	.....	.....	5	£ s. d. 597 13 7
Byron Creek .....	74	.....	.....	2	562 9 7
Coleman's Creek .....	70	.....	.....	2	348 10 0
Collector Creek .....	154	.....	.....	5	749 0 0
Cook's River, at Hilly's .....	74	.....	.....	2	557 13 9
Davey's Creek .....	74	.....	.....	2	498 10 0
Euroka Creek, Kempsey .....	74	.....	.....	2	256 14 11
Jacob and Joseph Creeks, Quirindi .....	134	.....	.....	4	1,667 13 9
Limestone Creek .....	64	.....	.....	2	468 6 6
Macauley's Creek .....	34	.....	.....	1	188 8 5
Morley's Creek .....	109	.....	.....	3	799 10 0
Mulwarrie Ponds .....	260	.....	I	5	3,542 8 10
Reidsdale Creek .....	39	.....	.....	1	142 2 2
South's Creek .....	29	.....	.....	1	152 15 10
Uralla Creek, at Hill-street .....	37	.....	.....	1	313 4 6
Umeralla Footbridge .....	481	.....	.....	16	283 3 6
	1,868	.....	I	54	10,914 5 4



## SCHEDULE C.

BRIDGES in course of construction, 30th June, 1902, where no previous Bridges exist.

Name.	Length in feet.	Number of Spans.			Cost.
		Iron.	Truss.	Beam.	
Adjungbilly Creek .....	58	.....	.....	2	£ s. d. 115 0 0
Cobram .....	576	1	2	9	16,163 9 3
Fennell Bay, Lake Macquarie .....	379	.....	1	9	3,861 2 9
Harvey's Crossing .....	455	1	.....	6	6,000 0 0
Lane Cove Arch Footway .....	476	2	.....	6	4,600 0 0
Murrumbidgee, at Yaouk .....	109	.....	.....	3	456 16 0
Nimmie Creek .....	54	.....	.....	2	239 0 0
Tabulam .....	1,304	.....	5	21	14,500 0 0
Thalabah Creek .....	89	.....	.....	3	247 0 0
Webber's Creek .....	150	.....	1	2	1,875 14 0
Wellondilly River, at Burrogorang .....	389	.....	.....	11	1,300 0 0
	4,039	4	9	74	49,355 2 0

## SCHEDULE D.

BRIDGES in course of construction, 30th June, 1902, to replace present Bridges.

Name.	Length in feet.	Number of Spans.			Cost.
		Iron.	Truss.	Beam.	
Adelong Creek .....	74	.....	.....	2	£ s. d. 879 3 7
Bogolong Creek .....	64	.....	.....	2	287 5 0
Bullangina .....	574	.....	.....	17	2,500 0 0
Brickyard Creek .....	34	.....	.....	1	143 5 0
Chain of Ponds, near Liddell .....	34	.....	.....	1	229 1 3
Dark Creek, at Jesmond .....	34	.....	.....	1	355 0 0
Ewenmar Creek, at Bemunna .....	165	.....	.....	6	886 5 0
Lahey's and Bellinger's Gullies .....	50	.....	.....	2	366 10 0
Luskintyre .....	917	2	.....	21	17,900 0 0
Macdonald River, at St. Albans .....	370	.....	2	4	7,290 6 11
Manar Creek .....	144	.....	.....	4	778 0 0
Mason's Creek .....	34	.....	.....	1	209 0 0
Molong Creek .....	70	.....	.....	2	440 0 0
Parkan-Pregan Lagoon .....	184	.....	.....	6	1,064 5 8
Stinking Gully .....	29	.....	.....	1	129 0 0
	2,777	2	2	71	33,457 2 5

## SCHEDULE E.

MISCELLANEOUS Works completed between 1st July, 1901, and 30th June, 1902.

Item.	Description.	Cost.
Hardwood Decking .....	Pymont Bridge .....	£ s. d. 650 0 0
Hardwood Decking .....	Stock .....	1,049 8 4
Ironbark Timber .....	Stock .....	1,713 13 5
Ulmarra Punt .....	Hull and Machinery .....	753 9 8
Taree Punt .....	Boiler and Engines .....	810 15 0
Supply of Monier Cylinders .....	Fennell Bay Bridge .....	237 11 6
Supply of Hardwood .....	Hay Bridge .....	208 0 0
Supply of Mile-posts .....	Goulburn District .....	107 7 9
		5,530 5 8

## SCHEDULE F.

MISCELLANEOUS Works in course of completion on 30th June, 1902.

Item.	Description.	Contract Co
Louth Punt .....	Hull and Gearing .....	£ s. d. 533 0 0
Taree Steam Punt .....	Hull and Gearing .....	876 0 0
Steam Relieving .....	Hull, Engines, and Boiler .....	1,558 0 0
Supply of Buckled Plate Tanks .....	Twenty in order .....	2,000 0 0
Earthwork Approaches .....	Cobram Bridge .....	2,350 0 0
Supply of Hardwood .....	Bourke Bridge .....	1,105 17 6
		8,422 17 6



## ENGINEERING DRAWING OFFICE (BRIDGES).

During the past year plans have been prepared and tenders invited for sixty-five works, of the value of £94,405.

The average number of officers employed has been fifteen, and the total expenditure on salaries £3,323, equivalent to 3.52 per cent. on the value of the works executed. This percentage represents considerably more than the actual cost of preparing the plans for which tenders have been called, since it includes a quantity of miscellaneous works, such as sketches, and calculations; also preliminary estimates for some 100 new works not proceeded with during the year.

A considerable amount of work has been carried out in connection with the preparation of plans, estimates, sketches, calculations, &c., for the approaches to the proposed Sydney Harbour Bridge.

The work of the year includes the following:—Renewal and deviation of Bourke Bridge approaches; bridge over Murrumbidgee River, at Darlington Point, in which is provided a steel bascule span, similar in principle to that recently completed at Telegraph Point, the clear opening provided through the bascule span is, however, 60 feet; bridge over Murray River, at Barham-Koondrook, comprising steel lift and composite truss spans; and steel arch footbridge, over the Lane Cove River, to carry additional pipes for the Northern Suburbs Water Supply.

## PUBLIC WATERING PLACES.

The conservation of water has received considerable attention during the year, consequent on the severity of the drought.

In many parts of the State the stock routes became useless, owing to the lack of water, and team traffic has been almost if not entirely suspended. On some routes it is with the utmost difficulty that mail conveyances have been kept running. Under these circumstances it was necessary that every facility should be given to prevent an entire stoppage of traffic, and the public watering places in the west and north-west have been thrown open free of charge.

In several centres of population the water supply was exhausted, and the Department had to undertake the task of relieving the distress by conveying water by road or rail at very large cost.

At White Cliffs the supply was exhausted in May, and water was carted between 15 and 20 miles at a cost of exceeding £200 per week.

At Cobar a supply amounting to 50,000 gallons per day was provided, not only for domestic purposes, but for the mines; it being brought by rail from the artesian bore at Warren, a distance of 130 miles, special tanks being built and fitted on the trucks for the purpose. The cost of this service to 30th June was £2,300, but the expenditure was warranted, as by it the mines were enabled to continue working, and the difficulty of having a large number of men thrown out of employment in a waterless district was avoided.

Leadville also was destitute of water, and would have had to be deserted, but, fortunately, water was found by sinking a well, and the distress was thus relieved.

Of the tanks and dams completed during the year, the largest is that at Rocky Waterholes, on the road from Warialda to Vogamuldi, which has a capacity of 2,813,607 gallons.

Others worthy of special notice are the Mount Boppy tank, 2,603,556 gallons; the Beargamil tank and dam, on the road Parkes to Wellington, 2,580,428 gallons; the Terramungamine tank, on the road Dubbo to Coonamble, 2,540,193 gallons; and the Combaning tank, on road Temora to Stockinbingal; the Cuttaburra tank, on road Bourke to Wanaaring; the Curlewis tank at Curlewis; the London tank, on road Grong Grong to Warri; the Meejum tank, on road Narrandera to Barellan; and the Ringwood tank, on road Corowa to Berrigan, having each a capacity of 2,525,377 gallons. The average cost of these latter was £1,528, equal to less than  $\frac{3}{10}$  of a penny per gallon capacity.

A number of tanks and dams have been enlarged and otherwise improved, some forty subsidiary works, such as clearing, fencing, supplying pumps and engines, &c., having been carried out. The storage capacity added during the year amounts to 61,500,000 gallons, and the cost, including all subsidiary works, amounted to  $\frac{7}{10}$  of a penny per gallon.

Of the artesian bores completed, the Orel, No. 2, near Merrywinbone, with a discharge of 4,000,000 gallons per day, the Orel bore, No. 1, 3,000,000 gallons, the Walgett bore, 3,000,000 gallons, and the Come-by-Chance bore, near Walgett, 2,000,000 gallons per day, are the most satisfactory in the supply obtained. Good supplies have, however, been obtained at other places, and the bores in progress are expected to furnish satisfactory discharge.

The total discharge per day from all the bores now in operation is 51,200,000 gallons, of which 17,780,000 gallons per day results from operations carried out during the year. The cost has amounted to about 1d. per gallon of the daily discharge secured. In two cases water was not obtained. At Hungerford this result was anticipated, but the ground was tested at the instance of the Queensland Government, which shared the cost. At Willara, although the bore was within the artesian basin, bedrock was reached at 302 feet without result.

At Grafton boring operations were discontinued as in November, the tools became fast at a depth of 3,700 feet, and all efforts to dislodge them were unsuccessful. In this bore a large supply of natural gas, which burnt with a bright clear flame and was under high pressure, was tapped at a depth of about 3,100 feet.

Of the twenty-one bores completed or in progress, ten have been sunk under the provisions of the Artesian Wells Act of 1897, three are for town supplies, and the remainder are public watering places for stock.

The seven bores completed under the Artesian Wells Act supply 12,180,000 gallons per day, which are being used for domestic purposes, stock, and irrigation.

The advantages to be derived from these bores has been forcibly impressed upon settlers within the artesian basin by the drought, and applications under the Act are being received with such increased frequency that it may be found necessary to impose a minimum limit upon the area to be included in any one application, in order to guard against a possible too severe drain on the supply. The methods adopted in past years in gauging the discharges have been unsatisfactory. Steps are now being taken to carefully watch and periodically compare the flow from each bore, and to note the effect of new bores on older ones in the vicinity. With this object, tables were prepared during the year, and weir boards and gauges are being issued that will enable the officers in charge to test the flow in a systematic manner.

The



The importance of this cannot be overestimated, as although artesian boring and irrigation therefrom are still in their infancy in Australia, the demands for artesian water will undoubtedly rapidly increase with the population, and a careful observation of all necessary data now will tend to minimise disappointments in the future as to the permanent supply likely to be secured from new bores in the vicinity of old ones.

In view of the fact that irrigation from bores will become more general, it is also of great importance that artesian water should be systematically analysed from time to time, in order that any change in its properties by exposure to aeration may be discovered and its applicability to various soils ascertained.

Artesian water has usually properties, the effect of which on trees and root crops has not yet been practically tested. Before capital is expended in reticulation and planting it is highly desirable that the chemist should be in a position to point out the probable effect of these on the plants and soil.

The superiority of the water for wool-scouring purposes has been already proved, and it is anticipated that it will in the future be increasingly utilised for that purpose. The advantage of this both to the pastoralist and the Government is evident. Not only will the cost of the carriage of wool be reduced to a minimum, but a corresponding saving in the wear of roads will be effected.

#### GENERAL.

Whilst the continued dry weather has rendered the maintenance of metalled roads more difficult, it has reduced the demands for expenditure on unformed roads; with a recurrence of rain these will no doubt increase. With a road mileage of over 46,300 miles, only 16,000 of which are metalled, gravelled, or formed, the resources of the Department must necessarily be strained for many years to keep pace with legitimate demands for expenditure, and with the funds available for this year it will be only possible to carry out improvements where there is a fair amount of residence and to keep the main traffic routes in good order. Isolated selections are taken up and roads of access asked for when the cost of construction would amount to much more than the value of the property. Notwithstanding the hardships incurred by such selectors, their applications must be reluctantly refused.

The difficulty of maintaining roads is greatly increased by the scarcity in many parts of the State of suitable road-forming material and the refusal of owners where it does exist to part with it on any terms. The rights of private property must no doubt be respected, but it is unfortunate that owners who purchase property from the Crown for a nominal sum should have the power to prevent the use of material thereon, and so increase by thousands of pounds a year the cost of maintaining roads constructed for their own benefit as well as that of others.

The light traffic on leading roads, which is numerically much the greatest, is still seriously inconvenienced by the use of narrow tires on heavy waggons. This fact has been drawn attention to in the reports of this Branch for many years, and is again mentioned.

The submission to Parliament of the Tires Bill, already prepared, is an urgent necessity, if the convenience of a large majority of the travelling public and the cheapening of the maintenance of the roads are to be considered.

A considerable amount of river-bank protection has been carried out, but the necessity for systematically dealing with this important question is still urgent. The whole cost of such work has generally been borne by the Department, whilst in most cases benefit results only to the landowners adjoining. It is a question for consideration whether some arrangement could not be made by which those immediately interested would bear the larger share of the cost, the public taxpayers contributing only where the safety of public works is involved. No doubt the prime cost will always debar private owners from taking measures to cope with the difficulty, but it would be much to their advantage were the Government to undertake the work, the cost or a proportion of the cost to be refunded by instalments spread over a long period.

Applications for licenses under the Water Rights Act are increasing, and as experience has shown that in several important particulars that Act requires revision, attention is being given to the matter.

Irrigation is becoming more general. One privately-owned pumping plant alone on the Hunter River distributes 2,500,000 gallons per day, and it is a question for consideration how far this can go on during dry seasons without seriously affecting the water supply of such towns as Maitland and Newcastle.

Some modification seems desirable in the provisions of the Truck Act. Where contracts are let many miles from a store, it is found impossible to get storekeepers to deliver goods to the workmen living in isolated camps. Under these circumstances men decline to work, unless the contractor will provide rations, and, as the Truck Act prevents him from doing so, the latter is often quite unable to secure the labour required by him. Were the Minister empowered to suspend the Act under certain conditions on requisition this difficulty would be overcome.

As foreshadowed in last year's report, several changes have been made during the year in the areas of road districts, consequent on the increased work incidental to the transfer of the Public Watering Places Branch to this Department.

In the year 1898-9 the cost of supervision, including salaries, wages of overseers, equipment allowances, engineering and travelling expenses, office and store rent, cleaning, lighting and fuel, amounted to 8.38 per cent. on the total expenditure on works carried out; in 1899-1900 it was reduced to 8.19 per cent.; in 1900-01 to 7.03 per cent.; but this year it again shows a slight increase, and now stands at 7.34 per cent. This is fully accounted for by the additional number of overseers, &c., required in carrying out day-labour works, and the exceptional conditions resulting from the drought.

I have, in conclusion, to once more express satisfaction at the energetic and loyal co-operation shown by officers of all grades in the Branch, and the efficiency with which they have discharged their duties.

W. J. HANNA,  
Commissioner and Principal Engineer for Roads and Bridges.

Department



Department of Public Works, Roads, Bridges, and Public Watering Places  
Branch.

YEARLY STATISTICAL REPORT FROM 1 JULY, 1901, TO 30 JUNE, 1902—SUMMARY  
OF ALL DISTRICTS.

TABLE A.—EXTENT OF DISTRICT.

Classification.	Number.	Mileage.†
ROADS.		
1. Scheduled Roads under Road Superintendents .....	1,701	30,796
2. Unclassified Roads under Road Superintendents .....	1,767	13,872
3. Scheduled Roads under Trustees .....	32	226
4. Unclassified Roads under Trustees .....	19	118
5. Roads subsidised by Department under Municipal Councils.....	508	1,336
Totals .....	4,027	46,348
BRIDGES.		
6. Bridges (20-ft. span and over), under care of Road Superintendents or Trustees, or built at cost of Government, on all classes of Roads, within or outside Municipal limits.†	Number, 3,251. Total length overall, 305,659 feet.	
FERRIES.		
7. Ferries, subsidised, leased, or worked by Department or Trustees, including emergency Punts and Boats.†	{ No. of Punt Ferries, 102. No. of Boat Ferries, 32. Total No. of Punts in District, 120. Total No. of Boats in District, 208. Total No. of Steam Launches in District, 3. Total No. of Tanks, Wells, and Dams in District, 374.	
8. Water Supply and Conservation Works (including all works of this character carried out at Government cost).†	{ Total No. of Artesian Bores, 87.	
MUNICIPALITIES.		
9. Municipalities within limits of district in receipt of subsidies, for which Road Superintendents are required to give Certificates.	Number, 146.	

† The total lengths and numbers given in this table must agree with these in tables I and K.

TABLE B.—CONTRACTS.

Classification.	Number.	Amount.
1. Contracts as let by Local Officers during 1901-2 .....	3,177	£ 308,571 0 0
2. Contracts as let by Head Office, but carried out by Local Officers .....	86	50,860 0 0
3. Aggregate Number and Amount of Contracts as let .....	3,263	359,431 0 0
4. Amount of smallest Contract .....		3 0 0
5. Amount of largest Contract .....		2,187 0 0
6. Average value of Contracts let by Road Superintendents .....		79 2 6
7. Contracts as completed during 1901-2, including those let prior to 1901-2, Number and Value .....	3,201	337,542 0 0
8. Contracts incomplete on 30th June, 1902, and Amount due thereon .....	467	63,276 0 0

TABLE C.—ANALYSIS OF EXPENDITURE.

Inclusive of all Vouchers rendered during 1901-2, and Progress Payments on Contracts incomplete on 30 June, 1902, but exclusive of Deposit Vouchers.

	Wages.	Contracts.	Stores, Materials, and Sundries.*	Supervision.†	Municipal Expenditure.†	Total.
Roads .....	£ 219,248	£ 281,096	£ 103,081	£ 71,459	£ 32,493	£ 972,927
Bridges.....	48,687	123,024	} 103,081	} 71,459	} 32,493	} 972,927
Ferries .....	9,268	3,434				
Tanks .....	} 38,224	} 17,360	} 18,264	} 71,459	} 32,493	} 972,927
Wells .....						
Dams .....	} 1,546	} .....	} 6,343	} 71,459	} 32,493	} 972,927
Artesian Bores .....						
Other Works .....	1,546	.....	6,343	71,459	32,493	972,927
Total Value of Vouchers, as per Voucher Register, 1 July, 1901, to 30 June, 1902.	316,373	424,914	127,688	71,459	32,493	972,927
Vouchers submitted for payment.....						No. 29,483

\* Including goods obtained under annual contracts or locally, freight, compensation, &c.

† Including engineering and travelling expenses, office and store rent, cleaning, lighting, fuel, wages and expenses of overseers, of fore men.

‡ The amount of certificates given on account of municipal subsidies.



TABLE D.—PROPORTION OF CLASSIFIED EXPENDITURE TO TOTAL EXPENDITURE.

Classified Expenditure.	Amount.	Percentage on Total Expenditure.
	£	
1. Wages .....	316,373	32'52
2. Contracts .....	424,914	43'67
3. Stores, Materials, and Sundries .....	127,688	13'13
4. Supervision* .....	71,459	7'34
5. Municipal .....	32,493	3'34
Total Expenditure .....	972,927	100'00

\* The amount will be that quoted in Table C, plus the salaries and equipment allowances paid by Head Office to the officers, assistants, overseers, and foremen who were employed in the district during the year, and all railway fares on service.

TABLE E.—TRAVELLING AND COST THEREOF, 1901-2.

Officer.	Miles travelled.			Total Amount of Travelling Expenses Vouchers for above period.
	Road.	Rail.	Total.	
1. Road Superintendents .....	279,025	79,296	358,321	£ s. d.
2. Assistants .....	92,943	33,881	126,824	.....
3. Foremen, Overseers .....	62,946	10,752	73,698	.....
Totals .....	434,914	123,929	558,843	5,631 19 3

TABLE F.—LABOUR STATISTICS. (Monthly Average.)

Classification of Labour.	Permanent.	Temporary.	Total.
By Department.			
Foremen, Overseers .....	52'92	59'83	112'75
Road Maintenance Men .....	940'17	516'50	1,456'67
All others (Ferry-men, Caretakers, &c.) .....	103'25	1,351'83	1,455'08
Totals .....	1,096'34	1,958'16	3,054'50
Contractors and Contractors' Men .....			6,217

TABLE G.—REPORTS, MINUTES, RETURNS, &amp;c.

Official Papers, including Reports, Minutes, and Returns (other than Vouchers) registered from 1 July, 1901, to 30 June, 1902. District Offices, No. 46,006; Head Office, No. 34,402.

TABLE H.—SUMMARY OF WORK EXECUTED.

SHOWING Work completed (inclusive of Contracts in progress on 1 July, 1901, but not including Contracts in progress on 30 June, 1902) on Roads under Road Superintendents during the year 1 July, 1901, to 30 June, 1902, and carried out under Contract or by day-labour. Ordinary maintenance not included.

Class of Work.	Unit.	Scheduled Roads outside Municipality.	Scheduled Roads within Municipality.	Unclassified Roads outside Municipality.	Unclassified Roads within Municipality.	Totals.
1. Road construction, including formation, metal-ling, gravelling, ballasting, or corduroying, exclusive of clearing or draining .....	chains	23,471	808	2,350	201	26,830
2. Formation, including cuttings, embankments, not metalled, gravelled, &c., exclusive of clearing or draining .....	chains	25,581	296	12,621	858	39,356
3. Clearing, any width .....	chains	36,380	282	23,933	221	60,816
4. Draining, one or both sides of road .....	chains	21,303	166	5,451	.....	26,920
5. Maintenance metal, gravel, or ballast obtained .....	cub. yds.	349,142	43,481	4,993	7,063	404,679
6. First-class timber culverts, any span .....	No.	36	5	5	1	47
7. Second-class timber culverts, " .....	No.	111	.....	38	1	150
8. Other timber culverts .....	No.	979	5	162	.....	1,146
9. Pipe culverts .....	No.	298	.....	127	2	427
10. Causeways, any class .....	No.	885	3	238	2	1,128
11. Stone, brick, or concrete culverts .....	No.	5	2	.....	.....	7
12. " " " walls with timber deck .....	No.	1	.....	.....	.....	1
13. " " " " iron " .....	No.	140	.....	.....	.....	140
14. Fencing .....	rods	7,550	212	1,681	6	9,449
15. Ordnance fencing .....	rods	433	.....	180	19	632
16. Punts built .....	No.	2	.....	1	.....	3
17. Boats—new, built, or supplied .....	No.	8	.....	2	.....	10
18. Punts overhauled and repaired .....	No.	60	.....	5	.....	65
19. Boats " " .....	No.	49	.....	3	.....	52
	No.	In Progress.	Completed.	Capacity or yield.		
20. Tanks .....	45	13	32	61,500,000 gals		
21. Wells .....	26	6	20			
22. Dams .....	8	1	7			
23. Artesian Bores .....	21	10	11			



TABLE H—continued.

BRIDGES CONSTRUCTED (20-ft. Span and over) under the Superintendence of Departmental Officers.

Totals.	Details of Spans.	No.	Total Length.
Number of Bridges built ..... 45	With iron or steel superstruction, and timber or iron deck.....	9	730
	Timber beam approach spans to iron or steel bridges...	24	960
Number of Spans of all kinds ..... 185	Timber truss approach spans to iron or steel bridges...	8	806
	Timber truss or arched spans.....	16	521
	Timber beam approach spans to truss bridges.....	128	4,208
	Timber beam spans.....	.....	.....
Overall length of Bridges built, 7,225 feet.	Stone, brick, or concrete arched bridges .....	.....	.....
	Totals .....	185	7,225

TABLE I.—GENERAL SUMMARY OF WORK EXECUTED TO 30 JUNE, 1902.  
Irrespective of time or date of effecting same.

ROADS.												
Classification.	Metalled, Gravelled, Ballasted, or Corduroyed.		Formed.		Cleared and Drained.		Cleared only.		Bush or Untouched Road.		Total Mileage (of all the preceding columns).	
	Miles.	Chains.	Miles.	Chains.	Miles.	Chains.	Miles.	Chains.	Miles.	Chains.	Miles.	Chains.
UNDER ROAD SUPERINTENDENT.												
1. Scheduled; outside Municipalities*	8,058	37	5,274	21	4,466	47	7,825	13	5,277	78	30,902	36
2. Scheduled; within Municipalities	852	20	166	11	46	39	216	74	55	21	1,337	5
3. Unclassified; outside Municipalities	335	75	1,051	69	874	14	3,225	23	8,459	6	13,946	27
4. Unclassified; within Municipalities	35	20	29	78	4	44	47	0	46	12	162	74
Totals ..	9,281	72	6,522	19	5,391	64	11,314	30	13,838	37	46,348	62
5. Works superseded by deviations ...	17	53	34	22	6	30	14	4	8	57	81	6

\* Including roads under trustees.

CULVERTS.			BRIDGES.		
Classification.	Number.	Total Length in feet.*	Classification of Spans.	No. of Spans.	Total Length in feet.
Iron Decked .....	101	1,282	Iron or Steel, with Iron Deck .....	184	9,942
Stone, Brick, or Concrete Arched .....	797	5,628	Iron or Steel, with Timber Deck .....	159	13,313
Stone, Brick, or Concrete Walls, with Timber Deck .....	243	2,451	Timber Trusses or Arches .....	531	41,611
Timber, all classes, under 20 ft. span.....	24,657	213,619	Stone, Brick, or Concrete Arched.....	53	2,012
Do do 20 ft. span and over...	623	19,495	Timber Beam Spans (20 ft. span and over)	7,897	235,221
Pipe.....	12,661	317,458			
Totals .....	39,082	559,936	Totals .....	8,824	302,099
* Length of deck, measured along line of traffic, except in case of pipe culverts, which shall represent length between inlet and outlet.			Total No. of Bridges .....		3,251

CAUSEWAYS.		PUNTS, BOATS, FERRIES.						
Number.	Total Length in feet along line of traffic.	Classification.	HOW WORKED.					
			Oars only.	Wire Rope without Gear-ing.	Hand Gear-ing and Wire Rope.	Steam Gear-ing and Wire Rope.	Total No.	Total Width between Mooring Posts.
21,947	496,321	Iron Punts .....	...	...	3	8	11	9,600
		Timber Punts.....	...	13	93	1	107	58,613
		Steam Launches.....	...	...	...	...	3	.....
		Horse-boats .....	...	2	...	...	2	615
		Flood-boats, iron .....	4	...	...	...	4	.....
		Ditto timber .....	65	...	...	...	65	.....
		Other Boats .....	139	...	...	...	139	.....
		Punt slips, for execution of repairs.....	...	...	...	...	8	.....
		Totals .....	208	15	95	9	339	68,828
BUILDINGS.		Ferry-men's, Bridge Caretakers' or other houses, or build-ings, the property of the Department, Number, 224.						

TABLE K.—PUBLIC WATERING PLACES.

	Completed.	In progress.	Total.†
Tanks .....	246	13	259
Wells .....	78	6	84
Dams .....	50	1	51
Artesian bores .....	87	10	97
Extensions, alterations, and subsidiary works .....	40	12	52



## ARTESIAN Wells and Works in connection therewith completed or commenced during Year ended 30 June, 1902.

Work.	Locality.	State of Work.	Capacity in gallons.	Amount expended during year.	Total Cost to 30 June, 1902.
			per day.	£ s. d.	£ s. d.
Artesian well casing .....		Contract in-		1,778 15 11	1,778 15 11
Bidura Bore (sinking) .....	Euston to Pooncarie	complete.			
Collie Bore No. 2 (sinking) .....	At Collie	Completed		570 5 0	2,491 18 11
Careunga (sinking) .....	Moree to Boggabilla	Work sus-		843 4 2	2,695 5 4
Come-by-Chance Bore (sinking) .....	Near Walgett	pended.			
Coonamble Bore (recasing) .....	At Coonamble	In progress	830,000	1,445 1 4	7,515 1 7
Dolgelly Bore Service Tank .....	Moree to Boggabilla	Completed	2,000,000	1,019 18 8	2,951 4 2
Eurie Eurie Bore (distributing channels) .....	Near Walgett	"		1,025 0 7	1,025 0 7
Florida Bore (sinking) .....	At Goodooga	"		913 17 8	1,283 12 4
Goodooga Water Supply (pipe-laying, &c.) .....	Near Millie	In progress		130 0 0	284 17 6
Glenalbyn Bore (sinking) .....	At Goodooga	Completed		154 17 6	651 18 0
Grafton Bore (sinking) .....	Near Enngonia	"	780,000	101 8 2	101 8 2
Gulargambone Bore (sinking) .....	At Grafton	Work stopped.		604 8 9	1,320 10 3
Hungerford Bore No. 1 .....	At Gulargambone	Completed		1,541 7 5	2,145 14 4
Killowen Bore (sinking) .....	At Hungerford	"	Nil	1,158 7 4	9,124 15 11
Manfred Bore (sinking) .....	Near Hungerford	Completed	170,000	1,805 2 3	2,574 5 9
Munblebone Bore (sinking) .....	Ivanhoe to Menindie	"		336 11 2	447 15 1
Nedgera Creek Bore (sinking) .....	Near Ivanhoe	In progress		1,081 17 3	2,612 7 5
Oreel No. 1 Bore (sinking) .....	Warren to Brewarrina	Completed	1,000,000	1,109 0 0	1,553 13 8
Oreel No. 2 Bore (sinking) .....	Coonamble to Quambone	"	1,500,000	1,542 8 2	2,038 18 9
Oreel No. 3 Bore (sinking) .....	Near Merrywinbone	"	3,000,000	1,583 15 0	3,365 10 9
Ooarnoo Bore (erection pumping appliances) .....	"	In progress		262 0 0	262 0 0
Oscaca Bore (cleaning out and casing) .....	"	Completed	4,000,000	1,163 15 6	3,721 9 7
Packsaddle Bore (erection pumping appliances) .....	Wilcannia to Wompah	"		431 2 8	431 2 8
Three Corners Bore (sinking) .....	Wanaaring to Milparinka	In progress		205 12 0	205 12 0
Tenandra Bore (distributing channels) .....	Silverton to Cobham	"		661 12 6	1,062 4 8
Trangie Water Supply (erection pumping plant) .....	Near Warren	Completed	300,000	744 11 6	927 13 0
Ulmie Bore (sinking and service tank) .....	Warren to Coonamble	"		760 2 1	1,215 19 2
Warri Warri Bore (deepening) .....	At Trangie	"		267 14 11	1,779 5 11
Walgett Bore (sinking) .....	Near Walgett	"	1,300,000	451 2 4	950 13 3
Willara Bore (sinking) .....	Tibooburra to Wompah	In progress		1,317 12 2	2,5 9 19 7
Yellow Waterholes Bore (sinking) .....	At Walgett	Completed	3,000,000	1,378 12 11	6,645 7 6
	Near Hungerford	"		619 2 2	2,468 19 5
	Deniliquin to Moama	"		41 4 0	41 4 0
		In progress		346 0 0	430 18 3
				143 13 6	789 12 0
			17,780,000	27,872 17 4	69,224 16 2

## TANKS, Dams, Wells, and Works in connection therewith, completed or commenced during Year ending 30 June, 1902.

Work.	Locality.	State of Work.	Capacity in Gallons.	Amount Expended during Year.	Total Cost to 30 June, 1902.
				£ s. d.	£ s. d.
Alectown Tank (excavation) .....	At Alectown	In progress			
Bogan Gate Tank (tank, appliances, fencing) .....	At Bogan Gate	Completed	850,210	630 13 3	814 3 4
Bora Creek Dam (construction) .....	At Howell	"	750,000	255 0 0	255 0 0
Billabong Creek Weir .....	On Billabong Creek	"	292 16 6	292 16 6	292 16 6
Beargamil Tank and Dam (excavation, fencing) .....	Parkes to Wellington	"	2,580,428	647 8 0	675 8 11
Berrigan Well (fencing) .....	At Berrigan	"		25 7 0	25 7 0
Bangheet Tank (excavation) .....	Walgett to Goodooga	"	705,253	327 3 2	493 2 11
Branxton Well .....	At Branxton	"		10 0 0	10 0 0
Burrumbuttock Tank (excavation, appliances, fencing) .....	At Burrumbuttock	"	926,308	681 16 10	1,131 15 3
Broke (deepening waterhole) .....	At Broke	"		9 0 0	9 0 0
Box Tank (enlargement) .....	Broken Hill to Menindie	"	1,885,918	313 5 0	313 5 0
Bull Oak Tank (excavation, erection, appliances, fencing) .....	Grong Grong to Warri	"	1,814,924	454 14 6	1,199 3 0
Black Dam Tank (excavation) .....	Warialda to Yetman	"	1,876,355	395 10 8	1,156 13 10
Buckled Plate Tanks (supply), first contract .....		"		1,190 0 0	1,190 0 0
Brooklesby Tank (erection of cottage) .....	Howlong to Walbundrie	In progress			
Bokhara Dam (construction, causeway over bywash) .....	Bokhara Creek	Completed		63 0 0	63 0 0
Campania Tank (excavation, fencing, drains, &c.) .....	Near Campania	In progress			
Canoon Tank (excavation and fencing) .....	Hay to Balranald	Completed	841,792	125 2 7	125 2 7
Cookamidgera Well (well and windlass) .....	At Cookamidgera	"	1,702,777	317 0 0	441 6 1
Combining Tank (excavation, erection appliances) .....	At Combining	"		267 1 3	595 19 3
Capertee Water Supply (repairs to dam) .....	Temora to Stockinbingal	"	2,525,377	23 13 11	20 13 11
Collarenebri W. S. (windmill pump, service tanks) .....	At Capertee	"	160,000	1,461 15 0	1,461 15 0
Corilla Tank (alterations and repair) .....	At Collarenebri	"		50 0 0	50 0 0
Cuttaharra Tank (excavation and erection supply tank, fencing, &c.) .....	Bourke to Cobarr	"		323 8 6	323 8 6
Curlewis Tank (excavation, engine-shed, pump, fencing, &c.) .....	Bourke to Wanaaring	"	2,525,377	154 2 6	154 2 6
Carawandool Tank (fencing) .....	At Curlewis	"	2,525,377	1,920 5 9	1,920 5 9
Devlin Tank (fencing) .....	Forbes to Maraden	"		855 10 4	1,733 11 5
Deeble's Tank (fencing) .....	At Devlin's Siding	"		114 5 4	114 5 4
Dry Lake Tank (excavation, drains) .....	At Wyalong	"		19 10 0	19 10 0
Euston W. S. (pump) .....	At Euston	In progress		39 7 5	39 7 5
Ferguson's Tank (cleaning out and enlarging) .....	Wilcannia to Milparinka	"		17 0 0	40 0 0
Gulf Creek Well .....	At Euston	Completed		15 17 8	26 12 11
Grayrigg Tank (enlargement) .....	Mulwala to Bull Plain	"			
Gladstone Well .....	At Gulf Creek	Completed		58 7 2	90 0 9
Germanton Well (sinking, erection appliances and fencing) .....	Hermidale to Nymagee	"	1,936,122	373 5 5	373 5 5
Gilgannia Tank (fencing) .....	At Gladstone	"		25 0 0	25 0 0
Grong Grong Tank (erection service tank) .....	At Germanton	"		133 8 9	136 8 9
Howlong W. S. (erection tank and appliances) .....	Quirindi to Gunnedah	"		24 7 9	24 7 9
Hall's Creek Well (brickwork, erection windmill tower, &c.) .....	At Gilgannia	"		247 1 1	250 19 1
Hermidale Tank (excavation, erection pump appliances, &c.) .....	At Grong Grong	"	10,000	29 4 0	29 4 0
Kincheva Tank (excavation appliances, service tank, and fencing) .....	At Howlong	"		526 3 4	526 3 4
Kempsey District (small wells, &c.) .....	Binagara to Barraba	"		125 2 7	236 3 9
Lockhart Tank (laying piping) .....	At Hermidale	"	2,417,628	665 15 0	2,512 6 9
Leadville Well (deepening erection appliances) .....	Broken Hill to Menindie	In progress		2,411,198	1,424 0 0
Limestone Tank (fencing) .....	In Kempsey District	Completed			
Louth W. S. (erection pump) .....	At Lockhart	"		10 7 6	10 7 6
London Tank (excavation) .....	At Leadville	"		45 0 0	93 11 9
Mount Hope Tank (drains) .....	Parkes to Bogan	"		15 8 1	15 8 1
Murchison Tank (cleaning out and enlarging) .....	At Louth	"		20 16 0	20 16 0
Murilla Tank (fencing) .....	Grong Grong to Warri	In progress		2,525,377	1,298 3 11
	At Mount Hope	"		44 13 0	44 13 0
	Mulwara to Bull Plain	In progress			
	Wilcannia to Milparinka	Completed		25 6 3	25 6 3



## TANKS, Dams, Wells, and Works in connection therewith, completed or commenced—continued.

Work.	Locality.	State of Work.	Capacity in Gallons.	Amount Expended during Year.	Total Cost to 30 June, 1902.
McPhail Tank (appliances, fencing)	At McPhail	Completed	.....	£ s. d. 987 16 3	£ s. d. 993 13 6
Munnah Well (sinking and fencing)	Coonabarabran to Mullaley	"	.....	37 12 6	37 12 6
Mabin's Corner Well (sinking and erection two service tanks)	Near Spring Plain, Deniliquin	"	.....	375 2 1	375 2 1
Meejum Tank (excavation, appliances, fencing, and service tank)	Narrandera to Barellan	"	2,525,377	1,228 10 6	1,236 13 5
Mandamah Tank (excavation appliances and fencing)	Temora to Merool Creek	"	1,935,954	1,023 17 7	1,028 17 7
Marsden Weir	At Marsden	"	.....	125 0 0	125 0 0
Murrumbidgee Tank (erection appliances, fencing)	At Murrumbidgee	"	.....	144 4 5	147 18 8
Murray Hut Well (boring in, &c.)	Jerilderie to Tocumwal	"	.....	84 18 2	88 17 11
Millthorpe Water Supply (erection pumping appliances)	At Millthorpe	Incomplete	.....	146 2 1	223 5 4
Mount Boppy Tank (excavation, &c.)	At Boppy Mountain	Completed	2,609,556	1,014 13 11	1,184 14 4
Newell's Dam (enlargement)	Forbes to Parkes	"	.....	78 5 0	78 5 0
Nymagee Tank (excavation, fencing, &c.)	At Nymagee	"	1,498,390	678 13 4	1,247 6 10
Oakland's Well (erection aermotor cottage)	At Oaklands	"	.....	135 0 10	542 9 4
Osborne (w. tower, &c.)	Berrigan to Clear Hills	Completed	.....	113 19 6	371 4 4
Osborne Well (fencing)	At Guerie	"	841,792	50 0 0	111 4 9
Ponto Common Tank (deepening and fencing)	Coonabarabran to Mullaley	"	.....	56 13 10	91 13 9
Pine Vale Well (sinking)	Bourke to Wanaaring	In progress	.....	625 15 2	625 15 2
Poison Point Tank (excavation inlet shoot drains)	At Ponds Creek	Completed	841,792	215 7 6	325 8 3
Ponds Creek Tank (excavation)	At Wyalong	"	.....	275 15 7	576 12 2
Pine Ridge Well (erection engine-house, pump, &c.)	Corowa to Berrigan	"	2,525,377	1,203 8 10	5,114 10 10
Ringwood Tank (excavation)	Wialda to Vogamildi	"	2,813,607	795 3 8	1,527 1 5
Rocky Waterholes (excavation)	Wialda to Yetman	"	680,841	594 12 9	1,023 1 5
Rocky Tank and Dam (excavation, construction, and fencing)	At Sofala	In progress	.....	7 3 0	7 3 0
Sofala W. S. (erection pumping appliances)	At Stuart Town	Completed	1,893,191	435 6 0	710 17 4
Stuart Town W. S. (excavation tank and drains)	Wilcannia to Wanaaring	In progress	.....	808 7 0	808 7 0
Seavilles Tank (excavation, fencing drains, &c.)	Wialda to Inverell	Completed	1,503,273	751 5 5	751 5 5
Sandridge Tank (excavation)	At St. Albans	"	.....	74 8 5	79 5 5
St. Albans Well (sinking, bricking, &c.)	Gundaroo to Queanbeyan	In progress	.....	72 10 5	72 10 5
Sutton Well	Young to Morangorell	Completed	.....	68 14 9	68 14 9
Tubbal Tank (fencing)	Maude to Billabong	"	1,643,079	347 15 3	551 10 9
Toogimbie Tank (excavation and fencing)	Dubbo to Coonamble	"	2,540,193	1,212 3 0	1,781 11 5
Terramungamine Tank (excavation and erection appliances)	Temora to Cootamundra	"	.....	101 17 7	116 18 8
Trigalong Tank (fencing)	Pallal to Eulowie	"	915,196	514 10 11	514 10 11
Tea-tree Tank	Cobar to Bourke	"	.....	59 15 0	59 15 0
Two Water-holes Tank (alterations)	Boggabri to Coolah	"	.....	66 9 11	66 9 11
Tambar Springs (fencing)	Carrathool to Hillston	"	1,683,585	13 0 0	534 3 9
Wah Wah Tank (excavation, &c.)	Wagga to Junee	"	.....	104 16 3	105 16 3
Wallace Town Dam (erection fencing)	Maude to Billabong	"	1,490,982	558 14 1	558 14 1
Windouran Tank (excavation, drains, fencing)	Moama to Wakool River	"	336,717	167 8 6	167 8 6
Wamboota Tank (enlargement erection appliances, &c.)	Hexham to Williamtown	"	.....	18 9 6	13 9 6
Williamtown Well	Broken Hill to Cobham	In progress	.....	1,111 14 5	1,111 14 5
Wonnaminta Tank (excavation, erection of appliances, &c.)	Deniliquin to Conargo	Completed	.....	10 2 11	52 17 11
Wandook Tank (fencing and cottage)	At White Cliffs	"	.....	542 18 7	576 1 9
White Cliffs No. 2 Tank (fencing, cottage, and pipe-laying)	Eualalong to Mount Hope	"	.....	167 7 11	358 4 8
Whoey Tank (erection cottage and fencing)	"	"	1,462,193	99 17 0	117 4 7
Walters Range Tank (cleaning out and deepening)	"	"	1,010,151	716 15 0	783 12 0
Yarran Water-holes Tank (excavation, flume, &c.)	Narrandera to Condobolin	"	.....	61,449,647	33,748 9 9
					45,106 10 6

## RETURN of Expenditure, Public Watering Places, from 1 July, 1901, to 30 June, 1902.

Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, Amount of Expenditure to 30 June, 1902.	If finished, Actual Amount of Expenditure.	Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, Amount of Expenditure to 30 June, 1902.	If finished, Actual Amount of Expenditure.
PUBLIC WATERING PLACES.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Artesian Bore	.....	.....	25 3 0	Cuttaburra Tank	1,920 5 9	1,920 5 9	.....
Arampo Bore	.....	.....	1,480 5 9	Collarendabri Water Supply	323 8 6	.....	323 8 6
Brewarrina and Walgett District	.....	.....	92 4 1	Combarlog Tank	1,461 15 0	.....	1,461 15 0
Bokhara Dam	39 1 10	1,638 16 4	.....	Carrenga Bore	1,445 1 4	3,227 16 4	.....
Banlingabba Bore	.....	.....	470 3 7	Canoon Tank	207 1 3	.....	267 1 3
Baglad Dam	.....	.....	110 14 10	Cookamidgee Well	20 13 11	.....	20 13 11
Bogan Gate Tank	680 13 3	.....	838 5 0	Cookamidgee Tank	.....	.....	331 7 0
Bulgandramine Tank	.....	.....	173 17 3	Cameron's Tank, near	317 0 0	.....	317 0 0
Burrumbuttock Tank	631 16 10	.....	1,128 13 8	Dry Lake Tank	10 0 0	.....	322 17 1
Birmedman Tank	.....	.....	16 0 6	Dimby Well	3 0 0	23 17 0	.....
Boll Oak Tank	454 0 6	.....	1,198 9 0	Dimby Ridge, near	.....	.....	12 16 6
Broula Springs	.....	.....	10 12 3	Devlin's Tank	31 8 6	.....	12 8 6
Bungheet Tank	327 3 2	.....	403 2 11	Dolgelly Bore	284 17 6	.....	310 15 6
Broghan Dam	.....	.....	37 10 0	Dargle Bore	12 0 0	12 0 0	.....
Berrigan Tank	35 7 0	.....	79 13 0	Deebles' Tank	42 9 11	.....	42 9 11
Beefwood Dam	.....	.....	3 2 0	Dingle Ridge Bore	.....	.....	10 2 2
Boogaldie Tank	4 7 6	4 7 6	.....	Davisville Well	.....	.....	1 7 7
Beremegad Tank	.....	.....	20 11 0	Daysdale Tank	.....	.....	105 14 11
Brooklesby Tank	63 0 0	.....	63 0 0	Dandaloo Dam	.....	.....	16 18 6
Bulyerai Bore	.....	.....	82 4 6	Eurie Bore	154 10 6	.....	1,525 15 6
Benedict-Menville Tank	4 16 0	4 16 0	.....	Euraba Bore	82 19 0	82 19 0	.....
Barnato Tank	.....	.....	55 2 6	Flood's Tank	796 3 8	1,527 1 5	.....
Burruga Dam	18 14 4	18 14 4	.....	Finley's Bore	.....	.....	912 1 6
B. Riley's Creek Dam	.....	.....	62 5 9	Ford's Bridge Bore	317 6 9	1,751 12 10	.....
Bora Creek Dam	255 0 0	.....	255 0 0	Flagstone Creek Dam	.....	.....	84 0 4
Bidura Bore	570 5 0	.....	1,457 5 5	Florida Bore	101 8 2	101 8 2	.....
Black Dam	395 10 8	.....	475 1 11	Gongolgan Weir	5 12 0	722 1 7	.....
Beargamit Dam	647 8 11	.....	647 8 11	Gidgen Camp Bore	.....	.....	5 2 6
Billabong Creek Weir	292 9 0	.....	292 9 0	Grafton Bore	1,158 7 4	2,599 16 11	.....
Box Tank	313 5 0	.....	485 5 0	Gurie Gurie Dam	.....	.....	256 13 3
Box Creek Tank	.....	.....	6 10 0	Grogan Grong Tank	148 16 5	.....	1,493 12 9
Beratta Tank	10 12 2	10 12 2	.....	Grogan Tank	.....	.....	910 5 6
Curlew's Tank	845 2 3	.....	1,716 0 1	Ge Bang Creek	6 8 7	943 0 10	.....
Cummoek Water Supply	.....	.....	86 17 0	Glenalbyn Bore	1,541 7 5	.....	1,580 18 0
Coonamble Bore	23 16 0	.....	384 7 8	Goodooga Water Supply	604 8 9	.....	1,244 5 3
Casing	.....	.....	6,516 1 0	Germananton Well	46 18 11	.....	59 13 11
Crooked Creek to Lake Albert	75 0 0	599 2 0	.....	Gulargambone Bore	1,806 2 3	.....	1,806 2 3
Curragh Bore	.....	.....	475 17 6	Grayrigg Tank	373 5 5	.....	373 5 5
Canowindra Well	1 15 3	134 4 9	.....	Gilgannia Tank	192 8 9	.....	192 8 9
Carrathool to Green Hills Well	.....	.....	38 2 6	Gulf Creek Well	57 6 2	.....	57 6 2
Collie Bore	843 4 2	2,504 4 4	.....	Glendon Tank	.....	.....	.....
Callaburra Bore	.....	.....	290 14 7	Gunnachie Well	24 7 9	.....	24 7 9
Come-by-Chance Bore	2,044 19 3	3,333 16 9	.....	General Charges	.....	.....	1 11 6



## RETURN of Expenditure, Public Watering Places—continued.

Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, Amount of Expenditure to 30 June, 1902.	If finished, Actual Amount of Expenditure.	Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, Amount of Expenditure to 30 June, 1902.	If finished, Actual Amount of Expenditure.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Hall's Creek Well .....	125 2 7		123 6 7	Pine Ridge Well .....	275 15 7		535 15 7
Hexham Water Supply .....	21 8 2	21 8 2		Poison Point Tank .....	255 0 0	255 0 0	
Howlong Water Supply .....	8 3 10		8 3 10	Pine Vale Well .....	55 13 10		55 13 10
Hiawatha Tank .....	11 12 1	11 12 1		Polygonum Hut Tank .....	2 1 0	2 1 0	
Hermidale Tank .....	565 16 0		2,512 6 9	Palganertie Tank .....	25 14 1	25 14 1	
Hungerford Bore .....	336 11 2		336 11 2	Ponto Common Tank .....	50 0 0		50 0 0
Hermitage Tank .....	43 11 7		43 11 7	Ringwood Tank .....	1,203 8 13		1,544 19 13
Hillgrove Water Supply .....	40 9 7	114 9 7		Red Hill Tank .....	123 1 8	123 1 8	
Ironbark Tank .....	101 13 0	123 18 7		Rocky Dam .....	594 12 9		1,003 1 5
Jumping Sandhill Well .....	192 13 10	192 13 10		Rockley Public Watering Place .....			27 7 8
Kelly's Gully Tank .....			19 1 4	Stanchions .....	41 3 5	41 3 5	
Kelly's Camp Bore .....			4 10 0	15-mile Gums Tank .....			211 5 6
Konraare Bore .....			2 0 9	Sr. Albans Well .....	74 8 5	74 5 5	
Kinchega Tank .....	1,307 18 9		1,307 18 9	Site of Artesian Well, Walgett .....	751 5 5	751 5 5	13 13 0
Kerrigundi Tank .....			0 3 6	Fandridge Tank .....			3 9 0
Keighran's Tank .....			45 12 6	Sandy Creek Bore .....			
Kamandra Dam .....			114 8 8	Shallow Well .....	2 19 3	2 19 3	
Limestone Tank .....	15 8 1		15 8 1	Savernake Tank .....			21 1 11
London Tank .....	1,156 15 7		1,155 15 7	Stock, Casing, &c. .....	1,753 14 8	1,753 14 8	
Leadville Water Supply .....	45 0 0		72 4 6	Sunny Corner Water Supply .....			19 13 8
Lockhart Tank .....			62 7 13	Spring Creek Works .....	124 12 8	474 13 8	
Mandamah Tank .....	1,028 17 7		1,032 13 5	Stuart Town Water Supply .....	435 6 0	435 6 0	
Mulga Valley Tank .....			27 3 0	Sibra's Bore .....			51 15 0
91-Mile Bore .....	8 4 0	343 2 11		Tarrion Creek Dam .....	11 4 0	789 3 13	
Morangerell Tank .....			74 12 3	Tomingley Tank .....			53 0 0
McPhail's Tank .....	987 16 3		1,303 19 1	Tanbar Springs .....	66 9 11		63 9 11
Marsden Overflow Dam .....			125 0 0	Tuncoona Bore .....			93 7 11
Murrumbidgee Tank .....	144 4 5		467 11 0	Terramungamine Tank .....	1,212 3 0		1,781 11 5
Mercadool Bore .....			1,089 7 1	Tathra Well .....			12 5 5
Mount Boppy Tank .....	1,014 13 11		1,123 18 5	Tenandra Bore .....	267 14 11		1,779 5 11
Morven Tank .....			444 2 0	Tin Pot Water Supply .....			1 7 6
Mumblebone Bore .....	1,109 3 1		1,109 3 1	Tea-tree Tank .....	514 13 11		514 10 11
Mossgeil Tank .....			21 13 8	Till Till Tank .....			0 9 1
Murray Hut Well .....	84 18 2		88 17 11	Trangie Water Supply .....	351 0 5		351 0 5
Myalla Tank .....			77 5 9	Tincroo Bore .....			443 7 7
Mongulla Bore .....	7 4 0		180 15 4	Tuckland Tank .....	5 9 9	5 9 9	
Mulgany Bore .....			5 0 0	Tuon Bore .....			970 9 2
Merungie Well .....	15 16 9		422 11 4	Thorndale Tank .....	8 6 4	8 13 10	
Megum Tank .....	1,227 16 6		1,227 16 6	Tubball Tank .....	68 14 9		141 2 10
Mabin's Corner Well .....	375 2 1		375 2 1	Trigall Tank .....	101 17 7		413 8 9
Moree Bore .....	18 16 8	206 17 5		Three Corners Bore .....	760 2 1		925 0 6
Marshmead .....	5 19 0	5 19 0		Toogimbie Tank .....	347 15 3		347 15 3
17-mile Tank .....	20 16 1	20 15 1		Umbable Bore .....	1,317 12 2		1,359 11 8
11-mile Tank, "Seville's" .....	808 7 0	808 7 0		White Cliffs Tank No. 2 .....	542 18 7		884 0 3
Manfred Bore .....	1,084 10 3	2,562 2 1		White Swamp Tank .....			25 0 0
Millthorpe Water Supply .....	145 2 1	222 5 8		Walgett Bore .....	619 2 2		1,894 8 2
Mullipa Tank .....	26 6 3		27 18 1	Wyalong No. 2 Tank .....			22 12 4
18-mile Tank .....	74 5 0	74 5 0		Wah Wah Creek and Carathool Bore .....	13 0 0		17 5 6
19-mile Tank .....			853 2 7	Willandra Tank .....			18 13 1
Moomin Creek Bore .....	100 4 4	100 4 4		Warri Warri Bore .....	1,378 12 11	2,298 13 8	
Manildra Weir .....	313 3 0	313 3 0		Woolabra Bore .....			453 10 6
Mount Hope Tank .....	44 13 0		57 4 8	Whoey's Tank .....	167 7 11		358 4 8
Nyrang Creek Dam .....	21 1 1		242 18 3	Wilemna Store .....			5 2 10
Nymagee Tank .....	678 13 4		1,247 6 10	Walgett Bore Drains .....	41 4 0		41 4 0
Nedgera Bore .....	1,543 8 2		1,555 8 2	Willie Bore .....			7 7 0
Nouraine Tank .....			3 1 4	Wormaminta Water Hole Tank .....	1,111 14 5	1,168 18 9	
Normanston Well .....	10 4 3	10 4 3		Wallow Bore .....			192 9 0
Narraburra Tank .....	1 10 0		871 7 8	Wanboota Tank .....	167 8 6		197 8 6
Narrabri Bore .....	12 0 0	12 0 0		Warialda Tank .....			5 18 0
Narrabri Bore Casing .....			1,487 1 10	Wanaaring Tank .....	3 0 0	111 0 0	
Narrowin Bore .....			3 13 5	Whittingham Dam .....			19 2 0
Oakey Creek Tank .....	105 7 5	411 10 9		Wallace Town Dam .....	104 16 3		104 16 3
Oberon Well .....			30 0 0	Walters Range Tank .....	56 9 3		67 16 10
Oaklands Well .....	135 0 10		512 9 4	Wandook Tank .....	10 2 11		190 1 0
Old Gnomery Bore .....			33 12 6	Wah Wah Tank .....	358 7 0		358 7 0
Orrel Bore No. 2 .....	1,594 18 2		2,516 14 11	Wallara Bore .....	345 0 0		345 0 0
Old Gunbar Tank .....			67 18 8	Windawan Tank .....	20 18 0		20 18 0
Orrel Bore No. 1 .....	1,845 15 0		3,895 9 11	Water Supplies for Minor Townships and Incidental Expenses .....	1,170 17 3	4,680 6 3	
Osacar Bore .....			100 12 2	Youndah Well .....	110 16 2	110 16 2	
Osborne Well .....	113 19 6		714 15 8	Yalpunga Tank .....	31 15 10	37 3 10	
Ooarnoo Bore .....	61 6 10	675 6 3		Yarrea Tank .....	716 15 0		716 15 0
Reserve Tank (Y) .....	41 8 3	41 8 3		Yerong Creek .....			15 18 4
Pack-saddle Bore .....	744 11 6	927 13 0		Youghl Plains .....			0 15 4
Pera Bore No. 1 .....			3 12 4	Yellow Water Hole Bore .....	143 19 6	1,076 5 8	
Pera Bore No. 2 .....			18 7 1	Salaries, Equipment, Travelling Allowances, &c. .....	15,593 2 5		
Pambula Well .....	5 13 6	44 13 6					
Paldrumatta Bore .....			128 0 7				
Ponds' Creek Tank .....	215 7 6		325 8 3				
Purdy's Springs .....			35 10 0				
				Total .....	75,145 18 7	42,268 11 4	82,853 0 8

## SUMMARY OF EXPENDITURE FROM 1 JULY, 1901, TO 30 JUNE, 1902.

Loans .....	£ s. d.
Consolidated Revenue .....	59,552 16 2
	15,593 2 5
Total .....	475,145 18 7

## EXPENDITURE ON WATER CONSERVATION, PUBLIC WATERING PLACES, ARTESIAN BORINGS, &amp;c., SINCE COMMENCEMENT OF WORK TO 30 JUNE, 1902.

Loans .....	£ s. d.
Revenue .....	903,883 2 10
	639,514 15 11
Total .....	£1,543,402 18 9



## RETURN of Expenditure on Public Works by Roads and Bridges Branch, from 1 July, 1901, to 30 June, 1902.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.			If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.			If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£	s.	d.				£	s.	d.	
Abbot Road, Greendale	1901	1,054	15	7	1,054	15	7	1,054	15	7	
Abbott's Falls to Bangay Road	1900	15	0	0	33	0	0	33	0	0	
Aberdeen to M'Donald's and Scrumbow	1882	363	3	8	6,231	11	0	6,231	11	0	
Aberdeen to Segenhoe and Gundy Road	1898	9	1	0	129	12	7	129	12	7	
Acacia Creek to White Swamp	1901	121	4	0	3,958	8	11	3,958	8	11	
Acre's and Hazlett's Roads, Kellyville	1901	223	10	3	223	10	3	223	10	3	
Adaminaby to Billylagra	1895	257	18	5	3,339	11	0	3,339	11	0	
Adaminaby to Dry Plain	1895	49	0	0	327	7	9	327	7	9	
Adaminaby to Gibrumatta	1899	93	0	3	193	0	3	193	0	3	
Adaminaby to Jinlabyne	1883	282	12	10	2,023	2	11	2,023	2	11	
Adamstown to Swansea	1885	83	8	2	9,045	19	9	9,045	19	9	
Adamstown-Swansea Road to Belmont Park	1901	39	0	0	39	0	0	39	0	0	
Adelong to Hillas Creek	1895	234	0	0	1,351	9	8	1,351	9	8	
Adelong to Sharpe's Creek	1900	69	19	9	279	11	1	279	11	1	
Adelong Crossing to Bag	1892	999	17	4	5,628	8	4	5,628	8	4	
Aiken's Lane, Pennant Hills	1899	29	19	1	71	12	5	71	12	5	
Albury to Boonanoomana	1894	1,392	2	11	8,784	14	6	8,784	14	6	
Albury-Boonanoomana Road to South Corowa	1901	105	15	3	106	15	3	106	15	3	
Albury to Cookarra	1893	297	11	2	3,405	9	4	3,405	9	4	
Albury to Uruana	1872	793	1	8	32,049	9	10	32,049	9	10	
Albury and Corowa Road to Uruana	1874	655	8	3	24,039	9	10	24,039	9	10	
Aliak's Creek, via Bloom Hill, to Campbell's River	1892	62	10	2	481	8	10	481	8	10	
Allandale Road to Rothbury	1899	218	13	8	244	2	8	244	2	8	
Allynbrook to Duck's Selection (White's Road)	1901	47	0	0	47	0	0	47	0	0	
Alstonville to Pearce's Creek	1895	154	8	6	2,275	17	8	2,275	17	8	
Alstonville-Booyong Road to Napier's	1897	30	0	0	222	19	0	222	19	0	
Alstonville-Booyong Road to Tevan Junction	1897	250	10	0	1,470	18	6	1,470	18	6	
Amosfield to Asiea Creek	1890	672	18	0	5,322	5	6	5,322	5	6	
Angledool to Waris Hebel	1898	29	17	0	220	19	10	220	19	10	
Appin to Appin Falls Reserve	1901	29	18	0	29	18	0	29	18	0	
Appin to Brook's Point	1896	50	0	0	292	19	7	292	19	7	
Appin, via Wilton, to Maldon	1901	315	10	9	315	10	9	315	10	9	
Approach to Kilara Station	1901	37	0	0	37	0	0	37	0	0	
Approach to Mulginey's Crossing, Orara River	1901	13	3	11	13	3	11	13	3	11	
Approach to Robley's Premises, Wyong	1901	314	14	0	314	14	0	314	14	0	
Approach to Warrawee Station	1895	51	14	7	275	12	11	275	12	11	
Araluen, via Bettowndy to Bick Creek	1901	2	11	0	2	11	0	2	11	0	
Araluen Creek, at Upper Araluen, to Harrison's	1901	30	0	0	30	0	0	30	0	0	
Araluen P.O., via Araluen West to Elrington-	1901	15	0	0	15	0	0	15	0	0	
Araluen Road	1901	293	6	0	293	6	0	293	6	0	
Araluen-Moraya Road to Dena River	1893	30	0	0	45	0	0	45	0	0	
Aradia Roads	1886	151	8	2	1,395	4	2	1,395	4	2	
Argoon to Morandah	1890	19	1	0	631	1	9	631	1	9	
Armidale to Castle Doyle	1884	99	15	3	2,465	13	0	2,465	13	0	
Armidale to Gostwyck	1886	273	4	10	5,939	7	6	5,939	7	6	
Armidale to Kangaroo Hills	1887	75	1	6	1,108	13	7	1,108	13	7	
Armidale to Long Swamp	1879	125	15	6	4,926	17	4	4,926	17	4	
Armidale to Mihi Creek	1884	97	11	6	3,297	8	2	3,297	8	2	
Armidale to Yarowick	1901	29	7	6	29	7	6	29	7	6	
Armidale towards Arding Church	1888	239	5	0	3,918	19	9	3,918	19	9	
Armidale towards Inverell Road	1891	159	1	0	871	11	9	871	11	9	
Armidale, via Kelly's Plains to Bald Knob	1894	98	5	0	2,036	9	3	2,036	9	3	
Armidale Road to Hall of Hickey's Creek	1894	235	14	8	3,585	1	2	3,585	1	2	
Armidale Road to Upper Five-day Creek	1895	138	6	10	908	8	0	908	8	0	
Armidale Road to Wabro	1899	53	9	0	591	0	7	591	0	7	
Armidale Road up Mungwy Creek	1896	75	10	4	474	10	7	474	10	7	
Armidale Road up Nulla Creek	1901	97	13	0	365	18	0	365	18	0	
Armidale Road, via Timaroz, to Willi Willi	1895	47	2	6	634	1	1	634	1	1	
Armidale-Eastern Plains Road to Boralong	1899	14	18	0	47	10	0	47	10	0	
Armidale-Eastern Plains Road to Duval Plat-	1893	11	7	6	49	10	6	49	10	6	
Armidale-Eastern Plains Road to Eversleigh	1891	26	5	9	107	3	3	107	3	3	
Armidale-Glen Innes Road, at 19-M.P., to Guyra	1901	37	0	6	37	0	6	37	0	6	
Arnold's to App's-tree Flat	1874	1,250	10	0	24,181	3	9	24,181	3	9	
Ashford to Glen Innes	1901	18	6	9	18	6	9	18	6	9	
Ashlea to Upper Dingo Creek	1892	351	4	5	2,818	16	4	2,818	16	4	
Ashlea-Upper Dingo Creek Road to Lewis'	1901	32	4	0	32	4	0	32	4	0	
Attunga to Hall's Creek	1895	100	0	0	459	9	6	459	9	6	
Attunga to Somerton	1887	200	0	0	1,672	14	11	1,672	14	11	
Avenue Road, Colo Vale	1901	20	0	0	20	0	0	20	0	0	
Awaba to Freeman's Waterholes	1895	281	0	5	1,850	2	2	1,850	2	2	
Buck Creek Road, Casino District	1901	12	11	0	111	0	0	111	0	0	
Black Forest to Coolingatta	1901	171	17	6	171	17	6	171	17	6	
Baker's Creek to Metz	1895	43	17	3	351	4	0	351	4	0	
Baker's Creek, via Herbert Park, to Locabar	1896	54	9	0	526	9	1	526	9	1	
Baker's Road, Carlingford	1897	24	13	3	85	18	0	85	18	0	
Balala to Kingstown	1881	104	12	0	3,984	10	0	3,984	10	0	
Bald Knob towards Emmaville	1895	71	9	0	800	17	0	800	17	0	
Balgowlah, via French's Forest, to Gordon	1901	128	17	8	1,532	18	8	1,532	18	8	
Ballaalaba to Harold's Cross	1901	37	0	0	37	0	0	37	0	0	
Ballangarra Wharf to Glen Esk	1895	293	13	0	1,939	2	7	1,939	2	7	
Ballina to Bangalow	1883	699	17	6	20,283	1	2	20,283	1	2	
Ballina to Byron Bay, via North Creek	1887	392	0	0	5,831	12	0	5,831	12	0	
Ballina to Tenterfield	1891	6,271	11	7	126,735	17	4	126,735	17	4	
Ballina-Bangalow Road to Johnson's	1901	98	14	0	98	14	0	98	14	0	
Ballina-Tenterfield Road to Lismore-Casino	1901	43	17	9	43	17	9	43	17	9	
Ballina-Tenterfield Road to Saville's	1895	10	0	0	353	1	1	353	1	1	
Balmain, over Iron Cove and Parramatta River	1893	876	8	10	7,445	13	0	7,445	13	0	
Bridges, to Ryde	1897	165	14	2	3,022	16	0	3,022	16	0	
Balranald to Swan Hill Bridge	1901	10	0	0	10	0	0	10	0	0	
Bamarang to Wogamia	1899	15	0	0	59	19	4	59	19	4	
Bandon Grove to Malcondra	1901	230	13	1	213	13	1	213	13	1	
Bangalla Mountain Road	1899	117	14	1	325	3	8	325	3	8	
Bannister's to Gorman's	1901	1	1	0	1	1	0	1	1	0	
Baradine to Goorianawa	1894	43	15	0	291	4	0	291	4	0	
Baradine to Teridgerie	1896	80	15	7	2,671	0	6	2,671	0	6	
Barber's Creek to White's C.P.	1895	155	15	5	639	16	9	639	16	9	
Bargo, via Rockford, to Phasant's Nest	1896	287	16	3	1,451	15	9	1,451	15	9	
Bargo Bridge to Aylmerton	1894	288	17	10	1,262	8	3	1,262	8	3	
Barham to Moulamein	1901	49	7	0	324	14	7	324	14	7	
Barlow's Mill to Wood's	1883	34	9	2	34	9	2	34	9	2	
Barmedman to Buddigower	1883	243	18	0	3,994	3	0	3,994	3	0	
Barney Downs to Lionsville	1894	135	18	2	3,776	13	11	3,776	13	11	
Barraba to Bundarra	1898	34	9	7	184	9	7	184	9	7	
Barraba to Horton River	1893	45	17	6	1,875	17	2	1,875	17	2	
Barrengarry to Moffitt's and Rutledge's	1901	35	0	0	35	0	0	35	0	0	
Barrengarry to Nelson's	1895	70	0	0	814	0	0	814	0	0	
Barrengarry to Yeola	1895	87	5	3	1,198	0	10	1,198	0	10	
Barrenjoey Road to McGarr's Creek	1895	799	19	5	1,545	16	11	1,545	16	11	
Barrington to Cobark Road	1892	265	5	6	1,548	14	3	1,548	14	3	
Barrington to Little Manning River	1896	182	14	6	514	15	9	514	15	9	
Barry to Hanging Rock	1890	12	0	0	82	0	0	82	0	0	
Barton's to Combo	1901	34	8	0	34	8	0	34	8	0	
Basham's to Dawson's Cemetery	1901	50	0	0	50	0	0	50	0	0	
Bathurst Creek-road up	1900	3	11	2	43	5	2	43	5	2	
Bathurst River-bank protection	1901	1,474	4	8	1,311	2	11	1,311	2	11	
Bathurst to Bellevue	1895	39	19	3	633	7	4	633	7	4	
Bathurst to Icely	1893	205	13	7	1,713	4	6	1,713	4	6	
Bathurst to Rockley	1895	886	15	11	4,697	0	2	4,697	0	2	
Bathurst, via Blayney and Cowra, to Grenfell	1870	2,124	0	2	13,283	15	11	13,283	15	11	
Bathurst, via Poor Man's Hollow, to Bald Hills	1900	154	13	3	177	5	3	177	5	3	
Bathurst, via Poor Man's Hollow, to Bald Hills	1901	39	7	6	39	7	6	39	7	6	
Bathurst-Burrage Road, at Saleyards, to Poor	1900	14	17	0	274	2	6	274	2	6	
Bathurst-Man's Hollow	1901	20	0	0	20	0	0	20	0	0	
Batlow Cemetery Road	1901	747	0	3	4,133	9	1	4,133	9	1	
Baulkham Hills to Round Corner at Dural	1895	57	0	0	191	15	0	191	15	0	
Baulkham Hills to Seven Hills Road (Chapel	1895	260	0	0	552	14	6	55			



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
Blackheath to Mogaiong	1895	80 0 0	1,204 4 1	Braidwood to Nelligen	1863	997 7 5	35,363 15 6
Black Lane, Dubbo District	1901	29 4 10	29 4 10	Braidwood to Nerriga	1872	410 12 0	5,281 19 1
Black Mountain to Guyra	1895	74 19 0	472 7 3	Braidwood towards Queanbeyan	1890	187 10 10	4,856 6 8
Black's Road, Galston	1896	16 0 0	72 18 0	Braidwood, via Bell's Creek, to Araluen	1804	524 16 0	23,191 13 3
Blackman's Point to Ennis Ferry	1895	80 10 9	410 0 1	Braidwood, via Reidsdale, to Bell's Creek	1872	57 10 10	3,997 6 7
Blacktown Road, via Mount Capicure, to Chats- worth	1891	230 13 6	2,502 13 3	Braidwood-Animbo Road, at Gilbert's Creek, to Burke's Corner	1901	16 11 9	16 11 9
Blacktown Road, via Seven Hills Station, to Windsor Road	1895	200 0 0	1,445 2 8	Braidwood-Animbo Road, at Jackson's, to Cawthorn's	1901	44 14 6	44 14 6
Blakebrook to Keerong	1890	279 8 5	1,665 8 10	Braidwood-Elrington Road, at 5 M.P., to Murphy's	1901	31 0 0	30 0 0
Blakebrook to Petersen's	1894	168 4 8	1,324 3 5	Braidwood-Mongarlowe Road, at 6-Mile Post, to Back Creek	1899	60 0 0	60 0 0
Blanch's to Burns' Point Ferry	1896	423 2 9	2,053 17 0	Braidwood-Nerriga Road, at Nerriga, to Timber- light	1901	60 0 0	60 0 0
Blandford Railway Station to Box Tree Hill	1895	79 0 0	643 10 5	Braidwood-Nerriga Road to Charlehawk	1901	24 14 2	24 14 2
Blaxland's Flat Road	1894	47 5 6	665 1 11	Braidwood-Tarago Road, via Larbert, to Tarago	1881	198 14 6	3,532 17 9
Blaxland's Ridge, via Moran's Rock, to head of Colo	1888	522 8 2	2,967 18 4	Branxton to Dalwood	1895	125 13 4	755 1 9
Blayney to Brown's Creek	1880	64 15 1	5,488 12 0	Branxton to Deep Creek	1896	100 8 0	840 17 9
Blayney to Guyong	1881	184 13 3	4,012 17 2	Branxton to Gresford	1895	412 5 2	2,607 7 5
Blayney to Hobby's Yard	1883	284 5 1	3,004 14 7	Branxton to McMullan's	1895	50 0 0	265 10 6
Blayney to Hobby's Yard Road, towards Moorilla	1901	174 19 9	318 2 11	Branstone to Court's Crossing	1896	44 16 8	646 9 6
Blayney to Millthorpe	1883	145 4 0	4,307 18 1	Breakfast Creek to Prosser's	1901	15 0 0	15 0 0
Blayney to Neville	1877	221 4 6	12,659 15 11	Bredbo to Cowra Reefs	1896	30 0 0	30 0 0
Blayney to Newbridge	1895	152 11 11	1,535 3 8	Bredbo to Nimbo	1890	258 12 6	22,268 18 8
Blayney, via Grehgahmstown, towards Millthorpe	1897	145 4 10	580 8 5	Bridger's to Laverly's Gap	1892	299 8 0	606 13 11
Blenkinsopp's to Wilde's Meadows	1890	10 0 0	1,360 14 7	Bridge Road, Naranderra	1901	150 0 0	150 0 0
Boat Harbour to Ballina Road	1891	55 15 0	1,092 5 4	Bridgewater to Yeoval	1895	397 11 7	2,513 8 8
Boat Harbour to Cowlong	1887	200 0 0	3,094 18 2	Brill Bril to Gundie Tin Mines	1898	100 0 0	299 0 0
Bobbin Creek to Main Arm, Upper Dingo Creek	1901	14 13 6	14 19 6	Bringly to Luddenham	1892	287 0 3	1,736 3 10
Hobbiwea Creek to Rocky Creek	1893	159 6 0	4,827 9 10	Broke, via Nine-Mile, to Singleton Road	1896	152 3 10	695 17 5
Robundarah to Adaminahy	1880	227 13 9	103 0 0	Broken Back Bridge to Pennant Hill's Road	1891	400 0 0	2,068 9 3
Booble Road	1901	100 0 0	4,102 19 11	Broken Hill Relief Works (Roads)	1892	2,179 19 11	2,179 19 11
Bodalla to Dignan's Creek	1893	311 4 7	3,428 15 0	Broken Hill to Menindie	1892	109 16 6	1,299 18 7
Bodalla, via Noorooma, to Tilba	1890	269 8 0	3,428 15 0	Broken Hill towards Cobham	1887	164 0 0	3,602 4 0
Bogan Gap to Fifeild	1897	349 19 3	2,271 7 4	Brolgan Siding to Bell's	1901	48 14 0	48 14 0
Bogan Gate to Gunning Gap	1898	83 9 3	312 17 1	Broke's Grant, Road through	1900	19 16 3	88 0 0
Boggy Creek to Cottage's	1892	104 13 0	640 0 7	Brookstead to Gari	1 05	37 14 0	217 3 11
Boggy Flat to Holmes' Creek	1896	136 5 9	573 6 5	Brooman to Nelligen	1893	190 8 0	2,239 19 8
Boggy Flat Crossing towards Dight's Ford	1901	10 13 0	17 10 0	Brooman's Head Road, Maclean	1901	162 0 0	162 0 0
Boloco to Panpong	1895	32 15 0	198 19 2	Broughton (or Epsom) Road, near Liverpool	1900	23 15 0	169 0 0
Bolong Road (Nowra District)	1900	17 17 0	297 4 7	Brown's Creek to Carcoar-Millthorpe Road	1901	280 9 2	280 9 2
Bolwarra to Rosebrook and Branch	1887	148 16 7	3,301 11 7	Brunbah and Montague Platform	1890	63 11 11	2,151 7 6
Bombala to Buckley Springs	1889	50 0 0	477 14 6	Brungle to Wyangala	1890	380 0 0	3,216 14 5
Bombala to Burrumbrook	1899	50 0 0	259 4 10	Brungle Bridge to Gobarralong	1888	239 4 5	2,868 2 7
Bombala to the Cemetery	1900	1 19 6	30 0 0	Brungle Road to Tumut River	1901	77 11 3	77 11 3
Bombala to Delegate	1871	87 0 0	17,139 8 11	Byron's Corner to Wagga Wagga—Narranderra Road	1899	44 14 0	274 5 1
Bombala to Langham's Crossing, Snowy River	1900	40 0 0	104 0 0	Buckley to Pemberton's	1896	168 19 0	865 19 2
Bombala to Nimitybelle	1892	430 14 6	13,544 10 2	Buckley's Springs to Tayfield	1901	20 0 0	20 0 0
Bombala, via Gunningrah, to Bobundarah	1891	203 17 0	2,472 14 10	Buckra-Bendinn Road	1891	103 6 9	949 5 10
Bombala, via Mila, to Delegate	1892	376 2 1	15,870 5 0	Budgeon to Gilgandra	1896	150 0 0	395 11 1
Bombala, via Tantara, to Merimbula	1894	2,406 7 0	15,870 5 0	Bugby Hill to Oaks Road (Bob's Range Road)	1897	200 0 0	376 1 0
Bondi Beach, roads across	1899	189 8 4	3,592 3 3	Bukkalla Vineyard, via Fraser's Creek, to Severn River	1900	27 12 0	76 2 6
Bondi at "Head of Run" to Nangutta	1901	20 0 0	50 0 0	Bulga Road to West Portland	1896	15 0 0	324 15 6
Bondi, up Bondi Creek (Bombala District)	1901	28 14 0	28 14 0	Bull Ridge to Isabella River	1895	45 0 0	419 15 7
Bong Bong Crossing to Rinnaburra, Byron Bay Road	1899	49 19 0	49 19 0	Bulladellah to Bungwall	1878	483 2 0	12,108 17 0
Bong Bonglong to Muttama Siding	1899	87 10 7	250 17 3	Bulladellah to Coolongoolook	1895	308 9 11	4,151 12 4
Boogaldi to Pilliga	1893	85 16 6	743 14 5	Bulladellah to Larry's Flat	1892	739 13 11	5,803 8 3
Bookham to Chidowla	1885	66 17 0	1,438 15 5	Bulladellah to Tea Gardens	1901	99 17 9	99 17 9
Bookham to Cooradigbee	1881	50 0 0	2,267 7 8	Bulladellah, down Myall River	1891	63 0 6	792 9 4
Bookham to Ilialong	1884	Nil.	1,036 3 0	Bulli, via Coal Cliff, to Blue Gum Forest	1882	437 6 3	6,641 9 4
Boolaroo to Teralba	1901	44 13 10	132 17 8	Bulli—Blue Gum Forest Road to Thirroul P.S.	1901	10 4 4	10 4 4
Booligal to Hillston	1880	48 16 0	4,255 12 1	Bulli Pass to Cataract River	1880	50 0 0	2,107 19 7
Booligal to Ivanhoe	1892	125 0 6	3,033 19 3	Bulluck Wharf to Coolongoolook	1894	334 14 0	2,410 5 5
Booloroo Bridge to Geondiwindi	1895	74 17 9	2,474 12 9	Bun, bowlee Creek to Billapaloola	1901	29 11 6	29 11 6
Booral to Bulladellah	1876	554 6 5	13,771 6 6	Bundanoon to Ferndale	1888	69 11 2	1,768 13 0
Booral up right bank Kurrah River	1897	252 1 0	916 14 0	Bundarra Road to Bora Creek	1899	453 8 7	1,251 11 5
Booralong Station to Baldersleigh	1899	58 19 0	71 17 0	Bundarra—Bora Creek Road to King Conrad's Mine	1901	30 0 0	30 0 0
Booralong towards Aberfoyle	1888	113 12 4	2,975 18 10	Bungendore to Black Range	1881	39 12 0	1,391 17 5
Boorie Creek Bridge, up Boorie Creek, to Brugg's	1900	49 7 0	139 4 6	Bungendore to Doughty	1888	133 17 6	5,027 11 2
Bora Creek to Boggy Camp	1899	21 12 0	142 3 9	Bungendore to Upper Gundaroo	1893	60 19 0	1,286 17 6
Borah Road to Jacob and Joseph Creeks	1900	0 14 9	192 7 0	Bungendore, via Captain's Flat, to Braidwood and Cooma Road	1889	822 2 8	19,242 18 8
Border to New Koreelah, River Tree, Tooloom road	1898	118 16 8	485 8 8	Bungendore—Captain's Flat Road to Neal's Creek	1901	57 13 0	57 13 0
Boree to Manilla	1895	95 0 0	943 0 6	Bungonia to Inverary Park	1901	40 0 0	40 0 0
Boree Creek towards Morundah	1899	61 17 6	139 12 6	Bungonia to Look-down	1901	32 1 0	32 1 0
Boro to Long Swamp	1901	20 0 0	20 0 0	Bungwall to Carba	1901	60 0 0	60 0 0
Boundary Road, Centennial Park	1901	931 5 6	931 5 6	Bungwall to Forster	1895	200 0 0	1,264 10 3
Botanic Gardens, Extension and Roadway	1897	2,486 17 4	2,486 17 4	Bunmerong Road to Cook's River Road	1898	450 0 0	1,720 12 9
Bourbah to Gulargambone	1897	121 14 0	398 9 9	Bunmerong Road to Brand	1900	227 12 8	4,333 0 0
Bourke to Barrington	1884	599 17 6	6,497 0 4	Burgman's Lane, Muswellbrook District	1901	15 0 0	15 0 0
Bourke to Culgoa River	1897	1 8 0	1,611 8 0	Burns Lane to Nulla Mount	1899	8 19 7	8 19 7
Bourke to Hungerford	1895	722 17 9	10,123 9 8	Burns Road, Wahroonga	1899	508 12 10	781 14 5
Bourke to Louth	1897	90 4 3	510 16 0	Burradoo to Kingslook Road	1896	62 5 0	529 13 8
Bourke to North Bourke	1901	629 18 4	629 18 4	Burriga to Swashfield	1898	202 8 0	600 7 6
Bourke to Toorale	1900	25 4 0	124 15 8	Burrigong to Emu Creek	1897	189 0 9	939 2 7
Bourke to Wanaaring	1885	887 7 7	10,459 8 4	Burrigong to Robertson Road	1884	6 12 6	1,641 13 8
Bourke towards Cobar	1895	1 8 0	4,024 13 0	Burrill to Kimbriki	1890	163 4 6	1,882 16 0
Bowan Park P.S. to Green's Butter Factory	1901	89 19 11	89 19 11	Burringbar to Cudgera	1895	707 19 8	1,561 5 11
Bow to Idaville	1893	19 6 0	342 11 7	Burringbar to Moolball	1888	199 11 9	1,960 11 11
Bowenfels to Stony Point	1895	110 0 0	853 4 9	Burringbar to Upper Burringbar	1894	108 0 0	750 11 5
Bowenfels to Tarana	1900	200 0 0	1,092 14 11	Burrows to Binalong	1887	279 12 8	15,993 19 6
Bowling Alley Point—River Bank Protection	1901	60 0 0	60 0 0	Burrows to Breakfast Creek	1892	118 19 2	1,680 11 10
Bowman's River, Road up	1899	95 12 0	141 11 0	Burrows to Cunningham	1885	125 11 2	2,635 16 8
Bowling to Binalong	1896	144 17 4	843 3 8	Burrows to Keenya	1885	135 0 2	2,929 10 5
Bowral to Briars	1892	155 11 6	1,254 10 1	Burrows to Narrawa	1892	385 3 0	3,597 9 3
Bowral to Robertson	1874	526 0 0	21,366 14 5	Burrows, via Gorham's towards Rugby	1900	78 9 2	159 15 11
Bowral-Robertson Road to Maloney's	1889	90 18 3	190 18 3	Burrows-Binalong Road to Great Southern Road to Burrows Road	1901	35 2 7	35 2 7
Bowraville to Upper North Arm	1879	344 1 0	7,011 18 9	Burrows-Narrawa Road, near Bolong to Taylor's Flat	1899	194 17 4	442 4 8
Bowraville to Upper South Arm	1890	287 5 9	2,114 4 11	Burrumbuttock Tank, Fencing	1901	28 10 0	28 10 0
Box Tree Road to Sandy Creek	1899	39 9 0	80 0 0	Burrumbuttock to Brocklesby Railway Station	1901	59 8 6	59 8 6
Box Tree Hill Road, via Timor Gap, to Isis River	1882	119 3 9	3,275 2 1	Burwood Extended to Dudley Road to Lambton B Pit	1900	.....	.....
Boyce's to Penhurst	1899	126 10 0	484 16 0				
Bradley's Head Road	1900	169 16 11	371 1 7				
Braidwood to Animbo	1893	261 13 4	3,819 17 9				
Braidwood to Elrington	1872	242 4 6	6,551 10 0				
Braidwood to Euradux	1892	50 0 0	229 5 11				
Braidwood to Mongarlowe	1881	204 12 5	3,984 18 8				



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
Butcher's corner to Defence Reserve at Hungry Point	1901	179 17 8	179 19 8	Chilcott's to Campbell's	1901	63 19 0	63 19 0
Byalla, via Hallam's towards Dalton's	1901	50 0 0	50 0 0	Chiver's Bridge towards Kangaroo	1900	89 14 9	102 14 9
Byangum to Dunbille	1892	158 11 2	578 1 0	Churchill's Wharf to Page's Ferry Road	1895	80 0 0	505 13 6
Byangum to Upper Middle Arm	1894	125 0 0	952 5 6	Clarence town to Limeburner's Creek	1884	238 2 9	5,231 1 7
Bylong, via Wolara to Ringwood (Leas' Pine)	1901	100 0 0	100 0 0	Clarence town to Thalaba	1895	158 17 4	1,046 17 6
Byron Bay to Broken Head	1897	45 13 0	451 8 1	Clarence town, via G. N. William, to Brookfield	1884	62 10 0	1,050 10 0
Cabbage Tree Road, Narrabeen	1901	51 0 5	51 0 5	Clarendon to Cornwallis	1884	20 0 0	937 2 5
Cabramatta to Cowpasture	1895	241 12 7	242 12 7	Clark's to Round Mountain	1899	39 4 8	79 14 8
Cadgongary to Upper Brogo	1895	135 3 7	635 17 6	Clarke Creek to Long Creek, via Windeyer	1900	25 0 0	74 18 3
Cadia Gate to Long Swamp	1901	60 0 0	60 0 0	Clear Hills to Daysdale	1891	77 7 10	133 1 2
Caleb Cook's Road	1901	20 0 0	20 0 0	Clement's, via Lamb's, to Mummel Road	1901	50 0 0	50 0 0
Calga to Teridgerie	1901	40 0 0	40 0 0	Clifton to Caragabal	1895	238 12 9	2,515 11 6
Caloola to Trunkey	1894	115 1 2	537 4 8	Cloeburna to Quondong Siding	1901	49 18 0	49 18 0
Caloola to Wamboona	1900	145 12 6	145 12 6	Clune's to Binna Burra	1887	160 8 10	8,033 7 10
Caloola Road via Wimb'edon to Newbridge	1878	57 8 8	2,643 15 7	Clune's to Dunoon	1895	48 12 6	777 1 6
Camberwell via Kermod's to Carrowbrook Road	1890	64 11 8	1,217 0 5	Clune's to McKenzie's	1890	119 18 1	1,642 12 6
Cambewarra to Lumsden's Corner	1895	114 5 0	856 2 4	Clune's to Rosebank	1891	155 5 6	2,098 18 7
Cambewarra Mountain to Anderson's Farms	1901	47 4 9	47 4 9	Clune's—Binna Burra Road to Nashua	1899	35 3 9	97 6 3
Cambewarra Mount towards Woodhill	1897	100 0 0	685 3 4	Clunes—Stagg's Road to Eureka-Duraby Road	1900	39 9 0	72 16 0
Cambon, via Pyangle, to Dungaree	1895	51 0 0	289 11 9	Clybucca Creek to Menarcobini	1901	95 15 1	95 15 1
Camden to Cox's River	1890	636 5 9	8,729 4 5	Coast Hospital Grounds—Roads in	1898	161 2 4	1,141 8 10
Camden to Werombi	1893	361 10 6	2,270 6 6	Coast Road to G. Smith's	1901	79 8 8	79 8 8
Cameron's Crossing to Moril Creek	1901	19 12 0	310 0 7	Coast Road to Perrett's	1874	875 11 3	26,257 5 11
Campbell's Creek to Pyramul Road, via Murray's Lane	1901	54 19 10	24 19 10	Coast Road to Perre's Road to Railway Reserve—Clearing Crown Lands	1901	142 16 0	142 16 0
Campbelltown Road	1901	50 0 0	20 0 0	Coast Road to Rolland's Plains	1894	111 13 0	893 0 5
Campbelltown to Narellan	1892	63 0 0	1,446 18 2	Coast Road to Sullivan's	1895	10 19 0	1,308 5 1
Campbelltown to Pictou	1892	481 15 1	2,215 12 9	Coast Road, via South Arm, to Marx Hill	1890	91 3 11	1,962 10 2
Camberra Post Office to Uriarra Road	1895	24 17 0	131 12 2	Cobah Road, Arcadia	1901	24 0 4	240 4 1
Candelo to Bemboka	1895	183 4 10	1,141 7 0	Cobar to Balaclava	1896	44 8 0	555 12 10
Candelo to Wyndham	1882	113 16 0	5,085 14 4	Cobar to Jacob's Well	1895	434 0 0	2,340 7 7
Canowindra to Eugowra	1896	291 13 4	7,443 0 8	Cobar to Louth	1893	18 1 0	631 10 1
Canowindra to Goolagong	1890	41 9 0	1,282 11 7	Cobar to New Gilgannia	1889	178 4 9	2,856 2 11
Canowindra to Long's Corner	1895	55 5 6	391 8 3	Cobar to Nyngan	1887	59 0 0	2,302 4 4
Canowindra to Toogong	1897	22 7 9	341 17 9	Cobar to Viaduct near Fort Bourke Mine	1901	300 0 0	300 0 0
Canterbury Trust Road to Forest Road, Hurstville	1901	20 0 0	20 0 0	Cobar towards Bourke	1895	100 0 0	3,837 17 3
Capertee to Glen Alice	1895	193 11 0	1,314 17 0	Cobargo to Wadbilliga	1888	145 15 11	3,923 17 6
Capper's to Deep Creek	1897	71 11 1	400 7 6	Cobbadah to Rocky Creek	1874	86 3 0	14,266 16 3
Captain's Flat to Jarangle	1901	43 4 0	43 4 0	Cobbarah to Denison Town	1895	10 13 0	544 18 4
Captain's Flat to Norongo	1892	47 0 0	1,094 15 11	Cobbarah to Gilgandra	1893	465 19 1	5,175 4 10
Carabost to Humula	1901	15 0 0	15 0 0	Cochran to the Duncan's	1892	140 0 0	514 8 5
Carabost to Kyamba	1880	48 13 0	5,105 17 9	Cockburn to Wilcannia	1890	209 16 2	4,672 13 10
Caramana to Orara Junction	1890	119 10 6	1,075 17 7	Coff's Harbour to Sharpe's	1890	987 17 8	13,491 17 7
Caramana to Sealand's	1890	105 14 9	570 14 7	Colinton up Colyer's Creek	1901	20 0 0	20 0 0
Carcoar to Felthimber Creek	1895	151 2 3	748 18 8	Collaredabri to Angledool	1892	202 10 6	1,770 5 2
Carcoar to Flyer's Creek	1899	43 16 0	2,603 7 11	Collaredabri towards Narrabri	1893	95 2 6	1,145 2 8
Carcoar towards Barry	1894	85 9 4	672 5 11	Collector to Breadalbane	1881	100 0 0	3,154 14 7
Carcoar towards Millthorpe	1895	51 2 0	1,535 9 4	Collector to Gundaroo	1895	65 0 0	893 19 0
Carcoar, via Mount Macquarie, to Shaw	1901	99 18 9	99 18 9	Collector, via Bohara, to Gunning	1890	105 19 2	4,425 7 2
Cargo to Manildra	1883	235 0 7	4,174 5 0	Collector, via Luckie's Pass, to Spring Valley	1900	50 0 0	110 0 0
Cargo-Canowindra Road to Barragan Hall	1900	31 0 0	82 14 0	Collector, via Luckie's Pass, to Tiranna	1882	200 0 0	6,336 8 4
Carne's Hill, via Bringelly, to Greendale	1895	119 5 8	1,892 14 1	Collambatti Creek to Taylor's Arm Rd. at Lett's	1901	20 0 0	20 0 0
Carrathool to Hillston	1881	425 15 1	9,719 5 6	Colo Vale Platform to Great Southern Road	1901	86 16 0	86 16 0
Carrathool Ferry towards Argoon	1900	101 10 2	133 18 6	Combarah to Bingham Tank	1901	35 0 0	35 0 0
Carrington Road, National Park	1900	2,581 10 6	2,581 10 6	Comleroy to Sackville Ferry	1895	114 16 11	1,015 12 8
Carter's Road, Galston, near Fagan's	1900	15 0 0	44 16 2	Commandant Hill to Port Macquarie Road	1891	38 10 2	338 0 11
Carter's to Pomeroy	1896	26 0 0	356 16 2	Conargo towards Moonbria	1892	33 0 0	1,026 11 5
Casino to Coraki	1886	776 14 10	9,624 3 0	Condabolton to Nymagee	1894	325 13 4	1,811 11 1
Casino to Ellangowan	1890	46 1 8	2,860 6 6	Condabolton to Ungarie	1897	19 2 6	347 8 3
Casino to Mount Lindsay	1895	1,888 9 7	22,205 6 9	Condabolton—Ungarie Road, via Bena, to Wamboine Post Office	1901	8 15 0	8 15 0
Casino to Myall Creek	1873	772 7 2	31,921 1 6	Condong to Durambah	1895	373 7 0	2,235 12 4
Casino to North Codrington and Wharf at Ranken's	1892	372 9 8	5,691 14 1	Condong to Palfrey's and Cudgera	1901	88 7 1	465 7 3
Casino-Coraki Road to South Codrington Post Office	1900	2 18 0	31 0 0	Conea to Curraebark	1894	50 0 0	50 0 0
Casino-Ellangowan Road to Tatham-Myrtle Creek Road	1896	109 2 6	160 12 6	Congarini to Rolland's Plains (North Coast Rd.)	1885	581 3 0	8,191 18 5
Casino-Mount Lindsay Road to Reynolds'	1896	21 11 9	268 4 9	Congarini, up Taylor's Arm	1897	108 17 6	484 13 6
Casino-Myall Creek Road to Tabulam-Myall Creek Road	1901	88 15 0	88 15 0	Congarini, up North Bank, Taylor's Arm	1887	24 6 6	7,100 11 0
Casino-North Codrington Road via Caniba, to South Gundurimba	1900	2 1 0	439 19 9	Conn's to Morangarell	1901	7 9 0	7 9 0
Casino-North Codrington Road via Tomki Public School, to Tatham	1890	103 3 2	876 16 3	Coolah to Gobarralong	1887	97 16 7	3,572 16 10
Casino River Bank Protection	1899	334 8 9	857 10 0	Coolah to Cassilis	1895	150 0 0	684 9 0
Cassilis to Turra Vale	1898	11 7 0	100 0 0	Cooluman to Currawarna	1897	159 8 0	355 3 5
Castle Hill, to Main Windsor Road	1895	60 0 0	260 18 0	Cooluman, via Cowabbie, to Warri	1892	176 7 9	2,980 0 5
Castle Hill Hall to Banks'	1893	32 10 0	210 14 11	Cooluman, via Kindra, to North Berry Jerry	1896	199 8 7	1,138 8 2
Castle Mountain Public School to Kelso's and Miller's	1900	4 9 0	25 0 0	Cooluman, via Springwood, to Beaconsfield	1890	300 0 0	1,872 15 10
Cathcart to Bibbenlake	1888	39 13 8	1,640 2 11	Cooolai to Wallangra	1884	40 0 0	818 5 7
Cathcart to New Line Road	1900	55 0 0	45 0 0	Cooolonglook to Bungwall	1901	62 19 6	62 19 6
Cathcart Junction, via Pambula, to Eden	1875	968 0 8	43,071 6 11	Cooolonglook to Dalgety	1896	223 11 4	1,050 15 10
Catherine Hill Bay Deviation	1900	0 8 4	328 19 6	Cooma to Big Badger	1901	221 7 11	5,268 5 3
Cattai Creek at Clarke's, to Fisher's	1896	50 0 0	225 0 0	Cooma to Bobundarah	1880	566 0 7	6,420 14 7
Cawdor to Westbrook	1894	60 0 0	377 2 7	Cooma to Dry Plain	1887	124 15 3	3,197 15 0
Cedar Creek to Nambucca Heads	1893	67 10 4	793 19 8	Cooma to Jindabyne	1881	837 8 13	14,485 4 1
Cedar Creek Road, near Thirlmere	1900	84 0 0	193 1 8	Cooma to Kiandra	1879	1,055 19 0	23,595 15 4
Cedar Party Road to Taree-Wingham Road	1891	100 0 0	1,517 13 10	Cooma to Murrumbidgee	1893	98 14 11	1,732 0 6
Cedar Party Creek Road, up Killabath Creek	1890	144 18 6	1,497 4 7	Cooma to Nimitybelle	1892	451 10 11	2,248 2 6
Cessnock Cemetery Road	1901	3 17 0	3 17 0	Cooma, via Cottage Creek, to Dalgety	1900	29 8 1	69 8 1
Cessnock to Harper's Hill	1879	513 14 7	3,933 5 7	Cooma, via Dangelong, to Kydra	1895	475 9 3	4,611 19 11
Cessnock to Josephson's	1884	100 0 0	2,791 9 8	Cooma, via Green Hills, to Numera la	1887	150 0 0	1,772 2 4
Cessnock, via Mount View, to Millfield	1891	344 16 11	3,546 13 10	Cooma, via Myalla, to Bobundarah Road	1897	187 17 3	865 9 9
Chad's Creek Road, Maitland District	1900	214 9 6	234 0 6	Cooma, via Rosebrook, to Little Plain	1889	54 1 5	1,711 11 7
Chandler Fridge to foot of Jegla Mountain	1872	477 9 6	30,174 8 1	Coonabarabran to Black Stump	1892	484 5 9	4,445 5 4
Charlestown Road to Court House	1901	47 13 9	47 13 9	Coonabarabran to Bomera	1891	263 10 5	3,355 12 2
Charlestown to Dudley	1891	351 18 3	2,871 8 1	Coonabarabran to Mullaley	1887	772 11 2	9,977 4 11
Charlestown to Kahliluh	1901	597 12 3	597 12 3	Coonabarabran to Mundooran	1891	345 3 0	13,171 13 0
Charlestown, via Warner's Bay, to Boolaroo	1897	50 1 11	2,529 19 9	Coonabarabran to Tenandra	1895	422 19 8	3,925 0 8
Charleyong to Mayfield	1894	47 1 6	289 1 3	Coonabarabran to Timor Rock	1893	77 10 6	553 5 2
Chaseling's Corner, via Wyong, to Allison's	1890	538 12 8	1,065 5 10	Coonabarabran, via Madderty, to Ulanambri	1890	150 0 0	558 4 3
Chatham to Taree—Wingham Road	1891	39 18 0	359 0 4	Coonamble to Comogolong	1892	399 18 4	2,746 17 14
Chatham Valley to Oberon—Shooter's Hill Road	1901	47 14 0	47 14 0	Coonamble to Coombimbie	1897	37 4 0	392 4 0
Cheer's Hill to Allomera and branch road to School	1890	153 17 10	2,382 13 5	Coonamble to Gilgandra	1891	416 8 8	5,074 19 3
Cheshire Creek to Turon River at Wild's	1898	50 11 9	249 9 9	Coonamble to Pilliga	1897	113 8 8	439 3 8
				Coonamble to Quambone	1897	211 15 0	512 19 7
				Coonamble to Teridgerie	1894	115 19 0	642 8 7
				Coonamble to Tooraweenah	1895	143 15 0	855 15 11
				Coonamble to Warren	1892	492 17 0	4,793 12 10
				Coonamble towards Billerooy	1895	67 19 6	324 16 6
				Cooney to Metz	1890	44 0 0	440 12 0
				Coonong Siding to Urana	1885	700 8 0	9,251 12 3
				Cooper's to Mullumbimby Main Arm Road	1901	56 18 0	56 18 0



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1901.
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
Cooper's Flat Road, up Karakora Creek.....	1895	20 0 0	205 0 0	Cumins to Four-mile Creek.....	1895	138 0 4	771 0 8
Cooper's Flat Road, up Karakora Creek.....	1884	119 2 0	2,948 15 5	Cummock to Bolderogery.....	1885	193 12 4	2,662 12 0
Cooranbong to Freeman's Waterholes.....	1892	295 6 1	2,126 6 2	Cummock towards Eurimbla.....	1900	26 10 0	176 10 3
Cooranbong to Wattagang Mountain, Wollombi Road.....	1893	604 4 2	2,716 14 11	Candle, via Saville's to Cooper's Creek.....	1895	327 0 0	1,952 6 11
Cooranbong Road to Dora Creek Platform.....	1887	150 0 0	1,416 11 11	Cupitt's Road, near Cooyal.....	1900	24 4 0	24 10 0
Cooranbong Road to Killingworth.....	1900	367 0 4	952 4 9	Curlewis to Gunnedah, via Wondobah.....	1901	14 6 0	14 6 0
Cooranbong, via Rhondra, to Teralba.....	"	390 3 10	539 7 6	Curlewis towards Goran Lake.....	1895	41 0 0	115 0 0
Cooranbong-Wattagang Mountain Road to Humphrie's Conditional Purchase.....	1897	198 4 4	813 5 9	Curra Creek to Arthurville.....	1880	111 0 0	3,635 5 6
Cooranbong-Wattagang Mountain Road to Pringle's.....	1900	34 3 4	73 6 5	Curra Creek to Bolderogery.....	"	219 10 7	11,042 0 10
Cootamundra to Binalong.....	1892	255 5 10	3,820 8 10	Currahulla to Goonoo-Goonoo.....	1901	40 0 0	41 0 0
Cootamundra to Coolac.....	1875	149 9 8	7,984 12 2	Currahulla to Pailaway.....	1891	83 0 0	974 13 3
Cootamundra to Junee.....	1892	144 8 0	2,478 0 6	Currahulla Siding to Tocumwal.....	1895	131 0 0	1,054 16 6
Cootamundra to Stockinbingal.....	1885	129 17 6	2,471 12 7	Dagworth to East Maitland Road.....	1887	95 12 10	1,655 13 7
Cootamundra to Suburban Areas.....	1895	10 0 0	62 15 10	Dairy Creek to Galley Swamp.....	1895	120 0 0	770 18 1
Cootamundra to Temora.....	1912	236 12 2	17,952 6 6	Daisy Swamp to Abington Creek.....	1901	93 18 8	98 18 8
Cootamundra to West Jindalee.....	1895	63 0 0	418 6 11	Dalgety to Jimenbuen.....	1889	117 3 0	663 18 11
Cootamundra, towards Berthong.....	1891	68 7 7	964 9 11	Dalgety to Jindabyne.....	1883	135 6 8	3,400 10 8
Cootamundra, via Cowong, towards Jugiong.....	1897	69 4 10	245 4 10	Dalgety to Maffra.....	1889	50 0 0	535 14 4
Cootamundra, via Ironbong, to Bethunga.....	1891	68 18 0	1,811 3 8	Dalton to Narrara.....	1882	115 18 8	5,647 15 6
Cootamundra, via Kilrush, to Wallendbeen.....	1892	63 8 3	1,243 18 7	Dangalong Road to Tom Grogan's Creek.....	1895	30 0 0	271 1 2
Cootamundra-Temora Road, near Seven-mile post, to Freeburn's.....	1901	25 4 0	25 4 0	Dare's Road, Gloucester.....	1901	80 7 3	80 7 3
Cootamundra-Temora Road to Combaning South.....	1901	91 15 3	91 15 3	Darke's Forest to Heathcote Road.....	1892	101 0 0	993 19 7
Cootamundra-Binalong Road, via Maher's Hill, to Callinga.....	"	5 4 6	5 4 6	Darkwater Bridge, up Left Bank Belmore River Darkwater Bridge, up Right Bank Belmore River and Branches.....	1888	95 13 4	1,924 12 0
Copeland to Cobark.....	"	49 10 0	49 10 0	Death's, towards the Pinnacles.....	1892	159 17 11	838 16 8
Copeton-Bundarra Road to Roha Creek.....	"	41 0 0	41 0 0	Deegan's to Irvine's.....	1900	41 1 0	81 1 0
Cymmanhurst to Upper Smith's Creek.....	1895	270 0 0	681 11 0	Deep Creek to Busby's Flat.....	1895	154 15 1	2,775 8 8
Cypabella Creek to Bowler's Gap.....	1886	338 18 0	6,147 17 1	Deep Creek-Busby's Flat Road to Wyon.....	1900	69 16 0	88 12 0
Cracki to Broadwater.....	1889	190 0 0	2,231 3 8	Deepwater, via Nine-mile to Tent Hill.....	1888	370 13 9	7,214 19 1
Cracki to Buckendoon.....	1895	270 2 6	953 2 8	Deepwater, via Nine-mile to Tent Hill Road, to the Gulf.....	1901	50 0 0	50 0 0
Cracki to Tuckurimba.....	1892	164 17 0	2,142 1 6	Dee's Corner to Bungwall Road, at Flyer's Creek.....	"	13 16 0	19 16 0
Cracki to Swan Bay.....	1893	102 19 11	824 2 2	Defence Road to Pittwater Road.....	1888	836 1 7	4,570 16 1
Cracki to Tuckurimba and Branch to North Codrington Wharf.....	1891	199 19 5	1,319 12 11	Delegate to Border, near Bendock.....	1887	57 0 0	1,149 1 10
Cracki-Broadwater Road, near Dungarubba P. S., towards Hoar's Selection.....	1888	285 17 0	3,480 8 5	Delegate to Border, near Kirranong.....	1895	80 0 0	384 6 6
Cracki-Mull Creek Road to Harwood.....	1901	56 0 0	56 0 0	Delegate to Brown's Camp, via Kirranong.....	1901	86 0 0	86 0 0
Cracki-Tuckurimba Road to Rainbow Creek.....	1899	14 0 0	69 4 6	Delegate to Wollondibby.....	1891	150 0 0	1,711 1 2
Cracki-Wyrallah Road, at North Codrington School, to Richmond River.....	1900	7 0 0	37 10 0	Deniliquin to Berrigan.....	1892	199 14 0	1,300 3 7
Corbett's Lane, Miller's Forest.....	1901	50 0 0	50 0 0	Deniliquin to Boonoomoomana.....	1895	305 6 3	3,327 17 6
Corinda to Nine-mile Dam.....	1895	17 14 0	653 10 2	Deniliquin to Colomo.....	"	119 5 0	1,247 0 4
Corndale to Duraby.....	1899	50 0 0	327 0 0	Deniliquin to Moama.....	1891	132 1 5	2,005 3 7
Corowa to Correen and Jerilderie Road at Momalang.....	1892	576 15 11	5,065 10 8	Deniliquin to Narrara.....	1895	55 7 6	853 0 5
Corowa to Piney Range.....	1885	214 1 9	6,233 16 1	Deniliquin to Urana.....	1894	470 1 2	23,792 15 0
Corowa, via Merton to Mulwala.....	1895	62 4 6	343 4 1	Deniliquin to Wakool Lane.....	1892	33 18 6	2,134 10 4
Cottage Creek B ridge, via Wickham Council Chambers, to Islington.....	1900	15 0 0	45 0 0	Deniliquin to Wangonilla.....	"	127 18 10	3,013 8 8
Couabrya to Oberne.....	1895	232 11 6	697 19 5	Deniliquin towards Morocoo.....	1893	21 18 0	1,277 13 2
Cowabie Creek, near Elliott's School.....	1901	39 14 0	39 14 0	Denny's Lane, Norwood.....	1901	15 0 0	15 0 0
Cowan's Creek to Waterview.....	1895	19 2 0	119 9 1	Derris Mountain to Terrell.....	"	50 0 0	50 0 0
Cowan Creek Road.....	"	50 0 0	326 0 10	Devlin's Gate, via Junction Hotel, to Mandemah Devlin's Siding towards Warri.....	1897	250 0 0	1,120 12 1
Cowlong to Marom Creek.....	1890	295 5 11	3,105 11 8	Diamond Swamp to Tarama.....	1901	182 7 10	182 7 10
Cowlong-Marom Creek Road to Boathar- bour-Marom Creek Road.....	1901	14 0 0	14 0 0	Ditchfield's to Napier.....	1901	173 16 9	1,142 9 5
Cowra to Breakfast Creek.....	1888	365 14 1	5,058 3 5	Dolgelly, via Willaroo, to Boggabilla.....	1901	58 9 0	190 19 0
Cowra to Canowindra.....	1889	816 0 10	8,755 6 3	Doran's to Risley's.....	1891	148 19 0	148 19 0
Cowra to Glen Logan.....	1880	22 0 0	579 15 2	Doran's to Upper Mullumbimby Creek.....	1895	25 1 1	2,129 18 3
Cowra to Goolgong.....	1878	591 6 1	7,912 19 3	Doughboy Hill towards Bangendore.....	"	85 5 0	924 0 0
Cowra to Kootawatha.....	1875	3 0 0	6,552 4 1	Doughboy Hill—Bungeendore Road to Corrinia. Dougherty's to Sally's Flat.....	1901	79 8 5	567 4 0
Cowra to North Logan.....	1901	92 14 0	99 14 0	Douglas Park to 13-mile peg on Mt. Keira Road Dover Point Ferry to Heathcote.....	1895	41 0 0	43 0 0
Cowra, via Binni Creek, to Walli.....	1886	12 0 0	2,804 6 3	Drake, via Lunatic, to Tooloom.....	1895	120 0 0	615 0 11
Cowra, via Darby's Falls, to Howell's Creek.....	1893	244 13 0	3,894 3 9	Dripstone to Nurea.....	1901	783 12 10	1,989 15 11
Cox's Creek Road to Monkerai (Bridle Track).....	1901	25 0 0	25 0 0	Dripstone P.S. to Macquarie River.....	1901	21 5 2	21 5 2
Crabbe's to Lloyd's.....	1894	66 15 0	731 5 6	Dubbo to Barrabadden.....	1891	297 18 8	297 18 8
Craigie, via Quinburra, to Border.....	1891	51 11 0	184 11 6	Dubbo to Gilgandra.....	1891	794 13 3	12,339 2 6
Craigie's to Rocky River.....	1886	43 1 8	92 4 11	Dubbo to Gundooran.....	1900	134 15 0	204 15 0
Crickie and Show Grounds, Sydney—Approach Crittenden's to Mount Douglas.....	1901	17 0 0	17 0 0	Dubbo to Peak Hill.....	1905	330 10 9	2,681 6 11
Croki Punt to Main Road.....	1894	35 0 0	297 3 6	Dubbo to Yeoval.....	1878	156 0 0	7,282 1 11
Crooked Lane to Tennyson.....	1901	199 2 1	199 2 1	Dubbo towards Cobbora.....	1890	476 9 7	6,213 7 0
Crookwell to Bigga.....	1896	570 17 5	3,743 15 6	Dubbo, via Banninyong, to Whitewood.....	1901	173 14 1	179 14 1
Crookwell to Gullen.....	1882	112 15 2	5,391 6 2	Dubbo-Cobbora Road, near Bel. 1, to Mundooran.....	1903	126 0 0	195 0 0
Crookwell to Gunning.....	1895	312 19 3	1,865 3 6	Duckmaloi Hill to Hazelgrove.....	1908	3 0 0	271 3 8
Crookwell to Laegans and Binda Road.....	1883	75 0 0	1,455 15 9	Dudley Road to Swansea Road, at Cobbin's.....	1890	50 0 0	141 9 3
Crookwell to Mount Wayo.....	1892	303 12 1	6,430 0 4	Dunedoo to Stoll's.....	1896	0 5 9	256 3 1
Crookwell to Taralga.....	1874	498 0 13	13,588 8 11	Dungay to Skinner's and Knight's.....	1895	179 16 2	1,074 7 5
Crookwell, via Viddler's, to Roslyn.....	1892	109 3 6	1,113 6 11	Dungay to Upper Dungay Creek.....	1901	44 18 0	44 18 0
Crookwell—Wheo Road to Mount Pleasant.....	1901	41 8 7	41 8 7	Dungog to Fosterston.....	1897	27 6 0	3,729 0 10
Crossland's Cemetery Road.....	1900	2 12 6	40 0 0	Dungog to Thalabi.....	1895	99 19 8	1,350 17 0
Cucumbark, up Brown's Creek.....	1899	35 4 8	82 15 7	Dungog to Underbank.....	1892	399 15 0	9,373 18 0
Cudal to Barragan Hill.....	1895	92 17 7	611 19 9	Dungog to Weismantel's.....	1883	428 1 0	20,236 17 1
Cudgelong to Denison Town.....	1897	1,248 18 5	11,898 19 5	Dungog-Bandon Grove Road up Sugarloaf Creek Dungog-Monkerai Road up Cox's Creek.....	1900	20 13 0	41 0 0
Cudgelong to Hill End.....	1873	341 12 9	19,042 14 10	Dungowan to Mullah Creek.....	1901	50 0 0	50 0 0
Cudgelong to Home Rule.....	1881	111 0 6	2,272 6 3	Dungowan to Swamp Oak.....	"	20 0 0	20 0 0
Cudgelong to Merendee.....	1895	130 2 8	745 7 7	Dungowan Creek, south bank, to Cadell's.....	1893	290 0 0	2,397 17 1
Cudgelong to Piamhong.....	1901	30 11 6	30 11 6	Duramana to Peel.....	1895	33 7 0	374 7 8
Cudgelong to Rylstone.....	1883	300 15 11	6,657 1 6	Duri to Gowri.....	1897	50 0 0	1,545 6 5
Cudgelong to Wollar.....	1891	434 4 11	4,392 12 10	Duri towards Woodlands.....	1901	70 0 0	85 0 0
Cudgelong Village to Rylstone.....	1885	225 6 2	4,623 1 11	Duri, via Colly Blue, to Bomera.....	1894	795 3 11	5,570 15 5
Cudgellico to Enabalong.....	1891	99 19 0	335 3 0	Dutton's to Marom Creek.....	1890	188 11 0	1,995 9 0
Cudgellico to Hillston.....	1895	133 3 5	1,151 15 7	Duval to Pearson's.....	1895	45 15 6	255 18 0
Cudgellico to Pullitot Tank.....	1892	122 17 6	4,341 11 7	Dwyer's Creek to Moruya.....	1901	9 18 0	9 18 0
Cudgellico to Ungarie.....	1900	105 14 6	168 5 6	East Hills to New Wharf, Bankstown.....	1900	28 4 6	28 11 0
Cudgen to Norrie's Head.....	1895	49 17 5	464 3 6	East Kempsey to Crescent Head.....	1889	223 13 6	3,117 10 0
Culeairn to Germanton.....	1882	300 10 7	14,208 17 6	East Kempsey to Sherwood, and Branch to Dondingalong.....	1880	110 3 6	4,085 11 3
Culeairn to Walbundrie.....	1895	159 14 10	1,533 11 0	East Kempsey to Spencer's Creek and Branch Road.....	1877	672 1 4	10,444 3 4
Cullenbone to Cobbora.....	1890	669 19 3	15,254 7 8	East Kempsey to Verge's Swamp.....	1895	35 15 0	342 11 3
Cullenbone Public School to Two-mile Flat.....	1900	20 0 0	27 1 1	East Maitland to Freeman's Waterholes.....	1891	956 12 7	9,735 13 1
Cumabum Ferry to Bishop's Farm.....	1901	83 0 0	83 0 0	East Maitland to Mimmi Road.....	1897	130 0 0	712 2 2
Cumberland Road, Ingleburn.....	"	19 17 9	19 17 9	East Maitland to Raymond Terrace.....	1904	487 6 3	6,204 15 17
				Eastern Plains to Tenterden.....	1895	58 8 6	480 5 5
				Eastern Plains—Tenterden Road, via Brushy Creek, to Inverell Road.....	1900	9 2 0	21 7 0
				Eatonswill to Ramorne.....	1901	39 0 0	39 0 0
				Eatonswill to Seeland's Creamery.....	"	74 5 0	74 5 0
				Eccleston to Upper Allyn.....	1896	79 0 0	375 0 0



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
Eccleston-Gresford Road up Massey's Creek.	1901	30 0 0	30 0 0	Germananton-Cookardina Road northerly be- tween Bunyan's and Yeomans'	1901	24 18 9	24 18 9
Eden to Towamba	1879	493 7 5	17,027 4 3	German Bridge Road to Worden P.S.	1901	15 0 0	15 0 0
Eden, via Kiah and Timbillica, to the Border.	1896	386 4 9	1,070 1 0	German Bridge-Wallarobba Road to Walter- bachs	1899	11 12 0	11 12 0
Edgehill School towards Coreoran's	1900			Gerogery to Howlong	1881	253 1 4	13,455 6 4
Edith to Ginkin	1899	50 0 0	329 15 10	Gerogery, via Jinlora, to Bungawannah	1875	121 7 0	7,051 4 4
Edithville Road, Miller's Forest	1901	190 0 0	100 0 0	Gerogery Station to Walla Walla	1876	241 8 6	8,022 2 8
Edmund's Half-way House to Merool		24 0 0	24 0 0	Gilgandra to Toorawee	1900	152 14 0	219 14 0
Eight-mile to Paddelock	1895	46 13 0	228 17 11	Gilgandra to Warren	1897	341 17 6	628 7 9
Eight-mile Post, Cooma Road, past Hazlett's.	1901	54 13 5	54 13 5	Gilgunnia to Mount Hope	1901	52 18 3	52 18 3
Eldridge's towards Wheeo Post Office	1898	40 0 0	170 0 0	Gillenhah to Darlington Ferry	1893	204 6 2	6 8 8 0
Ellalong to Wallaby Gully	1895	45 0 0	285 7 5	Gillenhah to Old Man Creek	1892	732 16 3	1,869 5 10
Ellenborough Bridge towards Jackey's Balga	1897	9 0 0	44 0 0	Gilmore to Reilly's Crossing	1872	349 17 6	4,553 17 11
Elrlington to Araluen	1870	107 9 1	3,075 8 3	Gimunderr, towards Gundaroo	1852	30 5 6	513 5 4
Elsmore to Kangaroo Camp	1895	132 13 0	959 5 5	Gladesville to Lane Cove Bridge, at head of Navigation	1901	1,470 16 11	1,470 16 11
E. McGuire's to Pitt Town Bottoms	1891	140 10 9	835 7 1	Gladesville, via Gordon, to Pittwater	1890	667 12 1	3,731 12 8
Emery's Corner to Brown's Mountain	1896	1 0 0	58 6 10	Glasson's Woodshed to Mcorilla	1895	34 17 0	386 11 2
Emmaville to Deepwater	1895	282 9 2	3,144 8 8	Glebe Island Bridge to Petersham	1885	543 3 4	13,879 9 7
Emmaville to Strathbogie	1885	187 13 6	3,282 1 6	Gleendonbrook to Bind Creek	1901	11 12 0	11 12 0
Emmaville to Webb's	1897		222 1 6	Glen Innes to Bullock Mountain		100 0 0	100 0 0
Emu Creek to Hazelgrove-Iriih Corner Road	1901	30 0 3	30 0 3	Glen Innes to Emmaville	1881	227 17 7	9,636 0 4
Enfield to Raiby's Grant	1896	114 13 7	629 4 3	Glen Innes to King's Plains	1875	323 9 3	11,314 5 8
Ennis to Carney's, and Branch to Somerville's	1895	278 9 0	2,025 9 10	Glen Innes to Mount Mitchell	1888	238 4 3	2,297 0 9
Ennis Road to Ballegarra Road		68 7 0	951 17 5	Glen Innes to Red Range	1895	246 12 0	1,304 5 11
Epping Roads on 1 Streets	1901	285 10 0	285 10 0	Glen Innes to Shannon Vale	1891	53 10 0	840 3 3
Erina, via Kincumber, to Terrigal Haven	1893	194 7 4	2,437 7 11	Glen Innes, via Farracabad, to Ilparan	1901	99 3 0	99 3 9
Erskine's Corner towards Coolamon	1900	8 5 6	31 3 6	Glen Oak to Oakendale	1899	13 15 6	14 5 3
Eslick's towards Four-mile Creek	1895	56 0 0	430 5 10	Glen Reagh, up Tallawadga Creek	1898	65 2 6	163 12 4
Euabalong to Condobolin	1900	114 0 6	180 17 0	Glen Ugie to Pillar Valley	1899	179 19 9	500 0 9
Euabalong to South Condobolin	1898	323 9 4	1,202 5 4	Glen Ugie to Upper Coldstream	1901	25 0 0	25 0 0
Euabalong to Willandra Bridge		92 11 6	381 13 4	Glen William Bridge, North Approach	1900	25 0 0	75 1 0
Eugowra to Bindogundra	1895	87 6 6	1,241 2 3	Glencoe to Mount Mitchell	1890	157 2 2	2,197 3 4
Eugowra to Goolagong	1889	19 8 0	172 2 3	Glenhaven Road, Castle Hill	1897		60 0 0
Eureka to Duraby	1885	115 15 4	2,245 8 3	Glenie's, via Chilcott's Flat, to Goorangula Road	1891	23 4 7	355 13 6
Eureka to Gay's	1891	100 8 12	427 4 3	Gleniston's Bridge to Yarra Yarra	1896	40 0 0	400 0 0
Eurobodalla to Billia Bilbow	1897	21 0 0	165 16 4	Glenquarry towards Macquarie Pass	1890	1,447 19 6	5,874 10 8
Eurobodalla to Nerrigunda	1889	52 0 0	1,553 2 5	Glenrock, via Schofield's Creek, to Westgrove	1901	39 0 0	30 0 0
Euroka to Green Hills Wharf	1901	29 5 0	29 5 0	Glenrock-Barry Road, at foot of Hungerford Hill, to Rosevale		19 19 10	19 19 10
Evan's Plains to Perth	1895	37 9 0	594 15 7	Glenroy to Mundaroo	1890	21 2 0	913 8 8
Exeter's to Great Southern Road		140 5 8	1,244 19 4	Glenroy to Yarrara Gap	1867	47 18 6	431 17 0
Exeter to Meryla	1901	71 11 6	71 11 6	Gloucester to Cobark	1885	205 5 6	5,288 11 4
Exeter Railway Station to Exeter Butter Factory		97 16 0	97 16 0	Gloucester to Copeland	1880	200 15 4	6,751 11 8
Fall's Creek towards Jervis Bay	1896	77 10 0	501 3 7	Gilm's to Nymboida	1890	45 0 0	635 3 10
Farley's Gate, via Rocky Crossing, to Barrington Bridge	1898	40 0 0	261 14 1	Goharralong to Bogongo	1893	105 0 0	473 15 5
Farlow's to Towell's	1900	32 15 0	9 1 6	Goddard's, via Torrington, to Tent Hill Road	1893	70 12 0	252 0 1
Farmendow Road, Nowra District	1901	360 1 2	360 1 2	Goolagong to Brewarrina	1865	49 10 6	891 1 1
Farrington Road, at Hazler's, to Louis'		10 0 0	10 0 0	Goodwin's to Glencoe (Glencoe to Graham's Valley)	1900	9 1 0	50 0 0
Favell's towards Byng	1884	86 11 5	2,259 14 5	Goombrugga to Brocklesby Railway Station	1901	16 17 2	16 17 2
Federal Factory to Binna Barra	1899	220 0 0	1,013 0 0	Goombrugga to Airle Brake		40 0 0	40 0 0
Federal Paper Mills, Botany—Road to	1901	525 10 3	515 10 3	Goonellabah to Rous	1895	397 1 1	1,481 3 2
Fernleigh to Hogan's	1892	101 16 0	2,130 0 2	Goorangoola Road to Bower's and Bowman's Creeks		50 0 0	356 0 0
Fernmount to Tyson's	1894	10 4 0	265 6 8	Goorangoola Road to Carrow Brook		152 19 0	978 9 1
Felton's Road, Carlingford	1901	20 0 0	20 0 0	Gorlinville to McFadyen's		91 11 5	1,122 1 0
Fiddlen's Wharf Road	1893	229 13 1	558 13 1	Gorrick's Hill to Wilberforce	1901	148 15 5	148 15 5
Fildild towards Dandaloo	1901	49 11 8	49 11 8	Gosford to Coorabong	1892	963 12 10	9,569 17 4
Fingerboard to Strathbogie, via New's	1894	104 5 0	862 8 0	Gosford to Maiden's Brush	1900	20 0 0	87 17 10
Firpatrick's Hill to Buttal	1901	170 6 6	170 6 6	Gosford to The Blood tree	1890	299 13 10	2,994 0 4
Flanagan's Swamp to Orandumbly and Upper St. Leonards	1891	169 5 3	1,533 14 10	Gosford to Tuggerah Beach	1897	359 16 2	2,431 4 2
Fleming's Hill to Grono's Farm	1896	40 0 0	214 12 4	Gosford-Coorabong Road to Jiliby-Mandalong Road	1897	49 0 0	228 0 6
Flyer's Creek to Dorney's	1884	300 0 0	5,363 11 1	Gostwyck to New Park	1882	205 13 0	8,877 0 3
Foot of Mountain up Wollondilly River	1882	207 0 0	3,206 13 3	Gostwyck to Vogel's	1866	50 0 0	231 7 10
Forbes to Burrawong	1898	58 6 9	199 8 2	Goulburn to Bungonia	1874	335 0 0	8,824 19 10
Forbes to Condobolin	1879	334 5 7	13,376 19 2	Goulburn to Chain of Ponds	1878	203 3 0	17,485 2 2
Forbes to Goolagong	1896	167 10 1	1,479 4 6	Goulburn to Cooma	1874	1,704 16 7	135,653 10 6
Forbes to Gunningland	1883	117 18 0	6,362 17 3	Goulburn to Mount Wayo	1892	459 0 0	3,483 16 5
Forbes to Marsden	1899	112 13 2	366 4 5	Goulburn to Mummel Bridge		214 16 2	2,679 1 11
Forbes to Parkes	1878	33 5 6	3,318 18 0	Goulburn to Pomeroy	1880	286 0 0	6,614 10 10
Forbes to South Condobolin	1882	994 19 7	16,629 15 4	Goulburn to Taralga	1883	520 0 0	12,125 12 8
Forbes Flood—Damages, Roads and Streets	1900	50 17 9	361 17 10	Goulburn to Windellama	1876	126 10 0	10,645 17 4
Forbes towards Grenfell		8 19 3	126 7 10	Goulburn, via Boxer's Creek, to Great Southern Road	1897	60 0 0	306 3 0
Ford-street to Lennon's Corner	1901	21 0 0	21 0 0	Goulburn Road to Burruga, via Porter's Retreat	1901	45 13 0	45 13 0
Ford's Bridge Cemetery—Road to		6 0 0	6 0 0	Goulburn-Cooma Road, at 79-mile post, to Hutchinson's	1900	24 3 0	34 11 0
Forest Hill to Gredadoo		91 15 3	91 15 3	Goulburn-Cooma Road, at 24-mile post, to Currawang	1901	16 2 0	16 2 0
Fort Scratchley—Road round		46 10 5	45 10 5	Goulburn-Rockley Road to Oberon-Swashfield Road	1899	20 0 0	38 18 0
Fosterton Road, via Wade's, to Bandon Grove Road		14 11 0	14 11 0	Grafton to Flying Horse	1890	163 8 9	12,216 16 4
Four-mile Creek Road up Swallow Creek		61 16 0	61 16 0	Grafton to Southgate	1894	439 18 11	2,184 13 6
Four-mile Tree to Charlton	1890	135 8 6	2,449 0 7	Grafton, via Glen Innes, to Inverell	1865	5,260 6 3	17,741 16 0
Fox's to McCormack's	1892	101 18 7	1,493 19 0	Grafton-Glen Innes Road, at 22-mile post, to Glen Elgin and Pheasant Creek	1900	16 7 6	40 0 0
Fox Valley to Thornleigh Station	1897	340 0 0	558 2 7	Gragin Station to Gragin Railway Siding	1901	20 2 0	20 2 0
Frankland's Boundary to Dungog-Paterson Road	1901	26 0 0	26 0 0	Graham to Balmain		10 0 0	10 0 0
Frederickton, via Jack's Crossing, to Deep Creek		45 5 0	45 5 0	Graham to Otley's Creek	1900	14 7 0	44 7 0
French's Forest to Greendale	1890	1,205 5 3	3,098 0 4	Grahamville to Bangalow	1889	195 9 10	3,084 9 3
Frogmore to Kenyu	1901	48 13 6	43 13 6	Grapes to Main Arm, Brunswick River	1901	101 5 6	101 5 6
Fullerton Cove towards the Beach		50 15 5	50 15 5	Grassy Gully Road	1900	35 0 0	709 9 10
Guinea's, up right bank of Horton River	1899	21 9 0	97 7 0	Groat to Sally's Flat	1883	479 1 5	6,229 7 4
Galong to Binalong	1897	11 19 9	203 18 8	Great Northern Road	1857	6,514 9 0	732,702 19 8
Galong to Marengo	1892	251 3 3	2,132 18 0	Great Northern Road, at Foster's Hotel, to John-street, Singleton	1901	50 0 0	50 0 0
Galong towards Burrowa	1890	63 17 0	1,698 3 7	Great Northern Road to Castlemount		100 0 0	100 0 0
Galston to Dural	1896	914 0 0	1,870 10 1	Great Northern Road to Tubbamurra	1899	62 2 2	85 17 2
Galston to Dusthole Bay		749 5 8	3,371 7 7	Great Northern Road towards Stanthorpe	1894	122 9 6	2,526 6 11
Galston to Middle Dural	1898	150 14 10	597 9 7	Great Northern Road up Dry Creek	1896	34 13 2	174 12 2
Galston Road to Berowra Creek	1896	73 8 4	393 8 4	Great Southern Road	1857	8,952 18 7	655,652 12 9
Garah to Kuopio	1895	131 12 5	731 7 0	Great Southern Road at 42 M.P., to Albany- Cockardina Road	1901	9 11 10	9 11 10
Garland to Gallymount	1901	19 19 9	19 19 9	Great Southern Road, at Glenfield, to Camp- belltown	1899	542 8 4	802 8 3
Garra to Bocoile		26 13 5	26 13 5				
Gaspard to Wallabadah		43 11 10	53 11 10				
Gear's to Coval-lane and Deep Gully Road	1897	131 13 6	725 8 4				
Gemmel's to Ariah P.S.	1901	24 0 0	24 0 0				
George's Plains to Caloola	1894	91 7 7	1,022 10 7				
George's River Road	1900	32 0 0	82 0 0				
German's Hill to Boree	1895	85 3 0	634 1 9				
German's Hill to Kite's Swamp		91 10 9	838 9 11				
Germananton to Bowler's Gap	1895	23 13 0	773 4 9				
Germananton to Cookardina	1883	95 10 10	2,019 7 9				



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.			If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.			If Unfinished, amount of Expendi- ture to 30 June, 1902.					
		£	s.	d.				£	s.	d.						
Great Southern Road at Whylandra to Burraway	1901	37	5	0	37	5	0	Hinton to Nelson Plains Road	1887	170	0	2,480	7	6		
Great Southern Road to Burrowa	1895	188	0	8	1,589	1	3	Hodde's Road to Pounddale Road	1901	103	18	0	103	18	0	
Great Southern Road to Cobbitty	1896	195	6	2	681	1	11	Hodgkinson's to the Beach	1899	50	0	0	291	18	0	
Great Western Road	1857	14,928	5	3	680,623	9	3	Holmwood to Milburn Creek	1900	8	12	6	156	6	7	
Great Western Road to Blacktown (Flashcombe Road)	1896	78	16	5	677	10	2	Holmwood to Woodstock	1887	12	0	0	196	0	0	
Great Western Road to Lapstone Range	1895	60	0	0	411	7	10	Holmwood towards Scrubby Rush	1897	51	19	3	213	2	9	
Great Western Road to Prospect Reservoir	1893	84	13	9	1,391	19	11	Holt's Flat to Tantawanglo	1892	130	0	0	902	18	0	
Great Western Road to Seven Hills Road (Toongabbie Road)	1895	30	0	0	491	0	0	Homestead Point to Wallangara	1888	199	19	0	2,879	14	6	
Great Western Road to Wentworth Falls Reserve	1896	450	4	5	665	13	2	Homestead Point towards Ebenezer	1901	26	11	9	26	11	9	
Great Western Road, near 111 M.P., at Tom's Flat	1901	29	0	0	29	0	0	Honeysuckle to Burrigate	1882	30	0	0	1,351	15	9	
Great Western Road, near 103 M.P., towards Sunny Corner	"	25	0	0	25	0	0	Honeysuckle Falls to Tarana—Bowenfell's Road	1897	10	0	0	176	12	11	
Great Western Road, near Glenbrook, to Lucasville	1898	58	17	5	326	0	8	Honeysuckle Hill Road	1900	80	18	9	107	3	9	
Grebert's to Solferino	1886	260	7	3	8,012	12	6	Hornsby to Galston	1893	611	8	1	10,058	12	9	
Green House, via Key's, to Kingsgate	1901	12	0	0	12	0	0	Hornsby Rifle Range—Road to	1901	118	1	4	111	1	4	
Green Valley to Great Northern Road	"	16	19	0	17	19	0	Hoskingtown towards Harold's Cross, via Rossi	1890	140	12	2	808	12	10	
Green's Lane to Hartford Gully	1891	30	0	0	373	19	4	Howlong to Goombargana	1896	86	8	7	452	4	2	
Greenhills, via Sherwood Bridge, to Dungay Creek	1892	222	16	10	2,419	7	5	Howlong to Walbundrie	1892	151	6	10	5,745	3	1	
Greenwood Railway Station to Gum Flat	1901	20	0	0	20	0	0	Howlong-Walbundrie Road to Howlong	1901	28	16	0	28	16	0	
Grenfell to Bimbi	1882	191	9	10	6,240	9	11	Groery Road	1901	44	16	8	44	16	8	
Grenfell to Goolagong	1885	107	7	7	4,503	5	0	Hoxton Park Road	1896	161	6	6	667	14	5	
Grenfell to Marsden	1883	295	17	10	8,015	4	7	Humula to Kyamba	1892	232	14	4	1,164	10	0	
Grenfell to Weddin Gap	1890	58	7	6	1,311	17	11	Humula to Tarcutta	1901	34	15	6	34	15	6	
Grenfell towards Enreka	1901	3	0	0	3	0	0	Ilabo to Brabbin's	1895	115	16	6	517	5	6	
Grenfell, via Holey Camp, to Leonard's	1899	104	14	7	152	11	2	Ilabo to Eurongilly	1901	57	0	0	57	0	0	
Grenfell Railway Approach	1901	30	0	0	30	0	0	Ilavell to Bundarra	1892	456	19	5	2,334	1	7	
Gresford to Carrabola	1896	690	6	11	2,559	5	9	Inverell to Dinton Vale	1885	32	10	1	2,521	13	6	
Gresford, towards Dungog	"	52	9	10	310	14	3	Inverell to Gum Flat	1889	141	19	0	2,753	5	5	
Greta to Earls	1895	70	0	0	490	0	0	Inverell to King's Plains	1885	150	1	6	5,225	10	4	
Grodno to Bull's	1901	7	0	0	7	0	0	Inverell to Strathbogie	1894	114	2	6	4,015	11	8	
Grong Grong to Warri	1895	367	9	6	2,019	9	6	Inverell to Texas	1878	540	8	1	16,458	14	3	
Guildford Road (Parramatta)	1900	50	0	0	125	0	0	Inverell to Wallangra	"	410	13	4	23,309	13	9	
Gulgambone to Box Ridge	1901	66	0	0	66	0	0	Inverell towards Warialda	1877	626	14	6	16,525	18	0	
Gulf Creek to Bingara—Barraba Road, at 14 M.P.	1900	345	9	6	1,641	10	2	Inverell, via Elsmore, to Glen Innes Road	1884	199	4	0	8,073	9	4	
Gulgong to Ulan	1895	43	0	0	259	2	4	Inverell, via Tingha, to Kangaroo Camp	1893	215	16	3	3,044	12	3	
Gulgong, via Barney's Reef, to Birriwa	1901	14	0	0	349	9	0	Inverell Road, at 23 M.P., to Yetman Road, at 10 M.P.	1906	164	13	1	5	6	8	3
Gum Flat to Burrah Creek	1901	47	5	10	47	5	10	Inverell-King's Plains Road, at 7 M.P., to same road, at 11 M.P.	1901	38	3	11	38	3	11	
Gum Flat to Little Plain	1898	25	12	11	205	8	7	Irishtown to Wollun	1893	36	6	3	295	11	3	
Gum Holes Creek Crossing	1901	25	12	11	205	8	7	Iron Bridge, Boggha to Manilla	1901	66	14	8	96	14	8	
Gunbar to Wheelbar	1899	220	9	2	3,753	4	8	Ironbong Road to Frampton Platform	"	1	9	16	11	156	11	8
Gundagai to Bongongolong	1893	183	2	6	261	18	3	Ison's Gate to Carrabubula	"	103	0	0	103	0	0	
Gundagai to Reno	1891	297	19	0	2,093	1	5	Jacob and Joseph Road to Great Northern Road	1890	25	6	10	25	6	10	
Gundagai to Wombatdrey	1892	99	15	0	1,175	13	0	Jericho over Big Swamp	"	99	9	1	1,513	4	4	
Gundurimbah to Rous Road	1895	34	11	6	192	7	11	Jerilderie to Berrigan	1901	23	10	0	23	10	0	
Gundy to Timor Post Office	1897	54	0	0	224	16	6	Jerilderie to Clear Hills	1893	284	16	6	2,787	9	2	
Gunnah to Reid's Flat	1897	211	11	8	1,000	2	6	Jerilderie to Daysdale	1891	140	17	11	1,535	17	3	
Gunnah to Boggabri	1894	88	3	9	789	14	6	Jerilderie to Goolgumbula	1884	300	3	0	5,082	7	8	
Gunnah to Burdurgate	1898	34	5	0	101	7	6	Jerilderie to Tocumwal	1893	97	7	1	325	12	1	
Gunnah to Mullaley	1888	811	19	9	10,250	0	4	Jerilderie-Goolgumbula Road to Coomong Siding	1901	25	0	0	25	0	0	
Gunnah to Somerton	1901	209	10	0	3,120	9	4	Jerilderie-Tocumwal Road to Carraghmohr Road	1884	121	12	8	2,848	14	0	
Gunnah towards Barraba	1890	68	19	4	68	19	4	Jerry's Plains to Denman	1896	217	6	0	344	17	8	
Gunnah towards Wandabah	1895	31	0	0	431	15	13	Jerry's Plains to Doyle's Creek and Mills	1888	170	7	0	451	0	0	
Gunnah, via Biala, to Fish River	1895	20	18	0	128	10	0	Jerrong to Wiarraborough Creek	1891	1	6	8	1,287	9	0	
Gunnah, via north side of Namoi, to Carroll	1893	47	2	0	595	17	0	Jesswoldan to Uralba	1901	65	6	10	65	6	10	
Gunning to Upper Gundaroo	1893	345	19	1	3,950	14	4	Jesswoldan-Uralba Road to Duck Creek Camp	1901	152	2	0	222	2	0	
Gunning, via Dalton, to Burrowa	1892	491	1	5	4,749	10	8	Jew Creek Track	1895	65	0	0	1,093	10	0	
Guntawang to Goolma	1878	265	6	6	14,042	18	8	Jilliby to Little Jilliby	1892	303	14	11	1,009	11	1	
Guyra to Falconer, via Bank Paddock	1900	193	6	0	165	12	6	Jindabyne to Ingebyrah	1900	59	0	0	85	0	0	
Guyra to Glencoe	1895	379	0	2	2,570	2	0	Jindabyne to Koscinko	1895	28	13	0	188	15	6	
Guyra to Kangaroo Camp	1903	123	18	0	4,054	14	10	Jindabyne to Wollondibby	1897	13	9	9	97	0	0	
Guyra to Oban	1889	208	43	6	3,074	16	4	Jindera to Albury-Wagga Road	1888	179	18	11	2,457	2	5	
Guyra to Rockdale-Kookabooka Road, near Aberfoyle	1899	130	3	6	247	19	0	Jindera to Walla Walla	1900	62	12	0	112	19	0	
Guyra to Sandy Creek	1890	64	4	9	853	8	3	Jindera, via Hovel Dam, to Brocklesby	1892	376	15	0	3,291	18	6	
Hainsville, via Mullimbimby, to Byron Bay	1894	684	0	11	5,970	7	5	Jingellie to Kancoban	1891	226	15	4	1,253	10	0	
Hall's Lane, Braidwood-Nerriga Road	1901	18	18	11	18	18	11	John McLeod's to Buchanan's	1890	250	0	0	2,484	7	6	
Hanging Rock towards Walcha	"	50	0	0	50	0	0	John's River Wharf to Stewart's River Road	1901	19	5	6	19	5	6	
Hanley's Creek Road	1900	71	5	2	114	16	10	Johnston's Lane, Moss Vale	1892	39	0	0	603	7	4	
Hanning and Longford to Great Northern Road	1899	20	12	0	29	15	0	Jonhston's Bridge to Moonbi Railway Station	1900	65	18	6	88	12	0	
Harden towards Marengo	1898	109	2	5	853	4	2	Jugiong to Murrumburrah	1887	139	3	0	3,629	0	7	
Hargraves to Triambull	1899	50	0	0	321	17	8	Junction, Barnett and Little Manning Rivers to Nowendoc	1896	55	0	0	557	0	0	
Harris Park Storm-water Drain	1901	10	0	0	10	0	0	Janetion, Barry and Nundle Roads at Hanging Rock	1901	3	4	2	3	4	2	
Hartigan's to Upper North Arm	1895	216	5	4	1,541	0	11	June to Cooba Creek	1895	105	7	9	1,172	7	7	
Hartley to Jenolan	1890	1,838	0	1	14,348	1	6	June to Ganmain	1898	148	19	1	678	11	1	
Hartwood to Deniliquin-Berrigan Road	1901	72	15	2	72	15	2	June Junction to Wagga Road	1901	9	7	6	118	0	6	
Harwood to Chataworth	1883	97	16	0	1,018	13	10	June Reefs, via Millbank, towards June	1898	73	17	0	73	17	0	
Harwood to Woodburn	1890	1,437	1	8	7,520	13	6	Kameruka to Bemboke	1895	128	4	4	613	19	7	
Harwood-Woodburn Road to Donaghy's	1901	11	9	0	11	9	0	Kameruka to Tantawanglo	1901	150	0	0	150	0	0	
Hay to Balranald	1887	314	6	6	1,990	8	2	Kangaroo to Chalkers and Swan's	1896	41	0	0	373	1	11	
Hay to Booligal	1883	335	0	0	14,148	6	5	Kangaroo Creek to Quinn's	1900	45	0	0	63	0	0	
Hay to Darlington Ferry (north side)	1896	148	15	5	857	0	9	Kangaroo Valley P.O. to Donnelly's and others' farms	1901	25	2	6	25	2	6	
Hay to Darlington Ferry (south side)	1899	108	14	3	201	0	10	Kangaroo Valley to Budgong Gap	1897	120	0	0	836	8	9	
Hay to Gumbah	1874	14	16	0	7,468	8	6	Kangaroo Valley, via Woodhill, to Berry	1899	338	14	3	788	9	10	
Hay to Toogimbie	1901	35	16	0	35	16	0	Kanoona to Candelo	1895	152	0	0	938	5	8	
Hay to Wanganella	1881	70	17	6	1,533	5	7	Kanoona, via Bright's, to Ryan's Swamp	1901	131	3	8	131	3	8	
Head of Popran Creek to Wharf at mouth of Mangrove Creek	1901	98	7	1	98	7	1	Katoomba to Caves Road	1895	60	0	0	439	13	3	
Heathcote to Bulli Pass	1890	270	19	11	2,432	19	6	Katoomba to the Valley of the Waters, Wentworth Falls	1901	20	0	0	20	0	0	
Heathcote to National Park (Bottle Forest Road)	1901	58	0	2	58	0	2	Kayuga, via Baxter's, to Aberdeen	1894	116	14	8	905	14	8	
Heazlett's Hotel, across Red Hill to Long Flat	"	15	0	0	15	0	0	Kayuga Road to Castle Rock	1895	60	0	0	289	16	3	
Henty to Cookardinia	"	116	10	10	116	10	10	Kelloshiel to Gowan	1878	2	9	18	3	9,017	5	6
Henty to Pleasant Hills	1892	3	0	0	1,657	2	8	Kelly's Plains Road, via McLennan's, to Great Northern Road	1901	37	7	0	37	7	0	
Heron's Creek Wharf—Approach road	1898	63	0	0	201	7	0	Kelly's Plains Road, via Morrissey's and Garling's, to Church	1895	35	18	10	35	18	10	
Heron's Creek Wharf to Waterloo Creek	1901	34	0	0	34	0										



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
Kelso-O'Connell Road, at Bosworth Falls, to Bloom Hill .....	1900	9 8 4	20 0 0	Long Bay Road .....	1899	100 0 0	100 0 0
Kempsey to foot of Jeogla Mountain .....	1872	1,973 1 6	59,592 4 3	Long's, via Piambong, to Two-mile Flat .....	1900	50 7 1	85 4 9
Kendall School, via Logan's, to North Coast Road .....	1898	40 7 0	129 9 0	Long Reach to Clybucca .....	1890	39 9 2	645 12 11
Kenthurst Post Office to Porter's .....	1895	30 0 0	60 0 0	Long Reach to Rainbow Reach .....	1891	39 18 6	505 0 6
Kernode's, via Goorangoola, to Dry Creek .....	1890	50 0 0	639 0 0	Loop Road, via Glendural, to Brownlow Hill .....	1896	28 9 6	118 12 0
Kew to Rolland's Plains (North Coast Road) .....	1895	1,595 12 8	9,005 19 8	Lorn to Pitnacree .....	1896	75 0 0	573 14 7
Kialla to Pegar Hill .....	1898	80 0 0	284 5 0	"Lorn" Roads, West Maitland .....	1899	129 16 7	311 7 9
Kileoy to Wellomombi .....	1901	75 1 6	75 1 6	Louth to Tilpa .....	1901	110 0 0	110 0 0
Killarney to Oakdale .....	"	116 17 10	116 17 10	Louth Park Road .....	1894	130 0 0	1,050 0 0
Killingworth and Wallsend Roads .....	"	300 0 0	307 0 0	Louth Park towards Rathluba .....	1901	15 0 0	15 0 0
Kincumber to Lloyd's Wharf .....	1896	54 8 9	394 6 1	Loxton's to Boggy Camp .....	1898	205 10 0	739 11 9
King's Road, Cooranbong .....	1901	80 0 0	80 0 0	Lower Mangrove to Head of Popran Creek .....	1900	9 8 0	40 0 0
Kingsvale to Wallendbeen .....	1894	115 3 9	773 10 4	Lower Portland to Moran's Rock .....	1901	373 5 6	303 5 6
Kingswood to Luddenham .....	1901	1,026 18 5	1,026 18 5	Lower Tareutta to Alfred Town .....	1892	156 1 6	2,794 2 0
Kippilaw to Breadalbane .....	1887	88 19 0	1,435 11 10	Lowther to Gambenang .....	1890	20 0 0	683 10 0
Kippilaw to Gurrundah .....	1888	87 17 8	3,493 15 5	Lucas-street to East Hills Park .....	1901	10 0 0	10 0 0
Kippilaw-Breadalbane Road towards App's Farm .....	1901	6 1 0	6 1 0	Lucknow to Emu Swamp .....	1901	45 0 0	45 0 0
Kirkconnell to Sanny Corner .....	1890	148 4 11	1,798 7 10	Lucknow to Huntley .....	1895	47 0 0	649 11 2
Kissing Point Road, Turramurra .....	1900	62 7 11	64 12 11	Lucknow to Worboy's Junction .....	1895	107 5 0	2,080 3 4
Kitty's Creek to Dog Trap Ford .....	1888	119 1 0	1,759 3 5	Lue to Botobolar .....	1900	2 5 0	75 0 0
Knowles to Comabella .....	1900	180 3 7	342 2 0	Lynch's to Cooyal Butter Factory .....	1899	10 0 0	79 11 6
Koorawatha towards Godfrey's Creek .....	1899	72 19 8	170 4 8	Lyons' Road, Drummoyne .....	1879	252 19 10	10,971 3 2
Koorawatha towards Lovett's .....	1901	26 0 0	26 0 0	Macksville to D. Bradley's .....	1901	538 15 0	538 15 0
Koorawatha towards Warrangong .....	1897	58 18 10	332 14 3	Macksville to Macleay Heads .....	1898	174 3 0	501 17 3
Krambach to Kew (North Coast Road) .....	1893	1,254 8 5	14,322 12 11	Macksville to Upper Warrell Creek .....	1886	42 17 0	867 5 5
Krambach to Khoribakh Bridge .....	1901	210 19 0	210 19 0	Macksville Ferry to Lower Nambucca P.S. ....	1893	98 6 0	194 14 6
Krambach to Tuncurry .....	1895	643 5 1	4,903 4 4	Maclean to Broom's Head .....	1901	100 0 0	100 0 0
Krambach Cemetery to Cucumbark .....	1900	14 5 5	50 6 9	Maclean to Palmer's Channel .....	1890	117 17 0	1,521 2 7
Krambach-Tuncurry Road, past Public School, to Khoribakh Creek .....	1894	11 10 8	44 0 0	Maclean to Woodford Quarry Camp .....	1900	42 3 0	72 10 0
Kurrajong to The Hermitage .....	"	40 1 11	215 6 10	Maclean, via Bluff Point, to Brushgrove .....	1887	372 7 6	4,160 10 11
Kynamboon to Nobby's Creek .....	1889	217 18 0	4,348 4 5	Maclean, via Tyndale, to Brushgrove .....	1890	125 12 0	2,293 13 1
Laemalac up Bumbowlee Creek .....	1900	100 0 0	271 19 0	Macquariedale Road, from Appin to Nepean River .....	1900	40 0 0	140 0 0
Laemalac to Gobarragandra .....	"	49 15 1	213 11 7	McCarthy's to Henty-Urangeline Road, at Schenner's .....	1900	16 15 0	38 15 0
Laggan to Bindra .....	1875	140 0 0	3,674 8 2	McCormack's towards Grabben Gullen .....	1901	86 0 0	86 0 0
Laggan to Golspie .....	1892	60 2 7	236 11 3	McDonald River to Daniel's Run .....	1900	20 0 0	40 0 0
Laggan to top of Wattagan Mountain .....	1895	231 4 7	1,613 7 4	McDonald River up Webb's Creek .....	1893	98 19 10	778 7 4
Lake Albert to Coursing Ground .....	1901	10 0 0	10 0 0	McDonald's to Lithgow Flats .....	1900	5 0 0	20 0 0
Lake Albert to Wagga Wagga Cemetery .....	"	13 17 6	13 17 6	McGrath's Hill to Maroota .....	1890	521 12 10	6,239 6 3
Lake Bathurst to Bronty .....	1898	16 2 9	165 6 9	McInnes' Lane to Wharf .....	1901	45 2 2	45 2 2
Lake Road from Douglas to Gundaroo-Braid- wood Road .....	1900	86 10 0	88 14 0	McIntosh's to Small's .....	1899	57 0 0	136 15 0
Lambton to Charlestown .....	1883	21 8 3	3,109 13 1	McIntosh's to Nymboida .....	1890	507 6 2	4,793 8 0
Lambton, via Cardiff, to Lake Road .....	1894	315 10 1	1,363 14 10	McIntyre Flat to Puddledock .....	1880	99 11 8	1,121 13 10
Lane Cove Road to Cowan Creek, at Bobbin's Head .....	1884	200 0 0	1,912 19 8	McLean's to Model Farm .....	1896	79 10 6	307 13 0
La Perouse Cable Station, Road to .....	1899	163 6 2	2,384 4 9	McNamara's Crossing to Scanlan's and Whitton's McPhee's Lane .....	1899	20 9 3	64 1 3
La Perouse Cemetery Road .....	1901	100 0 0	100 0 0	Maifra to Ironmongie .....	1900	13 10 9	13 10 9
La Perouse to Little Bay .....	1884	95 0 0	1,479 4 6	Main South Coast Road .....	1879	37 13 0	191 10 6
Larbert, via Reedy Creek, to Hallett's .....	1891	20 0 0	225 15 7	Main South Coast Road across Terragong Swamp .....	1901	9,395 9 0	174,998 17 6
Largs, via Tocot, to Paterson Bridge .....	1896	170 0 0	984 14 6	Main South Coast Road, at Charlesworth Hill, to Bulli Pass .....	"	38 14 2	38 14 2
Larry's Flat Cutting to Water Reserve .....	1901	36 15 0	36 15 0	Main South Coast Road to Bengellala .....	1899	110 10 5	201 0 1
Larry's Flat Road to Warrah Flat .....	1899	40 9 0	83 0 3	Main South Coast Road to Bulli Park .....	1901	19 0 0	19 0 0
Laughton Dale to Weaver's, on Wiseman's Ferry Road .....	1901	193 9 1	193 9 1	Main South Coast Road to Gerrigong .....	"	30 0 0	30 0 0
Laurieton to Comboyne .....	1892	861 6 2	5,080 5 10	Main South Coast Road to Wedderburn .....	1900	10 0 0	21 0 0
Lavis's to Toohey's Mill .....	1886	225 6 11	4,215 7 5	Main Windsor Road to Model Farm's Road .....	1898	105 0 0	231 10 2
Lawford to Glenbora .....	1901	46 3 9	46 3 9	Main Windsor Road to Toongabbie Road (via Hammer's Bridge) .....	1895	89 18 0	425 4 3
Lawler's to Hyatt Bridge Road .....	"	76 3 3	76 3 3	Main Windsor Road, via Redbank Crossing, to Wentworthville .....	1901	24 15 0	24 15 0
Lawrence to Myall Creek .....	1894	825 6 6	142,501 4 0	Maitland Bar Road (Avisford to Maitland Bar) .....	1899	20 0 0	60 19 5
Laws to Upper Blindmouth .....	1900	26 0 0	86 0 0	Maitland Road to Broomfield's Hill .....	1896	40 0 0	422 15 10
Lea-ville to Cassilis .....	1897	11 1 0	334 10 10	Maitland Road to Earl's Conditional Purchase (Fox Gully Road) .....	1894	18 7 6	404 5 5
Leeholme to Tarana and O'Connell Road .....	1872	92 8 0	4,694 0 2	Maitland-Stanhope Road to the P.S. at Lamb's Valley .....	1901	25 0 0	25 0 0
Leet's Vale to Dargle's Farm .....	1901	71 16 1	71 16 1	Major's Creek to Monga .....	1871	139 4 2	7,331 10 2
Leighwood to Stonequarry .....	1887	59 19 6	1,268 19 9	Major's Creek to Snowball .....	1880	167 14 1	6,701 2 7
Levenstrath to Geeragrow .....	1895	19 17 10	417 14 9	Major's Creek-Snowball Road to Wyambene .....	1899	28 8 9	44 15 3
Levenstrath to Green's .....	1890	78 19 10	1,713 1 1	Major's Lane .....	"	222 4 1	572 4 5
Leycester Creek to Campbell's .....	1887	300 0 0	4,771 12 3	Majura towards Bungendore .....	1890	97 15 0	1,923 11 8
Lidsdale to Wolgan .....	1893	64 6 2	850 4 2	Malton Road, Beecroft .....	1901	10 0 0	10 0 0
Lilliss to Long Arm .....	1900	20 0 0	60 0 0	Mandagery Creek Crossing, near Eugowra .....	1889	56 0 0	56 0 0
Limbri to Swamp Creek .....	1901	60 0 0	60 0 0	Mandurama to Burnt Yards .....	1899	92 9 9	1,188 11 8
Limburner's Creek to Krambach (North Coast Road) .....	1894	1,872 5 2	15,674 19 6	Mandurama to Canowindra .....	1873	274 0 11	17,705 1 1
Limekilns to Wattle Flat .....	1898	47 7 3	294 1 6	Mandurama towards Neville .....	1895	186 18 7	1,400 9 11
Limestone Hill to Newell's Crossing .....	1895	155 11 6	1,234 12 7	Mandurama-Neville Road to Shaw-Carcar Road .....	1901	47 9 0	47 9 0
Limestone to Wallerawang Road .....	1901	39 14 6	39 14 6	Manildra to Dilga .....	1899	48 8 10	195 4 5
Lincoln, via Cooney's, to Gilling Hall .....	"	121 0 0	121 0 0	Manildra to Toogong .....	1880	136 19 2	3,209 6 5
Lismore to Beardow's .....	1894	168 12 0	1,616 14 5	Manilla to Bendemeer .....	1898	148 0 0	459 7 6
Lismore Road to Bagot's Mill .....	1901	59 7 4	59 7 4	Manilla to Boggabri .....	1900	50 0 0	91 0 0
Lismore to Dunoon .....	1895	394 18 6	3,009 19 7	Manilla to Burindi .....	1898	285 0 0	497 6 9
Lismore to Federal .....	1896	457 15 10	3,179 0 11	Manilla to Crow Mountain .....	1896	125 11 7	551 7 7
Lismore to Gundurimba .....	1891	64 11 5	866 14 1	Manilla to Keepit .....	1901	100 0 0	100 0 0
Lismore to Nimbin .....	1883	912 10 9	5,843 19 1	Manilla to Somerton .....	1891	50 15 0	518 2 9
Lismore-Nightcap Road to Bexhill-Monti- collum Road .....	1901	6 0 0	6 0 0	Manilla towards Gunnedah .....	1890	229 13 3	331 4 10
Lismore-Nightcap Road, via McPherson's, to Rocky Creek .....	1898	19 14 6	92 12 4	Manilla up Namoi River .....	1897	59 0 0	509 10 4
Lismore to Tucki .....	1901	403 13 0	12,405 16 10	Manly to Barrenjoey .....	1879	1,621 0 9	21,605 4 1
Lithgow to Hartley Vale Station .....	1896	300 0 0	1,426 12 9	Manly-Bay View Cycle Path .....	1900	295 14 1	1,029 17 8
Lithgow to Lidsdale .....	1890	187 10 10	2,395 4 6	Mannery's Road, Miller's Forest .....	1900	41 9 8	102 9 8
Little Hartley to Lowther .....	1895	154 2 0	798 12 2	Marengo Creek Road .....	"	2 0 0	25 0 0
Little Hartley to River Lett .....	1885	45 15 6	3,822 11 10	Marengo to Gogullaalong .....	1901	5 0 0	5 0 0
Little Plain to Bingara .....	1894	394 1 11	5,496 9 11	Marengo to Montague .....	"	25 0 0	25 0 0
Little Plain to Reedy Creek .....	1901	82 6 6	734 7 1	Marlee Road to Gilgoley's .....	1892	31 0 0	213 6 3
Liverpool to Penrith and Bringelly Road .....	1896	487 0 7	1,871 2 0	Marangaroo to Meadow Flat .....	1890	237 5 0	3,113 5 8
Liverpool, via Holdsworth, to Eekersley .....	1891	149 13 0	1,692 15 11	Marrowbone Road .....	1899	99 17 9	219 17 9
Liverpool, via Moorebank, to Grodno .....	1898	237 15 0	437 0 3	Marrowbone Road to Oakley Creek Road .....	1901	19 0 0	19 0 0
Liversidge's Road, Balgowlah .....	1901	14 14 2	14 14 2	Marsfield Roads .....	"	458 7 11	458 7 11
Llanvethlin to Great Northern Road .....	1890	28 12 6	543 11 6	Marsden Road, Rydalmore .....	"	100 0 0	100 0 0
Lochiel to Back Creek .....	1893	48 15 0	360 8 1	Marsden Park to Box Hill .....	1873	136 3 8	4,852 1 11
Lochinvar to Boyce's .....	1895	"	145 13 0	Marulan-lane .....	1901	1 2 4	19 2 4
Lochinvar to Elderslie .....	1894	341 12 10	1,943 2 2	Martin-place—Hydrant Covers .....	"	4 0 5	4 0 5
Lochinvar to Railway Station .....	1885	49 0 0	683 3 6	Martin's Wharf Road .....	1891	39 15 5	844 8 0
Lockhart to Yerrong-Urangeline Road .....	1901	138 14 9	138 14 9	Martinsville Public School to Wilkin's Condi- tional Purchase .....	1898	86 16 9	772 11 10
Lockhart to Yeulba .....	1900	28 11 11	75 15 11	Marulan to Bannaby .....	1891	331 10 6	3,797 11 11
Locksley to O'Connell .....	1900	10 11 0	32 12 6	Marulan to Ollen Ford .....	1895	350 0 0	7,169 12 3
London Hotel, near Warri, towards Gemmell's .....	1901	42 13 4	42 13 4				



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.		If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.		If Unfinished, amount of Expendi- ture to 30 June, 1902.		
		£	s. d.				£	s. d.			
Marulan to Stoney Range .....	1901	30	0 0	30	0 0	Moss Vale to Little Forest .....	1891	224	4 7	4,163	11 11
Marulan-Taralga Road to Newfoundland .....	1896	50	0 0	50	0 0	Moss Vale to Mandemur .....	1890	110	3 0	3,219	13 1
Maryvale to Towri .....	1896	319	15 7	1,484	14 2	Moss Vale to Meryla .....	1896	398	4 8	1,393	4 7
Masters' to Walcha Road .....	1895	18	14 3	179	11 5	Moss Vale towards Macquarie Pass .....	1890	334	17 3	8,615	1 7
Mathoura to Bunaloo .....	1888	62	1 0	1,995	16 5	Moss Vale, via Macquarie Pass, to Shellharbour .....	1899	300	0 0	600	0 0
Matong-Warri Road to Ganmain-Cowabie Road .....	1901	49	19 0	49	19 0	Moulamein towards Tchery and Maud .....	1901	45	6 0	46	6 0
Matthew's to Forest Reefs .....	1885	119	6 4	2,917	4 9	Moulamein towards Swan Hill .....	1900	165	14 0	357	5 0
Mayal Creek to Pratt's .....	1898	89	18 0	235	17 6	Mould's Road, Dural .....	1901	302	18 4	302	18 4
Maybole to Ben Lomond .....	1892	20	6 0	434	5 4	Mount Adrah to Adelong Crossing .....	"	12	0 0	12	0 0
Mayfield to McKnight's .....	1895	298	12 6	1,792	4 4	Mount Boppy Gold Mines, Road to .....	1900	15	10 6	38	10 0
Meadow Flat, via Sunny Corner, to Palmer's Oakley Road .....	1891	282	11 1	3,465	5 11	Mount Falke Road .....	"	183	5 6	1,199	10 11
Mears Flat to Swan Bay .....	1901	30	17 0	30	17 0	Mount Hall Road, Raymond Terrace .....	1911	125	0 0	125	0 0
Meehan's Crossing to Limestone and Maloney's .....	1895	98	4 4	919	18 6	Mount McDonald to Daley's Springs .....	1897	39	19 0	342	17 6
Meeum to Birrell .....	"	170	18 9	1,110	8 5	Mount McDonald to Grubine .....	1889	33	0 0	1,216	8 10
Menangle to Camden .....	"	127	2 5	742	13 7	Mount Mooby to Dartbrook Bridge .....	1895	38	8 0	203	1 6
Merimbula to Jellat Jellat .....	1874	157	0 0	3,534	11 11	Mount Piddington Paths (Lithgow District) .....	1901	25	0 0	25	0 0
Merriwa to Bunn .....	1896	47	19 0	363	19 5	Mount Victoria to Pell .....	1885	61	1 7	2,806	17 3
Merriwa to Cassilis .....	1891	713	2 2	10,662	18 3	Mount Victoria to Mount York .....	1895	59	2 0	229	13 7
Merriwa to Gilli Gilli .....	1892	15	0 0	148	18 6	Mount Wayo to Abercrombie Bridge .....	1881	455	16 4	35,563	15 1
Merriwa, via Flagg, to Gungah .....	1893	19	10 0	91	10 0	Mount Wilson to Mount Irvine .....	1895	18	5 0	592	15 10
Merryvale to McInerney's .....	1901	33	10 0	39	10 0	Moylan's to the Beach .....	1895	68	1 11	389	1 10
Meryla Platform to Stone Quarry Creek .....	"	54	0 0	54	0 0	Mudgee to Cassilis .....	1873	795	16 6	7,315	8 11
Michelago to Jingera .....	"	285	19 12	285	19 12	Mullaley to Denison Town .....	1892	1,696	15 5	9,998	0 5
Midson's Road, Epping .....	1900	29	5 8	31	18 1	Mullengandra to Morven .....	1901	55	13 0	55	13 0
Mila P. S. to J. Scott's Selection .....	"	19	12 6	35	0 0	Mullion to Belgravia .....	1891	23	0 2	702	0 9
Military and Long Bay Road, Randwick .....	1895	225	0 0	1,530	19 7	Mullion to Ophir .....	1897	40	0 0	242	3 0
Military Road, St. Leonards .....	1885	503	12 10	13,493	13 9	Mullumbimby to the Saddle .....	1901	359	1 10	359	1 10
Miller's Forest to Tarro .....	1896	143	2 0	805	2 0	Mullumbimby to Upper Main Arm .....	1890	286	2 1	2,624	5 5
Millfield to M. Hayes' portion .....	1898	74	17 0	220	3 8	Mullumbimby, up left bank Mullumbimby Creek .....	1897	109	6 11	847	19 5
Mills to Combam .....	1901	49	13 0	49	13 0	Mulwala to Savernake .....	1899	348	12 5	702	0 6
Millthorpe to Byng .....	1882	155	10 4	3,798	19 1	Mummel Bridge to Narrawa .....	1892	359	7 6	4,586	1 8
Millthorpe to Long Swamp .....	1878	325	12 0	10,308	12 9	Mundaroo to Ournie .....	1893	49	18 0	117	7 0
Millthorpe to Lewis Ponds .....	1890	110	15 3	2,162	8 10	Mundooran to Tooraweenah .....	1895	557	0 4	3,277	3 0
Millthorpe to Spring Hill .....	1895	51	0 0	377	16 6	Mungay Creek Road, near School, to Armidale .....	1900	21	4 0	70	0 0
Milsons' Point, via Lane Cove Road, to Pent's Ferry Road .....	1875	1,995	4 9	63,244	15 6	Murphy's Hill to Cudal .....	1891	26	13 4	839	9 0
Minora towards Temora .....	1895	120	0 0	812	15 10	Murray's Road (Metropolitan District) .....	1900	66	6 10	163	14 4
Minmi to Thornton .....	1878	228	0 2	6,486	13 4	Murray's Run to Yarramalong .....	1896	576	17 11	3,905	15 3
Minmi Road to Young Wallsend .....	1900	514	1 4	1,342	15 2	Murrumbateman to Ginninderra .....	1893	248	0 0	1,682	17 0
Minto to the Cowpasture, via St. Andrews .....	1901	80	7 7	80	7 7	Murrumbidgee to Wollar .....	1880	13	16 8	1,411	16 8
Missenden Road, Camperdown .....	1897	90	0 0	180	0 0	Murrumbidgee Road to Chamberlain's Crossing .....	1901	17	15 0	17	15 0
Mitchell's Creek to Jennie Road .....	1901	96	18 0	96	18 0	Murulla Road, Quirindi District .....	"	17	9 6	17	9 6
Mitchell's Creek to Palmer's Oakley Road .....	1879	12	10 0	4,339	9 8	Murwillumbah to Blue Knob .....	1894	866	2 6	6,172	10 11
Mittagang to Billyrambuck .....	1891	15	0 0	243	9 7	Murwillumbah to Boyd's Point Ferry .....	1890	562	12 11	6,600	4 8
Mittagang to Glenquarry .....	1896	55	6 8	722	5 8	Murwillumbah to Queensland Border .....	1891	283	5 10	4,256	6 2
Mittagang towards Diamond Fields .....	1879	29	0 0	1,693	11 11	Murwillumbah to Risley's .....	1894	1,036	15 9	10,139	16 0
Moama Railway Station Approaches .....	1901	23	18 6	23	18 6	Murwillumbah, via Cudgen Wharf, to Terranora .....	1892	675	7 3	8,732	7 6
Moama to Bama .....	1888	120	1 5	813	11 11	Muscle Creek Road .....	1896	31	10 0	322	3 4
Moama to Narrow Plains .....	1901	57	0 0	57	0 0	Muswellbrook to Merriwa .....	1893	764	19 11	8,732	4 2
Moama towards Moulamein .....	1875	221	5 10	15,429	16 9	Muswellbrook, via Dartbrook, to Seone .....	1895	102	1 9	780	13 11
Mobb's Hill to Rogan's Hill .....	1895	1,534	0 11	4,013	14 5	Muswellbrook Bridge to Sandy Hollow .....	1888	305	14 6	6,365	4 6
Model Farm Roads, Parramatta District .....	1901	95	0 0	95	0 0	Mutton's Falls to O'Connell .....	1890	118	0 9	1,215	4 5
Model Farm to Lindendale .....	1900	60	0 0	110	0 0	Myalla to Nimitybelle .....	1900	2	12 3	40	1 1
Model Farm to Alberty-Cookardina Road .....	1901	54	1 1	54	1 1	Myer's Crossing, up Never Never .....	1884	254	15 3	3,588	13 6
Mogo to Ryan's Creek Bridge .....	1896	54	8 5	459	8 5	Myokum to Tyagarah .....	1892	23	4 0	1,181	6 1
Mogo to Tomakin .....	1887	32	18 0	962	16 3	Nabiac, via Dargaville's, to Cucumbark .....	1897	171	0 0	157	14 6
Mogo-Ryan's Creek Road to Millard's .....	1901	14	12 0	14	12 0	Nally's Creek Road .....	1899	100	0 0	168	8 4
Moleville to Stockyard Creek .....	1899	53	2 3	824	6 6	Narellan to Bringley .....	1892	365	13 5	3,227	1 4
Molong Municipality, Roads in .....	1900	149	0 0	350	0 0	Narrabarba to Cape Howe .....	1900	2	6 0	30	0 0
Molong to Cargo .....	1896	203	16 10	2,253	4 0	Narrabri to Bogabri, via Terriaro .....	1888	247	12 0	4,151	8 3
Molong to Greta .....	1897	17	5 0	477	18 6	Narrabri to Bulweri .....	"	503	5 10	5,164	6 8
Molong to Manildra .....	1880	183	10 6	9,394	19 9	Narrabri to Bulah and Bullawa Creeks .....	"	446	6 6	4,935	0 4
Molong to Norah Creek .....	1890	20	0 0	874	17 3	Narrabri to Pilliga .....	1893	384	18 6	4,954	3 7
Molong to Redbank .....	1895	36	2 11	345	0 0	Narrabri to Terry-bie-bie .....	1888	182	12 0	4,293	13 3
Molong to Warne .....	1882	141	14 8	4,535	0 2	Narrabri, via Little Mountain, to Stony Creek .....	1891	45	11 5	1,242	12 4
Molong-Cargo Road, via Boranger's, to Orange- Cargo Road .....	1900	47	0 0	57	0 0	Narraburra Hall to Young-Temora Road .....	1899	7	0 0	51	7 6
Mona Vale Quarry and Road .....	1897	91	13 8	151	0 2	Narrandera to Darlingford Ferry—North side .....	1896	146	8 10	589	7 8
Mongarlowe to Clyde Road .....	1897	52	13 5	1,039	11 8	Narrandera to Ganmain .....	"	211	11 4	404	5 3
Mongarlowe, via Charlie's Forest, to Wog Wog .....	1894	65	0 6	1,122	8 7	Narrandera to Mirrool Creek .....	1895	107	3 11	887	1 8
Monkeral towards Gloucester .....	1901	52	0 6	50	0 6	Narrandera to Old Goree Bridge .....	1892	296	14 0	1,878	8 6
Monkeral, via School of Arts, to Dungog Road .....	1876	35	0 0	35	0 0	Narrandera towards Wagga .....	1864	143	8 7	5,174	10 2
Monkey Hill to Hill End .....	1895	131	14 6	11,810	14 7	Narrara Road, near Roche's, to Pudman Road .....	1895	76	16 5	1,718	5 11
Monticollum to Coorabell .....	1897	91	16 0	575	17 6	Narrara Road, near Roche's, to Pudman's Road to Road Dalton to Narrara .....	1900	48	19 11	58	19 5
Mookerawa to Gum Flat .....	1901	42	0 0	42	0 0	Narrara, via Penning's, to Kelly's .....	1901	38	0 0	38	0 0
Moonan Flat to Rossington's .....	1895	252	14 11	1,516	0 2	Narramine to Bogan River .....	1895	204	15 2	1,151	2 1
Moonan Flat, Glenrock Cattle Station Road, up Page's Creek .....	1899	30	0 0	50	0 0	Narramine to Tomingley .....	1899	591	3 9	1,228	16 0
Moonee to Congarini (North Coast Road) and Branches .....	1894	1,783	5 4	12,672	8 1	Narramine to Trangie .....	1901	114	10 8	114	10 8
Moorheads to Greendale Bridge .....	1901	23	4 6	23	4 6	Narramine, via Backwater, to Boggy Plain .....	"	87	2 6	87	2 6
Moorilla to Neville .....	1893	322	13 4	3,874	14 9	Narramine-Bogan River Road, at Seven-mile post, via Comber's, to Farrandale .....	"	115	19 2	115	19 2
Moorland to Upper Stewart's River .....	1890	248	0 0	2,537	3 4	Nelligen to Bateman's Bay .....	1884	35	0 0	2,125	18 7
Moree to Bingara .....	1895	148	11 0	2,207	17 2	Nelligen to Benandra .....	1874	25	0 0	2,091	14 2
Moree to Bogamildil .....	1895	203	8 0	1,813	9 6	Nelson to Rouse Hill .....	1896	10	0 0	102	5 2
Moree to Ironbarks .....	1876	43	12 5	24,847	7 7	Nelson's Plains to Seaham .....	"	111	19 4	672	9 3
Moree to Mungindi .....	1894	1,690	11 11	9,521	3 8	Nerriga to Oallen Ford .....	"	50	0 0	314	12 6
Moree to Rocky Creek .....	1892	142	15 6	2,917	17 0	Nerrigundah Road, via Cadgee, to Tinpot .....	1899	36	0 0	490	18 1
Moree, via Goomal, to Mogil Mogil .....	1887	213	15 8	6,224	12 1	Nerrigundah to Cape's .....	1901	93	19 6	93	19 6
Moree Road, via Reeves, to Pallal Road, at Bangheet .....	1834	72	4 0	523	14 7	Nerrigundah to Mount Utopia .....	"	30	0 0	30	0 0
Mornington to Mount Vincent .....	1900	0	13 3	60	0 0	Neville, via Watteville, to Newbridge and Trunk .....	"	48	18 11	48	18 11
Mornington Railway Station to Mornington Oil Works .....	1900	50	5 8	149	18 0	New Beach Road, Rusheutter's Bay .....	"	1,612	8 10	1,612	8 10
Morongo Junction to Graham .....	1895	531	6 11	2,180	17 4	Newbridge to Abercrombie River .....	1887	69	0 8	19,223	14 0
Morpeth to Dungog .....	1877	1,278	6 1	34,917	3 10	Newbridge towards Rockley .....	1895	192	10 0	1,224	4 7
Morpeth to Four-mile Creek .....	1891	103	0 0	700	0 0	Newcastle to Mosquito Island .....	1901	98	0 0	98	0 0
Morpeth to Largs .....	1895	45	0 0	222	0 0	Newcastle, via Hamilton, &c., to Minmi .....	1884	1,027	16 5	12,337	19 7
Morpeth to Thornton .....	1891	198	12 4	2,023	9 9	Newcastle, via Islington, to Western Boundary of Waratah Municipality .....	1900	326	5 11	504	0 10
Morpeth Bridge to Largs .....	1896	113	16 0	732	15 3	Newcastle, via Merewether, &c., to New Lambton .....	1895	450	11 8	1,143	9 8
Morrissett to mouth of Dora Creek .....	"	60	0 0	329	14 1	New Gilginnia to Hillston .....	"	152	13 2	152	13 2
Mortlock's to Cowra Reefs .....	"	68	5 3	421	4 9	Newrybar to Cooper's Shoot .....	1891	40	17 0	1,368	12 11
Moruya to Araluen .....	1895	702	11 0	35,648	7 9	Newtown Railway Bridge to Undercliffe Bridge .....	1899	200	0 0	641	7 1
Moruya to Wamban .....	1900	1	1 0	19	19 7	Newtown Road .....	1900	145	0 0	145	0 0
Moruya, via Kiora, to Larry's Mount .....	1896	30	17 9	198	9 9	Nicholl's Corner to Enfield Road .....	1896	49	9 3	371	9 7
Mosquito Bay Road (Moruya District) .....	1901	15	12 0	15	12 0	Nimbia Road to Jiggi .....	1888	405	7 1	5,600	16 9
Moss Vale to Barragarry .....	1890	489	0 5	10,385	15 2	Nimbin Road to Watson's .....	1891	98	15 0	2,501	9 5
Moss Vale to Canyonleigh .....	1891										



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1901.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
Nimitybelle down Tom Grogan's Creek .....	1894	20 0 0	302 0 6	Parrish's to King's and other Farms .....	1901	25 0 0	25 0 0
Nine-mile Hill to Haytown .....	1901	95 4 0	95 4 0	Paterson Bridge to Martin's .....	1900	40 0 0	130 0 0
North Arm to Beach .....	1895	320 5 6	2,642 17 5	Paterson, up Webber's Creek .....	1896	83 3 7	239 13 7
North Arm to Bonville School .....	1897	151 19 6	388 12 0	Payne's Creek Bridge, up Stockyard and Bagnell Creeks .....	1898	51 13 3	137 13 3
North Hill to Lachlan Gold Mines .....	1900	1 9 0	12 2 6	Peach Orchard Road, Fountaindale .....	"	23 8 0	113 8 0
North Sanzarez to Uralla .....	1896	22 7 6	245 13 11	Pearce's, via Eatonswill, to Copmanhurst Road .....	1895	186 13 3	1,135 9 5
Norwood to Wingham—Nowendoc Road .....	1901	25 0 0	25 0 0	Pearce's Corner to Berowra Creek, at Crosslands .....	1885	219 8 11	937 17 0
Nowendoc Road to Dolly's Flat .....	1895	10 0 0	104 0 0	Pearce's Corner to Brooklyn Railway Station .....	1894	624 10 10	1,608 16 3
Nowendoc Road to Upper Manning .....	"	42 0 0	428 0 0	Pearce's Corner to Pennant Hills .....	1884	345 5 7	3,971 0 4
Nowra to Budgong .....	"	340 0 0	1,842 19 9	Pearce's Creek to Booyong Station .....	1896	56 4 6	311 16 3
Nowra to Grassy Gully .....	"	250 9 2	624 19 11	Pembroke Road and McGibbon-street, Minto .....	1901	30 0 0	30 0 0
Nowra to Kangaroo Valley .....	1895	443 4 9	3,001 14 4	Pennant Hills Road to Beecroft Station (Murray Road) .....	1895	42 10 11	283 14 8
Nowra to Nerriga .....	1882	928 5 0	13,993 18 3	Pennant Hills Corner to Mould's Corner .....	1892	548 7 0	4,851 1 7
Nowra to Yalwal .....	1881	605 0 0	6,999 0 8	Pennant Hills Road to Thornleigh Quarry .....	1895	40 0 0	246 9 7
Nowra, via Coolangatta, to Berry .....	1901	330 1 8	330 1 8	Pennant Hills Road, via Beecroft, to Eastwood .....	1896	868 7 11	2,239 14 2
Nowra-Nerriga Road to Yerrilyong Vale .....	1898	97 7 10	176 5 1	Penshurst to Allyn River .....	"	179 15 6	680 18 6
Numbungga to Desert Creek .....	1901	25 0 0	25 0 0	Periceo to Wog Wog .....	1889	100 11 0	1,701 15 4
Nundle to Cranway .....	1895	170 11 5	593 16 10	Perth to Mount Evernden .....	1895	138 13 5	1,034 6 8
Nymagee to Hermidale .....	1890	201 1 2	4,510 1 7	Perth, via Charlton, to Rockley .....	"	382 10 10	2,892 17 0
Nymagee to Mount Boppy .....	1895	72 13 0	446 4 3	Perth-Rockley Road, at 9-mile post, to Glaze- brook Flat .....	1901	22 5 9	22 5 9
Nymagee to Mount Hope .....	1897	68 3 4	818 11 4	Peterkin's to Warrell Creek Ferry .....	1889	85 11 0	1,765 7 11
Nymagee to Priory Tank .....	1894	0 11 0	576 2 9	Phillips to Solferino Road .....	1895	300 0 0	1,763 0 0
Nymagee towards Condobolin .....	"	10 0 0	635 12 3	Phoenix Park to McClymont's Swamp .....	"	158 10 8	463 10 8
Nyngan to Canoban .....	1899	13 7 0	108 0 0	Pictou, via Oaks, to Blackland's Crossing .....	1874	420 16 11	19,858 7 1
O'Connell's to Crane's .....	1901	38 0 0	38 0 0	Pilliga, via Bugibone, to Eurie .....	1894	41 7 0	1,118 14 4
O'Connell to Beaconsfield .....	1879	431 14 10	6,821 2 10	Pimlico to Emigrant Creek Point .....	1893	56 0 0	600 18 3
O'Connell to South Apsley .....	1885	101 13 7	3,267 2 10	Pimlico to Wardell-Ballina Road .....	1889	62 11 3	821 9 4
O'Connell to Wambool .....	1897	94 17 9	1,026 1 2	Pioneer Hotel to Connell's .....	1899	25 0 0	107 6 4
O'Connell Road to Cooper's Overbridge .....	1896	15 0 0	1 10 12 10	Piper's Flat to Sunny Corner .....	1895	137 17 10	1,492 6 2
O'Sullivan Road .....	1899	11 16 7	2,596 9 2	Piper's Lane to the P.S. (Tunnot District) .....	1901	10 0 0	10 0 0
Oakdale to Bargo River .....	1892	324 17 2	1,744 1 7	Pitnacree towards Dunmore House .....	1895	138 15 8	1,058 5 0
Oakdale to Brimstone Gully .....	1901	78 9 0	78 9 0	Pitnacree towards Raworth .....	1901	195 15 4	221 18 3
Oakdale School to Burrigorang Valley .....	1900	4,220 11 6	4,593 19 4	Pitt Town Road to Old North Road .....	1896	228 4 5	995 12 6
Oakey Creek to Tooloom .....	1895	64 16 6	895 14 0	Pittwater Road, within Ryde and Hunter's Hill .....	1900	20 0 0	320 0 0
Oakhampton Road .....	1890	148 16 1	915 2 11	Pocket to Blindmouth .....	1894	221 16 7	1,956 4 4
Oaklands to Berrigan .....	1901	37 11 6	77 11 6	Pocock's to Upper Punchbowl Creek .....	1901	30 0 0	30 0 0
Oaklands to Urana .....	1895	76 6 3	741 14 10	Point Hut Road (Queanbeyan District) .....	"	151 9 5	151 9 5
Oberne to Upper Tarantia .....	1900	101 17 6	157 0 0	Pokolbin Road to Will's Hill .....	1899	142 15 3	215 3 3
Oberon to Caves Road near Bindo .....	1888	145 14 3	3,995 13 9	Pokolbin Village Reserve to McDonald's, Oakley Creek Road .....	1900	67 19 9	149 0 0
Oberon to Little River .....	1895	277 8 6	1,827 3 10	Port Hacking to Cronulla Beach .....	1901	293 18 2	293 18 2
Oberon to Mount Werong .....	1877	200 1 1	5,747 9 7	Port Macquarie to Tacking Point .....	1886	38 19 2	87 5 8
Oddy's Bridge to West Blowering .....	1895	275 0 10	1,310 19 6	Port Macquarie towards Walcha .....	1872	654 5 9	26,795 3 4
Old Armidale Road, via Middle Creek, to Kangaroo Camp .....	1899	20 14 0	91 14 11	Portland Ferry to Park Villa .....	1895	57 17 0	572 6 6
Old Ballina Road .....	1899	91 10 0	880 12 0	Portland Ferry to Sackville Road .....	"	75 0 0	792 9 4
Old Bar Road to Redbank Ferry .....	1896	12 10 0	131 9 6	Possam Brush to Fairfield .....	1901	149 7 0	149 7 0
Old Bathurst Road at Fish River to Honey- suckle Falls .....	1900	1 8 0	51 0 0	Possam Shoot to Binna Burra .....	1896	164 8 6	1,661 12 11
Old Burra Road, at Moore's, to The Tindery .....	1901	14 14 0	14 14 0	Possam Shoot to Cooper's Shoot .....	1887	47 4 5	10,598 17 1
Old Burra Road to Michelago .....	1886	203 15 6	2,436 18 10	Powell's to Wilson's Creek Pocket .....	1900	85 16 0	166 0 0
Old Castle Hill Road to Government Reserve .....	1895	10 0 0	101 0 0	Prahran to Snowy Plain .....	1899	265 7 8	2,509 18 3
Old Chadwick Road to Pipe-clay Siding .....	1897	90 0 3	923 12 10	Pratley's to Dennis Island .....	1901	32 0 0	32 0 0
Old Condong Road .....	1885	102 1 0	714 9 9	Pretty Pine to Moulamein .....	1896	248 18 11	1,624 16 3
Old Forest Road to Kilgin .....	1901	47 16 6	49 16 0	Prospect to Richmond .....	"	733 2 2	4,150 19 7
Old Inn Road to Larry's Flat .....	"	19 16 0	19 16 0	Prospect Church Lane (Richmond Road to Great Western Road) .....	1900	25 13 0	105 0 0
Old Inn to Booral Road .....	1899	103 16 6	2,191 13 9	Puddledock, via Springmount, to Black Mountain .....	1896	44 17 9	59 5 0
Old Junee Railway Station to Mimosa .....	1895	160 0 0	1,019 8 2	Punkalla to Noorooma .....	1896	15 0 0	210 6 8
Old Junee, via Wilson's, towards Erinvale .....	1900	91 0 7	188 5 2	Punt Road, Maroota .....	1901	20 3 4	20 3 4
Old Penang Road .....	1895	20 3 4	421 17 4	Purlewaugh to Pine Vale .....	1898	35 0 0	443 12 3
Old Pittwater Road .....	1901	151 11 10	151 11 10	Purlewaugh to Tambar Springs .....	1899	33 0 0	155 5 0
Old Prospect Road .....	1900	29 8 0	287 1 11	Pyramul Cheese Factory to Crudine P.O. ....	1900	0 4 9	25 0 0
Old School at Crawford, up the Crawford River .....	1901	36 1 6	35 1 6	Pyramul to Aaron's Pass .....	1899	19 0 0	120 9 0
Old Windsor Road, via Pearce's, to Blacktown Station .....	1895	871 4 6	1,145 4 9	Pyrmont Bridge Road .....	"	239 8 5	861 8 5
Orange to Canobolas .....	1881	231 12 4	5,603 16 9	Quarry Road, Dundas .....	1901	47 0 0	40 0 0
Orange to Canowindra .....	1888	830 11 10	10,626 8 6	Quarry, via Flick's, to McGettigan's .....	1895	160 9 6	660 8 1
Orange to Forbes .....	1886	1,570 6 6	107,812 3 9	Queanbeyan to Ginninderra, and Branch towards Railway Station .....	1878	121 10 6	10,607 14 3
Orange to Inceley .....	1881	6 2 0	3,839 1 11	Queanbeyan to Gudgenby, via Dick's Yards .....	1901	422 0 6	422 0 6
Orange to Ophir .....	1864	57 0 0	6,199 2 2	Queanbeyan to Gudgenby, via Rocky Crossing .....	1891	559 13 6	2,184 16 9
Orange to Pinnacles .....	1884	124 12 0	2,157 6 10	Queanbeyan to Upper Gundaroo .....	1874	215 5 7	3,448 9 10
Orange to Stuart Town .....	1896	275 5 9	1,541 11 10	Queanbeyan to Uriarra-Taemas Road .....	1881	197 13 7	4,030 19 10
Orange towards Carcoar .....	"	377 0 2	2,027 9 1	Queanbeyan, towards Braidwood .....	1895	495 8 10	1,766 16 3
Orange-Forbes Road to Borenore Creek at Convent .....	1900	35 13 4	55 19 4	Queanbeyan-Ginninderra Road to Queanbeyan- Gundaroo Road .....	1901	18 1 0	18 1 0
Orphan School Road to Luddenham .....	1901	300 0 0	370 0 0	Queanbeyan-Gudgenby Road, at Harris's, to Rockview .....	"	27 18 0	27 18 0
Orphan School Road to Bringley Road (Cow- pasture Road) .....	1899	48 1 0	200 15 10	Queanbeyan-Gundaroo Road to Goulburn-Cooma Road .....	"	69 6 3	69 6 3
Orton Park to Bellvue .....	1901	47 9 0	47 9 0	Queanbeyan-Gudgenby Road to Woden to Bulga Creek .....	1900	4 11 0	28 0 0
Osborne's or Mount Ranken Lane .....	"	20 0 0	20 0 0	Queanbeyan-Uriarra-Taemas Road to Mountain View .....	1901	25 0 0	25 0 0
Oswald Road, Maitland District .....	"	40 13 8	47 13 8	Queanbeyan-Uriarra-Taemas Road to Bulga Creek .....	"	32 12 6	32 12 6
Ourimbah to Chittaway .....	1895	198 3 7	1,230 10 9	Brindabella Road .....	"	28 16 0	28 16 0
Ourimbah up Ourimbah Creek .....	1893	250 13 2	1,616 15 3	Quilkie's, down Taylor's Arm, south side .....	1894	206 0 6	983 1 2
Outlet Road, Dungay Creek .....	1891	38 6 8	342 2 0	Quilkie's Hill to Lively's .....	1901	483 0 0	483 0 0
Owen's Wharf up Left Bank, Kincella Creek .....	1889	26 2 1	913 7 6	Quipolly Platform to Quirindi .....	1900	1 10 3	20 0 0
Oxford Road, Ingleburn .....	1901	19 5 10	19 5 10	Quirindi to Gunnedah .....	1894	240 11 0	2,121 17 4
Packa Tank to Sutherland's Lake .....	1899	10 0 0	103 10 0	Quirindi to Lower Quipolly .....	1899	87 10 5	199 16 10
Paddy's Hut to the Pee Dee Road .....	1901	15 0 0	15 0 0	Quirindi to Wallabadah .....	1878	215 14 6	6,829 17 9
Page's Creek Road .....	1892	24 11 6	221 7 6	Quirindi to Warrah Ridge .....	1895	120 0 0	392 17 11
Page's Road, Rooty Hill .....	1901	50 0 0	50 0 0	Quirindi to Willow Tree .....	1878	105 12 0	1,103 14 4
Palmer Plains to South Gunjurimba .....	1894	149 9 2	1,635 9 4	Quirindi towards Borah Creek .....	1894	161 4 8	1,107 15 5
Pambula to Bald Hills .....	1899	30 0 0	390 4 0	Quirindi, via Bundella, to Bomera .....	"	1,077 0 9	11,139 10 0
Pambula to Merimbula .....	1887	126 14 10	5,931 13 0	Quirindi, via Gaspard, to Great Northern Road .....	1879	332 13 2	2,739 10 1
Pambula, via Nethercote, to Eden .....	1896	80 2 0	807 5 11	Quirindi, via Quipolly, to Werris Creek .....	1891	29 19 0	494 18 3
Park Avenue, Gordon .....	1900	79 10 2	305 12 11	Quirindi Road, near Kent's, to W. Baker's .....	1900	10 0 0	20 0 0
Parkes to Bolderogery .....	1887	72 7 1	2,421 9 8	Quondong to Eureka .....	1896	12 15 0	21 15 0
Parkes to Brolgan .....	1900	28 19 9	46 9 9	Raby to Minto .....	1896	30 0 0	293 11 2
Parkes to Condobolin .....	1884	143 3 0	11,102 19 9	Railway Crescent, Beecroft .....	1901	31 18 6	31 18 6
Parkes to Coradgery .....	1888	21 3 0	2,742 13 3	Railway Hotel to Sharpe's .....	1890	1,117 19 2	13,214 8 4
Parkes to Manildra .....	1895	291 1 4	6,026 9 0	Raleigh School to Cooper's .....	1893	52 2 2	88 2 2
Parkes to Peak Hill .....	"	813 10 8	6,026 9 0	Randwick Tollgate to La Perouse .....	1893	1,244 1 0	6,126 18 4
Parkes towards Trundle, via Deep Lead .....	1900	75 2 7	141 18 7	Randwick and Coogee Roads, Randwick .....	"	1,400 0 0	9,022 2 4
Parkinson's Lane, Duramana .....	1901	43 5 10	43 5 10	Randen Bridge to Monkey Hill .....	1896	154 11 11	1,054 10 7
Parnell's Hill Road (Nowra District) .....	"	175 8 5	175 8 5	Rawdon Vale to Moppy .....	1901	30 0 0	30 0 0
Parramatta to Pennant Hills .....	1884	177 10 0	1,979 16 0				
Parramatta, via Windsor, &c., to Richmond Bridge .....	1880	7,705 13 8	13,910 12 6				
Parramatta District—Roads .....	1900	51 8 0	186 13 8				
Parramatta Park—Culvert .....	1901	6 15 0	6 15 0				
Parramatta Park to Toongabbie Creek .....	1896	75 0 0	764 0 0				



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.		If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.		If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£	s. d.	£			£	s. d.	£
Raymond Terrace to Saltash .....	1893	76	3 2	1,244	Rouse Hill to Schofield's Platform .....	1888	96	9 0	1,406
Raymond Terrace to Seaham .....	1884	199	11 2	4,011	Rouse Hill and Dural Road, via Kenthurst, to Fisher's .....	1896	90	0 0	501
Raymond Terrace to Williamstown Road .....	1894	374	9 7	1,649	Run of Water to Winderradeen .....	1895	157	0 0	1,127
Ray's Road, Carlingford .....	1896	447	10 4	983	Rushforth Road to Southampton .....	1899	22	1 4	40
Razor Back Mountain, Sofala, to Running Stream .....	1901	400	0 0	400	Rutherford to Cessnock .....	1892	1,209	17 8	7,305
Red Ground to The Diamond .....	1901	137	11 0	137	Rutherford to Hudson's .....	1895	184	15 9	1,350
Red Hill to Kerr's .....	1892	467	15 6	2,327	Rutherford to Maryvale .....	1885	296	18 4	2,565
Red Range Road to Bear Hill .....	1894	239	0 6	1,636	Ryan's to the Border .....	1895	48	19 0	330
Redbank to Merrygoen .....	1896	82	4 10	284	Rydal to Hampton .....	1894	315	19 4	3,021
Redbourne's Ferry Bridge to Dyring .....	1896	23	0 0	317	Rylstone to Bylong .....	1886	80	13 0	4,210
Redbourne's Ferry Bridge, via Clydesdale, to Glendon Road .....	1895	19	11 0	256	Rylstone to Glen Alice .....	1895	55	19 2	869
Reddell's to Brunswick Road and Pipe-clay Sideline .....	1891	103	12 0	2,341	Rylstone to Narrango .....	1878	251	2 5	19,113
Reedy Creek, Road up .....	1901	43	17 3	41	Rylstone to S. fala .....	1901	280	1 8	280
Reid's Flat to Rugby .....	1897	101	13 0	935	Sackville Road, near Ebenezer, via Page's Ferry Road, to Maroota .....	1895	63	0 2	348
Reidsdale to Warrumbungle .....	1893	32	3 2	136	Saddler's Creek Road .....	1895	42	18 0	376
Reilly's Crossing, via Batlow, to Bago .....	1892	293	17 1	1,829	Salisbury Plains to Kentucky .....	1887	49	6 3	1,001
Reservoir to Cadia .....	1894	101	10 2	1,671	Saltash to Brown's Selection .....	1898	120	12 6	182
Rhine Falls to Bolero .....	1895	257	0 0	761	Saltwater Creek to North Bank of River (Ballina District) .....	1901	50	0 0	50
Richlands to Wombeyan Caves .....	1887	274	6 10	2,865	Salway's to Ginerol .....	1895	55	17 0	314
Richmond to Cornwalls Road .....	1896	30	0 0	177	Sam's to Homestead Area .....	1900	52	2 7	110
Richmond to Yarramundi .....	1896	99	14 6	613	Sander's Corner to Kenthurst .....	1899	55	19 10	91
Richmond towards Dr. Clarke's Bridge .....	1896	69	0 0	321	Sandy Creek Road to Bocoole .....	1901	34	0 0	34
Richmond, via Cornwalls, to Windsor .....	1896	136	17 1	793	Sandy Creek to Bristow's Hotel .....	1896	89	13 1	89
Richmond Bridge to Mount Wilson .....	1888	898	1 6	13,034	Sandy Creek to Jellero .....	1896	35	8 0	235
Ridgeway's, via Monkerai, up Karuah River .....	1895	115	12 0	1,265	Sandy Creek to Millfield .....	1891	174	11 0	1,499
Riley's Hill to Broadwater .....	1890	1	0 0	55	Sandy Creek to Mount Vincent .....	1891	59	7 0	3,197
Risk up Ford's Creek to Queensland Border .....	1898	18	13 0	177	Sandy Creek to Murrumbidgee .....	1894	200	0 0	1,350
Riverstone to The Vineyards .....	1901	148	8 4	148	Sandy Creek to Wombeyan Caves .....	1899	454	18 10	18,821
Riverstone to Windsor, along Railway Line .....	1901	210	14 0	210	Sandy Crossing Road to Bombala Common .....	1900	0	17 6	33
Rix's Creek, via Glennie's, to Goolangoolia Road .....	1897	33	16 0	957	Sandy Flat and Bolivia to Main Range .....	1898	84	10 6	340
Road across Redbank Creek, near Matong .....	1901	53	14 6	53	Sandy Flat-Main Range Road to Bald Rock .....	1901	107	19 0	107
Road along Right Bank Kinchela Creek .....	1899	45	11 8	131	Saverne, via Bull Plain, to Corowa .....	1891	63	1 0	68
Road along West Bank Nymboida River .....	1901	30	0 0	30	Schneider's Corner to Darkie's Gully .....	1891	11	4 7	11
Road between Law's and McNaughton's .....	1901	19	0 0	19	Scone to Bunnan .....	1877	291	1 2	9,171
Road between parishes of Osborne and Galore .....	1901	19	3 10	141	Scone to Moonan Brook .....	1879	264	9 5	11,699
Road from N.E. Corner J. Kelly's portion, parish of Derry .....	1901	24	17 0	24	Scone up Middle Creek .....	1891	166	7 3	1,147
Road from S.E. Corner, Matthew's C.P. to Milbrulong Railway Station .....	1900	149	3 11	317	Scotch Creek Road .....	1891	57	4 0	805
Road, left bank Macleay, Warneton to Towal Creek .....	1895	205	4 1	1,987	Scott's Creek Roads .....	1899	35	3 6	103
Road past Callan Park Asylum .....	1895	42	0 0	339	Seaham Punt to Clarencetown .....	1895	127	16 7	813
Road running east from N.W. Corner and portion 35, parish of Mungaharaba .....	1901	33	5 0	33	Sedgefield, via Mitchell's Flat and Glendon Bridge, to Gresford Road .....	1894	19	13 0	159
Road to Bellington Heads .....	1893	34	3 0	160	Serpentine Bridge to Cameron's .....	1901	44	16 11	44
Road to Grace's .....	1901	99	0 0	413	Seven Hills Road to Vardy's Grant .....	1895	15	0 0	124
Road to Nutley's C.P. .....	1901	28	0 0	28	Seven Oaks to Trial Bay .....	1882	975	7 6	17,973
Road to Simpson's Ridge School .....	1898	75	15 4	75	Shadforth to Whitley's Junction .....	1896	89	5 9	436
Road to Upper Bucca Creek .....	1898	44	12 0	197	Shark Creek through Loughman's .....	1901	9	8 0	9
Road to Upper Deep Creek .....	1901	44	16 7	44	Shark Creek Bridge to Hinchey's .....	1897	4	16 11	239
Road through Paterson's .....	1895	149	13 10	885	Sharpe's to Moonee and Branch towards Wool- goolga .....	1899	543	2 0	3,363
Road through Warren's Lane .....	1901	79	19 9	471	Shaw's up East Bank Orara River .....	1894	172	14 17	2,143
Road up B. area-Bendina Creek .....	1901	75	0 0	75	Shaw towards Berrig .....	1901	15	0 0	15
Road up East Bank, Bilsdown Creek .....	1896	55	9 4	55	Shepherd's Hill, via St. Albans, to Mount Manning .....	1893	34	11 4	3,281
Road up Forbes River .....	1901	71	4 10	475	Sheepwash to Yarrang .....	1893	314	6 9	1,593
Road up George's Creek, Run Larra .....	1894	172	0 11	1,051	Sherwood to Willi Willi .....	1894	250	13 0	1,947
Road up left bank Wilson River .....	1901	138	4 0	138	Shooter's Hill to Jamber .....	1891	99	42 3	149
Road up north bank of River at Pimlico .....	1896	60	0 0	291	Shooter's Hill to Little River .....	1896	109	0 0	259
Road up right bank German Creek .....	1895	143	16 9	543	Shaw Ground Road to Kellyville .....	1901	49	17 7	41
Roads, Palmer's Island .....	1899	238	17 0	2,941	Singleton's Mill to Genteman's Halt .....	1895	92	18 6	92
Roads, parish of Bective .....	1899	160	11 3	418	Singleton's Mill to Brandy Creek .....	1895	86	3 6	404
Roads in the vicinity of Jinderra .....	1901	28	0 0	28	Singleton to Cooper's Flat .....	1884	348	2 2	7,195
Roads on Ash Island .....	1895	149	17 7	471	Singleton, via Maison Dieu Road, to Jerry's Plains .....	1895	163	2 8	145
Roads on Koorie Island .....	1899	35	0 0	417	Singleton-Maison Dieu Road to Warkworth .....	1899	197	15 1	3,135
Roads on Mosquito Island .....	1894	50	0 0	376	Skinner's Shoot to Byron Bay .....	1896	41	19 6	221
Roads on Rawden Island .....	1895	42	13 0	1,436	Slack's Creek to Middlingham .....	1897	36	0 0	170
Roads through Dumaresq Island .....	1891	59	16 6	878	Smithfield to Fairfield .....	1891	139	17 4	1,093
Roads through Harbord Estate .....	1895	242	8 10	2,435	Smithfield to Jerry's Meadows .....	1901	350	0 0	350
Roads through Mitchell's Island .....	1887	173	13 9	3,341	Sodwalls to Jerry's Meadows .....	1894	63	13 9	2,075
Roads through Oxley Island .....	1895	275	0 0	4,787	South Creek to Luddenham .....	1901	21	5 0	21
Roads within limits of Hurstville, Rockdale, Kogarah, and Canterbury .....	1894	2,392	8 4	12,571	South Grafton to Cemetery .....	1891	1,647	10 10	12,547
Robertson to Fitzroy Falls .....	1897	253	0 4	6,892	South Grafton to Moonee (North Coast Road) .....	1883	174	15 7	1,530
Robertson to Fountaindale .....	1895	15	0 0	405	South Grafton to Rushforth .....	1886	173	1 4	10,048
Robertson towards Jamberoo .....	1897	79	0 0	1,618	South Grafton, via Hillgrove, to Armidale .....	1884	3,181	10 2	121,328
Robison's to Upper Shark Creek .....	1900	14	8 0	30	South Gundurimba to Parrott's Nest .....	1893	53	13 11	220
R.B. Roy to Reedy Creek .....	1895	211	11 9	1,607	South Head Roads .....	1888	3,000	0 0	49,632
Rock Station to Lockhart, via Bullenong .....	1894	134	14 2	9,255	South Head Road (widening) .....	1899	6	0 0	972
Rock Station to Urangeline, via Lockhart .....	1883	236	8 3	3,182	South Head Road at Watson's Bay, to Military Reserve Gate .....	1895	65	15 7	326
Rock Vale to Kookabookra .....	1890	95	8 0	1,283	South Lismore to Wyrallah .....	1887	219	2 1	3,974
Rockley to Burruga .....	1895	1,443	19 7	7,799	South Lismore-Wyrallah Road to Bragg's .....	1901	21	4 0	21
Rockley to Swallow Nest .....	1880	35	11 0	2,994	South West Rocks to New Entrance .....	1899	61	19 0	175
Rockley to Trunkley .....	1874	144	3 4	6,267	Southgate to Broadwater .....	1894	707	4 2	4,056
Rockley-Enmore Road to Armidale-Milhi Creek Road .....	1900	16	5 0	51	Southgate to Flood Reserve .....	1894	99	13 9	292
Rocky Hall to Wog Wog .....	1899	20	0 0	146	Southgate-Broadwater Road to Southgate- Flood Reserve Road .....	1901	27	0 0	27
Rocky Range Deviation, Awaba .....	1901	114	0 2	821	Sparrow's Corner to Foxlow, via Carwoola .....	1890	99	14 0	2,551
Rolland's Plains to Dungay Creek .....	1891	159	3 4	3,705	Spencer's Creek to River Bank .....	1899	92	3 4	245
Rooty Hill Station to Rupertswood Church .....	1901	82	8 8	118	Spit Ferry Approach .....	1899	357	7 11	950
Rosgall Road, Maitland District .....	1901	18	0 0	18	Spring Hill towards Cadia .....	1879	58	14 3	2,890
Roswood to Humula .....	1891	25	19 6	1,431	Spring Terrace to Forest Reefs .....	1883	114	3 2	2,433
Roswood to Lower Bago .....	1901	15	0 0	15	Spring Terrace to Long Swamp .....	1887	45	6 6	2,076
Roslyn to Forest Lodge .....	1895	25	8 0	35	Springdale Road, Gordon .....	1901	23	16 2	23
Rossington's, via Glenbrook, to Barry .....	1895	103	10 0	725	Springdale, via Wallundry, to Lynch's .....	1899	86	13 6	245
Rossi to Galvin's Creek Saw Mills .....	1901	73	12 6	73	Springdale to Hawkesbury .....	1896	180	0 0	1,945
Rouchel Road, via Back Creek, to Kennedy's .....	1901	21	0 0	29	St. Alban's to Lower Quipolly .....	1901	14	17 3	14
Rouchel Road, via Broad Crossing, to Scone- Gundy Road .....	1899	20	0 0	156	St. Alban's up M'Donald River .....	1896	292	18 8	1,819
Rouchel Road, up Back Creek .....	1900	20	0 0	53	St. Alban's, via Wright's Creek, to Books' Ferry .....	1901	90	0 0	369
Roughley's Corner to Glenorie P.O. ....	1901	15	0 0	15	St. Alban's Court-house—approach road .....	1901	7	3 4	7
Round Corner, at Dural, to Rouse Hill .....	1894	150	0 0	675	St. Clair Hall, Wollamba River, to road through Paterson's .....	1895	50	0 0	50
Round Corner, at Dural, to Wiseman's Ferry (old North Head) .....	1895	912	17 1	3,320	St. Mary's to Blacktown Road, via Llandilo .....	1895	56	15 3	76
Rous Cemetery Road .....	1901	20	10 0	20					
Rous Factory, via Beeson's, to Wardell Road .....	1890	119	16 0	2,367					



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
St. Mary's to Orphan School Road .....	1895	242 17 10	892 4 4	Tichborne, along south bank of Gobang Creek..	1900	35 1 3	55 6 3
Stanhope to Glendonbrook .....	1856	69 1 3	363 6 9	Timor Post Office to foot of Crawney .....	1896	26 15 6	297 15 0
Stanmore Road, from Enmore Road, to Canter- bury Trust Road .....	1894	500 0 0	4,011 13 8	Tingha to Elmsmore .....	1895	116 11 0	1,296 14 10
Sternbeck's to Wiseman's Ferry .....	1900	25 0 0	81 3 0	Tingha to New Valley .....	1899	46 2 0	66 13 0
Stewart's River to Upper Camden Haven .....	1901	40 0 0	40 0 0	Tingha to Stanborough .....	1901	32 1 6	98 10 0
Stockinbingal to Dudaman .....	1897	66 10 5	65 10 5	Tinonee to Bootawah .....	1895	49 18 8	438 8 1
Stockinbingal to Marsden .....	1895	237 17 10	952 9 9	Tinonee to Old Bar Reserve .....	1895	210 0 0	1,174 1 2
Stockton to Nelson's Bay .....	1894	950 13 9	8,126 15 7	Tinonee to Wingham Ferry .....	1896	130 0 0	3,555 17 11
Stonehenge to Graham's Valley .....	1892	63 8 7	418 12 7	Tinonee Road to Killawarra .....	1892	195 8 0	799 2 10
Stony Creek to Angledale .....	1901	150 0 0	150 0 0	Tinonee Road to Possum Brush .....	1894	161 5 0	1,319 19 8
Stony Creek to Moreton's Creek .....	1892	80 0 0	704 12 11	Tintenbar to Alstonville .....	1883	298 3 4	6,714 1 1
Stony Pinch to Smith's Creek .....	1890	452 19 0	452 19 0	Tintenbar to Binna Burra .....	1896	320 8 0	2,016 14 5
Stony Pinch up Stockyard Creek .....	1894	205 8 11	1,155 14 5	Tintenbar to Pearce's Creek .....	1896	16 0 0	829 17 9
Stott's Channel to Chinderah .....	1901	1 0 0	1 0 0	Tintenbar, vi Tooley's Mill, to Booyong Village .....	1884	342 10 0	4,041 17 8
Stroud to Dungog .....	1876	299 15 7	8,814 13 3	Tintenbar-Alstonville Road to por. 363, par. Tocumbil .....	1901	40 0 0	40 0 0
Stroud Road to New Wharf .....	1891	50 0 0	657 1 0	Tintenbar-Pearce's Creek Road to Alstonville .....	1901	40 0 0	40 0 0
Stroud Road, near 6-Mile, to Seaham Road .....	1890	50 6 0	374 1 8	Tintinhull, via Moonbi, to Limbri and Mulla Creek .....	1898	75 0 0	537 3 9
Stroud Road, near 8-Mile, to Clarence Town Road .....	1891	72 0 0	599 4 5	Tomerong to Jervis Bay .....	1897	130 2 17	625 1 1
Stroud Road, near 12-Mile, to Tea Gardens .....	1892	348 7 8	2,106 19 4	Toole's to Bolong .....	1901	42 8 6	42 8 6
Stuart Town to Burrendong .....	1880	56 4 9	2,092 11 6	Toongabbie Creek to Windsor Road at Killyville .....	1894	902 14 10	1,556 10 11
Stuart Town to Mookerawa .....	1895	8 2 8	1,300 11 4	Toongabbie Post Office, via School, to Went- worthville Railway Station .....	1897	325 0 0	625 4 0
Sussex Reach to Copp's Hill .....	1901	37 0 3	129 17 9	Torrington P.O. to Silent Grove Battery .....	1901	92 15 0	92 15 0
Sussexman's, via Possum Brush, to Fairfield Road .....	1891	230 11 2	1,728 17 10	Towamba, via Bondi, to Maharatta Bridge .....	1887	457 0 8	2,988 7 4
Sutton Forest to Cowley's .....	1887	2 9 17 3	1,245 4 4	Towamba to New Buildings .....	1891	219 10 0	1,944 16 9
Sutton Forest to Green Hills .....	1900	63 4 0	63 4 0	Towamba to Yambula Gold-fields .....	1900	139 14 6	277 13 6
Sutton Forest, via Exeter, to Barber's Creek .....	1896	4 5 10 0	2,297 13 4	Towrang to Arthursleigh .....	1896	53 7 6	581 4 2
Swan Bay to New Italy .....	1891	124 12 6	2,271 13 13	Towrang to Menzies .....	1892	150 0 0	3,764 17 6
Swan Bay Road .....	1899	0 6 1	68 0 0	Trangie—Roads at .....	1900	160 4 9	210 4 9
Swan Reach Wharf, near Hinton—Road to .....	1901	20 0 0	20 0 0	Trangie to Cathunral .....	1901	69 10 0	69 10 0
Sydney to Banks' Meadow (Botany Road) .....	1894	2,205 0 1	12,547 15 8	Travelers' Rest to Macleay Heads .....	1892	185 19 0	2,183 8 3
Sydney, via Dam at Cook's River, to "Half-way House" .....	1876	2,923 15 6	102,651 15 0	Trevalyn to Summer Hill .....	1900	40 4 0	163 10 0
Sylvania to Port Hacking .....	1896	427 7 7	1,317 13 5	Trevel's to Lewis Ponds .....	1895	100 0 0	772 0 4
Table Top Railway Station to Ettamogah .....	1901	29 17 0	29 17 0	Trial Bay Road to Smoky Cape .....	1891	41 14 0	318 8 5
Tabrabucca to Hammond's .....	1895	100 13 6	632 8 2	Trial Bay Road to South-west Rocks .....	1895	39 18 3	298 19 0
Tadulama to Myall Creek .....	1892	557 4 3	6,715 8 6	Trunking-Newbridge Road from Neville, via Waterfall .....	1901	92 10 6	92 10 6
Temas to Brindabella .....	1891	295 5 3	3,541 11 4	Tucki Factory to Munro's Wharf .....	1894	158 10 0	961 1 9
Tallaganda Crossing up Jerrabat Gully .....	1891	82 9 9	473 17 0	Tuckumbil to Rous .....	1891	119 10 4	1,119 8 11
Tallawang Road to "Goodman Inn" .....	1893	25 5 2	799 9 9	Tuena Road to Sherwood .....	1893	27 6 0	515 8 4
Tallywalka towards Ivanhoe .....	1892	46 13 0	2,225 5 0	Tuggerah and Terrigal Roads .....	1900	80 0 0	272 12 8
Tamworth to Barraba .....	1891	2,207 2 2	23,289 9 10	Tuggerah Beach to selections east of Matcham's .....	1896	41 6 0	272 2 7
Tamworth to Nundle .....	1898	842 1 9	26,603 10 6	Tuggerah Platform to Tuggerah Lakes .....	1895	45 0 2	657 15 1
Tamworth to Somerton .....	1891	583 5 10	4,859 14 1	Tuggerahong to Tuggerahong Railway Platform .....	1898	21 9 0	73 18 0
Tamworth to the Forest .....	1883	25 0 0	1,716 8 5	Tumbarumba to Bago .....	1890	754 19 0	4,092 14 7
Tamworth to Werri Creek .....	1896	370 12 8	1,090 0 4	Tumbarumba to Courabarra .....	1893	55 15 0	652 9 11
Tamworth to Winton .....	1898	2 30 11 2	2,515 3 11	Tumbarumba to Jingellie .....	1882	345 14 10	15,755 13 7
Tamworth, via Moore Creek, to Attunga .....	1898	180 0 0	2,066 12 0	Tumbarumba to Little Billabong .....	1895	735 19 2	28,243 2 3
Tamworth, via T.S.R., to Moonbi .....	1901	100 0 0	100 0 0	Tumbarumba, via Paddy's River Junction, to Tooma .....	1900	15 15 0	350 16 0
Tanbanyan Road to Unkyer Creek .....	1886	958 12 3	91,917 15 4	Tumbarumba, via Tooma, to Tintaldra .....	1898	417 11 0	20,392 4 8
Tarago to Braidwood .....	1891	124 4 6	4 10 16	Tumbarumba-Bago Road to the Mines at Byrnes .....	1901	11 11 0	11 11 0
Tarago to Bullio .....	1895	271 16 0	1,511 18 11	Tumbarumba-Tintaldra Road to Maragle .....	1901	43 0 0	43 0 0
Tarago to Bumaroo Ford .....	1891	275 10 7	3,059 7 0	Tumbulgun to Tweed Heads and Terranora .....	1894	535 2 10	2,213 14 3
Tarago towards Rockwell .....	1897	1,501 1 11	14,652 6 4	Tumut to Adelong .....	1891	306 4 9	15,855 8 0
Tarana to Jenolan .....	1900	44 16 0	45 15 0	Tumut to Gundagai .....	1894	1,003 8 9	33,142 19 4
Tarana to Meadow Flat .....	1892	218 0 0	2,291 17 7	Tumut to Kandra .....	1873	1,039 11 5	17,989 10 11
Taree to Wingham .....	1883	328 19 10	5,281 13 3	Tumut to Sandy Creek .....	1871	324 17 6	4,131 7 7
Taree towards Tuncurry .....	1901	72 10 0	72 10 0	Tumut to Tomorrara .....	1891	299 10 11	1,935 6 1
Taree-Nabiac Road through Burnside Estate to Middlebrook's .....	1900	6 16 9	43 17 0	Tumut, via Brungle, to Gundagai .....	1870	919 18 5	10,257 2 1
Taree-Tuncurry Road, via Sidebottom, to Old Bar Road .....	1895	50 0 0	331 9 5	Tumut, via Piper's, up Bumbullee Creek .....	1894	75 0 0	534 19 8
Taree Ferry to Glenelg Wharf .....	1899	40 0 0	200 0 0	Tumut, via The Plains, to Jones' Bridge .....	1891	145 2 2	1,575 12 1
Tarrabandra to Gocup .....	1897	77 12 6	333 2 3	Tumut Plains to Goobaragandra .....	1886	80 0 1	339 17 3
Tatalia to Thyra .....	1892	105 17 11	1,535 12 0	Tumut-Yass Road to Bundo and Lac-ma-lac .....	1901	20 0 0	20 0 0
Tatalia-Thyra Road to Wamboona .....	1901	41 0 0	44 0 0	Turlijah to Turross Heads .....	1895	15 0 0	150 5 11
Tatham to Myrtle Creek .....	1891	239 12 0	1,699 19 9	Turner's to Wonnul .....	1893	74 19 6	230 12 6
Tatham, via Knight's, to Wharf near Green Ridge .....	1895	70 10 0	817 18 5	Turramulla to Bobin's Head Road .....	1885	67 11 0	1,433 9 10
Tathra to Tanja .....	1893	170 0 0	400 0 0	Turramulla Station to Burke's Corner .....	1900	25 1 2	31 1 2
Tea Gardens to Wobbeegong Bay .....	1901	23 19 9	20 19 9	Tweed River to Upper Rowland's Creek .....	1897	77 19 9	232 10 9
Telegherry, via Master's, to North Coast Road .....	1897	131 19 6	778 14 11	Two-mile Creek to Newrybar .....	1889	75 19 0	810 0 10
Telegraph Bridge to Dog Trap .....	1901	0 19 6	9 19 6	Two-mile Flat to Cudjebegong .....	1901	19 9 0	19 9 0
Telegraph Bridge to Hudson's .....	1900	6 13 0	39 18 0	Uyagara to Boyle's .....	1895	149 15 0	1,934 3 1
Telegraph Point to Hack's .....	1894	34 10 3	54 10 3	Ulmara to Lavalia .....	1900	98 9 6	192 19 0
Temora to Mandemah .....	1894	265 5 2	2,093 3 13	Ulmara to Yamba .....	1883	972 7 6	8,639 6 11
Temora to Morangarell .....	1897	70 18 0	522 15 9	Ulmara towards Corinda .....	1887	334 0 10	2,891 9 11
Temora to Old Junee .....	1888	295 18 8	4,032 13 4	Umbango to Oberne .....	1893	37 13 11	377 13 11
Temora to Stockinbingal .....	1894	113 14 9	883 13 2	Umeralla Platform to Cowra Reefs .....	1897	50 0 0	250 5 3
Temora to Trugley .....	1895	160 6 3	660 0 6	Underbank to Upper Chichester .....	1895	80 0 0	816 11 0
Temora to West Wyalong .....	1887	2,386 6 9	23,937 10 9	Underbank to Upper Williams .....	1893	150 0 0	1,031 2 1
Tenterfield to Bonshaw .....	1888	491 18 8	19,879 12 9	Un'on Church to Southgate Wharf .....	1889	43 13 0	2,661 4 3
Tenterfield to Scrub .....	1885	180 0 0	2,654 19 3	Upper Dartbrook and Sparke's Creek .....	1890	58 5 0	337 10 1
Tenterfield towards Sunnyside School .....	1898	49 6 8	113 0 8	Upper Dartbrook to Upper Wybong .....	1901	145 12 11	458 19 2
Tenterfield, via Stembrook, towards Rocky River .....	1891	159 16 2	1,179 6 7	Upper Karak Flat to Wingham-Nowendoc Road .....	1896	359 11 6	2,127 15 8
Teralba to Toronto .....	1900	272 13 2	1,458 12 7	Upper Lansdowne Roads .....	1897	71 5 0	314 13 11
Teralba, via Rhondra, to Cooranbong Road .....	1891	98 7 3	923 7 3	Upper Manilla to Crow Mountain .....	1901	50 0 0	50 0 0
Termeil towards Milton .....	1891	159 11 0	1,908 9 3	Upper North Creek to Byron Bay Road .....	1905	44 2 6	251 0 10
Terragong Swamp Road .....	1901	104 6 6	104 6 6	Upper Picton to Picton Lakes .....	1895	150 0 0	591 14 4
Teven to Ferry (north side) .....	1894	77 6 0	171 18 9	Upper Road leading to Eastwood .....	1892	175 0 0	1,915 0 0
Thalgarra to Hlgrove .....	1901	40 11 8	40 11 8	Upper Ronchel to Stewart's Brook .....	1900	25 0 0	100 0 0
Tharwa Road to Balga Creek Road (Long Gully Road) .....	1890	4 18 0	4 13 0	Upper South Arm to S. Beat's .....	1896	25 8 0	913 1 9
Tharwa to Tibbinbilly .....	1901	74 15 6	74 15 6	Upper Tucna to Mount Costigan .....	1899	72 0 0	74 15 0
Tharwa, via Smith's, to Michelago .....	1901	117 3 8	163 4 8	Upper Ukyra to Clybucca .....	1898	24 19 10	177 9 17
The Meadows to Tarana-Jenolan Road .....	1890	299 18 10	3,328 1 5	Upper to Lower Bago .....	1900	60 0 0	118 0 0
The Pinch to Congewai .....	1895	45 12 7	383 13 1	Upper to Lower Coldstream .....	1898	151 2 9	614 16 9
The Pinch to Ellalong .....	1895	50 0 0	201 0 0	Upper to Lower Ford, Turner's Flat .....	1901	55 12 11	306 1 9
Thompson's, up Dairy Arm .....	1894	215 17 11	1,248 7 6	Upper to Lower Myall .....	1899	19 16 0	19 16 0
Thompson's Creek to Cullen Bullen .....	1892	100 10 3	843 8 1	Uralla to Bundarra .....	1897	37 5 1	23,263 0 6
Thornburn's to English's .....	1891	70 18 0	661 13 3	Uralla, via Balala, to Bundarra .....	1890	420 6 4	3,545 1 9
Thornburn's to Kelly's .....	1901	100 0 0	100 0 0	Uralla, via Gostwyck, to Rockwood .....	1894	63 9 10	827 19 7
Thornleigh Quarry Road .....	1901	45 0 0	45 0 0	Urana Cemetery Road .....	1883	150 0 0	1,743 18 5
Thoroughgood's to Campbell's, &c. .....	1898	66 19 7	499 9 1	Urana to Urangeline .....	1901	37 13 10	37 13 10
Thuddingra to Morangarell .....	1898	66 19 7	499 9 1	Urana to Broke Creek .....	1901	25 0 0	25 0 0
				Urana to Brookong Diggings .....	1901	25 0 0	25 0 0



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
Uranquinty to Churches Plains .....	1901	24 18 0	24 18 0	Wellingrove to Strathbogie .....	1899	97 2 4	2,495 1 7
Urialla Road (Queanbeyan District) .....	1900	40 0 0	45 4 0	Wellington to Goolma .....	1895	579 10 5	3,776 11 5
Uriarra Road .....	1901	63 8 6	63 8 6	Wellington to Ponto .....	1891	260 0 0	2,870 13 4
Vacy to Summer Hill and Trevallyn .....	1897	127 2 10	474 18 10	Wellington to Ulundry .....	1901	234 3 1	2,745 11 4
Verrier's to Clermont .....	1899	27 18 0	157 16 0	Wellington to Woolmon .....	1890	403 10 0	3,527 0 5
Verrier's, via Clermont Park, to Attunga- Somerton Road .....	"	45 8 0	176 6 0	Wellington towards Burrendong .....	1880	139 12 5	6,191 5 7
Viney's Road, Dural .....	1901	37 10 11	37 10 11	Wellington towards Cobbora .....	1882	795 6 3	9,657 12 8
Violet Dale up Dumaresq Creek .....	1894	63 18 6	618 12 7	Well's Creek to Kareela .....	1896	50 0 0	441 13 10
Voller's Lane to Nicholl's Gate .....	1901	30 3 0	30 3 0	Wendowie, up east bank Gilmore Creek .....	1891	3 6 1 4	1,345 7 8
Waddell's Orchard, via Glendon, to Great Northern Road, near Belford .....	1896	62 17 0	503 8 0	Wendowie School, up west bank Gilmore Creek .....	1894	80 0 0	516 7 7
Wagga Wagga Cemetery Road .....	1898	0 11 0	108 12 4	Wentworth to Euston .....	1895	27 2 4	145 15 1
Wagga Wagga to Coolamoon .....	1892	274 9 8	2,338 16 4	Wentworth to Menindie .....	1888	25 0 0	2,025 0 0
Wagga Wagga to Old Man Creek .....	"	175 4 4	1,747 17 1	Wentworth to South Australian Border .....	1885	17 4 0	1,553 17 1
Wagga Wagga to Grogadoo .....	1891	249 3 3	2,165 4 3	Wentworth Falls to Burrigorang .....	1895	100 2 0	2,370 17 3
Wagga Wagga to Kyamba .....	1891	396 8 8	14,093 4 5	Werris Creek Gap to Railway .....	1892	"	251 8 8
Wagga Wagga to The Rock .....	1893	223 14 8	1,414 19 7	West Maitland to Eccleston .....	1883	1,476 13 3	10,647 19 5
Wagga Wagga to Tooyal .....	1901	97 13 6	97 13 6	West Maitland to Mulbray .....	1894	292 11 3	1,515 4 8
Wagga Wagga to Wantabadgery .....	1892	80 9 4	1,513 16 1	West Portland to Comleroy Road .....	1888	44 5 0	1,275 2 7
Wagga Wagga to Willan's Hill Park .....	1901	23 0 0	23 0 0	West Wallend to Cemetery .....	1898	33 2 0	197 19 1
Wagga Wagga towards Narrandera .....	1894	197 18 1	12,336 19 6	Westbrook, via Spring Creek, to Pictou and Oaks Road .....	1900	111 0 0	155 4 4
Wagga Wagga, via Wallace and Harefield, to June .....	1892	221 18 11	1,215 18 11	Weston Road, Balmain .....	1875	75 0 0	2,450 11 1
Wagga and Albury Road, via Yamba Station, to Jingellie .....	"	687 17 9	8,377 16 5	Wheeo to Bendvale .....	1896	78 10 0	237 19 1
Wagga-Coolamoon Road towards Tooyal .....	1900	11 4 0	42 18 4	Wheeo to Bind .....	1887	32 5 1	2,788 6 0
Walbundrie to Walldool .....	1901	49 5 0	49 5 0	Wheeo towards Crookwell .....	1884	26 1 6	5,103 1 1
Walcha to Aberlaid .....	1892	180 0 0	888 7 5	Wheeo Post Office towards Gunning .....	1888	90 0 0	2,032 1 0
Walcha to Eulo .....	"	143 18 0	1,793 4 2	Whelham Road, Beech .....	1901	5 0 0	5 0 0
Walcha to Nowendoc .....	1879	281 0 0	6,970 13 9	White Cliffs to Mootwingee .....	"	163 6 12	163 6 10
Walcha to Uralla .....	1877	120 0 0	5,471 0 1	Whiteman's Creamery to Whiteman's Bridge .....	1896	65 0 7	292 3 6
Walcha towards Emu Creek .....	1893	36 17 4	430 12 2	Whittingham to Broke .....	1896	88 3 6	625 0 3
Walcha towards Port Macquarie .....	1872	176 12 6	29,170 8 10	Whittingham-Broke Road to Singleton-Broke Road .....	1900	50 0 0	129 10 0
Walcha Road to Bendemeer .....	1898	20 0 0	110 0 0	Whitton Ferry to Pullitot Tank .....	1891	456 14 1	5,014 15 9
Walcha Road to Comboyne .....	1895	230 0 0	1,479 1 5	Wilberforce to Bull Ridge .....	1901	106 10 0	105 10 6
Walcha Road to Njungle .....	1896	147 13 0	1,032 19 10	Wilberforce to Pitt Town .....	1895	32 1 7	437 5 11
Walcha Road to Walcha .....	1894	289 13 0	2,165 17 9	Wilcannia to Jacob's Well .....	1897	24 0 1	123 18 0
Walgett to Comboyong .....	1892	54 9 6	1,132 8 4	Wilcannia to Menindie .....	1888	79 0 6	1,767 17 4
Walgett to Corinda .....	1896	86 11 6	629 11 1	Wilcannia to Tilpa .....	1898	51 2 0	492 2 0
Walgett to Goondabinni .....	"	170 0 0	1,271 14 9	Wilcannia to Wanaaring .....	1895	93 6 6	417 2 8
Walgett to Pilliga .....	1893	322 11 1	2,745 5 3	Wilcannia to Wompah .....	1892	295 10 7	4,737 1 8
Walgett, via Boorooma, to Brewarrina .....	1891	345 13 4	1,377 17 8	Wilcannia towards Broken Hill .....	1890	222 14 3	2,772 14 3
Walgett, via Goodooga, to Brenda .....	1893	194 16 0	3,347 7 1	Wilgoa to Wandello .....	1896	100 0 0	551 1 5
Walgett, via the Springs to Brewarrina .....	"	"	"	Wilkinson's, via Egeenhoe to Scone-Gundy Road .....	1901	11 0 0	155 0 0
Goodooga Road .....	1896	57 0 0	635 13 10	Wilkie Road (Lee's Pinch) to Ringwood .....	1901	20 0 0	20 0 0
Walholme to Werris Creek at Breeza .....	1900	27 19 11	56 9 11	Willawa-street to Limeworks, Village of Port- land .....	1901	27 17 0	27 17 0
Walla Walla to Burrumbuttock .....	"	33 10 0	180 0 1	Williams' to Taylor's Arm .....	1897	161 10 0	780 5 0
Wallabadah Station to Gullen's .....	1901	49 0 0	49 0 0	Williamstown to Sandhills .....	1897	34 17 4	247 0 11
Wallabadah to Nundle, Swamp Creek .....	1882	287 2 4	7,539 19 9	Williamstown, via Medowie, to Stroud Road .....	1896	140 18 8	733 3 10
Wallabadah to Wallabadah Station .....	1901	127 15 0	127 15 0	Willoughby Municipality Relief Works .....	1900	55 12 5	199 19 11
Wallace's Gap, via Ballalaba, to Oramere .....	1875	165 5 1	2,503 1 8	Wilson's to Sneath's .....	1895	97 12 0	499 10 0
Wallangra to Ashford .....	1894	71 0 0	551 13 6	Wilson's Downfall to Rivertree .....	1887	144 1 10	5,190 8 1
Wallangra to Boggabilla .....	1885	171 11 0	2,332 11 6	Wilson's Farm, via Hanuon's, to Old June .....	1901	50 0 0	50 0 0
Wallarobba to Cox's Creek .....	1896	30 0 0	174 0 0	Wilson's Road (Wollombi District) .....	"	8 8 0	8 8 0
Wallarobba to German Bridge and Brookfield .....	"	112 11 8	797 13 5	Wilson's River, via Enn's, to Walcha Road .....	1897	203 5 0	4,396 3 5
Wallendbeen to Stockinbingal .....	1891	145 7 5	772 0 11	Wimbledon towards Blayney .....	1899	2 6 3	25 0 0
Wallerawang to Mudgee .....	1857	721 4 7	20,779 4 5	Wimburns Road .....	1901	90 17 2	97 17 2
Wallerawang to Rydal .....	1891	64 12 0	807 6 0	Windellama to Mayfield .....	1897	47 0 0	255 19 5
Walli towards Woodstock .....	1888	32 0 0	2,016 16 9	Windellama Road, via Ravenswood, to Bungonia Road .....	1901	35 0 0	35 0 0
Wall's to Downing .....	1895	15 0 0	102 3 0	Windeyer to Avisford .....	"	40 0 0	40 0 0
Wall's Junction to Botobolar .....	1884	51 6 4	2,110 17 3	Windeyer to Hargraves .....	"	50 0 0	50 0 0
Wall's Junction to Havilah .....	1901	30 0 0	30 0 0	Windeyer to Queen's Pinch .....	1892	162 16 6	1,778 1 0
Wallsend to Gosford Road .....	1878	511 11 2	11,291 7 2	Windsor to Blacktown Road .....	1896	102 6 11	395 18 2
Wallsend to Lake Macquarie .....	1884	149 15 11	1,628 9 9	Windsor to Bull Ridge .....	1895	516 15 1	2,096 12 0
Wallsend to Sandgate .....	"	300 17 11	2,171 3 11	Windsor to Sackville, to Wiseman's Ferry .....	1883	421 3 5	13,488 2 6
Wallsend-Lake Macquarie Road to Lake Macquarie Park .....	1901	25 0 0	25 0 0	Windsor Road to Mulgrave Station .....	1896	60 0 0	291 6 11
Wandellow to Tuross River .....	"	30 0 0	30 0 0	Wingello towards Marulan .....	1901	50 0 0	50 0 0
Wandsworth to "Old Ben Lomond Inn" .....	1888	247 3 10	2,379 8 9	Wingham to Landsdowne Road .....	1882	310 0 0	3,976 12 0
Wanganella to Yangi .....	1897	89 10 6	479 11 1	Wingham to Nowendoc .....	1883	1,081 3 7	22,463 10 1
Waratah to Ellis's Quarry .....	1901	202 5 9	202 5 9	Wingham, via Ashlea, to Kelvin Grove .....	1876	309 19 9	5,197 15 4
Waratah to Minni Road .....	1882	582 9 4	15,906 18 5	Wingham, via Brimbin, to Landsdowne .....	1885	40 0 0	922 5 7
Wardell to Beechwood .....	1897	71 17 6	135 0 0	Wingham, via Bungay, to Killawarra Road .....	1895	50 0 0	314 12 0
Wardell to Emigrant Bridge .....	1890	221 14 11	2,265 12 10	Wingham-Kelvin Grove Road at 21 M.P. to Big Rim Creek .....	1901	56 12 6	56 12 6
Wardell to Rous .....	1895	163 0 6	3,209 9 3	Wingham-Nowendoc Road to Karaak Flat .....	1884	49 0 0	910 16 6
Wardell to the Beach .....	1891	57 7 5	862 9 4	Wingham-Nowendoc Road to the River (Kelly's Cross ng) .....	1901	23 3 3	23 3 3
Wardell Road towards Broadwater .....	1901	97 16 6	97 16 6	Wiseman's Ferry to Gentleman's Halt .....	1889	67 19 4	849 3 7
Wardell-Rous Road to Alstonville .....	1899	155 12 1	1,266 8 11	Wiseman's Ferry to Warkworth .....	1896	947 16 5	5,313 19 2
Wardell-Rous Road to Mulhearn's .....	1901	83 0 0	83 0 0	Wiseman's Ferry, via Leet's and Loxton's, to Portland Ferry .....	"	456 16 8	1,841 19 9
Warialda to Bingara .....	1884	880 17 2	11,703 17 8	Woden to P. Smyth's .....	1901	13 11 6	13 11 6
Warialda to Bogamildil .....	1891	66 13 0	1,440 10 7	Wollar to Barragan .....	1900	7 13 6	40 0 0
Warialda to Gunywarildil .....	1879	1,946 0 4	8,229 10 10	Wollombi to Cessnock .....	1893	602 0 0	6,382 6 3
Warialda to Toulumba Road .....	1901	30 0 0	30 0 0	Wollombi up Narone Creek .....	1896	30 0 0	153 10 11
Warialda towards Inverell .....	1877	639 5 3	15,976 0 1	Wollombi up Yango Creek .....	1892	100 0 0	1,199 7 5
Warialda Road, at Black Jack, to Yetman .....	1876	41 12 10	10,993 1 6	Wollombi Road to Howe's Valley .....	1896	111 5 0	612 0 5
Warialda Road, to Fernhill Public School .....	1901	78 16 0	78 16 0	Wollondilly to The Peaks .....	1900	119 0 0	262 10 0
Warialda, via Ezze's, to Morse Road .....	1876	193 5 7	26,239 5 0	Wollongong to Port Kembla .....	"	175 0 0	411 4 0
Warialda, via Gragin, to Reedy Creek .....	1886	103 13 11	1,410 13 4	Wollongong, via Mount Keira, to 13-mile peg .....	1895	203 2 1	861 0 10
Warialda-Gavin's Gap Road to Dog Trap Ford .....	1901	9 9 0	9 9 0	Wolmulla to Yurammie .....	"	49 11 10	33 19 0
Warkworth to Putty .....	1879	734 8 0	15,947 6 1	Wombat towards Berthong .....	1901	33 3 7	33 3 7
Warne to Macquarie River .....	1899	102 13 0	1 8 1	Woodburn to Boundary Creek .....	1896	510 0 0	1,209 7 2
Warne Road to Kerr's Creek .....	1896	40 0 0	280 13 5	Woodburn to Bungawalbyn Ferry .....	1892	713 5 4	2,938 5 3
Waroo, via Boombolo, to Cavan Gap .....	1897	160 15 4	1,474 9 10	Woodburn to Burrill .....	1891	40 0 0	427 0 0
Warren to Carinda .....	1894	155 12 6	1,317 12 2	Woodburn to Dungarubba .....	1891	113 13 4	2,168 11 2
Warren to Pine Ridge .....	1901	97 5 0	97 5 0	Woodburn to Evan's Heads .....	1895	120 14 8	417 8 3
Waterfall to Oford Hill .....	1897	481 2 1	3,371 1 9	Woodburn to The Gap .....	1891	49 10 0	77 0 8
Waterview to Ramore .....	1891	161 14 10	911 0 11	Woodburn, via Tucki, to Rous .....	1891	233 6 2	4,4 6 13 2
Watamondara towards Cameron's .....	1898	59 2 4	241 3 9	Woodburn-Boundary Creek Road to Beach .....	1900	31 14 0	85 5 0
Watamondara towards Warrangong .....	1899	39 16 7	123 7 0	Woodburn-Boundary Creek Road to Riley's Hill .....	1901	15 0 0	94 0 0
Wauchope to Beechwood .....	1890	130 0 0	910 15 4	Woodburn-Bungawalbyn Ferry Road to Swan Bay Flood Refuge .....	1899	50 19 0	36 9 0
Wauchope to Heron's Creek .....	1892	243 0 10	2,793 9 0	Woodbury to Yarramalong .....	1895	555 7 1	3,633 12 10
Waverley Government Subdivision Roads .....	1901	350 0 2	350 0 2	Woodfordleigh to Tyndale .....	1895	65 6 6	1,175 6 4
Webster's to Flood's .....	1896	78 6 6	472 19 11	Wood's Reef to Linton .....	"	25 0 0	25 0 0
Weetahala, via Angledool, to Goodooga .....	1893	77 15 9	576 0 11	Woodstock to Canowindra .....	1891	374 17 7	5,979 1 9
Wee Waa to Barren .....	1894	82 10 0	751 19 3	Woodstock to Kangaroo Flat .....	1896	151 5 9	544 8 6
Wee Waa-Burren Station Road to Birgibone .....	1901	43 2 6	43 2 6				
Wellesley, via Craigie, to Border .....	1896	100 0 0	473 16 5				



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	STREETS.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.
Woodstock to Mount McDonald .....	1883	£ s. d. 610 10 5	£ s. d. 9,077 8 9	Barragan, Main-street .....	1901	£ s. d. 50 1 4	£ s. d. 50 1 4
Woodstock towards Walli .....	1901	20 12 8	20 12 8	Beecroft, Copeland-street .....	"	20 0 0	20 0 0
Woodton towards Quirindi .....	1896	96 0 2	444 9 5	Beecroft, Mary-road .....	"	5 2 0	5 2 0
Woodville Road to Fairfield Station .....	"	250 0 0	479 3 11	Bega, Camp-street .....	"	295 12 0	295 12 0
Woodville to Stewart's Corner and Dunn's Creek .....	1887	69 6 6	1,381 0 6	Bellinger Heads, Brown and Bonville streets .....	"	14 2 0	14 2 0
Woolabra, via Millie, to Meroo .....	1899	54 15 0	3,843 17 5	Blayney, Ogilvie-street .....	"	43 11 8	43 11 8
Woolbrook to Rutherglen .....	1901	21 0 0	21 0 0	Blayney, Palmer and Water streets .....	"	156 5 11	156 5 11
Woolgoolga to the Jetty .....	1899	15 16 0	294 0 0	Boggabri Streets .....	"	52 0 0	52 0 0
Woolla Woolla Roads .....	1895	150 0 0	445 0 0	Bowral, Main-street .....	"	100 0 0	100 0 0
Woolomin to Cadell's .....	1892	48 14 0	265 1 7	Brewarrina Streets .....	"	400 0 0	400 0 0
Woolomin to Crawley's .....	1898	45 7 6	189 15 7	Bullahdelah, Church-street .....	1899	10 9 5	99 19 2
Woolong to head of Sandy Creek .....	1896	45 0 0	224 0 0	Bullahdelah, Richmond-street .....	"	100 0 0	100 0 0
Woolshed to Gulf Creek (Tamworth District) .....	1901	60 0 0	60 0 0	Bungendore, Gibraltar-street .....	1901	46 9 10	46 9 10
Worboys to Spring Terrace .....	1896	33 0 7	276 8 1	Bungendore, Rutledge-street .....	"	73 14 0	73 14 0
Woy Woy to Strathaird .....	1901	35 0 0	35 0 0	Carcoar, Naylor-street .....	"	18 0 0	18 0 0
Woy Woy to Blackwall .....	1900	65 0 0	75 0 0	Clarencetown, Rifle-street .....	"	9 2 4	9 2 4
Wundandian to Mathie's Farm .....	1901	50 0 0	50 0 0	Concord, Cooper-street .....	"	200 0 0	200 0 0
Wyalong to Kelly's .....	"	33 0 0	33 0 0	Cooloolongook, Midge-street .....	"	2 0 0	2 0 0
Wyalong West Recreation Ground, Access to .....	"	16 4 0	16 4 0	Corowa Streets .....	"	112 0 8	112 0 8
Wyong Road, at 11 miles to Bunnan .....	1896	78 9 4	199 13 10	Dudley Streets .....	"	17 17 3	17 17 3
Wyong Road at Hogan's and the Bridge to Brogheda .....	1890	11 11 0	161 11 0	Euston, Perry-street .....	"	10 0 0	10 0 0
Wyee to Swansea .....	1895	449 7 10	2,213 5 10	Gordon, Harold-street .....	"	37 6 2	37 6 2
Wyndham to Burrigate .....	1892	136 0 0	591 8 0	Grong Grong, Junea-street .....	"	22 6 0	22 6 0
Wyndham to New Station .....	1899	22 18 6	59 18 6	Gundagai Streets and Footpaths .....	"	50 0 0	50 0 0
Wyoming Road, Gosford .....	1901	75 0 5	75 0 5	Hay Streets .....	"	500 0 0	500 0 0
Wyong, via Jillybi, and Mandalong to Morrisset .....	1895	975 15 2	2,016 14 11	Helensburgh, Park-street .....	"	64 19 8	64 19 8
Wyrallah to Rous .....	1888	88 12 0	10,413 3 6	Hillgrove, Bracken-street .....	"	143 16 0	143 16 0
Yalgogrin to Mirrool Creek .....	1895	99 4 0	1,115 7 0	Hornsby Streets .....	1900	19 2 10	87 4 2
Yalgogrin to West Wyalong .....	1897	47 19 6	277 5 10	Illabo Streets .....	1901	49 1 6	49 1 6
Yallaroi towards Moree .....	1898	23 4 0	451 5 7	Lambton, Young-street .....	"	365 0 0	365 0 0
Yango Creek to Big Yango .....	1901	25 0 0	25 0 0	Leichhardt, Renwick-street .....	1900	50 0 0	292 10 0
Yarra to Parkesbourne .....	1887	40 0 0	812 3 7	Lockhart Streets .....	1901	118 18 2	118 18 2
Yarramalong to Lower Mangrove Creek .....	1896	182 5 11	648 1 6	Lyndhurst, Leadbeater-street .....	"	17 18 7	17 18 7
Yarramalong to Olney Reserve .....	"	199 18 3	641 5 2	Lyndhurst, Queen-street .....	"	25 0 0	25 0 0
Yarramalong Road to Chandler's .....	1901	15 0 0	15 0 0	Maitland West Streets .....	"	300 0 0	300 0 0
Yarraman to Back Creek .....	1891	9 2 0	333 14 3	Menangle, Station-street .....	"	99 8 11	99 8 11
Yarramundi to Wilberforce .....	1883	192 17 9	3,562 3 9	Merrara, Bow-street .....	1900	14 2 10	28 2 10
Yarras to Glanmire .....	1901	25 0 0	25 0 0	Millthorpe, Montgomerie-street .....	1901	45 3 2	45 3 2
Yarrowford to Ranger's Valley .....	1881	39 1 0	106 14 6	Moore Park, Lachlan-street .....	1899	1,377 5 11	6,380 14 9
Yass to Black Range .....	1885	61 3 8	635 5 0	Mulwala, Dunmore-street .....	1900	13 13 10	39 17 6
Yass to Dalton-Burrowa Road .....	1890	80 4 6	872 2 5	Mungindi Streets .....	1901	179 5 0	179 5 0
Yass to Fairfield Bridge .....	1895	230 0 0	7,278 12 11	Nymagee Streets .....	"	31 18 6	31 18 6
Yass to Upper Gundaroo .....	1882	275 11 1	10,853 11 0	Nyngan Streets .....	"	250 0 0	250 0 0
Yass to Wargella .....	1896	38 3 10	242 9 5	Paddington, Brown-street .....	1900	378 17 2	1,090 4 0
Yass to Woolgoolga .....	1875	84 10 5	4,939 11 8	Randwick, Orange and Avoca streets .....	"	398 0 10	702 2 8
Yass, via Jerrawa to Dalton .....	1894	186 8 0	1,430 17 6	Raymond Terrace, Adelaide-street .....	"	100 0 0	180 0 0
Yass, via Weejasper, &c., to Broken Cart .....	1900	30 17 6	36 17 6	Rookdale, Bay-street .....	1901	504 0 8	504 0 8
Yass, via Weejasper, &c., to Sawyer's Gully .....	1901	44 14 6	44 14 6	Rookwood, Joseph-street .....	"	88 19 10	88 19 10
Yass, via Weejasper, towards Tumut .....	1892	540 18 8	6,589 8 4	Roseville, Clive-street .....	"	23 2 9	23 2 9
Yass-Upper Gundaroo Road to Yass-Fairford Bridge, &c., Road .....	1901	24 8 0	24 8 0	Rydal, Bathurst-street .....	"	15 0 0	15 0 0
Yerong Station to Urangeline .....	1888	96 18 9	273 10 9	St. Ives, Horace and Stanley streets .....	"	68 0 0	68 0 0
Yetholme to Wambool .....	1901	208 10 0	208 10 0	Seaham, Warren-street .....	"	67 18 0	67 18 0
Yetman to Texas .....	1899	45 13 0	164 0 0	Sunny Corner, Street to Recreation Ground .....	1900	4 7 0	20 0 0
Young to Burrowa .....	1876	380 1 11	15,411 18 0	Sydney, Macquarie-street North .....	1901	242 12 6	242 12 6
Young to Douglas .....	1880	323 2 8	3,165 17 5	Temora, Hoskins-street .....	1900	100 0 0	200 0 0
Young to Grenfell .....	1888	313 18 4	10,079 13 1	Tingha Streets .....	1901	21 18 3	21 18 3
Young to Koorawatha .....	1892	259 14 8	1,207 18 2	Turrumulla, Cherry-street .....	"	62 9 0	61 9 0
Young to Temora .....	1883	369 3 3	10,899 17 1	Turrumulla, Smith-street .....	"	199 3 0	199 3 0
Young towards Bumbaldry .....	1892	277 17 7	2,712 17 3	Walgett Streets .....	"	157 11 6	157 11 6
Young, via Kingsvale, to Murrumburrah .....	"	130 10 3	3,080 17 6	Wanaaring, Main-street .....	"	1 7 0	1 7 0
Young, via Wombat, to Murrumburrah .....	1889	281 8 9	3,242 11 8	Waterloo, Ricketty-street .....	"	352 5 7	352 5 7
Young-Bumbaldry Road at 7-mile post to Solferino .....	1900	5 0 0	34 14 0	Wee Waa Streets .....	"	142 10 0	142 10 0
Young-Burrowa Road at 1-mile post to Young- Douglas Road at 2-mile post .....	"	10 0 0	30 0 0	White Cliffs Streets .....	"	79 12 0	79 12 0
Young-Murrumburrah Road, at 2-mile post, to Webb's Farm .....	"	0 13 6	28 10 6	Whitton Streets .....	1900	66 16 0	91 16 0
Young-Temora Road to Stoney Creek Road .....	1901	16 10 0	16 10 0	Wickham, Islington-street .....	1901	100 0 0	100 0 0
Young Wallsend to Minmi .....	1890	237 18 6	3,128 2 1	Willcannia Roads and Streets .....	"	100 0 0	100 0 0
				Wollabra Streets .....	1900	12 1 7	29 9 9
				Wyong Streets .....	1901	25 1 0	25 1 0
				Young, Lovell-street .....	"	179 2 3	179 2 3

CONSTRUCTION AND REPAIR OF BRIDGES.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	If Finished, actual amount of Expenditure.	CONSTRUCTION AND REPAIR OF BRIDGES.	When Com- menced.	Expendi- ture from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expendi- ture to 30 June, 1902.	If Finished, actual amount of Expenditure.
Albury District .....	1901	£ s. d. 1,945 16 0	£ s. d. .....	£ s. d. .....	Lithgow District .....	1901	£ s. d. 86 17 4	£ s. d. .....	£ s. d. .....
Armida District .....	"	330 4 6	.....	.....	Maclean District .....	"	135 10 9	.....	.....
Ballina District .....	"	761 4 10	.....	.....	Maitland District .....	"	1,730 11 8	.....	.....
Bathurst District .....	"	242 0 6	.....	.....	Metropolitan District .....	"	812 19 0	.....	.....
Bega District .....	"	531 11 7	.....	.....	Moree District .....	"	1,008 14 9	.....	.....
Bellingen District .....	"	112 15 7	.....	.....	Moruya District .....	"	190 12 2	.....	.....
Blayney District .....	"	79 18 0	.....	.....	Moss Vale District .....	"	131 7 8	.....	.....
Bombala District .....	"	127 9 8	.....	.....	Mudgee District .....	"	1,092 9 4	.....	.....
Bourke District .....	"	364 10 11	.....	.....	Murwillumbah District .....	"	243 18 2	.....	.....
Braidwood District .....	"	177 17 10	.....	.....	Muswellbrook District .....	"	385 13 11	.....	.....
Broken Hill District .....	"	108 15 0	.....	.....	Narrandera District .....	"	447 13 2	.....	.....
Campbelltown District .....	"	263 11 5	.....	.....	Newcastle District .....	"	597 11 4	.....	.....
Casino District .....	"	522 1 4	.....	.....	Nowra District .....	"	127 17 8	.....	.....
Cootamundra District .....	"	427 7 4	.....	.....	Orange District .....	"	511 5 5	.....	.....
Cowra District .....	"	1,054 18 6	.....	.....	Parramatta District .....	"	717 10 5	.....	.....
Crookwell District .....	"	28 0 2	.....	.....	Port Macquarie District .....	"	227 3 7	.....	.....
Cudgellico District .....	"	498 13 7	.....	.....	Queanbeyan District .....	"	177 1 4	.....	.....
Deniliquin District .....	"	641 15 9	.....	.....	Quirindi District .....	"	174 2 5	.....	.....
Dubbo District .....	"	1,000 1 8	.....	.....	Richmond District .....	"	898 4 1	.....	.....
Forbes District .....	"	643 0 2	.....	.....	Stroud District .....	"	341 8 11	.....	.....
Glen Innes District .....	"	3 5 9	.....	.....	Tamworth District .....	"	281 8 2	.....	.....
Gosford District .....	"	286 13 10	.....	.....	Taree District .....	"	2,210 10 8	.....	.....
Goulburn District .....	"	1,281 17 1	.....	.....	Tenterfield District .....	"	169 8 9	.....	.....
Grafton District .....	"	793 9 0	.....	.....	Tumut District .....	"	61 7 9	.....	.....
Hay District .....	"	787 0 10	.....	.....	Tumbarumba District .....	"	88 7 11	.....	.....
Inverell District .....	"	70 4 5	.....	.....	Waga Waga District .....	"	15 9 3	.....	.....
Kempsey District .....	"	861 7 3	.....	.....	Walgett District .....	"	778 8 4	.....	.....
Lismore District .....	"	430 8 2	.....	.....	Warralua District .....	"	9 4 2	.....	.....
					Willcannia District .....	"	150 1 1	.....	.....



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

CONSTRUCTION AND REPAIR OF BRIDGES.	When Com- menced.	Expenditure from 1 July, 1901, to 30 June, 1902.			If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.			CONSTRUCTION AND REPAIR OF BRIDGES.	When Com- menced.	Expenditure from 1 July, 1901, to 30 June, 1902.			If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.			
		£	s.	d.		£	s.	d.			£	s.	d.		£	s.	d.	
Wollombi District .....	1900	163	2	1					Parramatta River Bridge—									
Yass District .....	"	716	14	5					Maintenance .....	1901	451	12	5		451	12	5	
Young District .....	"	89	12	10					Paterson River, at Hinton .....	1898	496	17	2		13,026	6	4	
Alumny Creek, Dobie-street,									Pymont Bridge .....	1897	78,901	16	5		129,482	4	5	
Grafton .....	1901	679	12	1		679	12	1	Pymont Bridge—Maintenance	1901	1,908	1	9		1,908	1	9	
Araluen Creek, Footbridge .....	"	390	5	0		390	5	0	Queanbeyan River, at Quean-									
Bakers Creek, Stroud District ..	"	58	14	2		58	14	2	beyan .....	1896	20	0	0		6,954	1	5	
Belubula River .....	1900	197	7	10		1,844	11	10	Reidsdale Creek (McMahon's									
Bell's Creek Bridge, Tumber-									Bridge) .....	1901	142	2	2		142	2	2	
umba District .....	1901	82	5	10		82	5	10	Short-street Bridge, Young									
Big Bolivia Bridge .....	1900	55	17	9		393	6	9	Municipality—Re-decking ..	"	30	1	4		30	1	4	
Billabong Creek, Jerilderie .....	"	401	12	8		1,538	12	8	South's Creek (Goulburn to									
Bogan River, near the Peak									Bungonia) .....	"	159	4	4		159	4	4	
(Peak Hill to Trundle) .....	1901	530	6	8		530	6	8	Stone-quarry Creek, at Pictou ..	1891	1	4	0		4,205	2	2	
Bottle Creek .....	1899	9	3	4		844	5	9	Store Account for Bridges ..	1901	632	13	1		632	13	1	
Bow Bowing Creek (Campbell-									Store Account for Timber .....	"	412	17	11		412	17	11	
town to Narellan) .....	1900	15	4	0		49	12	3	Sugar Loaf Creek (Dungog to									
Bridges Generally .....	1901	158	9	1		158	9	1	Underbank) .....	"	79	3	0		79	3	0	
Brunswick River, at Mullum-									Trial Surveys and Borings .....	"	370	18	7		370	18	7	
bimby .....	1900	6	8	9		852	14	8	Tweed River, at Murwillumbah	1898	13	14	5		14,159	5	9	
Bumboolie Creek Footbridge ..	"	57	0	0		425	0	4	Uralla Creek, Hill-street,									
Byron Creek, and Approaches									Walcha .....	1901	313	4	6		313	4	6	
(Lismore District) .....	"	393	10	7		416	10	7	Waite's Bridge (Moss Vale to									
Chain of Ponds, near Liddell ..	1901	261	12	4		261	12	4	Oldbury) .....	"	86	4	0		86	4	0	
Charleyong River .....	1899	2,041	2	2		2,530	0	10	Weetalah Creek .....	"	333	7	6		333	7	6	
Coldstream River .....	1900	6,526	3	11		7,665	13	8	Wilson's River, at Telegraph									
Coleman's Creek Bridge (Col-									Point .....	1898	3,555	10	5		8,521	12	7	
lector to Tirannia) .....	"	564	10	2		569	14	2	Wiseman's Creek Footbridge									
Collector Bridge (Run of Water									(Bathurst District) .....	1901	19	19	11		19	19	11	
to Winderradeen) .....	"	418	6	10		762	10	0	Wyong Creek, at Wyong .....	1900	3,148	1	10		4,023	15	7	
Connor's Bridge Approach .....	"	10	0	0		20	16	0	Yaven Yaven Creek .....	"	136	13	11		732	2	9	
Coombing Creek (Carcoar to									Adelong Creek at Adelong .....	1901	3	15	6		3	15	6	
Pelltimber Creek) .....	1901	462	2	0		462	2	0	Ardglen Footbridge .....	"	38	19	5		38	19	5	
Cox's River, at Glenroy .....	1900	77	13	0		2,304	0	5	Beardy River at Yarrowford ..	1900	757	6	8		795	0	10	
Cudgong River, at Mudgee .....	1901	61	11	10		61	11	10	Ben Buckley Footbridge, over									
Davies Creek (Perth, via Charl-									Cudgong River .....	1901	50	0	0		50	0	0	
ton, to Rockley) .....	"	550	19	0		550	19	0	Boggy Creek, Ford-street, Gan-									
Duckmaloi River, at Edith .....	1900	1,033	16	7		1,043	11	8	main .....	"	337	0	0		337	0	0	
Eaton Creek, Rugby Creek, Cop-									Brickyard Creek (Braidwood to									
manhurst .....	1901	22	19	3		22	19	3	Animbo) .....	"	1	4	0		1	4	0	
Euroka Creek Bridge .....	1900	196	15	6		669	14	8	Broughton Creek at Farmeadow									
Ewennar Creek (Bemunnel									Clarence River at Tabulam .....	1899	4,014	10	7		12,035	12	2	
Bridge) .....	1901	923	12	0		923	12	0	Clarence River at Tabulam (Ap-									
Fennel Bay .....	1900	3,012	11	7		3,169	2	4	proaches) .....	1901	312	10	0		312	10	0	
Fish River, at Delaney's Falls									Cobram Bridge and Approaches	1900	11,760	8	7		14,135	0	9	
and Emu Creek .....	"	1,082	17	2		2,789	14	10	Cohen Bridge, Gunnedah .....	1901	38	5	0		38	5	0	
Foxground-road, Gerringsong ..	1901	80	6	11		80	6	11	Colling Creek .....	"	100	0	0		100	0	0	
Freres Bridge .....	1900	6	18	0		60	6	7	Copeton Footbridge (Inverell									
Gilgil Creek (Gerah to Kunopia)	"	521	6	6		1,651	12	2	District .....	"	30	0	0		30	0	0	
Glebe Island Bridge, Mainte-									Emumalla (Goulburn to Cooma)									
nance .....	1901	1,861	14	8		1,861	14	8	Farmer's Creek, Albert-street,									
Gulph Creek, Footbridge (Euro-									Lithgow .....	"	286	10	6		286	10	6	
bodalla to Nerrigunda) .....	"	35	0	0		35	0	0	Fawcett's Bridge, Lismore .....	"	11	0	0		11	0	0	
Gum Creek (Hay to Narrandera)	"	282	14	0		282	14	0	Footbridge at Mackie's .....	"	1	18	8		1	18	8	
Heiffer Creek (Barham to Moul-									Fry's Bridge, Drunewalla (Moss									
mein) .....	"	212	17	7		212	17	7	Vale to Jamberoo) .....	1897	35	12	0		35	12	0	
Hilly Crossing Footbridge									Glebe Island Bridge .....	"	22,238	4	7		62,605	18	9	
(Metropolitan District) .....	1900	615	17	2		653	3	2	Glennie's Creek, at Middle									
Hunter River, at Morpeth .....	1895	15	9	8		9,363	2	8	Falbrook .....	1900	192	12	7		238	7	7	
Hunter River, at Moonan Flat ..	1900	124	15	7		225	12	0	Hastings River, at Cameron's									
Iron Cove Bridge, Maintenance									Falls .....	1901	57	3	10		57	3	10	
Johnston's Creek, Rozelle Bay	1901	84	3	1		84	3	1	Holme's Crossing, Black Creek	"	1,857	7	0		1,857	7	0	
(Timber Truss Bridge) .....	1900	403	13	8		931	16	8	Jacob and Joseph, and Quirindi									
Jugiong Creek .....	1899	968	8	2		3,386	0	8	Creeks .....	"	1,606	8	9		1,755	8	9	
Keelluar Creek (Wallerobba to									Korn's Crossing Footbridge ..	"	145	5	0		145	5	0	
Brookfield) .....	1901	397	11	9		397	11	9	Lachlan River, at Goolagong ..	1900	379	3	8		510	5	4	
Kempsey Bridge, Macleay River	1896	1	0	0		22,344	18	2	Lane Cove River, at Chicago									
Killawarra Bridge, Manning									Mills (Pipe Line Bridge) .....	1901	410	10	4		410	10	4	
River .....	1899	1,659	13	6		9,653	14	11	Luskintyre Bridge .....	1899	1,226	12	6		1,415	17	6	
Lachlan River, at Condobolin ..	"	0	14	1		2,033	6	1	Macdonald River, at St. Albans	1900	1,123	7	0		1,359	6	7	
Lachlan River, at Darby's Falls	1900	1,391	15	6		1,592	14	8	Middle-street Bridge, Walcha									
Lane Cove, at head of Navigation	1898	4	6	0		3,992	14	3	(over Aspley River) .....	1901	178	11	7		178	11	7	
Lane Cove—Maintenance .....	1901	32	11	3		32	11	3	Molong Creek (Great Western									
Limestone Creek (Bathurst to									Road) .....	1899	167	0	0		167	0	0	
Grenfell) .....	1900	500	3	6		515	3	6	Mulwarree Ponds, at Lansdowne									
Linklater's Bridge (Glenfield to									Murrumbidgee River, at Dar-	1901	896	4	2		896	4	2	
Ingleburn) .....	1901	62	13	8		62	13	8	gui) .....	1900	189	16	1		264	16	4	
Mandagery Creek .....	1900	5	0	0		485	0	0	Murray River, at Koondrook ..									
Macquarie River, at Binghi									Murrumbidgee River, at Dar-	1901	16	10	11		16	10	11	
Crossing .....	1901	1,217	1	5		1,217	1	5	lington) .....	1900	1,542	5	7		1,633	15	7	
Macquarie River, at Scabbing									Murrumbidgee River, at Hay ..									
Flat .....	1900	1,782	17	5		1,873	4	9	Nepean River, at Harvey's									
Macintyre River, at Wallangra	"	125	1	10		364	12	6	Crossing .....	1899	4,073	7	5		4,396	9	9	
Manar Creek .....	"	633	15	1		696	15	1	North Sydney Bridge .....	1901	1,599	6	8		1,599	6	8	
McCauley Creek Bridge (Bulli,									Tangaratta Creek .....	1900	30	0	0		258	19	0	
via Coal Cliff, to Bluegum									Tomerong Creek .....	1901	91	12	2		91	12	2	
Forest) .....	1901	208	0	5		208	0	5	Webber's Creek, Maitland Dis-									
Mehi River, at Moree .....	1898	9	18	6		3,184	9	3	trict .....	1900	1,427	15	5		1,434	5	5	
Middle Creek, Inverell District	1901	104	9	3		164	9	3	Wheeny Creek, at Blaxland's									
Middle Creek (Kiama to Shell-									Ridge .....	1896	160	15	6		228	6	4	
harbour) .....	"	139	14	9		139	14	9	Wollondilly River, at Hill's ..	1900	1,145	7	1		1,228	16	3	
Milliwindi Gully (Tarpolly to																		
Carroll's Gap) .....	"	307	12	0		307	12	0										
Moama, at Echuca .....	1899	131	11	0		2,477	18	9										
Morley's Creek, at Byron-street,									CULVERTS, CAUSEWAYS,									
Gundagai, and Approaches ..	1901	885	3	3		885	3	3	AND CROSSINGS.									
Moruya Bridge .....	1898	82	16	11		9,484	2	2	Billabong Creek, Road Illabong									
Mumma River .....	1899	293	8	0		2,002	17	11										



## RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

PUNTS AND FERRIES.	When Com- menced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.	SUNDRIES.	When Com- menced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
Expenses of Punts and Ferries, generally .....	1901	£ s. d. 16,936 11 6	£ s. d.	£ s. d.	Compensation to Jackson and Donley .....		£ s. d. 82 0 0	£ s. d.	£ s. d.
Ulmarra Punt .....	"	1,001 14 7		1,001 14 7	Do J. McArthur .....		75 0 0		
Steam Relief Punt .....	"	599 17 11	599 17 11		Do J. McSharry .....		148 0 0		
					Do J. Sullivan .....		186 3 0		
<b>SUNDRIES.</b>					Bonus to H. F. Norrie .....		109 5 8		
Belmore Bridge—Lighting .....		21 10 0			Refund to S. McGill .....		47 13 0		
Extension of Minor Roads through Municipalities .....		15,550 1 8			Do J. McEwan & Coy. ....		173 0 11		
General Post Office New street Resumptions .....		1 0 0			Departmental Contingencies ..		641 19 9		
Incidental and Contingent Ex- penses .....		627 15 4			Services on Local or Public Contribution .....				
Road Rollers .....		110 0 0			Baan Ba, Crown lands clearing ..		3 1 7		
Roads and Bridges—Salaries, Equipment allowances, Establishment salaries, &c. ....		73,677 7 10			Barraba and Burinda Roads ..		1 19 7		
Services of other Departments..		6,179 19 6			Barregarry to Moffitt's and Rutledge's .....		15 0 0		
Compensation to A. W. Morgan ..		3 0 0			Ben Buckley Foot-bridge .....		25 0 0		
Do G. Hickey .....		122 18 6			Burns Road, Wairoonga .....		1 17 6		
Do E. Fitzgerald .....		5 0 0			Cambawarra Mountain to Anderson's Farm .....		15 0 6		
Do J. Donovan .....		12 0 0			Coraki—Myall Creek Road to Herwood .....		14 0 0		
Do Haigh & Gilder .....		5 0 0			Euroka Creek Bridge .....		50 0 0		
Do Janet Wearne .....		10 0 0			Exeter Railway Station to Exeter Butter Factory .....		100 0 0		
Do T. Buckley .....		67 4 0			Farmer's Creek Bridge .....		255 0 0		
Do T. Dowling .....		45 0 0			Forster Ferry Boat .....		1 8 0		
Do W. Thompson .....		2 10 0			Great Northern Road, Mait- land .....		3 0 0		
Do O. G. Morton .....		5 12 0			Guyra to Falconer .....		10 0 0		
Do H. Davis .....		7 17 5			Horace and Stanley Streets, St. Ives .....		20 0 0		
Do Mary Avis .....		131 15 6			Jersey-street, Hornsby .....		16 0 0		
Do C. Brown .....		105 0 0			Lorn Roads .....		40 0 0		
Do W. Glen .....		67 4 0			Main South Coast Road, Jam- beroo .....		23 13 0		
Do C. Ashburn .....		103 5 0			Ogilvie-street, Blayney .....		21 3 4		
Do S. Kimpton .....		124 6 0			Phoenix Park to McClymont's Swamp .....		131 5 8		
Do P. Kennedy .....		117 12 0			Railway Crescent, Beecroft ..		8 0 0		
Do A. Rich .....		75 3 3			Railway Fares .....		2 0 0		
Do J. O'Gorman .....		37 15 0			Railway-street, Dudley .....		1 15 0		
Do J. Pooley .....		5 0 0			Riley's Hill Quarry—R-fuso ..		8 15 10		
Do H. Crabb .....		3 0 0			Spencer's Creek to River bank ..		12 0 0		
Do F. Philp .....		2 0 0			Waite's Bridge .....		81 0 0		
Do Newcastle Gas and Coke Co. ....		7 3 0							
Do D. Carney .....		10 0 0							
Do P. Kemp .....		10 0 0							
					Totals .....		897,781 1 6	9,360,563 16 10	314,569 6 5

## SUMMARY OF EXPENDITURE FROM 1 JULY, 1901, TO 30 JUNE, 1902:—

Loans .....	£ s. d. 175,727 2 8
Consolidated Revenue .....	715,873 19 4
Services for other Departments ..	6,179 19 6
Total .....	£897,781 1 6

## STATEMENT of Loan and Revenue Votes and Expenditure from the year 1857.

Year.	Votes.			Total.	Expenditure.			Total.
	Loans.	Revenue.	Other Depart- ments.		Loans.	Revenue.	Services for other Departments.	
1857 .....	£ 14,814	£ .....	£ .....	£ 14,814	£ s. d. .....	£ s. d. .....	£ s. d. .....	£ s. d. 100,000 0 0*
1858 .....	10,000	.....	.....	10,000	.....	.....	.....	46,621 16 10
1859 .....	.....	91,030	.....	91,030	.....	.....	.....	114,585 18 5
1860 .....	20,279	131,290	.....	151,569	.....	.....	.....	199,208 6 10
1861 .....	7,400	103,250	.....	110,650	.....	.....	.....	135,641 4 0
1862 .....	60,000	140,469	.....	200,469	.....	.....	.....	224,497 7 4
1863 .....	12,000	114,145	.....	126,145	.....	.....	.....	255,248 3 11
1864 .....	9,000	213,772	.....	222,772	.....	.....	.....	154,689 4 0
1865 .....	13,900	149,390	.....	163,290	.....	.....	.....	148,806 12 8
1866 .....	52,500	111,617	.....	164,117	.....	.....	.....	186,417 14 6
1867 .....	18,900	131,063	.....	149,963	.....	.....	.....	177,009 10 4
1868 .....	59,000	113,512	.....	172,512	.....	.....	.....	193,125 5 0
1869 .....	15,500	125,605	.....	141,105	.....	.....	.....	182,199 2 4
1870 .....	2,500	119,863	.....	122,363	.....	.....	.....	223,227 11 0
1871 .....	18,500	181,673	.....	200,173	.....	.....	.....	178,985 5 0
1872 .....	40,000	197,777	.....	237,777	.....	.....	.....	283,966 9 6
1873 .....	58,000	281,998	.....	339,998	.....	.....	.....	293,890 5 8
1874 .....	12,800	295,333	.....	308,133	.....	.....	.....	401,561 10 0
1875 .....	11,200	331,110	.....	342,310	.....	.....	.....	403,955 14 0
1876 .....	102,000	569,243	.....	671,243	.....	.....	.....	465,175 4 8
1877 .....	.....	775,750	.....	775,750	.....	.....	.....	521,312 17 5
1878 .....	.....	545,692	.....	545,692	.....	.....	.....	675,201 11 5
1879 .....	.....	585,927	.....	585,927	.....	.....	.....	648,508 11 3
1880 .....	.....	551,346	.....	551,346	.....	.....	.....	507,753 2 8
1881 .....	51,000	521,771	.....	572,771	.....	.....	.....	601,994 4 1
1882 .....	.....	659,790	.....	659,790	.....	.....	.....	638,785 1 6
1883 .....	.....	747,850	.....	747,850	.....	.....	.....	778,306 1 10
1884 .....	24,400	684,284	.....	708,684	.....	.....	.....	825,366 5 11
1885 .....	.....	732,373	.....	732,373	.....	.....	.....	656,793 4 9
1886 .....	23,800	688,973	.....	712,773	.....	.....	.....	767,426 17 9
1887 .....	.....	707,712	.....	707,712	.....	.....	.....	695,451 14 10
1888 .....	152,080	660,783	.....	812,813	8,056 4 10	650,775 10 0	.....	663,758 10 11
1889 .....	120,100	701,593	.....	821,693	5,597 9 11	658,161 1 0	.....	805,303 18 10
1890 .....	114,771	821,483	.....	936,254	21,970 10 11	783,333 8 0	.....	997,677 14 11
1891 .....	.....	671,491	.....	671,491	67,340 4 11	930,328 10 0	.....	859,632 13 11
1892 .....	40,900	896,005	.....	936,905	82,327 5 8	807,305 8 3	.....	706,563 1 8
1893 .....	36,500	692,207	.....	728,707	56,268 19 9	650,293 1 11	.....	890,654 2 9
1894—30th June, 1895 (18 months) .....	25,063	835,611	.....	860,274	33,061 13 3	737,592 9 6	.....	776,400 7 9
1895-96 .....	100,075	450,000	.....	550,075	38,575 9 2	737,824 18 7	.....	676,209 19 2
1896-97 .....	119,100	550,000	1,709	670,809	54,261 1 11	620,180 2 10	1,763 14 5	616,097 15 3
1897-98 .....	67,197	550,000	573	617,770	60,567 17 8	554,956 16 4	573 1 3	645,569 5 3
1898-99 .....	57,000	583,564	1,500	642,064	79,059 1 7	565,009 4 11	1,500 18 9	678,605 13 9
1899-1900 .....	41,384	602,559	615	644,558	77,511 9 0	600,479 19 7	614 5 2	860,007 1 1
1900-1901 .....	64,000	731,847	5,441	801,288	133,147 2 10	721,419 2 9	5,440 15 6	897,781 1 6
1901-1902 .....	91,910	763,578	6,180	861,669	175,727 2 8	715,873 19 6	6,179 19 6	
Totals .....	£ 1,608,123	20,064,377	16,078	21,748,579	794,078 14 0	9,820,541 13 0	16,027 14 7	21,729,893 6 2

\* Approximate.



## ROADS AND BRIDGES EXPENDITURE.

Year.	Expenditure by Officers of Department.	Expenditure by Trustees.	Expenditure by Municipalities.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1857 .....	100,000 0 0	.....	.....	100,000 0 0*
1858 .....	46,621 16 10	.....	.....	46,621 16 10
1859 .....	114,585 18 5	.....	.....	114,585 18 5
1860 .....	199,208 6 10	.....	.....	199,208 6 10
1861 .....	85,641 4 0	50,000 0 0	.....	135,641 4 0
1862 .....	154,497 7 4	70,000 0 0	.....	224,497 7 4
1863 .....	185,248 3 11	70,000 0 0	.....	255,248 3 11
1865 .....	123,867 4 0	30,822 0 0	.....	154,689 4 0
1866 .....	109,075 12 8	39,731 0 0	.....	148,806 12 8
1867 .....	147,750 14 6	38,667 0 0	.....	186,417 14 6
1868 .....	140,086 10 4	36,923 0 0	.....	177,009 10 4
1869 .....	152,323 5 0	40,802 0 0	.....	193,125 5 0
1870 .....	141,863 2 4	40,336 0 0	.....	182,199 2 4
1871 .....	182,726 11 0	40,501 0 0	.....	223,227 11 0
1872 .....	144,257 5 6	34,728 0 0	.....	178,985 5 6
1873 .....	247,858 9 0	36,098 0 0	.....	283,956 9 0
1874 .....	257,366 5 8	41,524 0 0	.....	298,890 5 8
1875 .....	356,002 10 0	45,564 0 0	.....	401,566 10 0
1876 .....	366,802 14 0	37,153 0 0	.....	403,955 14 0
1877 .....	413,625 4 8	51,550 0 0	.....	465,175 4 8
1878 .....	497,032 17 5	24,280 0 0	.....	521,312 17 5
1879 .....	649,773 11 5	25,428 0 0	.....	675,201 11 5
1880 .....	614,708 11 3	28,800 0 0	.....	643,508 11 3
1881 .....	484,567 2 8	23,186 0 0	.....	507,753 2 8
1882 .....	577,212 4 1	24,722 0 0	.....	601,934 4 1
1883 .....	613,847 1 6	24,938 0 0	.....	638,785 1 6
1884 .....	750,584 1 10	27,722 0 0	.....	778,306 1 10
1885 .....	800,062 5 11	24,404 0 0	.....	825,366 5 11
1886 .....	628,379 4 5	28,414 0 4	.....	656,793 4 9
1887 .....	721,993 16 6	45,433 1 3	.....	767,426 17 9
1888 .....	663,928 14 10	31,503 0 0	.....	695,431 14 10
1889 .....	632,397 10 11	31,361 0 0	.....	663,758 10 11
1890 .....	770,808 18 10	34,500 0 0	.....	805,308 18 10
1891 .....	965,687 14 11	31,920 0 0	.....	997,607 14 11
1892 .....	859,027 13 11	30,605 0 0	.....	889,632 13 11
1893 .....	676,233 1 8	30,330 0 0	.....	706,563 1 8
1894 to 30 June, 1895 (18 months) .....	800,620 2 9	30,034 0 0	.....	830,654 2 9
1895-6 .....	729,544 15 10	19,285 0 0	27,570 11 11	776,400 7 9
1896-7 .....	588,910 7 1	9,910 1 10	77,389 10 3	676,209 19 2
1897-8 .....	587,690 17 9	10,600 17 10	17,805 19 8	616,097 15 3
1898-9 .....	616,087 5 2	8,710 6 8	20,771 13 5	645,569 5 3
1899-00 .....	647,266 14 11	7,471 19 3	23,866 12 7	678,605 13 9
1900-1901 .....	817,064 9 11	9,074 10 1	33,848 1 1	860,007 1 1
1901-1902 .....	857,471 12 0	7,816 11 7	32,492 17 11	897,781 1 6
Totals.....	£ 20,221,229 3 6	1,274,918 8 10	233,745 13 10	21,729,893 6 2

\* Approximate.



# Water Conservation, Water Supply, Drainage, and Sewerage.

## Report of the Principal Engineer for Water Supply and Sewerage.

Sir,

Department of Public Works, Sydney, 1 July, 1902.

I have the honor to submit the following report of the operations of this Branch for the year ended 30th June, 1902.

Under the latest reorganisation, this Branch of the Department is charged with the design and construction of all works for the conservation of water, for its supply to town and country, for removal from swamps and streets of towns, and lastly for the disposal of sewage.

The scope of action is thus so large and varied that it may be said to embrace the whole of the hydraulic engineering carried out in this State.

The report is classified under the following heads:—

- Works for conservation of water.
- Works for water supply.
- Works for drainage.
- Works for the removal and disposal of sewage.
- Works under design or projected.

During the past year there has been a great development of the day-labour system, and only *five* works have been executed through contractors. These are Narrabri Bore, Pyrmont Low Level Sewer, Balmain Low Level Sewer, drainage of Cooperbrook Swamp, and drainage of Duranbah Swamp.

All the other works mentioned in this report have been carried out by workmen directly controlled by the officers of the Department, and on nearly every work a profit to the State has been secured by thus dispensing with the contractor. The large claims for extras and compensations which used to shadow nearly all contract work are now unknown, and it is also noteworthy that the number of accidents to workmen has diminished to a remarkable extent. In the comparatively small number of cases which have occurred the sufferers have been paid their wages until they resumed work.

The day-labour system has vastly increased the work of the whole of the Staff of the Branch, and it might be pointed out that the present success of the system is in no little measure due to the energy and forethought of the officers and employees.

## WATER CONSERVATION (INCLUDING WEIRS, DIVERSION CHANNELS, REGULATORS, &C.).

As water conservation works are nearly always required in the more unsettled districts, it has been found necessary to establish depôts for the supply of provisions to the workmen at nearly every camp. The value of the goods supplied is deducted from each man's wages on the monthly paysheet. This arrangement is found to give great satisfaction, as the country storekeeper is seldom prepared to deliver goods at any great distance from his shop. Owing to the prevailing drought the past year has been exceptionally trying to all engaged in this class of work.

*Gwydir River Diversions.*—This scheme provides for tapping the Gwydir River, near Moree, by means of a cutting 15 feet wide with slopes of 1 to 1, its length is  $2\frac{1}{2}$  miles, and it discharges into the Mehi River. About 20 miles down the Mehi River a similar cutting takes off from the Mehi and cuts into the Moomen Creek. This second cutting is  $3\frac{1}{2}$  miles long. About 40 miles below this a third cutting connects the Moomen to the Thalaba Creek. This cutting is  $7\frac{1}{2}$  miles long. These diversions of the Gwydir River water are intended, not only to supply the dry creeks mentioned with water for stock, but also to mitigate the floods along the Gwydir River (the watercourse) country. The first cutting is now half finished, and the second cutting is practically completed. The third cutting had to be left about half completed in December last on account of the failure of all water supply in that district. The situation is 60 miles from either Moree, Narrabri, or Walgett, and great difficulty was experienced in getting supplies of fodder and provisions owing to the drought. It is gratifying to be able to report that under these severe conditions the work was executed at a reasonable cost.

*Burrowa Weir.*—This weir is situated on the Burrowa River, 1 mile below the township of Burrowa. It has been built of concrete on rock foundation, and backs up the water for a distance of  $2\frac{1}{2}$  miles. The length of the crest is 250 feet, and the quantity of impounded water is estimated at 20,000,000 gallons; it is intended to be used for stock watering, &c.

*Gin Gin Weir.*—This concrete weir across the Macquarie River near Trangie was commenced as far back as March, 1900, but the construction has been much impeded by floods. The length of the crest is 586 feet, and the difference in the levels of the water surfaces is 28 feet. The excavations have been made in alluvial ground full of dead timber, and have caused much trouble and anxiety. Most of the concrete has been mixed by a patent gravity mixer, which is the outcome of many years' experience. Latterly the work has been pushed on with both by day and night, and the whole work will be completely finished in a few weeks.

*Duck Creek Cutting.*—This cutting, which is one of the diversions, *via* Gunningbar Creek, from the Macquarie River below Warren, was completed during the year. The width is 5 feet, with slopes of  $2\frac{1}{2}$  to 1, and the length is 12 miles. The excavation was done with ploughs and scoops.

*Belaringar Regulator.*—The Belaringar Cutting is a diversion from the Macquarie River, 8 miles above Warren. A concrete regulator with a Stonier sluice gate has now been constructed in the mouth of the cutting to regulate the amount of water diverted from the river. The gate is 18 feet wide by 13 feet



feet high, and is actuated by chains and balance-weight. The slopes of the approaches and the apron have been covered with a sheathing of concrete, strengthened by means of an internal layer of heavy wire netting.

*Tuppall Creek Cutting.*—This is a diversion from the Murray River near Tocumwal. The cutting is 6 feet wide, with slopes of 1 to 1, length  $4\frac{1}{2}$  miles, and a fall of 1 foot per mile. It supplies water to 250 miles of creeks. The work is almost completed, the cutting being completed, and the concrete regulator at the entrance under construction.

*Eagle Creek Cutting.*—This cutting takes off from the Murray River near Barham. Its width is 6 feet, with slopes of  $2\frac{1}{2}$  to 1, length, 3 miles, with a fall of 1 foot per mile. The cutting is now finished, and a timber regulator at the entrance is under construction and all but completed.

*Yanko Creek Cutting.*—This cutting has been widened from its original width of 9 feet to 15 feet. The work is now completed, and a small regulator has been constructed at the entrance. The object of the work is to give a greater diversion of water from the Murrumbidgee River into Yanko Creek, and also to restrict the flow when the Murrumbidgee River falls below a certain level.

*Lake Cudgellico Works.*—These works were commenced in February, 1901, and are now completed. The object of the scheme is to store the surplus waters of the Lachlan River in Lake Cudgellico, and several smaller adjoining basins. The stored water will be used to replenish the lower portions of the river during the drier periods of the year. About 7 miles below Euabalong, a cutting 11 feet wide with slopes of 1 to 1, has been excavated from the river into the lake. The whole length of the work is 6 miles, passing through the Sheet of Water and Curlew Water. The inflow from the river is controlled by a concrete regulator with four bays of vertical sliding gates, this is situated at the entrance to the cutting. The amount of water which can be stored is estimated at 1,350 million cubic feet, although large portions of the original lake have been cut off by banks in order to prevent undue loss by evaporation. The stored water is discharged from the lake *via* Lake Creek, which enters the river 10 miles below the cutting; the outflow is controlled by another regulator constructed of timber with cast-iron flap gates, these can be operated by a winch.

*Booberoi Weir.*—This concrete weir across the Lachlan River, about 6 miles above Euabalong, is now completed. The length of the crest is 430 feet, and the water level is raised 19 feet. The impounded water is diverted into Booberoi Creek through a cutting 8 feet wide with slopes of 1 to 1, and length of  $1\frac{1}{4}$  mile. The bed-level of the cutting has been fixed 2 feet below the crest of the weir, and the flow of water is controlled by a concrete regulator placed in the entrance of the cutting. The regulator is provided with a wrought-iron Stonier sluice gate 11 feet wide by 8 feet high.

#### WATER SUPPLY (INCLUDING GRAVITATION, PUMPING SUPPLIES, BORES, &c.).

*Wollongong.*—The works for supplying this important town and district with water were commenced in 1901, and are now practically completed. The source of the supply is the Cordeaux River on the western side of the coast range. The dam is of concrete, 40 feet in height, and will hold back one year's supply at an elevation of 860 feet above the service reservoir. The water gravitates from the storage to the reservoir through  $7\frac{1}{2}$  miles of pipes. This pipe-line is laid down the valley of the Cordeaux, then up the valley of Kembala Creek, and across the coast range at O'Brien's Gap. The country is very rugged and intractable, and at one point the head of water in the pipes amounts to over 1,000 feet, or a pressure of 450 lb. per square inch. The works are designed to supply a much larger population than is at present in the district.

*Tumut.*—This scheme provides for the supply of the township by pumping water from a drift about 20 feet below the surface. The steam pumps will deliver the water into a circular concrete reservoir on Telegraph Hill, giving an elevation of 225 feet above the main streets. The works were commenced in March, 1902, and are now in progress.

*Blayney.*—This scheme provides for pumping water from a well in a drift 32 feet below the surface, and raising it into a circular concrete reservoir about 120 feet above the level of the streets. The capacity of the reservoir is 250,000 gallons, and the usual reticulations have been laid down. In order to secure a copious supply, over 300 feet of timbered tunnels have been constructed in the drift to supply the well. The works are now in progress.

*Narrabri.*—An artesian bore is now being driven in the centre of the town to provide water for baths and other domestic purposes. This work is being done by contract. The depth now reached is 1,500 feet, and the strata at present being excavated is shale. The whole of the bore is cased with swelled-joint steel tube.

*Thirlmere.*—A water supply for the Consumptive Home at Thirlmere has been arranged by tapping the main of the Picton Water Supply, and laying  $2\frac{1}{4}$  miles of pipe into an underground tank at the Home.

*Jenolan Caves.*—A new concrete dam has been built on the mountain torrent about 20 chains above the old dam. The capacity of the new reservoir thus formed is 250,000 gallons, and the supply is carried to the hotel and offices through a 3-inch pipe. The pressure is 105 lb. per square inch, and a stand-pipe for a fire-hose has been erected at the caretaker's house.

*Junee.*—An intercepting dam of concrete, on rock foundations, has been constructed during the year. The site is 10 chains below Bethungra Storage Reservoir, and the capacity is 150,000 gallons. The dam intercepts a stream in a lower strata which escapes from the storage.

*Mudgee.*—An intercepting dam of concrete, on rock foundation, has also been constructed here, about 10 chains below the storage. The supply impounded is estimated at 200,000 gallons.

*Hay.*—A new suction pipe, 10 inches in diameter and 680 feet in length, has been erected, together with the necessary staging at the river end, to give an increased supply to this town.

*Quarantine.*—The progress of the works for supplying the Quarantine Station, at North Head, Sydney Harbour, with water has been much delayed by the outbreaks of plague in 1900-2. The scheme was commenced in November, 1900, and is now completed. Two concrete channels collect the water from an extensive swamp on the heights of the North Head, and discharge into a circular concrete reservoir of 500,000 gallons capacity. The elevation is sufficient to command all the buildings and offices of the station; the distribution is effected by means of the old reticulations.

#### DRAINAGE.



## DRAINAGE (INCLUDING SWAMP RECLAMATIONS, STORM-WATER CHANNELS, &amp;c.).

Drainage schemes for the improvement of the rich swamp lands lying around the coastal rivers are now attracting much attention, and those which have been carried out have proved of great benefit, large tracts of useless spear-grass and reeds being rapidly converted into some of the finest dairying country in the State. The scheme of drainage for Marrickville may be said to have added a new suburb to Sydney.

*Duranbah Swamp.*—This swamp, of about 7,000 acres in extent, has now been drained by the construction of a canal with an outlet into Ledday's Creek, a tributary of the Tweed River. The length of the canal is 2 miles, width 10 feet, with slopes of  $1\frac{1}{2}$  to 1, the average depth of excavation being 5 feet. Most of the excavation was done with large hay-knives, the peaty material being cut out and carried 10 feet away from the edge of the canal. This work was done by contractors.

*Coopernook Swamp.*—This work is also being done by contract, and is now about half finished. The scheme provides for the drainage of about 5,000 acres of swamp by means of a canal with an outlet into Cattai Creek, a tributary of the Manning River. The canal is 50 feet wide, with slopes of  $3\frac{1}{2}$  to 1, length 4 miles, with a fall of 1 foot per mile; the average depth of the excavation is 4 feet. The material excavated is formed into a bank on either side of the canal, so that a channel 100 feet wide is thus formed for the purpose of carrying off the larger floods with great rapidity. The side drains discharge into the canal by means of circular Monier culverts provided with flaps to exclude the tidal water.

*Marrickville.*—This scheme is now completed, and the large basin of Tramvale, which was usually flooded out in wet weather, is now secured against such disaster, and is available for occupation. Two channels have been constructed to intercept the storm waters on the eastern and western slopes, and a small central drain has been made to serve the valley bottom. The channels are of concrete with brick sides, and they both discharge into Cook's River. The eastern channel is about  $2\frac{1}{2}$  miles long, and runs for the most part parallel to the Illawarra Railway, its cross-section is 20 feet by  $6\frac{1}{2}$  feet at the outlet, diminishing to 10 feet by 5 feet at its head. The western channel is about  $1\frac{1}{2}$  mile in length, and its cross-section varies from  $16\frac{1}{2}$  feet by  $6\frac{1}{4}$  feet down to 7 feet by  $4\frac{1}{2}$  feet. The course of this channel takes it through some spurs, which necessitated heavy cuttings in rock. The hill in Victoria-road is pierced by a tunnel 800 feet in length. The smaller central drain is about 1 mile long, and its cross-section varies from 5 feet by 4 feet to 5 feet by 2 feet. The outlet in Cook's River is at low water, and a self-acting sluice gate is provided to exclude the tide. When the tide rises the outlet closes, and the drain then discharges into the Marrickville Pumping Station, where a centrifugal pump of 10,000 gallons per minute capacity lifts the water into the Eastern Channel through a  $22\frac{1}{2}$  inch rising main. It is thought that this will provide for all the various conditions likely to arise in the future. Iron and concrete bridges have been provided where the channels cut the main streets, and timber girder bridges have been erected at other crossings. A steel plate-girder bridge has been built to carry the Belmore Railway over the eastern channel, and the Warren-road cutting on the western channel has its whole length covered with an arched concrete roof. The Victoria-road tunnel is lined with concrete and roofed with arched Monier plates.

*Orphan School Creek.*—A very insanitary area between Camperdown and the Glebe has now been converted into a pleasant and healthy locality by the completion of this drainage scheme. The original old wooden sewer which used to run from Prince Alfred Hospital towards Johnston's Creek has been taken up and filled in at considerable cost in order to insure that all noxious matter should be removed. A covered concrete channel has been built from the Hospital to Pymont Bridge Road, where it is connected to the existing channel. The length constructed was 26 chains of cross-section 5 feet by  $4\frac{1}{2}$  feet. For 165 feet under the Great Western Road tunnelling had to be resorted to, and Monier plates were used for roofing. The remainder of the work was covered with Monier plates of concrete strengthened with double-headed steel rails. The value of the surrounding land has been much improved by this work.

*Botany.*—Some extensive swamps in the neighbourhood of Bay-street have been drained by means of 20 chains of 38-inch circular concrete drain, with a branch of  $3\frac{1}{2}$  chains of 8-inch earthenware pipes. The work was rendered difficult by the nature of the excavations, which were all in wet drift sand. A scheme designed to prevent the continual flooding of the Botany-road was also completed, this consisted of 15 chains of channel excavated in earth, 12 chains of 48-inch concrete drain, 2 chains of 42-inch concrete drain, with steel rails built into the crown, and 15 chains of 42-inch Monier pipes. These works have much improved the surrounding properties.

*Casino.*—The object of this scheme—which is now completed—is to carry off the surface water from the streets of the township. The mean annual rainfall in this district (Richmond River) is 50 inches, and occasional storms of rain fall with tropical violence. The work now completed comprises a mile of earthenware pipes, varying from 24 inches to 6 inches diameter, laid at an average depth of 8 feet, with the usual manholes and concrete gullies.

*Narrandera.*—This township used to be periodically flooded with storm waters from the Town Common. The drainage works now completed comprise an earth channel 10 chains in length, falling into a concrete channel 37 chains in length, and of cross-section 8 ft. 4 in. by 6 ft. 4 in. The channel is open at the top, except where it intersects streets; five of these intersections have been covered with Monier plates, containing steel rails.

*Blayney.*—This scheme is designed to carry off the storm waters of the streets of the township and discharge into the Belabula River. The works completed comprise 75 chains of open drain excavated in clay,  $7\frac{1}{2}$  chains of concrete invert, and 460 feet of concrete culvert.

*Forbes.*—The North Circle Park drain, constructed by the Municipal Council, has in late years become little better than an open sewer. An open concrete channel has been constructed to carry off the offensive drainage. The length is 35 chains, with a cross-section of 27 inches by 30 inches deep. It is intended to convert the lower portion of the section of this drain into a sewer, to form portion of the town sewerage system when developed, thus leaving the upper portion to serve as the storm-water channel. Two flushing stations have been provided.

*Moore Park.*—This work was designed to carry off the overflow from Lake Kippax and to prevent the flooding of the Sydney Cricket Ground. The excavations were in loose sand, about 15 feet deep, and the following channels were constructed:—18 chains of 63-inch concrete drain, 12 chains of 48-inch concrete drain, 5 chains of 24-inch pipe, 9 chains of 18-inch pipe, and 4 chains of 18-inch pipe.

*Balmain.*



*Balmain.*—This storm-water channel in Mort-street was constructed during the year, and consists of  $15\frac{1}{2}$  chains of 45-inch circular concrete and brick drain, and  $5\frac{1}{2}$  chains of 42-inch drain. All the excavation was in rock, and 13 chains of the length had to be tunnelled. A low-level sewer was laid under this drain (see Sewerage Works).

*Hamilton.*—The portion of the branch channel which passes through the Agricultural Grounds was concreted and completed last August. Some timber crossings are now being erected in the Grounds. A drain was constructed along the Curley-road to the entrance gates, and thence the storm-water was conveyed into the branch channel by pipes.

*Lambton.*—The invert of part of the main channel was pitched during the year, and the fascining of the slopes repaired. The work was finished in September last. The new branch channel was extended for a further length of 22 chains.

*Double Bay.*—This stormwater channel, having been undermined by tidal action, was repaired by placing 540 tons of ballast along the walls near the outfall.

*Mosman's.*—This stormwater channel in Goldsborough-street was constructed during the year. It consists of 6 chains of 24-inch Monier pipes.

*Homebush.*—About 400 feet of 18-inch pipe was laid in the Wonga-street extension during the year.

*Ashfield.*—From Joseph-street to Queen-street, about 7 chains of 36-inch Monier pipes were laid for drainage of surface and storm waters.

*Newcastle.*—The Adamstown, Cottage Creek, and Wallsend channels were cleaned out, and some small repairs executed during the year.

#### SEWERAGE (INCLUDING SEWERS, SEPTIC TANKS, LOW-LEVEL SEWERS, AND PUMPS).

Miners employed in the sewerage tunnelling have been suffering for many years past from an obscure complaint known as "Sewer Disease." A Board was appointed to investigate this matter, and they found this disease to be consumption, induced by the dust formed in breaking down the sandstone rock, and inhaled by the workman in consequence of insufficient ventilation. The Board recommended that in future six hours be regarded as a day's work for a sewer miner on account of its dangerous character. The Board noted that the introduction of the day-labour system had very much improved the conditions of employment, as contractors are generally somewhat indifferent to such details as proper ventilation.

In the case of the Victoria-road tunnel (Marrickville Drainage Scheme, carried out by day labour under Mr. Engineer Peake) a quantity of 780 cubic feet of air per minute was driven into the working face, causing the air in the drive to travel outwards at the rate of 7 feet per minute. This was accomplished by a fan at the mouth of both headings, driven by electric motors, the current being obtained from the pumping-station light dynamo. Two hand-lamps were also provided to each face, and when all the fans and lamps were going, 20 amperes at 110 volts were registered. The whole arrangement added greatly to the efficiency of the miners.

*Randwick and Kensington.*—The second division of this sewer, from Avoca-street to Kensington Racecourse, was commenced in 1899, and at the beginning of this year the work had been completed as far as Rainbow-street. This portion of the sewer was constructed with a cross-section of  $4\frac{1}{2}$  feet by  $3\frac{1}{2}$  feet, and the tunnelling was in rock. The remainder of the tunnelling is in sand, and is now in progress. Work has also been commenced on the Kensington deviation, which extends from the Bunnerong-road to Randwick-road. Two shafts have been sunk, and the tunnelling in sand is now in progress. At the end of the year 530 feet had been driven and lined. A third shaft is also in progress.

*Waverley and Coogee.*—This sewer commences at Randwick outfall and traverses Beach-road, a distance of 45 chains. The junction chamber has been finished, and 10 chains of 29-inch by 21-inch Monier pipes have been laid. All the remainder of the work consists of rock-tunnelling, and at present 1,779 feet is completed.

*Dobroyd.*—This branch sewer commences at the main sewer in Sloane-street, Summer Hill, and runs to Dobroyd-street, a distance of 25 chains. The work, consisting of a brick and concrete sewer, in cross-section 42 inches by 28 inches was completed in December last. About 16 chains was tunnelled in shale, and the remainder was excavated by open cut.

*Mosman.*—This work was commenced in January and is now in progress. The sewer runs from the heights near Edwards-road through Mosman, and discharges into septic tanks on the foreshore at Balmoral. The tanks are being excavated in rock, and at the end of the year 13,000 cubic yards had been removed. A bank, to be planted with trees, is being formed around the tank. About 248 feet of the pipe-sewer has been laid, and the trenches have been opened out for 900 feet.

*Quarantine.*—The progress of these works for the accommodation of the Quarantine Station at North Head, Sydney Harbour, has been much delayed by the outbreaks of plague, which made it necessary to isolate the whole station. The work was commenced in 1899 and is now completed. An outfall has been constructed at the Inner North Head (Old Man's Hat), and a length of  $\frac{1}{4}$  mile of 3 feet by 2 feet concrete sewer was laid under the Head. Although this promontory has every appearance of being solid rock, it was found that two-thirds of the tunnelling was in soft white clay which gave great trouble by spewing through every interstice of the timber linings. All the buildings on the station were connected to the sewer, over half a mile of 9-inch and 6-inch pipes having been laid down, and the usual manholes, &c., have been provided.

*Liverpool.*—This work was continued during the year, and is now completed. The object of the scheme is to dispose of the sewage from the Asylum, but provision has been made to admit the township into the scheme at some future date. The septic tanks and filter beds are situated on the bank of George's River, about half a mile from the Asylum; the outfall is in the river, 5 chains from the filter beds. About 60 chains of 9-inch pipes were laid to connect the Asylum to the septic tanks. The tank constructed is of concrete, 52 feet by 26 feet, with an average depth of 7 feet. After flowing from the tank the sewage passes over the filter beds in troughs which automatically tip and distribute their contents periodically over the surface of the filtering materials. The filter beds measure 75 feet by 45 feet, and contain 39 inches of screened coke and 6 inches of screened gravel.



*Rockdale.*—About 49 chains of 9-inch earthenware pipes have been laid to remove the sewage which used to collect in a creek known as "Bray's Drain." A new outfall was constructed beyond the residences in Short-street.

*Narrantera.*—About 30 chains of 9-inch and 6-inch pipes have been laid along Audley-street, with an automatic flushing station at the end.

The following works are all part of the Low-level Sewerage System of Sydney and Suburbs. Generally speaking, it is designed to serve all the foreshores of the Harbour which are too low to gravitate into the main system which has its outfall at Bondi. The sewage is led by the usual pipes to underground pumping stations from which it is lifted to the high-level system through cast-iron rising mains.

*Pumping Stations.*—The original design provided for twenty-one of these in various parts of the city and suburbs. No. 1 Station at Pyrmont is now completed, and the machinery, including an electric crane, is in position. All the other stations are controlled from this Station, and all the electric cables for the supply of power, totalling over 40 miles in length, have been laid. Stations Nos. 3, 4, and 5 were built under the Balmain, Annandale, and Leichhardt contract. No. 3 is in Booth-street, Camperdown, and was excavated in solid rock to a depth of 25 feet. It has been connected to the high-level system by 11½ chains of 8-inch cast-iron rising main. No. 4 Station in Rose-street, Annandale, was connected to the Johnstone's Creek aqueduct by 15 chains of 6-inch rising main. No. 5 Station in Hutchinson-street was connected up to the high-level system by 21 chains of 6-inch rising main. No. 10 Station in Mort-street, Balmain, is now practically completed. In order to complete the stations as designed, only three more (Nos. 11, 14, and 15) remain to be constructed.

During the past year houses have been built over Nos. 2, 3, 4, 5, 7, 12, 13, and 21. They have been made uniform in appearance, being built of brick with slate roofs, ornamented with finials, and provided with ventilators, and connected to the Sydney water supply. The walls of Nos. 1, 6, and 12 have been covered with opalite tiles. Where required, fences and gates have been provided to enclose the houses. There are now only five stations left unprovided with houses.

*Pumping Machinery (Electrical).*—The pumps designed for these underground stations are of the differential type, with a lift valve contained in a hollow plunger. Each pump is driven by its own separate electric motor, to which it is geared by a cast-iron cog-wheel, and a pinion built up of compressed greenhide.

The pumps and motors are in duplicate in each station, and the power is supplied by the Railway Commissioners from the power-house at Ultimo. The installation of the machinery is now completed in five of the stations, and is in progress in five others.

*Pyrmont.*—The work of sewerage the eastern slope was finished during the year, and the sewage discharging into Elizabeth Bay has now been intercepted. The work consists of 6 chains of 3 feet by 2 feet concrete sewer, 19½ chains of 9-inch cast-iron pipe, 5½ chains of 9-inch earthenware pipe, and 2 chains of 6-inch earthenware pipe. To intercept the sewage discharging into Elizabeth Bay, about 10 chains of 6-inch pipe were laid near Darling Harbour station yard. This is one of the five works mentioned as being carried out by contractors during the past year.

*Erskine-street to Bathurst-street.*—These sewers have been completed during the year. Nearly all the trenches in this locality had to be dug in made ground, sometimes to a depth of 12 feet below sea-level; the excavation was consequently very wet and difficult to work. A total length of 6,000 feet of 6-inch pipe was laid, also 1,180 feet of rising main was connected to stations Nos. 12 and 13.

*Circular Quay.*—This sewer was also completed during the year. The excavations were in made ground, and four centrifugal pumps were required to cope with the great influx of water. Masses of old piles and logs were frequently met with, and the multiplicity of gas, water, hydraulic, and tram lines proved to be great obstruction to the work. The Old Tank Stream sewer was intersected in Pitt-street near Messrs. Cranes' shop, and here a large junction chamber was constructed, the low-level sewer being provided with a reflux valve to prevent it being flooded out by the tidal water from the Quay. The Tank Stream sewer was found to be in surprisingly good condition. Above the junction chamber it is built of brick, with a cross-section of 5½ feet by 3½ feet; below it is constructed of masonry, with a cross-section of 10 feet by 5½ feet. A total length of 4,050 feet of cast-iron pipes and 860 feet of earthenware pipes were laid, and the whole work was completed without any outbreak of infectious diseases which, it was feared, must follow the opening up of such an ancient neighbourhood.

*Balmain, Annandale, and Leichhardt.*—This work was one of those done by contractors, and was finished during the year. About 89 chains of 9-inch cast-iron pipes were laid to intercept the sewage from the areas adjacent to Johnstone's and White's Creeks. The whole of the excavations were in very loose ground or rock. The contract included the construction of pumping stations Nos. 3, 4, and 5, also a pipe sewer from Brennau-street to pumping station No. 6 in Easton Park.

*Burwood.*—In the first division, about 7,905 feet of 6-inch pipe sewer, with the usual manholes, have been constructed on the northern side of the railway line. The excavations were in ironstone and shale, and consequently proved more expensive than anticipated. In the second division, about 5,550 feet of 8-inch, and 1,760 feet of 9-inch, pipe sewers were laid. The locality is also to the northern side of the railway line.

*Balmain.*—On the Waterview Bay slope, about 10 chains of 6-inch earthenware pipes were laid, and about 17 chains of 6-inch pipe were laid under the invert of the Mort-street stormwater drain for future connection to the low-level system. The whole of these excavations were in rock.

*Ashfield.*—About 2,100 feet of 6-inch, and 3,850 feet of 9-inch, pipes were laid on the northern side of the railway.



## PROJECTED WORKS.

During the past year a great deal of miscellaneous survey and drafting work has been done in connection with the proposed extension of the Sydney water supply, the selection of the Federal Capital site, and the comprehensive schemes of water conservation in the interior of the State. In addition to these, the following works are all in progress, contemplation, or design:—

*Water Conservation.*—Surveys and investigations have been made, and designs prepared, for a cutting from the Namoi River into Pian Creek; a cutting from the Gwydir River to the Mehi River; a weir at Maude, about 30 miles below Hay, on the Murrumbidgee River; for further minor improvements in the way of regulators and small weirs on the Lachlan River and its tributaries; and for similar works on the Macquarie River and its tributaries.

*Water Supply.*—Preliminary investigations have been made into proposals to supply the townships of Gunnedah, Singleton, Inverell, and Stone. In all these cases the scheme recommended has been to pump water from the supplies in the drifts adjoining the river. Designs for the water supply schemes of the following townships have been completed, viz., Bega, Ballina, Bowral, Casino, Gundagai, Grafton, Mittagong, Port Kembla, Katoomba, Wagga, and Yass. Designs for the Cataract dam are in progress; the expenditure on this is expected to amount to a quarter of a million sterling. Reports have been obtained as to the expediency of making improvements to the water supply of the following townships:—Goulburn (additional storage), Richmond (filter beds), Wilcannia (additional pumps), Tamworth and Armidale (on the quality of the supply), Deniliquin (additional reticulation), Narrandera (additional storage), Lithgow (new storage reservoir), and also a branch supply to Currajong from Parkes.

*Drainage.*—The swamp drainage schemes which are in various stages of design are:—Coraki, Chilcotts, Casino, and the extensive swamps on the Macleay River. Drainage schemes, by means of stormwater channels, are in hand for the following localities:—Botany, Darlington, Enfield, Grenfell, Nowra, Penrith, Rookwood, Tamworth, and Young.

*Sewerage.*—Plans are prepared for works in the following localities:—Forbes, Hawkesbury, Hay, Hunter's Hill, Lismore, Newcastle, Orange, Rockdale, and the Zoological Gardens; also for the general continuation and extension of the Sydney sewerage system generally.

31st October, 1902.

L. A. B. WADE,  
Principal Engineer, Water Supply and Sewerage.

## WATER SUPPLY BRANCH.

RETURN of Expenditure, Water Supply Branch, from 1st July, 1901, to 30th June, 1902.

Work.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, Amount of Expenditure to 30 June, 1902.	If Finished, Actual Amount of Expenditure.
		£ s. d.	£ s. d.	£ s. d.
Construction of Storage Reservoir, Potts' Hill .....	*1902	64 15 4	64 15 4	.....
Duplicate Main from Prospect to Potts' Hill .....	1897	2,553 10 11	76,114 1 5	.....
Improvements in Mains .....	*1902	8,643 19 2	8,643 19 2	.....
Reservoir and other Works at Waratah .....	"	28 0 1	28 0 1	.....
Strengthening Upper Canal .....	*1902	1,983 0 4	1,983 0 4	.....
Country Towns Water Supply—Salaries, Equipment Allowances, &c. ....	1901	3,217 3 1	.....	.....
Services for other Departments .....	1901	402 10 5	.....	.....

## COUNTRY TOWNS WATER SUPPLY.

Albury .....	.....	.....	45,185 13 4
Armidale .....	.....	.....	36,904 9 9
Rathurst .....	.....	.....	54,366 14 0
Bourke .....	.....	.....	14,335 19 11
Bairanald .....	.....	.....	7,982 5 7
Berry .....	.....	269 11 6	4,192 15 10
Cootamundra .....	.....	.....	21,850 18 8
Coonamble .....	.....	196 13 11	7,821 19 9
Condonolin .....	.....	.....	6,485 2 8
Deniliquin .....	.....	.....	19,094 19 1
Dubbo .....	.....	.....	14,025 3 4
Forbes .....	.....	.....	16,594 14 6
Goulburn .....	.....	.....	55,602 17 10
Hay .....	.....	394 13 0	8,072 15 1
Jerilderie .....	.....	.....	5,060 19 11
Kiam .....	.....	14 11 5	6,909 9 8
Lismore .....	.....	412 12 11	12,314 3 3
Lithgow .....	.....	24 10 2	12,094 8 2
Moama .....	.....	.....	6,547 14 0
Moree .....	.....	734 2 0	9,162 3 7
Moss Vale .....	.....	.....	16,349 14 8
Mudgee .....	.....	832 16 0	18,710 0 9
Nowra .....	.....	.....	12,056 9 3
Nyngan .....	.....	83 7 3	11,159 6 9
Orange .....	.....	.....	30,987 18 11
Parkes .....	.....	4 12 6	28,334 19 7
Picton .....	.....	130 16 8	15,443 8 9
Wagga Wagga .....	.....	211 5 0	37,489 19 5
Wollongong .....	.....	19,792 7 6	31,037 19 0
Wentworth .....	.....	.....	9,684 19 7
Wilcannia .....	.....	.....	8,000 0 0
Warren .....	.....	.....	3,858 9 11
Wellington .....	.....	.....	11,222 3 3

\* Previous Expenditure under "Metropolitan Board of Water Supply and Sewerage."



RETURN of Expenditure, Water Supply Branch, from 1 July 1901, to 30 June, 1902—*continued.*

Work.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
		£ s. d.	£ s. d.	£ s. d.
Ballina .....	.....	35 7 1	402 18 8	.....
Bowral .....	.....	.....	307 10 5	.....
Blayney .....	.....	6,396 8 1	6,487 7 6	.....
Broken Hill .....	.....	.....	49 1 5	.....
Cowra .....	.....	.....	59 10 10	.....
Cobar .....	.....	531 7 9	22,222 15 2	.....
Carcoar .....	.....	.....	35 18 6	.....
Cooma .....	.....	.....	141 3 9	.....
Cudal .....	.....	.....	67 9 0	.....
Gundagai .....	.....	.....	129 4 5	.....
Gulgong .....	.....	.....	4 1 6	.....
Glen Innes .....	.....	.....	1 15 0	.....
Grenfell .....	.....	.....	28 3 5	.....
General Charges .....	.....	1,750 4 7	.....	.....
Gosford .....	.....	.....	32 4 7	.....
Gladstone .....	.....	17 9 0	17 19 0	.....
Hillgrove .....	.....	49 9 4	49 9 4	.....
Inverell .....	.....	.....	119 4 6	.....
Junee .....	.....	490 10 5	43,226 11 8	.....
Molong .....	.....	.....	196 4 10	.....
Mittagong .....	.....	149 8 2	173 3 8	.....
Narrandera .....	.....	6 8 4	12 3 4	.....
Narrabri .....	.....	953 1 4	953 1 4	.....
Port Kembla .....	.....	275 13 1	350 12 11	.....
Queanbeyan .....	.....	.....	7 9 0	.....
Rylstone .....	.....	.....	0 17 6	.....
Tamworth .....	.....	56 8 4	47,083 8 9	.....
Tenterfield .....	.....	.....	199 12 5	.....
Temora .....	.....	.....	2,596 13 9	.....
Tumut .....	.....	3,608 3 10	3,765 3 1	.....
Yass .....	.....	.....	82 16 8	.....
.....	.....	54,314 18 6	215,637 12 3	599,840 17 9

## SUMMARY OF EXPENDITURE FROM 1 JULY, 1901, TO 30 JUNE, 1902:—

	£ s. d.
Loans .....	50,695 5 0
Revenue .....	3,217 3 1
Services for other Departments .....	402 10 5
Total .....	£54,314 18 6

## WATER SUPPLY—VOTES AND EXPENDITURE.

Year.	VOTES.				EXPENDITURE.			
	Loans.	Revenue.	Other Departments.	Total.	Loans.	Revenue.	Other Departments.	Total.
	£	£	£	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1883 .....	790,000	5,013	.....	795,013	173,151 4 5	5,012 19 7	.....	178,164 4 0
1889 .....	100,000	8,562	.....	108,562	215,157 11 10	8,561 2 4	.....	223,718 14 2
1890 .....	50,000	9,005	.....	59,005	143,190 15 10	9,004 11 11	.....	152,195 7 9
1891 .....	.....	11,195	.....	11,195	191,641 18 4	11,194 4 1	.....	202,836 2 5
1892 .....	.....	3,615	.....	3,615	115,712 2 2	3,615 5 5	.....	119,327 7 7
1893 .....	30,000	.....	.....	30,000	74,421 17 11	.....	.....	74,421 17 11
1 January, 1894, to 30 June, 1895 .....	238,000	.....	.....	238,000	105,599 0 7	.....	.....	105,599 0 7
1 July, 1895, to 30 June, 1896 .....	25,000	.....	.....	25,000	28,972 3 0	.....	.....	28,972 3 0
1 July, 1896, to 30 June, 1897 .....	100,000	.....	.....	100,000	54,353 13 9	.....	.....	54,353 13 9
1 July, 1897, to 30 June, 1898 .....	110,000	1,000	.....	111,000	99,633 7 9	434 15 0	.....	100,068 2 9
1 July, 1898, to 30 June, 1899 .....	35,000	1,238	.....	36,238	112,735 4 8	1,464 17 6	.....	114,200 2 2
1 July, 1899, to 30 June, 1900 .....	15,000	2,490	.....	17,490	47,807 12 10	1,752 18 1	.....	49,560 10 11
1 July, 1900, to 30 June, 1901 .....	25,000	2,110	.....	27,110	43,995 17 10	1,336 18 1	.....	45,332 15 11
1 July, 1901, to 30 June, 1902 .....	48,000	3,500	402	51,902	50,695 5 0	3,217 3 1	402 10 5	54,314 18 6
Total .....	£ 1,566,000	47,728	402	1,614,130	1,457,067 15 11	45,614 15 1	402 10 5	1,503,085 1 5



## RETURN of Expenditure, Water Conservation Branch, from 1 July, 1901, to 30 June, 1902.

Work.	Whether Constructing or under Repair.	Expenditure from 1 July, 1901, to 30 June, 1902.		If Unfinished, amount of Expenditure to 30 June, 1902.		If Finished, actual amount of Expenditure.	
		£	s. d.	£	s. d.	£	s. d.
Angledool Weir .....	Survey .....					84	3 1
Bungowannah Proposed Weir .....	" .....	35	13 0	35	13 0		
Booberoi Improvements .....	Constructing .....	3,808	10 10			7,494	11 5
Belaringar Creek Cutting .....	" .....	1,016	0 3			4,398	3 10
Bourke Lock and Weir .....	" .....	306	11 0			14,745	11 4
Barren Jack Weir .....	Survey .....	922	6 3	1,135	0 0		
Billabong Creek Dam near Jerilderie .....	" .....	100	0 0	100	0 0		
Burrowa Weir .....	" .....	1,128	7 1			1,128	7 1
Crooked Creek Improvements .....	Constructing .....	895	15 8			6,146	13 2
Coopers Creek Swamp Drainage .....	" .....	2,724	0 2	3,623	12 2		
Cumeroona Storage Site .....	Survey .....	30	4 0	30	4 0		
Cudgellico Lake Improvements .....	Constructing .....	14,996	15 11			20,169	6 8
Duck Creek Cutting .....	" .....	3,296	0 11	3,413	3 4		
Duranbah Swamp, Tweed River .....	" .....	2,033	6 10	2,073	5 3		
Denilquin Weir .....	Survey .....	62	5 8	62	5 8		
Eagle Creek Cutting .....	Constructing .....	2,388	19 1			5,466	0 5
* Gwydir River Diversions .....	" .....	20,139	6 2	22,852	3 0		
Gin Gin Weir .....	" .....	4,284	10 6			15,748	14 10
Gauge Reading .....	" .....	250	4 11	616	18 2		
General Surveys .....	" .....	9	11 8	215	2 8		
Gunningbar Creek Regulator .....	Constructing .....					1,750	9 8
Goobang Weir, Parkes .....	Survey .....					162	9 3
Lake Cowal Works .....	" .....					277	6 11
Lock and Weir, proposed—Lane Cove River .....	" .....					154	4 9
Lachlan Storage Reservoir Site .....	" .....					29	11 8
Macleay River Improvements .....	Constructing .....	175	0 9	1,890	14 0		
Middle Billabong Regulator, &c .....	" .....	65	1 7			8,166	17 7
Murrumbidgee Canal Surveys .....	Survey .....	689	1 3	689	1 3		
Murrumbidgee Board Weir .....	" .....					110	1 1
Meters .....	" .....	17	0 5	17	0 5		
Murray River Canal .....	Survey .....	88	19 10	135	3 8		
Narromine Regulator Bridges .....	Constructing .....					368	1 2
Narrandera Proposed Weir .....	Survey .....	207	11 0	207	11 0		
Narrabri Creek Cutting .....	Constructing .....	46	16 4			135	2 3
Newrybar Swamp Drainage .....	Survey .....	36	1 7	36	1 7		
Pine Creek Improvements .....	" .....	67	12 0	67	12 0		
Para Creek By-wash .....	" .....					102	7 5
Queen Charlotte Vale Creek Dam .....	Constructing .....					725	10 11
Queanbeyan Weir .....	" .....	412	18 6			1,240	17 1
River Discharges, &c. .....	Survey .....	253	4 1	258	4 1		
Tuppall Cutting .....	Constructing .....	5,467	15 0	9,785	8 11		
Tarrison Creek Survey .....	Survey .....					12	3 6
Tocumwal Embankment .....	Constructing .....					43	10 7
Wyangall Dam Lachlan .....	" .....	517	6 1	855	19 1		
Warren Weir .....	" .....	335	13 2	4,110	0 11		
Wentworth Irrigation Works .....	" .....	580	13 3	7,125	0 8		
Watton Weir .....	" .....	566	9 4	566	9 4		
Wakool Cutting .....	" .....	111	9 6			5,828	0 6
Willandra Creek .....	Survey .....	39	19 2	39	19 2		
Whalan Creek Survey .....	" .....					14	14 6
Warialda District .....	Constructing .....					2,306	16 10
Weir on By-wash, Nyngan .....	" .....					583	7 5
Woytechugga Creek Improvements .....	Survey .....					13	5 9
Yanko Creek Improvements .....	Constructing .....	2,793	13 5			4,963	0 1
Yanko and Colombo Creek Profiles .....	" .....					84	17 2
Salaries, Equipment, Travelling Allowances, &c. .....	June, 1901 .....	8,226	1 7				
Suspense Account .....	" .....	11	5 10				
Services for other Departments .....	" .....	511	19 8				
Totals .....		79,655	8 2	59,942	4 5	102,454	7 11

\* Expenditure prior to August, 1896, under Mines Department.

## SUMMARY OF EXPENDITURE FROM 1 JULY, 1901, TO 30 JUNE, 1902.

	£	s. d.
Loans .....	72,876	11 2
Consolidated Revenue .....	6,266	17 4
Services for other Departments .....	511	19 8
Total .....	£79,655	8 2



WATER CONSERVATION EXPENDITURE.

Year.	Votes.				Expenditure			
	Loans.	Revenue.	Other Departments	Total.	Loans.	Revenue.	Other Departments.	Total.
	£	£	£	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1 August, 1896, to 30 June, 1897 ..	100,000	.....	117	100,117	32,518 2 10	12 0 0	117 6 5	32,647 9 3
1 July, 1897, to 30 June, 1898 ...	.....	825	526	1,351	15,613 13 0	969 12 3	525 12 0	17,108 17 3
1 July, 1898, to 30 June, 1899 ...	.....	766	.....	766	12,684 7 6	1,582 7 10	.....	13,666 15 4
1 July, 1899, to 30 June, 1900 ...	.....	1,275	.....	1,275	15,133 3 9	684 13 1	.....	15,817 16 10
1 July, 1900, to 30 June, 1901 ..	39,650 portion of 110,000	1,500	.....	41 150	56,482 15 7	1,359 13 11	.....	57,842 9 6
1 July, 1901, to 30 June, 1902 ...	.....	7,100	512	7,612	72,876 11 2	6,266 17 4	511 19 8	79,655 8 2
Totals .....	£ 132,650	11,466	1,155	152,271	204,708 13 10	10,875 4 5	1 154 18 1	216,738 16 4

EXPENDITURE ON WATER CONSERVATION, PUBLIC WATERING PLACES, ARTESIAN BORINGS, &C., SINCE COMMENCEMENT OF WORK TO 30 JUNE, 1902.

	£ s. d.
Loans .....	903,888 2 10
Revenue .....	639,514 15 11
Total.....	£1,543,402 18 9

SEWERAGE CONSTRUCTION BRANCH.

RETURN of Expenditure by Sewerage Construction Branch from 1 July, 1901, to 30 June, 1902.

Work.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, amount of expenditure to 30 June, 1902.		If finished, actual amount of expenditure.	
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
Ashfield Storm-water Channel—Purchase of, from the Brough Council ..	1900	.....	.....	4,500 0 0	.....	.....
Baptist-street Storm-water Channel .....	1892	.....	.....	14,500 0 0	.....	.....
Bay-street Overflow Sewer .....	1894	4 1 3	.....	8,841 8 8	.....	.....
Bondi-Waverley Sea Slopes .....	1895	.....	.....	16,000 0 0	.....	.....
Botany Road Storm-water Channel .....	1899	3,152 1 2	.....	3,623 18 2	.....	.....
Branch Drains, New Lambton, Adamstown, and Hamilton .....	1896	.....	.....	14,700 0 0	.....	.....
Branch Sewer Draining parts of Waverley and Randwick .....	"	6,462 13 11	.....	26,184 12 9	.....	.....
Circular Quay Low-level Works .....	1897	4,498 2 10	.....	8,978 6 0	.....	.....
" Subway .....	1902	9 5 0	.....	9 5 0	.....	.....
Construction of Storm-water Channel through Water Reserve in the town of Kiama .....	1893	24 12 6	.....	.....	1,751 15 5	.....
Cottage Creek, Newcastle, Storm-water Channel .....	1895	3 0 0	.....	.....	4,722 13 7	.....
Country Towns Sewerage .....	"	10,107 4 9	.....	34,815 0 10	.....	.....
Darling Harbour Low-level Works .....	1896	8,035 15 0	.....	20,082 2 7	.....	.....
Double Bay Creek Storm-water Channel, from Main Bondi Sewer to Double Bay .....	1895	842 6 4	.....	.....	10,858 9 1	.....
Drainage, Parkes and Forbes .....	1900	1,510 6 1	.....	1,571 2 9	.....	.....
Extension of Sewer, Waverley and Woollahra, to Randwick .....	1898	.....	.....	16,000 0 0	.....	.....
Jenolan Caves—Drainage Works in connection with Government Buildings .....	1897	392 5 5	.....	.....	917 3 2	.....
Johnstone's Creek Storm-water Channel .....	1891	.....	.....	.....	32,278 8 0	.....
Long Cove Creek, Ashfield, Storm-water Channel .....	1892	.....	.....	.....	4,020 0 0	.....
Metropolitan Area Sewerage and Storm-water Channels generally .....	1902	6,461 4 11	.....	6,461 4 11	.....	.....
Minor Storm-water Sewers, Northern Drainage—Draining parts of Petersham, Lichhardt, and Ashfield .....	1896	1 18 0	.....	.....	6,691 10 4	.....
Mosman and Outfall Works .....	"	.....	.....	19,000 0 0	.....	.....
Mosman Bay Storm-water Channel .....	1900	350 7 6	.....	4,327 19 6	.....	.....
North Sydney and Mosman Sewerage Extension .....	1896	5,910 1 9	.....	18,116 16 1	.....	.....
Northern Slopes, North Sydney .....	1898	193 8 8	.....	3,795 9 3	.....	.....
Paddington and Rose Bay Resumptions .....	1902	704 17 7	.....	.....	704 17 7	.....
Pymont Branch Sewer .....	1891	1,046 4 10	.....	29,999 19 2	.....	.....
Quarantine Station Sewerage and Water Supply .....	1898	3,388 0 3	.....	6,500 0 0	.....	.....
Rockdale Creek Storm-water Sewer .....	1899	797 19 5	.....	838 7 4	.....	.....
Sewerage in Low-level Zone at Ruheutter's Bay .....	1898	1,200 3 11	.....	8,960 12 11	.....	.....
Sewerage Works Generally .....	1897	2,255 18 1	.....	6,635 13 5	.....	.....
South Willoughby and Outfall Works .....	1897	15 17 4	.....	14,116 4 5	.....	.....
Storm-water Channels and Drainage Generally .....	1900	16,054 13 11	.....	23,884 0 8	.....	.....
Victoria Barracks and Lake Kippax Drainage .....	1901	3,216 15 8	.....	.....	3,216 15 8	.....
Waverley, Randwick, and Bondi Sewerage .....	1895	5,205 16 3	.....	9,789 6 7	.....	.....
Western Suburbs Sewerage, Main Scheme .....	1889	.....	.....	.....	830,000 0 0	.....
" Completion .....	"	48,850 17 5	.....	105,190 9 5	.....	.....
White's Creek Storm-water Channel .....	"	.....	.....	.....	59,339 12 0	.....
Willoughby and Chatswood Sewerage .....	1897	3,277 0 8	.....	19,800 0 0	.....	.....
Woolloomooloo—Providing new sewers and elevating Sewerage into Main Bondi Outfall Sewer .....	1896	2,361 5 0	.....	11,458 2 6	.....	.....
Detail Surveys, General Surveys, Salaries, Travelling Expenses, and Contingencies .....	1901	8,770 12 2	.....	.....	8,770 12 2	.....
Work done for other Government Departments .....	"	3,691 11 11	.....	.....	3,691 11 11	.....
Local Contributions—						
Ballina Drainage .....	"	7 15 2	.....	.....	7 15 2	.....
Newtown Branch, Johnston's Creek Storm-water Channel, near Stanmore Station .....	"	7 15 11	.....	.....	7 15 11	.....
Removal of Shaft, Gordon-street, Balmain, for Railway Commissioners .....	"	14 5 3	.....	.....	14 5 3	.....



## RETURN of Expenditure on Public Works, &amp;c.—continued.

Work.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If unfinished, amount of expenditure to 30 June, 1902.	If finished, actual amount of expenditure.
Compensations and Gratuities—		£ s. d.	£ s. d.	£ s. d.
Maddison and Ewing, compensation for loss, law case, Darnley and Anor	1901	550 0 0	.....	550 0 0
Compensation to workmen for loss of time, &c., Quarantine Station ...	"	125 10 3	.....	125 10 3
A. J. Stephens, compensation paid in connection with the death of.....	"	130 0 0	.....	130 0 0
Turner, Thos., compensation paid for damage to boiler.....	"	1 0 0	.....	1 0 0
Rowe, Richard H., compensation for injury to horse at Burwood .....	"	3 10 0	.....	3 10 0
McFadden, Katherine, compensation for loss of son .....	"	100 0 0	.....	100 0 0
Bennett and Speechly, removal of machinery, Sussex-street .....	"	10 0 0	.....	10 0 0
Furniss, J., compensation for loss of horse, Marrickville .....	"	8 0 0	.....	8 0 0
Austin, Jas., compensation for loss of tools at Circular Quay .....	"	4 0 0	.....	4 0 0
Jackson, Wm., compensation for injuries at Co gee .....	"	7 4 0	.....	7 4 0
Totals .....	...	£150,072 10 1	458,701 2 11	968,612 9 6

## SUMMARY OF EXPENDITURE from 1 July, 1901, to 30 June, 1902.

	£ s. d.
Loans .....	136,641 5 5
Revenue .....	9,739 12 9
Work done for other Departments .....	3,691 11 11
Total.....	£150,072 10 1

## VOTES AND EXPENDITURE.

Year.	VOTES.				EXPENDITURE.			
	Loans.	Revenue.	Of other Departments.	Total.	Loans.	Revenue.	Services for other Departments.	Total.
	£	£		£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1879 .....	400,000	.....	.....	400,000	409 12 3	.....	.....	409 12 3
1880 .....	.....	266	.....	266	2,941 12 10	265 5 2	.....	3,206 18 0
1881 .....	.....	4,735	.....	4,735	12,083 6 9	4,734 14 10	.....	16,818 1 7
1882 .....	.....	6,870	.....	6,870	32,498 18 8	4,008 14 6	.....	36,507 13 2
1883 .....	100,000	9,172	.....	109,172	105,321 5 5	286 12 2	.....	105,607 17 7
1884 .....	20,000	4,375	.....	24,375	119,730 10 10	2,795 19 4	.....	122,526 10 2
1885 .....	.....	15,950	.....	15,950	155,931 12 2	14,834 2 11	.....	170,765 15 1
1886 .....	250,000	3,817	.....	253,817	148,292 8 7	12,401 11 3	.....	160,693 19 10
1887 .....	.....	4,381	.....	4,381	108,774 18 3	20,181 10 2	.....	128,956 8 5
1888 .....	146,812	9,201	.....	156,013	64,063 9 6	11,998 9 4	.....	76,061 18 10
1889 .....	1,063,453	12,615	.....	1,076,068	81,315 18 10	9,616 0 4	.....	90,931 19 2
1890 .....	586,648	3,670	.....	590,318	82,985 19 9	11,006 19 5	.....	93,992 19 2
1891 .....	.....	5,218	.....	5,218	202,922 0 11	8,775 3 7	.....	211,697 4 6
1892 .....	109,692	8,505	.....	118,197	202,294 2 1	11,113 7 8	.....	213,407 9 9
1893 .....	18,850	4,340	.....	23,190	109,638 7 3	4,281 18 8	.....	113,920 5 11
1 January, 1894, to 30 June, 1895 .....	91,627	4,500	.....	96,127	236,340 3 10	5,347 18 9	.....	241,688 2 7
1 July, 1895, to 30 June, 1896 .....	40,000	2,500	.....	42,500	131,428 4 0	471 6 5	.....	131,899 10 5
1 July, 1896, to 30 June, 1897 .....	133,110	.....	67	133,177	127,757 14 11	2,884 19 6	66 17 5	130,709 11 10
1 July, 1897, to 30 June, 1898 .....	22,580	1,633	230	24,443	194,372 3 5	5,100 7 9	229 13 8	199,702 4 10
1 July, 1898, to 30 June, 1899 .....	28,500	4,838	1,084	34,422	196,848 15 9	5,978 0 11	1,084 9 1	203,911 5 9
1 July, 1899, to 30 June, 1900 .....	73,900	5,574	.....	79,474	152,368 19 4	7,339 9 1	.....	159,708 8 5
1 July, 1900, to 30 June, 1901 .....	49,400	7,488	125	57,013	210,708 3 3	8,353 0 4	125 8 6	219,186 12 1
1 July, 1901, to 30 June, 1902 .....	86,140	14,458	3,692	104,290	136,641 5 5	9,739 12 9	3,691 11 11	150,072 10 1
Totals .....	£ 3,220,712	134,106	5,198	3,360,016	2,815,669 14 0	161,515 4 10	5,198 0 7	2,982,382 19 5



RETURN of Expenditure Telephone Tunnel Construction, from 1 January, 1892, to 30 June, 1902.

Work, and where situated.	Whether Con-structing or under Repair.	Contract or Day Labour.	When Commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
Section 1.—Moore-street .....	Constructing .....	Contract .....	1892	£ s. d.	£ s. d.	£ s. d.
" 2.—General Post Office to The Exchange .....	" .....	" .....	1895	.....	.....	3,560 10 0
" 3.—Moore-street, along Barrack-street to Clarence-street.	" .....	Day labour ..	"	.....	.....	4,756 4 0
" 4.—General Post Office to Park-street .....	" .....	" .....	"	.....	.....	3,420 5 8
" 5.—Barrack-street to Liverpool-street .....	" .....	" .....	1896	.....	.....	4,520 0 10
" 6.—Castlereagh-street and King-street .....	" .....	" .....	"	.....	.....	9,551 15 3
" 7.—Park-street to Goulburn-street .....	" .....	" .....	"	.....	.....	2,808 14 0
" 8.—Goulburn-street to Railway Station .....	" .....	" .....	"	.....	.....	4,174 14 8
" 9.—Railway Station to Glebe-road .....	" .....	" .....	"	.....	.....	9,353 6 4
" 10.—Exchange to the Treasury .....	" .....	" .....	1898	21 9 11	.....	47 9 10
" 11.—Druitt-street, along York-street to Barrack-street.	" .....	" .....	1899	.....	.....	11,830 1 1
" 12.—Liverpool-street, along George-street to Engine-street.	" .....	" .....	1900	£0 1 9	.....	3,483 9 7
" 13.—George-street, down Engine-street, across Thomas street, up Ultimo-road to Harris-street to McArthur-street.	" .....	" .....	1899	31 19 9	.....	4,572 11 11
" 14.—Parramatta-street, along Newtown-road to Alma-street to Darlington Post Office.	" .....	" .....	"	95 5 2	.....	7,468 0 3
" 15.—Alma-street, through Deaf and Dumb Institution Grounds to Forbes-street, Newtown.	" .....	" .....	"	.....	.....	8,947 11 0
" 16.—Central Coffee Palace, along Clarence-street, across Erskine-street, and down Erskine-street to corner of Sussex-street and Erskine-street.	" .....	" .....	1898	0 10 0	.....	5,701 16 10
" 17.—Forbes-street, Newtown, along King-street to Congregational Church.	" .....	" .....	1900	22 7 4	.....	4,156 9 7
" 18.—McArthur-street, along Harris-street to Pymont Post Office (Union-street).	" .....	" .....	"	25 13 11	.....	3,864 10 7
" 19.—George-street, along Liverpool-street and Oxford-street to Dowling-street (and branch in Bourke and Flinders Streets).	" .....	" .....	"	2,581 4 11	.....	13,003 10 7
" 20.—Dowling-street, along Oxford-street to Paddington Post Office (and branch Paddington Town Hall).	" .....	" .....	1901	8,440 4 2	.....	9,831 19 0
Repairs generally .....	Repairs .....	" .....	1895	.....	.....	14,016 5 2
Cable Entrance, Pitt-street .....	Constructing .....	" .....	1896	.....	.....	9,291 13 0
Fitting Account .....	" .....	" .....	1898	1,614 14 6	.....	1,680 15 4
George-street Conduit .....	" .....	" .....	1893	.....	.....	26 11 3
Edgecliff Conduit .....	" .....	" .....	1895	.....	.....	6,868 3 10
A. L. & G. McCredie .....	Supervision, &c. ....	" .....	1897	1,000 0 0	5,503 14 3	3,483 1 3
J. H. Cardew .....	Professional fee, Telephone Tunnel Inquiry.	" .....	1897	.....	.....	2,623 8 6
Sheerin & Hennessy .....	" .....	" .....	"	.....	.....	125 0 0
J. B. Alderson .....	" .....	" .....	"	.....	.....	147 0 0
Plant Account .....	" .....	" .....	1900	23 1 5	.....	36 15 0
Marshall's Paddington Brewery .....	Compensation, damage to property.	" .....	1901	115 5 0	.....	77 8 3
J. Eade .....	" .....	" .....	"	10 0 0	.....	115 5 0
Drainage Account .....	" .....	" .....	1900	.....	.....	10 0 0
Miscellaneous .....	" .....	" .....	1899	339 5 11	.....	830 14 5
Removing Timber—Moore-street .....	" .....	Contract .....	1898	.....	.....	439 12 2
Removing Timber—G.P.O., Exchange .....	" .....	" .....	"	.....	.....	7 3 11
Section 3.—Removing Timber—Moore-street and Barrack-street.	" .....	Day labour ..	"	.....	.....	402 0 1
" 4.—Removing Timber—G.P.O. to Park-street ..	" .....	" .....	"	.....	.....	73 17 6
" 5.—Removing Timber—Barrack, Clarence, and Liverpool Streets.	" .....	" .....	"	.....	.....	534 11 0
" 7.—Removing Timber—Park-street to Goulburn-street.	" .....	" .....	"	.....	.....	118 10 2
" 8.—Removing Timber—Goulburn-street to Railway.	" .....	" .....	"	.....	.....	314 12 1
Totals .....	.....	.....	..	14,354 3 9	5,503 14 3	156,449 2 11

SUMMARY of Expenditure from 1st July, 1901, to 30th June, 1902.

Loans ..... £14,354 3s. 9d.

VOTES AND EXPENDITURE.

Votes.			Expenditure.		
Year.	Loans.	Total.	Loans.	Total.	
1892-3 .....	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1894-5 .....	3,560 10 0	3,560 10 0	3,560 10 0	3,560 10 0	3,560 10 0
1895-6 .....	432 0 0	432 0 0	432 0 0	432 0 0	432 0 0
1896-7 .....	29,489 3 5	29,489 3 5	29,489 3 5	29,489 3 5	29,489 3 5
1897-8 .....	21,698 19 9	21,698 19 9	21,698 19 9	21,698 19 9	21,698 19 9
1898-9 .....	4,915 15 3	4,915 15 3	4,915 15 3	4,915 15 3	4,915 15 3
1899-1900 .....	17,533 18 1	17,533 18 1	17,533 18 1	17,533 18 1	17,533 18 1
1900-1901 .....	4,704 9 7	4,704 9 7	4,704 9 7	4,704 9 7	4,704 9 7
1901-1902 .....	50,000 0 0	50,000 0 0	27,981 7 6	27,981 7 6	27,981 7 6
1901-1902 .....	30,000 0 0	30,000 0 0	37,282 9 10	37,282 9 10	37,282 9 10
	£162,334 16 1	£162,334 16 1	14,354 3 9	14,354 3 9	14,354 3 9
			£161,952 17 2	£161,952 17 2	£161,952 17 2

RETURN of Expenditure, Pneumatic Tubes Construction, from 1st July, 1901, to 30th July, 1902.

Work, and where situated.	Whether Constructing or under Repair.	When commenced.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, Amount of Expenditure to 30 June, 1902.
Pneumatic Tubes, between G.P.O. and Merchants' Exchange, Sydney—(Postal Department Vote, £7,000, 64 Vic. No. 60).....	Constructing.....	1901	£ s. d. 4,290 19 6	£ s. d. 4,290 19 6



## Report of the Government Land Valuer.

I HAVE the honor to transmit a report upon the operations of this Branch from the 1st July, 1901, to the 30th June, 1902.

*Railways and Tramways.*—The following lines have been proclaimed and confirmed :—

Narrabri to Walgett Railway, Part 1.	Gundagai to Tumut Railway, Part 2.
"      "      "      2.	Dubbo to Coonamble "      "      3.
"      "      "      3.	Cobar to The Peak      "      "
Casino to Lismore      "      "	Temora to Wyalong      "      "
Grafton to Casino      "      Part 1.	Enfield to Mortlake Tramway.
Culcairn to Germanton "      "	Mitchell Road-Alexandria Tramway.
Gundagai to Tumut      "      Part 1.	Balmain, towards Gladesville      "

Notifications of Resumption have been issued in respect of the undermentioned works :—

Bondi—Sewerage.	Mulwala—Site for Tank.
Bowra—Wharf.	Milson's Island—Inebriate Asylum.
Blayney—Water Supply.	M'Kane's Falls—Camping Reserve.
Booberoi Creek—Weir.	Nambucca River—Wharf.
Bangalow—Police Station.	Narrabri—Public Baths.
Cargelico Lake—Improvements.	Newcastle—Reception House.
Cockle Creek—Approach to Wharf.	Port Kembla—Deepwater Harbour.
Central McDonald—Wharf.	Penrith—Weir, on Nepean River.
Dunn's Crossing—Bridge.	Queanbeyan—Weir.
Double Bay—Roadway.	Redfern—Police Barracks.
Daysdale—Tank.	Rose Bay—Sewerage.
Domboy—Tank.	St. Alban's—Bridge.
Gobundry—Tank.	Summer Hill—Sewerage.
Kangaroo Valley—Court-house.	Sydney—Widening of Gipps-street.
Liverpool Asylum—Drainage.	"      Approach to New Central Railway
Lismore—Sewerage.	Station (two resumptions).
Lady Robinson's Beach—Roadway.	Tumut—Water Supply.
Marrickville—Stormwater Channel (three resumptions).	West Wallsend—Water Supply.
Murwillumbah—Diversion of Lavender Creek.	Watson's Bay—Water Supply.
Mercadool—Artesian Well.	Wollongong—Water Supply.
Maldon—Bridge over Nepean River.	Wollongong—Technical College.

Lands purchased for undermentioned works :—

Adamstown—Sewerage.	Mortlake—Coke Stage.
Burwood—Police Station.	New Lambton—Stormwater Channel.
Chatswood—Sewerage.	Redfern—Police Barracks.
Islington—Police Station.	Parramatta—Hospital for Insane.
Liverpool—Fire Station.	South Lismore—Police Station.
Leichhardt—Fire Station.	Wagga Wagga—Police Station.

Ninety-seven cases standing over from previous years have been finally settled; 519 valuations in various parts of the State have been made; 220 cases were advanced to a stage for valuation.

Estimates of proposed resumptions for the undermentioned works have been prepared :—

Wollongong—Water Supply.	Bellevue Hill—Tramway.
Central—Railway Station.	Milson Island—Inebriate Asylum.
Annandale—Police Station.	Rifle Range, Sydney.
Lismore—Sewerage.	Kangaroo Valley—Police Station.
Abercrombie-street—Tramway.	Widening of Wilmott-street.
Fire Station—Pymont.	Additions to Gilgandra Court-house.



*Miscellaneous.*—Amongst the many cases of very diversified nature, the following may be cited as having engaged the attention of this branch :—

Valuation of all lands in possession of the Government Charities Department.	Miss Eckford and Flood's Trustees—Claim for Trespass, Casino Railway.
Valuation of Harbour Trust Properties.	Gwydir River Improvements—Easements.
Valuation of lands to be handed over to the Federal Government.	Wakool Creek Improvements—Easements.
Exchange of lands, Culcairn to Germantcn.	Moree to Inverell Railway—Further report on outstanding cases.
Tocumwal Flood Embankment—Easements.	Duranbar Swamp—Easements.
Eagle Creek Cutting—Easements.	Gunningbar Creek—Easements.
Valuation of land for Car-shed, Centennial Park.	Proposed purchase of land at Wyalong.
Manly—Plague Compensation.	Marrickville Drainage—Easements.

Nearly the whole of the valuations of the wharfs and other properties included in the Darling Harbour Resumption Acts of 1900 have now been made, and negotiations are being carried on for a settlement with those claimants dissatisfied with the Government offer.

The staff remain the same as at last Report, save that one junior clerk has been temporarily appointed.

EDWARD J. SIEVERS,  
Government Land Valuer.

#### RETURN of Expenditure from 1st July, 1901, to 30th June, 1902.—Public Wharfs, Resumed Properties, and Darling Harbour Resumptions.

Work.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Unfinished, amount of Expenditure to 30 June, 1902.	If Finished, actual amount of Expenditure.
<b>Darling Harbour Resumptions—</b>	£ s. d.	£ s. d.	£ s. d.
Compensations, wages, and miscellaneous .....	1,409,742 13 5	1,483,332 6 10	.....
Interest paid on compensation money .....	83,352 12 6	83,352 12 6	.....
<b>Public Wharfs and Resumed Properties—</b>			
Salaries .....	3,921 0 8	.....	3,921 0 8
Contingencies .....	683 19 1	.....	683 19 1
Fire insurance .....	856 18 10	.....	856 18 10
Water rates (paid by Treasury) .....	1,382 6 9	.....	1,382 6 9
<b>City Improvement Advisory Board—</b>			
Fees .....	1,170 0 0	.....	1,170 0 0
Salaries .....	725 19 6	.....	725 19 6
Wages .....	76 10 6	.....	76 10 6
Contingencies .....	266 11 9	.....	266 11 9
Pictures of Old Sydney .....	250 13 8	.....	250 13 8
	1,502,429 6 8	1,566,684 19 4	9,334 0 9

#### SUMMARY OF EXPENDITURE FROM 1 JULY, 1901, TO 30 JUNE, 1902.

	£ s. d.
Loans .....	1,409,742 13 5
Consolidated Revenue .....	91,304 6 6
Sundry Departments .....	1,382 6 9
<b>Total .....</b>	<b>£1,502,429 6 8</b>

#### VOTES AND EXPENDITURE.

Votes.					Expenditure.				
Year.	Loans.	Revenue.	Other Departments.	Total.	Loans.	Revenue.	Other Departments.	Total.	
	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
1900-1901*.....	100,000			100,000 0 0	73,589 13 5			73,589 13 5	
1901-1902*.....	4,000,000 {	83,352 12 6 {	1,382 6 9 {	4,094,815 19 3	1,409,742 13 5	91,304 6 6	1,382 6 9	1,502,429 6 8	
		10,081 0 0 {							
Total .....	4,100,000	93,433 12 6	1,382 6 9	4,194,815 19 3	1,483,332 6 10	91,304 6 6	1,382 6 9	1,576,019 0 1	

\* These Votes are also being operated on by the "Harbour Trust."



RETURN of Expenditure, Labour Commissioners and State Labour Board, from 1st July, 1901, to 30th June, 1902.

Work.	Whether Con- structing or under Repair.	Expenditure from 1 July, 1901, to 30 June, 1902.	If Finished, actual amount of Expenditure.
Labour Commissioners of New South Wales—		£ s. d.	£ s. d.
Fees—Relief of and sheltering the unemployed .....		917 14 0	917 14 0
Travelling Expenses—Relief of and sheltering the unemployed .....		51 10 6	51 10 6
Government Labour Bureau—			
Salaries—Relief of and sheltering the unemployed .....		1,783 8 5	1,783 8 5
Contingencies—Relief of and sheltering the unemployed .....		522 2 2	522 2 2
Travelling Expenses—Relief of and sheltering the unemployed .....		28 15 0	28 15 0
Bunnerong Road Labour Depot—			
Shelter Sheds .....	Erection .....	473 10 4	2,455 14 7
Roads and Drainage .....	Construction .....	317 11 2	347 11 2
Salaries—Relief and sheltering of the unemployed .....		152 10 0	152 10 0
Wages—		224 17 0	224 17 0
Materials, &c.—		406 5 11	406 5 11
Provisions and Clothing—Relief and sheltering of the unemployed .....		250 15 5	250 15 5
Pitt Town Casual Labour Farm—			
Salaries—Relief and sheltering of the unemployed .....		274 11 11	274 11 11
Material—		425 19 3	425 19 3
Wages, Wood-cutting, &c.—Relief and sheltering of the unemployed .....		297 19 1	297 19 1
Provisions and Clothing—		419 4 0	419 4 0
Seeds, Tools, &c.—		31 8 3	31 8 3
Railway Freight and Cartage of Firewood—Relief and sheltering of the unemployed .....		1,264 12 9	1,264 12 9
Female Registry—			
Salaries—Relief of and sheltering the unemployed .....		50 11 9	50 11 9
Contingencies—		32 8 0	32 8 0
Night-shelter for Homeless Men—			
Contingencies—Relief of and sheltering the unemployed .....		4 15 0	4 15 0
Miscellaneous—			
Tents and Blankets—Relief of sheltering the unemployed .....		373 12 0	373 12 0
Conveyance of the unemployed—Relief of and sheltering the unemployed .....		2,252 3 8	2,252 3 8
State Labour Board—			
Fees .....		27 6 0	27 6 0
Salaries .....		170 9 7	170 9 7
Contingencies .....		121 3 7	121 3 7
Trades' Hall Registry .....		25 13 5	25 13 5
Totals .....	£	10,930 18 2	12,913 2 5

SUMMARY of Expenditure from 1st July, 1901, to 30th June, 1902.

Consolidated Revenue .....	£ s. d.
Special Deposits Account—	
Pitt Town Farm Revenue .....	1,296 1 0
Bunnerong Road Farm .....	10 3 4
Total .....	£10,930 18 2

LABOUR Commissioners' Votes and Expenditure.

Year.	VOTES.			EXPENDITURE.		
	Revenue.	Special Deposit Accounts.	Total.	Revenue.	Special Deposit Accounts.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1900-1 .....	12,888 0 0	2,181 18 0	15,369 18 0	6,516 18 6	841 9 5	7,358 7 11
1901-2 .....	19,702 0 0	2,307 13 4	22,009 13 4	9,624 13 10	1,306 4 4	10,930 18 2
	£ 32,590 0 0	4,789 11 4	37,379 11 4	16,141 12 4	2,147 13 9	18,289 6 1



## Department of Public Works, Accounts Branch, 1 August, 1902.

RETURN showing the estimated value of material and services requisitioned for by Officers of the Department, from 1st July, 1901, to 30th June, 1902, as compiled from the Requisition Register:—

	No. of Requisitions.	Value.		
		£	s.	d.
Railway Construction .....	1,589	29,252	7	4
Tramway .....	1,194	21,056	3	6
Government Architect .....	4,693	60,316	4	4
Roads .....	4,329	25,370	19	1
Bridges (not included in Roads) .....	744	6,738	17	3
Public Watering Places, &c. (not included in Roads) .....	330	8,655	18	7
Harbours and Rivers (1) .....	1,906	33,078	0	5
(2) Dredge Service .....	1,561	28,694	13	10
(3) Fitzroy Dock .....	368	19,133	0	11
Water Supply and Conservation .....	1,189	32,998	5	6
Sewerage Construction .....	2,000	42,248	4	11
Telephone Tunnels .....	78	4,376	5	8
Labour Commissioners .....	611	2,598	0	11
Head Office .....	367	10,273	8	7
Miscellaneous .....	171	323	9	10
Totals .....	21,130	324,514	0	8

No. of Orders issued, 39,000.

## Department of Public Works, Accounts Branch, 25 August, 1902.

SUMMARY of Amounts issued to Trustees from 1st July, 1901, to 30th June, 1902:—

SUMMARY.					£	s.	d.
Scheduled roads	...	...	...	...	5,681	3	6
Unclassified roads	...	...	...	...	1,713	10	0
Expenses of punts and ferries	...	...	...	...	16	0	0
Repairs and renewals of bridges	...	...	...	...	75	0	0
Public watering-places, &c.	...	...	...	...	69	13	0
Public baths, &c.	...	...	...	...	33	6	8
Water conservation	...	...	...	...	227	18	5
Total	...	...	...	...	£7,816	11	7

## Department of Public Works, Accounts Branch, 25 August, 1902.

AMOUNTS issued to Trustees for Scheduled Roads, 1901-2, from 1st July, 1901, to 30th June, 1902.

Road.	District.	Amount.			Total.		
		£	s.	d.	£	s.	d.
SCHEDULED ROADS.							
Phillips' to Solferino Road .....	Grafton .....	300	0	0	300	0	0
Mount Victoria to Mount York .....	Lithgow .....	50	0	0			
Springwood to the Hawkesbury .....	" .....	180	0	0	230	0	0
Eccleston to Upper Allyn River .....	Maitland .....	32	10	0			
Greta to Earls' .....	" .....	70	0	0			
Largs, via Tocal, to Paterson Bridge .....	" .....	170	0	0			
Louth Park Road .....	" .....	130	0	0			
Morpeth to Four-mile Creek .....	" .....	100	0	0			
" Largs .....	" .....	35	0	0			
Paterson, up Webber's Creek .....	" .....	20	0	0			
Pitnacree Bridge to Dunmore House .....	" .....	130	0	0			
Phoenix Park to McClymont's Swamp .....	" .....	25	0	0			
Wallarabba Road to Cox's Creek .....	" .....	30	0	0	742	10	0
Rocky Point Road .....	Metropolitan .....	200	0	0			
South Head Roads .....	" .....	3,000	0	0	3,200	0	0
Boggy Flat Crossing towards D'ght's Ford .....	Muswellbrook .....	10	0	0			
Cooper's Flat up Karakora Creek .....	" .....	20	0	0			
Goorangoola Road to Bower's and Bowman's Creek .....	" .....	50	0	0			
Kermode's, via Goorangoola, to Dry Creek .....	" .....	50	0	0			
Singleton and Maison Dieu Road to Warkworth .....	" .....	42	10	0			
Singlet n to Brandy Creek .....	" .....	86	3	6	258	13	6
Nowra to Yalwal .....	Nowra .....	15	0	0	15	0	0
Great Western Road to Seven Hills Road .....	Parramatta .....	30	0	0			
Old Castle Hill Road to Government Reserve .....	" .....	10	0	0			
Parramatta Park to Toongabbie Creek .....	" .....	75	0	0			
Round Corner, at Dural, to Rouse Hill .....	" .....	150	0	0			
Seven Hills Road to Vardy's Grant .....	" .....	15	0	0	280	0	0
Woodton towards Quirindi .....	Quirindi .....	80	0	0	80	0	0
Kenthurst P.O. to Porter's .....	Richmond .....	30	0	0			
Rouse Hill and Dural Road, via Kenthurst, to Fisher's .....	" .....	90	0	0	120	0	0
Junction, Barnard and Little Manning Rivers to Nowendoc .....	Stroud .....	55	0	0	55	0	0
Nowendoc Road to Dolly's Flat .....	Taree .....	10	0	0			
Nowendoc Road to Upper Manning .....	" .....	42	10	0			
Old Bar Road to Redbank Ferry .....	" .....	12	10	0			
Woolla Woolla Roads .....	" .....	150	0	0	215	0	0
St. Albans, via Wright's Creek, to Book's Ferry .....	Wollombi .....	90	0	0			
Thompson's, up Dairy Arm .....	" .....	50	0	0			
Woolong to Head of Sandy Creek .....	" .....	45	0	0	185	0	0
		5,681	3	6	5,681	3	6



GRANTS issued to Trustees, from 1st July, 1901, to 30th June, 1902—continued.

Road.	District.	Amount.	Total.
UNCLASSIFIED ROADS.		£ s. d.	£ s. d.
Repairs to Streets of Brewarrina .....	Bourke .....	150 0 0	150 0 0
Macquariedale Road, Appin, to Nepean River .....	Campbelltown .....	40 0 0	40 0 0
Crossing over Mandagery Creek, below Eugowra, at Public House Corner .....	Forbes .....	56 0 0	56 0 0
Repairs to paths on or about Mount Piddington .....	Lithgow .....	25 0 0	25 0 0
Frankland's Boundary to the Dungog-Paterson Road .....	Maitland .....	20 0 0	.....
Eccleston-Gresford Road up Massey's Creek .....	" .....	30 0 0	50 0 0
Araluen-Moruya Road to the crossing of Dena River .....	Moruya .....	13 0 0	.....
Derras Mount to Termeil .....	" .....	50 0 0	.....
Bridle Track between Nerrigundah and Mount Utopia .....	" .....	30 0 0	95 0 0
Road from Wandandian to Malcolm Mathie's and other farms ..	Nowra .....	50 0 0	50 0 0
Young-street, Lambton .....	Newcastle .....	365 0 0	365 0 0
A. Ison's gate towards Currabubula .....	Quirindi .....	100 0 0	.....
Currabubula to Piallaway, North side of creek, about 12 miles ...	" .....	153 0 0	.....
Main North Road to Castle Mount, passing Lobsey's and others ...	" .....	100 0 0	.....
Kangaroo Creek to Quinn's .....	" .....	45 0 0	.....
Quirindi Road, near Kent's, to W. Baker's .....	" .....	10 0 0	.....
Wallabadah Station to Galland's .....	" .....	40 0 0	448 0 0
Belmont to the Look-out, Grose River .....	Richmond .....	50 0 0	.....
Pitt Town to Old North Road .....	" .....	5 0 0	55 0 0
Berriecup to Berriecup Creek .....	Stroud .....	20 0 0	.....
Copeland to Cobark .....	" .....	49 10 0	.....
Coulac to Currakabak .....	" .....	50 0 0	.....
Monkerai, via School of Arts, to Dungog-Weismantles Road .....	" .....	35 0 0	154 10 0
Abbot's Falls to Bungay Road .....	Taree .....	15 0 0	.....
Stewart's River to Upper Camden Haven .....	" .....	40 0 0	.....
Upper Karaah Flat to Wingham and Nowendoc Road .....	" .....	20 0 0	75 0 0
Repairs to Walgett Streets .....	Walgett .....	150 0 0	150 0 0
Total .....		£ 1 713 10 0	1,713 10 0

## MISCELLANEOUS WORKS.

AMOUNTS issued to Trustees, Year 1901-2.

## Water Conservation.

	£ s. d.	£ s. d.
Construction of a Dam across Billabong Creek at south-west corner of Recreation Reserve, Jerilderie... ..	100 0 0	
Repairs to Dam across Lachlan River near Forbes ... ..	47 18 5	
	60 0 0	
	20 0 0	227 18 5

## Public Watering Places and Artesian Boring, 1901-2.

Repairs to Dam at Wangonella ... ..	25 0 0	
Repairing Well at Mulgrave, near Windsor ... ..	20 0 0	
	4 13 0	
Construction of Dam upon Ilford Common ... ..	20 0 0	69 13 0

## Expenses of Punts and Ferries, 1901-2.

Shelter for Boat on Callaghan's Creek, Road Nowendoc to Upper Manning ... ..	8 0 0	
	8 0 0	16 0 0

## Repairs and Renewals of Bridges, 1901-2.

Erection of Footbridge at Ben Buckley, Cudgegong River ... ..	50 0 0	
	25 0 0	75 0 0

## Public Baths, &amp;c., 1901-2.

Erection of Public Baths at Clifton ... ..	23 6 8
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Department



Department of Public Works, Accounts Branch, Sydney, 23 August, 1902.  
 AMOUNTS issued to Municipalities from 1st July, 1901, to 30th June, 1902.

Municipality.	Main and other Roads.	Extension, Minor Roads.	Unclassified Roads.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Armidale .....	51 0 0	37 8 4	.....	88 8 4
Albury .....	.....	56 16 8	.....	56 16 8
Alexandria .....	.....	.....	25 0 0	25 0 0
Adamstown .....	42 0 0	16 1 4	.....	58 1 4
Aberdeen .....	30 0 0	13 9 6	.....	43 9 6
Bathurst .....	.....	53 11 8	.....	53 11 8
Berry .....	.....	188 9 3	.....	188 9 3
Blayney .....	61 0 0	93 0 0	.....	154 0 0
Bexley .....	142 10 0	.....	.....	142 10 0
Balranald .....	.....	26 17 9	.....	26 17 9
Ballina .....	130 0 0	246 13 2	.....	376 13 2
Broken Hill .....	.....	.....	{ 430 6 11 } 500 0 0	930 6 11
Bingera .....	.....	120 19 7	.....	120 19 7
Bourke .....	.....	46 17 0	.....	46 17 0
Bega .....	40 0 0	160 8 3	.....	200 8 3
Bowral .....	.....	86 5 8	100 0 0	186 5 8
Braidwood .....	.....	163 2 6	.....	163 2 6
Bombala .....	.....	101 8 10	.....	101 8 10
Brewarrina .....	.....	.....	250 0 0	250 0 0
Bankstown .....	.....	.....	20 0 0	20 0 0
Balmain .....	75 0 0	.....	.....	75 0 0
Burrowa .....	.....	267 11 2	.....	267 11 2
Camden .....	.....	164 17 8	.....	164 17 8
Cudgegong .....	164 0 0	1,004 5 0	.....	1,168 5 0
Cooma .....	60 0 0	383 10 0	.....	443 10 0
Campbelltown .....	.....	483 13 3	30 0 0	513 13 3
Canterbury .....	284 0 0	.....	.....	284 0 0
Camperdown .....	90 0 0	.....	.....	90 0 0
Cobar .....	.....	53 6 6	.....	53 6 6
Casino .....	.....	750 0 0	.....	750 0 0
Coonamb.e. ....	.....	145 17 11	.....	145 17 11
Cowra .....	132 0 0	174 2 4	.....	306 2 4
Condobolin .....	.....	175 17 3	† 25 0 0	200 17 3
Concord .....	.....	.....	200 0 0	200 0 0
Coraki .....	.....	173 3 1	.....	173 3 1
Cabramatta and Canley Vale .....	78 0 0	93 8 9	.....	171 8 9
Cudal .....	.....	233 19 7	.....	233 19 7
Castlereagh .....	.....	219 0 0	.....	219 0 0
Carcoar .....	.....	.....	18 0 0	18 0 0
Cootamundra .....	.....	79 13 8	.....	79 13 8
Dubbo .....	9 0 0	45 11 5	.....	54 11 5
Dundas .....	92 0 0	11 12 2	40 0 0	143 12 2
Deniliquin .....	.....	327 16 0	.....	327 16 0
Dungog .....	.....	212 12 9	.....	212 12 9
Ermington and Rydalmere .....	.....	.....	100 0 0	100 0 0
Forbes .....	125 0 0	206 6 0	.....	331 6 0
Glen Innes .....	412 19 4	87 16 6	.....	500 15 10
Goulburn .....	32 16 0	182 18 0	.....	215 14 0
Gundagai .....	22 0 0	36 6 8	50 0 0	108 6 8
Grafton .....	.....	130 4 8	.....	130 4 8
Grenfell .....	7 0 0	40 0 0	300 0 0	347 0 0
Gerrington .....	337 0 0	.....	{ 30 0 0 } 180 6 11	447 6 11
Gulgong .....	.....	448 0 0	.....	448 0 0
Granville .....	50 0 0	.....	.....	50 0 0
Gunnedah .....	.....	65 5 11	.....	65 5 11
Greta .....	310 0 0	12 3 9	.....	322 3 9
Gosford .....	.....	107 13 2	\$ 200 0 0	307 13 2
Grafton, South .....	.....	73 16 0	20 0 0	93 16 0
Gladstone .....	.....	5 8 4	300 0 0	305 8 4
Hurstville .....	590 2 0	.....	20 0 0	610 2 0
Hillston .....	.....	69 15 2	.....	69 15 2
Hamilton .....	45 0 0	.....	.....	45 0 0
Hay .....	.....	84 16 2	500 0 0	584 16 2
Hill End .....	.....	31 1 10	.....	31 1 10
Inverel .....	.....	310 0 0	.....	310 0 0
Jerilderie .....	.....	100 0 0	.....	100 0 0
Junee .....	.....	204 11 6	.....	204 11 6
Jamberoo .....	.....	262 11 6	103 18 0	366 9 6
Katoomba .....	300 0 0	.....	.....	300 0 0
Kogarah .....	100 0 0	.....	.....	100 0 0
Kempsey .....	.....	202 0 7	.....	202 0 7
Liverpool .....	.....	51 12 0	.....	51 12 0
Lithgow .....	.....	185 7 3	.....	185 7 3
Lismore .....	196 0 0	744 16 6	30 0 0	970 16 6
Leichhardt .....	42 0 0	.....	50 0 0	92 0 0
Lambton, New .....	49 0 0	33 13 3	.....	82 13 3
Muswellbrook .....	36 0 0	7 1 6	.....	43 1 6

\* Public Watering-place; issued to Broken Hill Council.  
 account, Gerrington Council.

§ Public Baths account, Gosford Council.

† Court-house additions account, Condobolin Council.

|| Incidental expenditure account, South Grafton Council.

‡ Repair Bridges

AMOUNTS



## AMOUNTS issued to Municipalities from 1st July, 1900, to 30th June, 1901—continued.

Municipality.	Main and other Roads.		Extension, Minor Roads.		Unclassified Roads.		Total.			
	£	s. d.	£	s. d.	£	s. d.	£	s. d.		
Morpeth .....	255	0 0	51	1 5			306	1 5		
Maitland East .....	263	0 0	161	9 6			424	9 6		
Maitland West .....					300	0 0	300	0 0		
Mittagong .....	53	0 0	28	16 6			81	16 6		
Molong .....	104	0 0	145	0 6	149	0 0	398	0 6		
Mudgee .....	26	0 0	26	8 0			52	8 0		
Marrickville .....	700	0 0					700	0 0		
Manly .....			38	4 9			38	4 9		
Maclean .....			116	16 3	162	0 0	278	16 3		
Moruya .....			14	11 9			14	11 9		
Moree .....			31	0 0			31	0 0		
Murrumburrah .....			120	14 3			120	14 3		
Moss Vale .....			370	13 1	19	5 6	389	18 7		
Moama .....			212	15 8	80	18 6	293	14 2		
Murrurundi .....	25	0 0					25	0 0		
Merewether .....	39	0 0					39	0 0		
Mulgoa .....					*15	0 0	15	0 0		
Nyngan .....			1	0 2	†250	0 0	251	0 2		
Nowra .....	167	0 0	152	5 11			319	5 11		
North Sydney .....	438	0 0					438	0 0		
Narrandera .....			19	1 0	150	0 0	169	1 0		
Narrabri .....			210	0 0			210	0 0		
Narrabri West .....			8	0 0			8	0 0		
Narromine .....	27	0 0	10	0 7			37	0 7		
Newcastle .....					‡928	0 0	928	0 0		
Orange .....	31	0 0	69	3 6			100	3 6		
Orange East .....	25	0 0	14	10 2			39	10 2		
Pictou .....			75	11 13			75	11 13		
Penrith .....	49	0 0					49	0 0		
Parramatta .....			87	1 2			87	1 2		
Port Macquarie .....			163	18 0			163	18 0		
Peak Hill .....			143	16 3			143	16 3		
Queanbeyan .....	71	0 0	67	2 9			138	2 9		
Quirindi .....			89	5 4			89	5 4		
Rockdale .....	62	10 0			\$15	0 0	77	10 0		
Ryde .....	175	0 0			20	0 0	195	0 0		
Redfern .....	200	0 0					200	0 0		
Richmond .....			9	0 0			9	0 0		
Raymond Terrace .....			21	6 10			21	6 10		
Randwick .....	1,225	0 0					1,225	0 0		
Smithfield and Fairfield .....					350	0 0	350	0 0		
Singleton .....	28	0 0	7	6 11	50	0 0	85	6 11		
„ (South) .....	10	0 0	3	18 4			13	18 4		
Scone .....	21	0 0	6	0 0			27	0 0		
Shellharbour .....	461	0 0					461	0 0		
St. Mary's .....			146	11 8			146	11 8		
Sydney .....	400	0 0					400	0 0		
Tamworth .....	84	0 0	199	1 9			283	1 9		
Tamut .....			86	4 4			86	4 4		
Tenterfield .....	465	0 0	156	13 8			621	13 8		
Temora .....			194	10 1	100	0 0	294	10 1		
Uralla .....	21	0 0	11	13 0	40	0 0	72	13 0		
Ulladulla .....	377	1 9	100	5 4			477	7 1		
Ulmara .....			748	17 0			748	17 0		
Vaucluse .....	43	0 0					43	0 0		
Wellington .....	62	0 0					62	0 0		
Wollongong .....	254	0 0					254	0 0		
Wilcannia .....			12	11 2	100	0 0	112	11 2		
Wagga Wagga .....			122	5 9			122	5 9		
Wingham .....			46	0 0			46	0 0		
Walcha .....			230	14 1			230	14 1		
Warren .....			24	10 9			24	10 9		
Wickham .....	15	0 0			100	0 0	115	0 0		
Wallsend .....			38	13 10			38	13 10		
Wallendbeen .....			309	9 5			309	9 5		
Warialda .....			207	9 0			207	9 0		
Yass .....			231	11 10			231	11 10		
Young .....			150	3 5	179	2 3	329	5 8		
Wyalong .....			152	0 0			152	0 0		
Totals .....	£	10,311	19	1	15,750	0 9	6,430	18 1	32,492	17 11

\* Repair Bridges account, Mulgoa Council. † Incidentals account, Nyngan Council.

Newcastle Ocean Beach Reserve account, Newcastle Council. § Incidentals account, Rockdale Council.



Department of Public Works, Accounts Branch, 19 August, 1902.  
STATEMENT of the Department of Public Works General Bank Account, from 1st July, 1901, to 30th June, 1902.

Month.	Receipts.		Disbursements.	
	General Account.	Advance Account.	General Account.	Advance Account.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Balance .....	49 11 8	6,456 9 10	.....	.....
July, 1901 .....	51,738 16 4	106,964 7 6	51,494 1 11	110,716 10 10
August, " .....	52,523 10 8	103,857 2 9	50,715 16 11	103,843 5 5
September, " .....	34,781 15 0	63,418 14 7	36,883 14 10	62,921 8 7
October, " .....	62,385 3 11	90,292 5 5	57,502 3 4	85,324 5 9
November, " .....	84,093 18 4	100,037 1 3	83,484 8 9	108,200 3 0
December, " .....	69,056 12 0	93,757 9 4	74,509 19 11	92,869 4 10
January, 1902 .....	94,308 16 4	85,316 10 6	77,448 2 2	83,967 19 5
February, " .....	68,764 4 2	77,983 1 8	71,010 14 9	76,419 14 3
March, " .....	66,053 2 4	70,759 14 10	64,554 0 3	70,043 4 10
April, " .....	69,156 10 3	95,947 17 2	80,472 15 9	89,162 6 2
May, " .....	72,958 1 2	120,231 10 9	77,480 2 3	131,250 0 11
June, " .....	66,850 7 4	103,812 11 4	65,415 6 0	95,728 15 7
Balance .....	.....	.....	1,749 2 8	8,417 17 4
Totals .....	£ 797,720 9 6	1,118,864 16 11	792,720 9 6	1,118,864 16 11

OWEN CARROLL,  
Paymaster, Public Works Department.

Department of Public Works, Accounts Branch, 19 August, 1902.  
*Trust Account.*  
STATEMENT of Receipts and Disbursements, from 1st July, 1901, to 30th June, 1902.

Month.	No. of Deposits.	Receipts.	Disbursements.	Balances.
		£ s. d.	£ s. d.	£ s. d.
Balance on 30 June, 1901 .....	.....	562 2 0	.....	.....
July, 1901 .....	243	3,598 13 0	3,595 8 0	565 7 0
August .....	244	2,134 3 6	1,477 16 0	1,221 14 6
September .....	580	4,552 1 6	4,866 17 10	906 18 2
October .....	467	3,122 3 0	3,076 3 2	952 18 0
November .....	298	2,207 9 8	2,282 12 11	877 14 9
December .....	400	3,513 18 0	3,728 9 3	663 3 6
January, 1902 .....	370	2,488 0 10	1,985 16 6	1,165 7 10
February .....	497	3,711 15 4	3,730 6 8	1,146 16 6
March .....	358	2,356 8 8	2,648 18 2	854 7 0
April .....	381	2,416 11 4	2,574 6 0	696 12 4
May .....	259	1,864 15 0	1,942 15 10	618 11 6
June .....	284	3,300 12 6	3,580 6 0	338 18 0
Totals .....	4,381	35,828 14 4	35,489 16 4	338 18 0

OWEN CARROLL,  
Paymaster, Public Works Department.

Department of Public Works, Accounts Branch, 26 August, 1902.  
*Suspense Account, 1901-2.*

Items.	Amounts paid to Treasury from 11th February to 30th June, 1902.
	£ s. d.
Rents--	
Ferries .....	54 12 7
Watering-places .....	2 9 10
Miscellaneous .....	88 2 5
Sale of Property .....	318 10 0
Pitt Town Labour Farm .....	881 4 9
Docking Vessels .....	63 3 9
Forfeited Deposits .....	22 8 4
Sundry Deposits .....	1,011 11 0
Testing Fees, Cement .....	57 5 0
Inspection of Timber for New Zealand Government .....	751 6 11
Commonwealth of Australia .....	5,299 6 3
Miscellaneous Receipts .....	459 4 5
Refunds .....	40,388 11 9
Total .....	£ 49,397 17 0

Statement of Net Revenue.

Total, as above .....	49,397 17 0
Deduct Refunds .....	40,388 11 9
Net Revenue .....	£ 9,009 5 3



TOTAL Amounts posted through Suspense Account from 1st July, 1901, to 30th June, 1902.

	£	s.	d.
Balance on 1st July, 1901 .....	502	9	8
Receipts .....	74,548	8	3
	75,050	17	11
Disbursements .....	74,772	5	5
Balance on 30th June, 1902 .....	278	12	6

OWEN CARROLL,  
Paymaster, Public Works Department.

Department of Public Works, Accounts Branch, 26 August, 1902.  
*Revenue Account, 1901-1902.*

Items.	Revenue received through Public Works Department.	Revenue received at Treasury by Transfer, &c.	Total.
	£ s. d.	£ s. d.	£ s. d.
Tolls and Rents { Ferries .....	3,893 0 0		3,893 0 0
Watering-laces .....	858 17 5	107 14 11	966 12 4
Miscellaneous.....	252 18 5	1,459 0 0	1,711 18 5
Sale of Property .....	5,807 15 4	42 19 3	5,850 14 7
Pitt Town Labour Farm .....	1,305 19 8		1,305 19 8
Country Towns Water Supply .....		14,885 18 1	14,885 18 1
Docking Vessels, &c.....	6,834 13 4	827 19 4	7,662 12 8
Forfeited Deposits.....	152 10 2	646 11 4	799 1 6
Sundry Deposits .....	1,454 13 1		1,454 13 1
Dredging .....	10 0 0		10 0 0
Testing Fees, Cement, &c. ....	502 1 0		502 1 0
Inspection of Timber for New Zealand Government ..	1,452 12 10		1,452 12 10
Government of Victoria—Various Bridges .....		1,138 15 10	1,138 15 10
Commonwealth of Australia .....	49 19 9		49 19 9
Store Issues, &c. ....		281,160 3 5	281,160 3 5
Refunds, &c. ....	49,723 17 11	4,593 9 11	54,317 7 10
Miscellaneous—Hire, Repairs, Deductions, Royalties, Electricity, &c.	522 11 3	13,140 17 4	13,663 8 7
Totals .....	£ 72,821 10 2	318,003 9 5	390,824 19 7

*Statement of Net Revenue.*

Total as above .....	72,821 10 2	318,003 9 5	390,824 19 7
Deduct—Amount of Store Issues and Refunds as above.....	49,723 17 11	285,753 13 4	335,477 11 3
Net Revenue .....	£ 23,097 12 3	32,249 16 1	55,347 8 4

NOTE.—The Revenue Account Business was transferred to Treasury on 10th February, 1902.

OWEN CARROLL,  
Paymaster, Public Works Department.

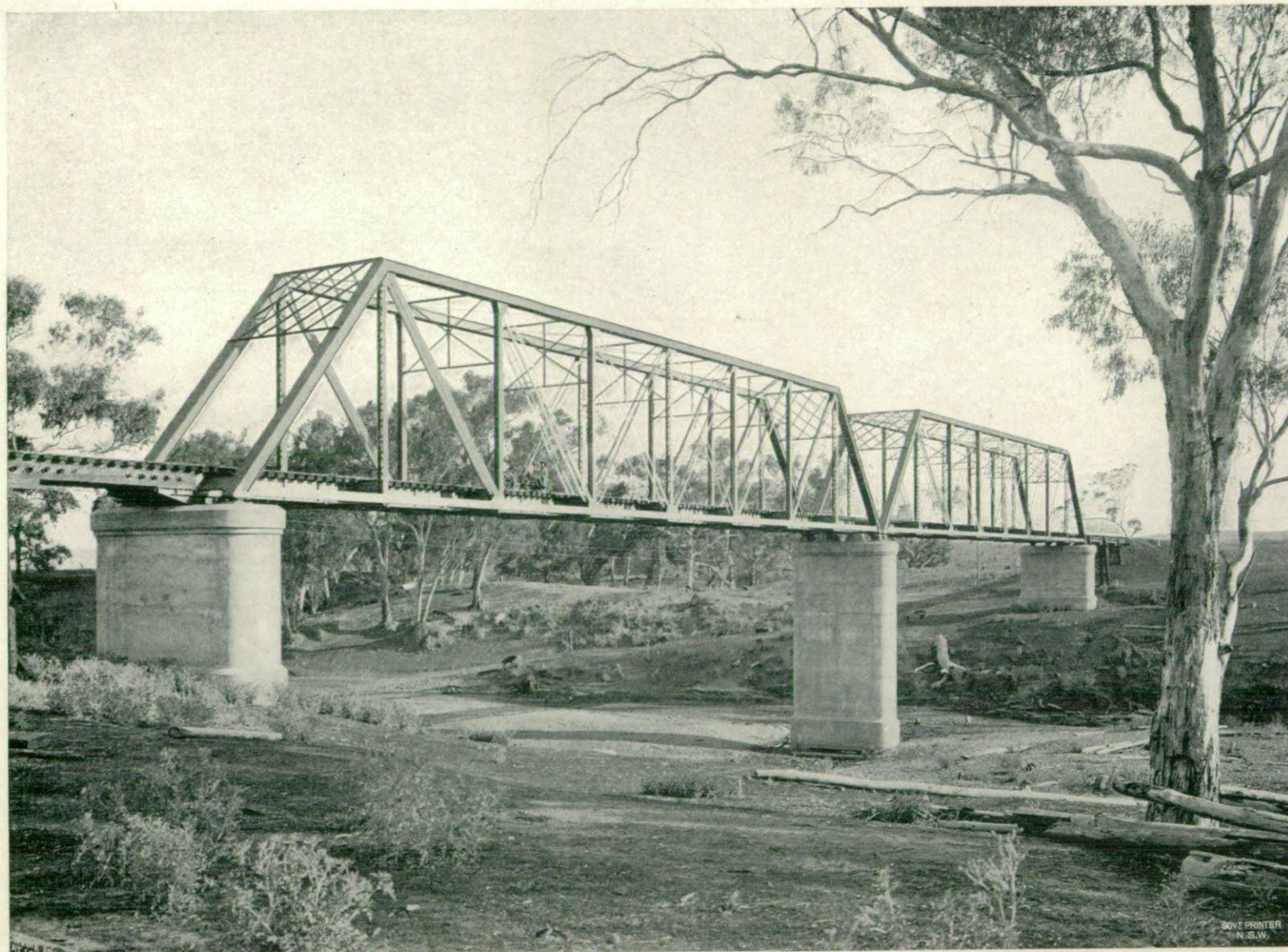
Department of Public Works, Accounts Branch, 19 August, 1902.  
*Fixed Deposits—Statement of Receipts and Disbursements from 1st July, 1901, to 30th June, 1902.*

Receipts.	No.	Amount.	Disbursements.	No.	Amount.
		£ s. d.			£ s. d.
Balance at 1st July, 1901 .....	184	34,841 6 6	Returned to contractors.....	150	20,754 17 0
Receipts .....	105	20,266 17 6	Renewed for contractors.....	16	9,147 7 0
			Forfeited to Treasury.....	3	303 5 0
			Balance held by Paymaster at 30th June, 1902 .....	120	24,902 15 0
		£ 55,108 4 0			£ 55,108 4 0

OWEN CARROLL,  
Paymaster, Public Works Department.

[Sixteen Plans ; nineteen Photos.]





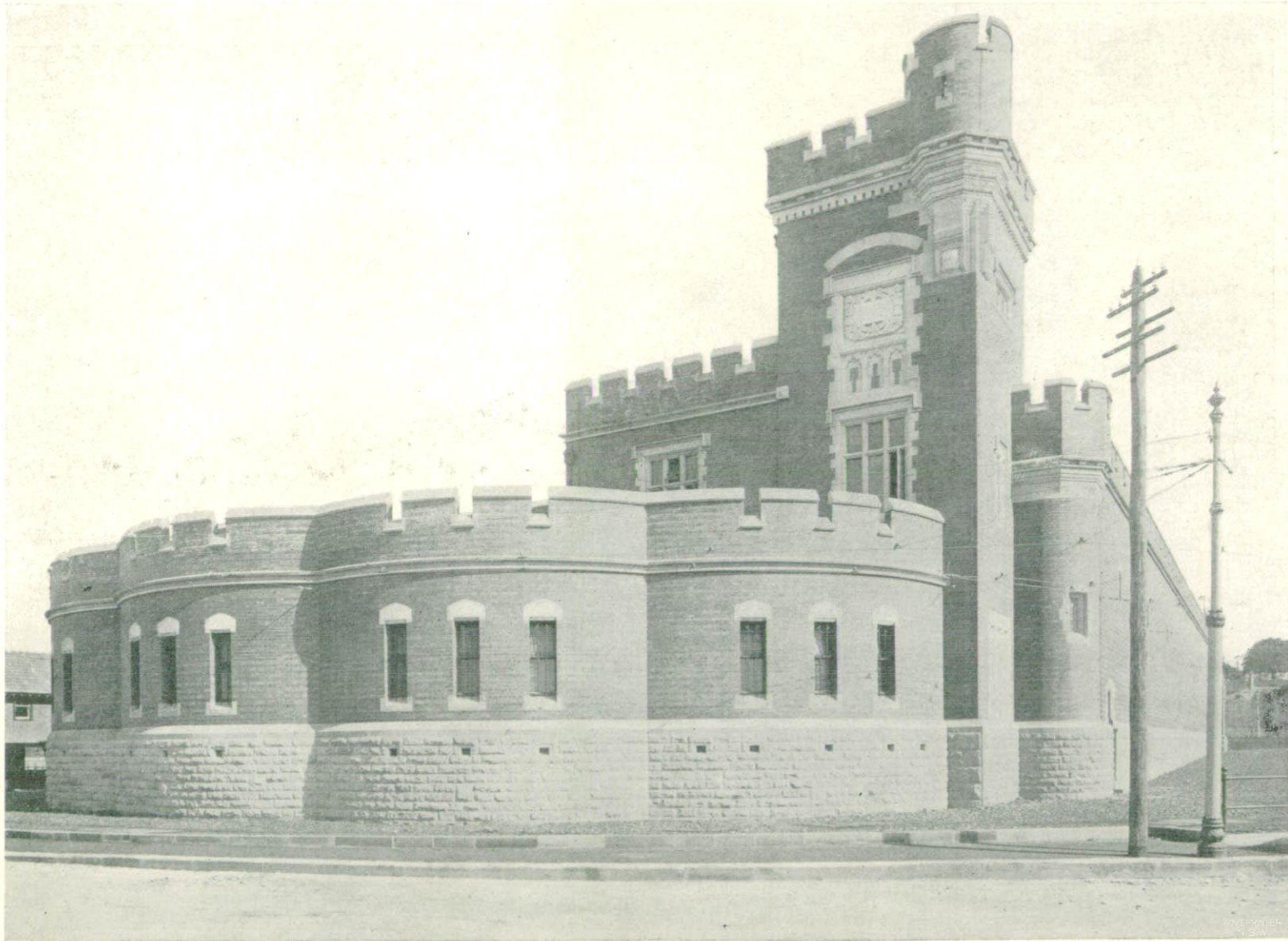
MOREE TO INVERELL RAILWAY: BRIDGE OVER GWYDIR RIVER, AT EZZIE'S CROSSING.





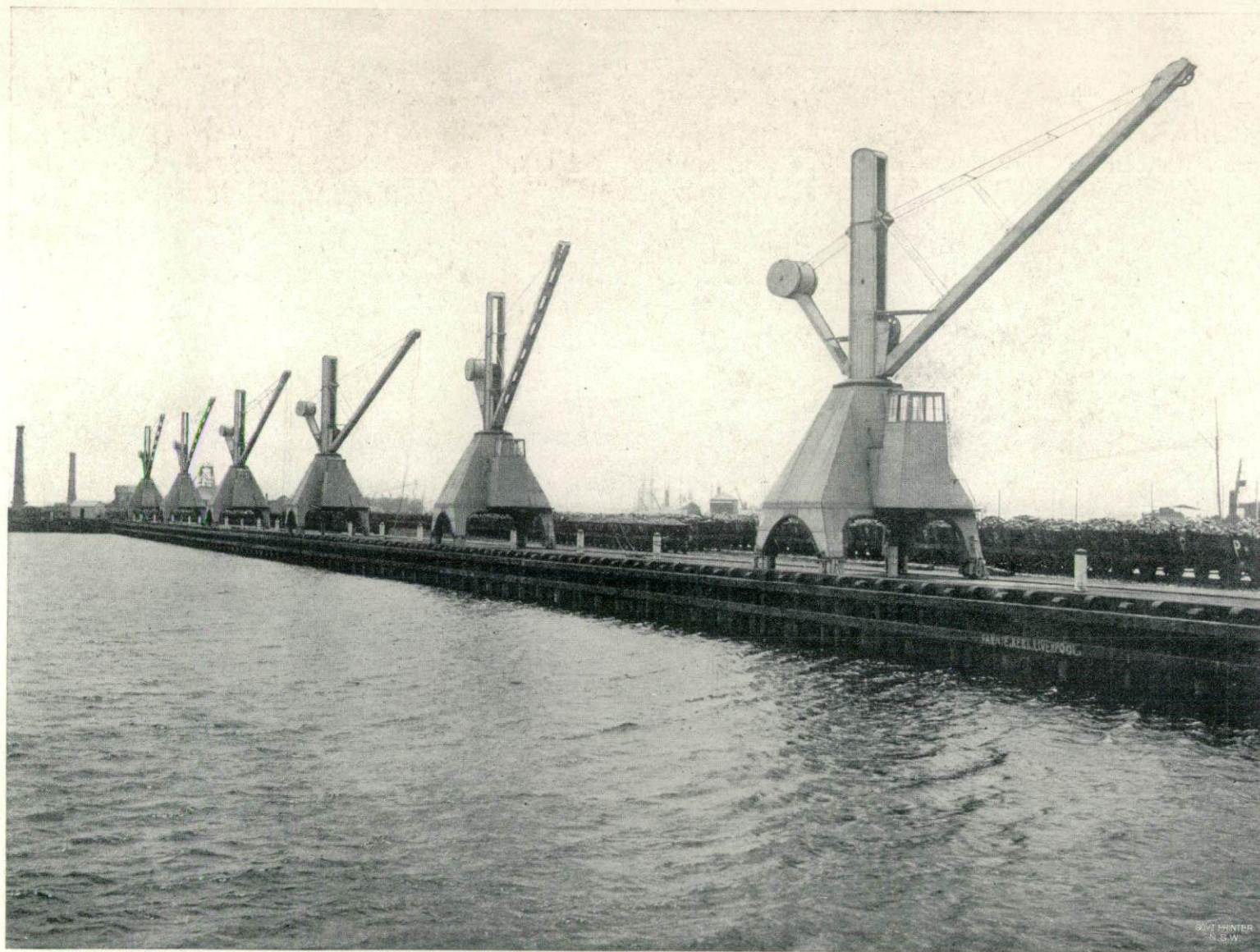
GOULBURN TO CROOKWELL RAILWAY: BRIDGE OVER WOLLONDILLY RIVER.





CAR-SHED, FORT MACQUARIE.





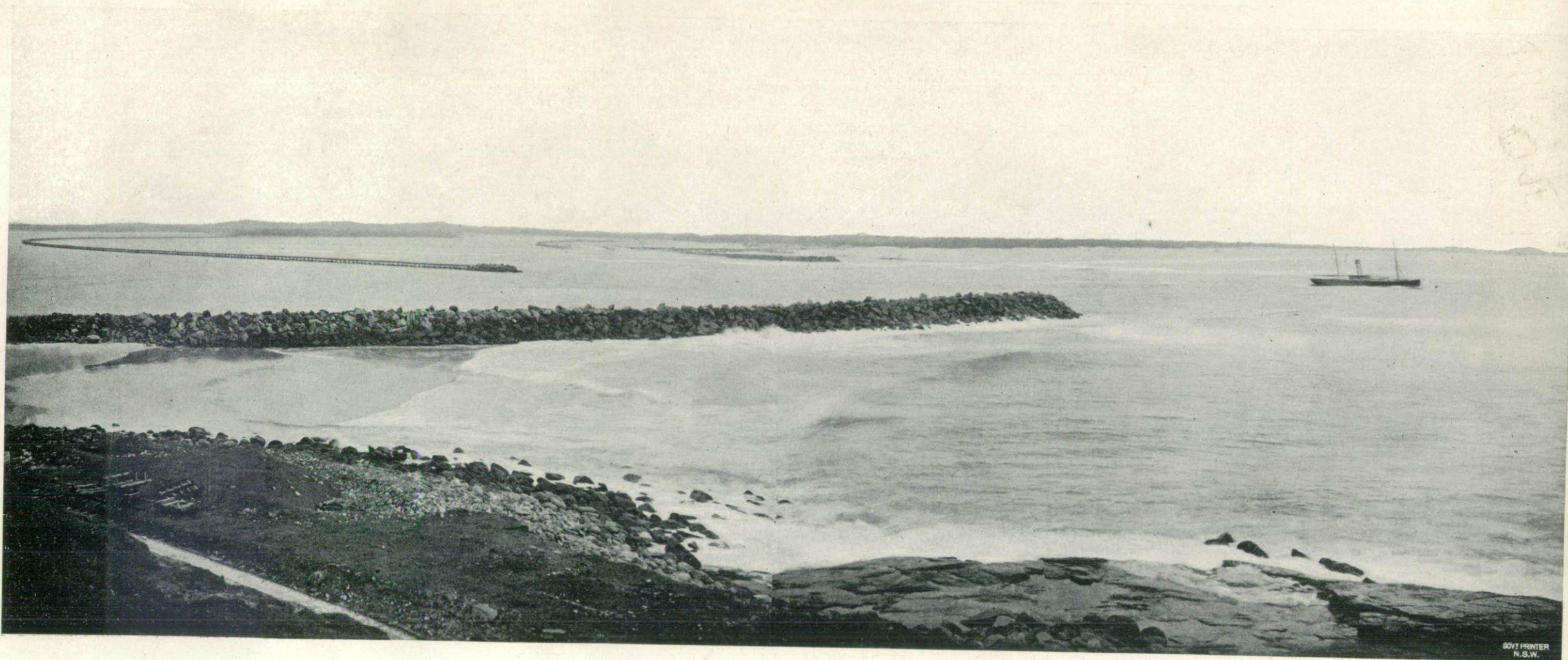
WHARF, INNER BASIN, CARRINGTON, NEWCASTLE, SHOWING 12-TON MOVABLE HYDRAULIC CRANES.





PORT KEMBLA HARBOUR WORKS.





CLARENCE RIVER HARBOUR WORKS.





COURT-HOUSE WAGGA WAGGA.





COURT-HOUSE, WAGGA WAGGA.

GOVT PRINTER  
N.S.W.





CUSTOM-HOUSE BUILDING, SYDNEY.





BRIDGE OVER WYONG CREEK, AT WYONG.





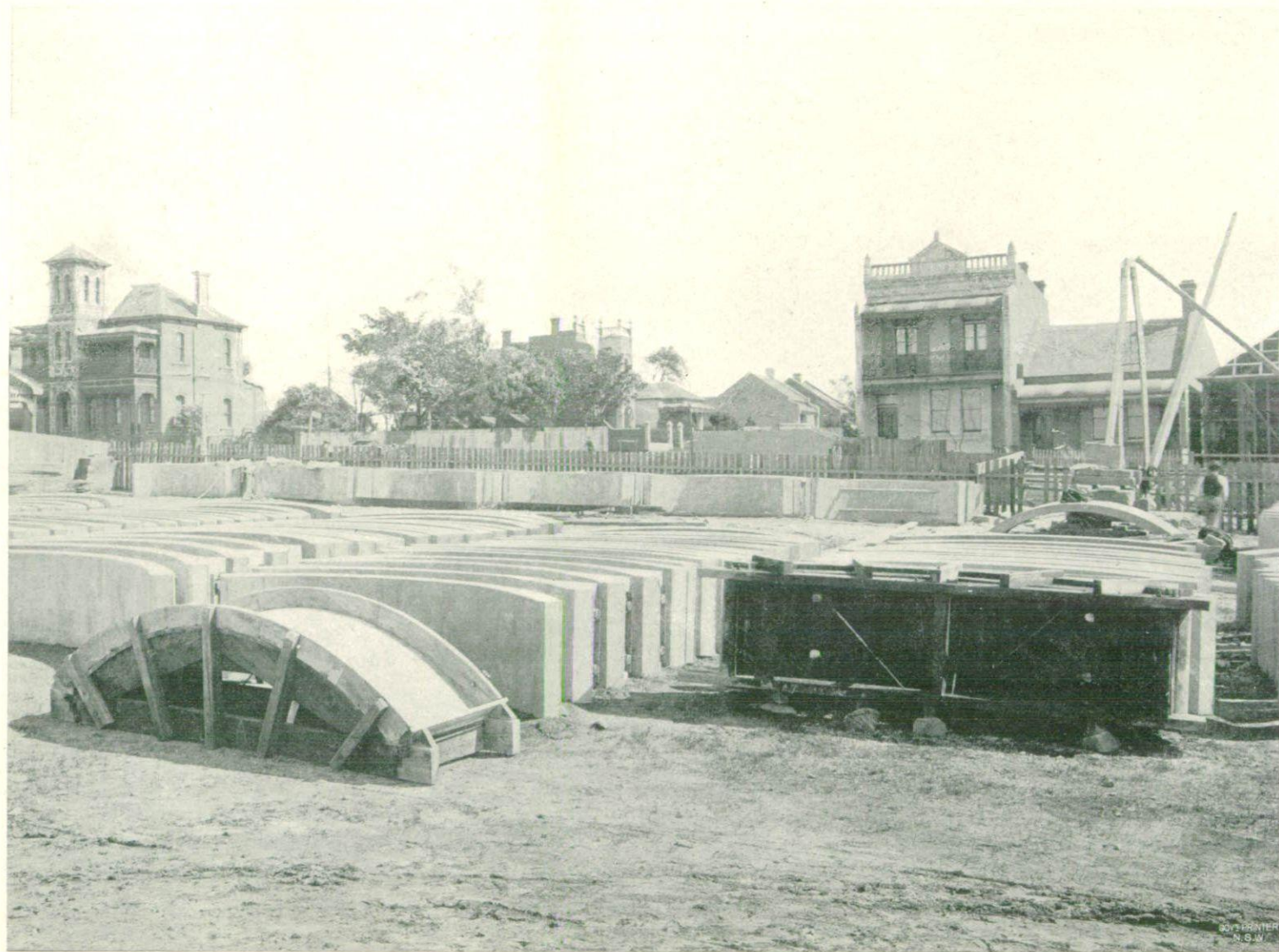
BRIDGE OVER WYONG CREEK, AT WYONG.





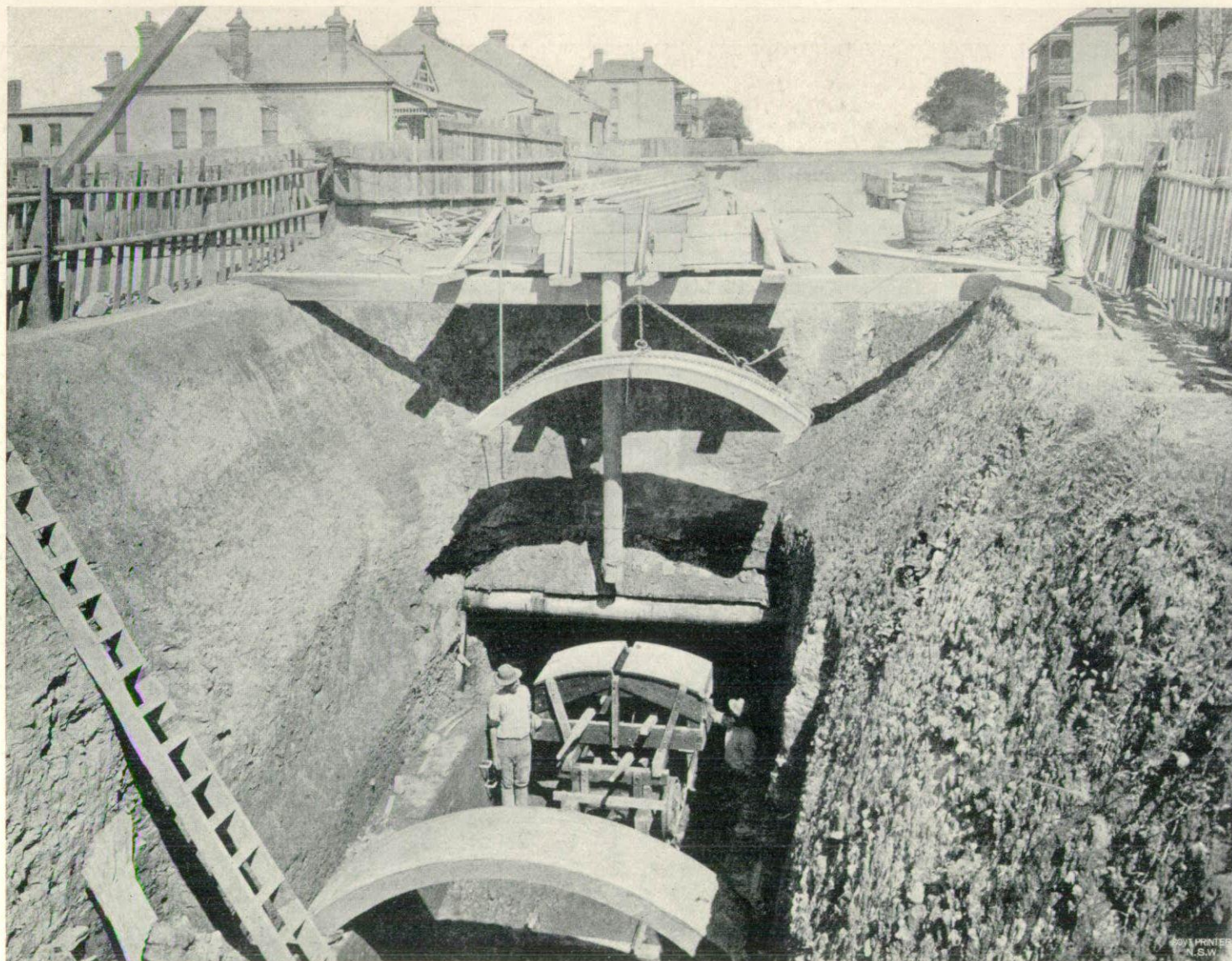
PYRMONT BRIDGE, SYDNEY.





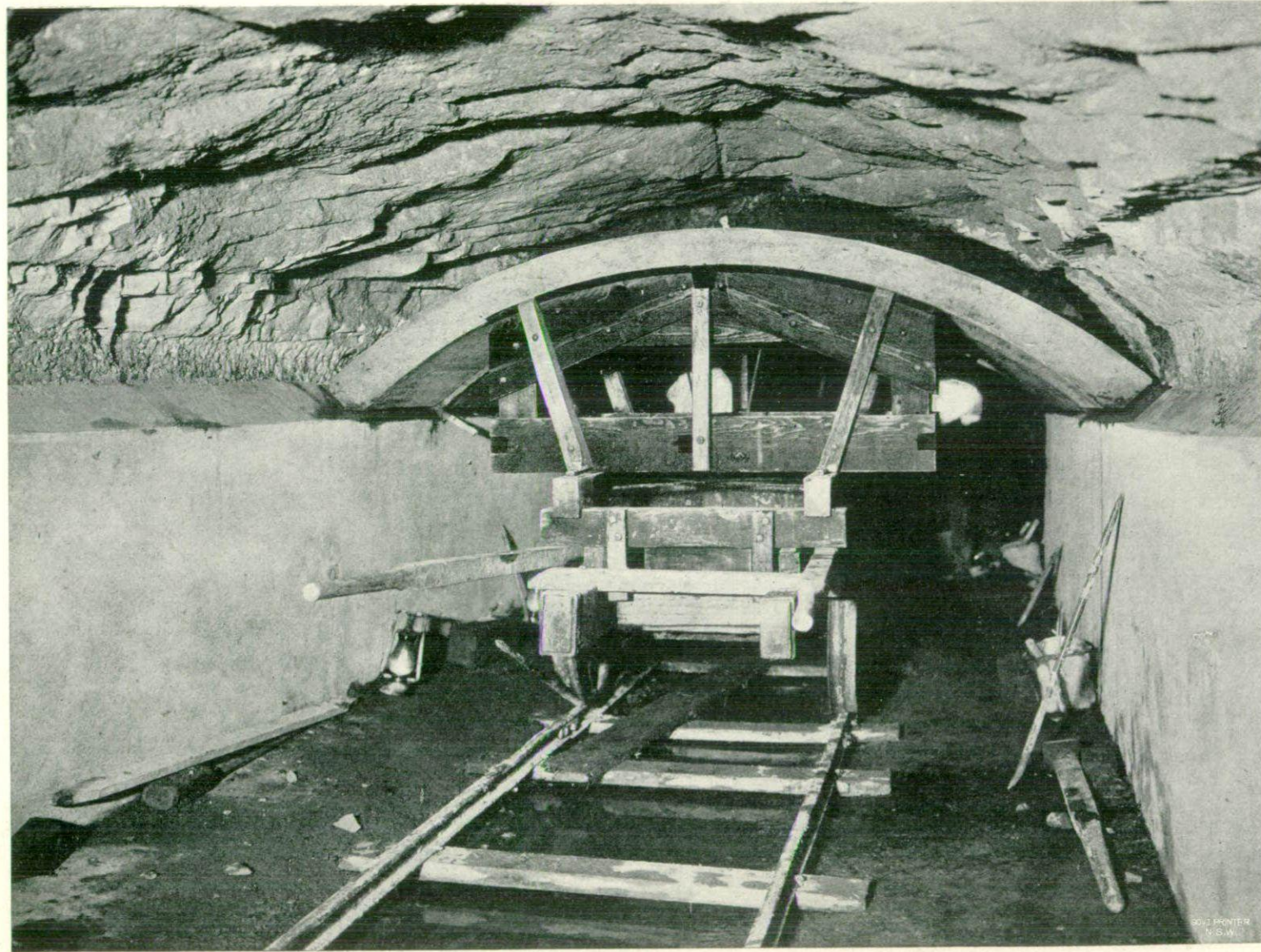
MARRICKVILLE STORM-WATER CHANNEL: MONIER" PLATES FOR ROOF.





MARRICKVILLE STORM-WATER CHANNEL: ROOF-PLATES BEING LOWERED ON TO TRUCK.





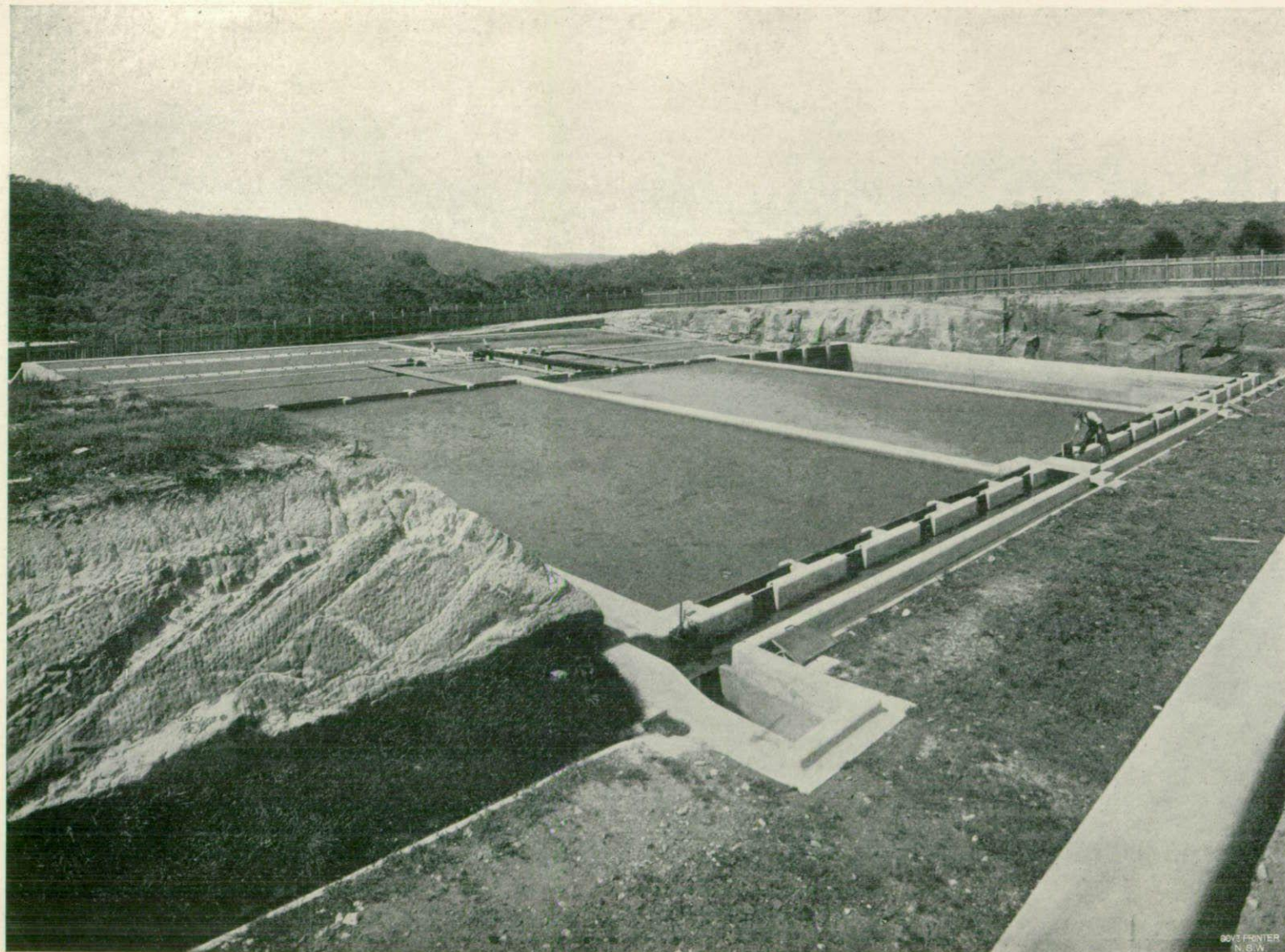
MARRICKVILLE STORM-WATER CHANNEL, SHOWING TRUCK AND METHOD OF SETTING PLATES IN POSITION.





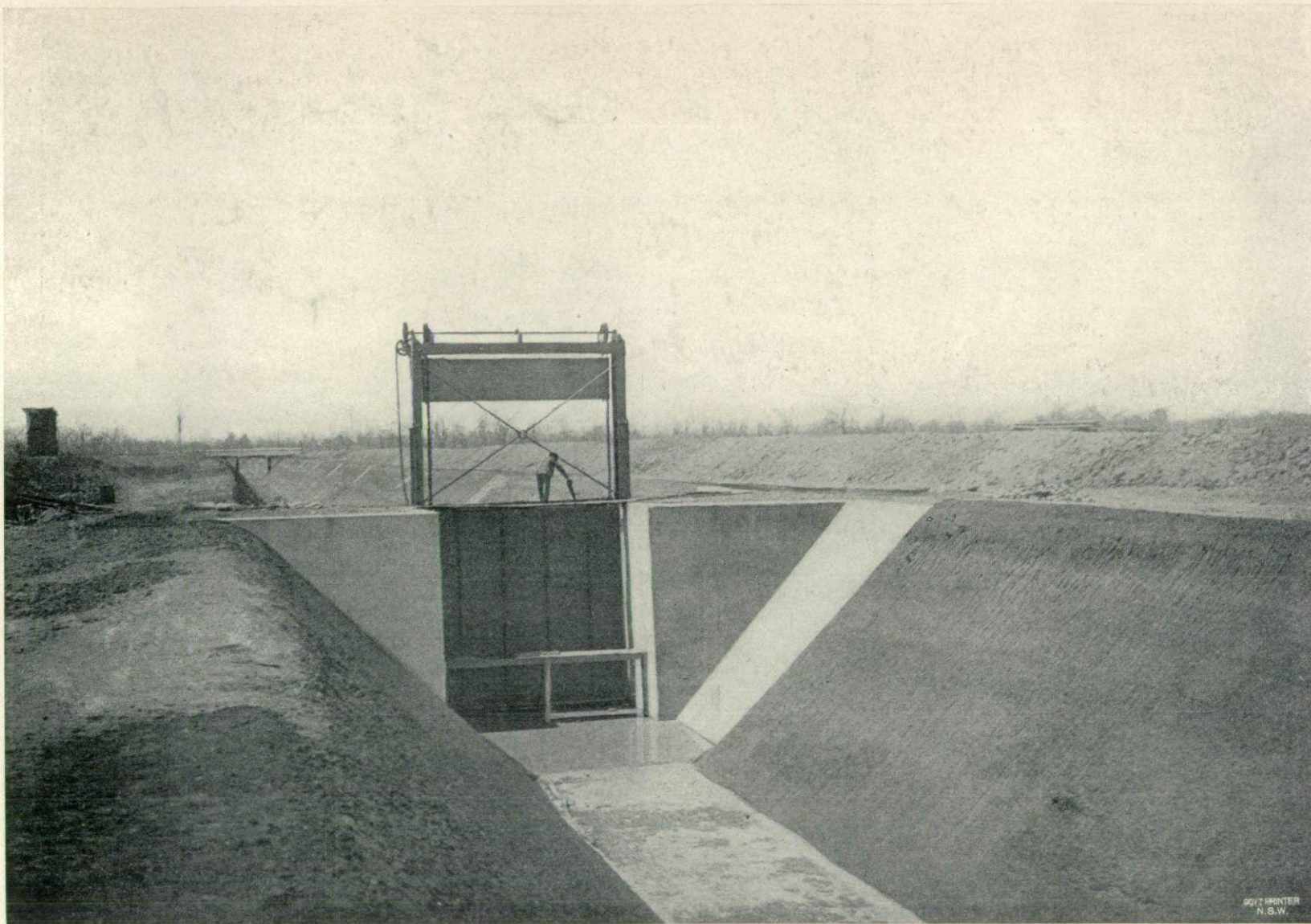
MARRICKVILLE STORM-WATER CHANNEL: TUNNEL WITH 'MONIER' ROOFING.





WILLOUGHBY AND CHATSWOOD SEWERAGE: SEPTIC TANKS.

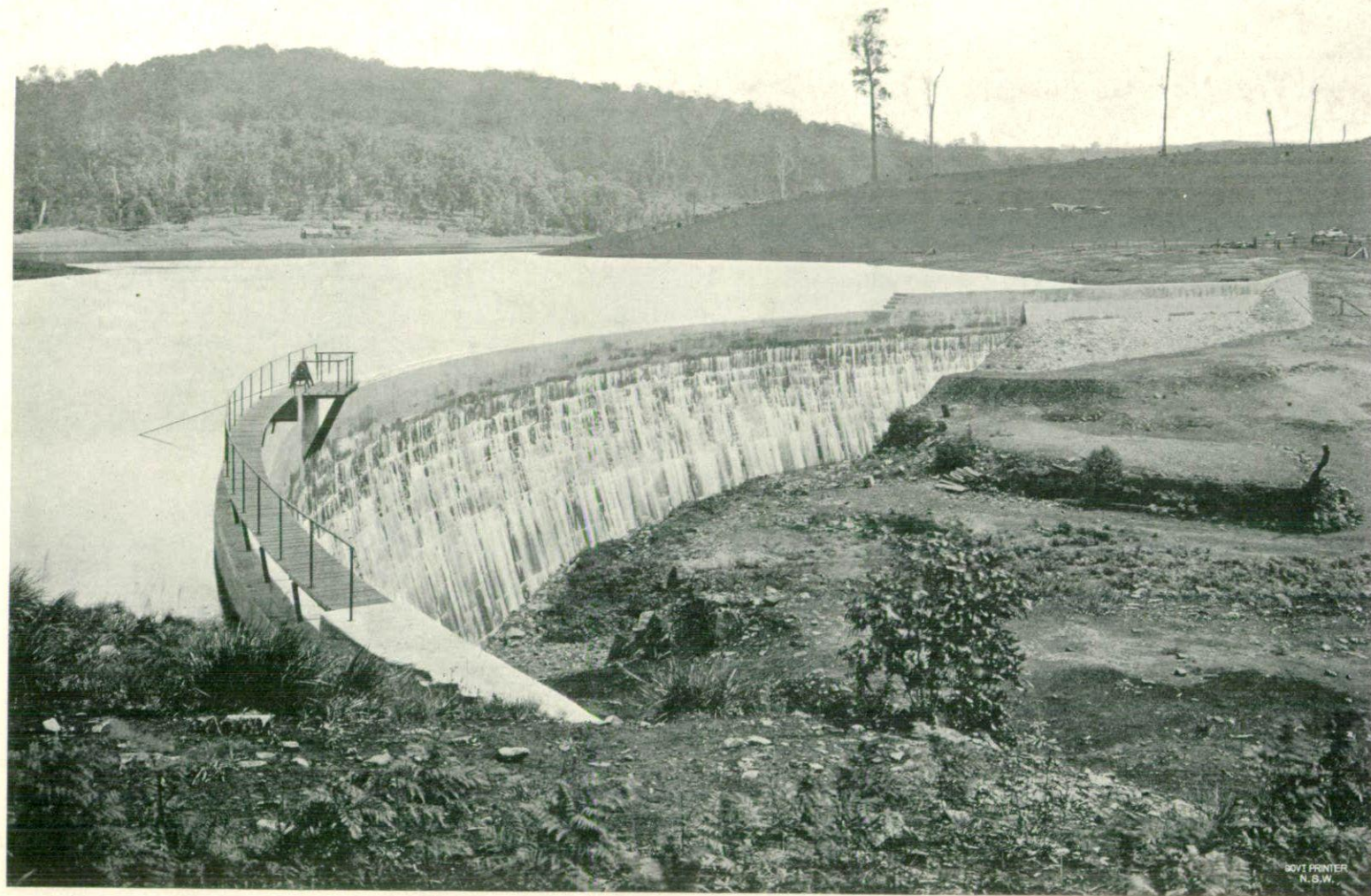




GOVT. PRINTER  
N.S.W.

IRON REGULATOR GATE ON CROOKED CREEK CUTTING, FOR STOCK PURPOSES.





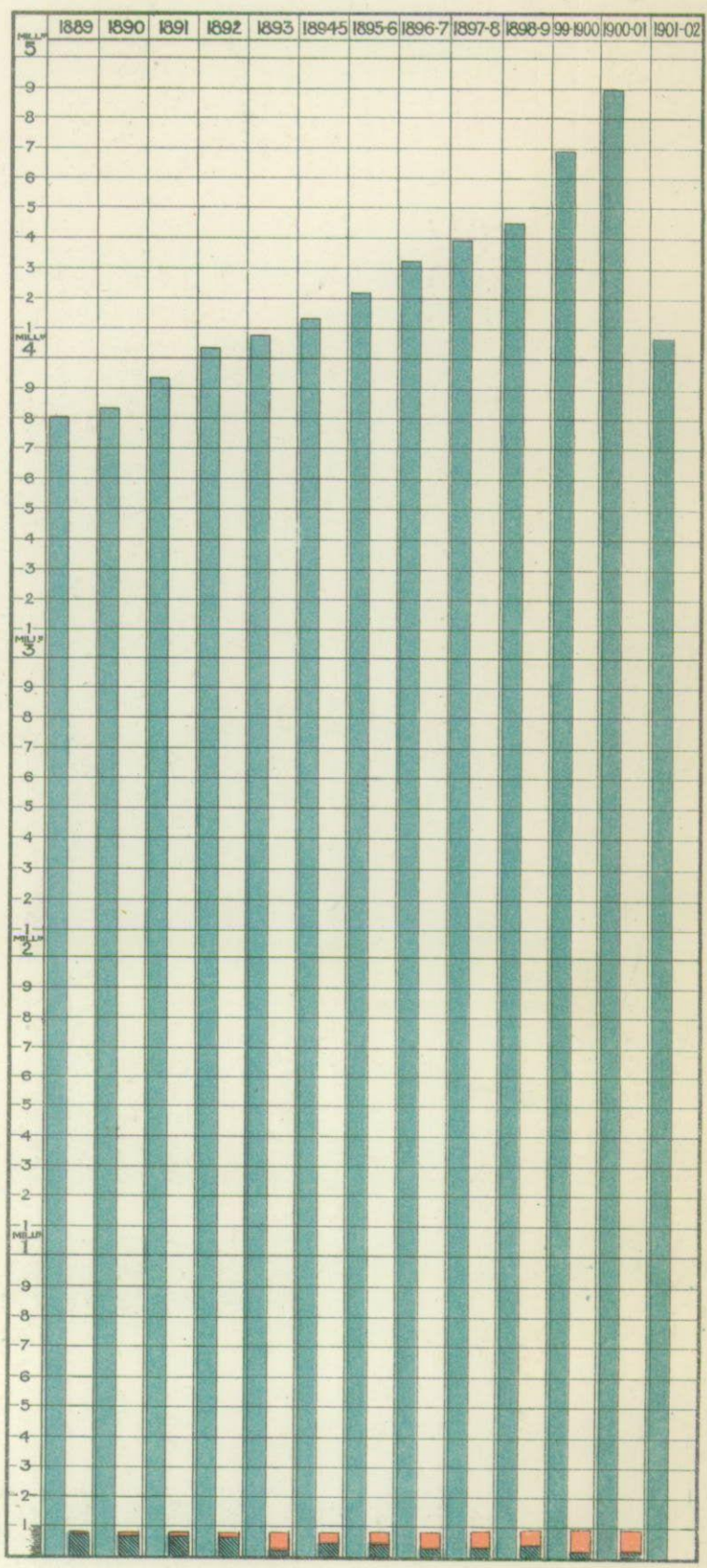
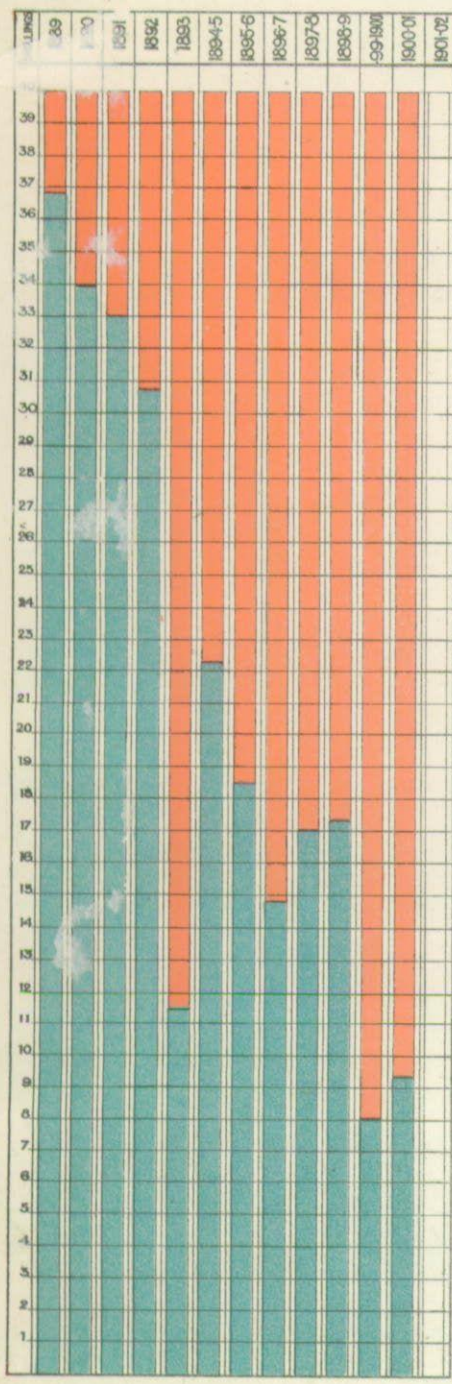
WOLLONGONG WATER SUPPLY: CONCRETE STORAGE RESERVOIR DAM.



1507  
02

BLUE Represents Percentage of Expenditure for Repairs.  
RED " Shortage in same: £2 per cent taken as Basis.

LIGHT BLUE Represents CAPITAL VALUE of Buildings.  
DARK BLUE " EXPENDITURE for Repairs.  
RED " SHORTAGE in EXPENDITURE, below the £2 per cent Basis.



W. L. Vernon  
Govt Architect.

\* The decrease in Capital Value is consequent on the transfer of Post Offices and other Buildings to the Federal Government.

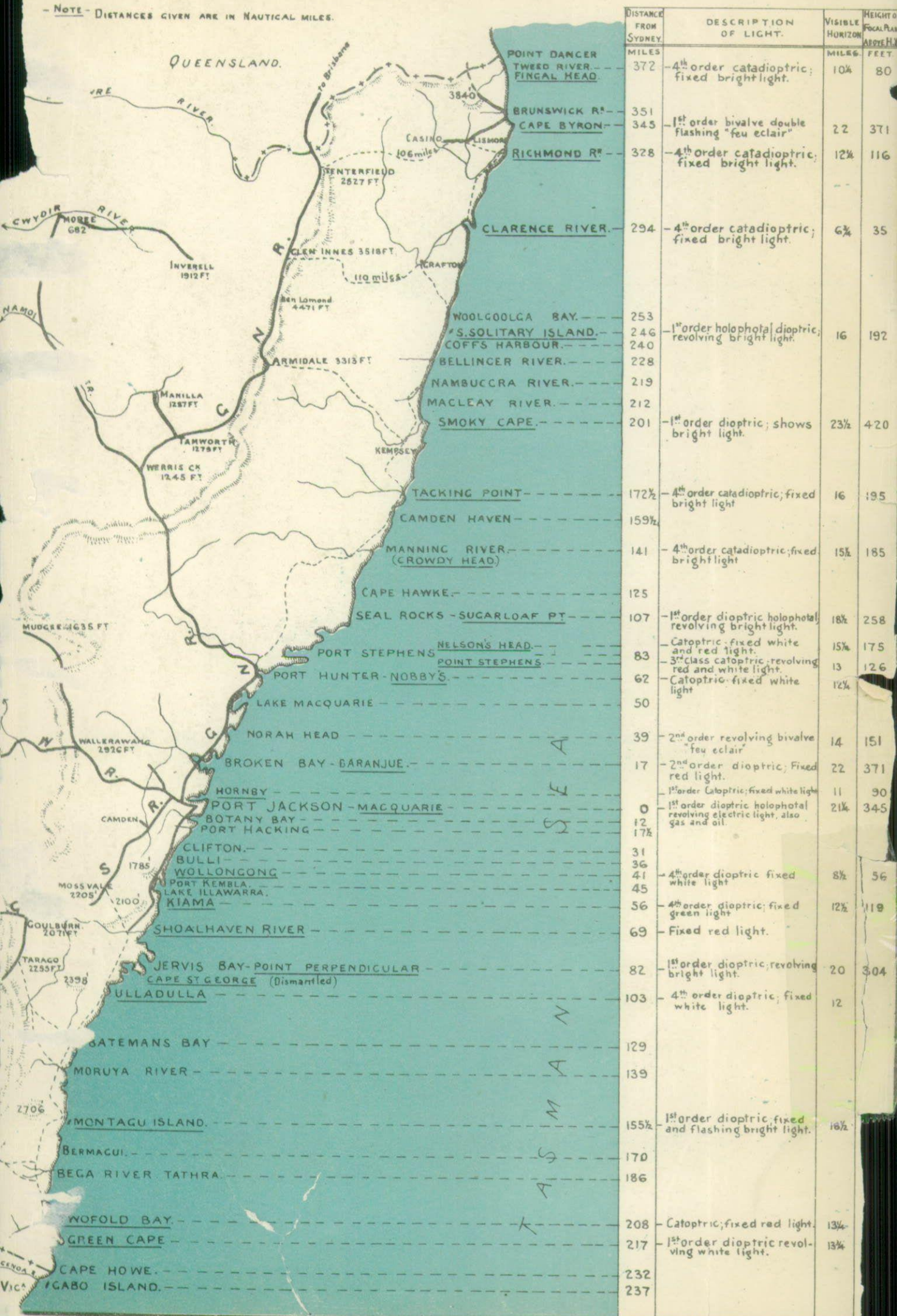
Photo-lithographed by  
W. A. Gillick, Government Printer,  
Sydney, N.S.W.



# COAST CHART OF NEW SOUTH WALES.

## showing positions of Lighthouses.

- NOTE - DISTANCES GIVEN ARE IN NAUTICAL MILES.





# MAP OF NEW SOUTH WALES RAILWAYS

to accompany  
PUBLIC WORKS ANNUAL REPORT  
1901 ~ 1902.



## Mileage open for traffic 30th June 1902

	Miles	Chs.
Southern System	Sydney to Albury & Murray R	387 64%
	Branch lines	592 38%
Western System	Granville to Bourke	490 37%
	* Branch lines	557 79
Northern System	Strathfield to Jennings	485 34
	Branch lines	304 56
South Coast line	Eveleigh to Nowra & Branch	104 11
Lismore to the Tweed line		63 57
Broken Hill to Tarragonee		40 07
	<b>Total</b>	<b>3026 64%</b>
Private Lines	Cockburn to Broken Hill	36
	Deniliquin to Moama	46
	<b>Total</b>	<b>82</b>
Lines under construction		423 M. 24% C.
Authorized lines but not commenced		30 M. 40 C.
* Includes the Murrumbidgee to Blayney Line		

## SCALE

MILES 0 10 20 30 40 50 60 70 80 90 100

## Notes

Railway lines shown thus —  
Lines under construction shown thus - - -  
Authorized lines shown thus . . .



# NEW SOUTH WALES HARBOURS

## TWEED RIVER ENTRANCE

SCALE 20 CHAINS TO ONE INCH

Magnetic North

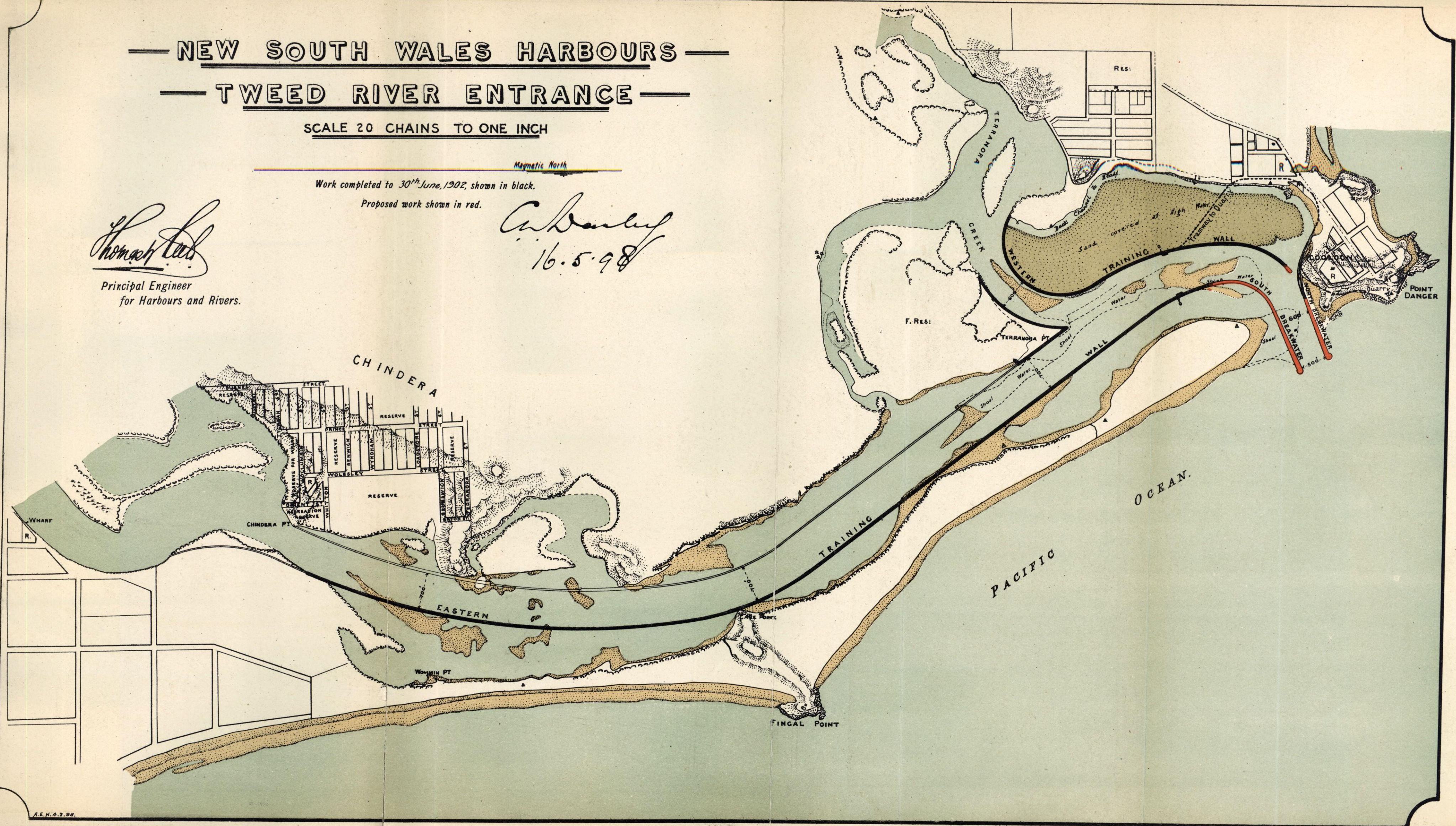
Work completed to 30<sup>th</sup> June, 1902, shown in black.

Proposed work shown in red.

*Thomas Lamb*

Principal Engineer  
for Harbours and Rivers.

*C. Barclay*  
16.5.98





# — NEW SOUTH WALES HARBOURS —

## — RICHMOND RIVER ENTRANCE —

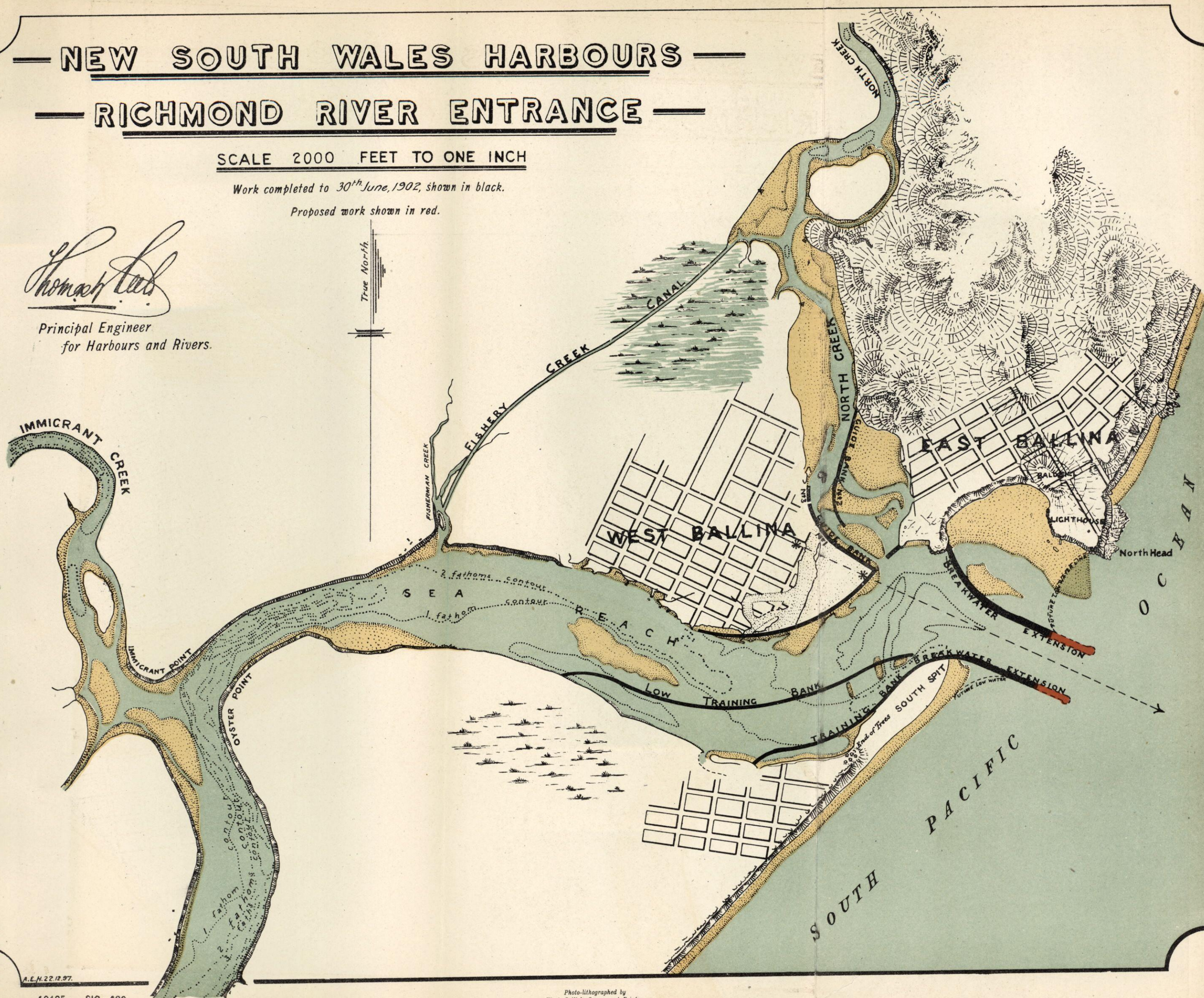
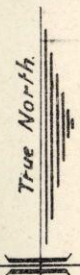
SCALE 2000 FEET TO ONE INCH

Work completed to 30<sup>th</sup> June, 1902, shown in black.

Proposed work shown in red.

*Thomas Lamb*

Principal Engineer  
for Harbours and Rivers.





# — NEW SOUTH WALES HARBOURS —

## — CLARENCE RIVER ENTRANCE —

SCALE 1500 FEET TO ONE INCH

Work completed to 30<sup>th</sup> June, 1902, shown in black.

Proposed work shown in red.

GOODWOOD ISLAND.

NORTH ARM.

Starting point 80 N.W. of T.S. 7.  
T.S. 7 (missing).

Zero 400' from Whf

*Thomas Lamb*

Principal Engineer  
for Harbours and Rivers.

Magnetic North

FREEBURN ISLAND.

PALMER I<sup>o</sup>

SLEEPER I<sup>o</sup>

ILUKA

OCEAN.

SOUTH TRAINING BANK HALF TIDE.

NORTH BREAKWATER.

SOUTH BREAKWATER.

SOUTH H<sup>o</sup>

PACIFIC

YAMBABA







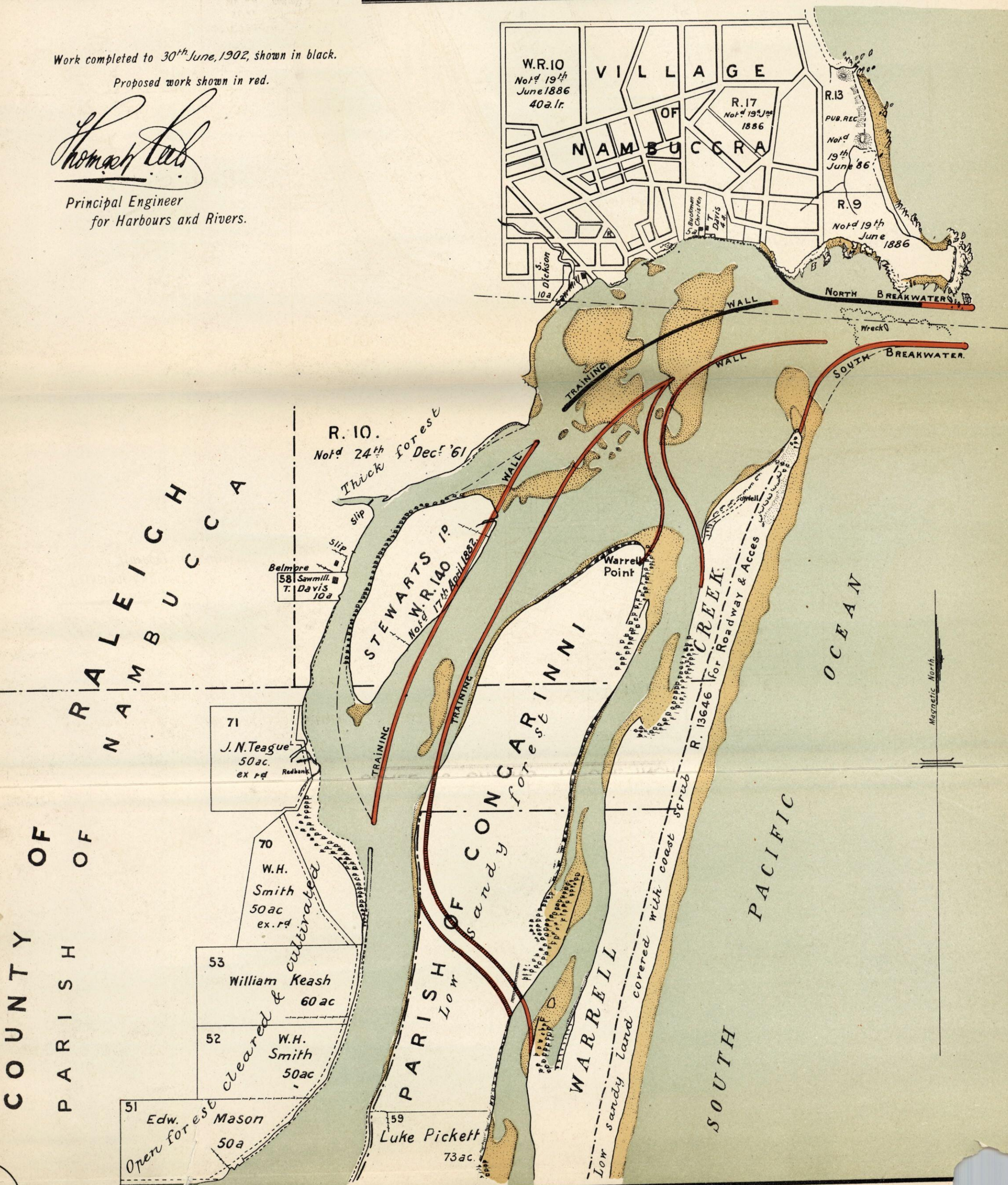
# NAMBUCCRA RIVER ENTRANCE

SCALE 20 CHAINS TO ONE INCH

*Proposed work shown in red.*

Thomas Leach

*Principal Engineer  
for Harbours and Rivers.*





*Principal Engineer  
for Harbours and Rivers.*

*Proposed work shown in red.*





# NEW SOUTH WALES HARBOURS

## HASTINGS RIVER ENTRANCE

*Thomas Lamb*

Principal Engineer  
for Harbours and Rivers.

SCALE 20 CHAINS TO ONE INCH

G. Smith  
50ac:

Work completed to 30<sup>th</sup> June, 1902, shown in black.

Proposed work shown in red.

Chas Farrell

50ac:

J.T. Hughes

50ac:

Geo. Halliday

50ac:

Jas. Butler

40ac:

J. Killion

53ac:

RES.

SOUTH

PACIFIC

OCEAN

Crown Land

C. Farrell  
13½ac

C. Farrell  
9.3.14

R.N. King

R.N. King

R.N. King

65ac:

41ac:

ROAD

THE HASTINGS RIVER

Chs Steele

47ac:

58ac:

H. Belts

32ac:

H. Belts

20ac:

H. Belts

21ac:

J.T. Hughes

23ac:

M. Charlton

25ac:

John. T. Hughes

49a

54a

65ac:

J.T. Hughes

42a.

W.M. Clarke

49a.

WHARF

TRAINING WALL

NORTH BREAKWATER

BREAKWATER

PORT

MACQUARIE

PARK



# NEW SOUTH WALES HARBOURS

## CAMDEN HAVEN ENTRANCE

SCALE 800 FEET TO ONE INCH

Soundings in feet reduced to Low Water Spring Tides.

Work completed to 30<sup>th</sup> June, 1902, shown in black.

Proposed work shown in red.

*Thomas Lee*

Principal Engineer  
for Harbours and Rivers.

V.R.

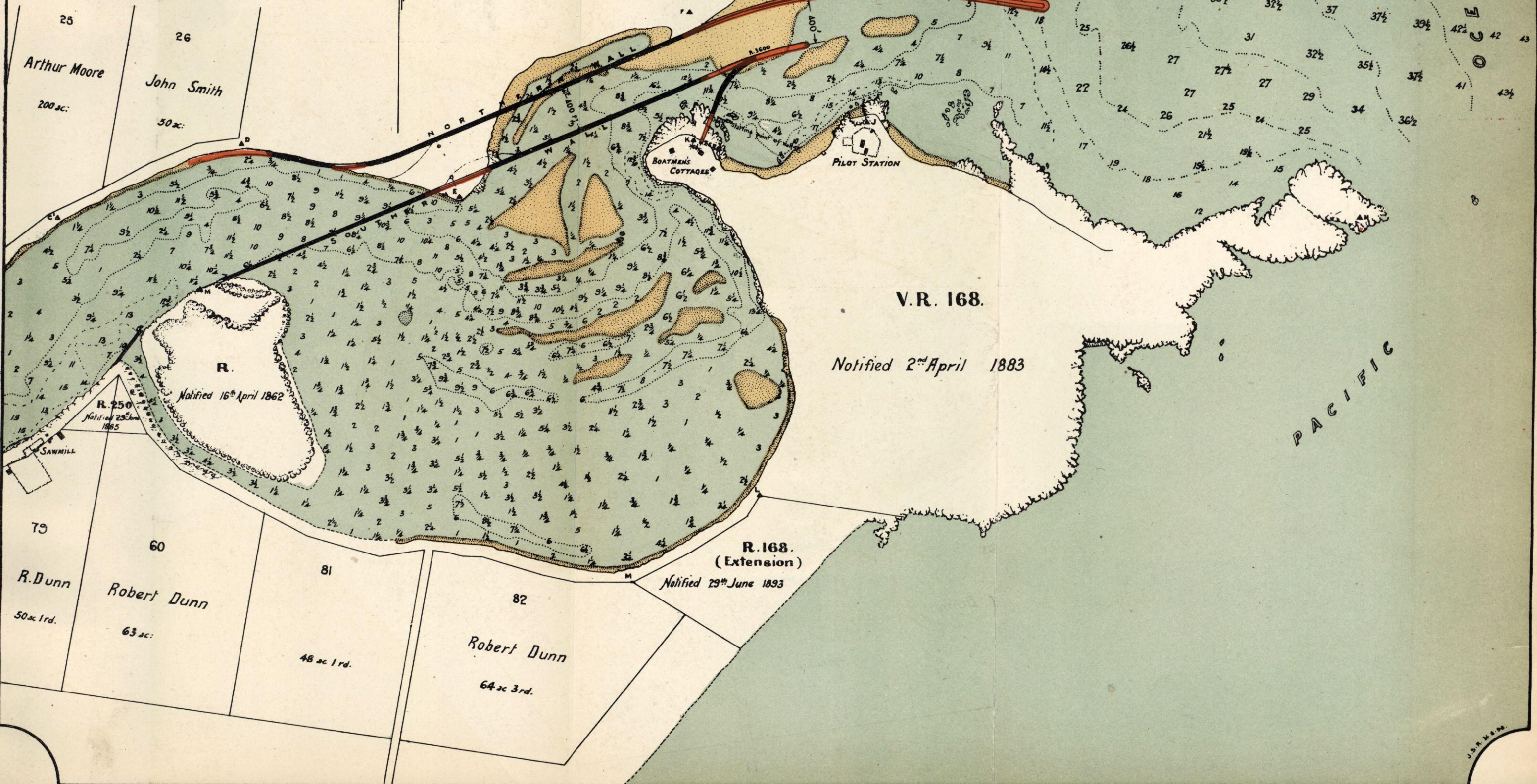
V.R. 168.

Notified 2<sup>nd</sup> April 1883

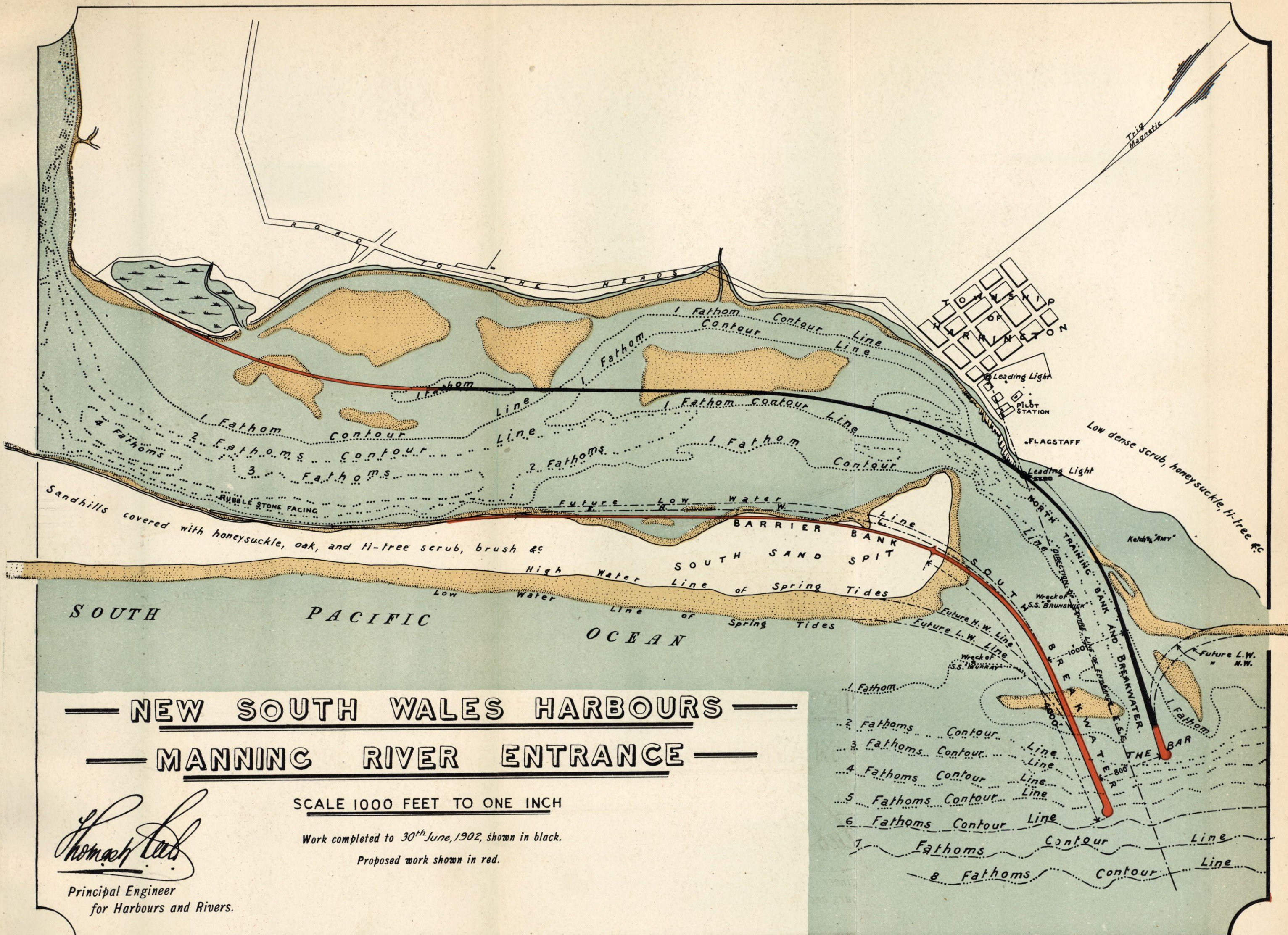
R. 168.  
(Extension)

Notified 29<sup>th</sup> June 1893

PACIFIC







**NEW SOUTH WALES HARBOURS**  
**MANNING RIVER ENTRANCE**

**SCALE 1000 FEET TO ONE INCH**

Work completed to 30<sup>th</sup> June, 1902, shown in black.  
 Proposed work shown in red.

*Thomas Lamb*  
 Principal Engineer  
 for Harbours and Rivers.

N.E.H. 29/12.97.



# NEW SOUTH WALES HARBOURS

## PORT OF FORSTER

SCALE 400 FEET TO ONE INCH

Soundings in Feet reduced to Low Water Spring Tides.

*Thomas Lamb*

Principal Engineer  
for Harbours and Rivers.

Work completed to 30<sup>th</sup> June, 1902,

shown in black.

Proposed work shown in red.

VILLAGE

OF

TUNCURRY

OCEAN

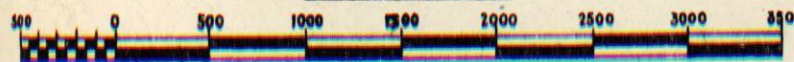


F O R S T E R



— SHEWING PROPOSED IMPROVEMENTS —

- SCALE OF FEET.

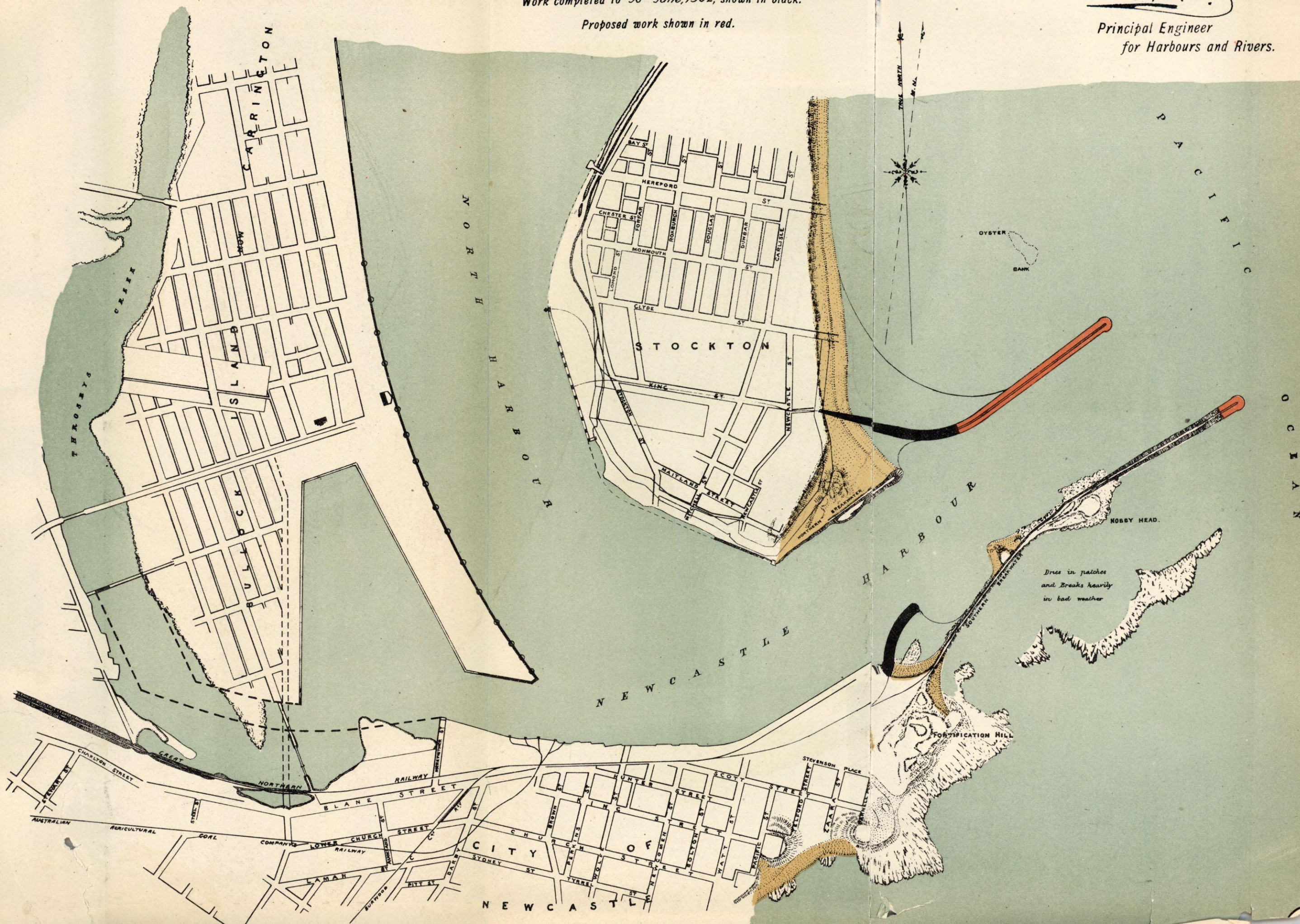


Work completed to 30<sup>th</sup> June, 1902, shown in black.

*Proposed work shown in red.*

Thomas Clark

*Principal Engineer  
for Harbours and Rivers.*







# PORT KEMBLA

SCALE 800 FEET TO ONE INCH

Range of Tides  $5\frac{1}{2}$  Ft. Neap Tides  $3\frac{1}{2}$  Ft.

J.S.R. 8-11-95.

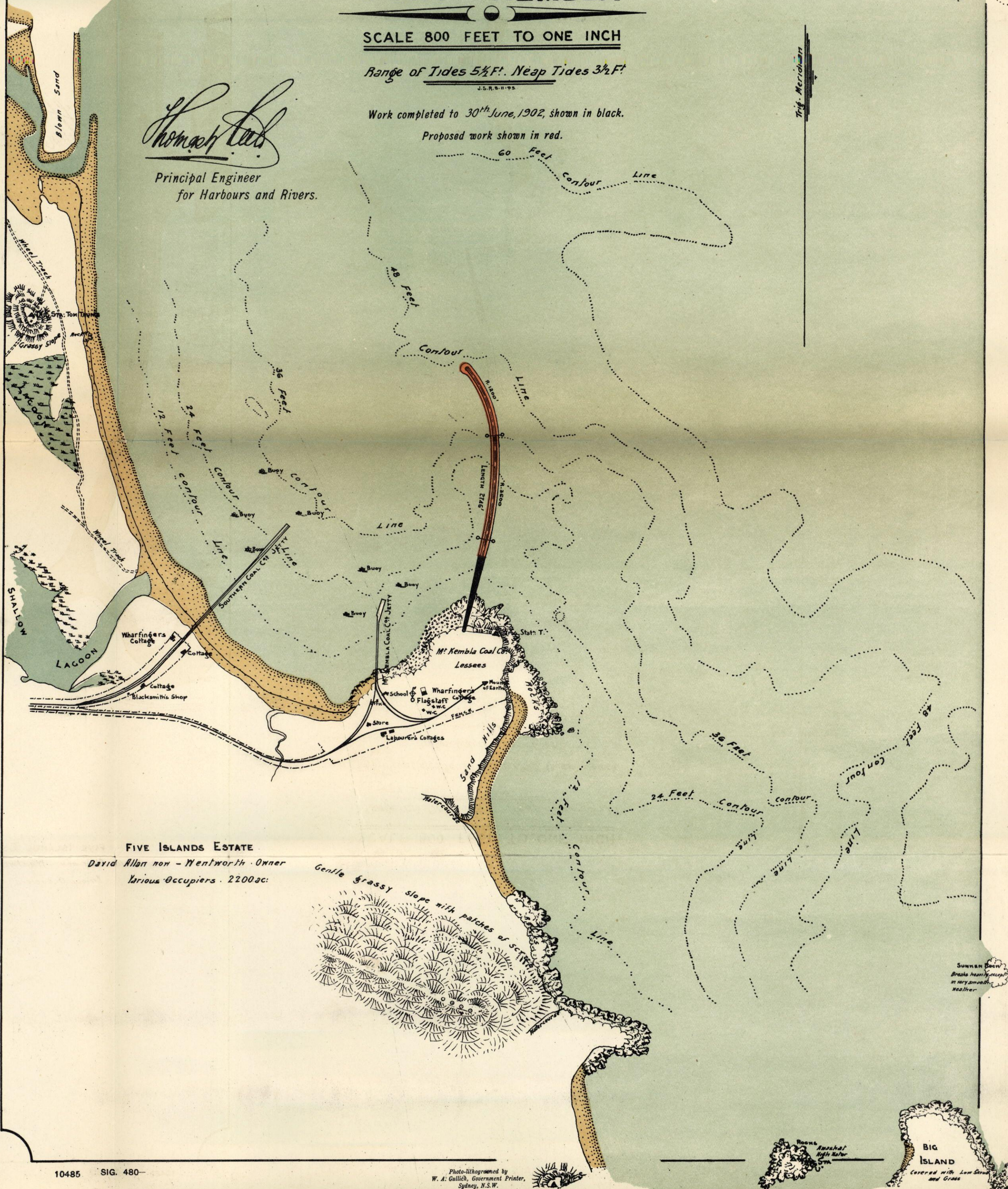
Work completed to 30<sup>th</sup> June, 1902, shown in black.

Proposed work shown in red.

*Thomas Lamb*

Principal Engineer  
for Harbours and Rivers.

Trig. Meridian



## FIVE ISLANDS ESTATE

David Allan non - Wentworth Owner  
Various Occupiers. 2200 ac.

Gentle grassy slope with patches of scrub

Sunken Boat  
Bricks heavily exposed  
in very small  
weather

BIG  
ISLAND

Covered with Low Scrub  
and Grass



# N. S. W. HARBOURS.

## BATEMANS BAY

SCALE 1200 FEET TO ONE INCH

Work completed to 30<sup>th</sup> June, 1902, shown in black.

### Note

Soundings in feet reduced to L.W.S.T.  
Plan reduced from M<sup>r</sup> Kennys survey  
taken September 1898.

Proposed work shown in red.

Range of Tides at Snapper 1<sup>st</sup> - at Batemans Bay  
Springs - 4 to 5 feet - 3 to 4 feet  
Neaps - 3 to 4 " - 3 "

*Thomas Laid*

Principal Engineer  
for Harbours and Rivers.

