

1899.
(THIRD SESSION.)

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT
OF THE
DEPARTMENT OF PUBLIC WORKS,
FOR THE
YEAR ENDED 30 JUNE, 1899.

Printed under No. 15 Report from Printing Committee, 21 December, 1899.



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THE DEPARTMENT OF PUBLIC WORKS.

(ANNUAL STATEMENT—1898-9.)

Printed under No. 15 Report from Printing Committee, 21 December, 1899.

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

Department of Public Works, 18 December, 1899.

Sir,

I do myself the honor to submit, for your information, the Annual
Statement relating to the operations of this Department during the year ended
30 June, 1899.

FINANCIAL.

The gross expenditure for the year amounted to £2,165,818 14s. 11d., of
which the sum of £813,809 11s. 5d. was provided from the Consolidated Revenue
Fund and £1,352,009 3s. 6d. from Loan Funds. This expenditure was distributed
as under :—

Summary of Expenditure, 1898-9.

Head of Service.	Revenue.	Loan.	Total.
	£ s. d.	£ s. d.	£ s. d.
Establishment*	26,366 14 0	.....	26,366 14 0
Railway Construction	2,188 11 5	177,293 12 4	179,482 3 9
Tramway Construction ... ..	.....	174,605 16 8	174,605 16 8
Harbours and Rivers	57,069 13 1	475,015 17 1	532,085 10 2
Dredge Service	78,937 18 0	.....	78,937 18 0
Country Towns Water Supply	1,464 17 6	41,324 10 1	42,789 7 7
Water Conservation and Irrigation	1,582 7 10	12,084 7 6	13,666 15 4
Government Architect	75,212 3 9	195,777 2 6	270,989 6 3
Roads and Bridges	565,009 4 11	79,059 1 7	644,068 6 6
Sewerage Construction	5,978 0 11	196,848 15 9	202,826 16 8
TOTALS	£ 813,809 11 5	1,352,009 3 6	2,165,818 14 11

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

Compared with the preceding year, these figures show an increase in Revenue Expenditure of £590 17s. 5d., and in Loan Expenditure of £305,751 1s. 7d., making together a total increase of £306,341 19s. over last year's disbursements.

The number of persons or firms, exclusive of officers and wages-men, with whom the Department had financial transactions during the year, was 5,138, while the pay vouchers dealt with totalled, after being summarised, 42,767.

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

Head of Service.	Contracts.			Wages.			Salaries.			Materials, Miscellaneous, Incidental.			Totals.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Establishment							26,366	14	0				26,366	14	0
Railway Construction	43,100	8	8	28,775	14	9	15,840	16	1	91,765	4	3	179,482	3	9
Tramway Construction	65,372	5	7	9,281	1	2	3,042	9	10	96,910	0	1	174,605	16	8
Harbours and Rivers	169,606	8	5	163,106	5	9	21,172	8	1	178,200	7	11	532,085	10	2
Dredge Service	97	16	6	50,215	12	5	3,648	0	0	24,976	9	1	78,937	18	0
Country Towns Water Supply	9,904	11	5	10,199	3	6	2,055	0	2	20,630	12	6	42,789	7	7
Water Conservation and Irrigation ...	1,093	18	9	3,471	16	2	5,004	17	5	4,096	3	0	13,666	15	4
Government Architect.....	173,378	15	7	41,224	18	2	16,523	3	7	39,862	8	11	270,989	6	3
Roads and Bridges	359,089	0	7	161,832	12	4	38,701	14	9	*84,444	18	10	644,068	6	6
Sewerage Construction	157,171	4	10	17,632	6	9	11,269	3	7	16,754	1	6	202,826	16	8
TOTALS£	978,814	10	4	485,739	11	0	143,624	7	6	557,640	6	1	2,165,818	14	11

* Includes road subsidies to Municipalities, amounts issued to Trustees, and officers' equipment and travelling expenses.

In addition to the foregoing expenditure, the Department executed works to the value of £28,813 15s. 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 5,053, of an aggregate value of £948,064 7s. 1d. They were distributed as follows :—

Head of Service.	Number of Contracts Let.	Value.
		£ s. d.
Railway and Tramway Construction	93	97,173 18 2
Harbours and Rivers	103	104,568 16 7
Country Towns Water Supply... ..	12	5,811 2 5
Water Conservation and Irrigation	3	589 19 6
Government Architect	424	180,212 8 3
Roads	4,127	315,952 0 7
Bridges	260	96,943 13 11
Sewerage Construction	31	146,812 7 8
TOTALS... ..	5,053	948,064 7 1

At the close of the financial year the number of Contracts in progress was 693, carrying liabilities to the amount of £438,920 6s. 10d.

Summarised

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

Before closing this review of the Department's financial transactions during the year, I invite attention to the following tabulated statement of the expenditure disbursed, year by year, during the period of ten and a half years, ended 30 June, 1899 :—

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
Totals ...						£12,158,878 11 2	£10,709,080 7 7	£22,867,958 18 9

These figures, which show an average annual expenditure of £2,177,900, exhibit in a striking form the magnitude of the undertakings carried out by the Department.

CONSTRUCTION.

The reports from the heads of Branches, appended hereto, set forth in detail the various works completed or in hand during the year, and supply a large amount of varied and interesting information respecting the progress and development of the Colony.

RAILWAYS AND TRAMWAYS.

The one new railway line completed and opened for traffic during the year was the Berrigan to Finlay extension, 13 miles 72 chains in length, bringing up the total mileage of existing lines as at 30 June, 1899, to 2,705 miles. The cost of this extension has been £31,653, or about £2,277 per mile.

The following lines were under construction at 30 June, 1899 :—

Tamworth to Manilla, length 29 miles 42 chains.

Moree to Inverell, length 95 miles 60 chains.

Extension to Darling Island.

The first named has since been completed and opened for traffic.

Acts have been passed sanctioning the construction of the undermentioned lines, and preparations are being made to carry out these works by means of day-labour :—

Koorawatha to Grenfell	...	...	length, 28 miles 28 chains.
The Rock to Green's Gunyah	...	„ 24 „ 52 „	
Byrock to Brewarrina	...	„ 57 „ 60 „	

The Survey Staff has been kept fully employed in making trial surveys, inspections, &c., of a number of proposed lines.

The completion and opening for traffic (on 4 October, 1898) of the Rose Bay Electric Tramway, which extends from the terminus of the Cable Tramway at Ocean-street to Rose Bay wharf, a distance of 1 mile 23 chains, single track, was reported in my previous statement ; but several improvements found to be necessary in consequence of the, at times, heavy traffic, have been carried out during the year. The cost of this tramway, including the generators, which also provide power for the Double Bay Sewerage Pumping-station, has been £19,800.

The hope expressed in my last report that the then current financial year would witness the completion of the George-street to Harris-street Electric Tramway, was not realised. It is, however, pleasing to be able to now report that this important line was completed and open for traffic on 8 December, 1899. The delays that have taken place in connection with this work have been caused by the radical change made from the original design.

The original intention was to run this tramway by means of electric power supplied from Rushcutters Bay Power-house, and the Act authorising the work was passed in September, 1896. Soon after this the Railway Commissioners, having in contemplation a scheme of converting all the tramways to electric traction, decided that the George-street to Harris-street Tramway should form only a section of one complete system. With this object in view, a sufficient area of land was secured at Ultimo, close to the Darling Harbour Station-yard, whereon could be erected buildings and machinery capable of supplying power to the extent of 20,000 horse-power. The arrangements for running the George-street line are accordingly but a small part of a large scheme for the conversion to electric traction of the whole of the existing steam and cable tramways. The magnitude and exceptional character of the works, now partially completed, are described in Mr. Deane's report, which shows that very special demands have been made upon the resources of the branch in connection with this exceptionally large electric-power installation.

IMPROVEMENT, MAINTENANCE, AND CONVENIENCE OF NAVIGATION.

The multifarious works undertaken by this branch are outlined in the accompanying report from the Engineer-in-Chief for Public Works.

It will be seen therefrom that good progress continues to be made with the schemes for improving the entrances to our northern rivers.

At the Richmond, the construction of the South Breakwater is being pushed on by night as well as by day, an electric light installation having been established for this purpose. The work already accomplished at this river entrance has practically done away with the delays to shipping that used frequently to occur in former times.

On the Clarence, the building of the Goodwood Island Training-wall and the maintenance of the Southern Breakwater have been the principal works in hand during the year. The opening out of the Woodford Island new quarry is proceeding, and, when completed, should help to materially reduce the cost of the Clarence River works.

Improvement works are being steadily carried on at all the river entrances and harbours north of Newcastle. About 600 men are constantly employed, 400 directly by the Government, and the remainder by contractors.

Dry Docks are in course of construction at the Tweed, Richmond, and Clarence Rivers, of a more substantial character than any hitherto built outside of Sydney, being excavated in rock and lined where necessary with concrete. They will be of sufficient size to take in the large dredges and tugboats, and will thus be the means of effecting a considerable saving, both in time and money, in cases where vessels would otherwise have to be towed to Sydney.

An increase is noticeable in the amount of work done in Newcastle Harbour as compared with the preceding year. Substantial progress has been made with the breakwaters and guide-wall, and the rock excavations and crushers have done good work in deepening the channels and wharf frontages.

One of the more prominent works now in progress is the construction of the "new basin." When finished the new basin will enclose an area of 90 acres, and provide some 6,000 feet of wharf frontage. A cattle-shipping wharf has already been completed, and work has begun on the construction of a coal-loading wharf which will be fitted with six hydraulic cranes.

In Sydney Harbour, demands for increased wharfage accommodation continue to come in. Contracts have been let for the construction at Woolloomooloo Bay of an additional 800 feet of berthing space with the necessary cargo sheds and stores. At Darling Island the concrete wharf wall is being pushed on, and has now been extended to a length of 1,100 feet.

In connection with the dredging operations which are so necessary in all our rivers and harbours, special attention may be drawn to the great success attending the work of the new dredge "Antleon." This dredge is unique in its design, and has more than fulfilled expectations. It will be invaluable in the work of removing the shallow sea bars which obstruct the entrances of most of our rivers.

In the South Coast District an important work has been the erection of Point Perpendicular Lighthouse, which takes the place of the old Cape St. George Light. It is fitted with a first-order dioptric revolving white light, the focal plane of which is 304 feet above high water. Quarters have been provided for a principal light-keeper and two assistants, and the total cost has been a little over £16,000.

A large

A large amount of new and repairing work has been executed at the Fitzroy Dock establishment; special mention may be made of the construction of two new tug-boats, "Phoenix" and "Dooribang," and of a wooden screw steam launch, the "Sol."

The docking facilities afforded by the Sutherland and Fitzroy graving docks have been largely availed of during the year. Including Imperial warships and the Government boats, 155 vessels, aggregating 206,230 tons measurement, have made use of the docks.

WATER SUPPLY.

The work of duplicating the 6-foot pipe-line between the Pipe Head Basin and Potts Hill Reservoir, a distance of $4\frac{3}{4}$ miles, is approaching completion.

New water supply works have been provided for the municipalities of Mudgee and Pieton, and extensive additions have been made to existing works at Cootamundra and Forbes. Schemes for supplying Kiama and Wollongong have been prepared.

WATER CONSERVATION AND IRRIGATION.

The operation of the Water Rights Act forms a noteworthy portion of the duties entrusted to the Department.

The map which forms an appendix to this report shows that the great majority of the works dealt with are in the Central and Western Divisions, being most numerous in Riverina, and in the dry districts on the Lower Lachlan, and north-west of the Darling.

The fact is often overlooked that the benefits resulting from these works, whether constructed by the Government or by private enterprise, are out of all proportion to their inconsiderable size and cost. Wanting these works, the land in many places would be practically valueless. As an instance of their great value the Willandra Weir, on the Lachlan River, constructed by the Government at a cost, including all subsidiary works, of less than £10,000, diverts water in flood time through 360 miles of channel in one of the driest districts in the Colony. The Middle Billabong Weir, although not quite completed, during a recent moderate rise in the Lachlan diverted a supply of water to a distance of nearly 100 miles. Again, the improvements carried out on the Yanko Creek, at a comparatively small cost, have resulted in providing permanent water to several hundred miles of frontage, even in the driest seasons.

The power vested in the Minister by the Act to make arrangements for the more equal distribution and beneficial use of the available supply of water is one which demands the utmost care in its exercise. Full and accurate data have to be procured and maintained respecting every river that is likely to be drawn on to any extent. Rules have also been framed under which the Minister's powers will be preserved, while at the same time protecting and encouraging private enterprise.

It is gratifying to be able to report that opposition to the granting of licenses for private works not objected to by the Department has almost ceased. The strife which raged for forty years regarding dams on the Yanko, Colombo, and Billabong Creeks,

Creeks, is practically ended. The conditions regulating the use of the waters of these creeks have been accepted by all parties concerned, and works of a higher class are now being constructed.

The severe drought which has for so long a period affected a wide area in the Central and Western Divisions has clearly shown that the equitable distribution of the available supply of water in our rivers is a question of growing importance, and on its satisfactory solution will depend, in a great measure, the extension of settlement and the development of the interior of the Colony.

Under the provisions of Section 4 of the Water Rights Act, works may be constructed by the Government for the use of landowners who are prepared to pay interest on the expenditure incurred. The utility of this section is becoming better known, and several proposals for works to be constructed under its provisions are now being dealt with.

The scheme, which was approved by Colonel Home, for the construction of a system of irrigation canals from the Murrumbidgee River, has been ready for some time to be submitted to the Parliamentary Standing Committee on Public Works. It provides for a storage reservoir of an estimated capacity of nine thousand million cubic feet of water, which would serve to keep up the supply in the river during the summer months. The estimated cost of the scheme is £650,000.

Other schemes which have occupied the attention of the Branch during the year are, the locking of the Darling River from Bourke to Menindie; the survey and estimate of a canal from the Murray River; and the survey and estimate for the diversions of an increased supply of water into Lake Cudgellico.

While I am of opinion that the importance of conserving water in the arid districts of the Colony cannot be over-estimated, I, however, cannot help thinking that the time has not yet arrived for carrying out very large schemes, involving an expenditure of many hundred thousand pounds. There is not, I think, sufficient population to warrant such works at the present time, especially when it is taken into consideration that most of the waters so conserved would have to be pumped from the canals to be used for irrigation purposes. The policy of the Department at the present stage should, to my mind, be in the direction of making small inexpensive dams, somewhat on the lines of those erected by pastoralists and others, on stock routes and other public thoroughfares, as well as in proximity to small centres of population. These dams would meet the existing and immediate demands, and induce settlement, and, in due time, would be followed up by the larger and more important works.

GOVERNMENT ARCHITECT.

Mr. Vernon reports that the past year has been a busy one, the total expenditure by his Branch—viz., £281,137 10s. 3d., including costs of services for other Departments—being greater than for any year since 1892. There has been a general improvement in building operations throughout the colonies, and the increased prices for labour and materials have no doubt contributed to the larger expenditure.

The

The new buildings completed comprise :—

					£	s.	d.
13 Police Buildings	...	...	...	Costing	13,014	14	6
5 Post Offices	...	...	...	„	10,591	3	10
7 Court-houses	...	...	...	„	9,457	11	6
New Gate Lodge, &c., University	...	...	...	„	1,952	0	0
Bourke Lands Office	...	...	...	„	3,735	6	5

The more important buildings under construction at 30 June, 1899, were:—

Custom-house	...	...	...	...	Additions and alterations.		
General Post Office	...	...	...	...	„		„
Treasury Buildings	...	...	...	...	„		„
Coast Hospital, Little Bay	...	...	...	...	„		„
Government House	...	...	...	...	„		„
Kenmore Hospital for Insane	...	...	...	...	New building.		
Water and Sewerage Board's Office, Newcastle					„		
Botanic Gardens—Buildings, &c.	...	...	...	...	„

Extensive works in the way of remodelling, improving, and adding to the first-class gaols of the Colony, which were rendered necessary by the altered methods of treating prisoners, have also been carried out during the year. Many of them have been provided with complete electric light installations.

At Kenmore Hospital for Insane, all the buildings intended to be erected for the present on the women's side of this institution have been completed, and a contract has been let for the erection of the corresponding buildings on the men's side.

In connection with the large amount of urgent repairs to public buildings and furniture, which require to be executed often with great expedition, the permanent workshop and store attached to this branch have proved eminently useful and economical.

Two comprehensive schemes for the erection of additional office accommodation—firstly, on land at the junction of Phillip and Hunter Streets, and, secondly, on the vacant land at the junction of Phillip, Bridge, and Young Streets,—were prepared and submitted to the Parliamentary Standing Committee on Public Works. The Committee reported against the first scheme, and decided to postpone the second until the Under Secretary for Lands and myself reported on the existing accommodation in the Works, Lands, and Mines Offices.

In view of the early accomplishment of Federation, Mr. Vernon points out that for the credit of the State it will be desirable to have all those buildings, such as Post Offices and Custom-houses, that will be transferred to the Federal Government, placed in good repair before such transfer takes place. The funds hitherto placed at his proposal for the repair of public buildings generally are quite inadequate for the purpose, and it will be necessary to give this matter early and earnest attention.

ROADS AND BRIDGES.

The Principal Assistant Engineer, Roads and Bridges, furnishes a concise summary of the valuable work done by this branch towards the opening up of the country for settlement.

During the year 1,139 miles of new roads were cleared or wholly or partially formed; 33 new bridges were opened; 33 old structures were replaced; and 2,573 culverts, aggregating $4\frac{1}{3}$ miles in length, were constructed.

The following table shows the total roads mileage and the aggregate length of bridges and culverts at 30 June in each year since 1896, and the total expenditure of the Branch for the same periods:—

Date.		Roads. Mileage.	Bridges.		Culverts.		Total Expenditure for the year.*
			No.	Length in feet.	No.	Length in feet.	
30 June, 1896 ...	...	38,952	2,771	260,519	31,073	461,578	£ 776,400
30 June, 1897 ...	...	39,874	2,842	267,964	32,671	486,907	676,210
30 June, 1898 ...	...	41,040	2,881	272,996	34,731	511,393	616,097
30 June, 1899	...	42,179	2,914	275,994	36,158	535,342	645,569

* Includes expenditure on new bridges completed and in progress.

It will be seen that the length of roads and bridges under control of the Branch continues rapidly to increase. There has been a slight increase in expenditure as compared with the preceding year, but it is essential, in order to keep the public roads of the Colony in fairly good trafficable condition, that large additions be made to the at present limited funds at the disposal of the Branch. The applications for grants amount to millions of pounds every year, and the most rigid economy has to be exercised in the attempt to meet reasonable claims.

The monthly average number of workmen regularly employed by the Branch was 1,046, while an additional 566 received temporary and intermittent employment. The number working under contractors averaged 5,684.

The contracts let during the year numbered 4,387, of an aggregate value of £412,895. Considering the large number of contracts dealt with, it is pleasing to report that in no instance has a contractor exercised his right of appeal to legal process, and in very few cases has it been found necessary to reverse at Head Office the decisions arrived at by the officers in charge of the works.

The advantage of linking the South Coast tourist district with the Blue Mountains by road has been recognised for some time. Last year the first step was taken by the construction of a road through the Macquarie Pass, connecting the coast with the southern table-lands. This year the Wombeyan Caves are being made accessible, and extensive improvements are being arranged for on the existing route

from Jenolan to Mount Victoria. The final step will be the opening of a road between the two great cave centres of the Colony, and when this has been done a tourist route of over 300 miles by road and rail, passing through magnificent scenery almost its entire length, will be available.

In providing access to new country, as yet sparsely populated, but giving fair prospects of development, the policy of the Department has been to select routes capable of permanent adoption and gradual construction as the traffic expands. In the early years roads were not infrequently constructed on such steep gradients that it has been found necessary to wholly or partially abandon them. In all new works every effort is being made to avoid this error, and, in addition, on long-established roads, the steep lengths are being gradually cut out by deviation; and it is hoped by this policy to gradually improve the traffic routes of the Colony and at the same time reduce the cost of maintenance.

On the Northern rivers a problem presents itself which has had the serious attention of the Branch. As nearly all the rich cultivated land adjoins these rivers, while that more remote is low-lying, swampy, and unsuitable for road-making, many of the leading arteries of traffic necessarily run along the river banks. The soil is friable, and its continual erosion has been a source of great expense. In many places the roads have been partly, or wholly, destroyed by floods, and by ordinary wave-action, resulting from steamer traffic, &c. Either protective works or costly resumptions have, therefore, from time to time been found necessary. Hitherto each case of erosion has been dealt with as it occurred, and consequently in some cases the quickest method of reopening traffic has had to be resorted to irrespective of its permanent efficiency. It has long been recognised that the problem should be dealt with in a more systematic manner, and steps are now being taken in that direction. Last year a small sum of money was provided on the Estimates for river-bank protection, and a commencement has been made in its expenditure on lines which it is thought will combine the maximum of efficiency with the minimum of cost. The importance of this work cannot be over-estimated.

In previous reports attention has been repeatedly drawn to the necessity for legislation dealing with the width of tires, and I desire again to urge immediate action. I have no hesitation in saying that, if broad tires were made compulsory, many thousands of pounds could be saved in maintenance every year, and the light traffic would be immensely benefitted without unduly interfering with the interest of waggon owners. On the many roads throughout the Colony on which metalling is impracticable, a few heavy loads, run on narrow tires, are sufficient to ruin them for lighter vehicles, and the many have to suffer for the mistaken prejudices of the few. It has been proved beyond question that on most soils broad tires are an advantage, even to the heavy traffic itself, as the roads are not rutted, and greater loads can be carried with equal tractive power.

In my report for the year ended 30 June, 1896, I called attention to the bad state of the roads in the vicinity of country towns. Most, perhaps all, country municipalities are burdened with an excessive area, and their chronic want of funds debars them from undertaking any work of road repairs except on the short sections passing through the more thickly-inhabited streets. The result is that a long stretch of good road, under control of the Department, is spoilt by a few miles of bad road
lying

lying within a municipality, and much irritation and delay are caused thereby. It is clear that under existing conditions municipalities are unable to maintain their portions of the roads in proper repair, and a remedy for this evil is urgently called for.

The Assistant Engineer for Bridges (Mr. de Burgh) reports the completion of 71 new bridges at a cost of £59,585 16s. 7d., 38 of which replaced previously existing structures which had become unfit for traffic. The total length of the 71 bridges is 9,791 feet, consisting of 265 timber beam spans, and 14 timber truss spans.

The more important bridges completed were the following :—

The renewal of the timber viaduct in approach to the iron bridge over the Murrumbidgee River at Gundagai, having a total length of 2,719 feet, and consisting of 78 timber beam spans :

Union Bridge over the Murray River at Albury, having a total length of 323 feet, consisting of two timber truss spans of 110 feet each, and three timber approach spans :

Bridge over the Bega River at Bega, having a total length of 433 feet, consisting of four 90-foot timber truss spans, and two 35-foot timber approach spans.

At the close of the year under review there were in course of construction 37 new bridges, estimated to cost £89,950. Of these, the more important are—

Kempsey Bridge, the completion of which may be looked for early in 1900 ; this bridge consists of four timber truss spans of 154 feet each, on cylinder piers, with 305 feet of approach spans, the width of deck being 22 ft. 6 in. throughout :


Dunmore Bridge, Paterson River, which will be completed at an early date :

Hinton Bridge, Paterson River, which completes the line of communication between Morpeth, Hinton, and northwards *via* Phoenix Park, in connection with the bridge over the Hunter River at Morpeth :

Murwillumbah Bridge, Tweed River, the construction of this bridge being rendered necessary by the opening of the railway from Lismore to the Tweed, which has its terminus on the south side of the river, opposite Murwillumbah.

In connection with the Hinton and Murwillumbah bridges, attention may be called to the improved machinery for raising the lifting span, by the adoption of a system of wire ropes in lieu of shafting overhead, a considerable saving in the cost of construction being effected thereby.

Three other bridges in course of erection deserve special notice on account of certain features in their design.

Queanbeyan Bridge, which should be finished early in 1900, is, with the exception of the bridge over the Lachlan at Cowra, the first erected in New South Wales of the composite type, in which steel is used in the bottom chords, and iron-bark for the compression members of the truss. I am of opinion  economy in maintenance may be expected from the use of this type of truss, as experience with timber trusses shows that the lower chords, which are the most difficult portion of the

the

the structure to replace, are, when constructed of timber, the first parts to decay. The Queanbeyan Bridge has three of these composite truss spans of 91 feet each; but longer spans of the same type will probably be found efficient and economical for the wider rivers.

At Moruya Bridge an important departure has been made in the use of cast-iron piles sunk by the hydraulic process. The old bridge was a very light timber structure, 850 feet in length, erected in 1875, and now quite past service. The river at this place is a sandy estuary, the depth to rock from high water varying from 9 feet at the shore to 46 feet in the centre. It was considered advisable that the piers of the new bridge should be of a permanent character, but the depth to rock made the sinking of cylinders a very costly matter. Piers consisting of three cast-iron piles, each 12 inches in diameter, and having a specially formed shoe $18\frac{3}{4}$ inches in diameter, have been adopted, the piles after fixing being joined together with steel bracing. These piles are sunk to a depth of 20 feet by means of a powerful jet of water, which, entering the top of the hollow piles and passing through orifices in the shoe, displaces the sand and causes the pile to sink to the required depth.

There can be little doubt that the success which has attended the operation of sinking the foundations of the Moruya Bridge will enable many similar cases to be dealt with more effectively and cheaply than hitherto.

Cockle Creek Bridge is also worthy of notice by reason of the use there of cylinders built on the Monier system instead of cast-iron (whereby a saving of £264 5s. was effected on two small piers alone), and of Monier coverings to protect the timber piles from the attacks of the cobra. The system, which is fully described in the report and illustrated by plate, is very efficient and capable of extended use.

Existing bridges to the number of 642 were overhauled and repaired during the year for an expenditure of £46,107 6s. 2d. All repairs have, as was the case in the previous year, been carried out by the Branch without the intervention of contractors, and further experience of the system has confirmed the anticipations of its suitability. The largest work in the way of repairs undertaken during the year was the restoration of traffic on the Denman Bridge, Hunter River, a great portion of which had been destroyed by floods. Three new piers were constructed (the most important being an iron cylinder pier) and the damaged superstructure rebuilt at a cost of £3,707 12s. 2d.

The duty of inspecting all timber exported to the order of the New Zealand Government, and also certain Harbour Boards, devolves upon this Branch; and whatever views may be held as to the advisableness of sending away large quantities of our best timbers, it is desirable that all such exports should be properly inspected and classed.

In the month of August, 1898, the New Zealand Railway Department placed orders in the Colony for the supply of about 4,000,000 superficial feet of hewn and sawn timber, and about 35,000 lineal feet of round piles (£43,500 worth), and at the request of the New Zealand Government arrangements were made for inspection before shipment by the officers of this Branch. In addition to the services of one inspector (Mr. Kane) sent to the Clarence from New Zealand, this work has required the undivided attention of three officers, as well as the constant supervision of the Department's

Department's timber inspector. Up to 30 June the following had been supplied :— 25,000 lineal feet of round piles, 1,250,000 superficial feet of squared and sawn timber, the money value of which, delivered in New Zealand, is £15,000, and it is satisfactory to note that the New Zealand Government state that their views have been met as to the quality of the timber sent forward.

In connection with the new steam ferry punt to carry vehicular traffic at Grafton, condensing engines are being used for the first time, and it is hoped that the public will appreciate the absence of the noise caused by the exhaust in the high-pressure engines in use heretofore.

At Ryde some experiments which have been conducted in the use of oil-engines for the propulsion of ferry-punts are so far satisfactory as to warrant their more general adoption.

Two steam-launches of a somewhat novel design have been built for passenger traffic and towage purposes on the Hunter and Clarence Rivers. These launches are each double-ended, 70 feet long, 15 feet beam, 5 feet depth, with hardwood keel and Oregon side-planking. They are propelled by compound surface-condensing engines, with 8-inch and 16-inch cylinders, 9-inch stroke. The engines indicate 50 horse-power, at 300 revolutions per minute. The boilers are return tubular boilers, 6 feet long, 7 feet diameter, wholly constructed of steel, and designed for a working pressure of 115 lb. per square inch. Propellers are fitted at either end of each launch, 3 ft. 3 in. diameter, 4 ft. 6 in. pitch, which drive the boat at a speed of $9\frac{1}{2}$ knots per hour. An electric light installation is fitted up, supplying side and mast-head lights, in addition to the lights for deck and engine-room. The launches are provided with coal-bunkers, water-tanks, and cabin for the crew, and have seating accommodation for more than 100 passengers each.

I have commented at some length, in this review of the Roads and Bridges Branch, not only on the work done, but also on the means adopted to carry it out, with the object of showing that the necessity of keeping in touch with modern improvements and adopting the best methods is not lost sight of.

In a new country no improvement in railway or water communication can be availed of to its full extent unless the roads, which feed these lines of communication, advance with them. In this Colony the bridges and ferries form a most important part of the roads. When, by the adoption of improved methods, such as those described in connection with the composite bridge at Queanbeyan, bridges at Hinton and Murwillumbah, the Monier system at Cockle Creek, and the hydraulic sinking at Moruya, present or ultimate economy is effected without loss of efficiency, the usefulness of the Department in opening up the country is increased in a corresponding degree.

SEWERAGE CONSTRUCTION.

It will be seen from the exhaustive report of Mr. Davis, Engineer-in-Chief for Sewerage Construction, that good progress has been made during the year by this Branch. The total expenditure on works completed and in progress amounted to £202,826 16s. 8d., while drawings were prepared for thirty-nine contracts representing works valued at £307,414.

The

The year under review marks the completion of the main northern branch of the Western Suburbs system, terminating in Leichhardt near the eastern shore of Long Cove, and of the greater portion of the main western branch, extending from Premier-street, Marrickville, to Bland-street, Croydon. The last section of the western branch, which provides for the sewerage of Burwood, Strathfield, and parts of Ashfield and Concord, is now in course of construction.

The sewers draining the north-western and south-eastern slopes of the Municipality of Balmain have also been completed.

The drainage of Kensington and West Randwick is being provided for by an extension, to the north-west corner of the racecourse, of the intercepting sewer which discharges into the sea at Coogee.

The outfall works at Willoughby Bay, which dispose of the sewage by a process of precipitation and filtration, have been in active operation for some months past, and the results obtained have fulfilled expectations.

Contracts are now in progress for sewers which will serve the greater part of the southern slopes of Mosman and the whole of Neutral Bay district. Designs for the sewerage of Middle Harbour slopes are being prepared, and tenders will shortly be invited for the construction of the first section.

It has been decided to treat the Willoughby and Chatswood sewage by means of septic tanks and Dibden filters, and the plans for the necessary works are in hand. Meantime active progress is being made with the outfall and reticulation sewers. These should be available at an early date for carrying away the slop-waters of the borough to a point where their accumulation will no longer be a menace to the health of the residents.

Treatment works on the septic tank and Dibden filter principle at Rookwood Asylum are nearly completed.

The reticulation of Manly is in a forward state.

The Quarantine Station grounds are being sewered, and, when the works now in progress are completed, the anxiety which exists with respect to the sanitary condition of the station will be removed.

During the year under review the attention of the Branch has been largely concentrated on the low-level area comprised in the foreshores of the harbour stretching between Double Bay and Balmain. The drainage of Double Bay on the Shone system is completed; that of Balmain is well under way, while contracts have either been let or are in preparation for the drainage of the foreshores stretching between these two points. Tests have been made as to the efficiency of the Shone system at Double Bay, and satisfactory results obtained.

It is gratifying to be able to report that all the municipalities in the metropolitan area, with few exceptions, have, or are in a position to have, the reticulation pipes connected with main sewers. In Strathfield, Homebush, and Concord the main sewers are under construction; those for Five Dock, Canterbury, Enfield, and Drummoyne are in the initial stage of design. It is, however, safe to predict

predict that within the ensuing twelve months all the more thickly-populated districts throughout the whole of the metropolitan area will be enjoying the benefits resulting from the completion of a comprehensive and efficient sewerage system.

A scheme of sewerage for the Illawarra suburbs is being prepared, and will on an early date be submitted for the consideration of the Councils interested.

The scheme designed for Newcastle has been referred to the local authorities.

Newcastle Pasturage Reserve, which comprised an area of 7,782 acres of swampy land, has been successfully drained.

The drainage of some of the more important country towns has occupied the attention of the Branch, and several schemes are now either being constructed, designed, or reported upon. It is found that towns possessing a proper water supply soon feel the necessity of some system of drainage to carry off the waste water.

LAND VALUATION.

The subjoined tabulated statement shows the amounts paid during the year in settlement of claims in respect of land resumptions :—

Branch.	Compensation.	Interest.	Costs.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Roads and Bridges	2,024 13 10	106 19 4	161 6 5	2,292 19 7
Harbours and Rivers	76,769 9 2	11,143 16 4	323 19 0	88,237 4 6
Government Architect	3,189 4 0	70 8 8	57 13 10	3,317 6 6
Railway and Tramway Construction.	18,506 2 4	1,284 4 8	645 12 6	20,435 19 6
Sewerage	3,103 1 6	181 8 10	170 9 6	3,454 19 10
Water Conservation and Country Towns Water Supply.	213 3 7	11 16 10	17 12 4	242 12 9
Totals	£ 103,805 14 5	12,798 14 8	1,376 13 7	117,981 2 8

The above expenditure shows a heavy increase—£76,871—over that of the preceding year, which is mainly accounted for by the large payments that required to be made on account of the lands resumed in connection with the electric power-house at Darling Harbour.

The report of the Government Land Valuer submits in a concise form the voluminous land transactions dealt with during the year. The principal matters occupying his attention have been the exchanges and resumptions of lands in connection with the new railway lines.

WATER AND SEWERAGE BOARDS.

The annual reports of the Metropolitan and Hunter District Water and Sewerage Boards have already been submitted to you and laid before Parliament. Both reports record extensive developments and improvements in the Water, Sewerage, and Drainage systems. The financial results are fairly satisfactory, and there is good reason to expect that within a comparatively short time the large amount of capital invested in these schemes will yield a highly remunerative return.

GENERAL.

In conclusion, I desire to bear testimony to the energy and zeal displayed by the staff—professional, clerical, and general—in the performance of their varied and important duties, and to express my obligations for the valuable assistance rendered by all in carrying on in a satisfactory manner the enormous business of this Department.

ROBT. HICKSON, M. Inst. C.E.,
Under Secretary for Public Works and Commissioner for Roads.

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Map of New South Wales Railways.
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Railways and Tramways.

I.

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

Department of Public Works, Railway Construction Branch,

Sydney, 28 August, 1899.

Sir,

I have the honor to report upon the work carried out in the Railway Construction Branch during the year ended 30 June, 1899:—

RAILWAY SURVEYS.

The following work was carried out by the Railway Survey Office Staff, from the 1 July, 1898, to the 30 June, 1899:—

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

Narromine to Coonamble.
 Coonamble to Bomera.
 Culcairn to the Upper Murray.
 Wellington to Werris Creek.
 Thirlmere to Burragorang.
 Casino to Tenterfield.
 Glen Innes to South Grafton.
 Guyra to South Grafton.
 Fairfield to Smithfield and Prospect.

The following inspections and examinations of trial and permanent surveys and one existing tramway were made:—

Temora to Gunbar.
 Byrock to Brewarrina.
 Wyalong to Hillston.
 Parkes to Peak Hill and Narromine.
 Narrabri to Walgett and Collarenebri.
 Koorawatha to Grenfell (two inspections).
 Bullock Creek to Bulbodney.
 The Rock to Green's Gunyah.
 Tarrawingee Existing Tramway.

The whole of the field work, and a portion of the drafting, &c., in connection with three permanent and four trial surveys were completed and three trial surveys were in hand but not finished, at the close of the year. For particulars see Appendix.

The plans and sections of the following proposed railways have been under review in connection with the preparation and revision of the estimated cost of construction:—

Bogan Gate to Bulbodney.
 Dubbo to Parkes.
 Belmore to Liverpool.
 Moree to Inverell (Deviation *via* Kelly's Gully).
 Grenfell to Wyalong.

The necessary drawings, viz., working plans and sections, proclaimed and police district plans, books of reference, land resumption notices, tracings and heliographic copies thereof, have been prepared for the 2nd and 3rd parts of the Moree to Inverell line, and the lithographic copies in book form of the working plans and sections have been completed.

The drawings in reference to the authorised railways, Koorawatha to Grenfell, Byrock to Brewarrina, and The Rock to Green's Gunyah, were, at the close of the year, in a forward state.

A considerable quantity of mathematical work has been done, in calculating the bearings and distances of the boundaries of land resumptions, and connections to same, for descriptive purposes, many of the boundaries being very irregular.

The officers of the Railway Commissioners Branch have been supplied with plans and compilations of county and parish maps, for use whilst inspecting and reporting on projected railways, proposed station sites, &c.

The drafting staff, during the period under review, has barely been sufficient to cope with the current office work, and the arrears of necessary, but less urgent, work have consequently not been diminished.

The staff of the Railway Survey Office consisted on an average of 29 officers, divided as follows:—
 1 Principal Assistant Engineer, 1 Supervising Engineer, 11 Surveyors, and 16 Draftsmen.

The following tables show the aggregate of each field operation carried out by the field staff during the past year in connection with the trial and permanent surveys:—

TRIAL SURVEYS.

Preliminary Exploration.	Preliminary Traverse.		Preliminary Levels.		Staking.		Levels.		Check Levels.		Cross Levels.		Details.	Inspection.
m.	m.	c.	m.	c.	m.	c.	m.	c.	m.	c.	m.	c.	m.	c.
1,840	608	58	425	42	458	28	471	65	113	70	89	11	269	70
														492

PERMANENT SURVEYS.

Staking.		Levels.		Check Levels.		Cross Levels.		Details.	Inspections and Examination.
m.	c.	m.	c.	m.	c.	m.	c.	m.	c.
221	70	128	14	116	32	84	74	157	16
									110*

* Includes Tarrawingee Tramway, 49 miles.

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.	
Bogan Gate to Bulbodney	75 5	29 May, 1898	10 Dec., 1898	2	81 76	81 76	Includes deviations.
Narrabri to Walgett, <i>via</i> Eurie		17 Feb., 1899	.....	2	65 40	.....	" "
Narrabri to Collarenebri.....		29 Dec., 1898	.....	1	61 60	.....	" "
Temora to Gunbar.....	135 18	12 April, 1898	10 Jan., 1899	2	123 58	139 18	" "
Wellington to Werris Creek ...	29 23	7 Feb., 1899	.....	1	29 20	.....	" "
Wyalong to Hillston	111 74	21 June, 1898	2 June, 1899	1	95 74	111 74	" "
City extension.....	2 68	5 April, 1899	23 May, 1899	2	2 68	2 68	" "

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.	
Koorawatha to Grenfell	28 28	1 June, 1898	29 April, 1899	2	19 70	28 28	
The Rock to Green's Gunyah ...	24 52	28 May, 1898	18 " 1899	2	11 58	24 52	
Byrock to Brewarrina	57 60	1 Feb., 1899	21 June, 1899	2	57 60	57 60	

RAILWAY CONSTRUCTION.

The following works have been in progress during the year ended 30 June, 1899:—

Parkes to Condobolin.

The capital expenditure during the year on this line, which had been opened for traffic on 1 March, of the previous year, was only a small amount; the total to date covered by this report being £117,433 7s. 6d., or about £1,871 per mile.

Nevertire to Warren.

The capital expenditure for the year on this line, which had been opened for traffic during the previous year, was £12,142 7s. 5d., making the total to 30 June last, £36,706 0s. 10d., or about £2,954 per mile.

Berrigan to Finley.

This line, which was in course of construction, generally by day labour, under the supervision of Mr. F. H. Small, when the previous year closed, was opened for traffic on 30 September, 1898.

In addition to the small contracts mentioned in last year's report, the following were let in 1898-99:—Trucking yards to C. Baker; pumping machinery to Bennie, Teare, & Co.; engine shed to C. Baker.

The expenditure for the year was £15,210 14s., and the total expenditure, £31,653 6s. 10d., or about £2,277 per mile.

Tamworth to Manilla.

The main line, including a steel bridge of three 60 feet spans with timber approaches over the Peel River, is being carried out under contract by Mr. T. Williams, entered into 29 November, 1897. Some small contracts were entered into during the year under report, as under:—

Trucking yards ... ..	...	...	...	...	...	J. Allibone.
Station buildings ... ..	...	...	...	...	...	J. Allibone.
Sleepers ... ..	...	...	...	...	...	J. Adams.
Pumping machinery ... ..	...	...	...	...	...	Bennie, Teare, & Co.
Pumping engine house ... ..	...	...	...	...	...	J. Allibone.

On the 30 June the bridges, including the Peel River Bridge, were nearly complete, and the road laying was practically finished; the station work and buildings were well advanced; and the water supply works at Manilla started.

The expenditure during the year was £10,289 18s. 10d., and the total to 30 June, £43,200 4s. 7d.

This line is expected to be open for traffic in September.

Extension of Railway to Darling Island.

That part of the construction which was let to Messrs. Bromley & Holloway in 1897, with the considerable additions made to it, was completed in September, 1898. A large portion of the work has been done by day labour, under the supervision of Mr. F. E. Wickham. This consisted of the levelling of about 16 acres of resumed land, making of road approaches, fencing, draining, and the ballasting and laying of nearly 2½ miles of sidings.

Two small contracts for sleepers and blue metal were let.

The footbridge, giving access across the yard to the ferry wharf, and some other small works, remain to be done.

The expenditure for the year was £14,204 4s. 6d., and the total to date, £18,686 0s. 11d.

Moree to Inverell.

This line which is, as regards the general works, being carried out by day labour under Messrs. W. Hutchinson and F. H. Small, was begun early in the year under review. Contracts for sleepers and bridge timbers having been already let, as referred to in last report.

The earthworks are practically complete for about half the length from Moree towards Inverell. The timber bridges are built for about 33 miles from Moree, and pile driving up to Gravesend, while material is being delivered for some distance beyond Warialda. Some of the material for the Gwydir River Bridge piers have been ordered.

The road has been laid to about 33 miles from Moree, including station sidings, except those of Moree.

The following contracts have been let in connection with this line—

241,000 sleepers to various contractors.

Ironwork to A. H. Brown.

Hardwood timber to six firms.

Piles to five firms

Gwydir Bridge steel superstructure—Supply and erection to Messrs. Mountney & Co

Sheep and cattle yards to J. Nevlan.

Station buildings to E. Rowland.

Wrought iron tank to Pope, Maher, & Co.

Pumping plant to Bennie, Teare, & Co.

Byrock to Brewarrina.

Tenders were accepted for 147,430 sleepers.

Permanent-way Material.

Tenders were called for 10,000 tons of 60-lb. steel rails and fastenings from America, and these, as well as the 15,000 tons referred to in the previous report, were under delivery.

Staff.

The officers employed in the supervision of the above works in the field were three supervising engineers, one resident engineer, and four assistants, and one cadet.

Inspectors and sub-inspectors and time-keepers have been employed as required.

The office staff consisted of one supervising engineer, one chief draftsman, and ten draftsmen.

TRAMWAY CONSTRUCTION.

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

George-street and Harris-street Electric Tramway, 3 m. 20 c. (double track); erection of Car House, Power House, and Machinery in connection with the conversion scheme of the City Tramway system, and the George-street and Harris-street Tramway; and the Rose Bay Electric Tramway of 1 m. 23 c. (single track) has been completed, and was opened for traffic on 4 October, 1898.

Permanent surveys have been completed and working plans and sections prepared for the tramway from Falcon-street to the Gore Hill Cemetery, a distance of 1 m. 15 c. (single track).

Surveys are in progress for the extension from George-street to Miller's Point, *via* Dawes Point, 56 chains, and the Neutral Bay Tramway, 70 c. (single track).

Trial surveys, estimates, and reports have been made of the following proposed tramways:—

	Miles.	Chains.	
Rose Bay to Watson's Bay	3	20	Single Track
Manly to Narrabeen and Newport	12	0	"
Liverpool-road to Ashfield Station	0	7	"
St. Peter's Bridge to Cook's River	2	0	"
Botany to La Perouse	3	50	"
Leichhardt to Callan Park Asylum	0	50	"
Willoughby Terminus to Gordon-road, Chatswood	1	3	"
" Smith-street, Willoughby	0	40	"
Enfield to Bankstown, <i>via</i> Pipe Line and Dean-street	7	30	"
Military-road to the Spit	1	30	"
Enfield to Mortlake	4	20	"

Rose Bay Electric Tramway.

This tramway commences at the terminus of the King-street and Ocean-street Cable Tramway, at Ocean-street, and runs along the New South Head road for a distance of 1 mile 23 chains (single track), terminating at the Rose Bay Wharf.

The following list gives particulars of the contracts in connection with the construction of this tramway:—

Contract.	Contractors.
Plastic bonds	Noyes Bros.
Generators	H. H. Kingsbury & Co.
Driving gear	J. J. Wood.
Accumulators	Gibson, Battle, & Co.
Overhead material	Noyes Bros.
Supply of poles	Stanley R. Booth.
Permanent way	W. Ewart & Co.
Switchboard and connections	H. H. Kingsbury & Co.
Accumulator room	G. T. Savage.
Feeder cables and junction boxes	J. O. Callender.
Waiting room	J. M. Wilson.
Ironwork for poles and brackets	Joyner Bros.

The Edison-Brown Plastic Bond was used for the permanent way.

The

The generators are installed in the Rushcutter's Bay Cable Tramway Power House, and consist of two of the multi-polar belt-driven type, designed to give an output of 150 kilowatts each, viz., 270 amperes at 550 volts. The size of these generators was decided after giving due consideration to the power, which, by arrangement, was to provide for working the air compressor pumps of the Double Bay Sewerage Station. They were manufactured by the General Electric Company of Schenectady, and supplied and erected by H. H. Kingsbury & Co.

The driving gear for the generators, which is driven by belting off the main engines by counter shafting, was manufactured by Messrs. Hudson Brothers (in liquidation, J. J. Wood, contractor), the link belting being manufactured and fixed by Messrs. Ludowici and Sons, of Sydney.

The accumulators are of chloride (the R type) with a capacity of 220 ampere hours. They are placed in a corner of the engine-room of the Rushcutter's Bay power-house, partitioned off with wood and glass construction, and forming a room 22 ft. x 22 ft., the erection of which was let to G. T. Savage. The plates, which number 240, are in glass boxes and ranged on benches in double tier.

The switchboard and connections were supplied and erected by H. H. Kingsbury & Co. The switchboard, which is 8 ft. 8 in. wide by 7 ft. 11 in. high, consists of five panels of slate with enamelled fronts moulded in frames of angle-iron. Raised platforms are provided at the front and back, with a door at each end.

The overhead wiring for single line, including the erection of the poles, was carried out by day-labour, the trolley wire being of the figure 8 section, equal to No. 000 B. and S. gauge, and of specially hard drawn copper of 98 per cent. conductivity (Mathieson's standard).

After starting the traffic, which proved very large at times, it was found desirable to put in extra loops and a double overhead conductor.

The overhead material, supplied by Messrs. Noyes Bros., is of Billings and Spencer's make, and the poles are of tallow-wood. The brackets and other ironwork are similar to those used at Willoughby, and were supplied by Messrs. Joyner and Sons.

The permanent way, the laying of which was entrusted to W. Ewart & Co., contractors, consists of 83 lb. grooved girder rails in 30 feet lengths laid on sleepers, twelve sleepers to each 30 feet of track. The ballast is blue metal throughout, with clay binding; the rail-joints are fitted with Pullen's patent joint-boxes. Three crossing-loops and one loop at the terminus at Rose Bay wharf have been provided.

Owing to the exceedingly sharp curvature of a portion of the road, a deviation, involving the forming of a bank comprising some 9,250 cubic yards of earth, was carried out.

The feeder cables and junction-boxes were supplied by Mr. J. O. Callender, contractor.

The feeder cables start from the terminal box at the power-house. They consist of one feeder for the tramway, and one for the sewerage pumping. They are conveyed in a trench under the footpath to the terminal pillar near Ocean-street, from which point to the pumping station at Double Bay the cable is carried overhead.

The junction-boxes, which are of cast-iron and provided with an inner watertight cover and heavy outer cover are placed about 9½ chains apart. The terminals are mounted upon bases of porcelain.

The cost of this tramway, including £3,000 to provide the power required for the Double Bay sewerage pumping station, was £19,800. It was opened for traffic on the 4 October, 1898.

George-street and Harris-street Electric Tramway.

The route of this tramway was described in last year's report.

The following list shows the contracts in connection with the construction of this tramway, and the progress at the close of the financial year:—

No.	Contract.	Contractor.	Remarks.
1	Plastic bond	Noyes Bros.	Completed.
2	Mannesmann poles	Foreign Agency Co.	"
3	Steam-engines and generators	H. H. Kingsbury & Co.	Being erected.
4	George-street permanent-way	Wilmott and Morgan... ..	Practically completed.
5	Harris-street	J. McSweeney	"
6	Tracks to car-house entrance	H. H. Kingsbury & Co.	Completed.
6a	Points and crossings, King and George Streets	H. W. Peabody & Co.	"
7	Steam boilers	G. and C. Hoskins	"
8	Boiler settings and mountings	J. Stewart & Co.	Work proceeding.
9	Switchboard and connections	H. H. Kingsbury & Co.	Material delivered.
10	Accumulators	W. Adams & Co.	"
11	Overhead material	Various orders	"
12	Power-house and offices	J. Stewart & Co.	Completed.
13	Cast and wrought ironwork for poles	J. J. Wood	"
14	Car-house	J. Stewart & Co.	"
15	Travelling cranes	H. W. Peabody & Co.	"
16	Feeder cables and Junction-boxes	Noyes Bros.	"
17	Circulating and feed pumps	H. P. Gregory & Co.	Material delivered.
18	Water conduit	J. McSweeney	Practically completed.
19	Portable offices	C. Shuker	Completed.
20	Excavation, power-house site	C. McClure	"
21	Chimney	Phippard Bros.	"
22	Return feeders	C. Kolling	"
23	Material for cross-bonding	W. Hoskins & Sons	"
24	Trolley-wire	C. Kolling	Erection proceeding.
25	Steel columns and crane girders	R. L. Scrutton & Co.	Completed.
26	Steam piping, high pressure	Peabody & Co.	Material delivered.
27	Store and repairing-shop	T. E. Spencer & Co.	Work proceeding.
28	Station wiring (cables)	Indiarubber G. P. & T. W. Co.	Material delivered.
29	Steam piping, low pressure	H. Vale & Sons	"
30	Covering for steam piping (large)	W. Adams & Co.	"
30a	" " (small)	E. L. Renwick & Co.	"
31	Office and W.C. accommodation, Circular Quay	Eaton Bros.	Tenders called for.
32	Small valves, high pressure	J. Milne	Drawings in hand.

All the permanent-way has now been completed, with the exception of the cross-overs and balloon hoop at Circular Quay, where the Railway Commissioners, on further consideration, found it necessary to make some alterations in their original requirements to allow of more accommodation for shunting purposes.

The rails which are being used on this tramway are of the girder type, 83 lb. per yard, 30 feet in length, and of specially hard steel. They are laid on concrete, 10 inches deep, and kept to gauge with wrought-iron tie-rods. All joints rest on bed-plates, and are provided with fish-plates with six bolts and Pullen's Patent Joint Boxes.

On opening up the streets it was found that certain lengths of the concrete-bed was sound and strong enough for the tramway. In these places it was therefore made use of. For the greater part of the length, including the whole of Harris-street and from Queen's Wharf to Bathurst-street, the concrete was too thinly laid in the first instance to afford the required support.

As the wood-blocking outside the limits of the tramway at several places along the route was badly worn and decayed, it was found necessary to arrange for the entire renewal of some portions, and the extensive patching of others. This work, which to a large extent was not anticipated, as the extent to which the wear had progressed was not noticeable, caused a serious additional expenditure.

Outside Electrical Work.

The poles have, with the exception of those required at the Redfern Junction and approach, been erected, and all the underground electrical work has been completed.

The Edison-Brown Plastic Bond, the materials of which were supplied by the contractors, Messrs. Noyes Brothers, is practically completed. Particular attention has been paid to the bonding as this tramway will act as the trunk line for the whole of the Western Suburbs, and consequently there will be a heavy return current. As a supplementary return a copper cable, having a sectional area of 45 square inches, is laid between each track from Circular Quay to Redfern. Each cable is connected to alternate rails on either side so that every car will be connected direct to the cable. These cables are laid against the inner rails of their respective tracks and are cross connected every 60 yards, the connection between the cable and inner rail being made with a special gun-metal clip-bolt. At the intersection of Liverpool-street and George-street nine cables are taken direct underneath, the Callender-Webber casing carrying the return current to the Power house at Ultimo, a distance of 900 yards. There are also from Engine-street two cables, and from Harris-street along William Henry-street four cables which carry the return current.

The copper cables for the return feeders were supplied by Messrs. Koebling & Sons, and consist of No. B.S.W.G. soft drawn copper wire of not less than 100% conductivity (Matthiessen's Standard) stranded together with a suitable lay.

The trolley wire, supplied by Mr. Charles Kölling, was manufactured by J. A. Koebling & Sons, of Trenton, N.J., U.S.A. The sectional area is 167,803 circular miles (equal to No. 000 B. & S.) hard drawn copper of 100% conductivity (Matthiessen's Standard) of figure 8 section. This wire is about to be erected.

The time has now arrived when the generating plant may be described in detail.

Power plant.

The original intention was to supply the power for the George-street and Harris-street Tramway from Rushcutters' Bay, the estimated cost of doing this as given to the Public Works Committee was—

Power	£11,150
Feeders	6,000

No provision was made for additional building, it being considered that the accommodation provided in the existing building was ample.

The power required to work the George-street and Harris-street tramway, taking into consideration the Railway and Harris-street traffic alone, is estimated at about 540-h.p. Forty cars were to be provided, so that taking thirty-six cars as being constantly in active service during the busy time of the day, this would mean an average of about 15-h.p. per car. There is sufficient reserve power in the engines at Rushcutters' Bay to provide for this, so that, by adding electric generators driven by a system of shafting, the whole could have been economically arranged. The proper provision to make would be three generators of, say, 300-h.p. each, so as to provide a small surplus and one machine in reserve. But even suppose it had been found more suitable to leave the reserve power at Rushcutters' Bay for the Rose Bay or other extensions, engines and generators of a total of 900-h.p. could be provided at a cost of £9,000, leaving the balance to defray the cost of two additional boilers and other contingencies that might arise.

The George-street and Harris-street Tramway Act was assented to on 14 September, 1896.

Soon after this the Railway Commissioners came to the conclusion that as the conversion of the whole of the tramways to electric traction was contemplated it would be wise to make George-street and Harris-street Tramway part of the complete system and commence the installation of the power at one spot. The matter was discussed between the Minister for Works and the late Chief Commissioner, with the result that it was in the end decided to secure land in Ultimo, in contiguity to the Darling Harbour Station-yard, where eventually power to the extent of 20,000-h.p. could be laid down as well as accommodation for 200 cars.

As part result of the conference between the Minister for Works and the late Chief Commissioner, it was decided that the work of providing buildings and power for the conversion of the tramways should be carried out by the Railway Construction Branch. It was eventually decided that this power and accommodation on this line should be provided, and that the work should be carried out by the Railway Construction Branch.

The power plant provided consists of four sets of Allis-Corliss horizontal cross compound engines, manufactured by the E. P. Allis Co., of Milwaukee, U.S.A., each direct coupled to an 850-k.w. generator of the General Electric Company's manufacture, with the necessary surface condensers of the Wheeler type, together with Blake air-pumps, feed-pumps, and circulating-pumps. The high-pressure steam piping and valves are manufactured by the Crane Manufacturing Company of U.S.A., and the low-pressure by Messrs. H. Vale and Sons, of Sydney.

The high-pressure cylinders are 26 inches in diameter, and the low-pressure 48 inches, and the stroke of the engine 48 inches, which work with a boiler pressure of 130 lb. per square inch and at a speed of 100 revolutions per minute. The valves are of the Reynolds-Corliss type, both steam and exhaust being made in a single piece free from springs or other complications. The main bearings are 20 inches in diameter and 36 inches long, fitted with top, bottom, and side shells, and lined with babbitt metal. The pistons are fitted with followers, bull ring, and packing ring, so designed that they can be examined without removing the pistons from the cylinders. Between the high and low-pressure cylinders a receiver with suitable traps is fixed in the basement below the engine-room floor. Between each two sets of engines a Wheeler condenser, having a cooling surface of 3,400 square feet, also a Blake air-pump of the latest twin-marine type, are fixed. The engines are so piped that any one of the four can be connected to either condenser and air-pump, this arrangement being much more economical, both in first cost and working, than fitting a separate condenser to each engine. The fly-wheel is 20 feet in diameter and weighs 45 British tons. It is built up out of mild steel plates, and constructed in the latest American practice. All the connecting bolts are of steel, and the wheel is keyed on to shaft by small steel keys.

The generators, of which there are four, were built by the General Electric Company of America. They are of the multipolar type, and designed to be operated at a speed of 100 revolutions per minute, and to give an output of 850 kilowatts each. Each generator is capable of delivering 1,545 amperes at 600 volts for short periods of time.

The switchboard, which is 40 feet long and 7 feet 6 inches high, has been delivered by the contractors, H. H. Kingsbury & Co., and the work or erection is about to commence. It will be placed on a gallery 90 feet long overlooking the engine-room 14 feet above the floor. Provision has been made so that the switchboard can be extended as may be required.

The fourteen steam-boilers, each measuring 16 feet long by 7 feet diameter, of 300-h.p., were manufactured by Messrs. G. and C. Hoskins. They are arranged in two batteries of seven each. All have been delivered and tested, and seven have been placed into position. The boiler setting and mountings are now being carried out by J. Stewart & Co., contractors.

The three centrifugal circulating-pumps, and the two plunger feed-pumps, supplied by H. P. Gregory & Co., contractors, were manufactured by the Blake Manufacturing Company of New York, and are about to be erected.

The centrifugal pumps, which are electrically driven, are made entirely of salt-resisting composition, and are capable of raising water up to a level of 36 feet with a discharge and suction nozzle of 12-inch diameter.

Each pump is coupled direct to two general electric motors. The motor armatures are of the standard G.E. 1,000 railway motor type. Each motor is complete with hand-starting rheostat and rheostat for regulating fields within 10 per cent.

The electrically-driven triplex feed-pumps are each capable of delivering 135 British gallons per minute against a boiler pressure of 140 lb. per square inch. The discharge and suction nozzles of this pump are 4 and 5 inches respectively.

In order to expedite the completion of the power-house, a contract for the supply of the steel columns and crane girders was let to Messrs. R. L. Scrutton & Co., and the work has been completed.

The contract for the high-pressure steam piping has been let to Messrs. Peabody & Co., and that for the low pressure to Messrs. Vale and Sons. All the material for both contracts has been delivered at the power-house, and is now being erected by day labour.

The covering for steam piping has been let in two contracts; that for the large pipes to W. Adam & Co., and for the small, to E. L. Renwick & Co. This work will be commenced almost immediately.

The accumulators, which were supplied by W. Adams & Co, contractors, and manufactured by the Electrical Power and Storage Company, have been delivered, and are about to be erected. These are of the E.P.S. (K type) cells. There are two batteries of 300 cell each in glass boxes. The capacity of the larger battery at a discharge rate of 80 or 90 amperes hours, and the smaller at from 15 to 20 amperes, will be 125 amperes hours. Spare parts will be provided for each battery.

Car-house.

The tracks to the car-house entrance, which were supplied by H. W. Peabody & Co., contractors, were manufactured by Wharton & Co., of Philadelphia; these have been placed into position and the work completed, this portion of the work being carried out by day labour.

The contract for the car-house has been let to J. Stewart & Co., contractors, and the work has been completed.

This car-shed, which measures 275 feet by 130 feet, and is all under one roof of the saw-tooth design lighted from the south, has twelve tracks with pits between the rails to enable cleaners and repairers to get at the rolling gear. This building also contains quarters for motor men and conductors. There is accommodation, under cover, for 108 full-sized cars, and the building can be further extended to contain an additional seventy-two cars.

Rolled joists are fixed the full length of the three bays to carry travelling cranes, and both the entrances and back opening are fitted with steel spring-roller shutters.

The contract for the Store and Repairing Shop has been let to Messrs. T. E. Spencer & Co., contractors.

This building, which measures 171½ feet by 43 feet and adjoins the car-house at the rear, has under its roof, also of the saw-tooth design, a store 36 ft. x 40 ft., workshop 90 ft. x 40 ft., armature winding room 30 ft. x 40 ft., drying-room 10 ft. x 40 ft., and a smithy 14 ft. x 40 ft. This work is being carried on with all possible speed by the contractor.

Power-house.

The contract for the excavation to the power-house site was let to C. M'Clure, contractor, and has been completed.

The erection of the power-house and offices is being carried out by J. Stewart & Co., contractors. This building, which is 200 ft. by 100 ft., can, if required, be extended to accommodate an additional 15,000-h.p., sufficient land being available.

The

The contract for the chimney has been let to Messrs. Phippard Brothers, contractors, and the work has been completed. This stack is 200 feet above the flue level and contains some 890,000 bricks, and is capable of carrying off the furnace gases produced up to 5,000 h.p.

The contract for the conduit from the boiler-house to Darling Harbour has been let to Mr. Justin McSweeney and the work is practically completed.

This conduit, which is 950 feet long, has been built for supplying water for condensing purposes.

The rolling-stock, consisting of forty motor cars and trailers, is being supplied by the Railway Commissioners at a cost of £23,200.

It will be seen (from the foregoing) that the arrangements for supplying power to the George-street and Harris-street Electric Tramway, forms only a small part of a large scheme for converting the Sydney Steam Tramways to electric traction, and for the supply of electric power not only to them but also to the conversion of the North Sydney cable tramway, and the supplying to the whole system on that side of the harbour of electricity.

The staff employed during the year under review on Tramway construction, inclusive of office work, comprised—

- 1 Principal Assistant Engineer,
- 2 Resident Engineers,
- 2 Assistant Engineers,
- 1 Engineering Assistant,
- 7 Draftsmen,
- 6 Inspectors,
- 6 Sub-Inspectors.

The work in connection with the George-street and Harris-street Electric Tramway being of quite a special nature, some difficulty has been experienced in obtaining suitable engineers and draftsmen to design and carry it out. The staff employed during the year has been insufficient to cope with the amount of work required of it, so that several matters of minor importance have been made to stand over. In spite of temporary assistance by the loan of officers from other branches all have been kept going at high pressure.

H. DEANE,

Engineer-in-Chief for Railway Construction.

II.

RETURN of Expenditure on Public Works by Railway Construction Branch from 1 July, 1898, to 30 June, 1899.

Work.	When commenced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If unfinished, amount of expenditure to 30 June, 1899.	If finished, actual amount of expenditure.
		£ s. d.	£ s. d.	£ s. d.
Albury to the River Murray	1899	33 6 8	33 6 8	.....
Berrigan to Jerilderie	1895	2,975 0 7	.....	42,166 15 1
Berrigan to Finley	1897	15,209 14 0	.....	29,652 6 10
Byrock to Brewarrina	1899	411 6 9	411 6 9	.....
City Extension	1883	780 10 6	5,766 2 2	.....
Cootamundra to Gundagai	1881	1,338 6 1	.....	269,422 19 5
Cootamundra to Temora	1899	5 13 9	.....	5 13 9
Dubbo to Bourke	1899	303 12 10	303 12 10	.....
Goulburn to Cooma	1881	50 7 8	.....	1,374,699 4 10
Goulburn to Wagga	1899	137 4 3	137 4 3	.....
Homebush to Waratah	1881	759 19 10	.....	2,146,237 6 11
Inverell to Glen Innes	1899	1 0 0	.....	1 0 0
Kiama to Nowra	1883	21 15 0	.....	361,427 2 7
Lismore to Tweed	1883	34 16 0	.....	903,151 10 9
Land Resumptions	1896	1,001 18 4	5,000 18 8	.....
Land Claims—Old lines	1898	425 12 0	425 12 0	.....
Murrumburrah to Blayney	1899	493 13 7	493 13 7	.....
Molong to Parkes and Forbes	1883	478 8 0	.....	383,310 0 0
Marrickville to Burwood Road	1890	53 8 0	.....	186,559 1 2
Moree to Inverell	1897	74,943 6 9	78,210 14 1	.....
Narrandera to Jerilderie	1897	595 4 1	595 4 1	.....
Narrabri to Moree	1883	10,494 11 4	.....	142,612 0 11
Nevertire to Warren	1897	12,142 7 5	.....	36,706 0 5
Parkes to Condobolin	1895	449 13 1	.....	117,431 8 6
Rock to Green's Gully	1899	1 3 9	1 3 9	.....
Rookwood Cemetery Extension	1895	0 7 6	0 7 6	7,106 17 0
South Grafton to Glen Innes	1883	29 19 10	11,818 13 4	.....
St. Leonards to Milson's Point	1895	15 0 0	.....	344,477 16 11
Sydney to Wollongong and Kiama	1899	238 3 9	238 3 9	.....
Trial Surveys (a)	1899	14,581 14 6	.....	.....
Tamworth to Manilla	1897	39,286 6 6	72,196 12 3	.....
Salaries, Equipment, Establishment Salaries, Increase cost of living, Allowance to Officers	1899	2,188 11 5	.....	.....
Services of other Departments	1899	4,987 7 11	.....	.....
Total	£	184,469 11 8	175,632 8 2	6,344,967 4 11

(a) For details see Statement attached.

DETAILS of Expenditure on Trial Surveys from 1 July, 1898, to 30 June, 1899.

Work.	Expenditure from 1 July, 1898, to 30 June, 1899.	Work.	Expenditure from 1 July, 1898, to 30 June, 1899.
	£ s. d.		£ s. d.
Byrock to Brewarrina	1,452 14 11	Narrabri to Pilliga	3 3 0
Bogan Gate to Bulbodney	1,492 0 2	Narrabri to Walgett, <i>via</i> Eurie.....	874 12 7
Bomera to Coonamble	28 13 7	Narrabri to Collareendabri	701 13 10
Cobar to Wilcannia	113 2 2	Narromine to Coonamble	57 17 0
Coolamon to Ariah	33 6 8	Parkes to Narromine	30 12 4
Culcairn to Upper Murray	77 17 4	Rock to Green's Gunyah	2,220 11 4
Coonamble to Werris Creek	15 10 0	Temora to Hillston	7 15 9
Darling Island	67 8 6	Temora to Gunbar	2,050 0 7
Dubbo to Coonamble	130 6 6	Tenterfield to Casino	91 3 6
Dubbo to Parkes	81 10 0	West Maitland to Taree	4 7 6
Dubbo to Werris Creek	4 1 10	Woolabra to Collareendabri	12 0 0
Fairfield, <i>via</i> Smithfield, to Prospect.....	0 4 4	Wyalong to Hillston	1,343 8 4
Guyra to South Grafton	143 7 4	Wellington to Werris Creek	424 15 11
Grenfell to Wyalong	318 12 6	Young to Grenfell	7 8 10
Koorawatha to Wyalong	328 14 11		
Koorawatha to Grenfell	2,359 13 11		
Mudgee to Coonamble	88 19 4		
		£	14,581 14 6

RETURN of Expenditure on Tramway Construction from 1 July, 1898, to 30 June, 1899.

Work.	When com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If unfinished, amount of expenditure to 30 June, 1899.	If finished, actual amount of expenditure.
		£ s. d.	£ s. d.	£ s. d.
Ashfield to Drummoyne	1890			12,985 5 11
Alterations to Car-house, North Sydney	1897	520 1 3	1,970 6 10	
Alexandria to St. Peters	1892			1 10 0
Bondi Extension	1889			12,919 4 11
Balmain to Gladstone Park	1891			3,008 12 0
Balmain to Drummoyne	1891			2 3 4
Balmain to Forest Lodge	1890	5 13 0		25,036 11 11
Botany to La Perouse	1890			9 6 10
Bourke-street, Botany	1891			8 18 0
City Cable	1890			96 15 3
Conversion Scheme	1897	71,158 8 9	72,026 7 4	
Campbelltown to Appin	1892			5 11 0
Day-street	1893			25 4 7
Dawes Point to Miller's Point	1899	75 8 0	75 8 0	
Darling-street, Balmain	1896			2 10 0
Erskine and King Streets	1892			88 5 1
Electric Trams	1892			496 17 4
Five Dock to Abbotsford	1892			5,533 3 2
George and Harris-street Electric Tramway	1898	*92,274 3 10	143 234 4 10	
General Charges		32 12 1		3,694 11 0
Gore Hill	1898	184 0 3	184 0 3	
Hunter-street to Circular Quay	1894			3 10 0
King-street to Ocean-street	1891	2 11 4		186,748 14 6
Kensington Extension	1893			252 2 6
Leichhardt to Five Dock	1889			19,823 14 0
Lane Cove Road	1891			42,653 0 1
Market-street to George-street Post Office	1896			45 6 0
Marrickville to Dulwich Hill	1899			7,297 17 6
Military Road, North Sydney	1892			17,023 18 5
Military Road to the Spit	1894			456 7 4
Mitchell Road to Waterloo	1892			7 5 0
Mossman's Bay	1894			9,496 11 3
Merewether to the Beach	1894			1 15 0
North Shore	1889			129 9 11
Newcastle-Plattsburg	1889			54 5 5
Newcastle-Merewether	1890			15,559 14 4
Newcastle-Tighe's Hill	1890			19,361 19 9
Newcastle-City	1890			15,679 9 1
Newcastle-Adamstown	1894			218 17 7
Newtown-Cook's River	1890			12,533 17 4
Newtown-St. Peters	1898	141 8 4		141 8 4
Neutral Bay	1896	489 9 9	504 10 9	
Ocean-street, Woollahra	1890			3 15 0
Paddington	1890			498 17 2
Parramatta-Dural	1891			10 15 6
Rose Bay Electric	1894	6,940 8 3		19,871 1 10
Rose Bay to Watson's Bay	1899	55 10 5		55 10 5
Redfern to Moore Park	1890			18,557 9 3
Regent-street	1892			803 13 5
Redhead to Belmont	1894			5 5 0
South Head and Watson's Bay	1890			192 7 9
Stockton to Waratah	1892			1 10 0
Transmission of power to North Sydney	1899	880 9 1	880 9 1	
Waverley Extension	1889			4,028 2 2
Woolwich to Field of Mars	1889			331 4 11
Willoughby Extension	1896	1,845 12 4		16,321 14 8
Yass to Yass Railway Station	1889			23,170 7 11
Yass Bridge	1889			5,645 10 1
		£	174,605 16 8	218,875 7 1
				500,960 18 9

* £8,901 10s. 5d. paid from Vote of £50,000, 61 V. 43-

TOTAL Expenditure on Railway and Tramway Construction to 30 June, 1899.

Year.	Railways.	Tramways.	Year.	Railways.	Tramways.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1857-8	51,467 6 0	.....	1880	1,430,042 15 0	29,008 19 5
1859	73,659 7 11	.....	1881	1,652,978 16 6	108,026 14 8
1860	210,687 0 2	.....	1882	1,695,070 13 3	190,979 0 7
1861	250,017 12 7	.....	1883	2,111,057 9 2	200,835 18 7
1862	248,245 7 10	.....	1884	2,871,684 6 10	105,308 18 10
1863	311,787 8 5	.....	1885	2,489,776 12 7	64,657 17 6
1864	348,707 11 8	.....	1886	2,048,706 13 5	88,509 18 7
1865	356,234 7 11	.....	1887	1,275,118 15 11	49,509 4 11
1866	494,105 7 8	.....	1888	660,885 16 0	.....
1867	536,327 1 5	.....	1889	257,022 14 1	5,546 12 6
1868	538,480 16 5	.....	1890	151,788 11 10	25,453 14 5
1869	444,361 2 11	.....	1891	601,507 17 8	82,808 19 4
1870	436,756 12 11	.....	1892	970,030 10 0	83,260 11 5
1871	282,215 17 7	.....	1893	849,184 13 4	133,094 12 0
1872	134,014 8 3	.....	1 Jan., 1894, to 30 June,		
1873	81,063 6 8	.....	1895	474,763 6 10	116,357 11 1
1874	348,180 18 4	.....	1895-6	208,154 8 5	6,562 2 2
1875	471,895 4 10	.....	1896-7	185,366 14 11	12,140 1 4
1876	647,272 5 3	.....	1897-8	164,756 16 8	80,016 16 8
1877	589,439 19 1	.....	1898-9	184,469 11 8	174,605 16 8
1878	793,351 4 7	.....		
1879	946,380 2 6	15,227 10 8	Totals.....	£28,877,077 15 0	1,571,911 1 4

SUMMARY of Expenditure on Railway and Tramway Construction during year ended 30 June, 1899.

	£ s. d.
From Loan Funds	351,899 9 0
„ Consolidated Revenue	2,188 11 5
„ Services of other Departments	4,987 7 11
	£359,075 8 4

Year.	Loans.	Revenue.	Services of other Departments.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1896-7	187,556 2 2	1,516 8 11	8,434 5 2	197,506 16 3
1897-8	227,335 3 10	3,746 16 11	13,691 12 7	244,773 13 4
1898-9	351,899 9 0	2,188 11 5	4,987 7 11	359,075 8 4
	£ 766,790 15 0	7,451 17 3	27,113 5 8	801,355 17 11

Report of the Engineer-in-Chief for Public Works.

III.

Sir,

Public Works Department, 3 November, 1899.

I have the honor to forward herewith an outline statement of progress made on the various works under my control during the year ended 30 June, 1899.

The report deals with the works and services under the following heads:—

1. Works for the Improvement, Maintenance, and Convenience of Navigation, including the Dredge Service.
2. Water Supply—(a) Metropolitan; (b) Country Towns.
3. Water Conservation, Irrigation, and Drainage.
4. Works not comprised under the above heads.

(1) WORKS FOR THE IMPROVEMENT, MAINTENANCE, AND CONVENIENCE OF NAVIGATION.

For convenience and system in describing the works along the coast included under this head, they are here taken in their order, commencing at the northern extremity of the coast line:—

Tweed River.

The rocks at the entrance to the eastern channel were removed by blasting during November, and some wreckage was blown up, the total cost being about £136.

A dry dock, 107 feet long x 42 feet wide x 7 feet deep at low water, is being constructed by contract at Terranora Creek, very fair progress being made. £1,355 7s. 10d. has been paid to date, the total cost, including probable extras, being estimated at £5,000. It is intended primarily for the use of dredges and other Government plant.

The sand pump dredge "Actor", which has been continuously engaged deepening and widening the channel from No. 5 to No. 2 wall, has during the past year dredged and deposited on shore 365,250 tons of sand at a cost of 1.71d. per ton, and the grab-dredge "Alpha" has cut channels through the various flats and shoals of the main river and tributaries. The "Alpha's" output has been 42,649 tons; the cost 4.21d. per ton.

A small amount of snagging has been done, and some repairs carried out to light-keeper's quarters, wharfs, &c., at a cost of £80.

Byron Bay.

Sundry repairs have been effected to the jetty and crane, and the goods shed was taken down and re-erected at a more suitable site, the cost of these works being £167.

The moorings were overhauled, and an additional set laid on the southern side at a cost of £280.

Richmond River.

North Breakwater.—This breakwater has been extended 242 feet, the tip-head being now 2,920 feet from high-water mark. The quantity of stone used was 37,290 tons, costing £6,923 13s. 3d., or 44.56d. per ton.

South Breakwater.—This breakwater has been extended 407 feet, the tip-head being now 6,553 feet from high-water mark. The quantity of stone used was 59,250 tons, costing £11,347 9s. 3d., or 45.96d. per ton.

South Training-wall.—Several subsidences which took place in this wall have been repaired, 2,998 tons of stone being used at a cost of £550 10s. 7d., or 44.07d. per ton.

Riley's Hill Quarry.—101,840 tons of stone have been quarried and loaded into punts at a cost of £10,219 11s. 8d., or 24.08d. per ton.

Two 10-ton cranes have been added to the plant at this quarry, and also an air-compressing machine for working the drill.

Work on the north breakwater was suspended on 13th April, it having been decided to concentrate all efforts in extending the south breakwater so as to check the inroads of sand which make round its end during southerly weather, and since 1 May work on the south breakwater has been carried on at night by electric light as well as during the day.

New Channel.—The work of removing the patch of indurated sand in the new channel has been proceeded with during the year, the material being broken up with dynamite, lifted into punts by dredges "Alcides" and "Zeta," and deposited behind the sand spits above Ballina, the expenditure on this work being £4,560 0s. 6d. The "Alcides," at a cost of 5.38d. per ton, lifted 83,490 tons, and the "Zeta" 28,980 tons of blasted material, cost per ton 6.44d.

An average of 100 men have been employed on the above works in connection with the improvements to the entrance of the Richmond River.

The construction of a dry dock at Riley's Hill was commenced on the 10 May. This work is being done by day-labour, and the dock is to be of the same dimensions as those now being constructed under contract on the Tweed and Clarence Rivers.

The site has been stripped to formation level, £298 8s. 4d. having been expended to date. An average number of twenty-eight men have been employed.

Removal

Removal of Rocks in Channel at Woodburn.—The work of removing these obstructions was commenced in March. The rock was first broken up with dynamite, and about 230 tons of the broken material has been lifted and conveyed in punts to Buckendoon, where it is used to protect the river bank. £681 16s. 6d. has been expended on this work, and the bulk of the material has yet to be lifted.

Snagging.—Work has been done at the following places to the amounts set opposite:—

	£	s.	d.
South Arm	1,341	18	4
North Arm	334	9	9
Dungarubba Creek	0	10	0
Leycester Creek	31	4	6
Bungawalbyn Creek	151	5	7
Wilson's Creek	47	11	8
Sandy Creek	135	0	0
	2,041	19	10

The work of constructing fascine training-walls in the South Arm was discontinued at end of November, the plant being then removed down river.

Training-wall, North Creek Canal.—A small training-wall was constructed at the northern entrance to the North Creek Canal in order to prevent shoaling there; 1,519 tons of small stone have been used at a cost of £152 13s. 9d.

New Wharfs.—The contractor for the construction of a wharf at Dungarubba commenced work in the beginning of June. One payment has been made amounting to £69 15s. 2d.

A wharf has been built by day-labour at the foot of the new road just below Oakey Creek, on the South Arm, at a cost of £96 0s. 9d.

A loading-place has been made near Tintenbar, on Emigrant Creek, 783 tons of quarry refuse being used. This work was carried out by day-labour at a cost of £117 1s.

A loading-place was made at Chilcott's Reserve, Duck Creek, at a cost of £34 0s. 7d.

Repairs to Wharfs.—Several small repairs were done to the various wharfs on the river, the total cost being £25 7s. 9d.

Repairs to Plant.—An average number of ten mechanics and three labourers have been continuously employed repairing dredges, tugs, cranes, drills, &c., fitting up new machinery, and installing electric light. The floating-plant has also been slipped and thoroughly overhauled. Dredging throughout the year has been carried out on the South Arm by the grab dredge "Mu," 51,045 tons having been lifted, at a cost of 3'40d. per ton, and principally at Duck Creek the "Lambda" dredged 15,478 tons; the cost was 7'28d. per ton.

Clarence River.

Goodwood Island Training-wall.—During the year, 81,708 tons of stone have been put in this wall, at a cost of 44'23d. per ton. The wall has been extended 2,725 feet, making the total length 5,550 feet.

Maintenance, Southern Breakwater.—2,213 tons of stone, at a cost of 39'08d. per ton, have been used in the maintenance of the southern breakwater.

Maintenance, South Training-wall.—66 tons of stone, costing 34'66d. per ton, have been used in the maintenance of the south training-wall.

New Quarry at Woodford Island.—The work of opening up the face of the quarry is proceeding. Two wharfs have been erected, and the lines for waggons will soon be laid, and everything got ready for the output of stone as soon as the Green Point Quarry is worked out, which will probably be in about six months time.

New Punts.—Two wooden punts, each of 100 tons capacity, were completed and handed over by the contractor in October. A contract is now in hand for the construction of four wooden punts, of 200 tons capacity each, for the sum of £4,100.

Dredging on the Clarence has been performed by the ladder-dredge "Minos" and the grab "Omega," the former removing 219,500 tons, at 2'53d. per ton, and the latter 39,545 tons, at 3'50d. per ton.

Dry Dock at Ashby.—A dry dock, having the same dimensions as the one on the Tweed River, is being constructed at Ashby, about 1 mile below Maclean. The work is being done under contract, the estimated cost, including probable extras, being about £4,750.

South Arm Rocks.—The work of cutting through this reef was resumed on 20 March, and by the end of the year, 1,165 tons of stone had been removed. The channel is now 90 feet wide and 8 feet deep at low water.

Woolgoolga Bay Jetty.—The work of putting in eleven new piles at the end of the jetty was completed, and the crane overhauled.

Coff's Harbour.—The drifting sand is causing a considerable amount of trouble at this place. Brush fences have been erected to keep the sand from blowing on to the jetty, and the water tanks from which the crane boiler is supplied have been removed further back, and a new well sunk, the sand having choked the old one. The crane received an overhaul, and the caretaker's cottage, shed, &c., were painted by contract at a cost of £13.

Bellinger River Improvements.

These works are being carried out under contract, the progress being as follows:—

No. 1 Wall.—1,715 tons of stone were put into this wall, extending it 24 feet, and making the total length 3,284 feet.

No. 3a Wall.—10,894 tons of stone were placed in this wall, extending it 583 feet, and making the total length 3,142 feet.

No. 5 Wall (East).—8,317 tons were used in the construction of this wall, which was commenced during the year. Its length is 1,760 feet.

Barrier Bank.—2,195 tons of stone were used in facing this bank, which is 2,500 feet long.

Payments to the amount of £4,305 6s. were made to the contractor during the year. The depth of water has increased in both the north and south channel.

The

The wharf at the heads was repaired at a cost of £45 8s.

The dredging at the heads has been carried out by the sand-pump "Theta," at the low cost of 1.07d. per ton. The grab "Beta" lifted 17,962 tons. The cost per ton, 7.44d., was high, owing to the expense caused by removal from Sydney, the dredge being a Sydney one temporarily employed on the Bellinger.

Nambucca River Improvements.

The output of stone at the Nambucca Heads training-wall has been 20,225 tons, and the wall has been advanced 174 feet, the total length now being 1,885 feet. Seventeen men are employed by the contractor, to whom payments amounting to £3,045 10s. 9d. have been made during the year.

A considerable amount of stone was used in raising and regrading the top of the wall, which had been damaged by a heavy sea as stated in last year's report.

A small amount of snagging was done at a cost of £14 5s.

Macleay River.

The work at the new entrance to the Macleay River is being carried out by day-labour, sixty men being employed. The output of stone has been 59,300 tons, of which 600 tons were used in making roads, and the balance, 58,700 tons, was put in the training-walls; the cost being £9,205 1s. 7d., or 37.25d. per ton. The dredging inside the entrance, by the sand-pump "Doris," cost 2.69d. per ton for 250,740 tons. Deepening the bar and approach, by the new sand-pump "Antleon," cost 2.47d. per ton for 124,750 tons, lifted from May to end of June. The ladder dredge "Fitzroy," up the river, lifted 193,920 tons, at a cost of 3.46d. per ton.

The south wall was advanced 833 feet, making the total length 1,852 feet. The north wall has been raised 2 feet for a distance of 1,180 feet, and 500 feet has been completed to high-water level, the total length being 4,450 feet.

The quarry is working well, and shows a splendid face, giving good large blocks.

The following contracts have been carried out:—

	Cost.		
	£	s.	d.
Residence for District Engineer	643	0	0
Wharf at Trial Bay	288	16	8
Repairs to wharfs generally	167	5	0
Re-grading approach to wharf at Frederickton	29	9	3
Supply of ironbark sleepers... ..	107	16	3

Repairs to wharfs have been carried out by day-labour at a cost of £48 4s. 6d.

Trial Bay Harbour Works.

These works were handed over to the Department of Justice on the 12 July. The following was the state of the work at that time:—

Total quantity of stone in breakwater	217,443 tons.
" " stone run to spoil	40,560 "
" " stripping	125,172 "

The length of the breakwater was 610 feet.

Hastings River Improvements.

The contractor for the construction of the training-wall has made steady progress during the year. Forty men have been employed, and the output of stone was 47,319 tons, extending the wall 889 feet, the total length to date being 1,725 feet. The quarry is well opened up, and shows a good face of stone. The payments made to the contractor amount to £9,181 13s. 3d., the contract price for stone being 3s. 8d. per ton.

A wharf has been constructed by contract at Ballengarra, on the Wilson River, for the sum of £293 15s., and some repairs were effected at Tacking Point Lighthouse, at a cost of £38. The sand-pump dredge "Eta," working at the various shingle and sand flats on the Hastings, dredged 168,960 tons; the cost has been 2.67d. per ton.

Camden Haven Improvements.

The works at Camden Haven are being carried out by day-labour, an average number of forty-eight men being employed. 34,231 tons of stone have been put in the south wall, extending it 1,330 feet, the total length being now 3,450 feet.

The north wall, which was commenced this year, contains 17,727 tons of stone, and is 2,075 feet in length. The total quantity of stone put in both walls for the year is 51,958 tons, costing £6,752 3s. 7d., or 31.19d. per ton. The quarry is working satisfactorily, good blocks of stone being turned out.

The new channel was broken through about the end of May, and is now navigable, and gradually improving. There is 7 feet of water on the bar.

A small amount of snagging has been done at a cost of £18 10s. 3d. The dredging required in connection with the new entrance was done by the sand-pump "Delta," and cost 1.95d. per ton.

Newcastle District.

Manning River.

Improvements to Entrance.—These works, which have made considerable progress during the year, are being carried out by contract, an average of about fifty men being employed.

The quantity of stone put into the north training-wall was 33,960 tons, extending it 460 feet, at a cost of £6,226.

The river training-wall was extended 780 feet, the quantity of stone used being 31,606 tons, and the expenditure £3,826 6s. 2d. A viaduct was constructed in this wall, at a cost of £143 7s. 9d., to allow

allow of the area behind the wall being used as a boat harbour. The weigh-bridge and office were shifted to a more convenient position for the present work. Throughout the year the ladder-dredge "Ulysses" has worked at the different river flats, removing gravel and sand. This work, amounting to 268,870 tons, cost 2'93d. per ton.

Repairs to Wharfs.—The wharfs at Taree and Wingham have been repaired at a cost of £32 6s. 10d.

Cape Hawke.

A contract was let in August for the construction of a breakwater on the south side of the entrance to Cape Hawke Harbour. During the earlier part of the year the contractor was engaged opening up the quarry and laying tram lines, &c.

The first stone was tipped on February 16, and up to June 30 5,627 tons of stone had been put in the wall, which is now 456 feet in length. The expenditure, including cost of erecting weighbridge and office, has been £1,077 3s. 8d. An average number of thirty-one men have been employed. The sand-pump "Rho" was employed during the year at Foster and up the river. The return of work and cost shows 229,800 tons at 1½d. per ton.

Port Stephens.

Some minor repairs were effected to the light-keeper's quarters at a cost of £7 9s. 8d., and Nelson's Bay Jetty was repaired at a cost of £2 11s. 9d.

The Myall River was snagged from Broadwater to Bulladelah, the expenditure being £32 8s. 5d. The dredging of the river was carried out by the sand-pump "Sigma" and the grab "Kappa." The former dredge removing 150,200 tons, and the latter, for a few weeks at the close of the year, 3,053 tons, at 7'52d. per ton, which includes cost of dismantling and removal of plant.

Newcastle Harbour.

The breakwater and training-wall at Newcastle are being carried out by day-labour. It will be seen that there is a considerable increase in the output of stone this year, an average number of sixty-five men being employed on these works alone.

North Breakwater.—The north breakwater was extended 486 feet, 17,663 tons of stone having been placed in the wall, at a cost of £4,582 18s. 11d.

South Breakwater.—The south breakwater was extended 87 feet, 12,589 tons of stone having been put in the work, at an expenditure of £2,183 1s. 7d.

South Guide Wall.—This wall was extended 224 feet, 13,038 tons of stone being used; the expenditure was £1,878 12s. 1d.

Rock Excavation.—The "Lobnitz" rock crusher "Poseidon" completed the breaking up of 29,950 tons of rock in the channel leading into the New Basin, and the material was removed by the dredge "Hunter," the expenditure being £1,582 14s. 4d. An area of 20,833 square feet at the wool berths, Queen's Wharf, was also crushed to a depth of 3 feet, the cost being £65 10s. 1d.

The rock excavator "Cliona" completed the work of excavating 2,140 tons of rock along the front of the wharf at the entrance to the New Basin in September, at a cost of £510 4s. 8d., the material being removed by the grab dredge "Nu."

New Wharfs.—A substantial wharf, to be used for the shipment of cattle, was constructed at the north end of the New Basin, at a cost of £2,812 18s. 10d.

In order to meet the increasing demand for coal-loading appliances, it has been decided to construct 1,300 feet of wharf, to carry six hydraulic travelling cranes, on the east side of the New Basin. A contract for the first section (about 600 feet) of this wharf has been let, and the work is in hand, the expenditure, up to the 30 June, being £694 10s. 11. An order for the six hydraulic 12-ton cranes has been placed with Messrs. Sir Wm. Armstrong, Whitworth, & Co., Newcastle-on-Tyne, the estimated cost being £16,500.

Repairs to Wharfs.—The wharfs round the harbour, which measure 12,000 feet in length, were kept in good repair at a cost of £848 7s. 8d.

The Stockton ferry wharf was altered, and a floating stage fixed at a cost of £80 3s. 2d., and three dolphins were erected at Stockton for £84 2s. 9d.

General.—8,350 tons of stone ballast was obtained from ships and lighters and used on the various training-walls in Throsby Creek (west side of the New Basin) and New Island North Harbour, and also as backing for the cattle shipping wharf. In addition to this, 4,220 tons of stone ballast were stacked at the end of the dyke to be used as backing for the wharf now in course of construction on the east side of the New Basin. The average cost of this ballast, delivered on lighter or wharf, was 10d. per ton. 7,209 tons of stone ballast, discharged from vessels at the Stockton ballast jetties, were used as backing to No. 4 and No. 5 jetties.

In order to accommodate the modern class of vessels it was found necessary to provide extra depth of water close in to the front of the wharfs at the dyke. This has been done successfully at No. 10 crane by placing logs behind the front and middle piles to hold up the stone backing. Other berths will be similarly dealt with.

A schooner which had sunk in the north channel was raised and placed on the bank at the New Basin, the expenditure being £77 8s. 6d.

A crane and tram-line were erected near the Pilot Station, on the Queen's Wharf, for the use of the military authorities, at a cost of £28 18s. 3d.

Repairs were effected to the lifeboat slip and the south beacon.

A large amount of work was carried out in connection with repairs to dredges, tugs, punts, &c., and in the construction of trucks, about thirty men being constantly employed.

A total average number of 156 men are employed on day-labour works in Newcastle Harbour, exclusive of dredge employees. The quantity and cost of ladder dredging in the harbour for the year is as follows:—"Newcastle," 491,400 tons, at 2'78d. per ton; "Samson," 348,050 tons, at 3'42d. per ton; "Hunter," 303,800 tons, at 3'45d. per ton. The sand-pump dredging has been 166,200 tons by the "Juno," at 4'12d. per ton; and 626,500 tons by the "Castor," at 0'83d. per ton. The work of the grab dredge "Nu" was 24,060 tons, at 8'57d. per ton.

Hunter

Hunter River.

A levee along the river bank at East Maitland, constructed for the purpose of protecting that town in flood time, was completed in July at a total cost of £1,225 15s. 11d.

The river bank at Bolwarra is being protected by fascine and stone work, the property holders of the neighbourhood paying half the cost, which is estimated at £458 11s. 8d. Work of a similar description was carried out at West Maitland, the cost being £31 10s. 9d.

Repairs to Wharfs.—The wharf at Patterson was repaired at a cost of £16 10s. 5d.

Repairs were also effected to the Larg's Wharf and the Cemetery Wharf, Stockton, the expenditure being £14 3s. 4d. The dredging on the river flats has been done by the "Vulcan" at a cost of 4'39d. per ton; the quantity towed away was 222,100 tons.

Lake Macquarie.

A fascine fence 2,230 feet long was constructed at Pelican to keep back the sand which, for some years, has been encroaching on the channel at this place. The sand-pump "Gamma" dredged the channel, depositing the sand behind the fence. The cost of this work, exclusive of the dredging, was £699 13s. 8d. The dredging cost 1'29d. per ton; the quantity pumped from the channel was 240,590 tons.

Repairs were effected to Cockle Creek Wharf and also to Belmont Wharf approach.

Sydney and South Coast District.

There is a large increase in the work done in this district as compared with last year, ninety-five works were carried out by day-labour, employing 350 men, at an expenditure of £85,420, and thirty contracts were also in hand, the payments on which amounted to £45,000.

Circular Quay.

Construction of Berths Nos. 9A and 9B and completion of Wharf between Berths Nos. 8B and 9A.—This work was completed by contract in December, 1898, and consists of a wharf and jetty on piles.

Two cargo sheds, Nos. 11 and 12, were erected under contract on the western side of the quay, the foundation and flooring for which had been put in by day-labour. The approaches to the new wharfs and sheds have been graded and metalled, and a retaining-wall built between Berths Nos. 8B and 9A.

Nos. 5 and 6 Berths, West side.—No. 5 berth has been extended 50 feet by contract, and extra railing put up. The cargo shed on this berth has also been extended 68 feet. An iron fence has been erected enclosing No. 6 berth.

Jetties.—The shed accommodation at Watson's Bay (No. 1) jetty has been increased, and the Manly (No. 2) jetty has been extended 30 feet.

General.—The wood-blocked portion of the roadway has been repaired at the worst places, and the metalled portions have also been kept in order. Minor repairs have been effected to the various jetties, wharfs, and stores.

The expenditure in connection with works carried out at the Circular Quay has been £20,742. An average number of 10 men have been employed on day-labour works.

Fort Macquarie and Dawes' Point.

The horse-ferry dock at Fort Macquarie was completed by contract early in the year and is now in use, the expenditure, including the cost of erecting a waiting shed, was £2,239 15s. 6d.

The construction of a similar dock at Dawes' Point has been commenced. The work is being carried out by contract for the sum of £4,394 7s. 9d.

Woolloomooloo Bay.

Berths Nos. 1 and 2, Eastern side.—In October a contract was let for the construction of Berths Nos. 1 and 2 for £7,567 2s. 8d. The work is now approaching completion. A considerable amount of work has been done by day-labour, principally in alterations to the retaining-wall at the back of the wharf.

A contract has been let for the construction of two cargo sheds at Berths Nos. 1 and 2, the contract sum being £7,693.

A large cargo store, No. 5, has been erected by contract at the rear of Berths Nos. 3 and 4 on the eastern side at a cost of £5,277 14s. 4d.

Cowper Wharf.—A new weighbridge, with offices, &c., has been erected and the iron railings and gates at the western end have been altered in position to make room for the construction of new offices.

The jetty has been repaired with new girders, decking, and braces, and sundry repairs have been carried out to wharfs, sheds, &c.

The total expenditure at Woolloomooloo Bay for the year has been £14,579 14s. 7d., and forty men have been employed for six months on day-labour works.

Darling Island.

The works at this place are being carried out by day-labour.

Good progress has been made with the construction of the concrete wharf wall. A length of 1,100 feet is now completed, the average height being 40 feet.

1,129 blocks containing 13,961 cubic yards of concrete were moulded and fixed in place. 17,500 tons of hand-packed ballast, and 123,614 tons of ballast and earth filling, have been placed behind the wall.

A description of the method of building this wall was given in last year's report.

A new berth, about 300 feet long, has been constructed at the southern end of the island, the material used being timber.

The ferry landing-place has been extended.

An average number of eighty-three men have been employed, and the expenditure has been £26,257 11s. 2d.

At

Miscellaneous Works—Sydney Harbour.

At Pyrmont a retaining-wall is being constructed along the new wharf extension, a waiting-shed for ferry-passengers has been erected, and the coal-jetties have been repaired.

Wharfs have been constructed by day-labour at Allen-street, White Bay, and Erskine-street, and by contract at Cockatoo and Drummoyne.

Alterations and repairs have been effected to the following wharfs:—Augustus-street, Orient Company's, Leichhardt, Blackwattle Bay, Rustcutters' Bay, Cabarita, Gladesville, Watson's Bay, Cockatoo, Dundas, and Abbotsford.

An average of twelve men have been employed by day-labour during the year in building and repairing wharfs in Sydney Harbour.

A staff of six divers and their attendants have been employed as follows:—

The work of deepening the berths in front of Pyrmont Wharf was completed early in the year.

The moorings of the "Sobraon" were overhauled, and those at the Quarantine Station renewed.

Various under-water foundations, &c., have been examined and reported on, and sunken vessels raised, &c.

The grab-dredge "Chi" was variously employed in connection with diving and blasting rock. The material lifted was 7,920 tons, the cost 13'58d. per ton. The "Pi" lifted 35,070 tons at a cost of 13'76d. per ton.

Shea's Creek Canal.

The principal work done here has been the maintenance of the slopes above Ricketty-street and the continuation of the pitching of the slopes below that point, a length of 2,200 feet having been pitched. The ground below Ricketty-street has been formed and graded.

A grab-dredge was employed deepening the lower portion of the canal during the first half of the year.

Two new wharfs have been erected.

Cook's River.

The dredging by the sand-pump "Neptune" has been continued during the year between Shea's Creek and Botany, the material being pumped on to the resumed area on the left bank of the river. 307,040 tons were so dealt with at a cost of 2'16d. per ton.

The dredge "Omieron" has been working above the dam, and the material dredged has been deposited on the resumed land on the northern side of the river. The quantity dredged was 78,618 tons; the cost, 2'05d. per ton.

A training bank, faced with ballast, has been constructed from the railway embankment to the new dam.

The wharfs at Lord's Road and Cook's River Road have been put in repair.

An average number of fifty-four men have been employed on day-labour works at Shea's Creek and Cook's River during the year.

Hawkesbury River.

A wharf has been built at Newport, the cost being £549 19s. 2d., and one is now being constructed at Tuggerah Lake. The wharfs at Mangrove Creek, Sackville Reach, and Colo have been repaired. The sand-pump "Sigma" has just started work at Mangrove Creek, and has dredged and deposited 4,320 tons of clay and silt.

Shellharbour.

The concrete breakwaters were lengthened towards the shore, fifteen men being employed for four months. The expenditure was £486 10s.

Shoalhaven.

Dredging has been the only work carried out during the year at Shoalhaven, the ladder-dredge "Archimedes" having dredged 203,030 tons. The cost was 4'36d. per ton.

Moruya River.

The training-wall from the tower bridge to Deloski's Creek has been continued, being now 6,538 feet in length, and the northern bank of the river at the same place has been protected, 33,685 tons of stone having been used altogether. Fifty-one men and eighteen teams are employed in connection with this work, which is being carried out by day-labour, the expenditure for the year being £5,628 13s. 2d.

The sand pump "Tau" has been engaged dredging along the training-wall, and depositing the material lifted behind it; 170,420 tons have been dealt with at a cost of 2'19 pence per ton.

A wharf has been constructed, under contract, near the township of Moruya.

Miscellaneous—South Coast.

George's River.—Wharves have been erected at Lugano Ferry, Rocks Point, Sans Souci, Sandringham, Como, Coman's Point, and Kurnell.

Lake Illawarra.—A jetty was erected, under contract, at Kanahooka Point, and a boat channel was cut by day-labour at the entrance to Mullet Creek—thirty men being engaged on this work for three weeks.

Kiama Harbour.—A pierhead has been built on the western side and a new fender placed round the "basin," an average of ten men having been employed by day labour on the above work for six months.

Minor repairs have been effected to wharfs, &c., at Botany, Wollongong, Ulladulla, Bateman's Bay, Bermagui, and Eden, an average of four day-labour men being employed during the year.

Darling and Murrumbidgee Rivers.

Bourke Wharf.—The wharf at Bourke was completed, under contract, in October at a cost of £4,454 4s. 5d. Three steam cranes have since been erected; also an office and store-room.

Darling River Snagging.—The snagging of the River Darling, a day-labour work employing sixty-one men, was continued during the year. Two gangs were engaged on the lower portion of the river, from 40 to 190 miles above Wentworth, until January; one gang being then removed to Wilcannia, and working between that place and Menindie, cleared 30 miles of river. Another gang has been working from Wilcannia towards Louth, and has partially cleared 40 miles of the river.

A length of 132 miles from Bourke to beyond Louth has been cleared of snags and rocks, and the dead timber on the banks has been burnt off.

The Bourke and Brewarrina section, a length of 132 miles, has been completed; most of the work on this section was, however, done before July, 1898.

The total length of river between Brewarrina and Wentworth that has been freed of snags and other obstructions to navigation since the work was begun in March, 1897, is 533 miles.

Murrumbidgee River Snagging.—Twenty men have been employed here during eight months of the year, and a distance of 79 miles of the river below Hay has been cleared of snags.

In connection with the snagging of the Darling and Murrumbidgee Rivers, it is pleasing to be able to state that letters have been received from representative persons in the Western District, expressing great satisfaction at the way in which the work has been carried out, and the resulting improvement in the navigation of the rivers.

Dredging.

With the exception of the work of the sand-pump "Jupiter," at Sydney Heads, 436,000 tons at 2 08d. per ton; the "Groper" (reclaiming at Rozelle Bay), 306,590 tons at 2 59d. per ton; and the "Sydney" (deepening at Sydney wharfs), 293,450 tons at 5 81d. per ton, all the dredging carried out has been described under the headings of district work, as well as in the tabulated statements attached to this report; but the important results obtained by working the new self-loading bar sand-pump "Antleon," and the large land-reclaiming sand-pump "Castor," demand more than a passing notice. Hitherto no attempt to deepen, by dredging, sea bars having only 5 feet of water on them, has, as far as I am aware, been made either in Europe or America—all the bars dealt with having sufficient depth to float a dredge drawing 8 feet. To overcome the difficulty, I took advantage of the latest improvements in boilers, engines, pumps, and steel shipbuilding, and had the twin-screw dredge "Antleon" constructed to load herself with 250 tons of sand on a rough bar when steaming slowly over it, and to draw, when so loaded, only 5 feet of water, with a speed of $9\frac{1}{4}$ knots. No pump dredge of this size with such a draft has ever been built before; and it is gratifying to report that the experiment has been entirely successful, no less than 2,000 tons of sand having been pumped in eight hours from the crown of a shallow and tortuous sea bar where there had been only 5 feet of water previously.

The work performed at Newcastle by the large sand-pump "Castor" is scarcely less important, although in a different direction to that of the "Antleon." The "Castor" has been fitted with a pump, driven by engines of 900 horse-power, and, on a pumping test extending over 202 hours actual pumping, has sent on shore, through 600 feet of 30-inch piping, 138,000 tons of sand at the low annual cost, including all expenses and repairs, of 0 83d. per ton. The future work of this vessel will be to pump on to the new island being formed above the North Harbour all the silt (12,000 tons per day) which the ladder dredges, working two shifts, can lift instead of towing it to sea. Dredges at Newcastle will now no longer be idle during stormy weather, and in a short time the work of reclamation will be sufficiently advanced to permit of jetties being erected at the new island for mooring either light or laden ships, and thus largely increasing the available accommodation for shipping in Newcastle harbour.

STATEMENT of Ladder Dredge Expenditure and Work for twelve months ended 30 June, 1899.

Ladder Dredge.	Where dredging.	Material lifted.	Tons.	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 puns.	Repairs.	Other causes.	
"Samson"	Newcastle	Mud, sand, rock, &c...	348,050	1,764	2,718	£ s. d. 3,651 6 4	d. 2'51	£ s. d. 2 1 4	£ s. d. 1 7 0	65	2	5	9	5	13	1	Extensive repairs.
"Sydney"	Sydney	Mud, sand, sewage, rock.	293,450	1,654	2,760	5,253 14 7	4'29	3 3 6	1 18 1	59	1	8	1	10	20	1	
"Newcastle"	Newcastle	Mud	491,400	1,938	2,745	4,149 2 0	2'02	2 2 9	1 10 3	71	1	6	12	1	9	0	Removed Sydney to Richmond River. Lifting hard material.
"Hunter"	do	Mud, sand, and rock..	303,800	2,117	2,781	3,256 4 5	2'56	1 10 9	1 3 5	76	2	5	5	1	11	0	
"Vulcan"	Hunter River	Sand and mud	222,100	1,858	2,714	2,583 19 1	2'79	1 7 9	0 19 0	68	1	9	7	7	7	1	
"Alcides"	Sydney Harbour and Richmond River.	Indurated sand & mud	125,350	1,707	2,677	2,809 17 4	5'38	1 12 11	1 1 0	64	4	16	1	5	10	0	
"Ulysses"	Manning River	Shingle	268,870	1,953	2,756	2,328 18 1	2'08	1 3 10	0 16 11	71	2	6	1	0	18	2	
"Fitzroy"	Macleay River	Clay, stone, & shingle	193,920	1,631	2,741	2,058 9 7	2'54	1 5 2	0 15 0	60	3	13	0	2	18	4	
"Minos"	Clarence River	Mud and sand	219,500	1,804	2,731	2,329 0 11	2'55	1 5 9	0 17 1	66	2	17	0	1	13	1	
"Archimedes"	Shoalhaven	Sand	203,030	1,842	2,770	2,478 11 2	2'93	1 6 11	0 17 10	66	4	4	2	8	14	2	
"Charon"	Sydney	Rock, mud, and sand.	159,590	1,526	2,004	1,853 2 1	2'78	1 4 3	0 18 6	76	1	6	...	2	14	1	
Totals			2,829,060	19,794	29,397	32,752 5 7											
Averages							2'77	1 13 1	1 2 3	67	2	9	3	4	14	1	

STATEMENT of Sand-pump Dredge Expenditure and Work for twelve months ended 30 June, 1899.

Sand-pump Dredge.	Where pumping.	Material lifted.	Estimated tons lifted.	Hours pumping.	Hours working.	Expenditure.	Cost per ton pumping.	Cost per hour pumping.	Cost per hour working.	Percentage of working hours.							Remarks.
										Pumping.	Coaling.	Removals.	Bad weather.	Silt to sea.	Repairs.	Other causes.	
"Neptune"	Cook's River	Sand	307,040	1,919	2,768	2,772 10 0	2'16	1 8 11	1 0 0	69	3	14	0	...	13	1	Material pumped very long distance.
"Juno"	Newcastle	do	166,200	1,662	2,713	2,857 9 2	4'12	1 14 5	1 1 1	61	1	12	0	...	26	0	
"Castor"	Newcastle	do	626,500	895	2,564	2,171 3 3	0'83	2 8 7	0 16 11	35	1	17	0	...	46	1	Commenced work 23 October, 1898, after alterations. Deposited at sea and harbour depôts.
"Jupiter"	Sydney Heads	do	436,000	649	2,793	3,781 4 1	2'08	5 16 6	1 7 1	24	6	0	4	52	14	0	
"Antleon"	Sydney, Port Hacking, and Macleay.	do	139,000	284	1,195	1,433 19 3	2'47	5 1 0	1 4 0	24	8	6	2	32	23	5	Commenced work, after trials and alterations, 19 Mar., 1899.
"Aetor"	Tweed Heads	do and shell	365,250	1,461	2,712	2,603 10 0	1'71	1 15 8	0 19 2	54	4	16	0	...	24	2	
"Alesus"	Nambucca Heads	do and clay	250,320	1,788	2,752	2,435 6 3	2'33	1 7 2	0 17 8	65	2	21	0	...	11	0	Material pumped very long distance.
"Dorus"	Macleay River Heads	do mud, clay	250,740	1,393	2,790	2,604 16 9	2'49	1 17 3	0 18 8	50	3	19	1	...	25	2	
"Dictys"	Ballina	do	412,950	1,222	2,664	2,682 9 7	1'55	2 3 11	1 0 2	46	3	20	2	...	22	7	
"Groper"	Sydney	do mud, clay	306,590	2,028	2,792	3,317 18 4	2'59	1 12 8	1 3 9	73	0	10	...	...	13	4	
Totals			3,260,590	13,301	25,743	26,660 6 8											
Averages							1'96	2 0 1	1 0 8	50	3	14	1	8	22	2	

Grab and Sand-pump Dredge.	Where pumping.	Material lifted.	Estimated tons lifted.	Hours pumping.	Hours working.	Expenditure.	Cost per ton.	Cost per hour pumping.	Cost per hour working.	Percentage of working hours.							Remarks.
										Pumping.	Coaling.	Removals.	Bad weather.	Silt to sea.	Repairs.	Other causes.	
						£ s. d.	d.	£ s. d.	£ s. d.								
"Gamma"	Lake Macquarie	Sand and mud	240,590	2,036	2,787	1,296 17 3	1'29	0 12 8	0 9 3	73	3	14	1	...	8	1	Pumping stiff mud at Hawkesbury River.
"Delta"	Camden Haven	Sand	200,800	2,510	3,039	1,637 11 11	1'95	0 13 1	0 10 9	83	0	8	0	...	6	3	
"Eta"	Port Macquarie	do	148,960	1,862	2,719	1,662 16 7	2'67	0 17 10	0 12 2	68	2	10	0	...	17	3	
"Theta"	Bellinger River	do	397,300	1,891	3,089	1,774 6 6	1'07	0 18 9	0 11 6	61	1	14	...	...	21	2
"Sigma"	Myall River and Hawkesbury River.	do and shell and mud	154,520	1,645	2,709	1,445 10 8	2'24	0 17 6	0 10 8	61	2	23	...	...	14	0
"Rho"	Cape Hawke	Sand	229,800	1,532	2,702	1,392 7 2	1'45	0 18 2	0 10 4	57	2	18	1	...	18	4	
"Tau"	Moruya River	do	170,400	1,136	2,649	1,553 7 11	2'19	1 7 4	0 11 9	43	3	24	0	1	26	3	
		Totals	1,542,370	12,612	19,694	10,762 18 0											
Averages							1'67	0 17 1	0 10 11	64	2	16	0	0	16	2	

STATEMENT of Grab Dredge Expenditure and Work for twelve months ended 30 June, 1899.

Grab Dredge.	Where dredging.	Material lifted.	Tons dredged.	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 punts.	Repairs.	Other causes.	
						£ s. d.	d.	£ s. d.	£ s. d.								
"Alpha"	Tweed River	Sand and mud	42,649	999	2,653	747 16 9	4'21	0 15 0	0 5 8	38	15	19	1	0	27	0	Repaired and removed, Sydney to Bellinger River.
"Beta"	Sydney and Bellinger	Sand, rock, clay	23,072	1,837	2,717	780 19 10	8'12	0 8 6	0 5 9	68	1	14	1	0	12	4	
"Zeta"	Richmond River	Sand and silt	28,980	1,897	2,728	773 15 8	6'44	0 8 2	0 5 8	70	2	9	1	2	15	1	Repaired and removed, Hunter River to Myall River.
"Iota"	Nambucca River	Gravel	56,825	1,765	2,712	565 13 0	2'39	0 6 5	0 4 2	65	1	4	...	...	27	3	
"Kappa"	Hunter River and Myall River.	Sand and mud	29,318	1,173	2,592	918 15 8	7'52	0 15 8	0 7 1	45	3	21	2	8	16	5	
"Lambda"	Richmond River	Mud, clay, and shell	15,478	1,502	2,744	470 6 5	7'28	0 6 3	0 3 5	55	1	9	1	...	12	22	Lifting blasted rock.
"Mu"	do	Sand and clay	51,045	1,820	2,393	723 6 1	3'40	0 7 11	0 6 1	76	2	8	4	...	10	...	
"Nu"	Newcastle	Rock, sand, and shell	24,060	2,313	2,963	779 0 10	7'77	0 6 9	0 5 3	78	1	5	1	3	10	2	
"Omicron"	Cook's River	Sand and mud	78,618	2,250	2,813	673 12 6	2'05	0 6 0	0 4 9	80	2	10	...	...	8	0	Extensive overhaul. Removed, Cook's River to Sydney, and repaired—lifting rock.
"Pi"	Sydney	Sand, mud, clay	35,070	2,080	2,795	1,625 5 1	11'12	0 15 7	0 11 7	74	1	7	...	3	13	2	
"Chi"	Cook's River and Sydney	Clay, sand, and rock	27,728	1,675	2,764	926 3 7	8'01	0 11 1	0 6 8	60	1	8	1	6	19	5	
"Omega"	Clarence River	Sand, mud, rock	39,545	1,463	2,656	577 1 9	3'50	0 7 11	0 4 4	55	1	12	...	...	17	15	
		Totals	452,388	20,774	32,530	9,561 18 2											
Averages							5'07	0 9 2	0 5 11	64	2	10	1	2	16	5	

STATEMENT of Tug Expenditure and Work for twelve months ending 30 June, 1899.

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.					Remarks.	
														Steam.	Coal.	Repairs.	Weather.	Other causes.		
							£ s. d.	£ s. d.	pence.	pence.	pence.	s. d.	s. d.							
"Thetis"	Sydney	128,480	7,171	5,574	3,700	3,159	1,518 14 6	1,714 3 10	2'83	50'82	73'81	17 6	20 6	52	2	15	1	30		
"Ceres"	Newcastle	345,280	9,920	.....	2,682	2,273	1,739 5 3	.....	1'21	42'08	...	13 0	15 4	67	2	15	9	7		
"Orestes"	do	492,850	11,032	.....	2,773	2,585	1,560 17 4	.....	0'76	33'95	...	11 3	12 1	78	2	7	10	3		
"Dawn"	Sydney	142,590	5,366	5,385	2,990	2,478	809 19 5	848 7 5	1'36	36'22	37'81	11 1	13 5	67	3	17	1	12		
"Galatea"	Newcastle	290,640	10,102	533	2,769	2,475	1,260 18 1	137 15 2	1'04	29'95	62'03	10 1	11 4	69	3	11	6	11		
"Little Nell" ..	Hunter River	93,630	5,744	.....	1,314	1,074	724 12 9	.....	1'86	30'28	...	11 0	13 6	73	3	18	0	5	Foundered off Red Head, near Newcastle, 16th Dec., 1898.	
"Dione"	Manning River	267,720	5,963	.....	2,573	2,230	952 6 3	.....	0'85	38'32	...	7 5	8 6	60	1	13	1	24		
"Achilles"	Sydney and Newcastle ..	122,990	5,364	2,864	2,778	2,618	584 11 5	327 19 4	1'14	26'15	27'48	6 7	7 0	65	5	6	0	23		
"Cyclops"	Shoalhaven	203,030	7,520	301	2,813	2,533	1,216 4 6	43 13 8	1'43	38'82	34'83	8 11	9 11	75	6	10	0	9		
"Athena"	Sydney and Macleay..	144,900	2,865	1,988	2,744	2,136	1,051 7 8	491 0 10	1'74	88'07	59'28	11 2	14 5	57	1	22	0	19	Extensive repairs.	
"Ganymede"	Newcastle	10,520	236	3,248	2,414	2,297	26 1 2	729 17 1	0'60	26'50	53'93	6 3	6 7	29	5	5	0	61		
"Dayspring"	Sydney	45,770	1,975	7,727	2,878	2,653	196 10 1	759 6 5	1'03	23'88	23'58	6 7	7 3	61	2	8	0	28		
"Callisto"	Macleay River ..	153,810	2,668	.....	1,887	1,759	278 13 2	.....	0'43	25'06	...	3 0	3 2	61	2	7	0	31		
"Aurora"	Sydney	78,950	4,127	3,802	2,642	2,520	334 5 0	262 14 6	1'01	19'44	16'58	4 6	4 8	64	5	5	0	26		
"Vesta"	Clarence River	70,840	2,022	172	2,520	1,531	268 12 8	15 10 11	0'91	31'88	21'11	2 3	3 9	42	2	39	0	16		
"Octopus"	Sydney	6,530	248	5,436	2,851	2,641	23 10 7	487 5 3	0'86	22'77	21'51	3 7	3 11	88	0	7	0	4		
"Scylla"	Hunter River & Newcastle	24,480	2,975	590	2,424	1,940	247 1 5	54 18 10	2'42	19'93	22'35	2 6	3 1	48	5	20	1	25		
"Ariel"	Newcastle and Myall River	.....	.....	4,391	2,418	2,231	.....	315 2 7	...	17'22	2 7	2 10	59	2	8	0	31			
"Europa"	Sydney .....	.....	.....	5,024	2,386	2,099	.....	365 16 9	...	17'45	3 1	3 6	59	2	12	0	26			
Totals		2,623,010	85,298	47,035	49,556	43,232	12,793 10 3	6,553 12 7												
Averages									1'17	35'99	33'44	7 10	8 11	62	3	13	1	21		

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

Ladder Dredge.	30 June, 1897, to 30 June, 1898. Dredging, Towing, and Repairing.			30 June, 1898, to 30 June, 1899. Dredging, Towing, and Repairing.			Remarks.
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Samson," at Newcastle	375,200	4,682 7 1	2'99	348,050	5,386 1 2	3'42	
"Sydney," at Sydney	346,100	5,338 12 1	3'70	293,450	7,112 18 10	5'81	
"Newcastle," at Newcastle	446,600	5,662 16 3	3'04	491,400	5,703 12 8	2'78	
"Hunter," at Newcastle	270,780	3,744 5 5	3'32	303,800	4,366 8 8	3'45	
"Vulcan," at Hunter River	195,170	4,372 18 1	5'38	222,100	4,066 9 6	4'39	
"Alcides," at Richmond River and Sydney	93,260	3,261 13 2	8'39	125,350	3,754 16 1	7'19	
"Ulysses," at Manning River	271,920	3,399 12 7	3'00	268,870	3,281 4 4	2'93	
"Fitzroy," at Macleay River	95,900	2,543 0 9	6'36	193,920	2,798 8 1	3'46	
"Minos," at Clarence River	166,700	2,695 7 9	3'88	219,500	2,597 13 7	2'84	
"Archimedes," at Sydney and Shoalhaven	138,500	3,720 1 3	6'44	203,030	3,694 15 8	4'36	
"Charon," at Sydney .....	.....	.....	.....	159,590	2,579 3 8	3'87	
							1898-9.
							{ Richmond River
							{ Sydney
							Tons. £ s. d. Pence per ton.
							83,940 2,812 4 11 8'00
							41,410 942 11 2 5'46

STATEMENT of comparative quantity and cost of work done by Sand-pump Dredges (with towing), for periods as stated.

Sand-pump Dredge.	30 June, 1897, to 30 June, 1898.			30 June, 1898, to 30 June, 1899.			Remarks.
	Dredging, Depositing, and Repairs.			Dredging, Depositing, and Repairs.			
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Neptune," at Cook's River and Bateman's Bay	340,867	3,759 3 5	2'64	307,040	2,798 17 9	2'19	
"Juno," at Newcastle.....	242,706	3,297 6 8	3'26	166,200	2,857 9 2	4'12	
"Jupiter," at Macleay River and Sydney	353,080	4,188 2 3	2'84	436,000	3,781 4 1	2'08	
"Castor," at Newcastle				626,500	2,171 3 3	0'83	
							1898-1899.
							Tons. £ s. d. Pence per ton.
							{ Sydney { on trial and }
							{ Port Hacking { alterations. }
"Antleon," at Sydney, Port Hacking, and Macleay River				139,000	1,424 7 6	2'47	14,250 543 14 10 9'16
							Macleay 124,750 890 12 8 1'76
							Lifted on Macleay Bar 77,000
							Lifted in Macleay River..... 47,750
"Actor," at Tweed Heads	320,375	2,391 10 7	1'79	365,250	2,603 10 0	1'71	
"Alesus," at Nambucca Heads	262,065	3,074 13 0	3'04	250,320	2,436 16 3	2'33	
"Dorus," at Macleay Heads	288,958	4,525 11 1	3'75	250,740	2,604 16 9	2'49	
"Dictys," at Richmond River	414,000	2,813 16 2	1'63	412,950	2,632 9 7	1'56	
"Groper," at Sydney	514,556	4,210 19 11	1'96	306,590	3,317 8 4	2'59	
							Total 124,750

STATEMENT of comparative quantity and cost of work done by combined Grab and Sand-pump Dredges (with towing), for periods as stated.

Combined Grab and Sand-pump Dredges.	30 June, 1897, to 30 June, 1898.			30 June, 1898, to 30 June, 1899.			Remarks.
	Dredging, Depositing, and Repairs.			Dredging, Depositing, and Repairs.			
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Gamma," at Lake Macquarie	72,793	667 10 0	2'20	240,590	1,296 17 3	1'29	1898-1899. { Myall River..... 150,200 { Hawkesbury River..... 4,320
"Delta," at Camden Haven	144,207	1,600 18 0	2'66	200,800	1,637 11 11	1'95	
"Eta," at Port Macquarie	105,533	1,471 0 11	3'34	148,960	1,710 11 1	2'75	
"Theta," at Bellinger	270,100	1,501 2 9	1'33	397,300	1,788 16 6	1'08	
"Sigma," at Myall River and Hawkesbury River	100,575	1,519 19 4	3'63	154,520	1,643 10 3	2'55	
"Rho," at Cape Hawke and Manning River	216,875	1,584 14 0	1'75	229,800	1,405 7 2	1'47	
"Tau," at Moruya	195,498	1,539 3 5	1'89	170,400	1,553 7 11	2'18	

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

Grab Dredge.	30 June, 1897, to 30 June, 1898.			30 June, 1898, to 30 June, 1899.			Remarks.
	Dredging, Depositing, and Repairs.			Dredging, Depositing, and Repairs.			
	Tons.	Expenditure.	Pence per ton.	Tons.	Expenditure.	Pence per ton.	
		£ s. d.	d.		£ s. d.	d.	
"Alpha," at Tweed River	41,230	702 7 5	4'08	42,649	768 16 9	4'32	{ 1898-9. tons. £ s. d. Pence per ton. Sydney 5,110 330 8 2 15'51 Bellinger River 17,962 556 13 3 7'44
"Beta," at Sydney and Bellinger River	19,760	1,252 15 0	15'21	23,072	887 1 5	9'22	
"Zeta," at Richmond River	7,070	543 8 11	18'44	28,980	774 12 1	6'42	
"Iota," at Nambucca River	59,015	559 15 11	2'27	56,825	565 13 0	2'38	{ Hunter River 26,265 1,025 9 10 9'37 Myall River 3,053 223 0 4 17'53
"Kappa," at Hunter River and Myall River	34,290	756 13 0	5'29	29,318	1,248 10 2	10'22	
"Lambda," at Richmond River	13,535	441 6 6	7'83	15,478	470 6 5	7'29	
"Mu," at Richmond River.....	40,449	758 13 0	4'50	51,045	723 6 1	3'40	{ Cook's River 19,803 481 2 2 5'82 Sydney 7,920 448 3 2 13'58
"Nu," at Newcastle	22,538	863 8 5	9'19	24,060	859 16 5	8'57	
"Omicron," at Cook's River	38,650	751 15 7	4'67	78,618	673 12 6	2'05	
"Pi," at Sydney	21,505	1,379 4 5	15'98	35,070	2,010 10 5	13'76	
"Chi," at Sydney and Cook's River,	50,881	1,280 0 3	6'03	27,728	929 5 4	8'04	
"Omega," at Clarence River	15,337	677 14 5	10'60	39,545	591 1 9	3'58	

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

Class of Dredge.	30 June, 1897, to 30 June, 1898.								30 June, 1898, to 30 June, 1899.																	
	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.												
			£	s.	d.	d.	£	s.	d.	£	s.	d.	d.	£	s.	d.	d.									
Ladder	2,405,730	16,143	30,258	2	4	3'02	1	17	6	39,667	2	11	3'95	2,829,060	19,794	32,752	5	7	2'77	1	13	1	45,341	12	3	3'85
Sand-pump	2,736,607	10,758	27,785	18	7	2'43	2	11	8	28,261	3	1	2'44	3,260,590	13,301	26,660	6	8	1'96	2	0	1	26,688	2	8	1'96
Grab and Sand-pump.....	1,105,581	10,807	9,432	11	2	2'05	0	17	5	9,884	8	9	2'15	1,542,370	12,612	10,762	18	0	1'67	0	17	1	11,026	2	1	1'71
Grab	364,260	18,685	8,687	2	5	5'72	0	9	4	9,967	2	10	6'59	452,388	20,774	9,561	18	2	5'07	0	9	2	10,502	12	4	5'57
	6,612,178	56,393	76,163	14	6	2'76	1	7	0	87,779	17	7	3'18	8,084,408	66,481	79,737	8	5	2'36	1	3	11	93,558	9	4	2'79

Floating Plant.

A wooden screw steamer named the "Powerful" is being constructed by day-labour from designs prepared in this office. This vessel is 90 feet in length by 22 feet beam by 6 ft. 6 in. deep, and is intended for general use in Newcastle Harbour. She is practically completed, and is estimated to cost £3,000.

The construction of a wooden screw steamer, the "Phoenix," was carried out by contract, the cost being £2,500. This vessel is intended for use in the Dredge Service.

A steel screw steamer, the "Dooribang," 85 feet by 20 feet by 8 feet, and of 250 effective horse-power, is being constructed by day-labour at Fitzroy Dock. She is now nearly completed, the estimated cost being £5,000.

A wooden screw steam launch, the "Sol," 50 feet by 10 feet by 5 feet, was constructed by day-labour at the Fitzroy Dock, the cost being £1,420. She is intended for the use of the Marine Board.

Two ash punts have been built by contract for the use of the Naval Depot at Garden Island, the contract sum being £300.

A wooden pontoon, 54 feet by 26 feet by 4 ft. 6 in., has been built at Fitzroy Dock for use on the works at Darling Island, the cost being £450.

Two relieving pontoons for ferry landings are being constructed, the contract price being £898 10s.

Five small pontoons for dredge and survey work were constructed at a cost of £220.

Lighthouses.

South Solitary.—The work of constructing new yard doors and laying on electric bells at this lighthouse is being carried out by day-labour; the cost is estimated at £30.

South Head.—A contract was let in April for repairing the Macquarie light-keeper's quarters and adding two rooms thereto, the estimated cost being £309. The work is now approaching completion.

The work of repairing the flagstaff and repainting internally the signalman's quarters was completed by contract for the sum of £60.

The Hornby light-keeper's quarters were painted internally and the flagstaff repaired, the work being done by contract for £160.

Point Perpendicular.—The contract for the erection of this lighthouse was completed on 17 March, and the official opening by the Marine Board took place on the 1 May.

The contract included the erection of a wharf, and some extra work was done, including a new telegraph office, the total cost being £16,280 17s. 11d.

(2.) WATER SUPPLY.

Metropolitan.

Centennial Park Reservoir.—Contract No. 3 was completed on 16 October, and the reservoir has been in use since that date. Contract No. 4 was for the erection of a light iron fence round the top as a prevention against accident.

About 8 acres of land surrounding the reservoir have been levelled and turfed by day-labour, fifteen men being employed for five months at a cost of £586 2s. 8d. The expenditure on work in connection with this reservoir for the year was £3,962 2s. 3d. The total cost has been £69,275 2s.

Duplication of 6-foot Pipe Line.—This work, which consists in laying a 6-foot steel main between the Pipe Head Basin and Pott's Hill Reservoir, a distance of $4\frac{1}{4}$ miles, is being carried out under two contracts, one for all the ironwork, and the other for all other work, such as excavation, brickwork, concrete, etc. The work is approaching completion, the expenditure for the year amounting to £64,830 15s. 9d.

Country Towns.

Works under Construction.

Tamworth.—The whole of the works in connection with the Tamworth supply have been completed and handed over to the Council. They were carried out entirely by day-labour.

Mudgee.—The works in connection with Mudgee which were carried out by day-labour have been completed. In connection with this scheme, Marks' Creek, an adjoining catchment, has been tapped and diverted into the storage reservoir. This has been done by means of a small concrete pipe, head dam, and about half a mile of 18-inch diameter earthenware pipes laid on a hydraulic gradient. A caretaker's cottage has also been added to the scheme.

Cootamundra.—The construction of the storage dam by day labour at Cootamundra has been completed. Owing to the exceptionally dry season experienced, a sufficient supply of water has not yet been caught, and the works have not yet been handed over to the Council.

Wellington.—The construction of the scheme for the supply of Wellington was put in hand during the year. The works, consisting of a storage dam, steel-pipe main, and reticulation, have all been carried out by day-labour, and are now nearing completion. The water in the storage dam will be held back by a concrete wall 45 feet in height and curved in plan to a 200-foot radius, the quantity stored being about 30,000,000 gallons. The supply is conducted into the town by means of a 7-inch diameter welded-steel main, and thence distributed direct by the usual 6-inch, 4-inch, and 3-inch diameter cast-iron reticulation pipes. The storage reservoir is situated $2\frac{1}{2}$ miles from the centre of the town, and at an elevation of about 140 feet above it.

Picton.—The works in connection with the supply at Picton, consisting of a storage reservoir, service main, service reservoir, and reticulation, have been put in hand and are nearing completion. The storage reservoir is being constructed by day-labour, the remainder of the works by contract. The storage reservoir is formed by a concrete wall curved in plan to 100 feet radius and 25 feet in height across the gorge of the Bargo River, holding 14,000,000 gallons. The service main consists of 5 miles of $8\frac{1}{2}$ -inch

8½-inch diameter riveted-steel pipe and 3 miles of 6-inch diameter cast-iron pipe, and conducts the supply direct to the reticulation and also to the service reservoir which acts as a balancing tank. The service reservoir is circular in form, 75 feet in diameter, 15 feet deep, and contains 400,000 gallons when full. This large capacity of reservoir was constructed to allow of 200,000 gallons being drawn off during the night for the generation of electricity for street lighting purposes.

Forbes.—The great expansion of the town of Forbes during recent years has rendered necessary a corresponding increase in the means of supply and distribution. The Department carried out the extensions to the reticulation, consisting of 10 miles of 9, 8, 4, and 3-inch cast-iron pipes and service reservoir. For the purpose of increasing the capacity and head of the existing reservoir, the present floor has been utilised, as the tank occupies the highest point on the most elevated ground near Forbes, and a riveted-steel tank, 45 feet in diameter and 50 feet deep, containing 300,000 gallons, has been placed inside the existing walls. The whole of the works are in progress.

Works authorised.

Kiama.—A scheme for the water supply of Kiama has been investigated and submitted with the estimate of cost to the Municipal Council, who have undertaken the responsibilities of the work, and drawings are now in hand. The supply will be obtained from the Fountindale Creek. This creek will be tapped by means of a small pipe head dam, and the supply conducted through 4½ miles of 5-inch diameter pipe to a service reservoir of 200,000 gallons capacity, from whence it will be distributed through the usual 6, 4, and 3-inch diameter reticulation pipes.

Proposals investigated.

Wollongong.—The question of the expediency of constructing a water supply for the town of Wollongong was referred to the Parliamentary Standing Committee on Public Works, who recommended a scheme capable of supplying, in addition, all of the villages to the north as far as Bulli and to the south to Port Kembla, the whole to be placed under the control of the Metropolitan Board of Water Supply and Sewerage.

The scheme comprised a storage reservoir of 172,000,000 gallons on the Cordeaux River, situated on the opposite side of the coastal range from Wollongong. From thence the supply will be conducted through a tunnel, ¾ of a mile in length, by means of an 8-inch pipe, and then for 5½ miles by a 6-inch pipe to a service reservoir of 400,000 gallons capacity on the outskirts of the town. The reticulation will consist of the usual 6, 4, and 3-inch pipes.

Bowral.—A design was prepared for the water supply of Bowral, but as the rates available that could be levied under the existing Act would not meet the charges of interest and maintenance, the matter has for the time been dropped.

Tumut.—Alternative schemes by gravitation from Wall's Creek and by pumping from the Tumut River were prepared, surveys carried out, and detail estimates of cost submitted to the Tumut Council. In this case, also, the financial means of the Municipality will not meet the charges, and the matter is in abeyance.

Queanbeyan.—A preliminary investigation was made into the matter of a water supply for Queanbeyan, and a gravitation supply from the Queanbeyan River recommended. This proved to be also outside the financial means of the Municipality, and nothing further has been done.

Goulburn.—The amount of water stored in the present reservoir on the Wollondilly River having been found inadequate for the present population, owing to expansion in the town and new Government Asylums, an investigation was made with a view of increasing it. An estimate has been submitted to the Council for an additional storage that will practically double the present supply.

(3.) WATER CONSERVATION, IRRIGATION, AND DRAINAGE.

(1.) The Water Rights Act.

During the year under review the applications for licenses under the Water Rights Act continued to occupy a large proportion of the attention of this Branch. As was shown in last year's report, the number of applications for licenses up till 30 June, 1898, was 557, and the number of those which had been dealt with till that date was 160. Up till 30 June, 1899, the total number of applications received had increased to 625, while the number of licenses issued up till that date was 351. While the great majority of the applications relate to dams on creeks and rivers, it is worthy of special note that sixty-six were for pumping machinery. With a few exceptions the object of these pumping-engines is to raise water for irrigation.

The beneficial effects of the Water Rights Act have already shown themselves in two important points. Unreasonable objections to the construction of dams and other works for the conservation of water have practically ceased to be raised. As a consequence of this, landholders are now taking up the construction of dams in places where it was formerly unsafe to do so, and the dams now being constructed are of a considerably improved type. This is specially noticeable in the country between the Murrumbidgee and the Murray. As might naturally have been expected, it was some time before Section 4 of the Water Rights Act came to be known and understood by persons who were willing to take combined action towards paying interest on the cost of useful works. The initial difficulties appear to be overcome, as several petitions requisitioning that works should be constructed under the provisions of this Section have been received, and are being dealt with.

A map of the Colony showing, amongst other information, the position of all the works which had been or were being dealt with up till 30 June, 1899, is appended to this report.

(2.) River Murray.

The Minister having sanctioned the final survey, and marking out of the proposed Murray canal system with a view to the preparation of an estimate, the work has been put in hand. As the survey for the head-work and for the first 2 miles of the main canal necessitated a considerable amount of work in the Colony of Victoria, it was necessary to obtain the sanction of the Victorian Government for this part of the work. The sanction was duly obtained, and two survey parties and one boring party entered on the work, which is now making satisfactory progress.

The framing of Regulations in connection with the irrigation area at Wentworth was considerably delayed owing, chiefly, to the novelty of the circumstances. Largely in consequence of the delay, which was unavoidable, a number of intending settlers, who waited for some time for the opening of the irrigation area for settlement, went elsewhere. The result of this was that only five blocks representing an area of about 55 acres were taken up. It has been recognised that the remoteness of Wentworth, and the lack of information regarding it, have contributed largely to the absence of demand for irrigation lots, and steps are now being taken to have the settlement properly advertised. The lots taken on lease are all under irrigation, and the results, so far as can at present be judged, are quite satisfactory.

(3.) Edward River.

Two proposals relating to increased utilization of this river have been investigated during the year—one for the construction of a cutting to Talbot's Lake, and the other for a cutting to increase the supply in the Wakool River. The former was found to involve more expense than would be warranted by existing conditions, while the latter is awaiting further information from the landholders concerned.

(4.) Murrumbidgee River.

The final plans and estimates for the proposed Murrumbidgee Southern Canal were completed, and have been ready for some time for inquiry by the Public Works Committee. The works include a storage reservoir at Barren Jack Mountain, at the junction of the Murrumbidgee and Goodradigbee Rivers, capable of conserving nine thousand millions of cubic feet of water. This reservoir will furnish a sufficient supply for the purpose of the proposed canal during the periods of low river, so that there will be no necessity to interfere with the requirements of the frontagers below the head of the proposed canal. The scheme provides also for branch canals, one of which will tail into the Murrumbidgee at Hay, and two others into the Billabong Creek near Conargo and Wangonilla respectively. Only a low weir will be required on the Murrumbidgee at the head of the proposed main canal, and this will be movable so that the navigation will not be interfered with. The estimated cost of the entire scheme is £650,000, and as the main canal will carry a supply of 1,000 cubic feet per second, it is estimated that water can be delivered from the canal at the rate of 246,000 gallons for 1s. after allowing for interest and maintenance.

A petition was presented by residents of Jerilderie and others asking for the immediate construction of the weir in the Murrumbidgee at the head of the proposed canal, the object in view being the provision of an increased supply of water in Yanko Creek. The Minister, however, decided that the question of the construction of the weir should be considered with that of the general scheme.

On petition from landholders concerned, the question of constructing a cutting from Old Man Creek to Sandy Creek was investigated, and an estimate of the cost was prepared. The estimate was published, and the matter was referred to the Land Board in accordance with section 4 of the Water Rights Act.

With regard to the proposal that the Government should deal with the question of irrigation at Balranald in the same manner as at Wentworth, it was decided that this should depend on successful developments at the latter settlement.

During the year the Yanko Creek Channel was cleared out, and the flow of flood-water to the Billabong Creek was materially improved. The town of Jerilderie, which was formerly dependent on the natural flow of the latter creek, is now chiefly supplied from the surplus waters of the Murrumbidgee.

(5.) Lachlan River.

As Lake Cudgellico depends on the overflow of the River Lachlan for its supply of water, and as this overflow failed in four years in succession, it was decided to investigate the question whether surplus water in high freshets could not be diverted into the lake. A survey with that object is in hand.

A trust was appointed to take charge of the Island Creek weir.

The dam across the River Lachlan to divert the flow over the Middle Billabong weir has been completed, as has also a regulator for controlling the flow into the Middle Billabong. A cutting from this channel to Marowie Creek is being put in hand, and arrangements are being made for the construction of regulators to control the flow in the latter.

A regulator to control the flow from the River Lachlan into the Willandra Billabong has been completed.

An estimate has been prepared for the construction of a weir on the Nyrang Creek, and the question has been referred to the Land Board for report, as required in section 4 of the Water Rights Act.

The question of completing the Gin Gin Weir and subsidiary work for the supply of water to the Ewenmar, Boothaguy, Marthaguy and other creeks has been referred to the Land Board for report.

(6.) Macquarie River.

The question of providing a more regular supply of water to the Belaringar Creek has been fully investigated, and a scheme for effecting this has been prepared. The estimate was notified, as required in the Water Rights Act, and the question was referred to the Land Board.

The construction of a regulator to control the flow of the water in the offtake at Warren weir has been commenced.

The question of constructing a cutting from Crooked Creek to Duck Creek, and of a regulator in Gunningbar Creek, has not been finally dealt with by the Land Board.

A concrete dam, about 30 feet in height, has been constructed on Queen Charlotte Vale Creek, at a cost of £540, for conserving water for mining purposes.

(7.) Gwydir River.

The construction of a channel for drainage purposes from Midgun Creek to Gilgil Creek is in progress.

The question as to carrying out the general scheme for the drainage of the Gwydir district is under the consideration of the Crown Law Department, the plans and estimate having been prepared.

(8.) Macleay River.

The question of the amalgamation of the drainage schemes on the Lower Macleay is on a fair way to settlement, the last of the Drainage Union having sent in a petition to be dissolved, with a view to inclusion in a comprehensive scheme.

(9.) Manning River.

The scheme for the drainage of the "Big Swamp," at Cooperook, has been accepted by the parties interested, and the work is about to be started, under the provisions of section 4 of the Water Rights Act. The drainage area is 6,800 acres, of which 2,232 acres are Crown land, and the estimated cost is £7,500.

(10.) Darling River.

The question of locking the River Darling from Bourke to Menindie has been under inquiry by the Public Works Committee, and plans and other information have been supplied by the Department as required.

(11.) Miscellaneous.

Discharges of rivers have been observed as opportunities offered, and the records of river heights have been maintained. Among miscellaneous questions dealt with have been the provisions of a proposed Amending Water Rights Act, regulations for the recovery of costs of works, and applications for inquiry into several minor works.

(4.) GENERAL WORKS.

Fitzroy Dockyard.

A considerable amount of work of a very varied character was carried out during the year at the Fitzroy Dockyard. In addition to the general routine work, improvements have been effected to the various shops, and the work of levelling the rock on the north side of Fitzroy Dock has been continued. The number of vessels docked has been 155, representing a tonnage of 206,230 tons. An average of 350 men have been employed.

Statements are subjoined showing the various works which have been carried on and the expenditure, also giving particulars as to vessels docked.

STATEMENT of work carried out at the Fitzroy Dockyard during the year ended 30 June, 1899.

Expenses in connection with the working of the Dockyard—							£	s.	d.	£	s.	d.
General working expenses	...	...	...	...	...	...	1,410	3	5			
Repairs to machinery—Sutherland Dock	...	...	...	...	...	...	1,219	4	1			
Electric Lighting (repairs, &c.)	...	...	...	...	...	...	458	0	5			
										3,087	7	11
Docking and repairing H.M. Ships (labour)	...	...	...	...	...	...	1,275	18	3			
„ other vessels (labour)	...	...	...	...	...	...	348	19	1			
„ materials used	...	...	...	...	...	...	202	7	11			
										1,827	5	3
Improvements to the Dockyard—												
Removal rock	...	...	...	...	...	...	1,122	11	6			
Construction of tramline	...	...	...	...	...	...	18	1	6			
„ sea wall	...	...	...	...	...	...	132	7	8			
Improvements to boiler shop	...	...	...	...	...	...	45	11	3			
„ blacksmith's shop	...	...	...	...	...	...	25	14	6			
New erecting shop	...	...	...	...	...	...	68	2	1			
Improvements to pattern shop	...	...	...	...	...	...	29	8	0			
„ machine shop	...	...	...	...	...	...	562	16	7			
„ moulding shop	...	...	...	...	...	...	61	1	10			
„ foundry	...	...	...	...	...	...	27	2	3			
„ saw-mill	...	...	...	...	...	...	100	6	10			
New fitting shop	...	...	...	...	...	...	598	15	1			
Sundries	...	...	...	...	...	...	14	13	4			
										2,806	12	5

	£	s.	d.	£	s.	d.
Dredge Service—						
Docking, repairs, and general overhaul to dredges	13,923	15	11			
" " " tugs	5,121	12	2			
" " " punts and barges	4,944	15	3			
Dredge "Castor" (repairs, &c.)	3,239	15	5			
Rock drill "Poseidon"	25	11	0			
Castings and rubber sleeves	38	8	10			
Inspecting stores	89	5	0			
				27,383	3	7
Tug "Dooribang" (construction)	4,340	0	3			
" " " "Powerful"	2,606	0	0			
" " " "Phoenix"	992	18	11			
				7,938	19	2
Harbours and Rivers, Water Supply, and Water Conservation (generally)—						
S.S. "Lilian" (docking and repairs)	61	7	11			
Launch "Swift" (docking, repairs, and driving in place of "Leila")	133	2	1			
" " "Leila" (docking, repairs, and driving)	717	12	5			
Survey boat and boring gear (repairs, &c.)	156	9	6			
Head office (sundry repairs, testing, &c.)	25	16	9			
Reclamation works (pipes, &c.)	1,415	6	8			
Circular Quay improvements	120	10	8			
Darling Island	3,005	15	6			
Cook's River " Shea's Creek	24	2	2			
Glebe Island works	234	10	5			
Fort Macquarie horse ferry	29	13	9			
Dawes' Point "	174	15	0			
Sydney wharfs	109	13	5			
Country wharfs	94	16	11			
Garden Island (cranes, &c.)	213	19	7			
Spectacle Island (tramline, &c.)	19	8	0			
Tweed River improvements	5	12	11			
Richmond River "	281	17	9			
Clarence River "	742	1	11			
Nambucca River (crane)	29	19	10			
Macleay River improvements	253	15	1			
Trial Bay harbour works	157	19	2			
Camden Haven improvements	3	18	3			
Manning River "	1	9	8			
Cape Hawke harbour "	32	13	0			
Newcastle harbour works	281	14	7			
Port Kembla "	59	9	3			
Moruya River "	9	2	0			
Murrumbidgee River, snagging	27	13	11			
Darling River "	217	5	0			
Country towns water supply	663	10	1			
Centennial Park reservoir	25	10	0			
Water conservation	499	15	7			
				9,830	8	9
Other Branches of Public Works Department—						
Sewerage Construction Branch	48	3	11			
Roads and Bridges	592	10	8			
Railway Construction	584	7	10			
Tramway	1,578	2	2			
Government Architect's	77	17	8			
				2,881	2	3
Other Departments—						
Marine Board—						
Launch "Sol" (construction)	1,406	15	9			
Repairs and overhaul to pilot steamers	1,138	3	8			
Repairs to launches and pinnace	791	1	5			
Lighthouses, lightships, and buoys	250	7	0			
Repairs to shed	314	10	0			
				3,900	17	10
Mercantile Explosives Department—						
Repairs to powder hulk	894	6	3			
Launch "Kate" (repairs and overhaul)	575	13	0			
Launch "Beatrice" (repairs)	40	17	10			
				1,510	17	1
Department of Education—						
Nautical s.s. "Sobraon" (general repairs)				740	2	5
Department of Justice—						
Launches "Nemesis" and "Biloela" (repairs)	170	15	1			
H.M. Gaols (repairs)	59	9	0			
				230	4	1

Other Departments—*continued.*

Board of Health—						£	s.	d.	£	s.	d.
Quarantine (repairs to buoy, tenders, &c.)...	...	...	...	...	...	227	2	6			
Offal barge (repairs) ...	...	...	...	...	...		5	17	6		
Launch (repairs) ...	...	...	...	...	...	192	13	10			
Little Bay Hospital ...	...	...	...	...	...	0	15	0			
									426	8	0
Water and Sewerage Board (repairs to punt) ...	...	...	...	...	...				30	17	1
Mines Department (launch, "Golden Fleece," repairs) ...	...	...	...	...	...				86	15	9
Military Department (repairs to launches "Ohm" and "Acheron") ...	...	...	...	...	...				189	1	7
Department of Lunacy (repairs to launch "Maude") ...	...	...	...	...	...				141	4	7
Customs Department (launch repairs)...	...	...	...	...	...				133	12	9
Work done for Messrs. G. & C. Hoskins (machinery pipe castings) ...	...	...	...	...	...				89	17	7
Sundry small jobs ...	...	...	...	...	...				86	1	6
									£63,321	0	5

Vessels docked during the year.

Sutherland Dock.

	No.	Tonnage.	Dues.	Expenses.
			£ s. d.	£ s. d.
H.M. ships	24	48,745	976 12 4	976 12 4
Merchant vessels	29	127,585	3,303 10 0	432 6 3
Government plant	36	6,923	43 2 10	43 2 10
Totals	89	183,253	4,323 5 2	1,452 1 5

Fitzroy Dock.

	No.	Tonnage.	Dues.	Expenses.
			£ s. d.	£ s. d.
H.M. ships	5	6,680	92 0 9	92 0 9
Merchant vessels	1	3,540	90 8 7	14 3 7
Government plant	60	12,757	65 19 4	65 19 4
Totals	66	22,977	248 8 8	172 3 8

Reclamation Works.

North Coast District.

Ballina.—For some time past the residents of Ballina, on the Richmond River, have complained of the nuisance caused by the low-lying swampy land which occupies a considerable area of the town, and it was determined to remedy this by filling-in the hollows with sand dredged from the harbour. The sand-pump dredge "Dictys" commenced this work in April, and was still engaged on it at the end of the year. Payments to defray the cost are being made by landowners in proportion to the quantity of material deposited on their allotments.

Newcastle District.

Stockton—36,958 tons of clay, discharged from vessels at the Stockton Ballast Jetties, was used for reclaiming Crown and private land, the owners of the latter paying the Government 2d. per ton for ballast deposited on their allotments.

Carrington.—71,017 tons of sand and 12,135 tons of stone were discharged from vessels at the Bullock Island jetties. This ballast was used to reclaim Crown land at the north end of Carrington.

The sand-pump "Juno" was employed deepening the New Basin and reclaiming the low-lying land between Throsby's Creek and Young-street.

The "Castor" was also at work deepening the New Basin, and reclaimed 10½ acres of land between the west side of the Basin and Denison-street.

North Harbour Reclamation.—A length of 2,780 feet of wall was constructed at the southern end of this proposed reclamation area, 16,120 tons of stone being obtained from the Waratah quarry and 4,018 tons from ships in the harbour. The total expenditure on the North Harbour reclamation works for the year has been £5,468 8s. 10d.

Sydney District.

Spectacle Island.—A portion of the foreshore on the southern side of the island has been reclaimed by the construction of a ballast-dyke, with filling behind.

Cook's River.—The resumed area between Shea's Creek and Botany, on the left bank of the river, is being reclaimed by the deposition of the silt pumped by the dredge "Neptune."

The embankments and drains have been maintained, and a brush-fence erected to keep the sand from being blown on to private property.

Long Cove.—A caretaker has been employed constantly attending to the drains, banks, &c. A portion of the embankment on the eastern side of the canal has been faced with stone to prevent damage by the wash of steamers.

Rozelle Bay.—The dredge "Groper" was engaged pumping silt on to the reclaimed area until February. The reclaimed land has been formed and graded, and silt has been removed from the storm-water channel.

White's Creek.—The dredge "Groper" was working here from April. The work at Rozelle Bay and White's Creek has been carried out by day-labour, twenty-three men being employed during the year.

Homebush Bay.—During the last month of the year twenty-four men have been engaged facing up the embankments with stone.

Other

Other Works.

Sydney District.

Garden Island.—A coal-shed, 180 feet x 45 feet, has been erected on the wharf by contract at a cost of £858. Brick bins have also been erected for coals, and the joints on the docking of the wharf have been filled in. This work was done by day-labour, the cost being £60 3s. 6d.

A new floating-stage has been constructed by day-labour and fixed in position for communication between the Guardship and the shore.

Spectacle Island.—The wooden rails of tramway are being replaced by iron rails, and minor repairs have been carried out to buildings, fences, wharfs, &c.

Glebe Island Causeway.—This work, which was commenced in April, 1898, consists in the construction of two high embankments as approaches to the new Glebe Island Bridge. 202,195 tons of ballast filling have been used in the work which is being done by day-labour, 140 men being employed.

A timber staging has been constructed under contract between the western and eastern embankments in order to carry the stone trucks, and the timber abutments of the bridge have also been erected under contract.

Glebe Island Quarry.—During the year 51,890 tons of ballast and 1,483 cubic yards of dimension stone have been obtained at the quarry on the north side of the island, and forwarded by punt to the various sea-walls and other works in Sydney Harbour, an average number of seventy men being employed by day-labour.

Manly sea-walls.—Those portions of the sea-walls which had been washed away by heavy seas, both on the ocean and harbour sides, have been reconstructed by day-labour, sixteen men being employed for five months.

Snail's Bay.—A new sea-wall has been constructed round the head of this bay, and all the masonry, with the exception of the parapet, is now in place.

Coogee Bay.—The foundations of the sea-wall have been repaired.

Rozelle Bay.—An earth embankment has been constructed at the foot of Booth-street to take the place of a bridge, the cost being £338 17s.

Cook's River.—The contract for the new bridge with sluices was completed, the cost being £10,265 10s.

An embankment with sluice-gates was constructed by contract across Marrickville Flat at a cost of £2,842 3s. 1d.

North Coast District.

Trial Bay.—On 24 November, 1898, a contract was let for the erection of ten warders' cottages for Trial Bay Prison, and the work was completed on 16 June, the total cost being £3,589 5s. 9d.

A contract was let in March for the erection of a new wing to the prison, and also extensive alterations and additions to existing buildings, the amount of the accepted tender being £9,638 8s. This work, which is now in progress, in addition to a new wing containing sixty-four cells, comprises six cubicles for single warders, new kitchen and bakehouse, new drainage system, &c., &c. The roofs of both new and old buildings are to be covered with Marseilles pattern tiles, the walls being of block concrete wherever practicable.

Surveys.

The surveys carried out during the year ending 30th June, 1899, were:—

Harbours and Rivers ...	...	...	...	...	...	...	...	19
Country Towns Water Supply ...	...	...	...	...	...	...	...	13
Water Conservation ...	...	...	...	...	...	...	...	6
Bridges...	...	...	...	...	...	...	...	4
Miscellaneous ...	...	...	...	...	...	...	...	13

Ninety-two cases of private reclamations and special leases and 156 cases of oyster leases have been reported upon.

C. W. DARLEY,
Engineer-in-Chief for Public Works.

3 November, 1899.

IV.

RETURN of Expenditure on Public Works by Harbours and Rivers Branch from 1 July, 1898, to 30 June, 1899.

Work.	Whether Constructing or under Repair.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount Expenditure.
			£ s. d.	£ s. d.	£ s.
WATER SUPPLY—					
Centennial Park Reservoir	Constructing.....	1895	6,579 18 10	.....	69,275 2
Duplicate Main, Prospect to Potts' Hill.....	"	1897	64,830 15 9	65,037 2 11	.....
Providing Country Towns.....	Constructing.....	1879	41,324 10 1	1,074,300 9 4	.....
DREDGE SERVICE—					
Excavation of Silt by Dredges	Annual Service...	1898	78,926 14 0	78,926 14 0	.....
Landing Silt and forming Ground and Special Dredging.....	Improving	1896	11,857 9 0	41,172 18 7	.....
Reclamation and Dredging at Cook's River, including cost of resumption of Land	"	1887	2,778 13 10	290,537 11 10	.....
Self propelling Steam Sand-pump Dredge for deepening shallow Bars	Constructing.....	1897	15,353 4 0	.....	20,000 0
Shallow draught Steamer for Dredge Service	"	"	1,457 13 5	1,500 0 0	.....
Towards fitting Steam-steering Gear and Electric Light on Dredges and "Thetis"	"	"	70 5 5	642 7 7	.....
SYDNEY DISTRICT—					
Circular Quay Improvements	"	1888	9,111 9 1	107,328 6 9	.....
Circular Quay Roadways, &c.—Maintenance.....	Annual Service...	1898	156 8 11	156 8 11	.....
Careening Cove and Neutral Bay Reclamation	"	1894	23 8 6	1,408 18 0	.....
Cook's River Improvements, near Tempe—Improvements for providing for Discharge of Flood-waters	Improving	1897	12,446 5 10	15,758 4 9	.....
Deepening Eastern Channel, Sydney Harbour	"	"	3,860 15 10	5,557 5 5	.....
Extension of Darling Harbour Wharf, including cost of Rail- way Connection, Land Resumptions, &c.	Constructing.....	1881	139,959 11 8	658,204 2 3	.....
George's River, Improvements.....	Improving.....	1897	1,325 9 5	1,327 9 5	.....
Glebe Island Levelling	"	1898	593 8 3	593 8 3	.....
Horse Ferry Dock and Landing at Dawes' Point.....	Constructing.....	"	309 12 8	309 12 8	.....
Long Cove Reclamation and Wharfage.....	Improving.....	1890	360 5 10	46,994 4 6	.....
Manly Sea-walls.....	Constructing.....	1898	1,344 5 8	1,344 5 8	.....
New Jetty and Shed, Circular Quay, and extending old A.S.N. Co.'s Berth	"	1892	332 7 6	37,991 18 10	.....
New Jetty, Circular Quay, west side	"	1897	8,971 6 4	9,943 7 3	.....
Naval Station, &c., Garden Island	Improving.....	1884	1,600 0 11	310,187 11 3	.....
Naval Ordnance Depot, Spectacle Island	"	1898	341 17 11	341 17 11	.....
Punts for Harbour Reclamation Works	Constructing.....	"	36 0 0	36 0 0	.....
Rusheutter's Bay—Completion of Sea-wall	Improving.....	1896	1 0 10	.....	3,102 12 2
Shea's Creek and Cook's River Works—Maintenance	"	1898	353 14 5	353 14 5	.....
Sea-wall, Snail's Bay	Constructing.....	"	978 1 7	978 1 7	.....
Woolloomooloo Bay Improvements.....	"	1888	4,273 16 1	.....	43,492 15 5
Woolloomooloo Bay Wharf, accommodation, including Cargo Sheds, east side	"	1897	10,103 12 6	10,395 0 7	.....
Wharf at White Bay (Glebe Island Improvements)	Improving.....	1898	238 1 6	238 1 6	.....
Wharves, &c.—					
Allen-street Wharf, Long Cove—Erection.....	Constructing.....	1897	83 8 10	.....	83 8 10
Admiralty Wharf—Repairs	Repairs, &c.	"	39 13 7	.....	48 4 1
Admiralty House—Repairs to Boat-shed	"	"	105 0 0	.....	145 0 0
Abbotsford Wharf—Repairs	"	1898	31 4 5	.....	31 4 5
Augustus-street Wharf, Leichhardt—Handrail.....	"	"	13 18 11	.....	13 18 11
Blackwattle Wharf—Maintenance and repairs.....	"	"	367 5 7	.....	367 5 7
Bestic Bridge, Rockdale—Repairs	"	"	15 4 0	.....	15 4 0
Bateman's Bay Wharf—Rails for Tramway	"	"	7 15 8	.....	7 15 8
Bermagui Wharf and Crane—Repairs	"	1897	100 7 5	.....	131 12 3
Berths, East Side Circular Quay—Repairs	"	1898	32 5 6	.....	32 5 6
Balmain Ferry Co.'s Wharf—Replacing piles	"	"	2 13 8	.....	2 13 8
Brundee Swamp, Nowra, Survey.....	"	"	15 1 1	.....	15 1 1
Botany Long Wharf—Repairs.....	"	1897	219 13 4	.....	366 8 10
Circular Quay—Maintenance	"	1898	758 18 0	.....	758 18 0
" No. 4 Jetty, Landings	"	"	12 17 0	.....	12 17 0
" " damaged by "Scout"	"	"	0 15 6	.....	0 15 6
Cement Testing	"	"	58 10 3	.....	58 10 3
Cowper Wharf, damaged by "Kadina"	"	"	5 16 7	.....	5 16 7
Cowper Wharf—Maintenance, repairs, &c.....	"	"	153 1 4	.....	153 1 4
Callen Park Wharf—Repairs	"	1897	28 12 9	.....	45 9 3
Cabarita Wharf—Repairs, landing, &c.	"	1898	16 5 10	.....	16 5 10
Canadian A. Coy's Wharf, Circular Quay, Fenders.....	"	"	9 16 11	.....	9 16 11
Colo River—Snagging	"	"	54 17 6	.....	54 17 6
Caretaker's Cottage, Dredge Service—Removing	"	"	57 19 9	.....	57 19 9
Coogee Sea Wall and Dyke—Repairs	"	"	110 17 9	.....	110 17 9
Camden District Flood Mitigation	"	"	18 16 8	.....	18 16 8
Colo River Wharf—Repairs.....	"	"	6 4 6	.....	6 4 6
Darling Harbour Wharf—Maintenance and repairs.....	"	"	207 7 3	.....	207 7 3
" Ferry—Landing	"	1897	66 14 11	.....	99 5 3
Drummoyle Wharf—Borings	"	1898	11 10 0	.....	11 10 0
Dust-bin for P. and O. Wharf, Circular Quay	"	"	9 13 7	.....	9 13 7
Dundas Road Wharf—Extension.....	"	"	34 17 0	.....	34 17 0
Dust-bins for Naval Stations.....	"	"	35 15 0	.....	35 15 0
Elkington Park Baths, Balmain	"	"	18 9 3	.....	18 9 3
Erskine-street Wharf—Removing Urinal, &c.	"	"	8 8 3	.....	8 8 3

* For items charged to this Vote, see Schedule marked "A."

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

Work.	Whether Constructing or under Repair.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.
SYDNEY DISTRICT—continued.					
<i>Wharves, &c.—continued.</i>					
Erina Creek Wharf, repairs—Grant to Progress Association	Repairs, &c.	1898	25 0 0	.....	25 0 0
Eastern and Australian Coy's. Wharf, Circular Quay— Roadway and gates.....	"	"	37 2 6	.....	37 2 6
Eden Wharf—Repairs.....	"	"	80 14 6	.....	80 14 6
Erskine-street Jetty—Repairs, Piles, &c.....	"	"	1 0 5	.....	1 0 5
" Wharf—Repairs, roadway, &c.....	"	1897	36 10 0	.....	115 5 5
Fence between Murray-street and Pyrmont Wharf.....	"	1898	16 9 11	.....	16 9 11
Farm Cove Jetty—Lengthening.....	"	"	19 7 7	.....	19 7 7
Floating Jetty, No. 4, Circular Quay—Repairs pontoon...	"	"	12 11 1	.....	12 11 1
"Forrester," steamer, Darling River, raising and towing...	"	"	109 16 2	.....	109 16 2
Fort Phillip Signal Station—Repairs, masts, &c.	"	"	40 11 5	.....	40 11 5
Garden Island—Discharging ashes.....	"	"	34 1 2	.....	34 1 2
" Pontoons and Bollards.....	Constructing.....	"	446 4 9	446 4 9	.....
Gosford Wharf Repairs—Grant to Council.....	Repairs, &c.	"	51 0 0	.....	51 0 0
Gladesville Asylum Wharf—Repairs.....	"	"	24 0 7	.....	24 0 7
Hay-street Wharf, Neutral Bay—Repairs.....	"	"	1 4 1	.....	1 4 1
Jervis Bay Wharf—Maintenance.....	"	"	2 2 0	.....	2 2 0
Kanahooka Point Jetty—Repairs.....	"	"	62 15 3	.....	62 15 3
Kiama Wharf—Repairs.....	"	1897	1 13 7	.....	5 10 8
"Leila" Launch—Maintenance and Repairs.....	"	1898	666 0 2	.....	666 0 2
Liverpool Dam Repairs—Grant to Council.....	"	"	100 0 0	.....	100 0 0
Messageries Maritimes Wharf and Shed, Circular Quay— Repairs.....	"	"	7 13 1	.....	7 13 1
Mangrove Creek and Hawkesbury River—Repairs to Wharf at Junction.....	"	"	21 11 0	.....	21 11 0
Manly Sea Wall, under New Pier—Repairs.....	"	"	110 16 5	.....	110 16 5
Nellings Wharf—Repairs.....	"	"	2 13 4	.....	2 13 4
Narooma Wharf—Repairs.....	"	1897	7 15 1	.....	45 3 9
Nowra Wharf—Repairs.....	"	"	12 14 6	.....	14 8 1
Naval Ordnance Depot, Spectacle Island—Repairs Buildings	"	1898	10 12 4	.....	10 12 4
North Shore Ferry Pontoons, Circular Quay—Repairs...	"	"	3 3 7	.....	3 3 7
Orient Co.'s Wharf, Circular Quay—Office for Customs...	Constructing.....	1897	27 7 9	.....	64 3 1
" Damaged by "Oruba".....	Repairs, &c.	1898	9 5 0	.....	9 5 0
Pyrmont Wharf—Repairs.....	"	"	97 8 7	.....	97 8 7
" Maintenance.....	"	"	151 8 5	.....	151 8 5
Parramatta Wharf—Repairs.....	"	"	2 13 11	.....	2 13 11
Pyrmont Ferry Landing—Waiting Room.....	Constructing.....	"	47 7 6	47 7 6	.....
P. and O. Co.'s Wharf, Circular Quay—Damaged by "Himalaya".....	Repairs, &c.	"	212 2 6	.....	212 2 6
Port Jackson Co.'s Jetty and Shed, Circular Quay— Extension.....	Improving.....	"	493 17 1	493 17 1	.....
Princes Stairs.....	Repairs, &c.	"	1 9 6	.....	1 9 6
Ryde Wharf—Repairs.....	"	1897	67 17 8	.....	155 11 6
Rushcutters Bay Boat Landing—Repairs.....	"	1898	2 15 5	.....	2 15 5
Road leading to Government Boat Shed—Repairs.....	"	"	14 18 1	.....	14 18 1
Railings, Circular Quay—Repairs.....	"	"	2 5 0	.....	2 5 0
Road to Timber Co.'s Wharf, Johnson-street, Annandale	Constructing.....	"	24 1 8	.....	24 1 8
Spectacle Island—Miscellaneous Repairs.....	Repairs, &c.	1897	24 4 11	.....	30 15 6
" Storeholder's Quarters.....	"	1898	31 15 11	.....	31 15 11
Sackville Reach Wharf and Approach—Repairs.....	"	1897	481 2 11	.....	486 0 8
San Souci Wharf—Repairs.....	"	1898	4 19 0	.....	4 19 0
Shed for Explosives, Fort Macquarie, for Marine Board...	Constructing.....	"	17 3 0	.....	17 3 0
Silverwater Wharf—Repairs.....	Repairs, &c.	1897	42 17 11	.....	208 1 11
Tathra Wharf—Repairs.....	"	1898	44 0 0	.....	44 0 0
Ulladulla Wharf—Repairs.....	"	"	9 16 4	.....	9 16 4
Ulladulla Breakwater—Repairs.....	"	"	31 7 3	.....	31 7 3
White Bay Wharf—Laying on Water and Gas.....	"	"	39 15 11	.....	39 15 11
" Mooring Piles.....	"	1897	0 10 0	.....	27 3 7
Watson's Bay Ferry Wharf, Circular Quay—Repairs.....	"	1898	41 8 7	.....	41 8 7
" Circular Quay—Additions to Waiting Shed.....	Improving.....	"	85 3 2	.....	85 3 2
Watson's Bay Wharf—Repairs.....	Repairs, &c.	1897	21 10 5	.....	27 9 1
Wiseman's Ferry Wharf—Repairs.....	"	"	2 5 6	.....	22 0 2
Wharf for Steamers—Government Tugs.....	"	1898	18 14 8	.....	18 14 8
Waterman's Landing, Erskine-street.....	"	"	0 14 3	.....	0 14 3
Wharf at Junction Hawkesbury and Colo Rivers.....	"	"	3 10 0	.....	3 10 0
Woy Woy Wharf.....	Constructing.....	"	8 16 3	8 16 3	.....
Woolloomooloo Bay Cargo Sheds—Repairs to Floors.....	Repairs, &c.	"	43 8 1	.....	43 8 1
WOLLONGONG DISTRICT—					
Arbitration case, Hungerford v. Minister for Works.....	.....	1896	3 5 6	.....	12,097 17 3
Harbour Works—Maintenance.....	.....	"	451 6 5	2,254 16 2	.....
Wollongong Breakwater—Repairs.....	Repairs.....	1898	22 12 4	.....	22 12 4
HUNTER RIVER AND NEWCASTLE DISTRICT—					
Extra Mooring Accommodation, Newcastle Harbour.....	Constructing.....	1897	*5,689 13 8	9,252 3 8	.....
New Lighter for Newcastle Harbour.....	"	1896	98 15 0	683 1 8	.....
Newcastle Harbour—Maintenance.....	"	1897	3,264 16 4	7,585 15 9	.....
Reclamation, North Harbour, Newcastle.....	Improving.....	1894	10,447 3 3	23,007 19 0	.....
Wharf and Shipping Appliances, Newcastle, including steam Cranes, Newcastle Wharf.....	Constructing } & improving. }	1858	17,488 19 11	399,451 0 1	.....
<i>Wharves, &c.—</i>					
Belmont Wharf—Repairs.....	Repairs, &c.	1897	3 5 9	.....	5 9 6
Bulladelah Wharf—Repairs.....	"	"	10 1 11	.....	47 8 5

* £1,093 2s. 8d. charged to Newcastle Harbour Improvement Vote.

* Charged to Vote, Richmond River Improvements.

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

Work.	Whether Constructing or under Repair.	When com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If unfinished, amount of Expenditure to 30 June, 1899.	If finished, total amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.
RICHMOND RIVER DISTRICT—continued.					
Wharves, &c.—continued.					
Gundurimba (East) Wharf—Repairs	Repairs, &c.	1897	4 16 10	.....	9 11 6
" (South) " "	"	1898	1 18 5	.....	1 18 5
Greenridge Wharf—Repairs	"	1897	2 3 6	.....	89 16 0
German Creek " "	"	1898	1 11 6	.....	1 11 6
Lismore High-level Wharf—Survey .....	.....	1897	1 10 0	.....	6 10 0
Meaney Creek—Drainage .....	.....	1898	0 14 0	.....	0 14 0
North Creek Jetty—Repairs	Repairs, &c.	"	1 19 5	.....	1 19 5
Oakey Creek Wharf	Constructing	"	96 0 6	.....	96 0 6
Quarry Refuse, Ballina Council .....	.....	"	17 1 3	.....	17 1 3
Richmond River Wharf—Repairs	Repairs, &c.	1897	4 12 3	.....	28 14 4
Stevens Kings Plains Wharf—Repairs	"	"	6 11 3	.....	44 8 11
Swan Bay Wharf—Repairs	"	"	2 18 6	.....	17 8 8
Tucki Wharf—Repairs to Shoot	"	1898	3 13 6	.....	3 13 6
Wyrallah Wharf—Repairs	"	1897	0 8 4	.....	1 5 4
Wardell (East) Wharf—Repairs	"	"	13 15 7	.....	64 6 10
Woodburn (North) Wharf—Repairs	"	1898	0 17 9	.....	0 17 9
" (South) " "	"	1897	1 15 11	.....	2 1 9
NAMBUCCA RIVER—					
Improving Entrance	Improving	1895	3,446 7 1	10,190 2 2	.....
Wharves, &c.—					
Nambucca Heads Wharf—Repairs to Approach	Repairs, &c.	1898	1 10 3	.....	1 10 3
" River, at Hubbert's Beach—Removing Tree .....	.....	"	2 0 0	.....	2 0 0
Taylor's Arm Channel—Removing Tree .....	.....	"	7 10 0	.....	7 10 0
" " Captain's Flat—Removing Tree .....	.....	"	3 7 0	.....	3 7 0
TWEED RIVER—					
Cape Byron Light-house and Quarters	Constructing	1897	110 0 2	110 0 2	.....
Dredge Dock at Terranora	"	1898	993 18 2	993 18 2	.....
Improvements	Improving	1890	842 12 2	33,551 18 9	.....
Wharves, &c.—					
Byron Bay Moorings, South side of Jetty .....	.....	1898	234 3 11	.....	234 3 11
Cudgen Wharf—Repairs	Repairs, &c.	1897	5 10 2	.....	8 14 11
Condong Wharf—Survey .....	.....	1898	0 18 0	.....	0 18 0
Landing for Cane at Tintenbar	Constructing	"	79 15 8	79 15 8	.....
Murwillumbah Wharf—Repairs	Repairs, &c.	1897	2 2 8	.....	4 12 2
Tumbulgum " "	"	"	1 7 1	.....	6 15 4
Tweed Heads " "	"	"	7 2 11	.....	7 7 8
" " Jetty and Approach—Repairs	"	1898	7 10 7	.....	7 10 7
Tweed River Wharves—Repairs	"	"	3 6 6	.....	3 6 6
" " North Arm—Removing Trees .....	.....	"	6 1 11	.....	6 1 11
" " Snagging	"	"	7 9 10	.....	7 9 10
Tug "Terranora"—Repairs	Repairs, &c.	"	3 9 11	.....	3 9 11
MACLEAY RIVER—					
Improving Entrance	Improving	1896	10,341 19 4	30,112 19 8	.....
Wharves, &c.—					
Ballengarra Wharf, Wilson River	Constructing	1897	311 17 0	.....	317 5 6
Bowra Wharf, Crane at Dever's	"	1898	2 19 6	.....	2 19 6
Camden Haven—Rails, &c.	"	"	59 1 6	.....	59 1 6
Frederickton Wharf and Approach—Repairs	Repairs, &c.	"	29 3 11	.....	29 3 11
Gladstone Wharf—Repairs	"	"	6 8 0	.....	6 8 0
Jerseyville " "	"	"	11 14 0	.....	11 14 0
Kinchela " "	"	"	8 0 0	.....	8 0 0
Laurieton Wharf, Camden Haven—Repairs	"	"	15 0 0	.....	15 0 0
Macksville Wharf—Repairs	"	1897	10 0 4	.....	11 6 8
Macleay River Wharves—Repairs	"	"	137 9 4	.....	247 14 4
Macleay River Dock, "	"	1898	15 0 7	15 0 7	.....
Seven Oaks Wharf—Landing Stage	"	"	28 0 0	.....	28 0 0
Smithtown " "	"	"	30 8 0	.....	30 8 0
Warrell Creek—Removing tree .....	.....	1897	9 10 0	.....	20 10 3
BELLINGER RIVER—					
Improvements	Improving	1890	4,595 3 4	33,963 6 1	.....
Wharves, &c.—					
Bellinger Heads Wharf—Repairs	Repairs, &c.	1898	47 17 2	.....	47 17 2
Bellinger River Wharves "	"	1897	1 15 0	.....	3 10 0
Bellinger River, North Arm—Removing tree .....	.....	1898	1 10 0	.....	1 10 0
MORUYA RIVER—					
Improving Entrance—Fascine Banks, &c.	Improving	1888	4,797 12 10	23,464 5 3	.....
Wharves, &c.—					
Moruya Wharf	Constructing	1898	295 4 8	295 4 8	.....
MURRAY, MURRUMBIDGEE, AND DARLING RIVERS—					
Improving	Improving	1856	9,511 9 8	218,734 12 3	.....
COCKATOO ISLAND—					
Dock Establishment—Contingencies	Annual service	1898	7,095 13 11	7,095 13 11	.....
Electric Light—Maintenance	"	"	442 5 11	442 5 11	.....
Fitzroy Dock Extension and Appliances	Improving	"	311 1 0	311 1 0	.....
Fitzroy Dock Inquiry	"	"	84 0 0	.....	84 0 0
Fitzroy Dock—Storekeeper's Quarters	Repairs	"	248 9 5	.....	248 9 5
Planing Castings for G. and C. Hoskins	"	"	88 11 4	88 11 4	.....
Passenger Jetty, South Side—Lengthening	Improving	"	68 0 7	68 0 7	.....
Screen in front of "Sobraon's" Baths	"	"	28 16 2	.....	28 16 2
Sea Wall	"	"	5 16 3	.....	5 16 3
Testing Crane for Rodgers Bros.	"	"	8 9 6	8 9 6	.....

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

Work.	Whether Constructing or under Repair.	When com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
MISCELLANEOUS.					
Ballina Swamps Reclamation		1898	£ 336 10 3	£ 336 10 3	£ 336 10 3
Booth-street Embankment, Annandale		"	306 9 7	306 9 7	306 9 7
Bolwarra Embankment, West Maitland		"	308 2 10	308 2 10	308 2 10
Bourke Wharf and Crane	Constructing	1897	4,884 9 0	5,561 15 4	5,561 15 4
Camden Haven—Improvements to Entrance	Improving	1896	7,468 10 4	12,771 6 5	12,771 6 5
Cape Hawke,	"	1894	1,046 7 6	1,167 16 0	1,167 16 0
Expenses of Tugs on Special Service	Annual Service	1898	506 16 1		506 16 1
Gratuities:—					
Widow of late W. J. Brown			50 0 0		50 0 0
" Hy. Bastian			75 0 0		75 0 0
" R. G. Johnston			100 0 0		100 0 0
" G. Law			100 0 0		100 0 0
" P. O'Neill			100 0 0		100 0 0
" A. J. Spencer			100 0 0		100 0 0
Hereford-street Wharf			2 10 0		2 10 0
Incidental			305 2 10		344 16 0
Johnston's Creek Storm-water Channel			313 0 0		313 0 0
Kiama Harbour and Pier Head Works—Maintenance	Improving	1898	848 1 0	848 1 0	848 1 0
Point Perpendicular Lighthouse	Constructing	1890	8,842 1 8	16,280 17 11	16,280 17 11
Port Kembla Harbour Improvements	Improving	1898	394 3 4	394 3 4	394 3 4
Providing and Fixing Tide-gauges along the Coast		"	117 8 2	117 8 2	117 8 2
Pymont Wharf		"	14 13 10		14 13 10
Pipes for West Australian Government		"	14 14 0		14 14 0
Road in approach to Brewarrina Water Supply—Grant		"	11 19 10		11 19 10
Shellharbour Breakwater—Repairs, Maintenance, and Dredging	Improving	1898	207 13 3	207 13 3	207 13 3
Wharf and Approach at Newport, Pittwater	Constructing	"	553 19 2		553 19 2
Amount paid to Armidale Council for taking over defective Water Supply Material			100 0 0		100 0 0
Harbours and Rivers and Water Supply—Salaries, Equip- ment, Allowances, Travelling Expenses, Rents, Cleaning, Incidental, &c.			16,922 9 4		16,922 9 4
Glebe Island Bridge	Constructing	1897	20,867 16 0	23,519 9 2	23,519 9 2
Pymont Bridge	"	"	60 0 2	142 0 5	142 0 5
Lighthouses as per Schedule "B"	Repairs, &c.	1898	*360 18 10		360 18 10
Preliminary Harbour and River Surveys as per Schedule "C"	"	"	†593 17 9		593 17 9
Work done for other Departments	"	"	11,092 15 3		11,092 15 3
Total			£ 664,905 11 0	£ 4,384,998 0 6	£ 220,565 8 4

TOTAL EXPENDITURE FOR THE YEAR.

	£	s.	d.
Harbours and Rivers Revenue	57,069	13	1
Dredge Service Revenue	78,937	18	0
Water Supply Revenue	1,464	17	6
Harbours and Rivers Loans	475,015	17	1
Water Supply Loans	41,324	10	1
Services of other Departments	11,092	15	3
Total	£664,905	11	0

NOTE.—Items under the heading "Wharfs" charged to Vote "Erection, Repairs, and Renewal of Wharfs, &c."
 * Items under this heading charged to Vote "Erection, Repairs, and Renewal of Wharfs, &c."
 † Items under this heading charged to Vote "Preliminary Harbour, and River Surveys."

SCHEDULE A.

HARBOURS AND RIVERS.

LIST of Items charged to Vote "Country Towns Water Supply."

Work.	Amount.	Work.	Amount.
	£ s. d.		£ s. d.
Armidale	78 7 8	Moree	93 6 7
Bathurst	127 5 8	Moama	2 17 6
Bowral	22 15 5	Nyngan	57 11 10
Ballina	4 0 11	Nowra	193 13 6
Cootamundra	3,223 0 1	Orange	37 18 11
Condobolin	685 19 8	Parkes	182 6 8
Coonamble	18 14 5	Pielon	11,096 9 3
Cowra	31 5 6	Queanbeyan	4 5 3
Cobar	7 13 0	Richmond	14 4 9
Forbes	6,147 7 7	Rylstone	0 17 6
Gundagai	11 0 4	Tamworth	1,322 2 7
Goulburn	57 0 6	Tumut	68 13 8
General Charges	282 6 0	Wollongong	59 1 6
Jerilderie	9 10 0	Wellington	6,845 11 8
Kiama	57 9 7	Warren	1,155 4 8
Lismore	485 12 5	Wentworth	0 5 4
Mudgee	8,939 17 9		
Moss Vale	0 12 5	Total	£41,324 10 1

SCHEDULE B.
HARBOURS AND RIVERS.

List of Lighthouses, &c., charged to Vote "Erection Repairs, and Renewal of Wharfs, &c."

Work.	Amount.	Work.	Amount.
	£ s. d.		£ s. d.
Barrenjoey Lighthouse.....	11 10 5	Solitary Island Lighthouse	31 6 2
Crowdy Head Lighthouse and quarters.....	4 13 9	South Head	33 16 0
Fingal	7 17 2	South Head Station—quarters	07 5 3
Green Cape	10 16 1	Smoky Cape Lighthouse.....	9 11 3
Hornby	47 11 7	Seal Rocks	0 8 2
Montague Island	18 11 4	Tacking Point Lighthouse and quarters	44 1 6
Nobby's	9 5 10	Tweed River Lighthouse	3 19 2
Nelson's Head	4 6 0	Ulladulla	13 11 1
Port Stephens	18 7 5	Wollongong	4 2 6
Point Perpendicular Lighthouse	11 13 6		
Richmond River	2 4 8	Total	£360 18 10

SCHEDULE C.
HARBOURS AND RIVERS.

List of Items charged to Vote "Preliminary Harbour and River Surveys."

Work.	Amount.	Work.	Amount.
	£ s. d.		£ s. d.
Blackwattle Bay—Soundings	1 7 0	Garden Island	1 11 6
Cockatoo Island—Borings	10 2 0	Incidental.....	45 2 1
Cabbage-tree Bay	1 8 0	Long Cove Creek Canal—Soundings	3 0 0
Clyde River—Survey at Entrance	184 7 11	Mosman's Bay—Proposed Reclamation	2 5 0
Coopersnook Big Swamp	2 2 0	Newcastle—Borings at Entrance	50 6 5
Circular Quay—Soundings	15 15 0	Plant.....	179 17 4
Cockle Creek—Soundings	8 9 1	Pittwater, Broken Bay	13 8 6
Double Bay—Proposed Sea-wall	5 5 8	Pymont Bay—Borings	13 1 0
Darling Island Wharfage Area	2 11 0	Ryde Park—Reclamation	5 15 1
Erskine-street—Wharfage Area	0 14 0	Sobraon—Shore Premises, Cockatoo	3 0 10
Fitzroy Dock—Soundings at Entrance	3 10 0	Woolloomooloo Bay—Soundings	2 5 6
Funafuti Exploration—Frame for	6 1 4	White Bay—Soundings	29 5 0
Fort Macquarie Point—Survey	2 12 6		
Fort Macquarie Wharfage Area	0 14 0	Total	£593 17 9

HARBOURS and Rivers Expenditure.

Year.	Loan.	Revenue.	Other Departments.	Total.
				£ s. d.
Previous to 1859				95,765 10 8
1859				16,183 19 4
1860				31,134 1 11
1861				52,314 4 9
1862				84,280 19 5
1863				53,318 16 11
1864				80,830 9 5
1865				58,347 6 8
1866				53,678 15 0
1867				70,840 7 10
1868				83,204 11 10
1869				81,279 12 9
1870				65,675 14 5
1871				67,425 7 11
1872				67,121 3 9
1873				111,160 12 6
1874				137,749 17 1
1875				222,913 19 6
1876				175,189 8 4
1877				186,916 18 0
1878				218,001 4 11
1879				247,110 1 10
1880				279,913 18 7
1881				313,217 0 1
1882				596,332 7 4
1883				733,620 0 0
1884				698,458 6 2
1885				689,171 14 10
1886				817,631 16 11
1887				596,743 8 8
1888	295,962 14 7	139,693 10 11		435,658 5 6
1889	554,521 13 10	148,676 16 1		703,198 9 11
1890	397,951 11 5	175,837 18 7		573,789 10 0
1891	449,527 18 1	211,206 19 3		660,734 17 4
1892	304,807 17 11	237,147 13 6		541,955 11 5
1893	235,614 11 9	169,168 19 11		404,783 11 8
1st January, 1894, to 30th June, 1895	372,698 12 5	229,205 2 1		601,903 14 6
1st July, 1895, to 30th June, 1896	231,789 0 0	152,120 8 5		383,909 8 5
1st July, 1896, to 30th June, 1897	289,393 6 4	123,347 19 9	13,595 3 10	426,336 9 11
1st July, 1897, to 30th June, 1898	376,341 5 4	119,817 15 2	11,832 0 4	507,990 0 10
1st July, 1898, to 30th June, 1899	516,340 7 2	137,472 8 7	11,092 15 3	664,905 11 0
				£12,890,698 7 10

V.

RETURN of Expenditure on Public Works by Water Conservation Branch, from 1 July, 1898, to 30 June, 1899.

Work.	Whether Constructing or under Repair.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
		£ s. d.	£ s. d.	£ s. d.
Administration of Water Rights Act		131 4 8		
Bourke Lock and Weir	Constructing.....	450 3 10	14,020 5 4	
Bourke Dock.....	"	556 4 0	556 4 0	
Balranald Irrigation Area	Survey	206 18 10	312 17 10	
Barrenjack Reservoir Site	"	10 16 7	10 16 7	
Bartley's Tank, Wyalong	"	7 19 4	7 19 4	
Crooked Creek to Duck Creek.....	"	27 11 7	27 11 7	
Cutting Gin Gin Weir to Belaringar Creek	"	103 5 5	103 5 5	
Cooperbrook Big Swamp Drainage	"	2 7 4		2 7 4
Embankment at Barham	"	1 18 0		1 18 0
" Beveridge Island	"	1 11 0		1 11 0
Forbes Weir—Grant to Council.....	Constructing.....	500 0 0		500 0 0
Gin Gin Weir	"	107 18 2	2,053 2 5	
X Gwydir River Drainage	Survey	80 3 6	885 2 9	
Gunningbar Creek Dam, near Warren	"	30 16 6		30 16 6
General Charges				
Locking Darling River.....	Survey	1,494 16 7	1,617 0 9	
Lake Talbott—Diversion of Water	"	72 15 3	72 15 3	
Lake Cudgellico.....	"	119 5 7	119 5 7	
Middle Billabong Weir and Channels	Constructing.....	686 8 9	7,184 7 2	
Murrumbidgee River at Narrandera	Survey	3 1 0		10 6 9
Murrumbidgee Wier Site near Head of Yanko Creek.....	"	29 9 11	29 9 11	
Medgum to Gil Gil Creek Drainage	"	444 18 11	444 18 11	
Outfall Creek from the Macquarie.....	"	9 0 4	9 0 4	
Queen Charlotte Vale Creek Dam	Constructing.....	96 3 6	96 3 6	
South Murrumbidgee Canal	Survey	184 6 5	278 0 0	
Sandy Creek near Narrandera	"	1 10 0		1 10 0
Tocumwal Flood Embankment	"	10 15 4		10 15 4
Tuckian Swamp Drainage	"	14 0 0		456 10 11
Urana Water Supply, Sinking Well—Grant to Trustees	Constructing.....	71 0 0		71 0 0
Warren Weir	"	508 11 5	3,241 11 7	
Warren Weir Regulator	"	212 18 6	212 18 6	
Wentworth Irrigation Area	"	941 6 2	5,428 13 4	
Willandra Weir Regulator	"	139 0 0		139 0 0
Yanko Creek Canal	"	349 1 0	605 16 0	
Salaries, Equipment, Travelling Allowances, &c.....		5,858 15 4		5,858 15 4
Urana Dam and Bywash—Repairs.....		*150 12 7		150 12 7
Constructing Dam, Urana Water Supply—Grant		*50 0 0		50 0 0
Total		£13,666 15 4	37,317 6 1	7,285 3 9

SUMMARY OF EXPENDITURE FOR THE YEAR.

	£ s. d.
Consolidated Revenue	1,582 7 10
Loans	12,084 7 6
Total	£13,666 15 4

* Paid out of Vote, "Salaries, Equipment, Travelling Allowances, &c."

WATER CONSERVATION EXPENDITURE.

Year.	Loans.	Revenue.	Other Departments.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1 August, 1896, to 30 June, 1897	32,518 2 10	12 0 0	117 6 5	32,647 9 3
1 July, 1897, to 30 June, 1898	15,613 13 0	969 12 3	525 12 0	17,108 17 3
1 July, 1898, to 30 June, 1899	12,084 7 6	1,582 7 10		13,666 15 4
				£63,423 1 10

Government Architect.

VI.

Report of the Government Architect.

I HAVE the honor to submit my report upon the building operations and services rendered by this Branch during the twelve months ended 30 June, 1899.

The year has been a busy one, and the result shows increased activity in building operations, the total expenditure being greater than that for any year since 1892; it appears to be coincident with the general improvement in building matters throughout the Colonies, the increased prices for labour and materials having no doubt contributed to the larger expenditure.

The ordinary Annual Revenue Vote for the year to cover expenditure on the varied services rendered by this Branch and to enable general repairs (and expenses that are not chargeable to Loans), to be undertaken, amounted to £50,000, which is the smallest sum voted for many years. It was, however, supplemented from various sources. The actual expenditure for the year has been as follows:—

	£	s.	d.
On Revenue	75,212	3	9
On Loan Account	195,777	2	6
Services for other Departments	10,148	4	0
Total expenditure for the year	£281,137	10	3

The accompanying Return gives in detail the buildings upon which the expenditure has been incurred, and comprises about one half of those under the care of this Branch.

Not many important buildings have been brought to a completion during the year, and the expenditure with one or two exceptions has been generally equalised particularly in regard to country buildings. The new buildings completed comprise:—

Police Buildings—	£	s.	d.
Booligal	880	15	9
Albury... ..	1,572	7	3
Cessnock	693	15	0
Currabubula	627	2	9
Forbes... ..	1,695	14	7
Ford's Bridge	541	12	11
Gladstone	1,230	19	11
Milparinka	705	13	0
Moonbi	957	18	3
Manilla	1,442	3	10
Peat's Ferry	767	7	10
Quirindi	1,023	2	5
Tilpa	876	6	0
Post Offices—			
Alexandria	1,755	9	7
Arncliffe	1,267	10	2
South Broken Hill	1,753	15	5
Lismore	4,454	1	1
Newcastle West	1,360	7	7
Court-houses—			
Bowraville	1,636	10	8
Enngonia	1,060	2	6
Gilgandra	595	3	0
Kew	1,616	17	9
Peak Hill	1,329	10	10
Tinonee	1,567	12	6
Wingham	1,621	14	3
Miscellaneous—			
Newgate Lodge, &c., University	1,952	0	0
Bourke Lands Office... ..	3,735	6	5

The following buildings are in course of extension or erection :—

						Expenditure during the year.		
						£	s.	d.
Botanic Gardens, Buildings, &c.	...	...	...	...	...	3,162	6	8
Custom-house	...	...	...	...	...	2,510	2	11
Darlinghurst Gaol...	...	...	...	...	...	4,322	14	0
Government House	...	...	...	...	...	4,643	18	2
Government Printing Office	...	...	...	...	...	2,935	9	3
General Post Office	...	...	...	...	...	30,249	9	0
Royal Mint	...	...	...	...	...	1,285	13	8
Public Works Offices	...	...	...	...	...	2,526	5	2
Treasury Buildings	...	...	...	...	...	9,792	2	0
Biloela Gaol	...	...	...	...	...	1,882	8	7
Coast Hospital, Little Bay	...	...	...	...	...	5,035	1	2
Hospital for Insane, Gladesville	...	...	...	...	...	1,813	5	0
Newington Benevolent Asylum	...	...	...	...	...	1,053	13	9
Parramatta Gaol	...	...	...	...	...	12,307	8	8
Benevolent Asylum, Rookwood	...	...	...	...	...	3,648	19	1
Bathurst Gaol	...	...	...	...	...	4,323	17	9
Bourke Court-house	...	...	...	...	...	5,774	8	5
Goulburn Gaol	...	...	...	...	...	2,948	0	0
Kenmore Hospital for Insane	...	...	...	...	...	18,200	4	7
Maitland Gaol	...	...	...	...	...	2,626	3	9
Water and Sewerage Board Offices, Newcastle...	...	...	...	...	...	3,895	2	6
Wyalong Court-house	...	...	...	...	...	1,340	0	0

At Christmas time upwards of 2,500 unemployed were engaged at painting the railings of the public parks of the Metropolitan District, and the expenditure was £10,762 7s. 6d.; the large majority of the men was of course unskilled, but the organisation into gangs under properly qualified foremen protected the Government against loss, and upon subsequent measurement of the work performed, it was found that the results were by no means unsatisfactory. This special effort has placed the Government property in a good state of repair and of appearance.

The second contract for the erection of courts at the National Art Gallery was completed during the year, and the trustees were enabled to obtain possession, so that now in the new portion of the building the pictures are efficiently exhibited in six courts. Plans were also in preparation for No. 3 contract, which includes the eastern wing and sculpture galleries. This work being of a monumental character is necessarily of substantial construction; no pains have been spared to ensure a really good building.

The expenditure under the day-labour system has been carried on uninterruptedly upon the General Post Office, with result that a spacious telephone exchange has been handed over to the Postal authorities, and the additions in George-street on the resumed land have also been completed fit for occupation. The additional storeys and the roof are rapidly progressing, as well as the rearrangement of the engine-room in the basement of the building.

At Government House a large quantity of defective external stonework has been replaced, and advantage was taken of this necessary work to enlarge the south end of the ballroom by means of an Apsidal window, and to provide at the same time an orchestral gallery, the additional space so gained having been very much needed.

The offices in Newcastle for the Hunter District Water and Sewerage Board progressed during the year almost to a completion, and will provide ample accommodation for this Board for many years to come.

The additions to the Treasury, including the new portico facing Macquarie-street, have been carried on continuously during the year, and with the portion of the No. 1 contract completed in the previous year, form the nucleus of an important block of buildings. It is recommended that the next step to be taken should be the remodelling of the old portion and bringing it into unison both as regards accommodation and appearance with the newer portions.

A large and continuous expenditure throughout the year has been incurred in remodelling, improving, and adding to the first-class gaols of the Colony to adapt them to the altered conditions under which the prisoners are now treated. Amongst other matters in connection with gaols, the installation of the electric light has taken a large amount of time and attention of the officers of this Branch; and I am in a position to report that in every case the installation has been successfully carried out. The gaols at Goulburn, Darlinghurst, Berrima, Bathurst, and East Maitland have now complete installations, while the large one at Parramatta Gaol is rapidly approaching completion. A small installation is approved of to be set up in Broken Hill Gaol.

During the year extensive plans for the enlargement and improvement of the Quarantine Station, at Manly, were prepared in accordance with the requirements of the Principal Medical Officer, and preparations made for commencing the work early in the following year.

Considerable alterations and expenditure have been made, and it is intended will still be made, to the Coast Hospital, Little Bay. These buildings are of wood construction, and, owing to pressing emergencies from time to time, have been increased in number and extent, unfortunately without any preconceived plan upon which the additions might be properly made. The consequence is that a large institution exists at Little Bay, faulty in general arrangement and questionable as to permanent stability; but so long as the Government cannot see its way clear to the erection of an entirely new hospital on better lines elsewhere continuous expenditure upon these buildings must necessarily be incurred.

At the Kenmore Hospital for Insane I have to report the completion of all buildings intended at present to be erected on the female side of the institution, and the entering into a contract for the completion of those on the male side. The steps now taken cover the whole of the buildings which it is anticipated will be required for some time. The completion of these works is looked forward to with some confidence, as it is anticipated that the result both from a technical point of view, as well as from the financial, is expected to be highly satisfactory.

A commencement was made during the year with the erection of two additional storeys to the Custom-house, at Sydney; and, as the same circumstances prevailed as previously at the Government Printing Office and the General Post Office, the Minister determined that the work should be carried out

on the day-labour system. Tenders had been invited and received before this decision was arrived at; and it will therefore, be possible, when this work is completed to make some comparison between the actual cost of the work under the system with what it may be expected to have been if carried out by contract. The whole of the extensive staff of officers located in that building is working without inconvenience, although for some time to come some portion or other will be without a permanent roof.

This branch of the Public Works Department is entrusted with a variety of duties in connection with other Departments and public buildings which give constant employment to the officers, in addition to the actual work of erecting and maintaining public buildings. Amongst other duties performed is the controlling of the electric lighting, from a central station at the Government Printing Office, of an increasing number of public buildings; also of the maintenance and up-keep of the electric-lighting plants in the gaols already previously referred to. It also periodically inspects and improves the steam-cooking plants throughout the numerous gaols and public institutions which are so fitted up, and it inspects and controls all boilers, machinery, and motive power in connection with these institutions. It also sees to all public lighting, by gas and otherwise, of metropolitan parks and public places not under the control of the City Council. Amongst other services rendered by this Branch is the controlling of the passenger-lifts in the Colonial Secretary's, Public Works, Lands, and Mines Offices—four in number—all on the hydraulic principle, and supplied with motive power by the Sydney Hydraulic Power Company. To give an idea of the general use to which these lifts are put, the following return of passengers may be quoted:—

Colonial Secretary's, per week	...	...	...	...	3,577
Public Works	"	...	...	...	3,509
Lands Office	"	...	...	...	3,509
Mines Office	"	...	...	...	3,063
Total	...	...	...	...	13,658

Taking this as a fair average, the total number carried in the course of a year would be 710,216.

The permanent workshop connected for many years with this Branch has of late been made more use of than formerly, as the following statement shows:—

	Wages.			Materials.		
	£	s.	d.	£	s.	d.
January, 1892, to December, 1892	1,054	6	3	998	14	3
" 1893 " 1893	1,237	2	7	336	19	8
" 1894 to June, 1895	2,466	4	2	979	1	2
July 1895 " 1896	2,244	15	10	2,693	13	9
1896-7	2,713	12	11	2,176	5	0
1897-8	6,757	3	2	2,848	4	3
1898-9	9,793	11	6	3,309	18	8

It is under the efficient and practical management of Mr. F. J. King, and the services it renders and the works it performs are of a multifarious character. Originally it was confined to rendering general services for all Departments of the Government service in the metropolitan area, which could be best done by one establishment, and in carrying out small matters of urgent repairs to buildings and furniture that are not put out to public competition. As, however, the buildings became more numerous, larger, and older, it was found desirable to increase its scope so as now to include general matters of repair, redecoration, and improvements, and a large and increasing number of miscellaneous works required to be done, often at great expedition. During the year this included fitting up several public offices for sub-departments, including the new branch of the Free Public Library at the Victoria Markets, and also extensive public decorations on the State occasions of the year. There is no doubt the convenience of the service has been met, and the work done in a thoroughly reliable manner. Only the best workmen are employed, and the materials used are specially selected under the annual contracts, and time and money both saved. The establishment works, however, under some disadvantages,—its premises (the Government Architect's old yard) are too confined and inconvenient, and upon occasions the need of a small machinery plant to save unnecessary hand labour has been felt. This, however, it is proposed to meet in the coming year, and authority has been given to place the necessary sum on the Estimates to accomplish it.

On the formation of the Public Service Tender Board the advisability of discontinuing all detached stores was under consideration, but it was found not only inconvenient to carry this out in this particular case, but the store of builders' ironmongery, timber, paints, &c., was retained, considerably enlarged, and placed in the charge of a competent storekeeper. The returns at the end of the year show a stock of material in hand valued at £2,315 1s. 5d. The stock has been inspected by a Public Works officer, and reported as in very good condition, every care having evidently been taken to store in a creditable manner, while the ledger for the last year has been well and neatly written up. Considerable cash returns have been made to the Treasury as the proceeds from the sale by public auction of obsolete fittings and old materials periodically accumulating in the yard.

During the year a scheme was prepared for the housing of the Office Staffs of the Inspector-General of Police, and of the Comptroller-General of Prisons, in a building to be erected on the site specially resumed for the purpose at the junction of Phillip and Hunter Streets. It was considered, however, that the site was too valuable and spacious for the limited accommodation required, and the scheme was extended to include offices for the Public Service Board, Auditor-General, and the Government Statistician, who in all cases are occupying rented premises. The enlarged scheme increased the estimated cost of the building to £44,810, which exceeds the limit above which all such matters are referred to the Parliamentary Standing Committee on Public Works. It was accordingly referred and investigated, with result that that authority recommended to Parliament the reduction of the scheme to its original dimensions. No steps have, however, yet been taken to provide the accommodation for the Inspector-General of Police and the Comptroller-General of Prisons, although badly required in both cases.

A larger and more comprehensive scheme was also placed before this Committee, comprising the erection of a large set of offices on the vacant land at the junction of Phillip, Bridge, and Young Streets, to accommodate the Mines Department, with all its sub-branches and museums, and also the Department of Public Instruction. Elaborate plans were prepared and a large amount of information supplied

relative

relative to the present housing of Government officials in public offices and in rented buildings generally, and although the Department placed before the Committee apparently strong and good reasons for undertaking this scheme, this latter body reported adversely.

It may be generally remarked that the natural growth of the public service in Sydney has to a very great extent been accompanied by disjointed and tentative arrangements for its accommodation. This has often led the Government into considerable expense in renting sundry premises in the city, more or less inconvenient; but it has also induced the enlargement of existing buildings which were designed complete in themselves, and which do not lend themselves successfully to such enlargements.

Another work of considerable importance occupied the attention of this Branch during the year. It comprised a long thought out scheme for the combined erection of a penitentiary for the reception of casual and short-sentence metropolitan prisoners, and a prison for the exclusive treatment of female prisoners under all sentences, and who can be conveniently brought in from the Colony generally. The site recommended by the Comptroller-General of Prisons, the Surveyor-General, and myself conjointly is a piece of land, 50 acres in extent, lying between the Bunnerong-road, Kensington, and the suburb of Randwick. Plans were prepared for both these establishments, and included the latest known details of prison construction, and the whole scheme has been placed before the Parliamentary Standing Committee on Public Works, whose investigations are still proceeding. It may be interesting to note that the opportunity now presents itself for erecting and equipping, for the first time in the British Empire, an entirely new and model establishment for female prisoners.

References were made in last year's report to the necessity of making a revaluation of such Government property in the charge of this Branch as might be transferred under Act to the now expected Federal Government.

Action, therefore, has been taken during the year with regard to the buildings used by the Postal Department, and a complete valuation to date is now ready for use whenever demanded. In this statement it has been possible to arrive at the present value of the buildings themselves, but owing to the fluctuating and, I believe, improving state of the land market, particularly as regards the site of the General Post Office, Sydney, it has not been thought desirable to fix a present arbitrary value; for obvious reasons, therefore, the result of the valuation is not disclosed in this report.

With regard to the condition of public buildings, every effort is being made with the funds at disposal to recover lost ground in the matter of general repairs to the increasing number of those under the charge of this Branch. Considerable advance has been made owing to the policy of permitting the cost of improvements and enlargements to existing country buildings, and of such works as clearly add to their capital value, to be charged against special loans raised on a currency of thirty years, while the establishment of the rule of charging the cost of matters of dilapidation, repairs, and expenses to revenue votes only has in all cases been strictly acted upon.

Under a continuance of this arrangement, and with somewhat more liberal revenue votes for the forthcoming year, it is anticipated that the long-standing list of requisitions from the Departments generally will be overtaken; but the hope of being able to systematically and periodically paint all buildings is, I fear, still a "hope" only.

All buildings to be handed over to the Federal Estate, including post-offices and customs houses, should, as a matter of credit to this State, be placed in good repair before such transfer is effected, and as it will take at least twelve months to do this, the initial step should be taken without delay.

No damage from fire, flood, or other extraordinary causes has been reported during the year. No matters of dispute with contractors in connection with deviations on contract or extra works, existed at the end of the year.

The work of this Branch in the country districts is conducted by twelve district architects, located as centrally as possible in their districts. Their work is of a comprehensive character, and besides superintending the erection of new buildings (plans and specifications for which are prepared in the Head Office), it comprises all matters of general repairs and improvements, the preparation of reports and estimates; also of specifications of contracts, together with supervision, payments to contractors, and the travelling inseparable from the nature of these duties. In some districts the travelling is a very heavy item, involving both expense and time from which the metropolitan work is free. The district architects keep up a complete system of book-keeping, and their daily communications with the Head Office are all conducted on one general arrangement.

The returns from these officers for the year afford the following information:—

Number of officers	...	...	...	...	...	...	12
Number of works carried out, but prepared in Head Office	...	...	...	...	...	...	99
Number of works carried out, but prepared in local offices	...	...	...	...	...	...	280
Total expenditure (not including £43,374 9s. 3d. at Kenmore)	...	...	...	...	...	...	£98,026
Papers, letters, vouchers, reports, and estimates dealt with	...	...	...	...	...	...	22,064
Number of miles travelled by railway	...	...	...	...	...	...	79,853
Number of miles travelled by road	...	...	...	...	...	...	33,652

The returns also show that half the time at the disposal of these officers is occupied in travelling, and that every £100 of expenditure has necessitated an average of 120 miles of travel. Where continuous supervision is necessary, and where the office work is excessive, additional help is rendered to the district officers.

The personnel of the Office Staff has remained unchanged during the year. Mr. Oakeshott, chief draftsman, and Mr. Truefitt, one of his principal assistants, applied for and obtained leave of absence to visit England; in neither case had the leave expired prior to the termination of the year. Mr. Mitchell has, during the absence of Mr. Oakeshott, very satisfactorily filled his position as acting chief draftsman.

During the year also, the Public Service Board instituted an inquiry with a view of permanently grading all professional officers in the Public Service, and an Advisory Board on behalf of the Public Service Board made long and continuous inquiries as to the position and service of the several professional officers in this Branch. On the announcement of the decision of the Board, and the results of this step, in the *Gazette* of 19 May, 1899, a number of appeals against such grading were sent in by the officers affected, including some from this Branch, and such appeals are now under investigation.

I have pleasure in reporting the general loyalty and efficiency of the services rendered by all officers throughout the year.

W. L. VERNON,
Government Architect.

VII.

RETURN of Expenditure on Public Works carried on by Government Architect from 1 July, 1898, to 30 June, 1899.

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
				£ s. d.	£ s. d.	£ s. d.
SYDNEY.						
Audit Office.....	Repairs	1898		11 2 5	20 6 8	31 9 1
Attorney-General's Office	Repairs	"		8 16 5	5 13 2	14 9 7
Admiralty House—Additions	Additions	1897			105 0 0	745 0 0
Repairs, &c.	Repairs, &c.	1898		85 10 7	422 0 3	507 10 10
Art Gallery—Additions	Additions	1895			2,490 0 0	23,613 2 2
Repairs	Repairs	1898			1 7 3	1 7 3
Abattoirs.....	Repairs	"			2 15 0	2 15 0
Botanic Gardens—Two semi-detached Cottages	Erection	"			1,278 6 5	1,278 6 5
Closets and Drains—Alterations	Alterations	"			200 5 5	200 5 5
Orchid House	Erection	"			391 1 0	391 1 0
Stables	Additions	"			503 16 5	667 12 11
Fencing	Erection	"			17 9 0	17 9 0
Repairs—Hot-houses	Repairs	"			315 19 2	315 19 2
Dwarf Wall and Iron Railing	Erection	"			31 14 0	31 14 0
Drainage of buildings	Construction	"			423 15 3	1,564 5 2
Buildings	Repairs	"		57 17 8	29 1 5	86 19 1
Belmore Police Barracks	Repairs	"		154 5 3	23 3 8	177 8 11
Lethal Chamber for Dogs	Additions	"			13 2 11	13 2 11
Board of Water Supply and Sewerage Office	Incidental	"			0 1 5	0 1 5
Chancery Square Courts	Repairs	"		50 12 0	393 11 8	444 3 8
Custom House—Additions	Additions	1898			2,510 2 11	2,510 2 11
Repairs	Repairs	"		95 4 8	91 18 9	187 3 5
Crown Law Office	Repairs	"		6 13 6	12 13 0	19 6 6
Central Police Court	Additions and repairs	"		61 13 6	64 12 8	126 6 2
Centennial Park—Shelter Pavilion	Erection	"			458 9 3	458 9 3
Ranger's Cottage	Erection	"			215 0 0	215 0 0
Colonial Secretary's Office—Additions	Additions	"			134 9 9	134 9 9
Repairs	Repairs	"		115 11 4	210 3 3	325 14 7
Charities Department	Furniture	"		11 12 7		11 12 7
Captain Hickson's Residence	Repairs	"			162 3 3	162 3 3
Darlinghurst Gaol—Repairs, Additions, &c.	Repairs, &c.	"		24 10 2	977 14 0	1,002 4 2
Additions	Additions	"			3,345 0 0	3,345 0 0
Electric Light	Maintenance	"			106 9 6	106 9 6
Court-house—Additions, Drainage, and Electric Light	Additions	"			449 17 5	449 17 5
Repairs	Repairs	"		3 15 4	75 7 8	79 3 0
Police Station	Erection	"			1,429 3 9	1,429 3 9
Reception-house	Repairs, &c.	"		8 1 7	119 7 11	127 9 6
District Court	Repairs	"		45 9 5	24 11 0	70 0 5
Domain—Kiosk	Drainage	"			30 10 1	30 10 1
Lodge, Kiosk, and Latrines	Repairs	"			8 8 8	8 8 8
Darling Island Improvements—Office	Furniture	"		0 9 0		0 9 0
Equity Court	Repairs	"		14 18 5	8 16 7	23 15 0
Electoral Office	Repairs	"		27 1 10	2 17 0	29 18 10
Examiners Office, Public Service Board	Furniture	"		16 0 4		16 0 4
Free Public Library	Repairs	"		132 15 11	81 0 5	213 16 4
Lending Branch, George-street Markets	Additions	"			201 2 0	201 2 0
Fisheries Department	Furniture	"		2 19 6		2 19 6
Fort Macquarie	Repairs	"			2 14 3	2 14 3
Government House—Repairs and Alterations	Repairs, &c.	"			1,505 3 6	1,505 3 6
Stonework, Repairs, &c.	Furniture	1896			2,471 18 0	4,789 10 9
Furniture	Erection	1898		359 3 8		359 3 8
Electric Light Installation	Erection	"			666 16 8	666 16 8
Telephones	Repairs	"			20 0 0	20 0 0
Government House Stables—Additions	Additions	1897			96 16 5	271 16 5
Repairs, &c.	Repairs, &c.	1898		36 6 7	44 4 9	80 11 4
Government Printing Office—Repairs, &c.	Repairs	"		109 16 10	100 4 9	210 1 7
Electric Light Maintenance	Repairs	"			455 10 5	455 10 5
Lifts	Repairs	"			57 4 2	57 4 2
Electric Light Installation and Electro Motors	Erection, &c.	1897			1,672 9 3	8,496 17 5
Additions	Additions	1895			1,063 0 0	21,711 12 1
General Post Office—Additions	Repairs	1897			30,249 9 0	43,584 19 9
Repairs	Repairs	1898			202 10 5	202 10 5
Government Labour Bureau	Repairs	"			0 15 9	0 15 9
Government Statistician's Office	Repairs	"		9 9 2	2 0 6	11 9 8
Governor Phillip's Statue	Erection	1896			720 10 0	12,320 10 0
Foundations, drainage, tarpaving, &c.	Construction	"			102 6 8	1,134 9 5
Government Architect's Workshops	Repairs	1898			5 5 3	5 5 3
Health Board Offices	Repairs, &c.	"		18 10 8	62 18 9	81 9 5
Furniture, fittings, Electro Motors, &c.	Fittings, &c.	1897			867 9 9	1,521 19 0
Insolvency Court	Repairs, &c.	1898			15 14 10	15 14 10
Inspector-General of Police Office	Repairs	"		125 4 7	69 14 4	194 18 11
New Offices	Erection	"			11 1 5	11 1 5
Imperial Pension Office	Furniture	"		7 2 8		7 2 8
Justice Department	Repairs	"		6 9 8	13 13 9	20 3 5
Lands Department—Brass Tablets	Additions	1898			105 12 0	105 12 0
Erection Strong Room	Repairs	"			781 18 2	781 18 2
Lifts Maintenance	Repairs	"			351 11 4	351 11 4
Repairs	Repairs	"		89 3 0	182 13 6	271 16 6
Land and Income Tax Office	Repairs	"		102 15 8	6 8 4	109 4 0
Lunacy Office	Repairs	"		1 3 3	0 8 8	1 11 11
Mines Department	Repairs	"			117 10 8	117 10 8
Furniture	Furniture	"		16 17 6		16 17 6
Additions	Additions	"			62 17 0	62 17 0
Erection of New Offices	Erection	"			11 1 5	11 1 5
Museum	Repairs	"			21 7 1	21 7 1
Additions	Additions	"			291 0 11	291 0 11
Mint	Furniture	"		26 1 7		26 1 7
Additions, Machinery, and Repairs	Additions, &c.	1896			1,285 13 8	11,885 6 6
Military Offices	Repairs	1898		2 2 10	5 11 7	7 14 5
Morgues—North	Repairs	"			1 2 0	1 2 0
South	Repairs	"		0 2 3	5 2 10	5 5 1
No. 1 Police Station	Repairs	"			3 1 11	3 1 11
Ormonde House	Additions	"			41 0 0	41 0 0
Repairs	Repairs	"			57 14 11	57 14 11
Additions, Repairs, &c.	Additions, Repairs, &c.	"			26 9 10	26 9 10
Observatory	Additions, Repairs, &c.	"			98 13 1	98 13 1
Ordnance Stores	Erection	1896				297 12 3
Parliament, New Houses of	Repairs, &c.	1898			660 12 2	660 12 2
Public Works Department—Repairs, &c.	Furniture	"		168 8 5		168 8 5
Repairs	Repairs	"			395 9 10	395 9 10
Lifts Maintenance	Repairs	"			2,526 5 2	3,433 14 1
Electric Light Installation	Erection	1897				

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

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
SYDNEY—continued.						
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
Public Instruction Department	Repairs	1898	.....	6 10 7	.....	6 10 7
Parliamentary Buildings—Improvements and Repairs	Repairs, &c.	.....	.....	789 10 5	.....	789 10 5
" Furniture	Furniture	"	108 6 2	.....	.....	108 6 2
" Attending to Ventilation and Gas Service	Repairs, &c.	"	.....	233 16 1	.....	233 16 1
Public Service Board	Repairs	"	9 1 10	11 14 0	.....	20 15 10
Pharmacy Board	"	"	.....	5 6 2	.....	5 6 2
Probate Office	"	"	.....	16 18 10	.....	16 18 10
Public Wharves Office	Furniture	"	5 10 6	.....	.....	5 10 6
Patents Office	Repairs, &c.	"	.....	49 17 10	49 17 10	.....
" Furniture	Furniture	1898	17 11 7	.....	.....	17 11 7
Public Service Tender Board	"	"	53 8 5	.....	.....	53 8 5
Prison for Females	Erection	"	.....	11 1 5	11 1 5	.....
Painting Railings, Public Parks, &c.	Repairs	"	.....	10,762 7 6	.....	10,762 7 6
Quarantine Station	Repairs, &c.	"	.....	147 6 9	.....	147 6 9
Quarantine Depot, Woolloomooloo	Repairs	"	.....	14 17 7	.....	14 17 7
Registrar-General's Office—Electric Light Installation	Erection	1897	.....	525 6 7	.....	857 14 6
" Repairs	Repairs	1898	40 15 1	21 15 7	.....	62 10 8
Railway Department	Furniture	"	0 8 11	.....	.....	0 8 11
Richmond Terrace	Repairs	"	.....	23 14 9	.....	23 14 9
Supreme Court—Additions	Additions	"	.....	309 9 6	.....	309 9 6
" Repairs	Repairs	"	16 2 7	296 6 1	.....	312 8 8
Stamp Office	"	"	3 8 11	94 18 4	.....	98 7 3
Sheriff's Office	Furniture	"	7 16 8	.....	.....	7 16 8
Stores Department	Repairs	"	.....	1 9 7	.....	1 9 7
"Sobraon," N.S. Ship—Additions to Shore Buildings, Baths, &c.	Additions	1897	.....	563 9 10	.....	1,133 3 1
"Sobraon," N.S. Ship—Furniture	Furniture	1898	43 3 9	.....	.....	43 3 9
Stock Department	"	"	2 19 6	.....	.....	2 19 6
Treasury—Repairs	Repairs	1898	585 9 2	390 3 8	.....	975 12 10
" Additions	Additions	1895	.....	9,792 2 0	17,094 16 3	.....
" Electric Light	Erection	1897	.....	49 10 3	.....	395 7 7
Technological Museum	Repairs	1898	.....	1 14 6	.....	1 14 6
University—Additions	Additions	"	.....	38 4 3	.....	38 4 3
" Repairs, &c.	Repairs, &c.	1898	.....	728 1 8	.....	728 1 8
" Gate, Lodge, &c.	Erection	1897	.....	1,752 9 0	.....	1,952 9 0
Water Police Court—Additions	Additions	"	.....	285 19 6	.....	439 19 6
" Repairs	Repairs	1898	4 15 3	33 6 0	.....	38 1 3
Weights and Measures Office	"	"	1 12 1	0 10 7	.....	2 2 8
William-street Post and Telegraph Office	"	"	.....	7 6 3	.....	7 6 3
Woolloomooloo Police Station	"	"	.....	32 19 9	.....	32 19 9
SUBURBS.						
ASHFIELD.						
Post and Telegraph Office	Alterations, &c.	1898	.....	161 12 0	161 12 0	.....
ALEXANDRIA.						
Post and Telegraph Office	Erection	1897	.....	620 9 7	.....	1,755 9 7
ARNcliffe.						
Post and Telegraph Office	"	"	.....	12 10 2	.....	1,267 10 2
BILOELA.						
Gaol	Additions	1898	.....	1,882 8 7	.....	1,882 8 7
" Repairs	Repairs	"	3 1 8	123 19 3	.....	127 0 11
BURWOOD.						
Post and Telegraph Office	Additions	"	.....	2 0 0	.....	2 0 0
Court-house and Lock-up	Cost of land	1897	.....	6 11 0	.....	608 11 0
"	Erection	1898	.....	400 0 0	400 0 0	.....
BALMAIN.						
Post and Telegraph Office, and Court-house	Repairs	"	.....	168 0 2	.....	168 0 2
BRUSH FARM REFORMATORY	Furniture	"	9 6 9	.....	.....	9 6 9
BOTANY BAY.						
Dedication of Kurnell Park	Incidental	"	.....	7 7 1	.....	7 7 1
BOTANY.						
Lock-up	Repairs	"	.....	32 10 0	.....	32 10 0
COAST HOSPITAL, LITTLE BAY.						
Repairs	"	"	.....	402 19 9	.....	402 19 9
Furniture	Furniture	"	196 18 3	.....	.....	196 18 3
Additions	Additions	"	.....	238 11 9	.....	233 11 9
Nurses' New Quarters	Erection	1897	.....	1,404 9 9	.....	1,472 9 9
"	Furniture	1898	304 16 4	.....	.....	304 16 4
Laundry	Erection	"	.....	1,959 6 0	.....	1,959 6 0
" Machinery	"	"	.....	654 13 11	654 13 11	.....
Water Mains	Construction	"	.....	347 0 0	347 0 0	.....
Junior Medical Officers Quarters	Erection	"	.....	28 0 0	28 0 0	.....
CALLAN PARK.						
Hospital for Insane	Repairs	"	40 0 5	535 18 3	.....	575 18 8
CAMPERDOWN.						
Post and Telegraph Office	"	"	.....	3 18 7	.....	3 18 7
CLYDE.						
Metallurgical Works	Additions	"	.....	307 2 1	.....	307 2 1
"	Cost of land	1897	.....	13 2 6	.....	77 8 3
"	Furniture	1898	5 8 0	.....	.....	5 8 0
COOK'S RIVER.						
Police Station	Repairs	"	.....	18 10 0	.....	18 10 0
DRUMMOYNE.						
Post and Telegraph Office	"	"	.....	6 8 11	.....	6 8 11
DULWICH HILL.						
Post and Telegraph Office	Cost of land	"	.....	203 10 5	.....	203 10 5
ENMORE.						
Post and Telegraph Office	Repairs	1898	.....	29 9 4	.....	29 9 4
GLADESVILLE.						
Hospital for Insane	Alterations and Repairs	"	.....	1,038 15 0	.....	1,038 15 0
" Boatshed, Pontoon, &c.	Erection	"	.....	779 10 0	.....	779 10 0
GLEBE.						
Post and Telegraph Office	Additions, &c.	"	.....	42 3 6	.....	42 3 6
Court-house	Repairs	"	2 9 6	.....	.....	5 17 9
Police Station	"	"	.....	4 13 4	.....	4 13 4
GRANVILLE.						
Post and Telegraph Office	"	"	.....	5 9 1	.....	5 9 1
HUNTER'S HILL.						
Court-house	Furniture	"	1 3 0	.....	.....	2 15 2
"	Repairs	"	.....	155 16 0	.....	155 16 0
KOGARAH.						
Post and Telegraph Office	Additions	"	.....	13 5 3	.....	13 5 3
MARRICKVILLE.—						
Lock-up	"	"	.....	30 10 6	.....	30 10 6
"	Repairs	"	.....	14 17 6	.....	14 17 6
Post and Telegraph Office	"	"	.....	0 2 1	.....	0 2 1

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

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
SUBURBS—continued.						
MANLY :—						
Post and Telegraph Office	Repairs	1898		94 10 10		94 10 10
NEWINGTON :—						
Benevolent Asylum				262 2 11		262 2 11
"	Additions	1895		791 10 10		6,043 19 4
NORTH SYDNEY.						
Court-house	Alterations and repairs	1898		109 6 10		109 6 10
Post and Telegraph Office	"	"		11 0 9		11 0 9
NEWTOWN.						
Post and Telegraph Office	Repairs	1898		37 9 4		37 9 4
Court-house	"	"	1 10 3	6 11 5		8 1 8
PETERSHAM.						
Post and Telegraph Office	Additions	"		20 0 0		20 0 0
PADDINGTON.						
Court-house and Police Station	"	"	7 7 1	6 1 4		13 8 5
PYRMONT.						
Post and Telegraph Office	Incidental	"		0 7 0		0 7 0
PARRAMATTA.						
Gaol	Additions, repairs, &c.	"		1,078 17 11		1,078 17 11
"	Furniture	"	19 11 11			19 11 11
"	Erection	"		9,439 17 9		9,439 17 9
"	Boundary Wall	"		45 0 0	45 0 0	
"	Vertical Engine	"		120 0 0	120 0 0	
"	Iron Galleries No. 6 Wing	"		928 13 6	928 13 6	
"	Electric Light Installation	"		89 19 6	89 19 6	
"	Temporary Electric Light Installation	"		605 0 0	605 0 0	
"	Power House	"				
Hospital for Insane	Furniture	"	28 16 11			28 16 11
"	Repairs	"		200 13 0		200 13 0
"	Gardener's Cottage	"		120 0 0	120 0 0	
Court-house Site	Erection	"		33 7 4		33 7 4
Court-house	Additional cost	"	87 15 1			37 15 1
"	Furniture	"		164 2 0		164 2 0
"	Additions	"		15 18 6		15 18 6
"	Repairs	"		4 11 8		4 11 8
Post and Telegraph Office	"	1898		66 7 0		66 7 0
Benevolent Asylum (George-street)	"	"		16 2 3		16 2 3
" (Macquarie-street)	"	"				
Cottage Homes	"	"		5 19 4		5 19 4
PARRAMATTA NORTH :—						
Post and Telegraph Office	Cost of land	1896		17 11 4		270 9 8
"	Additions	1898		23 0 0		23 0 0
RANDWICK.						
Post and Telegraph Office	Erection	1896		81 2 10		2,428 19 11
"	Additions, &c.	1898	1 14 7	34 5 1		35 19 8
RYDE.						
Court-house	Furniture	"	12 11 9			12 11 9
Police Station	Repairs	"	5 11 3			5 11 3
ROCKDALE.						
Post and Telegraph Office	"	"		60 8 11		60 8 11
REDFERN.						
Court-house	"	"		7 8 9		7 8 9
Police Station	"	"		8 9 1		8 9 1
Post and Telegraph Office	"	"		7 12 0		7 12 0
ROZELLE.						
Post and Telegraph Office	"	"		15 1 2		15 1 2
Lock-up	Erection	"		693 3 11		693 3 11
"	Furniture	"	2 13 6			2 13 6
RYDALMERE.						
Hospital for Insane	Repairs and alterations	"		159 0 9		159 0 9
"	Fencing	"		36 0 0		36 0 0
"	Recreation Hall	"		2,405 0 0	2,405 0 0	
"	Farm Buildings	"		31 8 0	31 8 0	
ROOKWOOD.						
Benevolent Asylum	Repairs, &c.	"		209 10 7		209 10 7
"	Erection	"		2,301 10 7		2,301 10 7
"	Scabies Ward	"		270 0 0	270 0 0	
"	Steam Cooking Plant—Scabies	"		633 7 8	1,193 15 9	
"	Ward	"		235 10 3	235 10 3	
"	Irrigation Works	1896				
"	Painting	1898		4 10 0		4 10 0
Police Station	Additions	"				
SOUTH HEAD (WATSON'S BAY).						
Shaftesbury Reformatory	Repairs	"		14 19 11		14 19 11
SUMNER HILL.						
Post and Telegraph Office	Additional cost of land	"		9 5 8	9 5 8	
WAVERLEY.						
Post and Telegraph Office	Repairs	"		102 13 7		102 13 7
WILLOUGHBY.						
Police Station	"	"		5 2 6		5 2 6
COUNTRY.						
ALBURY.						
Post and Telegraph Office	Repairs	1898		9 0 0	9 0 0	
Gaol	"	"	5 12 1	41 7 1		46 19 2
Court-house	"	"	41 1 9	2 4 0		43 5 9
Police Station	"	"	8 17 1	15 10 11		24 8 0
Government Architect's Office	Incidental	"		4 14 0		4 14 0
Police Officers' Quarters	Erection	1897		112 6 3		1,572 7 3
ARMIDALE.						
Post and Telegraph Office	Additions	"		116 1 11		581 8 5
Gaol	Repairs	1898		11 1 0		11 1 0
"	Additions	"		17 11 0		17 11 0
Court-house	Furniture	1897		1,124 17 11	2,520 18 5	
"	Repairs	1898	167 17 5			167 17 5
Lock-up	"	"		0 13 0		0 13 0
Police Station and Quarters	"	"	9 12 9	10 2 7		19 15 4
Lands Office	Additions and repairs	"		89 5 6	89 5 6	
Government Architect's Office	Incidental	"	0 6 6	17 6 2		17 12 8
Government Offices (Old Telegraph Office)	Additions	"	0 10 0	81 18 0		82 8 0
Roads Office	Furniture	"	5 1 5			5 1 5
ADELONG.						
Post and Telegraph Office	Repairs	"		64 4 6		64 4 6
Police Station	"	"		65 12 0		65 12 0
Court-house	Furniture	"	1 6 10			1 6 10
ADAMINABY.						
Court-house	Erection	"		1,955 0 0	1,955 0 0	
ADAMSTOWN.						
Post and Telegraph Office	Repairs	"		1 15 0		1 15 0

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

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY— <i>continued.</i>						
BATHURST.						
Gaol—Electric Light Installation	Erection	1898		1,731 10 0	1,731 10 0	
" Additions	Additions			1,250 7 2	1,250 7 2	
" Additions and Repairs	Repairs, &c.	1898		1,280 0 9		1,280 0 9
" Electric Light Maintenance				61 19 11		61 19 11
" Furniture	Furniture		29 1 2			29 1 2
Police Station	Repairs			8 0 0		8 0 0
Court-house			0 12 0	25 8 6		26 0 6
"	Additions	1898		570 17 0		570 17 0
Post and Telegraph Office				1,310 14 0		1,310 14 0
Government Architect's Office	Incidental		2 5 9	19 5 2		21 10 11
Technical College	Furniture and fittings		323 8 9			323 8 9
BOURKE.						
Gaol	Repairs	1898		4 6 3		4 6 3
Court-house	Erection	1897		5,774 8 5	6,492 0 10	
"	Furniture	1898	0 11 0			0 11 0
Post and Telegraph Office	Repairs			22 18 0		22 18 0
Lands and Survey Office	Erection	1897		2,817 7 8		3,735 6 5
"	Furniture	1898	8 18 8			8 18 8
NORTH BOURKE.						
Police Station	Additions			38 10 0		38 10 0
BROKEN HILL.						
Gaol				20 19 6		81 19 5
Court-house				1,231 3 10		1,231 3 10
"	Repairs		1 13 5	4 3 6		5 16 11
Government Architect's Office	Incidental		0 3 6	2 1 3		2 4 9
BROKEN HILL SOUTH.						
Post and Telegraph Office	Erection	1897		129 6 7		1,753 15 5
Police Barracks—Stable and fencing				764 12 8	764 12 8	
"	Repairs	1898		5 12 9		5 12 9
BOMBALA.						
Police Buildings	Additions			7 10 0		7 10 0
BRAIDWOOD.						
Post and Telegraph Office	Repairs			125 2 0		125 2 0
Lock-up Gaol				3 1 5		3 1 5
Police Station				35 2 0		35 2 0
BOGGABRI.						
Post and Telegraph Office	Additions	1897		24 0 0		333 12 6
BERRIMA.						
Gaol	Alterations & Repairs	1898	1 5 7	237 16 2		239 1 9
Governor's Quarters	Additions			86 12 11		86 12 11
Post and Telegraph Office	Repairs			12 16 0		12 16 0
BALRANALD.						
Lock-up Gaol	Additions			35 1 7	35 1 7	
Police Station				1,086 5 6	1,086 5 6	
Post and Telegraph Office	Repairs			5 0 0		5 0 0
BREWARRINA.						
Post and Telegraph Office				3 10 0		3 10 0
Court-house	Furniture		4 0 10			4 0 10
BINGARA.						
Post and Telegraph Office	Additions			171 19 0		171 19 0
"	Repairs			2 10 0		2 10 0
Court-house	Additions		4 11 0	889 15 2	889 15 2	4 11 0
Lock-up Gaol				234 1 0		234 1 0
BEGA.						
Court-house			5 16 11	1 8 0		7 4 11
Post and Telegraph Office	Repairs			2 18 0		2 18 0
Police Buildings	Additions			539 8 0	539 8 0	
BALLINA.						
Post and Telegraph Office	Repairs			38 0 0		38 0 0
BARRABA.						
Police Station				8 5 0		8 5 0
Post and Telegraph Office				30 14 1		30 14 1
BUCKLEY'S CROSSING.						
Court-house and Lock-up	Furniture		6 7 10			6 7 10
BURROWA.						
Court-house	Repairs			0 2 6		0 2 6
BULLI.						
Police Station	Additions			11 10 0		11 10 0
Court-house	Furniture		2 15 1			2 15 1
BYRON BAY.						
Police Station	Repairs		2 14 1			2 14 1
BERRY.						
Post and Telegraph Office				4 19 2		4 19 2
BURRAGA.						
Police Station	Additions			4 10 0		4 10 0
BOGGABILLA.						
Court-house and Police Station	Fencing	1897		20 10 0		68 0 0
"	Furniture	1898	43 7 2			43 7 2
BENDEMEER.						
Court-house			27 6 6			27 6 6
BOOLIGAL.						
Police Station	Erection			880 15 9		880 15 9
Court-house	Furniture		0 16 6			0 16 6
BARMEDMAN.						
Court-house			17 0 5			17 0 5
BYEROCK.						
Court-house and Police Station	Additions		0 19 10	322 15 5		323 15 3
BUNBARRA.						
Court and Watch-house				20 15 0		20 15 0
BROKEN BAY.						
Custom-house—Additional cottage	Erection	1897		133 0 6		262 0 6
Magazines	Additions			10 14 6		136 1 6
BULLADELAH.						
Court-house	Repairs	1898		6 11 0		63 3 6
BEMBOOKA.						
Court-house and Police Buildings	Additions			182 0 6		182 0 6
BLAYNEY.						
Post and Telegraph Office	Repairs			192 14 0		192 14 0
Court-house			0 7 9	0 13 6		1 1 3
BOWRAVILLE.						
Court-house and Police Station	Erection			1,636 10 8		1,636 10 8
BERMAGUI.						
Police Station—Temporary Cell				42 0 0		42 0 0
BELLINGEN.						
Court-house	Furniture		22 12 8			22 12 8
BATLOW.						
Police Buildings	Erection			668 7 6	668 7 6	
BROKE.						
Police Station				504 19 1	504 19 1	

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

Work.	Whether Con- structing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expendi- ture.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
BROADWATER.						
Court House	Additions	1898		44 5 2		44 5 2
BORADAH.						
Police Station, &c.	Erection	"		228 17 0	228 17 0	
BOWRAL.						
Post and Telegraph Office	Repairs	"		105 6 1	105 6 1	
CAMPRELLTOWN.						
Post and Telegraph Office	Repairs	"		2 10 0		2 10 0
Roads Office	Furniture	"	0 4 10			0 4 10
Stud Farm (Kirkham).	"	"	0 16 0			0 16 0
COONAMBLE.						
Court-house	Repairs	"		2 2 10		2 2 10
COOMA.						
Court-house	"	"	3 0 0	48 0 0	48 0 0	3 0 0
Police Station	"	"		11 8 0		11 8 0
Gaol	"	"	0 17 0	2 11 9		17 0 6
Post and Telegraph Office	"	"		6 13 0		6 13 0
CLARENCE TOWN.						
Post and Telegraph Office	"	"		37 4 0		154 18 6
CAMDEN.						
Post and Telegraph Office	Additions	1897		382 11 10		922 11 10
CASSILIS.						
Court-house	Furniture	1898	9 12 4			9 12 4
Post and Telegraph Office	Repairs	"		6 4 0		6 4 0
Lands Office	Furniture	"	1 1 0			1 1 0
COOTAMUNDRA.						
Court-house	Repairs	"	58 1 11	27 19 6		86 1 5
Post and Telegraph Office	Additions & repairs	1897		22 13 0		605 0 6
Lock-up Gaol	Additions	1898	2 3 10	575 16 0	575 16 0	2 3 10
Government Architect's Office	Incidental	"	1 17 0	29 1 11		30 18 11
Police Station	Repairs	"		1 0 0		1 0 0
COWRA.						
Lock-up Gaol	Additions	1898		23 1 10		23 1 10
Court-house	Repairs	"	0 17 0	76 18 0	76 18 0	0 17 0
Roads Office	Furniture	"	0 13 3			0 13 3
Post and Telegraph Office	Repairs	"		1 10 0		1 10 0
CASINO.						
Post and Telegraph Office	"	"		65 0 0	65 0 0	
COBAR.						
Court-house	"	"	5 15 1	11 15 0		17 10 1
Post and Telegraph Office	Repairs, &c.	"		71 0 0		71 0 0
Lands Office	Furniture	"	0 2 0			0 2 0
CARCOAR.						
Post and Telegraph Office	Repairs, &c.	"		97 18 0		97 18 0
CONDOBOLIN.						
Court-house	"	"		6 10 0		6 10 0
Post and Telegraph Office	Additions, &c.	"		195 12 3		195 12 3
COOLAH.						
Post and Telegraph Office	Additions	"		29 0 0		29 0 0
Court-house and Police Station	"	"		970 7 4		970 7 4
CANDELO.						
Post and Telegraph Office	Repairs	"		10 10 0		10 10 0
COPELAND.						
Court-house	"	"		4 0 0		4 0 0
Police Station	"	"		126 0 2		126 0 2
CUNDELETON.						
Police Station and Court-house	Repairs, &c.	"		197 7 6		197 7 6
CORAKI.						
Court-house	Additions	"		12 8 9		12 8 9
CUBAL.						
Post and Telegraph Office	" &c.	"		7 7 0		87 10 0
CARRIKOTON.						
Post and Telegraph Office	"	"	7 14 3	11 3 6		18 17 9
CROOKWELL.						
Police Buildings	Repairs	"		2 0 0		2 0 0
Roads Office	"	"	0 2 0			0 2 0
COOPERNOOK.						
Court-house	Furniture	"	13 19 4			13 19 4
CRESSNOCK.						
Police Station	Erection	"		693 15 0		693 15 0
COBARO.						
Court-house	Repairs	"	2 12 7	14 0 0		16 12 7
Police Station	"	"		13 12 0		13 12 0
CURRABUBULA.						
Police Station	Erection	"		158 6 4		627 2 9
" " Temporary Cell	"	"		18 10 0		18 10 0
CARINDA.						
Police Station Temporary Cell	"	"		70 0 0		70 0 0
Court-house	Furniture	"	16 2 6			16 2 6
CORAMBA—						
Court-house and Police Station	Cost of land	1897		34 13 10		35 1 4
" " "	Erection	1898		731 6 6	731 6 6	
CAMDEN HAVEN.						
Pilot Station	Additions, &c.	"		71 0 6		71 0 6
COROWA.						
Police Station	Repairs	"		6 18 8		6 18 8
CAPTAIN'S FLAT.						
Court-house and Lock-up	Erection	"		1,390 0 0	1,390 0 0	
COPMANHURST.						
Police Station	Additions, &c.	"		48 2 6		48 2 6
COOLABAH.						
Court-house	Furniture	"	15 16 7			15 16 7
Experimental Farm	"	"	0 17 1			0 17 1
COLLIE.						
Police Station	Erection	"		594 18 3	594 18 3	
DENILIKUIN.						
Gaol	Additions	"		12 11 6		12 11 6
Court-house	Repairs, &c.	"	27 17 7	29 16 5		57 14 0
South—Lock-up	Additions, &c.	"	3 4 3	323 3 0		331 7 3
DUBBO.						
Gaol	Repairs, &c.	"	4 15 2	39 13 5		35 8 7
Court-house	Additions	1897		19 4 0		101 4 0
" " "	Furniture	1898	9 15 9			9 15 9
Post and Telegraph Office	Additions	1897		273 0 8		353 2 6
Government Architect's Office	Incidental	1898		13 9 6		13 9 6
Lands Office	Alterations, &c.	"		43 5 0		241 5 0
Lock-up	Cost of land	"		400 0 0		400 0 0
DUNGOO.						
Court-house	Repairs	"	5 6 0	100 5 0		105 11 0
Police Buildings	Repairs, &c.	"		135 16 5		135 16 5

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

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
COUNTRY— <i>continued.</i>			£ s. d.	£ s. d.	£ s. d.	£ s. d.
DRAKE.						
Court and Watch House	Additions	1898	51 9 2	3 15 0	.....	55 4 2
Post and Telegraph Office	Cost of land	1897	.....	83 12 3	.....	83 19 9
DAVIESVILLE.						
Police Buildings	Additions	1898	.....	8 0 0	.....	8 0 0
DELEGATE.						
Court and Watch House	"	1897	.....	427 17 8	.....	1,029 17 11
DALMORTON.						
Court-house and Lock-up	Erection	1898	.....	383 13 1	383 13 1	.....
ENNGONIA.						
Police Station and Court-house .....	" .....	"	.....	1,060 2 6	.....	1,060 2 6
EUABALONG.						
Police Station	Repairs .....	"	.....	1 4 10	.....	1 4 10
EMMAVILLE.						
Post and Telegraph Office .....	" .....	"	.....	11 11 6	.....	11 11 6
FORBES.						
Court-house	Repairs	"	17 1 9	42 0 0	.....	59 1 9
Police Station and Lock-up	Erection	1897	.....	343 0 0	.....	1,695 14 7
Gaol	Additions	1898	.....	373 16 3	.....	373 16 3
Lands and Survey Office	"	"	102 19 8	35 11 0	.....	138 10 8
Police Barracks	Repairs .....	"	.....	1 17 6	.....	1 17 6
Government Architect's Office	Furniture	"	1 1 8	.....	.....	1 1 8
Roads Office	Repairs .....	"	.....	0 12 6	.....	0 12 6
FORSTER.						
Police Station	Additions .....	"	.....	6 14 0	.....	6 14 0
Court-house	Furniture	"	4 3 8	.....	.....	4 3 8
Post and Telegraph Office	Additions .....	"	.....	6 15 6	.....	6 15 6
FORD'S BRIDGE.						
Police Station	Erection	1897	.....	90 12 11	.....	541 12 11
FINLEY.						
Court-house	Furniture	1898	4 13 6	.....	.....	4 13 6
Police Station—Temporary Cell	Erection .....	"	.....	113 6 6	113 6 6	.....
GUNNEDAH.						
Gaol	Additions .....	"	.....	471 9 10	.....	471 9 10
Court-house	Furniture	"	0 10 0	.....	.....	0 10 0
Police Station	Repairs .....	"	.....	4 18 0	.....	4 18 0
GUNNING.						
Police Quarters	Erection .....	"	.....	405 0 0	405 0 0	.....
Court-house	Repairs .....	"	.....	4 0 0	.....	4 0 0
GRAFTON.						
Gaol	Additions .....	"	.....	183 10 0	183 10 0	.....
"	Repairs .....	"	.....	51 0 5	.....	51 0 5
Post and Telegraph Office	"	1897	.....	68 5 3	.....	155 2 3
Court-house	Additions	1898	.....	558 0 11	.....	558 0 11
"	Repairs	"	0 16 6	2 0 6	.....	2 17 0
Police Station .....	" .....	"	.....	6 14 6	.....	6 14 6
Lands and Survey Office	Additions	"	0 1 0	9 3 10	.....	9 4 10
Government Architect's Office	Incidental .....	"	.....	5 2 0	.....	5 2 0
GRAFTON, SOUTH.						
Post and Telegraph Office	Additions .....	"	.....	25 18 6	.....	25 18 6
Police Buildings	Repairs .....	"	.....	7 3 4	.....	7 3 4
Police Station	Additions .....	"	.....	20 5 6	.....	20 5 6
GUNDAGAL.						
Gaol	Repairs .....	"	.....	16 7 2	.....	16 7 2
"	Additions .....	"	.....	17 10 0	.....	17 10 0
Court-house	"	"	61 8 6	57 6 5	.....	118 14 11
Police Station	Repairs .....	"	.....	1 14 3	.....	1 14 3
GLEN INNES.						
Post and Telegraph Office .....	" .....	"	.....	35 9 6	.....	35 9 6
Court-house	Additions	1897	.....	1,060 10 2	.....	1,756 9 4
"	Furniture	1898	12 2 6	.....	.....	12 2 6
Gaol	Additions .....	"	.....	37 18 0	.....	37 18 0
GULGONG.						
Court-house	Erection .....	"	.....	1,427 8 0	1,427 8 0	.....
GUYRA.						
Court-house	Furniture	"	3 8 6	.....	.....	3 8 6
GRENFELL.						
Court-house	Additions, &c.	"	0 19 0	41 7 8	.....	42 6 8
Police Station	Alterations .....	"	.....	7 15 0	.....	7 15 0
Post and Telegraph Office	Repairs and alterations .....	"	.....	16 0 0	.....	16 0 0
Gaol	Furniture	"	10 13 3	.....	.....	10 13 3
GOONDOGA.						
Court-house	Additions	1897	.....	245 14 9	.....	449 17 0
"	Furniture	1898	2 15 6	.....	.....	2 15 6
Post and Telegraph Office	Additions .....	"	.....	15 7 6	.....	15 7 6
GRESFORD.						
Court-house and Police Station	Additions, &c.	"	10 11 7	351 7 0	.....	361 18 7
GOULBURN.						
Gaol	Additions, repairs, &c.	"	6 16 4	347 5 0	.....	354 1 4
" Electric Light Installation and Erection of Engine House	"	1897	.....	2,082 12 2	.....	3,391 19 6
" Water Supply	Construction	1898	.....	351 0 2	351 0 2	.....
" Electric Light Maintenance .....	" .....	"	.....	167 2 8	.....	167 2 8
Court-house	Repairs	1898	5 2 4	20 9 10	.....	25 12 2
Post and Telegraph Office	"	"	5 18 3	13 3 6	.....	19 1 0
Government Architect's Office	Furniture	"	21 19 5	.....	.....	21 19 5
"	Incidental .....	"	.....	10 1 9	.....	10 1 9
Land and Survey Office	Repairs .....	"	.....	0 11 6	.....	0 11 6
Morgue	Additions, &c. ....	"	.....	14 4 6	.....	14 4 6
GERMANTON.						
Police Station	Repairs .....	"	.....	3 15 0	.....	3 15 0
GUNDAROO.						
Court-house	Furniture	"	21 3 7	.....	.....	21 3 7
GLADSTONE.						
Police Station and Lock-up	Erection	1897	.....	764 16 1	.....	1,220 19 11
GLOUCESTER.						
Post and Telegraph Office	Cost of land	1898	.....	0 7 6	0 7 6	.....
GILGANDRA.						
Court-house	Erection	1897	.....	226 11 4	.....	595 3 6
GOOLAGONG.						
Police Station	"	1898	.....	1,089 5 0	1,089 5 0	.....
GRETA.						
Police Station	Alterations .....	"	.....	3 13 0	.....	3 13 0
GIRILAMBONE.						
Police Station	Erection .....	"	.....	536 7 10	536 7 10	.....
GRONG GRONG.						
Police Station	Repairs .....	"	.....	3 7 7	.....	3 7 7
GOSFORD.						
Police Station	Additions .....	"	.....	145 15 0	145 15 0	.....

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

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
COUNTRY—continued.			£ s. d.	£ s. d.	£ s. d.	£ s. d.
HAY.						
Court-house.....	Repairs.....	1898		13 0 0		13 0 0
".....	Additions.....	"		602 8 0		602 8 0
".....	Furniture.....	"	6 6 10			6 6 10
Police Barracks.....	Additions, &c.....	"		71 0 6		71 0 6
Gaol.....	".....	"		14 4 9		14 4 9
Land and Survey Office.....	Repairs.....	"		19 17 6		19 17 6
Police Station.....	".....	"		4 15 2		4 15 2
Post and Telegraph Office.....	".....	"		17 13 6		17 13 6
HILLSTON.						
Court-house.....	Furniture.....	"	57 3 8			57 3 8
Gaol.....	Repairs.....	"	2 0 8	3 2 7		5 3 3
HOWLONG.						
Post and Telegraph Office.....	".....	"		2 19 6		2 19 6
HARDEN.						
Police Station.....	".....	"		0 5 0		0 5 0
HILLGROVE.						
Post and Telegraph Office.....	".....	"		10 16 10		10 16 10
HOWE'S VALLEY.						
Police Station.....	".....	"		124 10 0		124 10 0
HORTON VILLAGE.						
Police Station (erection of buildings removed from Eulowrie).	".....	"		199 0 0		199 0 0
HAMILTON.						
Police Station.....	Repairs.....	"		7 8 10		7 8 10
HINTON.						
Police Station.....	Additions, &c.....	"		17 10 0		17 10 0
INVERELL.						
Court-house.....	Repairs.....	"	10 15 8	2 1 0		12 16 8
Lockup Gaol.....	".....	"		37 4 4		37 4 4
Public Buildings.....	Drainage.....	"		259 6 7		259 6 7
".....	Repairs.....	"		8 0 0		8 0 0
IVANHOE.						
Court-house.....	Furniture.....	"	3 0 0			3 0 0
JERILDERRIE.						
Post and Telegraph Office.....	Additions.....	"		385 13 8		385 13 8
JUNEE.						
Post and Telegraph Office.....	".....	"		366 5 4	366 5 4	
JUJONG—						
Court and Watch House.....	Repairs.....	"		16 12 2		16 12 2
JERRY'S PLAINS.						
Post and Telegraph Office.....	".....	"		1 11 0		1 11 0
JENOLAN CAVES.						
Accommodation House.....	Erection.....	1896		1,170 18 2	8,812 7 8	
".....	Furniture.....	1898	482 10 8			957 6 8
"..... Garden, Fencing Water Reserve, &c., and Repairs, &c., Wilson's Quarters.	Additions, &c.....	"		380 16 5	380 16 5	
KIAMA.						
Court-house.....	Repairs.....	"		2 17 6		2 17 6
Post and Telegraph Office.....	".....	"		9 18 0		9 18 0
KENMORE.						
Hospital for Insane.....	Erection.....	1894		18,200 4 7	128,899 17 9	
".....	Furniture.....	1898	919 11 11			3,869 7 5
KEMPSLEY West.						
Court-house.....	Additions.....	"	29 5 8	28 7 10		57 13 6
KATOOMBA.						
Court-house and Police Station.....	Repairs, &c.....	"	30 2 1	8 0 0		38 2 1
KERRIBEE.						
Police Station.....	Repairs.....	"		31 0 0		31 0 0
KEW.						
Court-house and Lockup.....	Cost of land.....	"		35 18 0		35 18 0
".....	Erection.....	"		1,646 17 9		1,646 17 9
LIVERPOOL.						
Benevolent Asylum.....	Repairs.....	"	4 17 4	92 3 11		97 1 3
".....	Fencing.....	"		158 14 6		158 14 6
Lockup.....	Repairs.....	"		15 10 0		15 10 0
Post and Telegraph Office.....	".....	"		20 0 0	20 0 0	
LISMORE.						
Court-house.....	Additions.....	"		32 6 0		32 6 0
".....	Furniture.....	"	32 2 7			32 2 7
Post and Telegraph Office.....	Erection.....	1897		1,688 6 0	4,454 1 1	
Police Buildings.....	Cost of land.....	"		7 10 7		394 5 9
".....	Additions.....	1898		24 9 11		24 9 11
Roads and Survey Offices (Old Post-office).....	Alterations, &c.....	"		152 19 0	152 19 0	
LAMBTON.						
Court and Watch House.....	Additions, &c.....	"		134 4 3		281 4 3
".....	Furniture.....	"	1 14 0			1 14 0
Police Station.....	Repairs.....	"		69 16 0	69 16 0	
Post and Telegraph Office.....	".....	"	5 10 0	5 10 0		11 0 0
LAWRENCE.						
Police Station.....	".....	"		20 0 0		20 0 0
LOUTH.						
Police Station Temporary Cell.....	Erection.....	"		127 4 10		127 4 10
LOCKINVAR.						
Police Station.....	Additions, &c.....	"		14 10 0		164 10 0
LOCKHART.						
Police Station.....	Repairs.....	"		0 14 10		0 14 10
LITHGOW.						
Court-house.....	".....	"	2 13 9	3 0 0		5 13 9
MAITLAND EAST.						
Gaol.....	Additions, Repairs, &c.....	"	14 3 5	961 15 6		975 18 11
" Electric Light Installation.....	Erection.....	"		1,216 15 9	1,216 15 9	
" Maintenance.....	Repairs, &c.....	"		58 14 8		58 14 8
" Boundary-wall.....	Additions.....	"		198 0 0		198 0 0
" Drainage.....	Construction.....	"		190 17 10	190 17 10	
Court-house.....	Repairs.....	"	13 9 0	54 19 0		68 8 0
Post and Telegraph Office.....	".....	"		4 0 0		4 0 0
Police Station.....	".....	"		19 9 6		19 9 6
".....	Additions.....	"		323 18 8	323 18 8	
Land and Survey Office.....	".....	"		53 6 8		53 6 8
".....	Repairs.....	"		38 12 9		38 12 9
Roads Office.....	Furniture.....	"	0 3 0			0 3 0
MAITLAND WEST.						
Court-house.....	Additions.....	1897		218 13 8		423 19 4
".....	Repairs.....	1898		6 9 4		6 9 4
" Site for Police Buildings.....	Cost of land.....	"		653 0 0		653 0 0
Police Station.....	Additions.....	"	8 3 8	4 12 0		12 15 8
MUDGEE.						
Gaol.....	Repairs.....	"	0 5 6	6 6 3		6 11 9
Court-house.....	Additions.....	"		535 18 3		535 18 3
".....	Repairs.....	"	24 13 5	13 0 0		37 13 5

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

Work.	Whether Con- structing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
COUNTRY—continued.			£ s. d.	£ s. d.	£ s. d.	£ s. d.
MUSWELLBROOK. Court-house	Repairs	1898		241 15 0		241 15 0
MOREE. Court-house	Additions	"	0 7 8	5 17 10		6 5 6
Police Station	"	"		37 17 0		37 17 0
Post and Telegraph Office	"	"		42 0 0		42 0 0
Gaol	"	"		395 2 6		395 2 6
"	Repairs	"	2 5 0	3 2 2		5 7 2
Land and Survey Office	"	"	1 4 6	22 11 9		23 16 3
Government Architect's Office	Incidental	"		0 3 6		0 3 6
Railway Construction Office	Furniture	"	3 8 7			3 8 7
MULLUMBIMBY. Police Station	Additions	"		10 15 0		10 15 0
MILPARINKA. Police Station	"	1897		507 8 0		705 13 0
Court-house	"	1898		1 0 0		1 0 0
MOSS VALE. Post and Telegraph Office	Repairs	"		84 18 0	84 18 0	
MURRUMBURRAH. Court-house	"	"		6 12 6		6 12 6
Post and Telegraph Office	"	"		0 15 0		0 15 0
MORPETH. Police Buildings	Furniture	"	2 11 0			2 11 0
MURRUMBUNDI. Court-house	Repairs, &c.	1897		109 4 1		279 3 2
Gaol	Furniture	1898	0 17 1			0 17 1
Post and Telegraph Office	Repairs	"		16 8 0		16 8 0
MOAMA. Post and Telegraph Office	"	"		0 8 9		0 8 9
MACLEAN. Court-house	Furniture	"	0 19 0			0 19 0
MURWILLUMBAH. Court-house	"	"	3 18 8			3 18 8
MORUYA. Court-house	Repairs	"	6 2 6	1 0 0		7 2 6
Police Station	Additions	"		12 12 8		12 12 8
"	Repairs	"		5 0 0		5 0 0
Post and Telegraph Office	"	"		66 15 6		66 15 6
MOUNT VICTORIA. Post and Telegraph Office	"	"		4 18 0		4 18 0
MOONBI. Police Buildings	Erection	"		957 18 5		957 18 5
MANILLA. Police Station and Lock-up	"	"		1,189 10 4		1,442 3 10
Court-house	Repairs	"	6 15 7	92 6 0		99 1 7
Post and Telegraph Office	Erection	"		1,064 1 0	1,064 1 0	
MOLONG. Court-house	Additions	"		162 12 1		162 12 1
MOUNT DRYSDALE. Police Station	"	"		5 10 0		5 10 0
MOULAMEIN. Post and Telegraph Office	Repairs	"		3 16 0		3 16 0
Court-house	Furniture	"	4 5 11			4 5 11
MINMI. Post and Telegraph Office	Additions	"		3 0 0		3 0 0
MITTAGONG. Cottage Homes	Furniture	"	16 0 6			16 0 6
MOSSGIEL. Court-house	"	"	2 10 0			2 10 0
MARSDEN. Court-house	"	"	4 11 1			4 11 1
Police Station	Additions	"		65 0 0		65 0 0
MEROE. Police Station	Repairs	"		0 9 9		0 9 9
MILLTOWN. Police Station	"	"		22 10 0		22 10 0
MUNGINDI. Court-house and Lock-up	Erection	"		987 10 0	987 10 0	
MANNING RIVER HEADS. Pilot Station—Erection of Boatmen's Cottage	"	"		64 16 3	64 16 3	
MANILDRA. Police Station (Temporary Cell)	Erection	"		27 10 0		27 10 0
MOUNT McDONALD. Police Buildings	Additions	"		5 13 7	5 13 7	
MONGARLOWE. Police Buildings	Repairs	"		3 19 4		3 19 4
NEWCASTLE. Hospital for Insane	Alterations	"		209 10 0	209 10 0	
"	Additions	1897		24 10 0		2,375 18 6
"	Repairs	1898	13 5 10	29 17 4		43 3 2
Court-house	Alteration and repair	"	30 19 6	105 1 1		136 0 7
Post and Telegraph Office	Repairs	"		21 14 3		21 14 3
Government Architect's Office	Incidental	"	0 13 6	0 4 9		0 18 3
Police Barracks	Repairs, &c.	"		28 13 4		28 13 4
Water-police Barracks	"	"		1 12 6		1 12 6
Custom-house	"	"	7 11 2	51 5 5		58 16 7
Boatmen's Quarters	Additions	"		140 4 0		140 4 0
Morgue	Repairs	"		10 19 5		10 19 5
Pilots' Quarters	"	1897		83 17 1		208 9 1
Lock-up (Lake Road)	Additions	1898		22 6 6		22 6 6
Water and Sewerage Board's Office	Erection	"		3,895 2 6	3,895 2 6	
Post and Telegraph Office (Newcastle West)	"	"		1,360 7 7	1,360 7 7	
Police Station, Hunter-street	Repairs	"		1 9 0		1 9 0
NARRABRI. Gaol	Additions, &c.	"		185 8 0		185 8 0
Court-house	Additions	"		69 18 0		69 18 0
NARRANDERA. Lock-up, Gaol	Repairs	"	8 12 8	0 4 1		8 16 9
Court-house	Additions	"	1 8 2	261 13 4		263 1 6
Post and Telegraph Office	"	"		96 15 0		96 15 0
Police Station	Repairs	"		4 5 7		4 5 7
Land and Survey Office	Furniture	"	6 9 10			6 9 10
NOWRA. Court-house	Repairs	"		3 1 4		3 1 4
Post and Telegraph Office	Additions	"		1,235 11 0	1,235 11 0	
NYNGAN. Court-house	Repairs	"		12 0 0		12 0 0
NYMAGEE. Police Station	Alterations	"		12 0 0		12 0 0

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

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
NARROMINE.						
Court-house and Police Station	Additions	1898		821 17 3		821 17 3
ORANGE.						
Court-house	Repairs	"	1 13 6	10 14 0		12 7 6
Gaol	"	"		25 0 0		25 0 0
Police Station	"	"		9 18 0		9 18 0
Government Architect's Office	Incidental	"	12 9 1	12 3 3		24 12 4
Police Barracks and Officers' Quarters	Additions, &c.	"		265 7 2		265 7 2
Roads Office	Repairs	"		0 6 6		0 6 6
OBERON.						
Court-house and Police Station	Additions, &c.	"		477 13 9		477 13 9
OXLEY.						
Court-house	Furniture	"	6 11 6			6 11 6
Police Station	Repairs	"		6 10 9		6 10 9
OBLEY.						
Court-house	Furniture	"	1 1 9			1 1 9
PENRITH.						
Police Station	Repairs	"		2 6 0		2 6 0
PICTON.						
Post and Telegraph Office	"	"		0 14 2		0 14 2
Court-house	Repairs and alterations.	"		13 6 0		13 6 0
PORT MACQUARIE.						
Court-house	Repairs	"		23 10 0		23 10 0
Police Station and Lock-up	Erection	"		1,106 13 6	1,106 13 6	
Pilot Station	Additions, &c.	"		30 4 6		30 4 6
Post and Telegraph Office	Repairs	"		18 18 0		18 18 0
PARKES.						
Court-house	"	"		0 5 0		0 5 0
Lock-up	Alterations and repairs	"		77 10 4		77 10 4
PATERSON.						
Court-house and Police Station	Repairs	"		94 10 0		94 10 0
PILLIGA.						
Court and Watch House	Furniture	"	6 12 10			6 12 10
POONCARIE.						
Post and Telegraph Office	Repairs	"		2 10 0		2 10 0
PAMBULA.						
Police Station	"	"		4 19 0		4 19 0
PALMER'S ISLAND.						
Police Station	"	"		49 4 3		49 4 3
PEAT'S FERRY.						
Lock-up	Erection	"		767 7 10		767 7 10
PEAK HILL.						
Court-house	"	1897		114 14 9		1,320 10 10
"	Additions	1898		40 4 0	40 4 0	
Police Station	Repairs	"		6 0 11		6 0 11
Post and Telegraph Office	Erection	"		417 17 0	417 17 0	
QUIRINDI.						
Police Station and Lock-up	"	1897		214 6 9		1,023 2 5
Court-house	Additions	"		72 16 4		195 17 1
Government Architect's Office	Incidental	1898		2 8 2		2 8 2
QURANBEYAN.						
Gaol	Repairs	"		1 0 0		1 0 0
Court-house	Additions	"	0 12 3	216 2 6		216 14 9
Post and Telegraph Office	Additions, &c.	"		63 0 0	63 0 0	
RAYMOND TERRACE.						
Court-house	Additions	"		14 0 0		14 0 0
"	Repairs	"	16 2 7	17 10 6		33 13 1
Police Station	Repairs, &c.	"		132 1 0	132 1 0	
Post and Telegraph Office	"	"		39 12 6		39 12 6
ROCKLEY.						
Court and Watch-house	Repairs	"	1 8 10	23 17 6		30 6 4
Post and Telegraph Office	Additions, &c.	"		184 15 6		184 15 6
Mining Warden's Office	Furniture	"	0 9 0			0 9 0
RICHMOND.						
Court-house	Repairs	"		8 9 0		8 9 0
Post and Telegraph Office	Additions	"		25 4 6		25 4 6
Agricultural College—						
Irrigation Works	Construction	1897		196 7 1		980 0 0
Drainage	"	"		76 1 6		141 13 6
Culvert at Entrance	"	1898		24 15 0		24 15 0
Repairs, Electric Light Plant and Machinery	Repairs	"		73 18 11		73 18 11
Additional Cooking-plant	Erection	"		291 0 0	291 0 0	
ROBERTSON.						
Post and Telegraph Office	Repairs, &c.	"		47 5 0		47 5 0
SINGLETON.						
Police Station and Barracks	Additions	"		22 1 6		22 1 6
Lock-up Gaol	Cost of land	1897		197 3 6		449 2 8
Court-house	Additions and repairs	"		82 19 6	244 6 6	
Post and Telegraph Office	Repairs	1898		36 13 5	36 13 5	
SCONE.						
Post and Telegraph Office	Additions	"		219 16 0		219 16 0
Court-house	Repairs	"	0 2 6	1 8 6		1 6 0
SOFALA.						
Lock-up	Incidental	"		1 6 1		1 6 1
SUNNY CORNER.						
Court-house	Furniture	"	16 3 0			16 3 0
STROUD.						
Court-house	Repairs	"		29 15 6	29 15 6	
Police Station	"	"		9 13 9		9 13 9
STOCKTON.						
Police Station	Additions	"		4 2 6		4 2 6
ST. ALBANS.						
Court-house	"	"	3 3 6	18 4 0		21 7 6
SOMERTON.						
Police Station	"	"		98 10 0		98 10 0
SHELLHARBOUR.						
Lock-up	Repairs	"		3 0 0		3 0 0
SOLITARY ISLAND.						
Lighthouse	Furniture	"	0 18 0			0 18 0
SUTTON FOREST.						
Governor's Residence, "Hill View"	Repairs	"		204 17 10		204 17 10
"	Additions, &c.	1897		198 13 3		488 0 8
"	Furniture	1898	13 16 8			13 16 8
TEMORA.						
Post and Telegraph Office	Repairs, &c.	"		12 9 6		86 1 4
Court-house	Repairs	"	9 2 4	1 10 0		10 12 4
TENTERFIELD.						
Police Buildings	"	"		5 0 0		5 0 0
Court-house	"	"		109 0 0		109 0 0
Gaol	Furniture	"	1 3 0			1 3 0

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

Work.	Whether Con- structing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expendi- ture.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
COUNTRY—continued.						
TAMWORTH.						
Police Station, &c.	Additions	1897		167 0 7		660 13 2
"	Repairs	1898	1 15 0	4 18 0		6 13 0
Court-house	Cost of land	"		468 4 1		468 4 1
"	Additions	"		488 13 5	488 13 5	
"	Alterations, C.P.S. office.	"		40 15 0	40 15 0	
Post and Telegraph Office	Additions	"		20 0 0		20 0 0
Gaol	Additions, repairs, &c.	1896		297 2 2		1,978 18 2
Land and Survey Office	Erection	1898		414 0 0	414 0 0	
TUMUT.						
Police Station	Repairs	"		3 0 0		3 0 0
Court-house	"	"		1 12 0		1 12 0
TIBOOBURRA.						
Police Station	Additions, &c.	1897		622 6 8		785 16 8
TOWAMBA.						
Police Station	Repairs	1898		2 0 2		2 0 2
TINONEE.						
Court-house and Lock-up	Erection	1897		170 9 5		1,567 12
"	Additions	1898		92 13 7		92 13
TRUNDLE.						
Police Buildings	Repairs	"		0 7 6		0
TILPA.						
Police Station	Erection	1897		870 7 6		876
THE ROCK.						
Police Station	Additions	1898		0 6 0		0 6
TILBA.						
Court-house	Furniture	"	22 16 2			22 16
TRUNKY.						
Police Station and Court-house	Alterations and repairs	"		139 1 0		139 1
TAREE.						
Post and Telegraph Office	Cost of land	"		308 3 9		308 3 9
"	Erection	"		588 1 3	588 1 3	
Court-house	Repairs	"	14 8 9	11 13 0		26 1 9
Lockup Gaol	Alterations	"	6 4 0			6 4 0
TWEED HEADS.						
Custom House	Additions	"		234 12 0		234 12 0
TINGHA.						
Police Buildings	Repairs, &c.	"		82 19 6		82 19 6
TRIAL BAY.						
Prison	Repairs	"		3 6 1		3 6 1
TUMBULGUM.						
Police Station	"	"		6 7 9		6 7 9
TUMBARUMBA.						
Police Station	Cost of land	"		1,029 11 9		1,029 11 9
"	Additions	"		5 12 0		5 12 0
URALLA.						
Police Station	Repairs	"		1 7 6		1 7 6
ULMARRA.						
Government Buildings	Repairs, fencing	"		20 0 6		20 0 6
"	Footpath, kerbing, &c.	"		11 10 0		11 10 0
UNGARIE.						
Police Quarters and Lock-up	Additions	"		56 15 0	56 15 0	
URANA.						
Court-house	Repairs	"		4 10 0		4 10 0
WOLLONGONG.						
Gaol	"	"		15 6 5		15 6 5
Court-house	"	"	6 0 3	41 6 6		47 6 9
Custom-house	"	"		44 0 2		44 0 2
Police Barracks and Lock-up	Erection	"		283 0 0	283 0 0	
WAGGA WAGGA.						
Gaol	Additions	"		65 7 0		65 7 0
"	Repairs and alterations	"		11 3 1		11 3 1
Court-house	Erection	"		37 7 0	37 7 0	
"	Furniture	"	1 17 0			1 17 0
Police Station and Officers' Quarters	Repairs	"	0 2 0	5 8 0		5 10 0
Lands and Survey Office	Additions	"	0 4 6	21 15 0		21 19 6
WINDSOR.						
Court-house	Repairs	"	39 14 0	137 13 0		177 7 0
Lock-up Gaol	"	"		113 4 4		113 4 4
WARRIALDA.						
Court-house	Alterations	"		10 0 0		10 0 0
Police Station	Repairs	"		1 10 0		1 10 0
WINGHAM.						
Police Station	Additions	"		244 5 0		244 5 0
WILCANNIA.						
Lock-up Gaol	"	"		384 1 11		384 1 11
"	Repairs	"	9 14 6	33 0 3		42 14 9
Court-house	"	"		4 10 6		4 10 6
WATTLE FLAT.						
Mining Office	Furniture	"	17 12 10			17 12 10
WALGETT.						
Court-house	Repairs	"	0 5 6	6 0 0		6 5 6
WELLINGTON.						
Gaol	Additions	"		356 5 0		356 5 0
"	Repairs	"		43 7 6		43 7 6
Court-house	"	"	4 14 6	44 0 0		48 14 6
WENTWORTH.						
Post and Telegraph Office	Erection of Post-master's quarters.	"		550 0 0	550 0 0	
Court-house	Repairs	"		5 14 6		5 14 6
Lock-up	Erection	"		1,373 8 3	1,373 8 3	
Gaol	Repairs	"		1 0 0		1 0 0
Custom House	Additions	"		11 11 2		11 11 2
Police Station	Repairs	"		2 19 6		2 19 6
WEE WAA.						
Court-house	"	"	15 10 8	67 1 10	67 1 10	15 10 8
WARATAH.						
Court and Watch House	Repairs, &c.	"		7 15 0		7 15 0
WALCHA.						
Police Station	"	"		48 9 0		48 9 0
WARREN.						
Post and Telegraph Office	Additions	"		17 2 0		17 2 0
WYALONG.						
Court-house	Erection	"		1,340 0 0	1,340 0 0	
"	Repairs	"		1 15 0		1 15 0
Lock-up	Additions	"		668 10 8		668 10 8
WYALONG WEST.						
Post and Telegraph Office	Incidental	"		0 5 0		0 5 0

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

Work.	Whether Constructing or under Repair.	When Commenced.	Furniture.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
WALENDRIE. Court-house	Erection	1898		0 8 2	0 8 2	
WICKHAM. Post and Telegraph Office	Repairs	"		78 4 0		78 4 0
WYNDHAM. Court-house and Lock-up	Erection	1897		686 19 3		1,621 14 3
WOODBURN. Police Station	Additions	1898		90 10 0	90 10 0	
WALLSEND. Court-house and Police Station	Repairs, &c.	"		39 5 3	39 5 3	
Post and Telegraph Office	"	"		12 12 0		12 12 0
WALLENDREEN. Police Station	"	"		46 9 6		84 10 6
WHITE CLIFFS. Police Station and Court-house	Furniture	1898	2 14 6			2 14 6
WOLLONBL. Police Station	Additions	"		4 0 0		4 0 0
Court-house	"	"		29 0 0		29 0 0
Post and Telegraph Office	"	"		14 2 0		14 2 0
WARDELL. Court-house and Police Station	Erection	"		795 9 8	795 9 8	
WHITTON. Court-house and Police Station	"	"		13 10 0	13 10 0	
WARROO. Police Station	"	"		577 17 6	577 17 6	
WOMBAT. Police Station	Repairs	"		85 10 0		85 10 0
WAUCHOPE. Police Station	Cost of site	1897		1 9 6	1 14 6	
WOLLAR. Police Station	Additions	1898		3 17 6		3 17 6
YASS. Gaol	Repairs	"		10 11 10		10 11 10
Lock-up	"	"		9 6 0		9 6 0
Court-house	"	"		34 8 6		34 8 6
YOUNG. Gaol	Additions	"		375 13 0		375 13 0
"	Repairs	"		46 19 6		46 19 6
"	Electric light maintenance.	"		6 11 2		6 11 2
Court-house	Repairs	"		11 6 6		11 6 6
Police Station	Furniture	"	4 10 6			4 10 6
Post and Telegraph Office	Repairs	"		1 1 6		1 1 6
YALGOGRIN. Court-house	Furniture	"	0 12 6			0 12 6
MISCELLANEOUS.						
Salaries, Travelling Expenses, &c.		1898		19,150 10 9		19,150 10 9
Incidental Expenses		"		307 1 10		307 1 10
Ballot-boxes		"		106 12 3		106 12 3
Lighting Government, Street, and Park Lamps.		"		1,195 18 5		1,195 18 5
Fuel and Light		"		1,166 7 2		1,166 7 2
Transfer to Postal Department Vote—Post and Telegraph Offices, purchase of Site, Loans, 62 Vic. 36 (1898)		"		3,000 0 0		3,000 0 0
Public Buildings generally—Wages, Materials, &c.		"	95 3 11	4,953 9 1		5,048 13 0
			£6,990 11 2	274,146 19 1	311,411 14 2	233,334 4 7

SUMMARY OF EXPENDITURE from 1 July, 1898, to 30 June, 1899.

	£ s. d.
Loans	195,777 2 6
Consolidated Revenue	75,212 3 9
Services for other Departments	10,148 4 0
Total	£281,137 10 3

APPENDIX A.
EXPENDITURE, Government Architect's Branch.

Year.	Loans.	Revenue.	Services for other Departments.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1863				95,052 10 2
1864				81,792 0 11
1865				51,063 19 8
1866				52,118 4 4
1867				73,202 6 4
1868				85,903 1 10
1869				96,313 9 0
1870				65,304 3 2
1871				67,651 6 5
1872				54,329 17 7
1873				96,875 11 9
1874				148,650 0 5
1875				199,982 6 7
1876				129,803 3 6
1877				164,889 17 11
1878				208,394 14 9
1879				457,317 1 5
1880				633,274 8 8
1881				421,896 13 7
1882				355,552 15 8
1883				367,377 18 5
1884				408,436 4 6
1885				428,881 5 8
1886				376,521 18 8
1887				281,033 12 11
1888				259,136 13 6
1889				225,574 16 9
1890				267,801 6 6
1891				334,253 7 6
1892				300,587 6 1
1893				222,147 16 5
1 January, 1894, to 30 June, 1895	113,928 13 8	93,059 2 8		206,987 16 4
1 July, 1895, to 30 June, 1896	141,672 13 10	65,508 7 3		207,181 1 1
1 July, 1896, to 30 June, 1897	166,183 0 0	60,249 2 10	23,720 3 10	250,152 6 8
1 July, 1897, to 30 June, 1898	166,516 17 8	62,597 9 5	16,586 3 0	245,700 10 1
1 July, 1898, to 30 June, 1899	195,777 2 6	75,212 3 9	10,148 4 0	281,137 10 3
Totals	£ 784,078 7 8	356,626 5 11	50,454 10 10	8,202,279 5 0

Roads and Bridges.

VIII.

Report of the Principal Assistant Engineer for Roads and Bridges.

Sydney, 6 November, 1899.

I HAVE the honor to present, for the information of the Under Secretary for Works and Commissioner for Roads, a report upon the works carried out by this branch during the year ending 30 June, 1899, together with tabulated statements of the expenditure for that year, the lengths of roads and bridges of various classes directly or indirectly under the charge of the branch, and other statistical information.

EXPENDITURE.

From these returns it will be seen that the expenditure on roads and bridges was £645,569 5s. 3d.—an increase over last year of £29,471 10s. Of this sum, £566,510 3s. 8d. were derived from revenue and £79,059 1s. 7d. from Loan Funds. A sum of £291,491 3s. 5d. remained unexpended from Loan Votes, and was carried forward.

Road works absorbed £454,009; bridges, £109,715; ferries, £14,037; and miscellaneous works, £29,161; while £54,076 were expended in salaries, supervision, equipment, travelling expenses, rent, &c.

The sum of £359,214 was expended by contract, and £162,051 by day-labour under the supervision of the Departmental officers, while £20,757 were paid to various municipal councils to assist in the maintenance of roads within their boundaries.

Of the total expenditure, contracts absorbed 55·64 per cent.; wages, 25·10 per cent.; stores, materials, and sundries, 7·66 per cent.; subsidies to municipalities, 3·22 per cent.; and supervision, rents, equipment, travelling, &c., 8·38 per cent.

Thirty-three new bridges were opened during the year, and 38 old structures were replaced at a cost of £59,585 16s. 7d.; while, on 30 June, 37 were in course of erection, at an estimated cost of £89,950 4s. 9d.

The cost of working ferries was £12,839 0s. 10d., and the revenue derived from them amounted to £5,886 15s.

STATISTICS.

A total length of 42,178 miles 66 chains of road have been dealt with during the year, classified as follows:—

Scheduled roads receiving a regular annual expenditure	...	28,386 miles 59 chains.
Municipal roads subsidised by the Department	... ..	1,156 „ 40 „
Unclassified roads receiving grants as required	... ..	12,635 „ 47 „
Total	... ..	42,178 miles 66 chains.

Of the scheduled roads, 461 miles, and of the unclassified roads, 237 miles 40 chains, are under the control of trustees, the Department exercising only a general supervision over the expenditure.

There are 2,914 bridges on these roads, consisting of 8,111 spans, having a total length of 275,994 feet, or 52 miles 22 chains. Of these, 71 bridges, having 279 spans and a length of 9,791 feet, or 1 mile 68 chains, have been built during the year.

The culverts number 36,158, of which 1,012 are constructed of stone, brick, or concrete, 22,978 of timber, and 12,168 are pipe-culverts. Their total length is 535,342 feet, or 101 miles 31 chains.

Causeways number 16,006, and have a total length of 388,029 feet, or 73 miles 39 chains.

There are 101 punt ferries and 45 boat ferries in operation, and the Department owns 1 steam-launch, 11 iron punts, 96 timber punts, 3 horse-boats, 74 flood-boats, and 134 other boats.

There are also 13 punt slips for executing repairs.

Two new punts were built during the year, and on 30 June 2 steam-launches were in progress.

The branch regularly employed 57 foreman and overseers, 905 road maintenance men, and 84 others, including ferrymen, &c. In addition to these, an average of 29 foremen and overseers, 370 road maintenance men, and 167 other men received temporary and intermittent employment, thus raising the average number of men regularly earning wages during the year to 1,612.

The average number of contractors and contractors' men employed was 5,634.

The contracts let during the year numbered 4,387, of which 4,127 were road contracts and 260 bridge contracts. These range in value from £2 to £2,546. The aggregate value was £412,895.

Three thousand four hundred and forty-seven contracts were completed during the year, and 476 were in progress on 30 June.

The number of reports, minutes, and returns received and registered at head office was 31,931, and 19,988 vouchers were examined and submitted for payment.

HEAD]

HEAD OFFICE AND FIELD STAFF.

The Roads Staff was on 30 June as follows:—

District Engineers	...	...	...	5
Assistant Engineers	...	...	...	2
Road Superintendents	...	...	...	56
Field Assistants...	...	...	...	20
Clerks in District Offices	...	...	...	15
Survey Draftsmen	...	...	...	2
"	"	(temporary)	...	2
Foremen...	...	...	...	6

The Bridges Staff was on 30 June as follows:—

Assistant Engineer	...	...	...	1
Engineer in charge of bridge designs...	...	...	...	1
Bridge Superintendent...	...	...	...	1
Draftsmen	...	...	...	15
Inspector of Ironwork...	...	...	...	1
"	Timber	...	...	1
Resident Engineers	...	...	...	4
Clerk	...	...	...	1
Bridge Inspectors and Overseers	...	...	...	4
Bridge Caretakers	...	...	...	7

NOTE.—Since 30 June transfers to another Department have considerably reduced the staff, and several alterations in title have also taken place.

The Colony is divided into 61 road districts, ranging in area from 74,230 square miles in the west to as low as 230 square miles in the more densely-populated areas on the coast. The greatest road mileage in charge of any district officer is 3,801 miles, and the smallest 257 miles.

In the execution of their duties road superintendents travelled 257,279 miles by road and 89,580 miles by rail. Field assistants travelled 94,756 miles by road and 29,269 miles by rail, and foremen and overseers travelled 69,632 miles by road and 6,094 miles by rail. These figures give a total of 646,610 miles travelled—421,667 miles by road and 124,943 miles by rail. The cost to the Department was £5,139 10s., equal to about 2½d. per mile.

GENERAL.

In view of the rapidly-increasing road mileage, and the limited funds placed at the disposal of the branch, it has been necessary to exercise the most rigid economy in the expenditure. When it is remembered that the applications for grants amount to many millions a year, it will be seen that at once the most laborious and least pleasant duty of officers has been the careful sifting of claims.

The inspection of roads on which expenditure has been applied for, and subsequently refused, has involved many thousands of miles of travelling, and much labour in collecting statistical information as to traffic, produce raised, and persons to be served. It has been, of course, impossible to altogether avoid charges of unfair treatment; but the fact that these have been so remarkably few, and on further investigation have usually proved unfounded, indicate that the officers have carried out their duties with impartiality and discretion.

In view of these facts, it is gratifying to note that the cost of supervision—which includes salaries, equipment, travelling, rent, wages of overseers, &c., &c.—has not exceeded 8·38 per cent. of the total expenditure.

In the expenditure of the annual and special grants the district officers have exercised the greatest care. Although over four thousand contracts have been dealt with, in no instance has a contractor exercised his right of appeal to legal process, and in very few has it been found necessary to reverse at head office the decision arrived at by those in charge of the work.

With regard to the bridges erected during the year, I have nothing to add to the exhaustive report submitted by the Assistant Engineer in immediate charge of such work, and beg, therefore, to forward it without comment for the information of the Under Secretary and Commissioner.

W. J. HANNA,

Principal Assistant Engineer, Roads and Bridges.

Under Secretary and Commissioner for Roads.

BRIDGE CONSTRUCTION, RENEWALS, AND REPAIRS.

IX.

Report of the Assistant Engineer for Bridges.

I HAVE the honor to report that, during the year ended 30 June, 1899, 71 new bridges were completed and opened for traffic, at a total cost of £59,585 16s. 7d. (for details, see Appendices A and B). The total length of these bridges is 9,791 feet, consisting of 265 timber beam spans and 14 timber truss spans. Of these, 38 bridges, having a length of 6,793 feet, and costing £42,797 18s. 8d., were constructed, to replace previously existing structures which had become unfit for traffic.

The more important bridges completed were:—The renewal of the timber viaduct in approach to the iron bridge over the Murrumbidgee River at Gundagai, having a total length of 2,719 feet, consisting of 78 timber beam spans, and costing £12,292 6s. 2d.

Union bridge over the Murray River at Albury, having a total length of 323 feet, consisting of two timber truss spans of 110 feet each and three timber approach spans, costing £6,813 13s. 5d.

Bridge over the Bega River at Bega, having a total length of 433 feet, consisting of four 90-foot timber truss spans and two 35-foot timber approach spans, and costing £4,251 9s. 3d.

The year's work adds 33 bridges to those previously existing, and there were, on the 30th June, 1899, 2,914 bridges, with a total length of 275,994 feet, or 52 miles 22 chains, under the control of the Department.

The materials used in the construction of these works may be summarised as follows:—

Round timber in piles and girders...	...	...	...	62,262	lin. ft.
Hewn timber and sawn timber	...	...	...	159,338	cub. ft.
Ironwork	...	...	...	322	tons.
Masonry	...	...	...	297½	cub. yds.
Concrete	...	...	...	1,066	"

NOTE.—The figures given on above, as also on the returns attached, represent the cost of bridge structures without engineering and incidental expenses.

WORKS IN PROGRESS.

At the close of the period under review a large number of important works were in progress, viz.:—Thirty-seven new bridges, estimated to cost £89,950 4s. 9d. (see Appendices C and D), of which 20 are to replace previously existing structures, and 17 are at new sites, the more important being—

Kempsey Bridge.—Estimated cost, £22,000. It will be noticed that in the report for the year ending 30 June, 1898, reference is made to this bridge, for which a contract had been let. Good progress has been made with the work during the year, and the completion may be looked for early in 1900. The bridge consists of 4 timber truss spans of 154 feet each, on cylinder piers, with 305 feet of approach spans, the width of deck being 22 ft. 6 in. throughout.

Dunmore Bridge, Paterson River—contract cost, £12,433—was also referred to in the last report, and its completion may be looked for in December next.

Hinton Bridge, Paterson River.—This bridge is to complete the line of communication between Morpeth, Hinton, and northwards *via* Phoenix Park, in connection with which the bridge over the Hunter River at Morpeth was built last year. It will consist of two 90-foot timber truss spans with a steel lift span, and 340 feet of beam spans in approach, and a contract has been let for £9,845.

Murwillumbah Bridge, Tweed River.—The recent opening of the railway line from Lismore to the Tweed, which has its terminus on the south side of the Tweed River, opposite Murwillumbah, made the construction of a bridge at the place necessary. A contract for £12,941 17s. 6d. was let in November, 1898, and the work is proceeding rapidly. The bridge will consist of four 90-foot timber truss spans, and a steel lift span on cylinder piers, with 100 feet of approach spans.

In connection with the Hinton and Murwillumbah bridges, reference may be made to the improved machinery for raising the lifting span, where, by the adoption of a system of wire ropes in lieu of shafting overhead, a considerable economy in construction is effected.

Queanbeyan Bridge.—This bridge is rapidly nearing completion, and is of considerable interest, as, with the exception of the bridge over the Lachlan River at Cowra, it is the first in which the composite form of truss has been used in New South Wales, and also because the Pratt style of truss, with vertical posts and inclined tension members, has been adopted, in lieu of the Howe type, in order to obtain a stiff cross-section. The superiority of steel over timber in tension, and the great cost of replacing the timber chords, which, from their position, are the first portion of the truss to decay, points to a great economy in maintenance being effected by the use of this type for important bridges.

Moruya Bridge.—The work of rebuilding the bridge which carries the South Coast road across the Moruya River was put in hand towards the end of the year, and a system of sinking foundations has been adopted, which, so far as this Colony is concerned, is new, and gives promise of a considerable saving. The old bridge was a very light timber structure, 850 feet in length, erected in 1875, and now quite past service. The river at this place is a sandy estuary, the depth to rock from H.W. varying from 9 feet at the shore to 46 feet in the centre. It was considered advisable that the piers of the new bridge should be of a permanent character, but the depth to rock made the sinking of cylinders a very costly matter. Piers consisting of three cast-iron piles (see Plan appended), each 12 inches in diameter, and having a specially-formed shoe 18½ inches in diameter, have been adopted, the piles after fixing being joined together with steel bracing. These piles are sunk to a depth of 20 feet by means of a powerful jet of water, which, entering the top of the hollow pile and passing through orifices in the shoe, displaces the sand and causes the pile to sink to the required depth. This system has been successfully used in other countries, but in New South Wales only to a limited extent in connection with timber piles, and then chiefly as an aid to withdrawing them. I made a trial of sinking these large cast-iron piles, prior to their use at Moruya, at Lake Macquarie in May last, when one of them was rapidly sunk 23 feet through sand and clay bands, and was also withdrawn, so successfully as to fully justify the adoption of the system.

An extension of this system of hydraulic sinking has also been used at Moruya to remove timber which may be met with in sinking the piles to reach the rock, when the depth of overlying sand does not afford sufficient holding for the piles, and the ebb and flow of the tide causes the silting-up of any excavation

excavation made unless a coffer dam be sunk at great cost. A steel cylinder, 3 ft. 6 in. in diameter and 25 feet in height, is provided, with an air-lock at one end, and is sunk through the sand till rock is reached by pumping water into the upper part of the cylinder. The air-lock is then brought into operation and the men descending through it cut a hole in the rock and fix the pile, when the cylinder is withdrawn and the operation repeated at the next pile.

The more usual system of sinking such a cylinder to the rock has been to excavate the material inside the cylinder, lifting it through the top, a process much lengthened by the fact that as the material was removed more was often carried in at the bottom by the influx of water. In the system now described, on the contrary, no material is excavated, the water pumped into the cylinder forcing the sand away from the bottom of the cylinder, so that the men descending after the air has been applied, find the rock swept clean of sand, and can proceed with the work of fixing the pile at once.

The plant by means of which these operations are conducted at Moruya is a very compact and perfect one, consisting of a double-action Worthington pump, 10-inch steam cylinders, 6-inch water cylinders, and 10-inch stroke, and capable of working against a pressure of 160 lb. per square inch for the hydraulic process, and a Marsh patent air-compressor, 10-inch steam, and 10-inch air cylinder for supply of air to the air-lock. Both these pumps, which are the best of the class, are supplied with steam by a 12-h.p. vertical boiler, working at a pressure of 80 lb. per square inch.

Cockle Creek Bridge and the Monier system.—This bridge (see Plan appended), though not of importance in point of magnitude, being only 343 feet in length, and costing £3,800, is of considerable interest, owing to the use in its construction of Monier cylinders in lieu of cast-iron, and also Monier pipes as a protective covering for the piles. The difficulty of protecting timber piers in saltwater from the attacks of the cobra leads to the use of the cylinders, generally of cast-iron filled with concrete, for important piers such as those under truss spans, and the cost of the cast-iron cylinders has been a very serious item. The success of the Monier system in connection with pipes of all sizes suggested that it might be used as a substitute of cast-iron in cylinders, and it was tried for the first time at Cockle Creek, as now described.

The main piers of the bridge each consist of two cylinders 3 ft. 6 in. internal diameter, and 2½ inch thick, constructed on the Monier principle, and having one layer of wire-netting (1-inch mesh and 16 gauge), and two spirals of 10 gauge steel wire wound completely round the cylinder, the turns being 1 inch apart. The longitudinal connection is formed by six steel bars 1½ inch by ½ inch placed between the wire spirals; these bars are so arranged that those of adjoining lengths of cylinder can be coupled together by means of a small fish-plate and steel wedges.

In sinking the cylinders the joints were made with red lead to prevent leakage, and it was found that when several segments were joined together, they could be lifted without disturbing the joint. A cast-iron cutting segment was used (see Fig. 4) to protect the bottom edge of the cylinder, and as a precaution against damage by the men's picks, a thin steel plate guard was provided for the inside of the cylinder up to a height of 4 feet, but this was not found necessary. The cylinders were sunk through gravel, sand, and clay, 36 to 41 feet below the water, and as it was found possible to keep them pumped dry if well pressed down by means of screw-jacks, the air-lock was not required. When a satisfactory foundation was reached the cylinders were filled with concrete in the usual way, the inside surface of the Monier being carefully cleaned to get as good a bond as possible with the concrete.

The cost of these cylinders delivered at site was 24s. per foot, as against £3 per foot for cast-iron cylinders of the usual type, making a saving of £264 5s. on these two small piers alone, and there is no doubt that their use in suitable localities will result in a very large saving in future.

Hitherto where protection from the teredo has been necessary for timber piles, muntz metal has been generally employed, or in some cases earthenware pipes filled with concrete, but these latter, owing to their fragile nature, and the difficulty of making a joint with the necessary longitudinal strength, have not proved very satisfactory. At Cockle Creek the experiment was made of using Monier pipes for a pile covering. These are exceedingly strong to resist fracture, and even if cracked do not fall to pieces; they can be jointed so as to have a good strength longitudinally, which makes them easy to handle; and, what is most important, a series of pipes can be forced down with screw-jacks without danger of cracking.

Fig. 1 on plan shows the Cockle Creek Bridge, in which 5 timber piers, having 3 piles in each, or 15 piles in all, have been protected by Monier pipes.

The formation is sand mixed with vegetable matter overlying stiff clay to a depth of about 5 feet, and it was considered desirable that the piles should be protected down to the point where they entered the clay, so as to provide against removal by scour of the soft upper strata. The piles were of ironbark, about 40 feet long, 14 inches diameter at the small and 18 inches diameter at the large end, driven 15 feet into the clay. From the level of the clay to high water, 4 hardwood battens were spiked to act as guides for the pipes, and the piles received a coating of Stockholm tar before driving. Driving having been completed, a small platform was attached to the pile above high water, and upon this were erected, by threading over the head of the pile, a sufficient length of 21-inch diameter Monier pipes to reach from high water to the clay-bed. The pipes were then jointed with a wire-netting cover and cement, the joint being the ordinary Monier pipe-joint, swelling the diameter of the pipe about 2 inches; but I may mention that the contractors for the pipes are now making an improved joint (shown in Fig. 2), which will suit better and be more sightly. While the joints were setting the capwales were fixed on to the piles so as to bring them into position and avoid movement after the pipes were sunk. The platform was then removed, and the pipe-casing lowered by means of hooks under the bottom length of the pipe, until it rested upon the bottom. A jet of water from an inch and a half pipe was then worked round the bottom of the pipe-casing to loosen the material, and pressure was applied by means of screw-jacks at the top, when the casing sank easily to the clay bottom. The space between the casing and the pile having then been scoured out with the jet, was filled with clean sand, finished with 9 inches of concrete at the top to form a cap. The casing presents a neat appearance, and I have no doubt will prove of great durability, probably outlasting the pile.

The pipes used are constructed on the usual Monier principle, being 1½ inch thick, of cement mortar on a groundwork of wire-netting 1½-inch mesh and 16 gauge.

P. and B. Pile covering.—This pile covering, of which favourable reports reach us from America, is of a bituminous nature, and it is claimed that the growths of marine plants on it protect it from the friction of sand suspended in the water, which is so destructive to copper. A trial of this covering has been made at Murwillumbah Bridge, and also at Webb's Creek, but no opinion can be formed until a considerable time has elapsed.

DRAWING OFFICE.

During the months of July to April inclusive almost the whole of the drawing office staff were employed on the plans for the Pyrmont and Glebe Island Bridges (under Mr. Darley), and this necessarily held back other works; but after April every effort was made to put out as much work as possible. Excepting the Pyrmont and Glebe Island Bridges, plans were prepared and tenders invited for 74 bridges and 3 punts, with a total contract value of £78,073.

REPAIRS TO BRIDGES.

During the year a sum of £46,107 6s. 2d. was expended upon repairs to 642 bridges, the system adopted being to invite tenders for supply of material required and carry out the work by day-labour under the Department's overseers. In those districts where timber is not available, or in cases of extreme urgency, the timber is sent from the depôt at Cockatoo Island, where a supply is kept which has proved most valuable. The expenditure on replenishing this stock of timber during the year has been £989 17s. 4d., but it is intended to carry a heavier stock in future, as any sudden demand reduces the present small stock below working limits. Although established in the first case for the use of this branch only, other branches of the Department have found the supply very useful from time to time.

The most important work under the head of repairs was the partial rebuilding of the bridge over the Hunter River, at Denman. The main portion of this bridge consisted of two spans of 90 feet each, on timber piers, and the flood of February, 1898, caused a subsidence of one of the river piers, followed by the collapse of about 70 feet of the superstructure. Three new piers have been erected, the most important being of iron cylinders, while the damaged superstructure has been rebuilt at a cost of £3,707 12s. 2d.

INSPECTION OF TIMBER FOR EXPORT.

In the month of August, 1898, the New Zealand Railway Department placed orders in the Colony for the supply of about 4,000,000 superficial feet of hewn and sawn timber, and about 35,000 lineal feet of round piles (£43,500 worth), and at the request of the New Zealand Government arrangements were made for inspection before shipment by the officers of this branch. In addition to the services of one inspector (Mr. Kane) sent to the Clarence from New Zealand, this work has required the undivided attention of three officers, as well as the constant supervision of the Department's timber inspector. Up to 30 June the following had been shipped:—25,000 lineal feet of round piles, 1,250,000 superficial feet of squared and sawn timber, the money value of which, delivered in New Zealand, is £15,000, and it is satisfactory to note that the New Zealand Government state that their views have been met as to the quality of timber sent forward.

PUNTS.

A contract was let, and the work of constructing a new steam punt for the vehicular traffic at Grafton ferry, Clarence River, is in progress. The punt will have a length of 64 feet, width 30 ft. 6 in., and depth 4 ft. 6 in., providing a carriage-way of 17 ft. 6 in. in the clear, and is worthy of note as being the first ferry-punt of the class in which compound surface condensing engines were used. The engines, which will indicate 40 h.p., have been built by Messrs. Simpson and Strickland, of Dartmouth, while the punt itself is being constructed at Newcastle, N.S.W. It is anticipated that the reduction of noise due to the use of condensing engines will be greatly appreciated by the public, as reducing the risk of bringing restive horses on the punt, while a large saving in consumption of fuel will be effected. The cost of the punt when complete will be £2,700.

Two new punts were completed for Broadwater Creek and Bega River ferries, at a cost of £373 4s. 10d.

USE OF OIL-ENGINES FOR PROPULSION OF PUNTS.

The need for some intermediate class of ferry-punts, between the ordinary hand-punt, costing about £250, and travelling at a speed not exceeding 1·2 miles per hour, and the large steam punts, costing £2,500, and travelling at a speed of 4 miles per hour, has been much felt. At present experiments are being conducted to ascertain if an oil-engine can be adapted to this purpose. The fact that the standard class of oil-engines do not reverse, and have practically only one speed, renders the problem somewhat difficult of solution, but it is thought that these difficulties are in a fair way to be overcome, and that in the ensuing year practical use may be made of the system.

STEAM-LAUNCHES.

Two steam-launches, for passenger traffic and towage purposes on the Hunter and Clarence Rivers, are now nearing completion. These launches are each double-ended, 70 feet long, 15 feet beam, 5 feet depth, with hardwood keel and Oregon side planking. They are propelled by compound surface-condensing engines, with 8-inch and 16-inch cylinders, 9-inch stroke. The engines will indicate 50 horsepower, at 300 revolution per minute. The boilers are return tubular boilers, 6 feet long, 7 feet diameter, wholly constructed of steel, and designed for a working pressure of 115 lb. per square inch. Propellers are fitted at either end of each launch, 3 ft. 3 in. diameter, 4 ft. 6 in. pitch, which will drive the boat at a speed of 9½ knots per hour. An electric light installation will be fitted, supplying side and mast-head lights, in addition to the lights for deck and engine-room.

The launches are provided with coal-bunkers, water-tanks, and cabin for the crew, and will each have seating accommodation for more than 100 passengers.

MISCELLANEOUS WORKS.

The wood-blocking of King-street, Newtown, from Bligh-street to the Newtown railway bridge, was relaid (a considerable improvement in levels being effected), at a cost of £8,266 1s. 2d., and the street which previously came under the control of the Department as part of the main road from Sydney, *via* dam at Cook's River, to Half-way House, was handed over to the Newtown Council, who agree to maintain it for the future.

E. M. DE BURGH,
Assistant Engineer for Bridges.

SCHEDULE A.

NEW BRIDGES completed and opened for traffic between 1 July, 1898, and 30 June, 1899.

Name.	Length in feet.	Number of Spans.		Cost.
		Truss.	Beam.	
Yellow Gully	33	.....	1	£ s. d. 157 14 2
Deep Creek	63	.....	2	392 19 3
Sullivan's Creek	38	.....	1	237 8 10
Rocky Creek (Coast Road to Perrett's)	38	.....	1	494 7 0
Burton's Creek	63	.....	2	398 18 11
Whiskey Creek	53	.....	2	380 18 3
Jandra Creek	78	.....	3	441 5 11
Richmond River at Newpark	73	.....	2	261 1 6
Taylor's Creek	153	.....	6	417 11 11
Puckawidgee Creek	29	.....	1	193 0 6
Crooked Creek	63	.....	3	335 17 1
Cowal at Trangie	108	.....	5	471 10 5
Wattle Creek (or Bong Bong)	68	.....	2	529 3 0
Fortis Creek	1837	1	3	1,045 19 5
Willandra Creek	67	.....	4	769 1 6
Muggabah Creek	96	.....	4	574 10 0
Lagoon Creek	164	.....	5	874 15 11
Lower Creek	183	2	.....	1,936 0 3
Cook's River at Wardell-road	248	.....	7	824 13 2
Glendon	153	.....	5	1,847 18 7
Greek's Creek	63	.....	2	361 6 0
Kendall	253	.....	7	990 17 5
Wheeney Creek	108	.....	3	332 5 7
Burrill Creek	153	.....	5	491 13 4
Killabakh Creek	63	.....	2	193 12 4
Plumbago Creek	123	.....	4	672 13 9
Leddy's Creek	53	.....	2	152 3 9
Old School Gully	23	.....	1	150 4 11
Three Bridges, Narrandera to Buckinbong	109	.....	4	461 9 7
Murwillumbah Creek	68	.....	3	220 2 5
Little Bumble Creek	28	.....	1	176 13 3
Totals	2,998	3	93	16,787 17 11

SCHEDULE B.

BRIDGE Renewals completed and opened for Traffic between 1 July, 1898, and 30 June, 1899.

Name.	Length in feet.	Number of Spans.		Cost.
		Truss.	Beam.	
Union at Albury	323	2	3	£ s. d. 6,813 13 5
Wollomombi River	183	1	3	1,508 9 10
Bega River	433	4	2	4,251 9 3
Brogo	136	.....	4	383 11 10
Cuttagee Lake	153	.....	4	482 12 8
Moorhead's Creek	38	.....	1	199 9 0
Deep Creek, Bombala	28	.....	1	184 3 11
Saucy Creek	183	.....	6	923 12 2
Allen's Creek	93	.....	3	488 7 5
Bunyan, Cooma Creek	115	.....	4	496 3 8
Urana Creek	178	.....	7	752 15 10
Rickter's Mill Creek	38	.....	1	153 18 8
Rocky Creek, Solferino	73	.....	2	541 18 11
Blackbird Creek	38	.....	1	250 3 10
Tapitella Creek	73	.....	2	450 0 0
Charcoal Creek	53	.....	2	224 17 9
Towradgi Creek	53	.....	2	255 13 0
Parnell's Creek	30	.....	1	184 16 4
Collin's Creek	28	.....	1	158 1 9
Hooligan's	53	.....	2	200 18 9
Cox's River	183	.....	2	1,590 16 9
Deep Creek, Edgar's	23	.....	1	431 9 0
Prout's Bridge	30	.....	1	523 2 0
Cockwhy Creek	93	.....	3	309 18 10
Stoney Creek	193	.....	6	630 18 4
Nattai Creek	63	.....	2	883 7 3
Cabramatta Creek	93	.....	3	229 14 4
Rocky Creek, Clarencetown	38	.....	1	125 8 11
Oakey Creek	93	.....	3	485 0 0
Dowes' Gully	28	.....	1	263 2 7
Anstey's Creek	28	.....	1	215 8 10
Bluff River	178	1	3	1,356 15 3
Slatey Creek	63	.....	2	292 5 6
Gundagai Bridge	2,719	.....	78	12,292 6 2
Gilmore Creek	47	.....	2	353 17 7
Dinsey's Creek	59	.....	2	187 10 6
Albury-street	213	.....	7	1,168 10 11
Rossi's	347	3	2	2,553 7 11
Totals	6,793	11	172	42,797 18 8

SCHEDULE C.
NEW BRIDGES in progress, 1 July, 1899.

Name.	Length in feet.	Number of Spans.			Cost.
		Truss.	Beam.	Iron.	
Die Happy Creek	73	.....	2	.....	£ s. d. 225 0 0
Nana Creek	53	.....	2	.....	204 6 0
Paroo River	278	.....	11	.....	2,372 16 0
Carragat Swamp	128	.....	5	.....	773 17 5
Terrigal Lake	103	.....	4	.....	379 15 0
Marrowie Creek	103	.....	4	.....	495 0 0
Kempsey	922	4	9	.....	18,650 0 0
George's Creek	158	.....	5	.....	723 12 10
Wallerawang Creek.....	63	.....	2	.....	225 0 0
Hinton	589	2	10	I	9,845 0 0
Wallangunda Creek.....	63	.....	2	.....	398 18 0
Goolma Creek	99	.....	4	.....	492 0 0
Buckton's	73	.....	2	.....	216 10 0
Branch Creek	73	.....	2	.....	400 0 0
Murwillumbah.....	523	4	3	I	12,941 17 6
Burrangong Creek	122	.....	4	.....	689 0 0
Boolaroo	338	I	8	.....	3,000 0 0
Totals	3,761	11	79	2	52,032 12 9

SCHEDULE D.
BRIDGE Renewals in progress, 1 July, 1899.

Name.	Length in feet.	Number of Spans.			Cost.
		Truss.	Beam.	Iron.	
Styx River.....	143	I	2	.....	£ s. d. 1,284 9 0
Chandler River	193	.....	6	.....	1,119 9 6
McLachlan River.....	108	.....	3	.....	598 0 0
Stone-quarry Creek	124	.....	.....	3	3,249 0 0
Wambo Brook Creek.....	53	.....	2	.....	362 0 0
Commissioners' Creek	38	.....	I	.....	309 4 4
Conargo Bridge	153	.....	6	.....	426 5 0
Little River	193	.....	6	.....	878 8 0
Bangalee Creek	53	.....	2	.....	390 10 0
Dunmore	427	3	I	I	12,433 0 0
Bishops	33	.....	I	.....	153 13 0
Mehi River	303	I	7	.....	2,981 17 6
Kangaroo Creek	43	.....	I	.....	195 12 0
Rylstone	228	I	4	.....	1,800 0 0
Queanbeyan	340	3	2	.....	5,966 12 2
Elberg's Gully.....	28	.....	I	.....	266 15 I
Dingo Creek	233	I	4	.....	1,765 0 0
Greg Greg River	203	.....	7	.....	784 0 0
Brungle.....	143	I	2	.....	1,280 6 9
Yass River	153	I	2	.....	1,673 9 8
Totals	3,192	12	60	4	37,917 12 0

SCHEDULE E.
Hand-gearred punts completed between 1 July, 1898, and 30 June, 1899.

Broadway Creek	£ s. d. 190 4 10
Bega River	183 0 0
Total	£373 4 10

Wood-blocking completed between 1 July, 1898, and 30 June, 1899.

Newtown Road	£8,266 1 2
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Timber supplied between 1 July, 1898, and 30 June, 1899.

Tallow-wood for Cockatoo Island.....	£ s. d. 156 0 0
Hardwood " "	676 13 4
Tallow-wood " "	157 4 2
Total	£989 17 6

Launches in progress, 30 June, 1899.

Two steam-launches	£4,070 0 0
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Roads and Bridges Yearly Statistical Report, from 1 July, 1898, to 30 June, 1899.

SUMMARY.

TABLE A.—EXTENT OF DISTRICT.

Classification.	Number.	Mileage.	
ROADS.			
1. Scheduled Roads under Road Superintendent.....	1,497	miles. 27,925	chains. 59
2. Unclassified Roads under Road Superintendent	1,339	12,398	07
3. Scheduled Roads under Trustees	66	461	0
4. Unclassified Roads under Trustees	49	237	40
5. Roads subsidised by Department under Municipal Councils.....	457	1,156	40
Totals	3,408	42,178	66
BRIDGES.			
6. Bridges (20-ft. span and over), under care of Road Superintendent or Trustees, or built at cost of Government, on all classes of Roads, within or outside Municipal limits.	Number, 2,914. Total length overall, 275 994 feet.		
FERRIES.			
7. Ferries, subsidised, leased, or worked by Department or Trustees, including emergency Punts and Boats.	No. of Punt Ferries, 101. No. of Boat Ferries, 45. Total No. of Punts in district, 112. Total No. of Boats in District, 209; 1 Basket Ferry.		
MUNICIPALITIES.			
8. Municipalities within limits of district in receipt of subsidies, for which Road Superintendent is required to give Certificates.	Number, 174.		

TABLE B.—CONTRACTS.

Classification.	Number.	Amount.
1. Aggregate Number and Amount of Contracts as let	4,387	£ 412,895
2. Amount of smallest Contract .....	.....	2
3. Amount of largest Contract .....	.....	2,546
4. Average value of Contracts let by Road Superintendent .....	.....	90
5. Contracts as completed during 1898-9, including those let prior to 1898-9, Number and Value.....	3,447	325,226
6. Contracts incomplete on 30th June, 1899, and Amount due thereon	440	88,850 2 4

TABLE C.—ANALYSIS OF EXPENDITURE.

Inclusive of all Vouchers rendered during 1898-9, and Progress Payments on Contracts incomplete on 30 June, 1899.

	Wages.	Contracts.	Stores, Materials, and Sundries.*	Supervision.†	Municipal Expenditure.‡	Total.
	£	£	£	£	£	£
Roads	136,942	276,694	19,736	{ 38,617 }	20,637	454,009
Bridges.....	18,650	78,894	12,051		120	109,715
Ferries	5,961	3,500	4,606		.....	38,617
Other Works	498	126	28,537	.....	.....	14,067
						29,161
Total Value of Vouchers, as per Voucher } Register, 1 July, 1898, to 30 June, 1899. }	162,051	359,214	64,930	38,617	20,757	645,569
Equipment and Travelling Expenses .....	.....	.....	15,459	15,459	.....	.....
	.....	.....	49,471	54,076	.....	.....
Vouchers submitted for payment.....						No. 19,988

* Include goods obtained under annual contracts or locally, freight, compensation, &c.

† Include engineering and travelling expenses, office and store rent, cleaning, lighting, fuel, wages, and expenses of overseers, but not wages of working foreman or gangers.

‡ The amount of certificates given on account of municipal subsidies.

TABLE D.

TABLE D.—PROPORTION OF CLASSIFIED EXPENDITURE TO TOTAL EXPENDITURE.

Classified Expenditure.	Amount.	Percentage on Total Expenditure.
	£	
1. Wages	162,051	25'10
2. Contracts	359,214	55'64
3. Stores, Materials, and Sundries	49,471	7'66
4. Supervision*	54,076	8'38
5. Municipal	20,757	3'22
Total Expenditure	£ 645,569	100'00

* The amount will be that quoted in Table C, plus the salaries and equipment allowances paid by head office to the officers and assistants who were employed in the district during the year.

TABLE E.—TRAVELLING AND COST THEREOF, 1898-9.

Local Officers.	Miles travelled.			Total Amount of Travelling Expenses Vouchers for above period.
	Road.	Rail.	Total.	
1. Road Superintendent	257,279	89,580	346,859	£ 3,275 19 1
2. Assistants	94,756	29,269	124,025	1,277 15 4
3. Foremen, Overseers	69,632	6,094	75,726	328 18 1
Totals	421,667	124,943	546,610	4,882 12 6

TABLE F.—LABOUR STATISTICS. (Monthly Average.)

Classification of Labour.	Permanent.	Temporary.	Total.
By Department.			
Foremen, Overseers	57	29	86
Road Maintenance Men	905	370	1,275
All others (Ferry-men, &c.)	84	167	251
Totals	1,046	566	1,612
Contractors and Contractors' Men			5,684

TABLE G.—REPORTS, MINUTES, RETURNS, &c.

Official Papers, including Reports, Minutes, and Returns (other than Vouchers) registered from 1 July, 1898, to 30 June 1899. Number, 31,931.

TABLE H.—SUMMARY OF WORK EXECUTED.

SHOWING Work completed (inclusive of Contracts in progress on 1 July, 1898, but not including Contracts in progress on 30 June, 1899) on Roads under Road Superintendent during the year 1 July, 1898, to 30 June, 1899, and carried out under Contract or by day-labour. Ordinary maintenance not to be 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	26,135	464	1,870	135	28,604
2. Formation, including cuttings, embankments, not metalled, gravelled, &c., exclusive of clear- ing or draining	chains	22,693	442	5,251	.....	28,386
3. Clearing, any width	chains	43,637	216	32,727	.....	76,580
4. Draining	chains	22,770	108	5,124	.....	28,002
5. Maintenance metal, gravel, or ballast obtained	cub. yds.	323,405	43,833	4,814	1,126	373,238
6. First-class timber culverts	No.	53	1	5	.....	59
7. Second-class timber culverts	No.	176	3	26	.....	205
8. Other timber culverts	No.	1,116	13	150	.....	1,279
9. Pipe culverts	No.	288	5	46	.....	339
10. Causeways, any class	No.	858	4	243	4	1,109
11. Stone, brick, or concrete culverts	No.	31	.....	1	.....	32
12. " " " walls with timber deck	No.	2	.....	.....	.....	2
13. " " " " iron "	No.	1	.....	.....	.....	1
14. Fencing, split	rods	3,817	.....	580	4	4,371
15. Ordnance fencing	rods	361	.....	.....	.....	361
16. Punt built	No.	1	.....	2	.....	3
17. Boats—new, built or supplied	No.	10	.....	1	.....	11
18. Punt overhauled and repaired	No.	52	.....	3	.....	55
19. Boats " "	No.	50	2	3	.....	55

TABLE H—continued.

BRIDGES CONSTRUCTED (20-ft. Span and over). Under the Superintendence of Departmental Officers.

Totals.	Details of Spans.	No.	Total Length in feet.
Number of Bridges built—			
New Bridges 33	71 { With iron or steel superstruction, and timber or iron deck.....	0	0
Renewals 38			
Number of Spans of all kinds—			
New Bridges 96	279 { Timber beam approach spans to iron or steel bridges	14	1,302
Renewals 183			
Overall length of Bridges built—			
New Bridges 2,998	9,791 ft. { Timber truss or arched spans.....	249	7,961
Renewals 6,793			
	Stone, brick, or concrete arched bridges	0	0
	Totals	279	9,791

TABLE I.—GENERAL SUMMARY OF WORK EXECUTED TO 30 JUNE, 1899.

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	70.88	59	4.911	66	4.720	46	6.740	65	4.889	74	28.351	70
2. Scheduled; within Municipalities	509	70	67	06	21	70	73	42	37	71	710	19
3. Unclassified; outside Municipalities	307	73	667	75	880	14	2,329	43	8,457	06	12,642	51
4. Unclassified; within Municipalities	94	69	28	42	1	63	12	55	8	70	146	59
Totals	8,001	31	5,675	29	5,624	33	9,156	45	13,393	61	41,851	39
5. Works superseded by deviations ...	18	19	19	74	5	77	65	22	1	20	110	52

CULVERTS (under 20-ft. Span).			BRIDGES (20-ft. Span and over).		
Classification.	Number.	Total Length in feet.*	Classification of Spans.	No. of Spans.	Total Length in feet.
Iron Decked	99	1,439	Iron or Steel, with Iron Deck	305	275,994
Stone, Brick, or Concrete Arched	719	5,235	Iron or Steel, with Timber Deck		
Stone, Brick, or Concrete Walls, with Timber Deck	194	2,581	Timber Trusses or Arches		
Timber, all classes	22,978	219,528	Stone, Brick, or Concrete Arched.....		
Pipe.....	12,168	306,559	Timber Beam Spans		
	36,158	535,342	Totals	8,111	275,994

* 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..... 2,914

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.	
16,006	388,029	Iron Punts .....	...	...	3	8	11	8,839	
		Timber Punts.....	...	15	81	...	96	52,146	
		Steam Launches.....	...	...	...	...	1	...	
		Horse-boats .....	...	3	...	...	3	780	
		Flood-boats, iron	9	...	...	...	9	...	
		Ditto timber	65	...	...	...	65	...	
		Other Boats	134	...	...	...	134	...	
		Punt slips, for execution of repairs.....	...	...	...	...	13	...	
		Totals	208	18	84	8	332	61,765	

BUILDINGS.

Ferry-men's, Bridge Caretakers' or other houses, or buildings, the property of the Department, Number, 42.

XI.

RETURN of Expenditure on Public Works carried on by Roads and Bridges Branch, from 1 July, 1898, to 30 June, 1899.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Aberdeen, up Narrow Passage and Scrumlow	1882	366 2 7	5,073 7 4
Aberdeen, Narrow Passage Road Extension to D. Kennedy at Mount View ...	1898	43 1 0	43 1 0
Aberdeen <i>via</i> Segenhoe to Gundy Road	"	53 13 0	53 13 0
Attunga to Somerton	1887	60 0 0	1,044 3 7
Attunga to Hall's Creek	1895	50 0 0	250 9 6
Amosfield School towards Stanthorpe	1894	48 18 0	2,663 18 5
Amosfield School to Acacia Creek towards Wylie Creek.	1898	26 19 0	26 19 0
Amosfield to Acacia Creek	1890	350 12 3	4,800 3 2
Acacia Creek <i>via</i> The Scrub to Tooloom	1895	98 19 8	633 16 6
Acacia Creek to the Border at White Swamp	1888	238 17 9	3,143 11 3
Armidale to Long Swamp	1887	51 0 6	899 4 5
Armidale to Mihi Creek	1879	99 4 7	4,645 3 6
Armidale <i>via</i> Hillgrove to Perrett's	1864	1,480 11 4	96,460 13 8
Armidale <i>via</i> Hillgrove to Perrett's towards Rockvale	1898	25 8 0	25 8 0
Armidale to Yarrowick	1884	141 12 0	2,898 11 7
Armidale Road to Taylor's Arm	1894	377 8 0	2,617 8 9
Armidale Road to Wabro Creek	1890	85 8 9	409 11 7
Armidale to Kangaroo Hills	1886	362 18 1	4,930 13 11
Armidale—Kangaroo Hills Road to Great Northern Road to Puddledock.....	1898	12 0 0	12 0 0
Armidale Road to Head of Hickey's Creek	1894	130 0 0	1,732 1 2
Armidale to Eastern Plains	1888	247 17 8	3,253 7 0
Armidale to Gostwyck	1884	94 3 6	2,191 5 10
Armidale to Duval	1890	61 6 0	564 12 6
Armidale <i>via</i> Kelly's Plains to Bald Knob	1894	91 12 0	478 16 7
Armidale to Castle Doyle	1886	62 12 2	1,262 4 4
Armidale Road, Timagog to Willi Willi	1895	50 0 0	459 0 0
Armidale Road to Upper Five Day Creek	"	140 0 2	490 16 8
Armidale Road up Mungay Creek	1896	79 19 0	239 16 3
Armidale Road up Nulla Creek	"	70 0 0	116 5 6
Armidale, Hillgrove Road to McDonald's Crossing to Temporary Common.....	1898	21 5 0	21 5 0
Armidale—Eastern Plains Road to Eversleigh.....	"	32 0 0	32 0 0
Armidale—Eastern Plains Road at Thom's Gully to Dural Platform	"	38 3 0	38 3 0
Armidale—Eastern Plains Road to Eastern Plains, Tenterden Road	"	59 16 3	59 16 3
Armidale—Eastern Plains Road to Pearson's to Dural	"	15 0 0	15 0 0
Armidale—Eastern Plains Road to Great Northern Road.....	"	22 10 0	22 10 0
Angledool towards Hebel to the Border .....	"	.....	.....
Ash Island Road	1896	40 10 6	135 13 7
Ashlea to Upper Dingo Creek	1892	386 10 4	1,859 1 10
Adamstown to Swansea	1885	363 18 5	6,723 17 1
Adamstown Road	1898	48 12 0	48 12 0
Allandale Road to Greta	1895	66 0 0	264 0 0
Arnold's to Appletree Flat	1874	940 16 9	21,082 9 0
Alstonville to Pearce's Creek	1895	280 0 0	1,023 7 5
Alstonville, Booyong Road to Napier's.....	1897	39 4 7	96 10 1
Alstonville, Booyong Road to Teven Junction.....	"	256 16 4	420 16 4
Aberglassyn <i>via</i> Lowry's to the River	1896	15 0 0	44 0 0
Appin to Brook's Point	"	61 4 10	144 18 5
Appin <i>via</i> Wilton to Maldon	"	163 3 6	624 18 8
Araluen Road <i>via</i> Kiora to Larry's Mount	"	32 5 0	72 0 6
Araluen <i>via</i> Bettowind to Back Creek	"	20 0 0	96 9 0
Adelong to Hillas Creek	1895	229 4 5	786 17 7
Adelong Crossing to Bago	1892	505 9 7	3,524 6 5
Adaminaby to Jindabyne	1888	160 19 11	1,343 17 11
Adaminaby to Dry Plain	1895	39 19 0	214 14 9
Albury to Urana	1872	777 14 6	29,610 1 8
Albury and Corowa Road to Urana	1874	691 10 3	22,364 3 0
Albury to Boomanoomana	1864	1,054 17 7	77,523 13 1
Albury to Cookardina	1892	289 6 1	2,555 15 1
Alick's Creek to Bloom Hill	"	45 9 10	281 19 11
Awaba to Freeman's Waterholes	1895	182 18 4	1,008 1 10
Approach to Warren Railway Station	1898	25 0 0	25 0 0
Albion Park, <i>via</i> Macquarie Pass, to Robertson	1896	211 16 7	5,056 19 9
Alfred Town towards Humula	1898	2 5 6	2 5 6
Allynbrook to Upper Williams	"	51 15 0	51 15 0
Balala to Kingstown.....	1881	139 3 0	3,727 19 6
Byangum up Middle Arm	1894	100 0 0	609 5 6
Byangum to Dunbible Creek	1892	50 0 0	319 9 11
Burringbar to Mooball	1888	89 0 3	1,500 11 8
Burringbar to Upper Burringbar	1894	95 2 0	441 6 2
Burringbar to Cudgera.....	1895	100 18 8	647 16 5
Bexhill to Woodlawn	1891	30 0 0	337 17 7
Bexhill, Woodlawn to North boundary of Bexhill at Camerons	1897	24 0 0	69 0 0
Bexhill to Monticollum Road	1884	763 6 6	8,876 4 3
Bexhill, Monticollum Road, &c., to McPherson's Crossing	1898	19 11 2	19 11 2
Bexhill to Numulgi School and Cross Selections	1890	173 17 0	896 0 6
Ballina to Bangalow	1883	523 10 11	17,876 7 7
Ballina, <i>via</i> North Creek, to Byron Bay	1887	239 0 0	4,651 12 7
Beechwood to Rolland's Plains	1885	199 0 0	1,804 19 9
Boggy Creek to Cottee's	1892	146 8 11	444 13 0
Blakebrook to Keerong.....	1890	239 6 8	952 19 0
Blakebrook to Petersen's	1894	166 15 0	845 18 3

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Bogaldie towards Pilliga	1893	74 3 11	505 13 3
Brush Grove, <i>via</i> Bluff Point, to Maclean	1887	352 10 10	3,057 16 4
Brush Grove, <i>via</i> Tyndale, to Maclean	1890	248 10 6	1,782 8 5
Barney Downs to Millera	1883	51 10 0	3,449 18 4
Bukeley to Cedar Brush Mountain	1898	30 0 0	30 0 0
Bingara to Top Bingara	1895	34 12 0	169 11 7
Bingara to Bora, between Spring Creek and Mountain	1898	21 0 0	21 0 0
Bingara to Warialda	1884	562 9 1	11,262 19 0
Bingara to Bundarra	1878	274 10 6	6,288 16 9
Bingara to Barraba	1891	895 10 4	10,576 10 3
Bingara, <i>via</i> Pallal, to Eulowrie	1888	100 0 0	1,414 12 8
Bingara Road, <i>via</i> Gineroi, to Yagobie	1895	251 1 1	936 6 11
Black Creek, <i>viz</i> Pretty Gully, to Tooloom	1891	503 19 0	3,302 17 4
Buddabadah Bridge to Lansdale	1898	43 15 0	43 15 0
Barraba to Bundarra	1894	169 13 4	3,239 15 9
Barraba, <i>via</i> the Gap, to Horton River	1893	162 9 5	1,529 19 8
Barraba to Burrindi	1898	50 0 0	50 0 0
Bungonia to the Look down	"	26 13 0	26 13 0
Bow to Idaville	1893	10 18 0	298 8 7
Butts and Wells Lanes, near Beaconsfield	1898	174 10 8	174 10 8
Bobbiwoa Creek to Rocky Creek	1893	200 0 0	1,192 12 14
Bungonia Road past Carey's	1898	28 0 0	28 0 0
Binnaway to Merrygoen	"	50 0 0	50 0 0
Booralong towards Aberfoyle	1888	116 17 3	1,773 7 6
Bunnerong Road to Botany Cemetery	1898	192 12 3	192 12 3
Branxton to Dalwood Bridge	1895	73 0 0	281 0 0
Branxton, <i>via</i> Elderslie, to Singleton Road	"	36 6 0	472 6 0
Barlow's Mill to Howard's	1894	31 2 3	215 7 7
Blaxland's Flat Road	"	122 1 9	467 16 5
Bellingen Road up Missabotti Creek	1882	246 8 9	8,640 4 6
Bellingen, <i>via</i> Bowraville, to Congarini	1895	675 3 1	2,098 2 0
Boat Harbour to Cowlong	1887	384 6 6	2,526 6 11
Baker's Creek to West Hillgrove	1895	28 19 2	179 5 11
Bowraville to Upper South Arm	1890	340 17 7	1,454 5 11
Bowraville to Upper North Arm	1879	462 9 2	5,941 9 1
Burril Creek to Kimbriki	1890	143 17 0	1,390 11 6
Bulladelah down the Myall River	1891	59 16 6	600 19 7
Bulladelah to Bungwall	1878	429 17 3	10,742 2 2
Bulladelah to Larry's Flat	1892	524 15 11	4,068 11 1
Bulladelah to Coolongoolook	1895	97 2 6	2,038 10 4
Booral to Bulladelah	1876	550 9 11	12,190 2 5
Booral to Karuah River	1897	239 19 0	299 16 0
Bendolba to Upper Wangat	1896	513 3 0	6,129 10 6
Bullock Wharf to Coolongoolook	1894	316 10 3	1,421 9 2
Bullock Wharf to Coolongoolook to the River	1898	69 0 0	69 0 0
Blandford to Isis River	1882	129 19 8	2,933 15 2
Blandford, <i>via</i> Box Tree, to Timor	1895	38 0 0	379 2 11
Barrington to Cobark Road	1892	213 2 11	741 0 5
Brandy Creek, <i>via</i> Goorangoola, to Dry Creek	1895	75 1 6	266 11 0
Barker's Lodge to Oakdale	"	76 9 8	300 10 9
Barker's Lodge, <i>via</i> Thirlmere, to Bargo River	1892	75 12 0	604 7 4
Berowra Station to the School House	1898	39 11 5	39 11 5
Balgowlah, <i>via</i> French's Forest, to Gordon	1895	120 0 0	363 9 6
Belltrees to Stewart's Brook and Top Camp	1889	169 7 0	2,099 19 5
Barrenjoey to M'Garr's Creek	1895	95 12 0	451 16 5
Bald Knob towards Emmaville	"	95 16 0	521 11 0
Booloroo Bridge to Goondiwindi	"	350 10 0	1,709 17 4
Belah to Tannabah	"	49 12 1	391 13 1
Black Mountain to Guyra	"	60 0 0	281 0 8
Brookstead to Guyra	"	44 17 3	139 3 11
Blackman's Point to Ennis Ferry	"	20 15 6	186 2 0
Blackman's Point and Ennis Road to Walcha Road	"	26 16 6	111 10 11
Berrigan and Mulwala Road to Barooga	1897	106 7 0	171 14 1
Berrigan to Boomanoomana	1891	184 0 8	1,010 7 10
Berrigan to Momalong	1896	172 19 2	237 19 2
Berrigan to Savernake	1895	201 17 0	293 12 6
Berrigan to Lalaltee	1898	67 18 0	67 18 0
Berrigan to Cottadidda	"	69 15 6	69 15 6
Bowral to the Briars	1892	95 14 0	786 16 10
Bowral to Robertson	1874	559 19 0	19,717 18 9
Bundanoon to Ferndale	1888	125 9 7	1,554 16 10
Bulli, <i>via</i> Coal Cliff, to Blue Gum Forest	1882	339 11 2	5,236 9 3
Bulli Pass to Cataract River	1880	106 8 4	1,843 18 3
Buggy's Hill to Oak's Road (Bob's Range Road)	1897	46 6 0	76 1 0
Burrawang to the Robertson Road	1884	74 0 6	1,477 16 11
Berrima to Bowral	1882	176 2 8	2,614 0 2
Berrima to Joadja	1890	155 16 2	1,238 13 4
Blenkinsopp's to Myra Vale	"	69 9 0	1,233 1 7
Binalong to Coppabella	1897	24 18 0	124 18 0
Bungendore to Captain's Flat	1889	1,219 9 3	13,718 10 8
Bungendore towards Doughboy Hill	1888	52 5 1	4,635 1 6
Bungendore to Black Range	1881	63 11 0	1,190 16 10
Bungendore to Upper Gundaroo	1893	192 9 10	885 8 0
Bookham to Illalong	1884	66 4 6	966 0 5
Bookham to Chidowla	1885	152 12 0	1,136 7 9

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Bookham to Cooradigbee	1881	133 15 7	2,038 5 9
Burrowa to Breakfast Creek	1892	188 12 1	1,210 7 8
Burrowa to Narrawa	"	293 19 11	1,992 6 9
Burrowa to Kenyu	1885	145 4 1	2,500 1 3
Burrowa to Binalong	1887	389 19 6	15,050 15 8
Burrowa to Cunningham	1892	300 1 3	2,118 9 4
Bendick-Morell to Marengo, and Branch to Windermere	1897	147 6 3	261 17 8
Bredbo to Nimbo	1890	270 0 1	21,492 18 7
Braidwood to Animbo	1893	299 19 11	2,993 10 8
Braidwood to Elrington	1872	173 16 2	5,890 15 3
Braidwood to Nerriga	"	449 3 10	3,983 6 3
Braidwood towards Queanbeyan	1890	198 9 3	4,287 1 0
Braidwood and Tarago Road, <i>via</i> Larbert, to Tarago	1881	189 19 9	2,844 4 0
Braidwood to Sergeant's Point	"	179 3 9	3,399 14 6
Braidwood, <i>via</i> Reidsdale, to Bell's Creek	1872	99 10 3	3,411 12 3
Braidwood and Araluen Road, near 14 M.P., to Upper Araluen	1898	30 0 0	30 0 0
Braidwood, <i>via</i> Bell's Creek, to Araluen	1864	402 6 5	21,580 18 11
Braidwood to Euradux	1898	25 0 0	25 0 0
Braidwood to Nelligen	1863	946 6 0	32,132 7 1
Bodalla to Dignam's Creek	1893	289 14 5	2,388 18 0
Bodalla, <i>via</i> Noorooma, to Tilba	"	223 17 1	2,609 19 8
Bega to Bermagui	1877	370 8 9	9,240 12 2
Bega to Tathra	1873	497 18 0	13,466 5 10
Bega to Brogo (Old Road)	1890	64 1 2	1,253 4 2
Bega to Pambula	1895	237 0 0	693 13 9
Bega to Brianderry	"	50 0 0	153 8 0
Bega to Nimitybelle	1892	1,030 17 10	6,047 16 10
Branch Road to Oswald	1897	38 8 6	67 15 6
Bombala to Delegate	1871	600 10 11	14,993 19 4
Bombala, <i>via</i> Gunningrah, to Bobundarah	1881	167 8 0	2,662 12 6
Bombala, <i>via</i> Mahratta, to Craigie	1892	155 13 9	1,021 8 10
Bombala, <i>via</i> Mahratta and Saucy Creek Bridge, to Bondi	1897	70 9 0	114 14 9
Bombala, <i>via</i> Mahratta, to Bondi	1898	29 10 0	29 10 0
Bombala to Buckley's Springs	1889	40 0 0	347 17 0
Bombala to Nimitybelle	1892	1,164 13 5	9,422 2 9
Bombala to Merimbula	1864	2,204 13 11	99,131 4 3
Bril Bril to Gundle Tin Mines	1898	199 0 0	199 0 0
Broggheda to Bunnan	"	28 0 0	28 0 0
Bobundarah to Adaminaby	1880	146 6 8	4,238 8 6
Burrogate to Pericoe	1897	15 15 0	47 14 0
Brewarrina to Engonia	1895	11 15 3	440 16 2
Buckley's Crossing towards Jimenbuen	1889	50 0 0	413 7 11
Buckley's Crossing to Maffra	"	42 15 0	379 14 4
Buckley's Crossing to Jindabyne	1883	95 0 0	2,955 5 0
Berridale to Buckley's Crossing	1891	53 8 3	124 6 9
Botobolar to Barra Creek	1898	40 0 0	40 0 0
Bethungra to Cooba Creek	1897	15 0 0	89 17 8
Bethungra and Cooba Creek Road towards Gundagai	"	101 12 0	101 12 0
Bredalbane towards Gurrundah	1898	239 3 6	2,599 13 3
Billylingra to Adaminaby	1890	236 5 6	2,315 11 0
Brungle Bridge to Gobarralong	1888	310 4 3	2,138 19 3
Brungle to Wyangle	1889	160 4 6	2,560 13 2
Balranald to Swan Hill Bridge	1887	18 16 0	3,966 8 1
Booligal to Hillston	1880	257 8 4	2,441 6 3
Booligal to Ivanhoe	1892	179 4 2	410 10 2
Burrangong to Emu Creek	1897	632 18 3	3,513 0 6
Berry to Barrengarry	1893	209 17 10	1,652 19 4
Brooman to Nelligen	"	10 19 0	10 19 0
Bateman's Bay to Heads	1898	25 0 0	118 9 2
Boloco to Popong	1895	80 0 0	1,015 0 5
Bermagui to Quama	1890	363 13 2	1,912 8 2
Bermagui to Cobargo	1895	174 1 6	897 7 4
Bermagui to Tilba Tilba	"	482 12 10	1,690 11 11
Baulkham Hills to round corner at Dural	1894	29 14 4	91 6 5
Baulkham Hills to Seven Hills Road (Chapel Road)	1895	260 11 9	853 6 2
Blacktown, <i>via</i> Seven Hills, to Windsor Road	"	384 15 11	1,111 8 7
Blacktown Road, <i>via</i> Mt. Capicure, to Chataworth	1891	60 0 0	169 15 6
Bulga Road to West Portland	1896	212 3 0	569 9 4
Barham to Moulamien	1895	160 0 0	486 3 11
Bell Station to Mount Wilson	1896	21 10 0	92 15 0
Bingie to Dwyer's Creek	1895	130 0 0	529 11 5
Binda to Tuena	"	120 8 1	294 19 3
Belmont Road, <i>via</i> Box Hill, to Bell's Lane	1896	778 11 4	15,497 10 3
Bell's Lane to Putty	1871	339 4 3	1,845 12 5
Blaxland's Ridge, <i>via</i> Morass Rock, to Upper Colo	1888	56 9 3	536 16 7
Bowenfels to Stony Point	1895	194 0 2	489 0 4
Bowenfels to Tarana	1896	86 1 4	351 8 5
Blackheath to Hat Hill	1895	79 8 9	973 10 8
Blackheath to Megalong	"	73 19 2	73 19 2
Blackheath to Shipley	1898	208 13 8	1,109 9 4
Bathurst to Icely	1893	2,635 5 0	123,773 15 7
Bathurst, <i>via</i> Blayney and Cowra, to Grenfell	1870	1,602 12 1	7,320 16 9
Bathurst to Burruga	1895	98 0 10	433 12 10
Bathurst to Bellview	"	148 2 6	148 2 6
Burruga to Swashfield	1898		

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.			If Unfinished, amount of Expenditure to 30 June, 1899.		
		£	s.	d.	£	s.	d.
Blayney to Millthorpe	1883	172	6	9	3,878	7	1
Blayney to Neville	1877	299	3	0	11,842	4	5
Blayney to Guyong	1881	225	6	0	3,497	7	3
Blayney to Hobby's Yards	1883	268	19	9	2,275	4	6
Blayney to Newbridge	1895	197	0	1	997	7	11
Blayney to Brown's Creek	1880	100	0	0	5,229	8	11
Blayney to Grahamstown	1897	117	12	3	236	5	3
Bull Ridge to Isabella River	1895	.....	.....	.....	311	10	8
Boree to Manildra	"	111	14	0	465	6	0
Bourke to Louth	1897	54	11	3	385	8	9
Bourke to Cobar	1895	11	17	0	3,749	14	3
Bourke to Barrington	1888	667	5	3	4,910	9	8
Bourke to Hungerford	1885	268	5	2	8,228	4	7
Bourke to Wanaaring	"	329	19	11	8,441	18	11
Bourbah to Gulgambone	1897	70	0	0	137	3	9
Broken Hill to Menindie	1892	29	8	0	1,042	1	4
Broken Hill to Cobham	1887	199	10	8	3,072	16	0
Broken Hill to The Pinnacles	1898	199	13	10	199	13	10
Broken Back Bridge to Pennant Hills	1891	149	2	0	1,370	16	1
Bogan Gate to Trundle	1897	645	3	10	757	9	2
Bridgewater to Yeoval	1895	296	2	6	1,318	6	10
Balmain, over Iron Cove and Parramatta River Bridges, to Ryde	1893	1,258	0	5	4,974	0	10
Bettington's Lane, Dundas	1891	29	6	8	257	3	4
Brewarrina to Boorooma	1898	129	6	8	129	6	8
Barrington to Little Manning River	1896	38	8	0	209	4	3
Baker's Creek, via Herbert Park, to Lochabar	"	123	11	4	315	13	10
Bingara to Rocky Creek	"	148	17	9	427	9	5
Budgeon to Gilgandra	"	60	0	0	175	11	1
Binna Burra to Byron Bay	"	557	0	0	1,042	14	5
Bexhill to Pearce's Creek	"	194	18	11	619	18	11
Ballina, Tenterfield Road, to Savilles	"	92	12	7	278	16	1
Blanch's to Byrnes' Point Ferry	"	269	16	0	950	9	0
Bargo to Rockford	"	103	8	6	252	1	1
Brawnstone to Coutt's Crossing	"	170	12	10	324	2	11
Bargo Bridge, via Buxton, to Aylmerton	"	174	13	5	759	6	1
Bellingen Road up South Arm	"	184	6	8	538	1	8
Bungwall to Forster	"	282	19	3	632	19	3
Barrengarry to Robertson	"	25	13	1	382	14	10
Braxton towards Cessnock and Branch, via Railway Station	"	105	0	0	284	0	0
Braxton to McMullan's	"	29	0	0	85	0	0
Bendeila Road to Jack's Corner	"	47	16	0	174	17	6
Baulkham Hills School to Toongabbie	"	51	0	4	172	14	6
Blackheath to Govett's Leap	"	39	18	11	89	9	8
Buckety to Pemberton's	"	186	16	0	357	0	2
Broke, via Nine-mile Creek, to Singleton Road	"	59	12	0	158	7	6
Boggy Flat Crossing towards Dight's Ford	"	28	0	0	79	0	0
Boggy Flat to Holmes Creek	"	70	0	0	183	4	6
Bendemeer to Retreat Station	"	24	16	0	103	6	8
Barber's Creek to Barrengarry	"	594	12	7	1,647	14	2
Burradoo to Kangaloon Road	"	152	3	8	307	13	10
Bowning to Binalong	"	172	6	0	461	8	2
Bilumbil Creek to Cowan's	"	96	13	5	683	17	1
Bell Bird to Mount View	"	88	13	6	148	2	9
Bongongolong to Coolac Railway Station	"	10	0	0	63	14	6
Bridger's to Laverty's Gap	1897	69	10	6	313	10	11
Brundah to Montegale Platform	1890	182	3	2	1,617	7	9
Brown's at Bobbin to Main Road, Road from	1898	50	0	0	50	0	0
Byron Bay to Broken Head	1897	155	18	0	213	2	0
Breeza to Gora Lakes	"	23	3	10	29	3	10
Brien's Road .....	"	.....	.....	.....	25	3	4
Bilpin to Mountain Lagoon	"	1	15	0	9	16	0
Bogg's Lane	"	36	18	0	46	18	0
Baker's Corner via Cooyal Reserve to Cooyal Butter Factory	1898	50	0	0	50	0	0
Badgery's Crescent, Lawson	"	4	5	0	4	5	0
Bakers Road, Carlingford	1897	9	0	0	61	0	0
Bathurst Flood Damages	1898	50	15	0	50	15	0
Ballalaba to Captain's Flat	"	14	14	3	14	14	3
Belford to Lower Belford	"	48	0	0	48	0	0
Ben Lomond, via Hockey's, &c., to Guyra-Inverell Road	"	32	2	3	32	2	3
Bembooka, via Green's Crossing, to Yankey's Gap	1897	106	10	0	186	10	0
Beaufort to Wellingrove	1898	36	14	0	36	14	0
Bergalia to Congo	"	51	10	0	51	10	0
Begg's Corner, via Wilson's, to Rye Park Bridge	1897	14	8	6	69	1	4
Bielsdown Creek, Road on West Bank	1898	26	11	8	26	11	8
Black's Creek, Road up	"	40	0	0	40	0	0
Blaxland's Arm, Road up	"	2	1	3	2	1	3
Bonshaw, via Rokey Creek, to Emmaville	"	98	15	0	98	15	0
Bowra to Upper North Arm to Graces	"	65	16	7	65	16	7
Borah Road up Low's Creek	"	8	14	0	8	14	0
Boyd's Point to Trutes Bay	"	80	0	0	80	0	0
Bolivia to the Sandy Flat	"	79	14	0	79	14	0
Bogan Gate to Gunning Gap	"	105	8	6	105	8	6
Bolderodgery to Bungundry Public School	1897	152	18	1	258	14	9

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.			If Unfinished, amount of Expenditure to 30 June, 1899.		
		£	s.	d.	£	s.	d.
Boree Creek to Morundah Railway Station	1898	32	4	0	32	4	0
Boloco to Buckley's Crossing to Jimenbuen	"	22	2	0	22	2	0
Bombala-Delegate Road to Burrumbooka	1896	11	5	0	37	6	7
Bomaderry Railway Station to Nowra Bridge	1898	438	18	3	438	18	3
Boggabri towards Manilla	"	55	16	0	55	16	0
Bobadah to Walker's Hill	"	15	19	6	15	19	6
Cassilis to Turi Vale	"	83	1	0	83	1	0
Crabbe's to Lloyd's	1894	100	0	0	494	0	0
Cudgeon Wharf to Teranora	1898	105	0	0	105	0	0
Cowlong to Marom Creek	1890	381	10	5	2,370	3	0
Clunes to Booyong	1898	40	0	0	40	0	0
Clunes to Stagg's	1887	149	2	8	1,751	5	7
Clunes to McKenzie's	1890	220	0	0	1,270	15	5
Clunes to Beardow's	1896	169	4	10	501	5	7
Clunes to Binna Burra	1887	240	16	3	7,463	5	11
Casino to Mount Lindsay Road at Reynold's	1896	55	8	0	149	10	0
Casino, Mount Lindsay Road, to Queensland Border	1898	59	9	6	59	9	6
Casino to Mount Lindsay	1876	731	12	10	17,770	3	7
Casino to Eden Creek, <i>via</i> Little's	1898	3	12	0	3	12	0
Casino to Coraki	1886	553	8	3	7,714	3	9
Casino to Ellangowan	1890	173	13	1	2,397	11	2
Casino to North Codrington Road, <i>via</i> Tomki Public School, to Tatham	"	142	12	3	526	8	2
Casino to North Codrington	1892	431	3	4	3,360	13	2
Casino, North Codrington Road, to Rankin's Wharf	1898	592	9	9	592	9	9
Casino to Myall Creek	1873	753	17	8	29,568	11	4
Casino, North Codrington Road, to Bruggy's	1898	43	17	3	43	17	3
Coraki to Broadwater	1889	180	0	0	1,807	18	8
Coraki to Wyrallah	1888	222	5	0	2,643	4	2
Coraki to Tuckerimba	1892	150	0	0	815	11	8
Coraki, Tuckerimba Road, to River Bank	1898	30	0	0	30	0	0
Coraki to Myall Creek	1892	179	17	10	1,708	11	9
Coraki to Swan Bay	1893	87	10	0	568	3	6
Carrington Road	1898	18	19	5	18	19	5
Carrington to Newcastle (Denison-street)	"	140	0	0	140	0	0
Caramana to Seeland's	1890	60	0	0	315	19	10
Caramana to Eatonswill	"	67	16	0	688	4	5
Coff's Harbour to Sharp's	"	783	7	3	10,911	19	4
Cadgee Hill to Upper Tuross	1898	13	0	0	13	0	0
Coolatai to Wallangra	1884	55	4	0	728	10	7
Coolatai to Graman	1898	19	19	6	19	19	6
Cobbedah to Rocky Creek	1874	161	15	6	13,810	17	5
Coff's Harbour to Sharpe's Road to Upper Bucca Mines	1896	88	2	0	549	10	3
Cregan's to Rocky River	1886	63	10	9	825	17	3
Coolongalook to Bunyah	1898	50	0	0	50	0	0
Collarendabri to Narrabri	1893	49	7	8	828	12	2
Copeland to Rawden Vale	1998	39	18	0	39	18	0
Collarendabri to Angledool	1892	150	19	9	1,192	8	8
Copmanhurst, <i>via</i> Morrison's, to Smith's Creek	1898	18	9	10	18	9	10
Coonamble to Tundabrine	1895	95	10	0	470	18	1
Coonamble to Combogolong	1892	293	7	9	1,786	17	8
Coonamble towards Coonimbria	1897	52	0	0	104	0	0
Coonamble to Gilgandra	1891	389	9	10	3,612	6	6
Coonamble to Pilliga	1897	88	12	1	180	12	1
Coonamble towards Baradine	1894	99	18	8	514	7	8
Coonamble towards Quambone	1897	64	12	6	131	4	7
Coonamble to Warren	1892	461	0	3	3,003	13	2
Coonamble towards Billaroy	1895	30	0	0	156	17	0
Cregan's to Invergowrie	1898	13	14	0	13	14	0
Congarini, up Taylor's Arm	1885	731	3	8	6,155	15	0
Congarini, up North Bank, Taylor's Arm	1897	101	18	7	201	9	8
Congarini Road to Belimbopini	1898	41	19	0	41	19	0
Congarini to Rolland's Plains	1894	1,447	5	10	8,755	5	1
Congarini Road, Fredericton, to Christopher Town	1898	43	10	0	43	10	0
Coast Road to Rolland's Plains	1894	110	0	0	522	15	5
Coast Road to Campbell's	1889	77	8	0	1,708	15	3
Coast Road to Perrett's	1894	1,025	12	10	6,361	16	7
Coast Road to Sullivan's	1895	201	8	0	819	14	1
Cohen's Crossing over Corindi Creek	1898	16	0	0	16	0	0
Cooperbrook to Harrington	1884	149	18	5	2,483	13	1
Cransdown's Hill—Pembroke Road, Carlingford	1898	20	0	0	20	0	0
Cedar Party Road to Taree and Wingham Road	1891	222	17	9	1,220	2	0
Cedar Creek to Nambucca Heads	1893	84	9	9	558	3	5
Cedar Party Creek, up Killabakh Creek	1890	124	0	0	1,161	7	5
Cameron's Crossing to Morill Creek	1891	40	0	0	256	5	7
Cessnock, <i>via</i> Mount View, to Millfield	"	350	0	0	2,519	7	0
Cessnock, <i>via</i> Allandale, to Harper's Hill	1879	570	4	8	2,277	7	3
Cessnock and Allandale Road towards Branxton	1897	80	0	0	160	0	0
Cessnock to Josephson's	1884	128	12	6	2,572	0	8
Cooranbong to Mandalong	1896	30	0	0	222	18	8
Cooranbong to Dora Creek Platform	1887	96	6	8	1,057	17	6
Cooranbong to Freeman's Waterholes	1892	213	6	2	1,473	9	2
Cooranbong to Wattagan Mountain	1893	249	5	8	1,435	0	10
Cooranbong and Wattagan Road to Humphrie's C.P.	1897	120	0	0	234	9	2
Currawong to Lake Bathurst	1898	42	14	0	42	14	0
Charlestown to Dudley	1889	84	7	4	2,256	5	1

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Charlestown to Warner's Bay.....	1897	28 19 9	78 9 7
Clarencetown, via Glen William, to Brookfield	1896	198 0 0	576 0 0
Clarencetown to Dungog	1877	459 2 2	22,169 0 3
Clarencetown to Limeburner's Creek	1884	244 18 8	4,394 12 10
Clarencetown to Thalaba	1896	181 18 6	522 0 7
Coonabarabran to Bomera	1891	250 0 0	2,937 14 1
Coonabarabran to Timor Rock	1895	100 0 0	249 13 4
Coonabarabran to Mundooran	1891	923 6 2	7,969 19 1
Coonabarabran to Mundooran Road to Merrygoen	1898	129 17 6	129 17 6
Coonabarabran to Malally	1887	750 0 0	7,230 14 9
Coonabarabran to Black Stump	1892	334 4 7	3,315 5 0
Coonabarabran, via Madderty, to Ulamambri	1895	103 8 1	303 8 1
Coonabarabran to Tenandra	1895	473 17 7	1,601 9 7
Confoy's to Marsden's Bridge (Mary's Mount Road)	1898	56 6 0	56 6 0
Currabubula to Piallaway	1891	79 19 3	733 13 3
Chandler Bridge to foot of Jeogla Mountain	1893	423 19 2	1,905 13 0
Commandant Hill to Port Macquarie	1894	41 5 0	221 4 0
Coolabah to Bogan River at Monkey	1897	189 5 10	234 18 1
Coolah to Cassilis	1895	75 0 0	459 9 6
Cooper's Flat Road, up Karakoora Creek	1896	37 0 0	108 0 0
Chatham to Taree and Wingham Road	1891	40 0 0	249 13 8
Copmanhurst to Upper Smith's Creek	1896	82 0 0	272 13 0
Copmanhurst to Mann River Goldfields	1897	99 12 0	105 6 0
Croki Punt to Main Road	1894	49 19 7	161 10 7
Cochran's to Duncan's	1892	24 0 0	250 1 10
Cheer's Hill to Algomera Junction	1890	139 11 11	1,930 1 1
Cundle, via Savilles, to Coopernook	1895	299 15 9	1,155 13 8
Cowan Creek Road	"	50 0 0	176 1 10
Cowan Creek to Waterview	"	20 0 0	90 10 7
Cooney to Metz	"	84 13 2	351 4 5
Corinda to Nine-mile Dam	"	8 12 6	489 6 7
Condong to Duranbah	"	350 0 0	1,165 13 1
Cudgen to Norrie's Head	"	49 19 7	201 6 1
Coraki to Buckendoon	"	90 0 0	338 0 2
Carne's Hill, via Bringelly, to Greendale	"	199 18 3	1,255 18 3
Campbelltown to Narellan	1892	64 0 0	866 2 10
Cambewarra to Lumsden's Corner	1895	139 5 2	441 17 4
Camden to Werombi	1889	295 17 2	1,163 14 6
Camden to Oaks	1893	397 5 1	3,284 7 11
Collector to Gundaroo	1895	65 0 0	745 13 0
Collector to Gunning	1890	135 15 2	4,192 17 11
Collector to Gunning Road to Murray's Lagoon	1898	4 19 6	4 19 6
Collector to Tiranna	1882	200 0 0	5,727 4 10
Collector to Bredalbane	1881	46 17 5	2,854 15 7
Cotta Walla to Roslyn	1892	110 11 0	764 3 5
Cronulla Beach Road towards Gunnamatta Bay	1898	88 12 10	88 12 10
Crookwell to Bigga	1896	354 4 0	1,785 17 6
Crookwell to Mount Wayo	1892	545 6 3	4,953 1 9
Crookwell to Laggan and Binda Road	1883	74 19 8	1,219 2 4
Crookwell to Gullen	1882	278 10 0	4,914 10 8
Crookwell to Taralga	1874	368 6 0	12,010 17 1
Crookwell to Gunning	1895	299 0 0	952 12 7
Carter's to Pomeroy	1896	60 0 0	143 17 10
Captain's Flat to Norongo	1892	46 16 6	770 15 11
Captain's Flat and Cooma Road to 24-mile post	1893	228 5 9	961 15 10
Cathcart to Mount Marshall	1898	26 0 0	26 0 0
Cathcart to Bibbenluke	1888	22 6 7	1,497 1 2
Cathcart to Road, Holt's Flat to Tantawanglo	1898	38 0 6	38 0 6
Cathcart to New Buildings	1896	443 19 11	957 19 5
Craigie to Delegate	1890	Nil.	438 17 3
Craigie, via Quinburra, to Border	1896	15 0 0	90 9 6
Crowby's Selection to Barraba-Bingara Road	1898	15 0 0	15 0 0
Cobargo to Wadbilliga	1888	45 12 0	3,487 1 7
Candelo to Wyndham	1882	161 17 0	4,661 10 1
Cooma, via Green Hills, to Numeralla	1887	146 1 8	1,362 6 4
Cooma to Bobundarah	1880	357 0 6	5,383 14 6
Cooma, via Myalla, to Bobundarah	1897	196 9 9	301 4 9
Cooma, via Mawson's Mill, to Murrumbucca	1898	70 0 0	70 0 0
Cooma to Jindabyne	1881	911 15 4	11,772 0 8
Cooma, via Rosebrook, to Cowra	1889	150 0 0	1,200 14 11
Cooma to Murrumbucca	1895	100 5 6	584 2 3
Cooma to Nimitybelle	1892	715 2 6	6,093 13 5
Cooma and Jindabyne Road to Kiandra	1879	959 19 11	20,594 9 0
Cooma, via The Peak, to Dry Plain	1887	113 13 3	2,758 14 11
Cooma to Big Badger	1879	166 0 0	4,567 5 7
Cooma, via Dangelong, to Kydra	1895	130 0 0	654 6 8
Croki Public School, Jones' Island Road to	1898	29 19 6	29 19 6
Coolringdon to Buckley's Crossing	1896	182 1 4	538 9 10
Cootamundra to Stockinbingal	1885	68 13 8	2,116 18 7
Cootamundra to West Jindalee	1895	40 0 0	299 6 11
Cootamundra to Junee	1892	332 18 2	1,693 7 0
Cootamundra to Binalong	"	407 19 11	2,762 13 1
Cootamundra to Temora	1882	183 0 6	17,124 13 0
Cootamundra, via Kilrush, to Wallendbeen	1892	90 0 0	947 14 7
Cootamundra, via Ironbong, to Bethungra	1891	160 0 0	1,426 6 0

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Cootamundra, via Cowong's, to Jugiong	1898	145 12 6	145 12 6
Cootamundra to Coolac	1875	174 7 4	7 536 2 4
Cootamundra to Berthong	1891	83 2 0	716 2 4
Coolac to Gobarralong	1887	341 16 2	2,711 4 1
Coolamon to Cowabee	1892	350 0 0	2,192 17 1
Coolamon to Currawarna	1897	9 7 0	33 7 11
Coolamon, via Springwood, to Beaconsfield	1896	363 14 6	945 15 5
Coolamon, via Kindra, to North Berry Jerry	"	211 16 7	573 1 10
Carabost to Kyamba	1880	87 2 0	4,886 10 3
Conargo towards Moonbria	1892	54 7 6	847 8 4
Curraghmoor Siding to Tocumwall	1895	120 9 0	683 13 9
Culcairn to Germanton	1882	464 7 9	13,033 4 8
Culcairn to Walbundrie	1895	308 6 3	931 2 8
Corowa, via Merton, to Mulwala	1898	64 15 0	64 15 0
Corowa to Piney Range	1885	264 16 6	5,361 19 10
Corowa to Coreen and Jerilderie Road at Momalong	1892	436 13 10	3,648 5 7
Coonong Siding to Urana	1885	529 17 9	7,869 0 10
Carrathool to Hillston	1881	274 19 8	8,614 6 4
Camberwell to Goorangoola Road, to Kermod's	1895	39 15 0	170 15 9
Courabyra to Oberne	"	91 12 0	289 12 11
Candelo to Bembooka	"	107 3 0	524 15 0
Condong to Palfrey's	"	70 0 0	278 0 2
Cadgangarry to Upper Brogo	"	84 6 0	238 8 6
Canberra Post Office to 7-mile post on Uriarra Road	"	10 18 0	68 0 3
Corruna Public School to Main South Coast Road	1898	65 0 0	65 0 0
Carragabal to Clifton	1895	392 6 4	1,854 17 6
Cotta Walla to Crookwell	1898	9 9 0	9 9 0
Comboyne Reserve, Road to	1897	12 10 0	45 0 0
Cawdor to Westbrook	1894	52 0 11	187 2 7
Coolongolook Road down South Bank of Wallamba River	1898	20 0 0	20 0 0
Cobba Road	"	10 0 0	10 0 0
Clarendon to Cornwallis	1884	25 2 2	840 10 0
Clay Hill to Stannix Park	1898	33 0 0	33 0 0
Cheshire Creek to Turon River, at Wild's	1898	99 12 0	99 12 0
Churchill's Wharf to Page's Ferry Road	1895	79 16 8	289 13 6
Caloola Road to Trunkey	1894	99 19 4	297 18 8
Caloola Road, via Wimbledon, to Newbridge	1878	77 3 0	2,456 9 11
Cobbarah to Gilgandra	1893	545 1 5	3,815 11 6
Cobbarah to Denison Town	1895	70 13 0	384 6 10
Carcoar to Felttimber Creek	1896	74 3 11	205 12 5
Carcoar to Millthorpe	1895	282 5 2	988 15 4
Carcoar to Flyer's Creek	1879	200 0 0	2,464 11 11
Carcoar towards Barry	1894	99 18 6	765 3 7
Cudgong to Wollar	1891	628 18 10	2,971 11 3
Cudgong-Wollar Road, at Stoney Creek Bridge, &c., to Cooyal R.C. Church	1898	24 18 0	24 18 0
Cudgong-Wollar Road, at Stapleton's, to Gleeson's	"	24 19 7	24 19 7
Cudgong-Wollar Road, at Cooyal Church, to Ironbarks	"	20 0 0	20 0 0
Cudgong to Merendee	1896	124 9 8	349 15 7
Cudgong-Wollar Road, at Taylor's, to the Drip, Road from	1898	40 1 0	40 1 0
Cudgong to Hill End	1873	479 19 10	28,647 18 9
Cudgong to Rylstone	1883	264 18 10	5,156 0 5
Cudgong Village to Rylstone	1885	246 2 10	3,928 14 7
Cudgong to Home Rule	1881	119 19 5	1,921 12 11
Cudgong to Denison Town	1893	1,332 13 11	8,338 18 10
Camboon, via Pyangle, to Dungaree	1896	55 10 0	139 11 9
Cowra to Glen Logan	1890	12 0 0	408 8 1
Cowra to Koorawatha	1875	40 0 0	6,942 13 7
Cowra, via Darby's Falls, to Hovell's Creek	1883	193 15 4	3,219 13 5
Cowra, via Binni Creek, to Walli	1886	14 0 0	2,595 4 9
Cowra to Goolagong	1878	579 9 5	6,543 9 4
Cowra to Canowindra	1880	455 2 0	6,492 17 2
Cowra to Breakfast Creek	1888	457 15 1	3,903 7 3
Capertee to Glen Alice	1896	243 12 7	624 14 8
Capertee to Glen Alice, at Turn-off to Airley	1898	1 11 0	1 11 0
Cargo to Canowindra	1882	228 13 10	3,941 7 9
Cargo to Cudal	1883	116 16 10	3,531 12 9
Cooyal Public School to Keene's Flat	1898	19 14 6	19 14 6
Clear Hills to Daysdale	"	17 12 0	17 12 0
Canowindra to Toogong	1897	57 10 0	167 6 0
Canowindra to Eugowra	1876	210 13 2	6,790 13 6
Canowindra to Goolagong	1890	94 7 1	965 14 9
Canowindra to Long's Corner	1895	80 19 6	182 16 9
Cummoock to Balderogery	1888	309 6 0	1,923 1 11
Cullenbone to Cobbarah	1890	1,339 11 4	12,271 17 1
Crimmins's to Four-mile Creek	1896	9 9 0	417 2 4
Cobar to Jacob's Well	1895	312 7 0	1,352 18 4
Cobar to Nyngan	1887	78 12 0	2,158 10 4
Cobar to Priory Tank	1889	185 13 6	2,863 11 8
Cobar to Louth	1893	Nil.	553 5 10
Cobar to Balarabon	1896	Nil.	235 0 0
Cudgellico to Hillston	1895	127 6 0	794 7 2
Cudgellico to Pullitop Tank	1892	Nil.	3,828 2 9
Curra Creek to Balderogery	1880	173 8 0	10,368 11 0
Curra Creek to Arthurville	"	100 14 3	3,324 5 0
Cobbity to Vermont	1898	22 5 0	22 5 0

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Cudal to Barragan Hall	1895	59 15 5	370 18 2
Centennial Park Roads	1887	Nil.	67,521 4 9
Comleroy to Sackville Ferry	1895	129 5 5	563 11 9
Castle Hill to Windsor Road	"	40 8 9	125 3 0
Castle Hill to Old Parramatta Road	1897	19 3 9	43 0 9
Cattai Creek, at Clarke's, to Fisher's	1896	37 0 0	108 0 0
Cattai Creek, at Pearce's, to Old North Road	"	65 0 0	185 0 0
Canterbury Trust Road	1897	35 14 8	122 16 9
Condobolin to Nymagee	1894	174 2 0	912 2 3
Condobolin towards Wagga	1897	86 1 6	152 17 10
Condobolin to Palisthan	"	55 0 0	159 10 0
Condobolin to Palisthan to Cugong	1898	154 3 4	154 3 4
Cabramatta to Mulgoa	"	50 0 0	50 0 0
Calabash Road to Dust-hole Bay	"	50 0 0	50 0 0
Calabash Road from Bay Road to Calabash Hills	"	10 0 0	10 0 0
Canyonleigh Road to Tugalong	"	75 0 6	75 0 6
Camp Bay, &c., to Point Perpendicular	1897	3 0 0	84 9 10
Conn's to Morangarell	1887	149 2 6	6,898 11 10
Curlewis towards Goran Lake	1898	29 3 0	29 3 0
Cardiff to Lake Macquarie	1897	46 5 0	192 0 0
Coutt's Crossing to Toothill	"	17 18 0	40 4 0
Coonanbarra Road, Wahroonga	"	Nil.	84 0 0
Chalker's to road Robertson, &c., to Genquarry	1898	290 9 0	290 9 0
Cundle, &c., to Cooperbrook to Lansdowne River	"	46 12 0	46 12 0
Davistown Road, Gosford	1898	15 0 0	15 0 0
Dungowan to Swamp Oak	1893	193 4 0	1,539 4 6
Dungowan Creek, south bank, to Cadell's	1892	30 0 0	1,026 8 0
Dungog to Thalaba	1896	94 15 0	741 14 10
Dutton's to Marom Creek	1890	153 10 0	1,442 6 9
Deepwater, via 9-mile, to Tent Hill	1888	454 8 11	5,835 3 10
Deepwater to Ranger's Valley	1898	30 0 0	30 0 0
Drice's Gate to Wallangarra	1888	125 18 0	2,341 8 6
Drinan's Gate to Gresford	1896	85 12 0	225 12 0
Darkwater Bridge up left bank Belmore River	1888	99 19 2	1,618 18 0
Darkwater Bridge up right bank Belmore River and Branch Road	1892	160 0 0	352 6 0
Dungog to Weismantles	1883	350 19 0	19,046 17 10
Dungog to Posterton	1877	444 14 9	3,338 14 4
Dungog to Underbank	1892	421 14 1	8,123 13 2
Denman to Doyle's Creek	1898	39 0 0	39 0 0
Dangar's Creek, via Glendon Post Office, to Drinan's Gate	1896	83 0 0	241 0 0
Dunbible to Stokers'	1898	41 19 0	41 19 0
Dagworth Bridge to East Maitland Road	1887	110 3 5	986 6 4
Dunmore to Clarendon	"	325 2 6	9,262 14 4
Dunmore Road to Largs-Tocal Road	1897	72 10 0	136 0 8
Duri, via Colly Blue, to Bomera	1894	1,021 12 1	3,618 2 1
Deep Creek Bridge fencing Approach	1897	"	30 0 0
Deep Creek to Busby's Flat	1890	286 13 6	2,069 1 11
Deep Creek Crossing to Lasscock's	1897	4 17 0	26 3 0
Deep Lead Mine, Corowa—Road to	1898	21 11 5	21 11 5
Duval to Pearson's	1895	5 12 0	83 8 0
Doran's up Mullumbimby Creek	"	90 14 4	549 13 2
Dungay's to Skinner's	"	128 14 4	656 7 3
Deegan's to Irvine's	1896	42 0 0	124 1 0
Doran's to Risley's	1895	333 8 7	1,084 17 5
Doran's—Risley's Road to Simmons'	1898	113 6 8	113 6 8
Darke's Forest to Heathcote Road	1892	98 11 3	681 14 11
Dalton to Narrawa	1882	313 7 1	5,062 1 2
Dolly's Flat Road, past Waroo, to road Wingham, via Ashlea, to Kelvin Grove	1898	35 14 1	35 14 1
Delegate to the Border, near Bendock	1887	9 2 0	704 10 9
Delegate, via Currawang, to Wollondibby	1891	131 4 6	1,258 14 2
Delegate to the Border, near Kirranong	1895	19 14 0	156 2 0
Devlin's Siding, via Cowabee, towards Warri	1898	134 3 6	134 3 6
Devlin's Gate, via Junction Hotel at Mandemah	1897	250 4 7	443 6 7
Deniliquin to Berrigan	1892	107 19 7	632 11 8
Deniliquin to Urana	1874	492 18 7	22,641 5 6
Deniliquin to Colimo	1895	177 2 0	874 19 5
Deniliquin to Wakool Lane	1892	184 6 9	1,815 6 8
Deniliquin to Wangonilla	"	297 18 11	2,344 2 1
Deniliquin to Moama	1891	198 9 3	1,484 7 9
Deniliquin towards Morocco	1893	67 12 0	1,164 9 9
Deniliquin to Boomanoomara	1895	456 3 10	2,127 10 8
Deniliquin to Narrama	"	28 10 11	718 10 7
Doughboy Hill towards Bungendore	"	82 10 6	341 16 3
Dangalong Road to Tom Grogan's Creek	1896	43 1 0	143 1 2
Douglas Park to 13-mile peg on Mount Keira Road	"	107 8 6	248 15 2
Dover Point Ferry to Heathcote Railway Station	"	109 13 4	546 16 1
Diamond Swamp to Tarama	1894	124 19 10	569 1 4
Dubbo to Yeoval	1878	135 4 0	6,866 1 11
Dubbo Yeoval Road to the Springs Crossing, Paddy's River	1898	10 0 0	10 0 0
Dubbo towards Cobbora	1890	477 7 3	4,732 0 8
Dubbo towards Cobbora Road at Dubbo Cemetery to Bunnengong Public School	1897	91 4 11	99 19 11
Dubbo to Peak Hill	1895	399 14 0	1,594 18 2
Dubbo to Gilgandra	1891	1,108 6 4	9,120 19 1
Death's to Euroka	1898	34 0 0	34 0 0

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Dairy Creek to Galley Swamp	1895	118 13 10	410 18 1
Dunedoo to Stolls	1896	31 0 0	131 5 4
Defence Road to Pittwater Road	1888	330 0 0	2,926 2 7
Duckamloi Hill to Hazelgrove	1898	32 13 6	32 13 6
Dog Trap Creek to Pheasant's Nest	1895	11 17 6	146 10 0
Dripstone to Newrea	"	199 6 10	962 10 3
Duramana to Peel	"	27 6 0	271 1 8
Dargaville Crossing, up the River <i>via</i> Stevens'	1897	154 3 9	304 4 9
Denman Embankment (Muswellbrook to Merriwa)	1898	20 14 1	20 14 1
Eureka to Duraby	1888	220 14 1	1,603 19 1
Eureka to O'Mara's	1898	59 0 0	59 0 0
Eureka to Gay's	1891	39 15 6	293 10 7
Emmaville to Deepwater	1895	416 19 3	2,124 6 9
Emmaville to Strathbogie	1885	106 15 0	2,630 8 2
Eatonswill to Whiteman's Creamery	1898	64 14 0	64 14 0
Emmaville to Webb's	1897	57 2 0	111 9 0
East Kempsey to Spencer's Creek and Branch Road	1877	785 14 7	8,423 8 0
East Kempsey to Spencer's Creek Road, <i>via</i> Pola Creek, to Macleay River	1898	34 2 6	34 2 6
East Kempsey to Verge's Swamp	1895	73 19 1	227 3 0
East Kempsey to Sherwood	1880	189 19 2	3,598 5 0
East Kempsey to Crescent Heads	1889	267 19 3	2,358 5 2
Erina, <i>via</i> Kincumber, to Terrigal	1893	220 8 6	1,785 5 3
Ennis and Gowrie Road <i>via</i> McLennan's to Carney's and Branch to Somerville's Gate	1895	334 19 0	1,060 4 4
Ellenborough Bridge towards Jackey's Bulga	1896	35 13 8	179 0 6
Eaton Bridge to Copmanhurst Wharf	1898	133 0 0	133 0 0
East Maitland to Minmi Road	1897	130 12 4	219 3 7
East Maitland to Freeman's Waterholes	1891	527 14 9	6,713 12 0
East Maitland to Raymond Terrace to East Maitland-Minmi Road	1897	234 3 6	275 18 6
East Maitland to Raymond Terrace	1894	484 0 6	3,893 16 11
East Maitland to Pitnacree Bridge	1898	100 0 0	100 0 0
Ennis Road to Glen Esk Upper Plains	1895	179 16 0	791 3 5
East Wardell Post Office to the Beach	1898	49 17 0	49 17 0
Elrington to Araluen	1870	84 0 6	3,419 2 6
Eurobodalla to Nerrigundah	1889	62 7 0	1,351 1 5
Eurobodalla to Billa Bilbow	1897	40 0 0	92 17 4
Eden, <i>via</i> Kiah River, to Timbillica	1896	220 0 0	420 0 0
Eden to Sturt	1879	440 16 1	8,669 11 7
Eden to Pambula	1881	289 10 0	8,759 10 11
Eden-Pambula Road to Day's Selection	1898	48 17 0	48 17 0
Exeter to Great South Road	1895	183 7 0	821 2 1
E. McGuire's to Pitt Town Bottoms	1893	103 17 6	474 9 8
E. McGuire's to Cattai Creek, at Pearce's	1896	90 17 8	192 15 3
Eastern Plains to Tenterden	1895	61 14 9	284 16 5
Evan's Plains to Perth	"	46 19 0	257 9 6
Eslick's to Four-mile Creek	"	42 4 6	235 6 10
Ellalong to Wallaby Gully	"	38 0 0	172 18 8
Eight-mile to Puddledock	"	Nil.	113 1 0
Elsmore to Kangaroo Camp	"	160 17 10	515 6 7
Eugowra to Bindogundra	"	239 11 6	715 2 4
Eugowra to Goolagong	1898	6 12 0	6 12 0
Eugowra to Goolagong Road to Frazere Public School	"	15 0 0	15 0 0
Kloderidge's towards Wheeo Post Office	"	60 0 0	60 0 0
Euabalong to South Condobolin	"	52 0 0	52 0 0
Euabalong to Willandra Bridge	"	108 13 4	108 13 4
Eccleston to Upper Alyn River	1896	59 0 0	172 0 0
Enfield Road to Reiby's Grant	"	64 12 10	285 16 2
Erskine Corner towards Coolamon	1897	7 10 0	12 0 0
Fox's to McCormack's	1892	120 0 0	1,225 16 2
Fidden's Wharf Road	1893	36 0 0	174 3 0
Fernmount to Tyson's	1894	30 0 0	220 7 8
Flanagan's Swamp to Upper St. Leonards and Orandumbly	1891	180 17 3	892 8 11
Flyer's Creek to Dorney's	1884	288 2 3	4,471 3 1
Foot of Mountain up the Wollondilly River	1882	161 6 0	2,059 4 5
Fitzroy Falls to Robertson	1890	690 16 6	5,777 13 11
Foxlow-street, Captain's Flat	1897	Nil.	75 13 2
Four-mile Tree to Charlton	1890	77 0 0	2,016 17 9
Forbes to Gunningbland	1883	218 12 7	5,967 17 3
Footpath, North side of Victoria Park	1898	409 9 6	409 9 6
Forbes to South Condobolin	1882	850 0 3	14,301 3 4
Forbes to Condobolin	1879	398 9 4	12,486 10 1
Forbes to Goolagong	1896	222 16 9	871 16 8
Forbes to Bogolong	1887	135 0 0	3,833 6 7
Forbes to Parkes	1878	60 16 2	3,161 18 4
Forbes to Burrawong	1898	25 14 0	25 14 0
Favell's to Byng	1884	100 2 5	1,904 11 6
Field of Mars Cemetery, Road to	1898	50 0 0	50 0 0
French's Forest to Greendale	1890	160 0 0	1,470 6 9
Frogmore towards Rye Park	1898	90 14 5	90 14 5
Flick's to the Quarry	1895	81 12 1	219 7 7
Frogmore, <i>via</i> Boolong, to Taylor's Flat	1898	3 10 0	3 10 0
Full's Creek towards Jervis Bay	1896	78 18 1	125 13 7
Foot's Road (Ourimbah Creek Road)	1898	25 0 0	25 0 0
Foster's Gate to Wingello	"	60 15 0	60 15 0
Foster's Gate to Wells' Creek	1896	83 13 6	197 19 10

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Five-mile Creek, across the Main Range, to Patterson's.....	1898	38 15 6	38 15 6
Flemming's Hill to Grono's Farm.....	1896	39 3 2	94 12 4
Frederickton, <i>via</i> Jack's Crossing, to Deep Creek.....	1898	178 15 0	178 15 0
Farley, <i>via</i> Ravensfield, to Bishop's Lodge.....	"	25 0 0	25 0 0
Felton's Road, Carlingford.....	1897	5 0 0	18 0 0
Flood-gate, Salt-water Creek, Jones' Island.....	1898	25 0 0	25 0 0
Fox Valley to Thornleigh Station.....	1897	62 10 0	100 15 9
Granville to Bangalow.....	1889	70 0 0	2,759 0 4
Guundurimbah to Marshall's.....	1892	154 12 3	880 4 6
Goonellebah to Rous.....	1895	361 9 0	860 1 11
Grafton, <i>via</i> Glen Innes, to Inverell.....	1866	6,070 13 3	299,639 19 10
Grafton, <i>via</i> Southgate, to Broadwater.....	1894	918 18 6	5,044 12 1
Grafton-Broadwater Road to Government Home for Aborigines.....	1898	46 17 0	46 17 0
Grafton to Flying Horse.....	1890	505 7 1	11,161 11 2
Gears' to Coval-lane, Coval-lane and Deep Gully Roads.....	1897	150 0 0	293 18 0
Goorangoola, <i>via</i> Danolly, to Dyrring Road.....	1898	49 8 0	49 8 0
Grebert's to Solferino.....	1886	420 18 0	6,921 16 9
Glynn's to Nymbodia.....	1890	44 18 6	491 1 6
Glen Innes to Red Range.....	1895	190 2 5	608 7 1
Glen Innes to King's Plains.....	1875	177 17 1	10,104 6 7
Glen Innes to Shannon Vale.....	1891	55 11 0	676 18 6
Glen Innes to Mount Mitchell.....	1888	112 1 3	1,785 17 9
Glen Innes to Emmaville.....	1881	246 10 1	8,690 1 8
Glen Innes-Inverell Road, <i>via</i> Westphalyn's Vineyard, to Old Armidale Road	1898	12 5 0	12 5 0
Glencoe to Mount Mitchell.....	1890	143 10 7	1,568 3 2
Gaspard to Wallabadah.....	1893	9 2 0	9 2 0
Guyra to Glencoe.....	1895	326 15 2	1,465 9 2
Guyra to Coff's Harbour.....	1898	155 19 6	155 19 6
Guyra to Sandy Creek.....	1890	69 19 9	654 17 4
Guyra to Kangaroo Camp.....	1893	286 4 8	3,734 0 1
Guyra to Oban.....	1889	55 4 0	2,673 10 4
Gundy Road, <i>via</i> Brushy Hill, to Rouchel Road near Wilkinson's.....	1897	42 0 0	109 12 1
Gundy to Timor.....	1896	43 10 10	108 12 10
Great Northern Road at New Treugh Hill, <i>via</i> Munembah to Wittingham			
Creamery.....	1898	69 19 6	69 19 6
Great North Road up Dry Creek.....	1896	26 12 2	72 11 2
Great Northern Road, <i>via</i> Russell's, towards Guyra Swamp.....	1898	39 11 10	39 11 10
Great Northern Road, <i>via</i> Long Reach, to Armidale Gostwycke Road.....	"	46 8 8	46 8 8
Green Hills, <i>via</i> Sherwood Bridge, to Dungay Creek.....	1892	269 18 2	1,660 19 6
Gostwycke to New Park.....	1882	265 6 0	8,041 7 7
Gostwycke to Vogel's Selections.....	1896	45 17 10	95 17 10
Gosford to the Blood-tree.....	1890	144 10 6	1,693 14 4
Gosford-Tuggerah Beach Road, to Terrigal.....	1898	10 0 0	10 0 0
Glennie's, <i>via</i> Chilcott's Flat, to Goorangoola Road.....	1891	28 0 0	246 13 11
Gunnedah to Malally.....	1888	343 4 4	8,160 6 9
Gunnedah to Wandobah.....	1889	30 0 0	344 17 5
Gunnedah to Carroll, <i>via</i> north side of Namoi.....	1893	69 13 0	409 15 4
Gunnedah to Somerton.....	1890	239 19 0	2,428 6 9
Gunnedah to Boggabri.....	1894	101 11 1	523 5 10
Gunnedah to Burburgate.....	1898	29 15 0	29 15 0
Glen Elgin Station to Pheasant's Creek.....	"	33 15 0	33 15 0
Gilgandra, <i>via</i> Collie, to Bemunel.....	1897	66 3 11	91 3 11
Glenreagh to Moul Creek.....	1898	30 0 0	30 0 0
Glenreagh to Tallawadjah Creek Mines.....	"	35 0 0	35 0 0
Gloucester to Copeland.....	1880	197 2 6	6,045 4 9
Gloucester to Cobark.....	1885	280 6 0	3,911 12 3
Glen Ora, <i>via</i> Public School, to Milikin's Road.....	1898	20 0 0	20 0 0
Green's-lane to Hartford Gully.....	1891	30 0 0	308 3 10
Grindley's Corner to Pipeclay Siding.....	1898	184 16 6	184 16 6
Geraghty's to Bryant's.....	1891	102 0 0	875 5 6
Goddard's, <i>via</i> Torrington, to Tent Hill.....	1898	69 18 1	69 18 1
Goorangoola Road to Carrow Brook.....	1895	103 14 0	452 18 3
Goorangoola Road to Bower's and Bowman's Creek.....	"	50 0 0	200 0 0
Gladstone, East Street, to Back Lands.....	1898	41 8 0	41 8 0
Gresford to Eccleston.....	1896	465 5 10	738 3 8
Glebe to Adamstown.....	1898	84 5 0	84 5 0
Gresford to Lostock.....	1895	201 11 2	792 11 2
Gresford and Eccleston Road towards Dungog.....	"	34 10 0	139 10 0
Gara to Kunopia.....	1895	144 16 0	283 19 6
Gosford to Cooranbong.....	1892	880 5 9	6,035 9 4
Gosford and Cooranbong Road to Tuggerah Lakes.....	1895	16 6 4	342 10 3
Gosford and Cooranbong Road to Jillaby and Mandalong Road.....	1897	60 0 0	115 14 10
Gosford District Flood Damages.....	"	2 0 3	33 9 3
Gosford to Tuggerah Beach.....	"	302 2 8	1,365 9 1
Gosford and Blood-tree Road to Narara Station.....	1896	98 18 4	252 5 3
Gosford and Blood-tree Road to Bushell's C.P.....	1898	15 0 0	15 0 0
Gosford and Blood-tree Road to Somersby Water Falls.....	"	80 9 7	80 9 7
Gordonville to McFadden's.....	1895	149 16 0	715 7 7
Green's Gunyah towards Boree Creek.....	1898	28 15 0	28 15 0
Green Ridge to Tatham, <i>via</i> Knight's Farm.....	1895	106 9 0	357 3 6
Green Ridge, Wharf Approach.....	1897	76 1 8	122 11 8
Goulburn to Cooma.....	1874	1,240 7 1	132,520 18 4
Goulburn to Pomeroy.....	1880	208 9 6	5,808 14 10
Goulburn to Roslyn.....	1878	284 17 9	9,376 10 8
Goulburn to Mount Wayo.....	1892	294 11 8	2,229 16 5

RETURN OF EXPENDITURE ON PUBLIC WORKS—*continued.*

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.		If Unfinished, amount of Expenditure to 30 June, 1899.	
		£	s. d.	£	s. d.
Goulburn to Mummel Bridge.....	1892	240	0 0	1,984	5 7
Goulburn to Bungonia.....	1874	190	3 0	7,821	16 7
Goulburn to Taralga.....	1888	482	6 10	10,531	5 8
Goulburn District Flood Damages.....	1898	9	16 8	9	16 8
Goulburn to Windellama.....	1876	151	13 0	10,134	3 10
Goulburn, <i>via</i> Boxer's Creek, to Great South Road.....	1897	65	6 0	119	6 0
Gunning to Berrybangle.....	1891	119	11 1	879	14 2
Gunning to Upper Gundaroo.....	1893	206	13 0	1,712	1 8
Gunning, <i>via</i> Dalton, to Burrowa.....	1892	543	11 6	2,710	4 9
Gininderra towards Gundaroo.....	"	43	7 0	381	1 10
Gininderra towards Bungendore.....	1890	35	5 6	1,580	6 11
Gurrundah, <i>via</i> Bialla, to Fish River.....	1898	35	12 0	35	12 0
Galong to Binalong.....	1897	1	5 7	113	4 0
Galong to Marengo.....	1892	467	8 6	1,479	1 4
Galong towards Burrowa.....	1890	137	7 9	1,430	19 0
Gundagai to Bongongolong.....	1883	92	2 9	3,347	13 4
Gundagai to Wantabadgery.....	1892	167	7 5	1,247	7 5
Gundagai to Wantabadgery, &c., to Cooba Creek.....	1898	66	5 6	66	5 6
Gilmore to Reilly's Crossing.....	1872	118	5 0	4,155	2 3
Gunnary to Reid's Flat.....	1897	251	2 3	400	12 3
Glenroy to Mundaroo.....	1890	7	18 3	864	1 8
Glenroy to Coppabella.....	1896	84	7 6	219	13 6
Gardener's Road, Botany.....	1898	602	2 9	602	2 9
Germanton to Jingellic.....	1886	167	3 6	5,383	13 6
Germanton to Cookardina.....	1883	117	14 0	2,335	15 6
Gerogery to Howlong.....	1881	237	8 6	12,641	10 6
Gerogery, <i>via</i> Jindera, to Bungowannah.....	1876	161	0 5	6,715	12 4
Glenquarry to Yarrunga.....	1896	169	8 8	671	16 6
Glenbrook Railway Station to Great West Road.....	1898	49	12 2	49	12 2
Gerogery Station to Walla Walla.....	1876	146	15 1	7,314	15 1
Germanton to Bowler's Gap.....	1895	120	3 2	529	16 2
Grattai to Sally's Flat.....	1888	465	7 0	4,905	14 8
Grenfell to Marsden.....	1883	236	6 0	7,028	17 1
Grenfell to Weddin Gap.....	1890	59	1 6	1,137	8 10
Grenfell, <i>via</i> Holey Camp, to Weddin Mountain.....	1898	53	7 5	53	7 5
Grenfell to Goolagong.....	1885	137	7 10	3,842	16 1
Grenfell to Bimbi.....	1882	169	16 6	5,649	15 6
Guntawang to Goolma.....	1878	261	11 7	13,092	5 7
Ganmain to Coolomon-Cowabee Road.....	1898	94	0 0	94	0 0
Ganmain Siding to Wagga-Narrandera Road.....	"	63	4 11	63	4 11
George's Plains to Caloola.....	1894	99	18 6	707	17 1
Golspie to Yalbraith.....	1878	42	2 0	42	2 0
Goodooga to Brewarrina.....	1895	8	8 0	570	17 7
Grahamstown School-house to Milthorpe Road.....	1898	173	3 5	173	3 5
Glasson's Woolshed to Moorilda.....	1895	51	14 8	247	6 2
Gorrick's Hill to Wilberforce.....	1898	134	11 3	134	11 3
Gulgong to Martin's Crossing.....	1896	92	0 0	142	8 2
Gulgong, <i>via</i> Barney's Reef, &c., to Uarby.....	1898	25	12 9	25	12 9
Gulgong, <i>via</i> Barney's Reef, to Birriwa.....	1897	10	0 0	102	0 3
Gulgong to Jackson's Crossing.....	1896	40	0 0	111	7 1
Gladesville, <i>via</i> Gordon, to Pittwater.....	1890	335	1 1	2,343	1 6
Girilambone to Copper-mine Township.....	1898	52	7 3	52	7 3
Grong Grong to Warri.....	1895	280	0 0	1,113	12 3
Grong Grong Post Office, Road fronting.....	1898	13	0 0	13	0 0
Galston Road to Berowra Creek.....	1896	69	0 0	132	0 0
Galston to Dural.....	"	90	0 0	243	10 0
Galston to Fagan's.....	"	124	13 6	254	13 6
Galston to Middle Dural.....	1898	19	9 0	54	9 0
German's Hill to Boree.....	1896	96	16 0	371	14 2
Govett's Leap to Grose Valley.....	1898	60	0 0	60	0 0
German's Hill to Kite's Swamp.....	1896	153	3 8	412	10 8
Great West Road to Wentworth Falls Reserve.....	"	31	5 6	66	13 3
Gillenbah to Buckingham.....	1898	14	0 0	14	0 0
Gillenbah to Darlington Point.....	1898	160	1 0	160	1 0
Gowrie to Duri Platform.....	1897	293	19 8	395	19 8
Gum Flat to Little Plain.....	1898	55	0 0	55	0 0
Glenbrook to Lucasville.....	"	37	10 0	37	10 0
Glen Logan towards Bungaroo.....	"	13	5 0	13	5 0
Great Northern Road.....	1857	5,582	17 10	640,629	19 9
Great Western Road.....	"	13,626	17 1	640,736	1 4
Great Southern Road.....	"	6,752	5 4	713,249	15 7
Glebe Island Bridge to Petersham.....	1885	675	13 0	10,712	10 1
Glebe to Adamstown.....	1898	42	3 0	42	3 0
Henderson Road, Teven Creek.....	"	80	10 9	80	10 9
Howlong to Walbundry.....	1892	169	10 0	5,066	4 6
Howlong to Goombargana.....	1896	74	18 4	282	7 11
Hay to Balranald to Burrabogie Run.....	1898	62	0 0	62	0 0
Hay to Booligal.....	1883	326	14 7	12,980	19 0
Hay to Gunbar.....	1879	99	16 0	7,229	14 6
Hay to Wanganella.....	1881	151	7 6	1,160	4 7
Henwood's and Graham's Farms, Road between.....	1898	3	7 6	3	7 6
Holt's Flat to Tantawangle.....	1892	87	10 10	343	2 8
Hartley to Jenolan.....	1890	590	2 10	9,576	14 8
Hill End to Duramana.....	1887	173	2 10	1,656	11 6
Hope-street, Barmedman, to Attewell's Selection.....	1898	10	13 6	10	13 6

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Hornsby to Galston	1893	478 13 11	8,167 7 3
Hill Top to The Ridge	1897	94 7 8	116 2 8
Harris to Rockview	1898	26 17 2	26 17 2
Harwood to Chatsworth	1883	52 15 4	1,627 19 0
Harwood-Chatsworth Road to Harwood-Woodburn Road	1898	38 0 0	38 0 0
Harwood to Woodburn	1890	1,278 6 9	3,116 12 2
Hayden's to Watson's	1891	220 0 0	2,028 19 3
Hainsville, via Mullimbimby, to Byron Bay	1894	804 11 11	3,802 3 2
Hartigan's, up North Arm, Tweed River	1895	173 4 6	815 3 5
Hexham to Williamtown	"	153 17 9	847 19 6
Hinton to Nelson's Plains Road	1887	134 5 2	1,979 8 6
Hexham to Limeburner's Creek	1884	741 1 5	8,934 7 8
Henty Station to Pleasant Hills	1892	129 16 10	1,240 9 7
Henty to Munyabla to Eurangelina	1898	54 0 0	54 0 0
Humula to Kyamba	1896	47 9 0	246 3 11
Humula to Tareutta	1892	30 0 0	720 11 2
Hellensburgh Railway Station, at 259 to 224	1898	43 14 0	43 14 0
Hay to Balranald	1887	241 10 5	1,279 8 3
Hayes' Portion 92, Parish Bardsley, Road through	1898	22 0 6	22 0 6
Heathcote to Bulli Pass	1890	271 9 10	1,923 16 11
Hanley's Creek Road	1898	58 5 5	58 5 5
Heron's Creek, Wharf Approaches	"	59 11 0	59 11 0
Hoskingtown to Harold's Cross	1890	48 0 0	582 16 8
Honeysuckle to Burrogate	1882	36 15 0	1,265 7 4
Hillesborough, via Rosebrook, towards Maitland	1887	250 0 0	2,991 15 5
Harrington Road North to Upper Cattai	1897	7 11 0	70 6 0
Holmwood towards Scrubby Rush	"	45 13 0	122 0 6
Harden to Marengo	"	160 0 0	338 9 6
Hefferman's to Upper Brogo	"	"	30 0 0
Honeysuckle Falls to Tarana-Bowenfell's Road	"	10 0 0	18 3 7
Hawkesbury Road, Springwood, along Single's Ridge	1898	44 19 10	44 19 10
Hampton towards Boyd's Store	"	30 0 0	30 0 0
Inverell to Gum Flat	1899	145 14 7	2,305 15 6
Inverell, via Elsmore, to Glen Innes Road	1884	272 7 3	7,470 7 6
Inverell to Bundarra	1892	249 16 6	1,358 2 8
Inverell, via Tingha, to Kangaroo Camp	1893	269 16 6	2,293 0 6
Inverell to Dinton Vale	1885	199 18 10	2,115 6 4
Inverell to King's Plains	"	366 19 5	4,515 5 10
Inverell to Wallangra	1878	862 10 10	21,353 7 10
Inverell towards Warialda	1877	949 18 1	25,527 17 10
Inverell to Strathbogio	1894	396 19 0	3,235 14 5
Inverell to Texas	1878	395 12 11	14,920 3 3
Inverell Road, at 23-mile Post, to Yetman Road, at 10-mile Post	1896	55 5 0	199 16 1
Irishtown to Wollum Platform	1893	39 18 0	224 2 6
Illabo Railway Station to Eurongilly	1895	37 4 0	226 17 3
Illabo to Junee Reefs	1898	26 13 0	26 13 0
Illaroo Road to Brown Mountain	1896	104 14 6	278 6 10
Illaroo Road to Burrier Gap	1898	64 4 9	64 4 9
Junee to Cooba Creek Bridge	1891	100 0 0	865 4 1
Junee, via Railway Line, to Narrandera	1896	66 12 8	274 18 1
Junee Junction to Wagga-Junee Road	1898	15 19 0	15 19 0
Jesswolan to Uralba	1891	111 5 0	827 1 0
Jericho, over Big Swamp	1890	116 14 0	1,213 7 4
John's River Wharf to Upper Stewart's River	"	258 6 4	1,751 2 6
John McLeod's to Buchanan's	1891	150 19 3	769 17 8
Jerry's Plains to Denman	1884	115 7 0	2,491 5 9
Jerry's Plains to Oakhollow	1898	38 10 0	38 10 0
Johnston's Bridge to Moonbi Railway Station	1892	83 19 10	473 7 4
Jilliby to Little Jilliby	1895	141 10 6	629 9 0
Jugiong to Murrumburrah	1887	93 11 2	2,995 15 8
Jindabyne to Ingebyra	1892	56 3 9	527 0 2
Jingellie to Kancoban	1892	290 14 0	2,503 19 0
Jerilderie to Goolgumbula	1891	162 7 8	1,230 5 10
Jerilderie to Tocumwal	1884	244 19 4	4,381 4 10
Jerilderie to Berrigan	1890	155 17 6	3,329 14 9
Jerilderie to Narrandera	1898	25 4 0	25 4 0
Jerilderie-Goolgumbula Road to Coonong Siding	"	149 10 0	149 10 0
Jerilderie to Coreen	1895	346 18 9	1,904 7 7
Jindera to Wagga and Albury Road	1897	9 2 0	18 4 0
Jindera to Walla Walla	1888	159 19 3	2,006 16 11
Jindabyne to Wollondilly	1895	25 0 0	115 15 6
Jones' Bridge to West Blowering	"	182 12 1	635 8 8
Jerry's Plains to Doyle's Creek	1895	17 6 0	77 14 8
Junction, Barnett and Little Manning Rivers, to Nowendoc	"	103 0 0	299 0 0
Jerrong to Wiaborough Vale	1898	92 3 5	92 3 5
Kynumboon to Nobby's Creek	1889	204 3 2	3,702 3 3
Kynumboon to Nottingham	1898	85 1 0	85 1 0
Kelly's, via Sharpe's, to Moonee	1890	1,716 18 9	11,224 0 9
Kempsey to foot of Jeogla Mountain	1894	2,399 1 8	11,213 0 4
Kincumber to Lloyd's Wharf	"	46 0 0	206 10 9
Kincumber to Little Beach	1898	9 0 4	9 0 4
Kyle's to Quan's	"	53 3 8	53 3 8
Krambach to Kew (North Coast Road)	1893	1,392 2 2	10,202 16 3
Krambach to Kew to Long Point	1898	12 0 0	12 0 0
Krambach to Kew at Ghinni Ghinni to Mott's Plains	"	145 19 0	145 19 0

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1898.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Krambach to Tuncurry	1895	660 6 11	2,646 8 10
Krambach to Tuncurry, past Public School, to Khoribakh Creek.....	1898	18 18 0	18 18 0
Kayuga, <i>via</i> Baxter's, to Aberdeen.....	1894	38 4 5	597 9 7
Kyogle to Back Creek	1897	8 15 0	99 19 2
Kew, Rolland's Plains Road, to Cedar Creek.....	1896	107 12 0	165 16 7
Kew to Rolland's Plains	1895	1,208 16 4	4,892 17 3
Koolah Creek, Road up	1898	62 0 6	62 0 6
Kangaroo Valley to Budgong Gap.....	1897	175 15 0	228 12 0
Kangaroo Valley, up Brogher's Creek	1882	209 3 10	2,453 10 0
Kangaroo Mount to Cambewarra Mount	1897	165 15 2	251 13 6
Kendall to Grass-tree Hill	1898	96 5 6	96 5 6
Kirkton Gate to the Braxton-Glendon Road, <i>via</i> the School and Fair Hall's Lane.	"	68 10 3	68 10 3
Kendall Public School to Kew and Rolland's Plains Road	"	21 0 0	21 0 0
Kippielaw to Gurrundah.....	1888	336 13 4	2,590 17 10
Kippielaw to Bredalbane.....	1887	79 19 6	836 12 10
Kitty's Creek to Dog Trap Ford	1888	164 1 2	1,450 13 9
Kialla to Pegar	1898	10 4 0	10 4 0
Kialla to Middle Creek.....	1895	40 0 0	195 9 2
Kiernan's Creek, Road up	1898	14 18 6	14 18 6
Kangona to Candelo	1895	99 2 0	450 9 5
Kangy Angy, Road over	1898	10 0 0	10 0 0
Kameruka to Bembooka	1895	75 13 0	185 6 3
Kamandra to Cobang	1898	23 0 0	23 0 0
Kirkeconel to Sunny Corner	1890	159 0 2	1,367 9 4
Koorawatha to Watkins	1898	19 15 0	19 15 0
Kelso, <i>via</i> Palmer's Oakey, to Sofala	1887	437 0 9	12,196 19 4
Kelso to O'Connell	1876	278 15 4	10,356 0 10
Kelso to White Rock	1896	29 8 0	124 15 9
Kelso to Kelloshiel	1895	23 16 3	173 7 8
Kelso to Monkey Hill	"	914 6 10	4,611 11 0
Kelloshiel to Gowan.....	1878	193 14 10	8,178 11 1
Kayuga Road to Castle Rock	1896	51 6 1	119 14 9
Kangaloon to Waratah Factory	"	50 17 3	141 15 3
King's Road, Cooranbong	1898	21 6 4	21 6 4
Kenthurst Post Office to Porter's	1896	27 0 0	79 0 0
Katoomba to the Caves Road	"	55 4 0	230 19 9
Koorawatha to Warrangong	1897	177 6 9	198 6 9
Kingsvale to Wallendbeen	1894	140 13 1	432 7 7
Kurrajong to the Hermitage	"	62 1 8	95 4 11
Lismore to Gundarimba	1891	69 16 9	629 12 4
Lismore to Risley's	1896	599 12 6	1,649 6 3
Lismore to Blue Knob	1883	776 8 6	22,943 6 6
Lismore—Blue Nob Road at Morton's to Webster's	1898	20 4 0	20 4 0
Lismore towards Nightcap	1895	520 0 0	1,744 15 10
Lismore—Nightcap Road to McPherson's, at Duraby Grass.....	1898	38 5 10	38 5 10
Lismore to Tucki	1893	280 0 0	11,301 0 4
Lismore to Beardow's	1894	335 12 4	1,096 1 7
Lismore District Flood Repairs	1897	Nil.	159 17 6
Louth Park to Portion 54, parish of Maitland	1898	89 12 5	89 12 5
Little Plain to Reedy Creek	1894	117 15 5	484 2 4
Loxton's to Boggy Camp.....	1898	149 4 5	149 4 5
Lawrence to Myall Creek	1864	721 8 5	140,206 10 6
Lawrence to Broadwater	1897	17 12 0	30 13 10
Law's and McNaughton's, at Harwood—Road between	1898	3 13 0	3 13 0
Leycester Creek Bridge to Campbell's	1887	422 5 2	3,843 0 11
Llangothlin towards Red Farm	1898	54 0 0	54 0 0
Levenstrath, <i>via</i> Kangaroo Creek, to Green's	1890	160 0 0	1,387 7 0
Laris to Toohey's Mill	1886	147 13 5	3,548 0 5
Long Reach to Clybucca	1890	39 19 10	519 2 9
Long Reach to Rainbow Reach	1891	39 8 0	385 2 0
Long's, <i>via</i> Piampong to Yamble	1898	100 6 3	100 6 3
Laurieton to Upper Camden Haven	1892	400 17 0	2,590 2 8
Lambton to Waratah	1898	50 0 0	50 0 0
Lambton to Charlestown	1883	37 4 9	3,015 14 9
Lambton and Charlestown Road, <i>via</i> Cardiff, to Lake Macquarie Road	1894	136 19 0	344 3 6
Laguna to top Wattagan Mountain	1895	200 0 0	848 10 5
Lochinvar to Railway Station.....	1885	35 0 0	585 19 6
Limeburners' Creek to Krambach (North Coast Road)	1894	1,677 13 7	10,350 12 3
Little Plain to Bingera	"	690 12 11	3,899 13 5
Largs, <i>via</i> Tocal, to Paterson Bridge.....	1896	154 0 0	490 14 6
Lochinvar, <i>via</i> Lamb's Creek, to Windermere.....	1894	166 14 9	681 18 9
Lochinvar to Boyce's	1896	33 0 0	112 13 0
Limestone Hill to Newell's Crossing	1895	171 15 10	754 0 10
Lostock to Carraboler	1896	119 0 0	332 16 6
Liverpool, <i>via</i> Holdsworth's, to Eckersley	1894	139 16 11	426 8 9
Liverpool, <i>via</i> Penrith, to Bringelly Road	1896	250 0 0	463 16 6
Lake Bathurst to Bronti	1898	50 6 6	50 6 6
Leighwood to Stone Quarry	1887	75 13 0	1,009 0 4
Lugarno Ferry, Road to	1898	8 6 3	8 6 3
Laggan to Binda	1875	47 5 9	3,231 8 2
Laggan School to Strathaird	1895	Nil.	113 17 9
Laggan to Golspie.....	1892	80 0 0	612 8 8

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Lower Tarcutta to Alfred Town.....	1892	249 17 1	2,109 13 9
Lochiel to Back Creek.....	1893	3 18 0	212 2 10
Larbert, <i>via</i> Reedy Creek, to Hallett's	"	Nil.	175 16 3
Little Forest to Canyonleigh	1894	688 16 5	3,645 5 0
Lithgow to Hartley Vale station	1896	133 5 6	553 2 7
Lithgow to Lidsdale.....	1890	198 0 0	1,885 10 11
Lidsdale to Wolgan	1893	77 3 0	603 3 3
Little Hartley to Hartley Vale	1885	194 1 6	3,543 10 4
Little Hartley to Lowther	1895	70 18 2	394 8 9
Lowther to Gambenang	1890	28 14 1	619 2 5
Lyndhurst to Bigga	1879	514 18 1	9,706 15 7
Leeholme to Tarana and O'Connell Road.....	1872	150 5 0	4,323 13 1
Limekilns to Wattle Flat	1898	101 15 3	101 15 3
Lucknow to Huntley	1895	107 7 9	426 14 4
Lucknow to Worboy's Junction	1896	331 0 8	1,255 6 1
Lane Cove to Cowan Creek, at Bobbin Head.....	1884	160 0 0	1,375 0 4
La Perouse to Little Bay.....	"	14 0 0	1,199 4 6
Loop Road, Glendarual, to Brownlow Hill	1896	18 17 6	50 0 6
Lavadia, towards Ulmara.....	1898	75 0 0	75 0 0
Leadville to Cassilis	1897	75 0 0	150 0 10
Luscombe's Hotel to Weilmoringle	"	557 2 8	785 13 8
Larry's Flat Road, at Berry's, to Flyer's Creek Road, at Gorman's.....	"	25 0 0	45 0 0
Lumby's to Carnsdale	1898	95 8 8	95 8 8
Locket's Lane	"	10 1 3	10 1 3
Lane 24, Moama	"	15 0 0	15 0 0
Murwillumbah to Blue Knob.....	1894	613 3 11	3,980 14 0
Murwillumbah, <i>via</i> Risley's, to Possum Shoot	"	1,333 6 2	6,804 12 7
Murwillumbah to Cudgen Wharf	1852	502 0 0	2,954 7 9
Murwillumbah to Queensland Border	1891	360 0 0	3,348 9 4
Murwillumbah to Boyd's Point Ferry	1880	637 12 3	4,959 15 11
Murwillumbah Public Wharf to Ferry	1898	610 12 1	610 12 1
Murwillumbah District Flood Repairs	1897	Nil.	969 4 8
Minmi to Thornton	1878	358 13 0	5,692 10 4
Minmi-Thornton Road, at Mount Elliot, towards Buttai	1898	194 15 6	194 15 6
Mullumbimby, up Main Arm, Brunswick.....	1890	241 13 2	1,836 11 11
Mullumbimby, up Left Bank Mullumbimby Creek.....	1897	166 13 6	168 13 6
Mullumbimby Creek to Cemetery	1898	50 2 0	50 2 0
Maclean to Palmer's Channel	1890	105 15 5	1,165 16 6
Maclean to Broom's Head	1897	64 8 0	130 1 4
McLean's to Model Farm	1896	42 0 0	148 2 6
Merriwa to Cassilis	1891	578 15 4	7,053 1 8
Merriwa to Gilli Gilli Crossing, Conlon's Creek	1898	12 10 0	12 10 0
Merriwa to Bunnan.....	1896	33 14 0	166 2 5
Merriwa to Walla	1898	120 7 6	120 7 6
Merriwa, <i>via</i> the Flags, to Gungal	"	22 0 0	22 0 0
Moleville to Stockyard Creek	1889	60 0 0	666 4 3
Maybole to Ben Lomond	1892	46 11 4	368 11 4
Mehi River Crossing at Moree	1898	15 0 0	15 0 0
Moree, <i>via</i> Goonal, to Mogil Mogil	1887	202 14 4	6,317 5 5
Moree Road, <i>via</i> Reeves, to Pallal Road, at Bangheet	1894	66 11 1	399 17 7
Moree to Ironbarks	1876	48 9 8	24,697 11 2
Moree to Rocky Creek	1892	149 19 0	2,479 2 4
Moree to Mungindi	1894	948 0 0	4,927 3 10
Moree to Bogamildil	1895	211 10 3	1,266 11 9
Moree to Telerago	1898	49 0 0	49 0 0
Moree to Bingara.....	1895	244 16 11	1,680 6 2
Moree to Yallaroil	1898	290 12 5	290 12 5
Moonee to Congarini (Coast Road)	1894	1,489 8 8	8,460 8 3
Marx Hill to South Arm	1896	117 17 8	353 15 2
Mosquito Island Road	1894	18 13 9	226 7 8
Mosquito Bay to Big Hill	1897	2 13 0	52 10 0
Mundooran to Tundabrine	1895	409 15 1	1,805 12 5
Myers' Crossing up Never Never	1884	216 17 10	2,607 1 10
Marlee Road to Gillogley's.....	1892	20 0 0	123 18 3
Myocum to Tyagarah	"	100 0 0	904 5 9
Morrissett to mouth of Dora Creek	1896	48 8 3	149 14 1
Miller's Forest Creamery to Tarro.....	"	132 0 0	386 0 0
Maitland Road to Earl's C.P. (Fox Gully Road)	1894	49 0 3	325 17 11
Maitland Road in Wickham	1898	113 10 0	113 10 0
Maitland Road, Broomfield Hill.....	1896	92 0 0	196 0 0
Maitland Road to Head of Ourimbah Creek	1897	7 18 5	116 5 5
Maitland District Flood Damages	"	77 14 3	197 2 4
Millfield to M. Hayes	1898	30 0 0	30 0 0
Morpeth to Raymond Terrace Road	1891	101 13 10	1,588 12 4
Morpeth to Four-mile Creek	"	110 0 0	370 0 0
Morpeth Road, through Phoenix Park, to Larga.....	1896	150 0 0	312 19 3
Morpeth, <i>via</i> Hinton, to Stuart's Corner	1892	258 15 0	1,228 12 0
Morpeth to Larga.....	1896	33 0 0	99 0 0
Martin's Wharf Road	1891	48 3 4	646 4 1
Muswellbrook, <i>via</i> Dartbrook, to Scone.....	1895	95 11 6	471 8 5
Muswellbrook Bridge to Sandy Hollow.....	1888	225 7 9	5,486 13 1
Muswellbrook, Merriwa Road to Piercefield, &c.....	1897	13 10 0	36 13 0
Muswellbrook to Merriwa	1893	665 19 11	6,574 16 0
Muscle Creek Road	1896	18 13 0	148 0 5
Moonan Brook to Glenrock Cattle Station.....	1895	169 6 4	668 12 5

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1898.
		£ s. d.	£ s. d.
Moontan Brook to Johnstone's.....	1898	25 0 0	25 0 0
Malally to Denison Town	1892	800 5 9	7,158 1 8
Mail Station to Langothlin Railway Station	1890	30 0 0	464 2 6
McIntosh's to Nymboida	"	586 12 0	3,210 12 4
McIntyre's Flat to Puddledock	1880	38 14 6	898 17 10
Macksville to Upper Warrell Creek	1886	48 17 6	667 19 0
Macksville Ferry to Lower Nambucca Public School.....	1898	69 1 0	69 1 0
Macksville to Macleay Heads	1885	123 14 8	1,153 14 9
Macksville to Bradley's	1898	112 0 0	112 0 0
Meehan's Crossing, via Limestone, to Maloney's.....	1895	138 19 7	588 11 9
Manilla up Right Bank Namoi and Blue Hole	1897	48 9 6	378 0 0
Manilla to Bendemere	1898	60 0 0	126 0 0
Manilla to Somerton.....	1891	58 18 0	467 7 9
Manilla to Crow Mountain	1896	42 19 0	75 16 0
Manilla to Burindi	1898	100 0 0	100 0 0
McIntosh's to Levenstrath	1895	59 10 0	192 11 4
Moorland to Upper Stewart's River	1890	250 0 0	1,742 16 2
Moorland to Upper Pipeclay Creek	1898	57 14 0	57 14 0
Mobbs' Hill to Rogan's Hill	1895	221 11 7	1,140 7 0
McDonald's River up Webb's Creek	1893	40 0 0	426 7 6
McDonald's Road near Ourimbah	1898	26 0 0	26 0 0
McDonald's Road near Quarrobolong	"	19 9 0	19 9 0
Moylan's to the Beach	1895	28 0 0	196 3 2
Murray's Run to Yarramalong	1896	250 0 0	596 17 3
Milo Post Office towards Bondi	1898	21 6 0	21 6 0
Milo School to Duguid's Range	1898	23 17 10	23 17 10
Menangle to Great Southern Road	1895	43 18 6	251 10 7
Main South Road to Cobbity	1896	89 13 3	241 14 11
Main South Road to Wombeyan Caves	1890	11,511 8 3	15,526 17 8
Main South Road to Jellore	1896	64 11 9	106 13 9
Main South Coast Road	1879	7,651 5 10	148,655 11 10
Main South Coast Road to Bulli Park	1898	21 5 3	21 5 3
Main South Coast Road, near Campbelltown, to Wedderburn	1896	17 13 6	258 11 8
Main South Coast Road to Woronora Presbyterian Church	1898	11 7 6	11 7 6
Mittagong towards Diamond Fields	1879	Nil.	1,857 4 1
Mittagong to Glenquarry.....	1896	270 11 6	461 6 6
Moss Vale—Kiama Road to Carrington Falls	1898	132 1 0	132 1 0
Moss Vale Flood Repairs	1897	94 19 3	7,096 18 3
Moss Vale towards Jamberoo	1890	676 5 4	7,514 3 5
Moss Vale to Meryla	1896	436 13 5	1,170 2 5
Moss Vale to Barrengarry	1890	395 12 7	8,851 5 4
Moss Vale to Mandemar	"	239 14 8	2,527 10 3
Mayfield to Barrengarry	1895	245 18 0	730 17 7
Menangle to Picton	1892	358 7 9	1,034 13 8
Meejum, via Collinroobie, to Barrellan.....	1895	200 0 0	529 16 7
Mount Wayo to Abercrombie Bridge.....	1881	481 6 0	34,022 19 10
Marengo to Montegale Platform	1898	24 17 3	24 17 3
Marengo, via Stoney Creek, to Narellan	"	132 5 6	132 5 6
Moorebank Avenue Road	"	34 14 0	34 14 0
Mummel Bridge to Narrawa	1892	473 3 7	3,348 16 0
Michelago to Naas Creek.....	1898	40 0 0	40 0 0
Myabla to Nimitybelle, via the Peak, to Cooma—Nimitybelle Road	"	19 19 0	19 19 0
Marulan to Taralga	1892	436 13 0	3,389 16 11
Millora, or Poverty Point, to Lyonsville	1898	49 0 0	49 0 0
Monga to Major's Creek	1871	111 0 6	6,938 4 5
Major's Creek to Berlang	1898	23 7 3	23 7 3
Major's Creek to Snowball	1880	301 15 10	5,980 17 11
Milton to Woodburn	1898	76 17 8	76 17 8
Milton to Little Forest	"	11 14 0	11 14 0
Mogo to Tomakin	1887	18 11 0	892 9 5
Mogo to Runnymede	1898	38 0 0	38 0 0
Mogo to Ryan's Creek Bridge.....	1896	79 6 8	253 11 8
Mortlock's to Cowra Reefs	"	39 12 8	253 7 6
Merimbula to Jellat Jellat	1874	29 0 0	3,142 11 1
Moruya to Araluen	1865	474 16 2	33,595 11 11
Mangoplah to The Rock	1898	10 0 0	10 0 0
Mathoura to Buraloo	1888	72 8 0	1,803 6 11
Moama towards Moulamein	1875	238 10 0	14,809 3 5
Murrumbateman to Gininderra	1893	140 18 0	1,025 12 11
Mittagang to Billyrumbuck.....	1891	22 15 8	202 9 10
Main North Road to Tubbamura	1898	11 5 0	11 5 0
Main South Road to Burrowa	1895	229 19 5	893 18 0
Mundaroo to Ourie	1898	30 0 0	30 0 0
Main West Road to Lapstone Range (Old Bathurst Road)	1895	65 4 4	231 10 1
Main West Road to Prospect Reservoir	1893	114 16 2	727 9 5
Main West Road at Springwood to Sassafras Gully	1898	20 3 0	20 3 0
Main West Road to Seven Hills (Toongabbie Road)	1895	55 0 0	200 0 0
Main West Road near Dubbo to Barrabadden.....	1898	167 15 0	167 15 0
Main West Road to Blacktown Road (Flushcombe Road).....	1896	82 0 0	239 0 0
Main West Road at Minore to Minore Platform	1898	80 19 2	80 19 2
Main West Road in East Orange	1897	.....	.....
Mudgee to Cassilis	1873	947 1 6	4,420 4 9
Mount Victoria to Bell.....	1885	64 12 0	2,657 14 10
Mount Victoria to Mount Victoria Reserve.....	1897	7 0 0	15 0 0
Mutton's Falls to O'Connell	1890	100 9 0	840 2 8

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, Amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Marangaroo to Meadow Flat	1890	269 16 10	2,267 5 4
Meadow Flat, <i>via</i> Sunny Corner, to Palmer's Oakey	1891	439 19 6	2,497 3 9
Mitchell's Creek to Road, Sunny Corner, to Palmer's Oakey	1879	13 6 0	4,289 9 8
Millthorpe to Cadia	1878	327 16 8	9,297 2 11
Millthorpe to Lewis Ponds	1890	199 9 2	1,807 2 4
Millthorpe to Byng	1882	145 4 4	3,387 14 9
Millthorpe to Spring Hill	1896	94 16 9	222 4 9
Monkey Hill to Hill End	1876	360 14 5	11,288 15 7
Mandurama to Burnt Yards	1889	81 1 9	989 11 0
Mandurama to Canowindra	1873	249 0 3	16,873 11 6
Mandurama to Neville	1895	217 3 0	873 9 7
Mingello to Bolderodgery	1898	17 3 0	17 3 0
Mount McDonald to Grabine	1889	37 3 0	1,101 16 4
Mount McDonald to Darby's Falls Post Office	1897	43 10 0	262 18 6
Matthew's to Forest Reefs	1885	123 5 0	2,497 18 5
Mullion to Belgravia	1891	64 19 8	560 5 7
March to Auberson's	1898	30 0 0	30 0 0
Mullion to Ophir	1897	49 5 0	122 3 0
Molong to Norah Creek	1890	60 10 0	774 14 3
Molong to Gregra	1897	80 1 8	156 6 1
Molong to Cargo	1889	39 13 11	1,827 0 1
Molong to Warne	1882	195 18 0	4,193 5 0
Molong-Warne Road to Dengate's	1898	36 0 0	36 0 0
Molong to Manildra	1895	136 9 0	871 3 0
Molong to Redbank	1896	49 3 9	158 17 9
Murphy's Hill to Cudal	"	75 0 3	219 9 3
Moorilda to Neville	1893	473 0 2	2,759 17 0
McGrath's Hill to Maroota	1890	632 2 9	4,384 17 1
Marsden Park to Box Hill	1873	239 8 3	4,438 12 2
Maryvale to Cobborah Road	1896	149 18 9	385 7 4
Main Windsor Road to Toongabbie Road, over Hammer's Bridge	1895	59 18 2	136 6 1
Main Windsor Road to Model Farm's Road	1898	40 13 3	40 13 3
Manildra to Toogong	1895	65 3 0	293 7 3
Milparinka to Wanaaring	1898	36 0 0	36 0 0
Moronglo Creek towards Burrowa	1895	256 0 3	1,150 2 3
Morven to Mullengandra	1898	45 18 3	45 18 3
Mundaroo to Ournie	"	50 0 0	50 0 0
Milson's Point, <i>via</i> Lane Cove Road, to Peat's Ferry	1875	2,021 2 5	57,171 18 5
Manly to Barrenjoey	1879	705 12 0	17,383 19 1
Manly-Barrenjoey Road to Newport	1898	41 17 11	41 17 11
Military Road to St. Leonards	1885	416 12 10	10,932 13 2
Military Road, Randwick	1895	225 0 0	899 0 0
Mount Mooby Road to Dartbrook Bridge	1896	13 8 6	74 13 6
Mount Victoria to Mount York	"	47 16 7	113 15 7
Mimosa to Temora	"	54 8 0	369 7 1
Monticollum Gap to Coorabel	1897	78 5 3	184 13 9
Midson's Road at Pratley's, East Carlingford	1898	25 0 0	25 0 0
McGilvray's Road	"	69 11 8	69 11 8
McInnes Lane, Ballina	"	24 12 0	24 12 0
McCue's Farm to Whiteman Wharf	"	40 0 0	40 0 0
Missendon Road	1897	82 10 0	232 10 0
Mogilla to Sam's Corner	"	160 13 4	213 9 0
Moorwatha, towards Brookesby Railway Station	"	12 12 0	39 19 0
Maida Road, East Carlingford	1898	5 0 0	5 0 0
Mayal Creek, across Tygalah Plain to Pratt's	"	45 0 0	45 0 0
Martinsville School to Clontin's Conditional Purchase	"	39 0 0	39 0 0
Mount Hope to Central	"	81 0 0	81 0 0
Mount Wilson to Mount Irvine	"	85 3 2	85 3 2
Mount Hope to Euabalong	"	82 0 0	82 0 0
New Korcelah, <i>via</i> Acacia Creek Bridge, to the Border	"	128 8 0	128 8 0
Newrybar to Cooper's Shoot	1891	168 19 0	1,062 15 1
Newrybar Factory to Ballina—Cooper's Shoot Road	1898	55 0 0	55 0 0
Narrabri to Little Mountain	1891	15 11 8	1,086 8 5
Narrabri to Eulah and Bullawa Creeks	1888	208 1 6	3,125 5 6
Narrabri to Pilliga	1893	251 16 8	3,328 19 11
Narrabri to Boolcarrol	1888	501 19 5	3,564 19 5
Narrabri to Boggabri, <i>via</i> Terriaro	"	200 0 0	3,423 16 5
Narrabri to Terry Hie Hie	"	200 0 0	3,709 18 9
North Saumarez Bridge to Uralla	1896	35 0 0	167 6 11
North Arm Road, at McKay's, to Smith's Selections	1891	151 4 3	595 5 2
North Arm to Beach	1896	511 14 5	1,380 5 6
North Arm to Bonville School	1897	107 3 6	157 3 6
Newcastle, <i>via</i> Hamilton and Plattsburg, to Minmi	1884	1,471 15 8	9,249 15 6
Nowendoc Road to Dolly's Flat	1896	30 0 0	59 0 0
Nowendoc Road to Upper Manning	"	77 0 0	224 0 0
Nundle to Crawney	1895	39 19 3	253 10 7
Narellan to Luddenham	1892	398 16 0	3,146 8 6
Narellan to Elderslie	1896	30 18 1	92 12 7
Nowra to Kangaroo Valley	1895	351 16 0	1,558 3 8
Nowra to Yalwal	1881	285 2 9	5,674 0 8
Nowra to Nerriga	1882	657 18 8	11,486 10 1
Nowra-Nerriga Road to Yerryong Vale	1898	58 14 5	58 14 5
Nowra to Burrier	1896	80 15 3	174 17 3
Nowra Bridge to Lower Budgong	"	341 8 11	869 9 6
Narrawa Road, near Roche's, to Pudman Road	1885	118 2 6	1,496 17 4

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.			If Unfinished, Amount of Expenditure to 30 June, 1899.		
		£	s.	d.	£	s.	d.
Nerriga to Oallen Crossing	1896	49	9	0	146	7	9
Nelligen to Bateman's Bay	1884	24	7	4	1,032	19	11
Nelligen to Banandra	1874	27	18	0	2,026	14	2
Nimitybelle, <i>via</i> M'Donald's Selection, to Curry Flat	1898	9	1	2	9	1	2
Nimitybelle down Tom Grogan's Creek	1894	17	13	6	222	0	6
Nimitybelle to Count a Guinea	1896	118	8	8	403	19	4
Nimitybelle towards Bobundarah	"	50	0	0	101	17	7
Nimitybelle-Bobundarah Road to Cooma-Nimitybelle Road	1898	96	12	11	96	12	11
Narrandera to Old Goree Bridge	1892	29	0	0	1,040	18	11
Narrandera to Mirrool Creek	1895	Nil.			307	6	4
Narrandera to Hay (North Side)	1896	198	16	6	625	8	6
Newbridge to Abercrombie River Road towards Rockby	1898	21	0	0	21	0	0
Newbridge to Abercrombie River	1887	619	10	6	17,843	14	7
Newbridge towards Rockley	1895	184	6	0	634	6	0
Nymagee-street to the Copper Mine	1897	77	7	0	212	17	0
Nymagee to Mount Hope	"	51	9	0	479	0	0
Nymagee to Hermidale	1890	412	3	1	3,174	2	11
Nymagee to Mount Boppy	1895	86	0	0	318	2	9
Nymagee to Priory Tank	1894	52	15	6	378	10	2
Nevertire to Trangie	1897	41	18	0	49	18	0
Narromine Bridge to Timbrehongie-Dubbo Road	1898	118	5	0	118	5	0
Narromine to the Bogan at the Oaks	1895	60	0	0	605	5	11
Narromine-Bogan River Road, at 7 M. P., to Waterloo Railway Station	1898	76	5	0	76	5	0
Narromine to Trangie	1898	126	10	0	126	10	0
Newtown Bridge to Undercliff Bridge	1895	183	6	8	1,907	18	2
Nicholl's Corner to Enfield Road	1896	31	2	4	134	17	10
Nixon's Corner to Ganmain Siding	1898	12	6	6	12	6	6
Nelson to Rouse Hill	1896	22	3	11	48	11	6
Nyngan to Enaweenah	1897	28	0	0	327	18	0
Nyngan to Canonbar	1898	98	7	6	98	7	6
Nambucca Ferry to Gumma Gumma	1897	12	1	9	57	9	0
Nambucca Ferry down Nambucca River	1898	24	7	3	24	7	3
Nye's Railway Gates towards Grehamstown	"	91	1	0	91	1	0
North Dural to Pitt Town	1897	6	17	7	55	4	3
Noonan Bridge to Thirlmere Railway Station	"	152	7	0	182	12	0
Native Dog Flat Road	1898	57	0	0	57	0	0
Old Ballina Road	1889	52	2	0	609	2	0
Old Inn to Booral Road	"	69	14	2	1,914	15	11
Old Moonbi to Ormond's Crossing	1898	10	0	0	10	0	0
Owen's Wharf, up Left Bank Kinchela Creek	1889	59	18	3	862	9	3
O'Mara's towards Maclean	1898	8	18	11	8	18	11
Outlet Road to Dungay Creek	1894	40	0	0	227	0	4
Old Bar Road to Redbank Ferry	1896	22	0	0	71	19	6
Old School at Crawford, up Crawford River	1898	15	0	0	15	0	0
Old Condong Road	1895	114	19	6	438	12	9
Old North Road, <i>via</i> Glenorie School, <i>via</i> Pratt's, to Cattai Bridge Road	1898	20	0	0	20	0	0
Old North Road to St. Albans	1893	139	8	10	1,363	15	3
Oswald Lane	1898	51	11	11	51	11	11
Ourimbah to Chittaway	1895	95	18	2	609	13	4
Ourimbah up Ourimbah Creek	1896	361	0	9	1,037	12	11
Oakhampton Road	"	134	5	6	513	19	3
Oaks to Cox's River	1893	895	17	0	2,974	4	5
Oaks to Foot of Mountain, Approach to Quarry	1898	4	0	0	4	0	0
Old Burra Road to Michelago	1886	193	11	2	1,935	8	4
Old Burra-Michelago Road, at Moore's, to Uriarra	1898	19	16	0	19	16	0
Old Marulan to Oallen Ford	1895	206	9	0	897	14	9
Oberon to Caves Road	1888	101	9	1	3,574	17	4
Oberon to Shooter's Hill	1877	140	4	8	4,997	9	4
Oberon to Little River	1895	278	13	2	985	10	4
Obley to Tomingley	1898	78	17	6	78	17	6
O'Connell to Wambool Platform	1897	744	17	0	828	4	6
O'Connell to Beaconsfield	1879	292	11	4	5,748	1	3
O'Connell to South Apsley	1885	100	9	11	2,915	11	9
Oberon to O'Connell	1879	296	11	6	8,794	5	6
Oberon-Jenolan Road to Fish River Creek (Oberon to Caves)	1898	54	5	6	54	5	6
O'Connell Road to Cooper's Overbridge	1896	19	3	4	62	17	10
Orange to Pinnacles	1884	59	8	0	1,792	10	1
Orange to Ophir	1864	149	10	0	5,590	10	3
Orange to Stuart Town	1896	249	1	3	674	5	3
Orange to Canoblas	1881	251	1	4	4,881	2	3
Orange to Nanima	1898	11	17	0	11	17	0
Orange to Forbes	1886	1,151	6	8	103,146	0	8
Orange towards Carcoar	1896	300	2	7	787	10	11
Orange Cemetery, Road to	1898	100	0	0	100	0	0
Orange to Icely	1881	117	11	5	3,959	0	1
Orange to Cargo	1888	232	10	1	4,059	8	5
Old Castle Hill Road to Government Reserve	1896	18	0	0	53	0	0
Old Windsor Road, <i>via</i> Pearce's, to Blacktown Station	"	59	9	3	157	2	11
Old Windsor Road, <i>via</i> Buckley's, to Toongabbie Post Office	1898	10	0	0	10	0	0
Old North Road, at Castle Hill, to Government Reserve, Old Castle Hill Road	1895	22	10	6	139	16	11
Old Junee Railway-station to Merrulebale	1896	200	0	0	446	8	4
Old Chadwick Road to Grindley's Corner	1897	59	15	11	131	15	1
Old Pejar Road	1898	40	0	0	40	0	0
Possum Shoot to Cooper's Shoot	1887	120	0	0	10,275	17	3
Possum Shoot to Binnaburra	1896	206	16	9	505	12	10

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Pearson's to Trimble's	1896	19 10 0	58 2 11
Payne's Bridge, up Stockyard and Bagnell Creeks	1898	18 0 0	18 0 0
Pimlico to Wardell and Ballina Road	1889	60 0 0	598 18 9
Pimlico Road to Emigrant Creek Point	1890	60 0 0	448 9 11
Peach Tree Road, Fountaindale	1893	29 19 9	29 19 9
Pokolbin Hills towards Branxton	1895	154 0 0	739 13 2
Phoenix Park to McClymont's Swamp	"	55 0 0	200 0 0
Pembroke Road, East Carlingford	1898	37 18 0	37 18 0
Palmer's Plains to South Gundurimba	1894	196 0 11	1,196 10 11
Pilliga to Walgett	1893	204 8 6	2,032 14 3
Pilliga, via Buglebone, to Eurie	1894	110 8 10	850 1 4
Peterkin's to Warrell Creek Ferry	1889	120 0 0	1,436 5 4
Punt Bridge, via Erina and Womberah, to the Sea Ocean Parade	1897	10 6 3	21 0 3
Port Macquarie to Tacking Point	1886	40 0 0	785 14 0
Port Macquarie towards Walcha	1872	617 6 1	24,163 12 3
Pappenbarra Creek to Cowal	1888	89 11 0	2,385 19 5
Pint-pot Creek to Chandler River	1893	131 8 0	600 0 0
Pocket to Blindmouth	1894	240 0 0	1,318 0 6
Pearce's, via Behan's, to Eatonsville	1895	120 3 8	540 10 8
Pearce's Creek to Booyong Railway Station	1896	60 0 0	148 11 3
Paterson to Gresford	"	427 13 6	1,240 3 0
Paterson-Gresford Road to Vacy-Summer Hill Road	1898	45 17 0	45 17 0
Pitnacree Bridge to Dunmore House	1895	119 0 0	499 5 0
Pine Vale to Garrawilla Creek	1898	134 12 3	134 12 3
Punkalla to Noorooma	1896	69 0 2	124 7 2
Pambula to Bald Hills	1890	20 6 0	210 4 0
Pambula to New Buildings	1896	399 13 0	1,266 6 10
Pambula to Merimbula	1867	200 0 0	5,050 4 1
Pambula to Back Creek	1896	127 12 6	407 5 0
Picton, via Oakes, to Blaxland's Crossing	1874	192 1 10	18,604 6 3
Pericoe to Wog Wog	1889	88 18 0	1,291 0 8
Prahran to Snowy Plain	1890	99 8 3	1,928 18 0
Perth to Mount Evernden	1895	147 6 2	587 5 4
Perth, via Charlton, to Rockley	"	92 19 9	1,502 15 7
Phillips' to Solferino Road	"	275 0 0	888 0 0
Pinnacles to Parkes—Grenfell-road	1898	18 4 0	18 4 0
Parkes to Coradgery	1888	224 13 6	2,447 17 0
Parkes to Balderogery	1887	107 12 0	1,979 2 6
Parkes to Peak Hill	1895	623 0 2	3,436 1 6
Parkes to Condobolin	1884	295 1 7	10,511 0 0
Parkes to Manildra	1895	179 6 0	1,104 7 8
Putty Road to Head of Colo	1898	62 16 4	62 16 4
Portland Ferry to Wiseman's Ferry	1895	86 10 0	297 8 3
Portland Ferry to Sackville Road	"	87 6 0	414 0 8
Portland to Portland Siding	1898	31 7 0	31 7 0
Parramatta to Pennant Hills Road	1885	119 19 11	1,635 0 0
Parramatta Park to Toongabbee Creek	1896	138 0 0	401 0 0
Parramatta, at East end of Broken Back Bridge, via Windsor and Richmond, to Richmond Bridge	1883	1,191 2 9	9,063 10 8
Pearce's Corner to Pennant Hills	1884	238 7 4	3,295 19 6
Pearce's Corner to Brooklyn Railway Station	1894	260 0 0	1,510 11 10
Pearce's Corner to Berowra Creek, at Crosslands	1885	30 0 0	714 8 1
Pennant Hills Road to Mould's Corner	1892	592 18 0	2,427 6 8
Pennant Hills Road, via Beecroft, to Eastwood	1896	129 19 3	384 3 5
Pennant Hills Road to Thornleigh Quarry	1895	38 0 9	126 9 7
Pennant Hills Road to Beecroft Station (Murray's Road)	"	53 2 8	161 3 9
Piper's Flat to Sunny Corner	"	284 13 7	816 3 0
Prospect to Richmond	1896	868 13 5	1,514 1 9
Priory Tank to Hillston	1895	47 8 0	410 19 11
Penshurst to Allyn River	1896	88 0 0	256 0 0
Pretty Pine to Moulamein	"	287 10 1	823 16 7
Pitt Town-Windsor-road to Pitt Town road	1897	67 7 9	102 13 6
Pejar to Middle Creek	1898	6 6 0	6 6 0
Protection of River Banks, Maclean	"	200 19 9	200 19 9
Protection of River Banks, Kempsey	"	248 9 6	248 9 6
Quirindi to Gunnedah	1894	159 17 9	862 1 4
Quirindi to Breeza, via Doyles, to Boxhill	1897	13 9 6	99 0 4
Quirindi, via Bundella, to Bomera	1894	984 12 11	7,670 19 1
Quirindi, via Gaspard, to Great North Road	1879	249 19 4	1,807 4 6
Quirindi, via Quipolly, to Werris Creek	1891	49 15 8	286 2 8
Quirindi to Homestead Selections on Borambil	1898	15 11 10	15 11 10
Quirindi to Warrah Ridge	1896	63 12 0	152 17 11
Quirindi, towards Borah Creek	1894	95 16 7	446 10 9
Quirindi to Wallabadah	1878	247 7 10	6,114 13 3
Quirindi to Willow-tree	"	129 19 6	737 3 7
Quilkie's, down Taylor's Arm, South Side	1894	129 4 0	624 4 2
Quambone to Boundary Gate	"	149 5 6	645 6 10
Queanbeyan to Uriarra and Taemas Road	1881	212 13 6	3,427 5 8
Queanbeyan to Naas	1891	124 13 0	1,166 7 10
Queanbeyan to Upper Gundaroo	1874	172 19 5	2,918 3 6
Queanbeyan, Gundaroo Road, at Reedy Creek, to Goulburn-Cooma Road at 42 M.P.	1898	13 17 2	13 17 2
Queanbeyan to Gininderra	1878	131 7 11	10,256 8 0
Queanbeyan, towards Braidwood	1896	293 13 6	756 10 11
Reddcliffe's to Brunswick River	1892	125 0 0	2,039 17 8

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Reddaciuff's—Brunswick Road to Pipe-clay Siding	1898	80 0 0	80 0 0
Red Range Road to Bear Hill	1894	159 0 0	916 14 1
Rous Factory, <i>via</i> Beeson's, to Wardell Road	1890	97 11 0	2,007 18 4
Road up Left Bank, Wilson's River	1894	162 7 8	659 2 7
Roads, Palmer's Island	1890	427 0 7	2,190 1 5
Red Hill to Kerr's	1892	250 9 9	1,733 3 2
Road up Forbes River	1896	76 11 6	196 12 5
Rockvale to Kookabookra	1890	18 19 0	855 14 3
Raleigh Creamery, Road to	1898	14 0 0	14 0 0
Rolland's Plains to Dungay Creek	1892	.....	3,135 1 5
Rolland's Plains to Ballingarra Wharf	1895	.....	246 19 9
Roads on Rawden Island	1885	59 19 1	1,233 6 3
Rushforth to Lower Gerogeroo	1898	31 10 0	31 10 0
Roads on Koroee Island	1890	34 18 0	302 18 5
Road between Nangutta and Pericoe	1898	32 17 0	32 17 0
Raymond Terrace at Saltash	1893	94 17 5	1,001 18 3
Raymond Terrace Ferry Approaches	1897	300 0 0	529 11 0
Road to Bellingen Heads	1898	36 9 5	36 9 5
Road to Upper Bucca Creek	"	49 11 8	49 11 8
Raymond Terrace to Seaham	1884	123 8 0	3,445 10 11
Raymond Terrace, <i>via</i> Nelson's Plains, to Seaham	1896	129 2 10	254 7 4
Raymond Terrace to Williamstown	1894	53 10 0	646 6 11
Road leading to Upper Lansdowne Road	1898	30 0 0	30 0 0
Road to Dalwood Ford (Tangorin Road)	1895	44 0 0	223 0 0
Road between portions 15 and 27 to N.E. corner of portion 140 (Shannon's to Woodburn), parish of Ballina	1898	74 3 0	74 3 0
Redbank to Merrigoe	1894	40 17 0	234 17 0
Roads on left bank, Macleay, Warneton to Towal Creek	"	211 13 6	1,248 11 7
Rouchel Store to Stoney Creek	1898	12 19 0	12 19 0
Rutherford, <i>via</i> Farley, to Cessnock	1892	722 8 10	5,046 12 8
Rutherford, <i>via</i> Farley, to Ravensfield	1898	28 17 1	28 17 1
Rutherford, <i>via</i> Stanhope, to Elderslie	1895	399 18 1	1,050 11 6
Rutherford and Telara Road to Fishery Creek and Teggs	1896	44 0 0	128 0 0
Rix's Creek, <i>via</i> Glennie's, to Goorangoola Road	1897	30 0 0	54 14 7
Road up Camden Haven River, North Branch	1898	41 0 0	41 0 0
Road up Thone Creek	1895	208 16 0	792 4 7
Ridgeway's, <i>via</i> Monkerai, up Karuah River	"	100 3 0	693 4 2
Road through Warren's Lane	"	79 19 1	236 14 10
Road from Walcha Road to Bendemeer	1898	20 0 0	20 0 0
Road through Paterson's	1895	69 10 9	483 6 6
Road through Book's Grant	1898	48 14 6	48 14 6
Road through Harbord Estate	1895	119 3 0	237 3 4
Ray's Road Carlingford	1896	100 1 0	228 4 10
Road from portion 106 to Grafton, <i>via</i> Southgate-Broadwater Road	1898	45 0 0	45 0 0
Round Corner at Dural to Rouse Hill	1894	92 0 0	333 0 0
Round Corner at Dural to Wiseman's Ferry	1895	441 12 10	1,278 1 0
Ryan's to the Border	"	50 0 0	185 11 6
Ryan's to Bingham Point	1898	160 0 0	160 0 0
Redbournberry Bridge to Dyring	1896	55 0 0	160 0 0
Rob Roy to Reedy Creek	1895	240 17 4	943 1 2
Road from Dorsey's along Serpentine	1898	19 9 0	19 9 0
Road up South Branch, Orara River	1895	78 4 0	305 18 8
Rothbury Public School to Allandale-Cessnock Road	1898	42 12 0	42 12 0
Rothbury to Pokolbin Hills	1898	63 0 0	63 0 0
Road up Right Bank, German Creek	1895	39 1 6	138 2 0
Robertson, <i>via</i> Macquarie Pass, to Glenquarry	1890	354 11 6	3,716 6 7
Richlands to Wombeyan Caves	1887	277 0 1	1,539 3 10
Rock Station to Lockhart	1894	70 14 10	690 19 4
Reiley's Crossing, <i>via</i> Batlow, to Bago	1892	190 19 9	989 18 5
Riley's Hill to Broadwater	1898	51 5 0	51 5 0
Rock Station to Urana	1883	128 4 2	11,440 6 7
Rosewood to Humula	1891	51 3 7	1,336 1 8
Run of Water to Winderradean	1895	160 0 0	605 12 0
Run of Water to Parkesbourne	1887	61 1 7	632 3 7
Rouse Hill and Dural Roads to Kenthurst to Fisher's	1896	82 0 0	239 0 0
Rouse Hill to Schofield's Platform	1888	86 13 6	1,131 15 3
Rosewood to Cappabella	1898	91 18 6	91 18 6
Richmond towards Dr. Clarke's Bridge	1896	59 3 0	141 11 0
Richmond Bridge to Mount Wilson	1888	737 19 7	10,246 18 11
Richmond to Cornwallis Road	1896	26 14 0	87 8 8
Red Range Road to Marshall's	1898	9 9 0	9 9 0
Reservoir to Cadia	1894	244 19 9	811 15 8
Rydal to Hampton	1894	218 6 8	2,853 16 10
Rankin's Bridge to Monkey Hill	1896	197 17 1	536 4 11
Road to S. Best's	1898	24 18 6	24 18 6
Rockley to Trunkey	1874	126 10 0	5,894 8 6
Rockley to Swallow Nest	1880	44 3 3	2,778 10 8
Rylstone to Bylong	1886	206 5 10	3,603 14 2
Rylstone to Narrango	1895	53 18 1	188 7 11
Rylstone-Narrango Road, at Burn's Lane, to Nullo Mount	1898	129 15 1	129 15 1
Rylstone, <i>via</i> Bogie, to Capertee	1895	97 17 9	516 7 11
Road past Callan Park Asylum	"	38 10 0	213 10 0
Randwick Toll-gate to La Perouse	1893	818 10 3	3,135 19 0
Randwick and Coogee Roads	"	1,002 7 6	5,752 7 6
Roads within limits of Hurstville, Rockdale, Canterbury, &c.	1894	1,289 10 0	7,270 10 0

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Roads in Little Bay Hospital grounds	1898	335 11 0	335 11 0
Roslyn Road to Chain of Ponds	1895	75 0 0	253 18 1
Reidsdale to Warrumbucca	"	24 16 6	129 1 7
Road south of Portion 2, Parish of Galore	1898	6 19 6	6 19 6
Raby to Minto	1896	28 4 0	49 14 1
Road separating Parishes of Osborne and Galore	1898	49 0 4	49 0 4
Rhine Falls to Bolaro	1895	Nil.	283 14 0
Redbourneberry Bridge, <i>via</i> Clydesdale, to Glendon Road	"	17 6 0	135 1 11
Road east of Walla Walla Railway Station	1896	37 16 4	67 19 1
Rocky Crossing to Barrington Bridge	1898	60 0 0	60 0 0
Roads through Dumaresque Island	1891	159 19 6	695 14 1
Road at Balmoral Railway Station	1898	9 10 0	9 10 0
Roads through Mitchell's Island	1887	240 15 8	2,479 14 9
Roads through Oxley Island	"	299 10 3	4,934 17 9
Reid's Flat to Rugby	1897	117 15 0	314 14 2
Road through Wright's Property near Krambach	"	2 16 0	40 0 0
Rylstone, from Cox's Siding to Lue	"	18 0 0	33 0 0
Rock Flat to Lincluden	"	2 2 0	19 19 0
Road opposite Cemetery Gates, Wagga Wagga	1898	95 9 4	95 9 4
South Lismore to Wyrallah	1887	344 12 2	3,379 10 11
South Gundurimba to Flaherty's	1898	60 17 3	60 17 3
Swan Bay to New Italy	1890	149 17 3	1,857 6 0
Southgate to Flood Reserve	1894	18 16 0	158 8 6
Shark Creek Bridge to Hinchey's	1897	69 14 6	102 1 3
Shark Creek to McNaughton's	1898	21 9 0	21 9 0
Shark Creek Road through Loughman's to Crown Lands	1896	36 0 0	90 19 11
South Grafton to Ulmarra	1886	144 18 0	9,608 4 6
South Grafton to Perrett's	1890	1,279 19 6	16,422 7 4
South Grafton to Rushforth	1888	184 15 2	1,147 13 8
South Grafton to Moonee (North Coast Road)	1892	1,268 19 1	8,467 17 7
South Grafton-Moonee Road to Ulmarra-Corinda Road	1897	23 10 0	74 4 0
South Grafton-Ulmarra Road to Clarence River at Allipon Creek	1898	12 0 0	12 0 0
Stony Pinch up Stockyard Creek	1894	126 13 1	706 12 0
Stony Pinch to Smith's Creek	1890	39 1 5	360 3 2
Stony Creek to Morton's Creek	1892	80 0 0	458 8 11
Salisbury Plains to Kentucky	1887	77 9 6	826 7 11
Seaham Punt to Clarencetown	1896	158 2 0	361 1 0
Seaham Road to Dunn's Creek	"	44 0 0	84 0 0
Stroud to Dungog	1876	293 15 8	7,927 2 3
Stroud Road to New Wharf	1891	41 7 8	506 1 4
Stroud Road near Six-mile to Seaham Road	1890	49 8 10	264 4 8
Stroud Road near Eight-mile to Seaham Road	1891	66 5 3	412 4 5
Stewart Town to Mookerawa Road	1895	40 0 0	160 0 0
Stockton to Nelson's Bay	1894	755 16 9	4,877 14 1
Stockton, Nelson's Bay Road at Williamtown to Sandhills	1887	29 10 0	75 15 9
Seven Oaks to Trial Bay	1882	948 18 1	15,811 12 8
Seven Oaks-Trial Bay Road to Back Lands	1898	16 10 6	16 10 6
South Side, Palmer's Channel	1898	15 15 0	15 15 0
Sandy Creek to Mount Vincent	1892	88 1 6	1,399 2 7
Fandy Creek Road to Boscoble Railway Platform	1898	19 4 0	19 4 0
Sandy Creek to Millfield	1893	199 0 0	850 1 3
Sweetnam's to Knight's	1898	85 0 0	85 0 0
Sandy Hollow to Widdin Creek	1894	60 0 0	232 3 0
Smithtown to Dairy Factory	1898	86 3 8	86 3 8
Scone up Middle Creek	1893	133 6 6	668 13 6
Scone to Moonan Brook	1879	646 19 10	9,354 19 8
Scone to Bunnan	1877	177 16 11	8,234 8 2
Slattery's Lane near Kirkton Gate	1898	7 10 0	7 10 0
Scotch Creek Road	1891	59 11 9	653 12 2
Singleton and Maison Dieu Road to Warkworth Road	1896	52 0 0	113 0 0
Singleton, <i>via</i> Warkworth, to Jerry's Plains	1890	224 3 1	2,299 5 0
Singleton to Brandy Creek	1866	55 0 0	163 5 2
Singleton to Cooper's Flat	1884	254 9 2	6,165 19 2
Singleton, <i>via</i> Maison Dieu, to Jerry's Plains	1896	76 11 6	323 8 5
Sherwood to Willi Willi	1894	261 10 3	1,125 16 7
Sherwood to Dungay Creek Branch	1898	34 6 0	34 6 0
Stonehenge to Graham's Valley	1894	47 19 8	222 8 0
Saltash to Brown's Selection	1898	78 16 0	78 16 0
Synott's to Funnell's	1888	438 7 5	4,321 15 0
Sedgefield, <i>via</i> Glendon Bridge, to Gresford Road	1894	15 17 8	100 12 8
Sharp's, up East Bank Orara River	"	310 11 6	1,326 11 9
Saddler's Creek Road	1895	70 6 5	213 7 1
Solway's to Ginerol	"	24 14 0	174 13 0
Stockinbingal to Marsden	"	170 7 0	331 15 6
Stockinbingal to Dudauman	1898	76 13 9	76 13 9
Sutton Forest to Main South Road	1887	33 3 1	923 13 9
Sutton Forest, <i>via</i> Exeter, to Barber's Creek	1896	430 0 8	1,152 16 2
Sergeant's Point, <i>via</i> Charley's Forest, to Wog Wog	1894	147 8 8	791 11 7
Sergeant's Point to Clyde Road	1887	60 6 1	893 3 0
South Creek to Luddenham	1894	199 15 6	941 6 5
Southampton Ferry Approach	1898	126 0 0	126 0 0
Sofala to Rylstone	1888	269 0 8	9,393 19 4
Spring Terrace to Forest Reefs	1883	142 4 9	1,950 12 0
Spring Terrace to Long Swamp	1887	99 6 11	1,924 3 0
Spring Hill towards Cadia	1879	59 10 0	2,685 7 1

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When commenced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Spit Approaches—Painting	1898	41 8 0	41 8 0
Stuart Town to Burrendong	1880	94 5 0	1,287 18 2
South Head Roads	1888	2,750 0 0	40,852 10 0
Stratton to Ollera	1898	36 0 0	36 0 0
Sydney to Bank's Meadow	1894	2,282 7 3	6,382 15 1
Sydney, via Dam at Cook's River, to "Half-way House"	1876	2,250 1 7	95,040 10 4
Sidmouth Valley Road	1883	25 0 0	1,451 8 4
Stanmore Road from Enmore Road to Canterbury Trust Road	1894	494 3 4	2,685 13 8
St. Mary's to Blacktown via Llandilo	1895	124 17 11	470 16 3
St. Mary's to Orphan School Road	"	211 17 6	549 14 0
Shadforth to Whiley's Junction	1896	139 15 3	397 7 7
South Head Road, at Watson's Bay, to Military Reserve Gates	1895	39 8 4	177 1 8
Stanhope Road to Singleton and Gresford Road	1896	25 4 6	138 4 6
St. Albans to Mount Manning	"	200 0 0	551 8 0
St. Albans Common to Broad and Harrington Arms	1898	20 0 0	20 0 0
St. Albans, up Wright's Creek	1896	54 0 0	183 13 0
St. Alban's, up McDonald River	"	300 0 0	816 13 3
Slack's Creek to Middlingbank	"	182 19 8	504 7 11
Sylvania to Port Hacking	"	103 11 3	505 13 11
Seven Hills Road to Vardy's Grant	"	27 0 0	52 0 0
Springwood to the Hawkesbury	"	165 0 0	480 0 0
Sackville Road, near Ebenezer, via Page's Ferry, to Maroota	"	57 16 0	157 10 5
Shooter's Hill to Mt. Werrong	1898	69 4 0	69 4 0
Sussman's to 'Possum Brush	1891	82 18 0	963 11 8
Shooter's Hill to Little River, towards Goulburn	1898	115 9 0	115 9 0
Sparrow's Corner to Foxlow, via Carwoola	1890	220 18 10	2,930 9 5
Skinner's Shoot to Byron Bay	1897	40 0 0	77 19 7
Sand-drift, Botany	1898	0 5 6	0 5 6
Shands to Berrigan	"	35 9 4	35 9 4
Small's to Woodfordleigh, Tyndale Road, at McInnes'	1897	19 10 0	68 12 6
Sutherland Road, Rookwood	"	25 0 0	50 0 0
Sternbeck's to Wiseman's Ferry	1898	21 0 0	21 0 0
Springdale to Cootamundra, Temora Road	"	9 0 0	9 0 0
Toohey's Mill Road to Hogan's	1892	295 18 2	1,445 0 1
Trial Bay to Smoky Cape	1893	49 19 7	179 9 11
Trial Bay to South West Rocks	1895	48 11 9	182 4 3
Two-mile Creek to Newrybar	1889	77 11 0	580 17 4
Tumbulgum to Tweed Heads	1894	247 0 5	1,109 2 1
Tabulam to Myall Creek	1892	646 13 10	4,495 3 2
Thorburn to English's	"	134 11 4	619 11 8
Thorburn to Kelly's	1891	65 0 0	514 0 3
Tucki to Munro's Wharf	1894	120 0 0	495 18 11
Tucki to Rous	1891	238 14 0	1,702 7 0
Tuckombil to Rous	1894	41 9 0	595 19 6
Tuckombil School to Portion 294	1898	46 4 0	46 4 0
Tintenbar to Pearce's Creek	1896	153 13 10	351 12 2
Tintenbar to Binna Burra	"	396 0 0	1,018 16 7
Tintenbar to Alstonville	1883	310 3 9	5,693 3 9
Tintenbar, via Toohey's Mill, to Booyong Station	1884	336 13 6	3,104 18 0
Tenterfield to Scrub	1885	130 11 6	2,000 19 3
Tenterfield Common, Road through	1898	100 0 0	100 0 0
Tenterfield to Sunnyside School	"	8 17 0	8 17 0
Tenterfield to Bonshaw	1878	647 18 10	18,152 4 1
Tenterfield to Swamp Oak Creek	1894	198 19 6	684 6 5
Tenterfield to Ballina	1891	6,228 3 3	107,238 0 1
Tenterfield, Ballina Road to Portion 225	1898	35 4 0	35 4 0
Travellers' Rest to Macleay Heads	1892	209 1 7	1,623 3 1
Thompson's, up Dairy Arm	1896	28 0 0	94 0 0
Tingha, via Stanborough to Boggy Camp Diamond Fields	1898	10 4 0	10 4 0
Tingha to Elsmore	1896	216 18 8	658 5 1
Telegra Bridge to Hudson's	1898	29 19 9	29 19 9
Tinonee Road to Failford Road	1894	121 4 0	871 18 0
Tinonee to Old Bar Reserve	1895	334 7 10	571 13 10
Tinonee Old Bar Reserve Road to Bohnock	1898	50 0 0	50 0 0
Tinonee to Wingham Ferry	1876	88 1 0	3,188 15 9
Tinonee to Killawarra	1892	50 0 0	492 14 10
Tinonee to Bootawah	1895	70 0 0	298 0 11
Tintinbul, via Moonbi and Limbri, to Mulla Creek	1898	143 0 0	143 0 0
Taree Ferry to Glenthorne Wharf	1896	36 0 0	83 17 7
Taree towards Tuncurry (North Forster)	1883	296 0 6	4,302 13 5
Taree to Wingham	1892	211 17 6	1,603 17 7
The Pinch to Congewai	1890	306 0 0	2,388 5 3
The Pinch to Ellalong	1895	30 0 0	265 14 6
Telegraph Road, Pymble	1898	126 13 2	126 13 2
Ten-mile Hollow to Mangrove Creek	1896	27 0 0	42 15 10
Trangie, via Quigley's to Nevertire, Bogan Road	1898	156 0 0	156 0 0
Twelve-mile, Stroud Road, to Tea Gardens	1892	262 3 11	1,473 12 7
Timor to foot of Crawney	1896	50 0 0	192 7 6
Tocal, up Webber's Creek	"	33 0 0	96 0 0
Teralba to Cockle Creek	1895	73 6 3	279 17 10
Tuggerah Beach Road to Selections east of Matcham's	1896	37 0 0	108 0 0
Tamworth to Nundle	1878	567 1 4	24,963 5 3
Tamworth to the Forest	1883	25 0 0	1,641 8 5
Tamworth to Barraba	1891	2,072 12 5	18,050 5 4
Tamworth to Werris Creek	1896	202 15 8	489 7 8

RETURN OF EXPENDITURE ON PUBLIC WORKS—*continued.*

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Tamworth to Winbon	1898	232 3 4	232 3 4
Tamworth, <i>via</i> Moore Creek, at Attunga	1878	178 16 10	2,477 16 10
Tamworth to Somerton	1891	350 4 0	3,374 1 11
Teven to Ferry (north side)	1894	45 14 0	457 2 7
Tatham to Myrtle Creek	1891	198 7 1	1,125 15 7
Tallaganda Crossing up Terrabat Gully	1894	60 0 0	306 2 7
Tyagarah to Boyle's	1895	101 4 6	610 13 11
Turramurra to Bobbin Head Road	"	803 14 6	1,211 13 2
Towrang to Long Reach	1892	165 3 5	3,275 4 2
Towrang to Arthursleigh	1896	25 1 0	224 18 6
Taralga to Rockwell	1891	120 13 0	2,783 4 0
Taralga to Bumaroo Ford	1895	212 8 10	545 13 4
Taemas to Brindabella	1891	399 0 4	2,619 12 1
Turlinjah to Tuross Heads	1895	13 5 0	129 6 5
Tarago to Braidwood	1886	1,025 10 7	89,124 10 4
Terneil towards Milton	1891	152 3 5	1,468 0 1
Towamba to New Buildings	1894	109 19 5	1,443 0 9
Towamba to Boodi	1887	39 16 0	2,148 5 0
Turner's, <i>via</i> Linburn, to Blackman's	1896	27 16 6	82 6 10
Tharwa to Tiddinbilly	1890	38 9 6	441 7 3
Tumut, <i>via</i> the Plains, to Jones' Bridge	1891	141 4 6	1,185 2 1
Tumut, <i>via</i> Piper's, up Bumbowlie Creek	1894	56 1 0	366 8 8
Tumut to Kiandra	1873	978 8 4	15,056 14 9
Tumut, <i>via</i> Brungle, to Gundagai	1870	427 14 4	7,733 7 5
Tumut to Adelong	1868	289 5 4	15,008 6 5
Tumut to Adelong Road to Racecourse and Recreation Ground	1897	69 1 0	91 1 0
Tumut to Tomorroma	1891	175 2 0	1,330 4 6
Tumut-Tomorroma Road to Bongonga	1898	29 14 0	29 14 0
Tumut to Lac-ma-lac	1871	84 10 4	3,371 3 3
Tumut to Gundagai	1864	657 8 7	29,880 15 2
Tumut-Gundagai Road, near Goeup Public School, to Meadow Creek	1898	13 0 0	13 0 0
Temora to Wyalong	1887	1,923 14 1	15,356 10 2
Temora to Morangarell	1897	87 5 2	154 0 4
Temora to Old Junee	1888	330 16 6	3,075 14 8
Temora-Mandemah Road, <i>via</i> Butts, &c., to Devlin's Gate	1898	42 1 0	42 1 0
Temora to Mandemar	1894	200 16 8	1,307 9 10
Temora to Stockinbingal	"	80 5 1	480 5 1
Temora to Trungle Hall	1896	76 18 4	271 15 4
Temora to Thanowring	1898	109 18 0	109 18 0
Tumbarumba to Courabyra Public School	1893	50 0 0	534 0 5
Tumbarumba, <i>via</i> Tooma, to Welaregang	1878	474 8 6	18,872 18 0
Tumbarumba to Bago	1890	267 5 1	2,632 15 9
Tumbarumba to Upper Burra	1894	Nil.	160 9 0
Tumbarumba to Jingellie	1882	237 14 6	14,744 8 6
Tumbarumba to Little Billabong	1876	720 16 11	26,064 1 6
Tatalia to Thyra	1892	162 16 6	1,143 14 11
Turner's to Wonnul	1898	36 0 0	36 0 0
Tarrabandra to Goeup	1897	68 0 9	122 12 9
Thompson's Creek to Cullen Bullen	1894	182 17 1	670 0 4
Thompson's Bridge to Pitnacree Road	1896	60 0 0	148 0 0
Tuena Road to Sherwood	1893	68 12 10	395 10 4
Tarana to Jenolan	1877	689 13 11	11,951 19 10
Tarana to Rydal Road to the Meadows, <i>via</i> Honeysuckle Falls	1896	60 8 9	112 2 4
Tallawang Road to "Goodiman Inn"	1893	100 0 0	584 0 6
Treweek's to Lewis Ponds	1895	116 9 0	464 12 6
Thalaba Creek to Yates' Gate	1898	166 19 3	166 19 3
Tallywalka to Ivanhoe	1892	14 13 0	2,138 12 0
Tabrabucca to Hammond's	1896	111 9 9	304 9 8
Trundle to Bullock Creek	1893	34 1 0	34 1 0
Toongabbie Creek to Windsor Road, at Kellyville	1894	130 9 5	306 18 3
Toongabbie Post Office to Wentworthville Railway Station	1897	"	25 0 0
Telegherry to Master's	"	143 18 5	292 14 5
Tuggerah Beach Road to Homestead Selections	1898	22 0 0	22 0 0
Tia to the Tia Mines	1897	15 0 0	45 0 0
Tighe's Hill to Carrington	"	50 18 11	191 16 5
Tableland Road, at Grey's, to the Gulf	"	3 8 0	24 0 0
Tomerong to Jervis Bay	"	94 13 0	184 11 7
Tuggeranong to Tuggeranong Railway Platform	1898	20 10 0	20 10 0
Thornleigh School to Collector and Tarana Road	"	34 3 6	34 3 6
Tangmangaroo towards Rye Park	"	50 0 9	50 0 9
The Rock to Avondale	"	5 16 2	5 16 2
Thudungra to Morangarell	"	151 19 0	151 19 0
Terneil to Bawley Point	"	28 14 6	28 14 6
Tathra to Tanja	"	110 0 0	110 0 0
Thirlmere to Pieton Lakes	"	24 8 0	24 8 0
Tooma to Meragle	"	50 0 0	50 0 0
Ulmarr to Yamba	1893	853 2 11	5,704 16 10
Ulmarr to Corindi	1887	176 13 1	1,981 3 5
Uralla to Bundarra	1879	611 12 11	22,078 12 2
Uralla <i>via</i> Balala to Bundarra	1890	217 2 0	2,530 10 5
Uralla, <i>via</i> Gostwycke, to Rockwood	1894	129 13 3	464 1 5
"Union Inn," <i>via</i> Melville Ford, towards Rosebrook	1885	286 15 4	1,140 9 10
Union Church to Southgate Wharf	1889	40 0 0	2,541 7 6
Underbank to Upper Chichester	1896	159 12 0	417 1 6

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Underbank to Upper Williams	1893	149 15 6	640 18 1
Umbango, <i>via</i> Oberne, to Tarcutta.....	"	10 0 0	887 16 7
Umeralla Platform towards Cowra Reefs	1897	49 13 6	109 4 6
Upper Dartbrook to Sparke's Creek Road	1895	29 10 0	337 16 10
Upper to Lower Ford, Turner's Flat.....	1898	114 13 9	114 13 9
Upper Dartbrook to Upper Wybong	1896	39 5 4	99 7 8
Upper Lansdowne Roads	"	359 16 0	1,017 7 2
Upper Road to Eastwood	1892	134 17 3	1,350 17 3
Upper Pieton to Thirlmere	1895	57 14 2	130 15 7
Upper Burragorang to The Peaks	1898	89 7 0	89 7 0
Upper North Creek to Byron Bay Road	1896	58 0 0	113 7 1
Upper to Lower Coldstream	1897	108 14 6	186 1 6
Upper Coldstream Bridge, through Roberts' and Want's Lanes	1898	96 2 3	96 2 3
Upper Manilla to Crow Mountain	1897	70 0 0	100 0 0
Upper Unkya to Clybucca	"	158 8 0	185 19 0
Urana to Brookong Siding	1898	10 0 0	10 0 0
Unwin's Bridge Painting	"	79 0 8	79 0 8
Urana-Mitchell County Boundary Road	"	10 7 6	10 7 6
Urana County Boundary Road to Road from The Rock to Green's Gunyah ..	"	27 10 0	27 10 0
Violet Dale up Dumaresq Creek.....	1894	82 3 0	402 5 3
Vacy to Summer Hill	1897	73 0 0	213 0 0
Vineyard School to Pitt Town Common.....	1896	42 1 1	89 8 5
Viney's Road, Dural	1898	30 0 0	30 0 0
Woodfordleigh to Tyndale	1895	48 10 0	892 12 3
Wyrallah to Rous.....	1888	580 0 0	9,791 15 4
Webster's to Flood's.....	1896	75 11 6	180 19 6
Wee Talaba, <i>via</i> Angledool, to Goodooga.....	1893	28 3 0	418 5 7
Wardell-Rous Road to Alstonville.....	1891	66 18 0	1,049 7 10
Wardell to Rous	1895	517 13 1	2,094 1 4
Wardell-Rous Road to "Old Camp" (Old Camp to McVicar's).....	1897	86 9 8	110 0 0
Wardell to Alley's Hill (Bagot's)	"	"	75 13 6
Wardell to Emigrant Creek Bridge	1890	136 14 4	1,631 6 6
Wardell to the Beach	1891	80 0 0	645 5 2
Woodburn to Bungawalbyn Ferry.....	1892	204 19 4	1,544 15 5
Woodburn-Bungawalbyn Road to Flood Reserve	1898	33 16 0	33 16 0
Woodburn to Evan's River Heads.....	1895	65 1 0	176 13 9
Woodburn to Tucki	1891	267 18 10	3,586 18 0
Woodburn to Boundary Creek at Blanche's.....	1896	387 11 3	1,009 1 3
Woodburn to Dungarubba	1891	188 11 8	1,699 18 7
Woodburn to the Gap (Iluka Road)	1893	36 8 7	569 10 10
Waterview to Ramornie	1891	92 19 5	457 0 10
Woolla Woolla Roads	1895	44 0 0	201 0 0
Whiteman's Creamery to Whiteman's Bridge	1896	58 9 0	132 1 8
Warialda-Moree Road, at Ryan's, to Knagg's C. P.	1898	19 19 0	19 19 0
Warialda to Bogamildil	1894	262 19 0	1,063 10 7
Warialda towards Inverell	1896	861 7 10	2,555 1 1
Warialda to Yetman	1876	241 3 6	9,843 16 9
Warialda to Gunyerwarilda.....	1879	284 8 8	6,162 1 5
Warialda, <i>via</i> Gragin, to Reedy Creek	1886	64 16 0	1,182 19 2
Warialda, <i>via</i> Ezzie's, to Moree Road	1876	116 10 8	25,723 6 5
Wilson's Downfall to Rivertree	1887	94 14 9	5,010 13 0
Wilson's to Sneath's	1896	37 1 8	194 0 0
Wellingrove to Strathbogie	1889	93 11 4	2,210 1 3
Williams' to Taylor's Arm	1897	220 14 0	307 17 0
Wandsworth to "Old Ben Lomond Inn"	1888	246 14 4	1,577 10 9
Wallangra to Strathbogie	1894	246 7 10	853 12 0
Wallangra to Boggabilla	1895	213 13 2	1,733 8 3
Walgett to Combogolong	1892	99 16 9	830 19 4
Walgett to Goondabloui	1896	179 14 9	774 12 3
Wee Waa to Burren Station	1894	100 0 0	530 0 7
Walgett, <i>via</i> the Springs to Brewarrina, Goodooga Road	1896	92 18 0	460 6 8
Walgett, <i>via</i> Goodooga, to Brenda.....	1893	247 1 6	2,395 18 7
Walgett to Corinda	1896	100 4 0	368 7 1
Walgett to Boorooma	1894	141 1 6	551 3 6
Walcha Railway Station to Walcha—Bendemere Road	1898	30 0 0	30 0 0
Walcha Road to Walcha	1894	244 2 3	1,437 12 11
Walcha Road to Nangla.....	1896	196 8 9	543 6 8
Walcha towards Emu Creek	1893	130 10 1	382 8 10
Walcha to Eulo.....	1892	209 2 0	1,240 12 8
Walcha to Nowendoc	1879	414 16 4	6,138 13 3
Walcha to Uralla	1877	134 7 7	5,138 1 7
Walcha towards Port Macquarie	1872	379 17 9	28,400 12 6
Walcha to Aberbaldie	1892	90 0 0	507 6 5
Wingham, up Cedar Party Creek	1882	207 18 8	3,139 15 1
Wingham and Nowendoc Road to Karaak Flat	1884	67 4 6	785 15 2
Wingham, <i>via</i> Brimbin, to Lansdown	1885	15 14 0	823 6 7
Wingham to Nowendoc	1883	960 16 10	19,206 10 6
Wingham, <i>via</i> Ashlea, to Kelvin Grove	1876	361 13 1	4,302 6 7
Wingham, <i>via</i> Bungay, to Bo Bo Creek	1895	48 0 0	182 7 0
Wilson's River, <i>via</i> Bar Scrub, to Walcha Road	1877	159 11 9	3,788 16 7
Wauchope to Beechwood.....	1890	51 4 2	621 15 4
Wauchope to Heron's Creek	1892	130 0 0	2,124 2 11
Wye to Swansee	1895	249 10 0	1,195 13 5
Wyong, <i>via</i> Tuggerah, to Water Reserve	1892	58 18 4	945 15 0
Wyong, <i>via</i> Jilliby and Mandalong, to Morrisett.....	1895	822 18 2	2,361 12 8

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1898.
		£ s. d.	£ s. d.
Woodbury's to Yarramalong	1896	870 9 4	1,589 3 11
Wyong to Allison's	"	100 0 0	394 19 10
Warkworth to Putty	1879	758 19 0	12,936 7 0
Wollombi to Cessnock	1893	600 0 0	4,483 19 2
Woy Woy to Blackwall	1894	45 0 0	292 6 1
Wollombi Road to Howe's Valley	1896	142 10 2	288 5 11
Wollombi up Yango Creek	1892	120 0 0	888 0 4
Wollombi up Narone Creek	1896	23 6 9	74 13 1
Wiseman's Ferry Road at Best's towards Kenthurst	1898	10 0 0	10 0 0
Wiseman's Ferry to Mouth Mangrove Creek	1896	17 8 0	247 15 11
Wallsend to Gosford Road	1878	439 9 2	12,758 3 8
Wallsend to Sandgate	1884	55 0 2	1,629 13 0
Wallsend to Lake Macquarie	"	120 12 10	1,026 3 6
West Maitland to Cemetery	1898	40 12 0	40 12 0
Wright's Hill to Deep Creek Bridge	1897	125 16 7	136 14 7
West Maitland, via Dunmore, to Paterson	1883	294 1 6	4,807 17 9
West Maitland to Mulbring	1894	389 13 5	822 13 5
Whittingham to Broke	1896	42 3 0	261 10 1
Waratah to Minmi Road	1882	484 9 8	15,557 18 9
Waratah-Maitland Road to Railway at High Level Bridge	1898	16 12 0	16 12 0
Woodton towards Quirindi	1896	50 0 0	141 15 9
Wallabadah to Nundle and Swamp Oak Creek	1882	179 17 9	6,842 14 8
Wallabadah Station towards Temi	1897	"	18 10 0
Woolomin, up Duncan's Creek	1898	4 16 7	4 16 7
Woolomin to Cadells	1892	29 2 0	176 8 7
Woolomin to Crawley's	1898	44 8 0	44 8 0
Werris Creek Gap to Railway	1892	24 3 1	164 8 8
Waterfall to Otford Hill	1890	294 15 11	2,301 17 4
Wollongong, via Mt. Kiera, to 13-mile peg	1895	32 0 6	88 4 9
Wheeo towards Crookwell	1884	123 6 7	4,827 6 0
Wheeo to Binda	1877	126 0 0	2,680 7 11
Wheeo to Reid's Flat	1896	"	66 12 1
Wheeo to Gunning	1888	61 6 0	1,733 2 0
Wes'on Road, Balmain	1898	640 0 0	640 0 0
Wallace's Gap, via Ballalaba, to Oranmere	1875	123 0 8	2,166 14 1
Waroo, via Boambolo, to Cavan Gap	1891	157 11 6	983 9 11
Wyndham to Burrogate	1892	50 0 0	343 16 0
Woollabra to Gurley	1898	67 0 0	67 0 0
Wellesley, via Craigie, to the Border	1896	62 7 4	186 6 8
Wendowie, up east bank Gilmore Creek	1891	84 8 0	870 6 4
Wendowie School, up west bank Gilmore Creek	1894	33 15 0	317 11 4
Wagga Wagga and Albury Road, via Yamba Station, to Jingellie	1892	725 19 4	6,109 6 0
Wagga-Narrandera Road, at Currawarna, to Cox's Farm	1897	17 14 10	26 14 10
Wagga Wagga to Gillenbah	1892	276 6 1	3,444 15 5
Wagga Wagga to Gregadoo	1891	195 0 0	1,439 4 3
Wagga Wagga to Coolamon	1892	215 19 5	1,230 4 11
Wagga to Coolamon-Currawarna Road, approach to Houlaghan's Bridge	1897	18 2 3	62 13 6
Wagga Wagga to Wantabadgery	1892	117 5 0	1,149 12 10
Wagga Wagga to Cookardina	"	109 13 2	1,704 6 6
Wagga Wagga to The Rock	1893	163 4 4	780 4 0
Wagga Wagga to Kyamba	1881	632 18 2	13,456 6 10
Wagga Wagga to Narrandera	1864	191 9 7	16,668 7 11
Wagga Wagga, via Wallace and Harefield, to Junee	1892	77 9 10	674 0 9
Walla Walla to Henty	1898	36 13 4	36 13 4
Walla Walla to Walla Walla West Public School	1897	44 9 11	164 1 2
Walla Walla Railway Station, Road from	1898	27 12 0	27 12 0
Widdin Creek to Wollar	1894	133 13 0	359 6 9
Whitton to Pullitop Tank	1892	292 14 9	4,120 17 6
Wanganella to Yanco	1897	54 2 6	753 13 8
Westerdale's to Finley	1898	34 19 0	34 19 0
Wilgoa to Wandello	1896	"	80 0 0
Wallendbeen to Stockinbingal	1894	60 9 0	383 7 11
Welaregang to Tintaldra	"	"	189 13 3
Wentworth to South Australian Border	1885	40 0 0	1,490 17 0
Wentworth to Euston	1896	11 4 0	71 12 9
Walkom's towards Gorman's	1898	21 5 10	21 5 10
Wolumla to Yurammie	1895	70 12 0	223 19 0
Wolumla to Mount Mamsen	1898	100 0 0	100 0 0
Wentworth Falls to Burratorang	1895	97 14 6	1,626 3 6
Worboys to Spring Terrace	1896	46 9 0	136 16 6
West Portland to Comleroy Road	1888	103 10 0	1,023 6 9
Windsor, via Cornwallis, to Richmond	1896	94 19 10	266 9 2
Windsor to Bull Ridge	1895	206 15 8	707 14 9
Windsor to North Dural	1898	18 14 0	18 14 0
Windsor, via Sackville, to Wiseman's Ferry	1883	559 0 0	11,687 14 1
Windsor to Blacktown Road	1896	83 17 10	143 0 7
Windsor Road to Mulgrave Station	"	36 8 8	114 7 4
Wiseman's Ferry to Singleton Mill	1889	15 0 0	647 17 1
Wiseman's Ferry, via Leet's Vale and Loxton's, to Portland Ferry	1896	252 7 0	467 19 8
Windeyer to Queen's Pinch	1892	180 0 0	1,254 2 9
Wallerawang to Mudgee	1857	894 7 3	18,192 17 4
Wallerawang to Rydal	1893	99 10 5	553 12 3
Walli to Woodstock	1888	98 17 8	1,786 6 6
Wottamondara towards Cameron's	1898	16 14 2	16 14 2
Woodstock to Canowindra	1891	494 12 6	3,363 8 9

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

ROADS.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.
		£ s. d.	£ s. d.
Woodstock to Mt. McDonald	1883	411 18 6	7,008 13 6
Woodstock to Kangaroo Flat	1896	134 10 6	250 15 9
Wall's Junction to Havilah	1898	29 6 0	29 6 0
Wall's Junction to Botobolar	1884	88 12 7	1,853 12 4
Wall's Lane, Jones' Island	1898	50 0 0	50 0 0
Wellington to Ulundry	1894	178 19 0	1,314 10 6
Wellington to Goolma	1895	565 3 8	2,151 19 8
Wellington-Goolma Road, at Spicer's Creek, to the Rock	1897	129 18 0	164 18 0
Wellington to Woolamon	1890	292 10 8	2,679 16 3
Wellington towards Cobborah	1882	663 19 5	7,493 2 2
Wellington towards Burrendong	1880	129 19 0	6,018 14 11
Wellington to Ponto	1891	208 15 7	2,010 13 4
Wilcannia to Jacob's Well	1897	35 8 0	54 8 0
Wilcannia to Tilpa	1898	79 10 0	79 10 0
Wilcannia to Wentworth	1888	196 3 5	3,427 2 4
Wilcannia to Wompah	1892	314 17 7	3,868 17 8
Wilcannia to Cockburn	1890	227 5 4	3,820 11 4
Wilberforce to Pitt Town	1895	75 8 6	278 19 4
Wilberforce to Howe's Creek	1898	171 3 8	171 3 8
Wilcannia to Wanaaring	1895	54 2 8	217 0 2
Wall's to Bowning	"	18 19 10	68 5 4
Warne Road to Kerr's Creek	1896	52 18 0	161 14 5
Wybong to Brogheda Road	"	29 2 0	103 19 9
Woolabra, via Millie, to Meroe	1890	231 14 4	3,633 5 3
Wallerobba to German Bridge and Branch to Brookfield	1896	132 0 0	384 0 0
Wallerobba to Cox's Creek	"	29 0 0	85 0 0
Woolong to head of Sandy Creek	"	41 0 0	93 0 0
Waddell's Orchard, via Glendon, to Great North Road, near Belford	"	64 0 0	195 0 0
Woodville Road to Fairfield Station	1896	45 0 0	127 18 5
Woodville Road to Guildford Railway Station	1898	13 0 0	13 0 0
Wahroongah Railway Gates to Stewart-street, Wahroongah	1897	145 2 9	155 2 9
Winburra Road, Harbord Estate	1898	177 16 7	177 16 7
Williamtown-Medowie Road, at Wilkinson's, to Fisher's	"	11 5 0	11 5 0
Williamtown, via Medowie, to Stroud Road	1896	157 16 6	350 18 9
Woolgoolga to Corinda Mines	1898	35 0 0	35 0 0
Windellama to Mayfield	1897	"	58 19 2
Williamtown to Sandhills	"	"	46 5 9
Wyalong to Ungarie	"	145 10 0	578 11 0
West Wyalong to Kildary Station	1898	171 10 0	171 10 0
West Wyalong to Willandry	1897	91 7 6	243 11 2
West Wyalong, Yalgogrin	"	52 14 4	229 6 4
Wyalong to Marsden	"	22 14 6	153 9 6
Wyalong to West Wyalong	1898	371 19 1	371 19 1
Warren towards Gin Gin Bridge	1897	13 10 0	110 0 0
Whittaker's Corner to the Olives	1898	101 14 0	101 14 0
Yanabong Bridge to East Maitland Road	1894	260 0 0	680 0 0
Yarrowford to Ranger's Valley	1881	78 3 0	2,483 17 4
Yarraman to Black Creek	1891	19 8 0	285 3 9
Yarramalong to Mangrove Creek	1896	56 18 9	238 17 11
Yarramalong to Olney Reserve	"	159 7 0	305 6 11
Young Wallsend to Minmi	1890	213 2 9	2,461 10 4
Yankee Siding towards Barellan	1898	142 1 6	142 1 6
Yass to Fairfield Bridge	1895	229 1 8	6,588 6 5
Yass, via Wee Jasper, to Tumut	1892	681 9 3	3,986 11 2
Yass, via Jerrawa, to Dalton	1894	113 5 2	839 1 8
Yass to Woolgarlo	1875	196 9 3	4,545 8 7
Yass to Dalton and Burrows Road	1890	36 8 0	632 7 10
Yass to Black Range	1885	39 19 8	369 0 0
Yass to Wargella	1896	9 2 0	116 12 0
Yass to Upper Gundaroo	1882	298 1 3	10,179 14 1
Yass to Gundaroo Road to Murrumbateman—Ginninderra Road	1896	30 4 10	118 3 10
Yammatree to Brawlin	1898	15 0 0	15 0 0
Young to Koorawatha	1892	196 3 5	642 18 9
Young-Koorawatha Road via Jasprizza's, to Young, Bumbaldry Road	1898	92 12 11	92 12 11
Young to Douglas	1880	240 0 0	2,288 11 10
Young, via Wombat, to Murrumburrah	1889	197 6 2	2,491 1 5
Young, via Kingsvale, to Murrumburrah	1892	99 14 10	2,768 9 5
Young to Bumbaldry	"	810 17 5	1,704 19 0
Young to Burrows	1876	400 0 0	14,364 15 5
Young to Temora	1883	299 19 11	9,619 18 8
Young to Grenfell	1888	566 4 10	8,942 3 0
Young-Grenfell Road to Meat Chilling Works	1898	16 7 9	16 7 9
Young Butter Factory to Stony Creek	1897	141 17 4	252 11 4
Yerong Station to Urangeline Post Office	1888	373 3 3	3,639 13 7
Yarramundi to Wilberforce	1883	239 17 1	2,780 12 9
Yarramundi to Richmond	1896	108 3 4	274 19 5
Yalgogrin to Mirrool Creek	1895	330 0 0	730 0 0
Yowie to Junction of Yowie and Wadbilliga River	1898	50 0 0	50 0 0
STREETS.			
Beecroft, Copeland-street	1896	30 0 0	215 8 5
Beecroft, Hanna-street	1898	5 0 0	5 0 0
Beecroft, Malton-street	"	25 0 0	25 0 0
Brewarrina, Young-street	"	2 0 10	2 0 10
Bulladellah, Richmond-street	"	47 4 0	47 4 0
Bundarra, Oliver-street	"	7 17 6	7 17 6

RETURN OF EXPENDITURE ON PUBLIC WORKS—*continued.*

STREETS.		When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1898.
			£ s. d.	£ s. d.
Bungendore, Streets of.....		1897	26 1 9	44 15 6
Centennial Park, James-street		1898	26 14 8	26 14 8
Centennial Park, Sutherland-street		"	91 5 5	91 5 5
Dubbo, Trangie-street		"	169 8 0	169 8 0
East Carlingford, Cambridge-street		"	6 6 9	6 6 9
East Carlingford, Chester-street.....		"	15 0 0	15 0 0
East Carlingford, Stanley-street.....		"	5 0 0	5 0 0
Howlong, Sturt-street		"	40 12 0	40 12 0
Laurence, High-street		"	17 12 0	17 12 0
Millthorpe, Elliot-street		"	66 3 4	66 3 4
Pymble, Station-street		"	177 15 10	177 15 10
Pymont, Union-street.....		"	85 6 0	85 6 0
Rookwood, East-street.....		"	30 0 0	30 0 0
Rookwood, Joseph-street		"	70 0 0	70 0 0
San Souci, Endeavor-street.....		"	30 0 0	30 0 0
St. Ives, Horrace and Stanley Streets		1897	20 0 0	59 7 6
White Cliffs, Streets of		"	156 10 0	216 15 0
Wyalong, Slec-street.....		1898	9 6 0	9 6 0

CONSTRUCTION AND REPAIR OF BRIDGES.		When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
			£ s. d.		
Albury District		1898	228 5 11		
Armidale		"	270 15 0		
Ballina		"	265 12 8		
Bathurst		"	278 9 0		
Bega		"	397 17 1		
Bellingen		"	160 2 0		
Blayney		"	107 9 10		
Bombala		"	315 2 5		
Bourke		"	895 0 1		
Braidwood		"	4 8 7		
Campbelltown		"	37 10 11		
Casino		"	126 5 9		
Cooma		"	152 7 8		
Coonamble		"	13 8 0		
Coonabarabran		"	91 19 11		
Cootamundra		"	143 5 1		
Cowra		"	688 2 6		
Crookwell		"	154 3 4		
Cudgellico		"			
Deniliquin		"	70 18 0		
Dubbo		"	482 6 2		
Forbes		"	247 12 5		
Glen Innes		"	252 17 2		
Gosford		"	87 1 5		
Goulburn		"	611 1 5		
Grafton		"	723 13 3		
Hay		"	1,518 1 0		
Inverell		"	70 18 7		
Kempsey		"	403 1 4		
Lithgow		"	265 17 1		
Lismore		"	540 18 6		
Maclean		"	100 2 3		
Maitland		"	1,735 9 9		
Metropolitan		"	373 17 0		
Moree		"	764 5 3		
Moruya		"	587 0 1		
Moss Vale		"	375 1 0		
Mudgee		"	419 7 9		
Murwillumbah		"	184 11 8		
Muswellbrook		"	461 0 5		
Newcastle		"	623 1 4		
Nowra		"	448 6 8		
Orange		"	158 10 0		
Parramatta		"	297 8 2		
Port Macquarie		"	102 3 5		
Queanbeyan		"	84 13 2		
Quirindi		"	152 5 7		
Richmond		"	122 17 0		
Stroud		"	65 14 3		
Tamworth		"	334 19 8		
Taree		"	376 11 5		
Tenterfield		"	208 17 0		
Tumut		"	293 15 1		
Tumbarumba		"	441 7 2		
Wagga Wagga		"	146 0 8		
Walgett		"	344 16 6		
Warialda		"	648 19 8		
Wilcannia		"	217 8 8		
Wollombi		"	84 2 0		
Yass		"	187 3 6		
Young		"	1,033 8 2		

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

BRIDGES.	When commenced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
		£ s. d.		£ s. d.
Arnold's.....	1897	637 17 0	.....	774 9 10
Anvil Creek	1898	16 19 0	.....	16 19 0
Allen's Creek	"	489 12 5	.....	489 12 5
Ansteys Creek	"	217 10 10	.....	217 10 10
Albury-street, Murrumburrah	"	1,267 8 1	.....	1,267 8 1
Burri Lake (Mornya).....	1897	13 2 6	.....	186 4 4
Borambil Creek and approaches.....	"	26 7 7	.....	368 18 3
Barraba over Manilla River	"	47 7 9	.....	49 0 4
Big Hill Flat.....	"	71 9 10	.....	133 7 10
Bendemeer	1898	31 5 5	.....	31 5 5
Brogo River, in approach to	"	393 11 10	.....	393 11 10
Blackbird Creek	"	250 3 10	.....	250 3 10
Bargo River, Main South Road.....	1896	31 0 0	.....	1,487 3 6
Bega River at Bega	1897	3,108 9 3	.....	4,724 3 9
Bluff River—Road Glen Innes to Tenterfield.....	"	274 15 9	.....	1,461 6 11
Bong Bong Creek.....	"	481 3 0	.....	581 3 0
Burton's Creek	1898	421 14 11	.....	421 14 11
Byewash, Paroo River at Wanaaring	"	2,395 19 5	.....	2,395 19 5
Burrill Creek—Road Burrill Creek to Kimbriki.....	"	503 13 4	.....	503 13 4
Cockwhy Creek	"	319 0 10	.....	319 0 10
Crooked Creek	"	335 17 1	.....	335 17 1
Cunningham's Creek	"	10 8 7	.....	10 8 7
Chapel Flat	1897	47 14 0	.....	91 14 0
Charcoal Creek, Unanderra	"	73 17 9	.....	224 17 9
Commissioner's Creek	1898	343 18 6	.....	343 18 6
Cochrane's Creek	"	85 5 9	.....	85 5 9
Camden Haven, at Kendall.....	1897	1,048 18 1	.....	1,102 1 10
Collin's Creek	1898	158 1 9	.....	158 1 9
Cabramatta Creek	"	238 6 4	.....	238 6 4
Cooma Creek, at Bunyan	"	496 3 8	.....	496 3 8
Cuttagee Creek.....	"	482 12 8	.....	482 12 8
Denman	1897	3,082 1 4	.....	3,797 12 2
Deep Creek, at Edgar's (Oberon to Caves Road)	"	361 9 0	.....	431 9 0
Dowes Gully	1898	265 4 7	.....	265 4 7
Dundoo Creek	"	19 19 11	.....	19 19 11
Dignam's Creek	"	5 0 0	.....	5 0 0
Douglas Park Crossing—Footbridge	"	19 17 0	.....	19 17 0
Deep Creek (Bega to Nimitybelle)	"	436 8 5	.....	4 6 8 5
Deep Creek and Jackson's Waterholes.....	"	461 9 7	.....	461 9 7
Fifty Mile, at Wards	"	89 11 6	.....	89 11 6
Forty-three Mile Creek	"	69 16 0	.....	69 16 0
Frazer's Creek	"	200 18 9	.....	2 0 18 9
Fortis Creek (Grebert's to Solferino)	1897	198 19 5	.....	1,124 3 3
Gilmore Creek	1898	353 17 7	.....	353 17 7
George's Creek (Kempsey to Jeogla Mountain)	"	739 7 7	.....	739 7 7
Hunter River, at Morpeth	1895	949 17 2	.....	9,239 11 5
Hunter River, at Glendon	1897	1,878 18 7	.....	1,882 2 7
Jembaicumbene	"	171 0 10	.....	233 16 10
Jandra Creek	1898	458 1 11	.....	458 1 11
Killabakh Creek	"	185 0 0	.....	185 0 0
Kenmore	"	102 3 7	.....	102 3 7
Kangaroo River (Kangaroo Valley)	"	2 13 0	.....	2 13 0
Loddon River	"	6 0 0	.....	6 0 0
Leddy's Creek	"	152 3 9	.....	152 3 9
Lucke's Creek	"	98 12 5	.....	98 12 5
Lansdown River	"	86 17 6	.....	86 17 6
Lagoon, near Raynor's	"	88 3 0	.....	88 3 0
Lagoon Creek	1897	607 1 1	.....	938 2 7
Lower Creek	"	765 15 9	.....	2,372 5 9
Mulwala	1898	90 14 9	.....	90 14 9
Morton's Creek.....	"	302 19 1	.....	302 19 1
Mororo Creek	"	29 0 0	.....	29 0 0
Muggabah Creek	"	574 10 0	.....	574 10 0
Mount Terry (Main South Coast Road)	"	34 0 0	.....	34 0 0
Murray River, at Albury	1897	2,601 2 8	.....	7,164 7 10
Nymboida	1898	217 12 4	.....	217 12 4
North Bourke approach	1896	249 11 5	.....	357 5 1
Narromine.....	1898	61 5 5	.....	61 5 5
Nattai Creek	"	883 7 3	.....	883 7 3
North Bourke	1897	209 10 10	.....	2,000 0 0
Ournie Glen	1898	169 15 2	.....	169 15 2
Oakey Creek.....	"	485 0 0	.....	485 0 0
Pejar Creek	1897	21 14 11	.....	107 11 1
Page's River, at Blandford.....	1896	170 0 11	.....	882 14 4
Parnell's Creek	1898	179 16 4	.....	179 16 4
Puckawidgee Creek	"	214 14 6	.....	214 14 6
Richter's Mill Creek	"	185 5 5	.....	185 5 5
Richmond	1897	53 10 3	.....	86 6 3
Reedy Creek.....	1898	53 0 0	.....	53 0 0
Rocky Creek	1897	74 19 2	.....	74 19 2
Richmond River at New Park	1898	286 12 6	.....	286 12 6
Rocky Creek (Grebert's to Solferino).....	1897	138 18 11	.....	541 18 11
" (Coast Road to Perrett's)	"	506 12 0	.....	541 2 0
Snake's Creek, raising	1898	88 12 2	.....	88 12 2
Sullivan's Creek	1897	137 2 11	.....	237 8 10

RETURN OF EXPENDITURE ON PUBLIC WORKS—continued.

BRIDGES.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
		£ s. d.	£ s. d.	£ s. d.
Sandy Creek	1898	6 14 3	.....	6 14 3
Slatey Creek	"	292 5 6	.....	292 5 6
Stockyard Creek	"	1 6 10	.....	1 6 10
Saucy Creek	"	978 8 2	.....	978 8 2
Stoney Creek, at Coila	"	644 15 3	.....	644 15 3
Towadgi Creek	"	255 13 0	.....	255 13 0
Taylor's Creek (No. 2)	1897	349 11 11	.....	417 11 11
Urana Creek (Deniliquin to Urana)	1898	753 5 5	.....	753 5 5
Victoria Bridge—Re-decking	"	66 13 3	.....	66 13 3
Wollondilly River	1897	22 10 1	.....	55 1 11
Wambo Creek	1898	369 19 2	.....	369 19 2
Wardell Road, over Cook's River	"	884 1 2	.....	884 1 2
Wollomombi River	1897	593 17 2	.....	1,635 0 6
Weean Creek	"	19 11 2	.....	816 13 0
Willandra Creek	1898	775 11 6	.....	775 11 6
Wheaney Creek	1897	279 3 7	.....	367 1 1
Yellow Creek	1898	157 14 2	.....	157 14 2
Bow	"	59 16 4	59 16 4	.....
Brooks	"	169 9 1	169 9 1	.....
Bishop's Creek	"	85 7 4	85 7 4	.....
Bogan River, at Nyngan	"	114 1 6	114 1 6	.....
Bean Tree	"	155 11 1	155 11 1	.....
Belabula River, at Canowindra	"	2 0 0	2 0 0	.....
Branch Creek	"	181 16 6	181 16 6	.....
Bangalee Creek	"	293 0 0	293 0 0	.....
Botany Road—Culverts	"	10 2 9	10 2 9	.....
Beccroft and Carlingford, between	"	123 17 5	123 17 5	.....
Burrangong Creek	"	280 11 4	280 11 4	.....
Billabong Creek, Conargo	"	72 10 0	72 10 0	.....
Byron Creek (Possum Shoot to Brooklett)	1896	105 4 11	417 3 0	.....
Cameron's Creek	1898	6 0 0	6 0 0	.....
Coolac, Jones' Creek	"	13 9 6	13 9 6	.....
Carragatell Creek	"	560 0 0	560 0 0	.....
Cockle Creek	1897	1,184 16 6	1,247 8 10	.....
Cox River	"	886 0 3	1,262 5 11	.....
Cudgegong River, at Rylstone	1898	863 8 3	863 8 3	.....
Chandler River	"	867 14 0	867 14 0	.....
Cowal, at Trangie	"	513 5 5	513 5 5	.....
Deep Creek (Bombala to Nimitybelle)	"	215 15 11	215 15 11	.....
Dyraaba, or Dignam Creek	"	9 16 0	9 16 0	.....
Dinsey's Creek	"	204 6 3	204 6 3	.....
Denman—Bank Protection	"	142 4 8	142 4 8	.....
Dalwood Creek	"	0 15 11	0 15 11	.....
Dunmore, Paterson River	1896	7,156 2 6	7,519 16 1	.....
Dingo Creek, at Cameron's Crossing	1898	0 14 6	0 14 6	.....
Floodvale—Widening	"	30 8 0	30 8 0	.....
Glebe Island—Maintenance	"	267 10 2	267 10 2	.....
Greg Greg	"	190 4 0	190 4 0	.....
Goolma Creek	"	44 0 0	44 0 0	.....
George's River, Liverpool	1897	22 14 4	23 1 10	.....
Goobragandra, near Lac-ma-lac	"	21 8 0	25 1 2	.....
Goulburn Railway Station Footbridge	1898	387 9 6	387 9 6	.....
Gundagai	1896	2,858 8 10	14,541 6 11	.....
Hamilton's Gully Creek	1898	20 12 11	20 12 11	.....
Iron Cove—Maintenance	"	747 11 1	747 11 1	.....
Inverloch and Marsden	"	243 15 9	243 15 9	.....
Jones' Creek, at Gundagai	"	124 10 1	124 10 1	.....
Kempsey, Macleay River	1896	12,080 0 8	14,592 1 6	.....
Katoomba, over Railway Line	1898	12 8 1	12 8 1	.....
Kenilworth	"	15 0 0	15 0 0	.....
Little Bumble Creek	"	114 0 0	114 0 0	.....
Lane Cove—Maintenance	"	82 19 5	82 19 5	.....
Lane Cove, at Head of Navigation	"	6 14 6	6 14 6	.....
Mehi River, at Moree	"	2,154 3 4	2,154 3 4	.....
Moruya	"	426 15 7	426 15 7	.....
Mongarlowe	"	53 11 10	53 11 10	.....
Moorhead's Creek	"	199 9 0	199 9 0	.....
Nepean River, at Camden	"	2 10 0	2 10 0	.....
Old School-house Gully	"	98 7 0	98 7 0	.....
Paterson River, at Hinton	"	12 3 0	12 3 0	.....
Plumbago Creek	"	672 13 9	672 13 9	.....
Prout's, at Canterbury	"	439 5 4	439 5 4	.....
Pymont—Maintenance	"	1,711 17 7	1,711 17 7	.....
Parramatta—Maintenance	"	277 6 3	277 6 3	.....
Queanbeyan River, at Queanbeyan	1896	3,108 4 9	3,146 15 6	.....
Ryan's Creek—Widening	1898	65 11 11	65 11 11	.....
Stonequarry Creek in Picton	1897	1,739 7 1	1,879 13 9	.....
Store Account—Bridges	1898	849 11 5	849 11 5	.....
" Timber	"	277 7 1	277 7 1	.....
Swan Hill—Maintenance	"	113 4 7	113 4 7	.....
Stonequarry Creek	"	0 2 6	0 2 6	.....
Sawpit Flat (Spring Creek)	"	85 19 9	85 19 9	.....
Sawpit Gully	"	137 2 9	137 2 9	.....

BRIDGES.	When Com- menced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If Unfinished, amount of Expenditure to 30 June, 1899.	If Finished, actual amount of Expenditure.
		£ s. d.	£ s. d.	£ s. d.
Styx River.....	1897	679 1 6	705 9 4	.....
Spring Creek (Gobarralong to Bongongo)	1898	82 11 1	82 11 1	.....
Tweed River, Murwillumbah	"	1,224 16 8	1,224 16 8	.....
Tumut River, at Brungle	"	1,189 3 1	1,189 3 1	.....
Tarraganda Lane	1897	98 5 2	150 7 0	.....
Tapitella Creek	"	248 0 0	525 0 0	.....
Tia River	1898	6 0 0	6 0 0	.....
Terry's Creek	"	1 5 0	1 5 0	.....
Throsby Creek	"	105 0 0	105 0 0	.....
Tannery Creek, Culvert	"	83 1 9	83 1 9	.....
Wollundilly River, at Rossi Crossing	1896	2,241 3 5	2,242 11 3	.....
Whiskey Creek	1897	299 6 3	393 6 3	.....
Warrana Creek—Fencing	1898	50 0 0	50 0 0	.....
Waterworks at Botany	"	40 0 7	40 0 7	.....
Warkworth	"	84 19 4	84 19 4	.....
White Rocks, Macquarie Pass—Footbridge.....	"	6 10 0	6 10 0	.....
CULVERTS.				
Fishburn Road	"	10 0 0	.....	.....
Howard's Lane.....	"	79 16 0	.....	.....
Kissing Point Road, Turramurra	"	5 0 0	.....	.....
Lane Cove Road, Turramurra	"	3 0 0	.....	.....
Morpeth to Largs.....	"	29 14 3	.....	.....
Pembroke and Cambridge Roads, Carlingford.....	"	15 10 5	.....	.....
Stewart's River, Upper Camden Haven	"	20 0 0	.....	.....
Wyong Station—Drainage	"	82 10 9	.....	.....
CAUSEWAY.				
Warrego River Crossing at Mungunyah	"	112 18 0	.....	.....
PUNTS.				
Expenses of Punts and Ferries generally.....	"	12,839 0 10	.....	.....
New Hand Ferry Punt, Coraki (Richmond River), Adams-st.	"	10 0 0	.....	403 14 0
New Steam-punt, George's River	1897	129 9 4	.....	3,040 19 4
Ryde Punt Landings and Approach	"	98 2 6	.....	729 14 9
SUNDRIES.				
Apsley River—Improvements	1898	570 0 0	.....	.....
Adams v. Young—Expenses incurred in Privy Council Appeal	"	195 18 11	.....	.....
Brown v. Young—Verdict, Interest, and Costs <i>re</i> accident in Bergalia Creek Bridge.	"	2,352 18 6	.....	.....
Compensation to John Jackson	"	80 0 0	.....	.....
Extension of Minor Roads into Municipalities, as per State- ment attached.	"	8,734 7 6	.....	.....
Government Stores, Centennial Park	"	3 3 5	.....	.....
Gratuity to Richard Tierney	"	180 0 0	.....	.....
Gratuity to James Gallagher	"	97 0 0	.....	.....
Incidental Expenses.....	"	1,118 10 6	.....	.....
New Steam Launches for Clarence and Hunter Rivers	"	1,199 0 0	.....	.....
Road Rollers.....	"	550 0 0	.....	.....
Re-laying Wood Blocks, King-street, Newtown	1897	6,431 16 11	.....	8,266 1 2
Salaries, Equipment, Travelling Allowances, &c.....	1898	59,829 12 2	.....	.....
Services for other Departments	"	1,500 18 9	.....	.....
Waller v. Young—Expenses incurred in Privy Council Appeal	"	204 7 10	.....	.....
Total .....	.....	645,569 5 3	7,836,064 8 8	80,181 2 0

SUMMARY OF EXPENDITURE FROM 1 JULY, 1898, TO 30 JUNE, 1899:—

	£ s. d.
Loans.....	79,059 1 7
Consolidated Revenue	565,009 4 11
Services for other Departments	1,500 18 9
Total.....	645,569 5 3

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 .....		.....	.....	.....
1859 .....		.....	.....	.....
1860	46,621 16 10	.....	.....	46,621 16 10
1861	114,585 18 5	.....	.....	114,585 18 5
1862	199,208 6 10	.....	.....	199,208 6 10
1863	85,641 4 0	50,000 0 0	.....	135,641 4 0
1864	154,497 7 4	70,000 0 0	.....	224,497 7 4
1865	185,248 3 11	70,000 0 0	.....	255,248 3 11
1866	123,867 4 0	30,822 0 0	.....	154,689 4 0
1867	109,075 12 8	39,731 0 0	.....	148,806 12 8
1868	147,750 14 6	38,667 0 0	.....	186,417 14 6
1869	140,086 10 4	36,923 0 0	.....	177,009 10 4
1870	152,323 5 0	40,802 0 0	.....	193,125 5 0
1871	141,863 2 4	40,336 0 0	.....	182,199 2 4
1872	182,726 11 0	40,501 0 0	.....	223,227 11 0
1873	144,257 5 6	34,728 0 0	.....	178,985 5 6
1874	247,858 9 0	36,098 0 0	.....	283,956 9 0
1875	257,366 5 8	41,524 0 0	.....	298,890 5 8
1876	356,002 10 0	45,564 0 0	.....	401,566 10 0
1877	366,802 14 0	37,153 0 0	.....	403,955 14 0
1878	413,625 4 8	51,550 0 0	.....	465,175 4 8
1879	497,032 17 5	24,280 0 0	.....	521,312 17 5
1880	649,773 11 5	25,428 0 0	.....	675,201 11 5
1881	614,708 11 3	28,800 0 0	.....	643,508 11 3
1882	484,567 2 8	23,186 0 0	.....	507,753 2 8
1883	577,212 4 1	24,722 0 0	.....	601,934 4 1
1884	613,847 1 6	24,938 0 0	.....	638,785 1 6
1885	750,584 1 10	27,722 0 0	.....	778,306 1 10
1886	800,962 5 11	24,404 0 0	.....	825,366 5 11
1887	628,379 4 5	28,414 0 4	.....	656,793 4 9
1888	721,993 16 6	45,433 1 3	.....	767,426 17 9
1889	663,928 14 10	31,593 0 0	.....	695,431 14 10
1890	632,397 10 11	31,361 0 0	.....	663,758 10 11
1891	770,808 18 10	34,500 0 0	.....	805,308 18 10
1892	965,687 14 11	31,990 0 0	.....	997,677 14 11
1893	859,027 13 11	30,605 0 0	.....	889,632 13 11
1894 to 30 June, 1895 (18 months)	676,233 1 8	30,330 0 0	.....	706,563 1 8
1895-6	800,620 2 9	30,034 0 0	.....	830,654 2 9
1896-7	729,544 15 10	19,285 0 0	27,570 11 11	776,400 7 9
1897-8	588,910 7 1	9,910 1 10	77,389 10 3	676,209 19 2
1898-9	587,690 17 9	10,600 17 10	17,805 19 8	616,097 15 3
Grand total	£ 17,899,406 6 8	1,250,555 7 11	143,537 15 3	19,293,499 9 10

* Approximate.

STATEMENT of Loans and Revenue Expenditure from year 1888.

Year.	Loans.	Revenue.	Services for other Departments.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1888	8,656 4 10	686,775 10 0	.....	695,431 14 10
1889	5,597 9 11	658,161 1 0	.....	663,758 10 11
1890	21,970 10 10	783,338 8 0	.....	805,308 18 10
1891	67,349 4 11	930,328 10 0	.....	997,677 14 11
1892	82,327 5 8	807,305 8 3	.....	889,632 13 11
1893	56,266 19 9	650,296 1 11	.....	706,563 1 8
1894 to 30 June, 1895 (18 months)	33,061 13 3	797,592 9 6	.....	830,654 2 9
1895-6	38,575 9 2	737,824 18 7	.....	776,400 7 9
1896-7	54,261 1 11	620,180 2 10	1,768 14 5	676,209 19 2
1897-8	60,567 17 8	554,956 16 4	573 1 3	616,097 15 3
1898-9	79,059 1 7	565,009 4 11	1,500 18 9	645,569 5 3
Grand total	£ 507,692 19 6	7,791,768 11 4	3,842 14 5	8,303,304 5 3

Sewerage Construction.

XII.

Report of the Engineer-in-Chief for Sewerage Construction for the Year ending 30 June, 1899.

Department of Public Works, Sewerage Construction Branch, Sydney, 30 August, 1899.

Sir,

I have the honor to submit the following report of the operations of this Branch during the year ending 30 June, 1899.

I have classified my report as follows:—

1. Transfer of Works to the Water and Sewerage Board.
2. High-level Sewerage.
3. Low-level Sewerage.
4. Stormwater Channels.
5. Drainage of Country Towns.
6. Detail Survey of Cities, Towns, and Suburbs.
7. Summary of Work Executed in the Drawing Office.

1. TRANSFER OF WORKS TO THE WATER AND SEWERAGE BOARD.

During the year the following works have been gazetted as completed and transferred to the Water and Sewerage Board, viz.,—

1. 3rd Division of the Northern Branch Western Suburbs Sewerage, commencing at the junction of Regent and Flood Streets, Leichhardt, and terminating in Glover-street, comprising $89\frac{1}{2}$ chains of 3 ft. 3 in. by 2 ft. 2 in. sewer, and 2 chains of cast-iron pipes 18 in. diameter.
2. Long Cove Creek sub-branch of the Main Northern Branch Sewer, commencing at Dover-street, Summer Hill, and crossing the suburban railway near Summer Hill Station, extends in a southerly direction to Long Cove Creek, thence, running parallel to that creek, terminates in Piggott-street, Petersham. It contains 10 chains of 3 ft. 6 in. by 2 ft. 4 in. concrete and brickwork sewer; $5\frac{1}{2}$ chains of 3 ft. 3 in. by 2 ft. 2 in. concrete sewer; 21 chains of 21 inch diameter "Monier" and stoneware pipes, including concrete curves; 7 chains of 16 inch diameter "Monier" and stoneware pipes, including concrete curves; and $4\frac{1}{2}$ chains of 12 inch stoneware pipes, including concrete curves.
3. Low-level Sewer, known as the Homebush Creek Branch, commencing at a point close to Allan and George Streets, Concord, and extending in a southerly direction across the Parramatta-road to the junction with existing stormwater channel close to the railway line.
4. Balmain South-eastern Slopes Branch of the Northern Main Sewer, commencing at Denison-street, Balmain, and extending in a north-easterly direction to Stephen-street, together with sub-branches at Weston and Victoria Streets, Reynolds-street, Rosser-street, Palmer-street, Curtis-road, Stephen-street, and Darling-street, comprising 182 chains of 3 ft. 3 in. by 2 ft. 2 in. sewer, and $11\frac{3}{4}$ chains of 9 inch pipe sewer.
5. The whole of the works connected with the sewerage of the low-lying areas of Double Bay, including all stoneware and cast-iron pipes, ejector stations, collecting chambers, shafts, manholes, lamp holes, flushing chambers, ventilating tubes, &c.; also all the land, buildings, machinery, storage battery, switchboards, electric motors, &c., connected with the air-compressing plant.
6. Euroka Creek Stormwater Channel, commencing in Lavender Crescent, North Sydney, at the existing stormwater channel under the railway embankment and extending in a north-easterly direction to a point about 1 chain from the centre of Riley-street, consisting of about 18 chains of 2 feet 6 inches diameter circular channel.
7. Careening Cove Stormwater Channel, commencing near the western building line of Denison-street, North Sydney, and extending in a north-westerly direction to Miller-street, a distance of about 5 chains. The work includes an alteration to existing channel in Miller-street for $1\frac{1}{2}$ chains, and the construction of a stormwater channel from the western side of Miller-street in a north-westerly direction to the centre of the footpath on the southern side of Berry-street, a distance of about 6 chains.

2. HIGH-LEVEL SEWERAGE.

Northern Branch Western Suburbs Sewerage.

The whole of the Main Northern Branch Sewer has been completed, commencing at the Illawarra-road, Marrickville, and extending northerly through Marrickville, Petersham, and Leichhardt, to Leichhardt Park on the eastern side of Long Cove. A branch leaves the main line at Frazer's-road, runs under the railway a little west of Lewisham Station, and is carried across Long Cove Creek on a steel aqueduct 280 feet in length, terminating in Sloane-street.

A sub-branch runs up the Long Cove Creek Valley as far as Piggott-street. Both these branches have been completed, and the latter length has been transferred to the Board.

Western

Western Branch Western Suburbs Sewerage.

The first, second, and third divisions of the Main Western Branch from Premier-street, Marrickville to Brand-street, Croydon, a distance of 5 miles 19 chains, have been completed.

The fourth division of this sewer which intercepts the sewage of Burwood, Strathfield, and Homebush, and parts of Ashfield and Concord, is now in course of construction. The total length of this division is $2\frac{3}{4}$ miles, a mile of which is in open trench, and the remainder in tunnel through shale formation.

Northern Main Sewer (Bondi Outlet).

Both branches of the Northern Main Sewer which drain respectively the north-western and the south-eastern slopes of the Municipality of Balmain have been completed during the year.

Waverley and Bondi Eastern Slopes.

Operations are well advanced in the construction of the sewer which intercepts the sewage from the seaward slopes of Waverley and Bondi. About $7\frac{1}{2}$ chains of the Bondi end which has been pushed on in advance of the remainder to allow of the reticulation of the area between Old South Head Road and Bondi-road being connected, have been completed.

About 10 chains of very bad ground have been met with near the Bondi end, and extra heavy timbering had to be employed to protect the sewer from the shifting sand, and in addition thereto, in a portion of the length, cast-iron pipes had to be substituted for the ordinary concrete sewer. With the exception of this portion the tunnels have been lined as far as Fletcher's Glen, and driving has been finished in the remaining tunnel within 2 chains of Bronte Creek.

*Randwick and Kensington.**1st Division.*

With the exception of shafts at 58·81 chains and 71·27 chains, the construction of this sewer from the present outfall at Coogee to the junction of Avoca and Howard Streets has been completed, and in about two months' time this section will be ready for carrying sewage from the Borough of Randwick.

2nd Division.

During the year drawings have been prepared and a contract let for an extension westerly to the Bunnerong-road, then following the centre of that road till the racecourse is reached. From this point the sewer skirts the western boundary of the racecourse and finishes in Alison-road, near the entrance gates.

It will provide an outlet for the sewage from part of the western slopes of Randwick, the Randwick racecourse buildings, and the Kensington township. The first 2 miles will be in tunnel through rock and sand, constructed of brick and concrete, varying in size from 4 ft. 6 in. by 3 ft. 6 in. to 3 ft. 3 in. by 2 ft. 2 in., the remaining quarter mile will consist of 21 and 18 in. pipes in open trench.

North Sydney Outfall Works.

The whole of the extensive works which have been under construction at Willoughby Bay, Middle Harbour, for some time past, to treat the sewage from the municipalities of North Sydney, South Willoughby, and Mosman, have been completed and are now in active operation. Briefly stated, the process in operation is as follows:—After the sewage has passed through screens to remove the larger floating bodies, which are afterwards burnt, it is treated with lime to facilitate precipitation of the suspended matters in the settling tanks.

After settlement has taken place the clearer liquid flows over a weir situated at and forming the ends of the tanks into an effluent channel which conveys it to filter beds, where it is purified by oxidation and bacterial agencies, and eventually finds its way to the tidal waters as a harmless effluent. The solids on the other hand are deposited as sludge in the tanks, which is drawn off and reduced to sludge-cake by forcing the liquid sludge through filter presses, and the cake is then burnt in destructor furnaces. Sufficient land was resumed to enable the tanks and other works to be erected. This, with the portion reclaimed for filtration, area amounts to about 13 acres. The reclaimed portion—about 8 acres—was filled in with sand and formed into eight filter beds. The treatment works, containing the straining chamber, air-compressing engines, filter presses, sludge receivers, and lime-mixing apparatus, are situated at the southern end of the resumption. Adjoining are five large settling tanks and a sludge reservoir. The open effluent channel conveying the effluent floated off from the tanks runs round two sides of the latter and passes along the sides of the filter beds, distributing its effluent through offset valves and troughing as required. A stormwater channel has been built to conduct the waters of Willoughby Falls Creek through the reclamation to the tidal waters.

The channel is also available as an overflow for the main sewage conduit near the tanks.

The filter beds are protected on the harbour frontage by a rubble dyke, and a jetty has been provided for the purposes of the works. The air-compressing plant consists of a Tangye horizontal steam engine (type "H"), which drives a horizontal double acting air compressor.

On 6 June last tests were made of the machinery. Indicator diagrams were taken of the compressor and engine under varying conditions, viz.:—(1) Full load, driving compressor, and lime mixer; (2) light load, engine driving lime-mixers and shafting only. In each case a constant pressure of 80 lb. per square inch was maintained in the receiver, and a steam pressure of 80 lb. per square inch on the boiler, with a consumption of half a ton of slack coal in ten hours.

The works will be shortly transferred to the Board.

Willoughby and Chatswood Sewerage.

A contract was let early in February last, and the construction of the works is now in active operation. The decision regarding the method of sewage treatment was held over pending the result of experiments to be made with septic tanks at Rookwood Asylum, which, as will be seen on reference to another paragraph, are now nearing completion. It has now been definitely decided to adopt the septic tank

tank system in connection with this scheme, and a site has been fixed at the eastern side of Warrane Road, near its intersection with the main creek which empties itself into the north arm of Sugarloaf Bay, Middle Harbour.

The tanks will be capable of dealing with the sewage from a population of 6,000, but are laid out in such a way that they can be enlarged from time to time as the population increases, until the maximum number of 26,780 has been reached.

The scheme now under consideration embraces a main outfall sewer and reticulation sewers.

Satisfactory progress has been made since the commencement of the works in February last, and up to the present time 3 miles 27 chains of pipes have been laid. It is confidently expected that the whole of the outfall sewer and reticulation will be completed by February next.

Neutral Bay and Mosman Sewerage.

The first division of this sewer has been let, and it is expected will be completed within three months.

Drawings have been prepared, and the contract let for the second division of this sewer. It consists of about 38 chains of 3 ft. 3 in. by 2 ft. 2 in. brick and concrete sewer, and 36 chains of 2 ft. 5 in. by 1 ft. 9 in. oviform "Monier" pipes. At the head of Shell Cove Creek an aqueduct will be constructed of 24-inch steel pipes and masonry abutments.

Drawings have been prepared and tenders will shortly be invited for the construction of an aqueduct to connect the second and third divisions of this sewer where it crosses the tidal waters at the head of Mosman's Bay.

Plans have been prepared, and the contract is ready for calling tenders for the third division of this sewer which will drain the remaining portion of the southern slope of the township of Mosman.

South Willoughby Sewerage.

Good progress has been made with the sewer which is now being constructed to convey the sewage of South Willoughby to the North Sydney Outfall Works. Two drives have been broken through, and tunnelling is proceeding in the other drives.

Owing to the very hard ground met with, the great depths of the shafts, and the unusual lengths of the drives amounting in some cases to $14\frac{1}{2}$ chains, several months must elapse before the works will be completed.

Middle Harbour Slopes.

Owing to the rapid increase of settlement on the Middle Harbour Slopes of North Sydney and Mosman it has been decided to push on with the intercepting sewer to drain this locality. Surveys have been completed, and plans are now being prepared for the first section which will discharge into the Willoughby outfall works, and extend thence in an easterly direction for about 30 chains.

It has been deemed inadvisable to construct the sewer beyond this point at present, as, owing to the sparse character of the settlement, the maximum rate of 1s. in the £ would not be sufficient to pay working expenses.

Manly Sewerage.

With the exception of a few extensions which have been rendered necessary to serve houses erected since the original design was prepared, and to lessen the cost of connection to ratepayers, the reticulation and other sewers have been completed and are now ready for carrying sewage.

Quarantine Ground Sewerage.

Plans have been prepared and a contract let for an outfall sewer discharging into the ocean at the "Old Man's Hat," Inner North Head, tunnelling under the hill which rises between the buildings and the ocean and connecting with branch pipe lines to intercept the sewage from the first and second-class quarters and the hospital grounds.

Rookwood Asylum Sewerage.

Up to the present time the earth-pan system has been in vogue at the asylum, the liquid sewage being carried through pipes to irrigation beds near the buildings. The increase in the number of inmates from 790 to 1,200, and the intended further increase to 1,500, have rendered improved sanitary arrangements necessary, and a proper system of pipe sewers is being constructed leading to "disposal" works situated in the asylum grounds, a little more than a quarter of a mile from the buildings, and in the direction of the Necropolis Railway Station. The works consist chiefly of a new form of tank, known as the "septic" tank, and coke filters, the process of treatment being as follows:—The sewage is first passed through wire screens and then into a silt pit where any heavy matter is deposited. From the silt pit the sewage flows under sunken weirs into the "septic" tank. Air and light are excluded from this tank and the sewage will travel so slowly as to remain in it twenty-four hours, during which period it is subjected to the attacks of micro-organisms whose growth is favoured by the condition in the tank.

The septic tanks are in duplicate, one only being used at a time. The effluent passes over a cascade of concrete steps and then into iron troughs and into a distributing pipe from which automatically-controlled valves connect with the three filter tanks.

In the filter tanks the destruction of all organic matter in the sewage takes place. On leaving the filters the purified effluent passes into a pipe drain running along East-street, and discharges into the Parramatta River.

These works are almost completed and are expected to be in operation by the end of August.

Pymont Sewerage.

The sewer is completed and will shortly be handed over to the Water and Sewerage Board.

Illawarra Suburbs.

The preparation of a gravitation scheme, including main and reticulation sewers, to discharge on to the sewage farm at Botany, is being proceeded with, and is now almost complete.

3. LOW-LEVEL SEWERAGE.

Special attention has again been given to the sewerage of the low-level areas.

Tenders were invited in England and the Colonies for the supply and erection of twenty electric motor pumping sets in duplicate, to lift the sewage to the gravitation sewers, and the tender of a local firm was accepted. Orders were also placed with a Colonial firm for the casting of the iron cylinders which will receive the pumping machinery in situations where the nature of the ground prevents the construction of a concrete chamber.

Drawings and specifications have been prepared for the necessary cables to convey the current from the Tramway Power Station at Darling Harbour and Rushcutter's Bay to the different pumping stations, also for the switch-boards, signalling apparatus, and other accessories.

The following localities have been dealt with during the year:—

Marrickville.

The main lines from the pumping station towards Erskineville, with all pipe branches, are now practically complete, and the remaining lines running through the flats towards Cook's River are approaching completion.

The engine-house is in course of construction, and will be completed in about three months. The engine-beds have also been built, the two boilers placed in position and partially built in.

A contract was let for a 22½-inch diameter steel rising main, which has been laid, and through which the sewage will be lifted to the Western Outfall Sewer, thence gravitating to the Sewage Farm at Botany.

Wentworth Park and Glebe.

A tender has been accepted for the sewerage of the low-lying areas of Wentworth Park and part of the Glebe.

Balmain, Annandale, and Leichhardt.

A contract was let in August last for the low-level sewerage of Balmain, Annandale, and Leichhardt. Four sites were selected along the south-eastern shores of Balmain for collecting the sewage viz.—at Stephen-street, Easton Park, Reynolds-street, and Mullins-street. In the two former cases the machinery chambers have been constructed of concrete, and in the latter of oval cast-iron cylinders. The tunnel under the hill from Stephen-street to Looke's Avenue, and the branch tunnel under the School of Arts to Cooper-street, have been driven, and the lining is well in hand. With the exception of the rising mains, about one-third of the remaining portion of the work remains to be completed.

Three additional pumping sites have been selected, viz.—At White's Creek, near Brennan-street; Johnstone's Creek, near the tramway crossing; and on land to be resumed at the junction of Orphan School Creek and Johnstone's Creek.

The necessary intercepting sewers have been laid out and plans are in preparation. On the completion of these works the whole of the low-lying areas along the foreshores from Waterview Bay to Johnstone's Creek will have been provided for.

Woolloomooloo and Botanical Gardens.

The construction of the low-level sewerage works of Woolloomooloo is now nearing completion. Pipes have been laid intercepting all sewage from the existing sewers, which, being of substantial construction, will remain as stormwater carriers only. A cast-iron caisson has been sunk in Forbes-street to receive the pumping machinery.

The tunnel intercepting the sewage from the Botanical Gardens has been completed, and is ready for connecting to the pumping station in Forbes-street.

Double Bay Low-level.

A scheme known as the "Shone" system has been adopted for the low-lying areas of Double Bay. For the purposes of the scheme, the area was divided into four sub-areas, each having an ejector station and collecting well, into which the gravitation sewers discharge.

At each station the Shone hydro-pneumatic ejectors are in duplicate, one ejector being ample to deal with the maximum sewage flow, while the pair working together are capable of discharging the maximum flow of rainfall and sewage. The ejectors are driven by compressed air, and their duty is to lift the sewage from the collecting wells, through delivery mains, into the Darling Point branch of the Bondi main sewer. A substantial one-storied building, of brick with sandstone facings and tiled roof, has been erected near Swamp-street off Bay-street, enclosing the air-compressing plant, which consists of two Parker continuous shunt wound motors, actuating two air compressors. By arrangement with the Railway Commissioners the electrical energy is supplied through 19/16 cable from the Power-house at Rushcutter's Bay. A storage battery of 230 Epstein cells has been installed, a primary duty of which is to run the plant at night when the energy from the tramway plant is not available.

The whole of the works has been completed, and on February last tests were made of the efficiency of the plant under normal conditions, with one air compressor and all the ejectors working. The results obtained were considered highly satisfactory.

Darling Harbour.

Tenders will shortly be invited for the low-level sewerage of the western side of Darling Harbour. A piece of land has been resumed at Pyrmont-street, opposite the Tramway Power-house now in course of erection, sufficient to contain the pumping plant, controlling station, and accessory buildings. Intercepting sewers have been designed along Pyrmont-street as far as Allen-street, and under the railway sidings to the old silt pit in Lackey-street. The old sewer will be widened at this point, and tidal flaps will be built in, controlled by automatic hydraulic valves to restrict the interception to maximum dry weather flow only.

It has been found impracticable to bring the sewage from the area north of Allen-street to this pumping station, and another set of pumps will be erected in the vicinity of Alma-street to deal with that area.

The survey of the scheme dealing with the City side of Darling Harbour, though much hampered by the heavy traffic in the neighbourhood, has been completed, and plans are now being prepared. The area will be served by three pumping stations fixed at suitable positions along the foreshore.

Rushcutter's

Rushcutters' Bay.

A scheme has been devised for Rushcutters' Bay low levels, and plans are almost completed. Two pumping stations will be erected, one near the north-eastern corner of the Tramway Power-house, and the other near the reserve adjoining Ithaca Road, Elizabeth Bay. Electric energy supplied from the Tramway Power-house at Rushcutter's Bay will be used in actuating the pumps.

Homebush Creek.

About 43 chains of 12-inch pipes have been laid along Powell's Creek, Homebush, from the outlet end of the present storm-water channel to a point near Allen-street, to carry off the sewage matter or dry weather flow discharged by the channel into the creek near the Railway Bridge.

Plans for a further extension of 10 chains have been completed, which will take the outlet to the limit of tidal waters.

It is intended that these pipes shall form part of a future low level system for the locality.

4. STORMWATER CHANNELS.

Long Cove Creek.

A branch known as the Daniel-street Branch of the Long Cove Creek Storm-water Channel has been constructed from the end of existing work to an outlet into the main canal, containing about 6 chains in length of concrete channel pitched at the outlet. For the purposes of the traffic, a covering has been thrown across the main channel at Fred-street and Davis-street, Petersham, built of steel girders and concrete jack arches.

Bay-street.

A contract was let in December, 1898, for a storm-water sewer which will serve the purpose of an overflow for the George-street main sewer, and a relief for the present drains in the neighbourhood of Wentworth Park which are inadequate to carry off the flood-waters of an exceptional rainfall. With the exception of about 5 chains of tunnel lining and the building of the outlet, the main line has been completed. The Mitchell-lane Branch has been constructed with the exception of about 6 chains.

An extension of Johnston's Creek storm-water channel is being constructed up the valley on the north side of the suburban railway, finishing at Bruce-street a few chains west of Stanmore Station. Being along streets, the channel will be covered throughout.

White's Creek.

The White's Creek Channel is now completed from Rozelle Bay as far as Booth-street.

The channel tapers to 8 feet in width at the Booth-street end, which has been built on land resumed for the purpose, the remainder being chiefly on land reclaimed by the Government at the head of Rozelle Bay. A branch 12 chains long and 10 ft. by 4 ft. in dimensions leaves the main channel near Brennan-street, and finishes at Catherine-street, and is practically completed.

A tender has been accepted for a 9 ft. by 4 ft. channel through the Rozelle reclamation connecting Easton Park Storm-water Channel with the waters of Rozelle Bay.

An extension of the Careening Cove Storm-water Channel in the Municipality of North Sydney has been carried out from Denison-street to Berry-street.

Necropolis.

Provision has been made for the storm-water drainage of the new portion of the Necropolis at Rookwood by the construction of a brick and concrete channel half a mile in length, emptying itself into the creek near the railway culvert. Adjacent to the channel a line of pipes has been laid to intercept the drainage from the graves.

Botany Storm-water Channel.

Surveys have been made to estimate the cost of a concrete channel to improve the present unhealthy state of the creek discharging into Botany Bay near the engine pond.

Shea's Creek Storm-water Channel.

An extension of Shea's Creek Storm-water Channel from the present termination at McEvoy-street to Botany Road is now being surveyed and estimates prepared.

Johnston's Creek.

An extension of the Johnston's Creek Storm-water Channel from Booth-street to Marramatta Road has been carried out. Owing to the removal of the Booth-street overhead bridge, and the substitution of an embankment, it was found necessary to cover the channel at that point. The contract included the laying of portion of the low-level pipe sewers of that locality which crossed the line of channel.

Marrickville Valley.

With the object of mitigating the floods which inundate the Marrickville Valley during heavy rains, and thus indirectly preventing the low-level sewerage pumps, now approaching completion at Meeks'-road, from being overtaxed by an excess of flood-waters, a catchment channel has been designed and surveyed which will discharge into Cook's River, near Unwin's Bridge, and thence takes a northerly course approximately parallel to the Illawarra railway, finally bending round the head of the valley and terminating in Victoria-road.

5. DRAINING OF COUNTRY TOWNS.

Newcastle.

The report on the scheme for dealing with the sewage of Newcastle and the suburbs as far west as Lambton and Waratah has been completed during the year, and copies, with plans, forwarded to the Hunter District Water and Sewerage Board, and to the various Municipal Councils, with a request that they should consider the financial aspect of the question, and report to the Minister.

It was proposed to deal first with the city of Newcastle, Merewether, the greater part of Hamilton, and a part of Wickham.

The

The estimate of cost for dealing with this area, including reticulation, was £75,308 12s. 6d. This was based on the assumption that the sewage could be turned into the ocean without treatment other than screening. As, however, it is possible that some further treatment might become necessary, in order to avoid pollution of the foreshore, precipitation works were designed, the cost of which would bring up the estimated capital outlay to £89,130 2s. 10d. The estimated rate necessary to cover interest (and repayment in 100 years) together with working expenses is, without precipitation works, 6½d. in the £, or with them, 9d. in the £.

At the request of the authorities interested, additional estimates have since been prepared to cover cost of including the whole of the municipalities of Hamilton, Wickham, and Carrington. As these additional areas are almost wholly below the gravitation zone, pumping would have to be resorted to, involving the construction of five pumping stations. The total extra capital cost is estimated at £36,961.

Some of the councils concerned have passed resolutions approving of the submission of the scheme to the Public Works Committee; but no recommendation has yet been made by the Newcastle Council or the Hunter District Water and Sewerage Board.

Cottage Creek.

A westerly extension of the Hannel-street branch drain, in open concrete channel about 18 chains long, has been constructed during the year.

Newcastle Pasturage Reserve.

The drainage of the Newcastle Pasturage Reserve has been completed, and the results are highly satisfactory. The work was of a very extensive character, the main drainage canal and two most important branches having a total length of 4 miles 57 chains; the width would average about 40 feet, the lower portion of the main canal being 110 feet wide. For a length of 1 mile 33 chains it was found necessary to protect the banks by fascine work, and also to construct at frequent intervals masonry water-cushion drops to reduce the velocity of the flow. In order to carry the railway and tramway traffic across these canals, several bridges of steel and timber have had to be constructed. The work has been the means of successfully draining 7,782 acres of land that was previously little better than a swamp.

Jenolan Caves.

Provision has been made for the drainage of the Caves House and adjoining buildings, by a sewer constructed of earthenware pipes from the stables to the bridge near the entrance to the Imperial Caves; from this point the sewage gravitates through steel pipes fixed to the present turbine pipes, as far as the Power-house, and carried thence across the gullies on steel trusses to an outfall into the creek some distance below the bathing-hole. The work, which was carried out by day-labour, also included the fixing of a hydraulic ram to supply water to the caretaker's residence.

Dungog.

Tenders have been called for the construction of a concrete channel from McKay-street along present bed of creek for about 24 chains, to relieve the present insanitary condition of the watercourse.

Narrandera.

Tenders have been accepted for the construction of a 9-inch pipe sewer discharging into filter tanks, to be erected near the creek, to dispose of the liquid sewage at present flowing into the river from the township. Plans for a further extension are now in hand.

Wallsend.

A concrete storm-water channel has been designed and is now being constructed by day-labour through Wallsend Park to the existing concrete channel near the Co-operative Company's railway.

Orange.

Tenders have been called for a further length of 14 chains of concrete channel, to be constructed from the existing channel in Kite-street to the cricket ground.

Liverpool.

A scheme has been prepared for the sewerage of Liverpool by means of a main outfall and reticulation sewers discharging on to a filtration area of 3 acres, situated on the left bank of George's River, about $\frac{3}{4}$ of a mile below the dam.

Parkes.

Surveys and estimates have been prepared of alternative designs for a storm-water channel, or pipe-sewers with filter tanks, with the object of improving the present insanitary condition of the township of Parkes.

Camden.

A sewage farm on the banks of the Nepean River with outfall and reticulation sewers has been designed and reported upon for the township of Camden.

Campbelltown.

Plans were prepared for a pipe-drain from the culvert under the Main Southern Railway along Dumeresque-street to Sydney-road, near Campbelltown platform.

Mulwala.

A plan was prepared for a small channel to deal with the storm waters flowing through the township.

6. DETAIL SURVEY OF CITIES, TOWNS, AND SUBURBS.

Sydney and Suburbs.

The Detail Survey of the municipality of Willoughby is now nearly completed as far as the locality embraced by the sewerage works now under construction.

Active progress has been made during the year with the Detail Survey of the Illawarra suburbs, special attention having been given to the area affected by the proposed scheme of sewerage.

The

The appointment of additional draftsmen to reduce the arrears of plan-drawing having been made, the extra staff has enabled the current work to be kept well in hand, and reduce to some extent the arrears that had accumulated.

Applications for copies of the detail sheets have increased considerably during the year.

7. SUMMARY OF WORK EXECUTED IN THE DRAWING OFFICE.

During the year drawings were made for 39 contracts, for which 168 drawings and 1,695 heliographs were prepared.

The value of the work designed amounted to £307,414. In addition to this, drawings for work valued at £44,600 are now in progress.

Sixty-seven sheets of the Detail Survey of Sydney and suburbs were drawn containing an aggregate of 877 tenements; 7 sheets were revised, and 71 tracings drawn for heliography.

Nine hundred and ninety-seven helios of the Detail Survey, and 334 helios of miscellaneous sewerage drawings were prepared and issued to the Water Supply and Sewerage Board, other Government departments, and for office use.

Thirty-six resumption and easement plans, and 44 miscellaneous drawings were made, and 181 plans mounted.

J. DAVIS,
Engineer-in-Chief for Sewerage Construction.

XIII.

RETURN of Expenditure on Public Works by Sewerage Construction Branch from 1 July, 1898, to 30 June, 1899.

Work.	Whether constructing or under repair.	When commenced.	Expenditure from 1 July, 1898, to 30 June, 1899.	If unfinished, amount of expenditure to 30 June, 1899.	If finished, actual amount of expenditure.
			£ s. d.	£ s. d.	£ s. d.
Bondi and Waverley Sea Slopes	Constructing.	1895	6,354 4 4	10,000 0 0	.....
Bay-street Overflow Sewer		1894	5,551 18 6	5,799 10 4	.....
Brickfield Creek, Parramatta, Storm-water Channel		1895	42 7 11	2,857 7 5	.....
Branch Drains, New Lambton, Lambton, Adamstown, and Hamilton		1896	5,892 8 10	14,415 9 5	.....
Branch Sewer draining parts of Waverley and Randwick.....		"	7,174 6 4	15,228 5 11	.....
Brennan-street, Easton Park, Balmain, and Wallsend Storm-water Channels		1898	360 8 10	360 8 10	.....
Circular Quay Low Level Works		1897	155 10 10	213 5 10	.....
Careening Cove Storm-water Channel		1895	720 4 8	860 5 11	.....
Cottage Creek, Newcastle, Storm-water Channel.....		"	646 19 8	4,212 12 2	.....
Country Towns Sewerage		"	217 3 8	3,355 14 11	.....
Construction of Drain across Reclamation to connect with Main Drain, Long Cove.....		"	280 18 5	.....	1,590 0 0
Darling Harbour Low-level Works		1896	463 19 0	750 5 0	.....
Double Bay Creek Storm-water Channel, from Main Bondi Sewer to Double Bay		1895	365 8 9	8,070 2 5	.....
Easton Park, Balmain, Storm-water Channel		1894	399 15 1	1,850 0 0	.....
Euroka Creek Storm-water Channel		1896	2 2 0	1,329 2 8	.....
Extension of Sewer, Waverley and Woollahra, to Randwick ...		1898	4,583 0 1	4,583 0 1	.....
Jenolan Caves Drainage Works in connection with Government Buildings		1897	117 6 5	460 7 9	.....
Johnstone's Creek Storm-water Channel		1891	5,268 11 0	27,958 19 8	.....
Long Cove Creek, Ashfield, Storm-water Channel		1892	450 2 10	511 7 10	.....
Manly Sewerage		1889	8,860 8 1	16,586 5 0	.....
Mosman and Outfall Works		1896	11,310 9 1	11,616 13 7	.....
North Sydney Land Resumption		1894	350 10 4	.....	10,000 0 0
Northern Slopes, North Sydney.....		1898	178 6 2	178 6 2	.....
Pymont Branch Sewer		1891	3,943 17 9	4,602 14 7	.....
Quarantine Station Sewerage and Water Supply		1898	39 11 8	39 11 8	.....
Randwick Storm-water Drainage		"	1,133 4 1	1,133 4 1	.....
Rookwood Asylum Sewerage		1897	1,868 17 4	2,020 18 0	.....
Rookwood Necropolis Drainage		1891	2,214 16 3	17,512 3 5	.....
Sewerage in Low-level Zone at Rushcutters' Bay		1898	145 10 9	145 10 9	.....
Storm-water Channels, Newcastle Pasturage Reserve Drainage..		1895	134 0 9	15,681 19 7	.....
South Willoughby and Outfall Works.....		1897	6,497 7 5	8,230 14 4	.....
Wallsend Storm-water Channel, to its junction with Ironbark Creek		1895	370 16 3	.....	3,000 0 0
Western Suburbs Sewerage, Main Scheme		1889	107,206 13 11	737,016 14 2	.....
White's Creek Storm-water Channel.....		1895	2,877 6 1	10,624 0 4	.....
Willoughby and Chatswood Sewerage		1897	3,088 4 11	3,491 9 8	.....
Woolloomooloo, providing new sewers and elevating Sewage into Main Bondi Outfall Sewer		1896	4,392 5 2	5,088 10 2	.....
Double Bay Low-level Sewerage		1895	3,189 12 7	15,178 13 3	.....
Johnstone's Creek Storm-water Channel, Stanmore Branch.....		1898	260 0 0	260 0 0	.....
Detail Surveys, General Surveys, Salaries, Travelling Expenses, and Contingencies		"	5,718 0 11	.....	5,718 0 11
Services for other Departments		"	1,084 9 1	.....	1,084 9 1
Totals.....			203,911 5 9	952,223 14 11	21,392 10 0

SUMMARY OF EXPENDITURE from 1 July, 1898, to 30 June, 1899.

	£ s. d.
Loans	196,848 15 9
Consolidated Revenue	5,978 0 11
Services for other Departments	1,084 9 1
	£203,911 5 9

TOTAL

TOTAL EXPENDITURE ON SEWERAGE CONSTRUCTION TO 30 JUNE, 1899.

Year	Loans.	Revenue.	Services for other Departments.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1879	409 12 3	.....	.....	409 12 3
1880	2,941 12 10	265 5 2	.....	3,206 18 0
1881	12,083 6 9	4,734 14 10	.....	16,818 1 7
1882	32,498 18 8	4,008 14 6	.....	36,507 13 2
1883	105,321 5 5	286 12 2	.....	105,607 17 7
1884	119,730 10 10	2,795 19 4	.....	122,526 10 2
1885	155,931 12 2	14,834 2 11	.....	170,765 15 1
1886	148,292 8 7	12,401 11 3	.....	160,693 19 10
1887	108,774 18 3	20,181 10 2	.....	128,956 8 5
1888	64,063 9 6	11,998 9 4	.....	76,061 18 10
1889	81,315 18 10	9,616 0 4	.....	90,931 19 2
1890	82,985 19 9	11,006 19 5	.....	93,992 19 2
1891	202,922 0 11	8,775 3 7	.....	211,697 4 6
1892	202,294 2 1	11,113 7 8	.....	213,407 9 9
1893	109,638 7 3	4,281 18 8	.....	113,920 5 11
1 January, 1894, to 30 June, 1895	236,340 3 10	5,347 18 9	.....	241,688 2 7
1 July, 1895, to 30 June, 1896	131,428 4 0	471 6 5	.....	131,899 10 5
1 July, 1896, to 30 June, 1897	127,757 14 11	2,884 19 6	66 17 5	130,709 11 10
1 July, 1897, to 30 June, 1898	194,372 3 5	5,100 7 9	229 13 8	199,702 4 10
1 July, 1898, to 30 June, 1899	196,848 15 9	5,978 0 11	1,084 9 1	203,911 5 9
Totals	£ 2,315,951 6 0	136,083 2 8	1,381 0 2	2,453,415 8 10

Land Valuation.

XIV.

Report of the Government Land Valuer.

I HAVE the honor to submit a report upon the operations of this branch from 1 July, 1898, to 30 June, 1899. Briefly summed up the work may be classified as follows :—

Railways and Tramways.—The following lines have been proclaimed and confirmed :—

Gore Hill Electric Tramway.
Moree to Inverell Railway, Parts 2 and 3.
Neutral Bay Electric Tramway.

Notifications of Resumptions have been issued in respect of the under-mentioned works.

Annandale, Ventilating Shaft.	Hinton Bridge.
Balmain Low-level Sewerage.	Kiama Water Supply.
Beecroft, Water Supply.	Limestone Creek, Access to Water.
Cockle Creek Bridge.	Merewether Post and Telegraph Office.
Camden Bridge.	Picton Water Supply.
Darling Harbour Low-level Sewerage.	Parkes Water Supply.
Dalwood Creek Bridge.	Pymont Post Office.
Frederickton Police Buildings.	Pymont Bridge.
Gundagai Bridge.	Picton Bridge.
Gwydir District Drainage.	Ranken's (near Casino), Approach to Wharf.
Gloucester Post Office.	Rylstone Bridge.
Glebe Island Bridge.	Rookwood Bridge.
Gundary Creek Bridge.	White's Creek Storm-water Channel.

101 cases standing over from previous years have been finally settled; 82 valuations in various parts of the Colony, ranging from a few pounds up to £35,500, have been made; 61 cases were advanced to a stage for valuation; 40 claims for temporary occupation have been adjusted.

Estimates were prepared of the cost of proposed resumptions for various works as follows :—

Kiama Rifle Range.	Young-street Stores.
Lane at Taylor Bay for Military purposes.	Walcha Lock-up Site.
White's Creek Storm-water Channel.	Port Kembla Harbour Works.
Adamstown Drainage.	City Railway Extension, Scheme 1.
Ejection Station, Darling Harbour.	" " " 2.
Wyong Lock-up Site.	" " " 3.
Willoughby Sewerage.	Land at Parramatta for Asylum purposes.

Miscellaneous.—Many matters of a miscellaneous character, involving much time and research, have been dealt with during the year, as, for instance,—

Report on site for Drill-hall, Albury.
Claim of the Sydney Freehold Land Co. for damage to property, Annandale.
" for damage to land by construction of Sewerage Works, Ashfield.
" " at Parramatta by construction of Storm-water Channel.
J. Lugg's claim for compensation for land resumed for Tramway purposes.
Completing Ramsay's Estate matters—Long Cove reclamations.
Leichhardt—Long Cove—treating with owners for sale of land.
Lease of land to Y. Hogan, Orange Water Supply.
Picton Water Supply, Easements.
Particulars given to Lands Department as to resumptions from Packer's Grant, Rockdale.
Sale of land resumed for extension of Supreme Court.
Sydney Water Supply, list of outstanding claims for Water and Sewerage Board.
Koorawatha to Grenfell Railway, Exchanges of lands.
Mosman's Bay, land required from Ferry Co. for Tramway purposes.
Nowra Water Supply, Easements.
Centennial Park, damage to land.
Parramatta Cottage Homes, sale of surplus land.
Dedication of land Alma and Goodhope Streets, Paddington.
Completing Margaret Jones' matter, White's Creek.
" Ann Walker's matter, Sydney Water Supply.
Return of all lands resumed during 1897, for Government Statist.

The principal matters which have engrossed the attention of the branch for the past year have been the negotiation of exchanges of lands in connection with the Koorawatha to Grenfell railway line, estimates of city extension, the adjustment of interests in connection with the Port Kembla harbour proposals, Pymont Bay cases, and the resumptions on the second and third sections of the Moree to Inverell railway.

The Under Secretary for Works and Commissioner for Roads.

EDWARD J. SIEVERS,
Government Land Valuer.

Memorandum from Accountant to Under Secretary and Commissioner for Roads.

Public Works Department, N.S.W., Accounts Branch, 11 August, 1899.

HEAD OFFICE BANK ACCOUNTS, 1898-9.

I SUBMIT herewith statements of the operations of the Head Office Bank Accounts in my name, for 1898-9. They are as follows:—

1. General Account.
2. Suspense Account.
3. Trust Account.
4. Revenue Account.

1. General Account.

The receipts, being lodgments by the Treasury for payments, amounted to—

	£	s.	d.	£	s.	d.
General Account	618,184	18	11			
Advance Account	591,056	12	7			
				1,209,241	11	6
Disbursements—						
General Account	616,662	6	8			
Advance Account	590,055	15	5			
				1,206,718	2	1
Balance to Credit, 30/6/99—						
General Account	1,522	12	3			
Advance Account	1,000	17	2			
				2,523	9	5

2. Suspense Account.

Receipts	2,024	17	1
Disbursements	1,963	14	8
Balance to Credit, 30/6/99	61	2	5

3. Trust Account.

Receipts	41,346	0	10
Remitted to Treasury to Cr. Trust Fund...	41,042	13	10
Balance to Credit, 30/6/99...	303	7	0

4. Revenue Account.

The amount which passed through this Bank Account was £69,580 7s. 5d. On another paper a statement of Revenue business, both through this Bank Account and by transfers at the Treasury, is set forth in more detail.

Summary of Banking Accounts.

	Receipts.			Disbursements.			Balance on 30 June, 1899.			No. of Cheques.
	£	s.	d.	£	s.	d.	£	s.	d.	
1. General.....	1,209,241	11	6	1,206,718	2	1	2,523	9	5	5,509
2. Suspense	2,024	17	1	1,963	14	8	61	2	5	150
3. Trust.....	41,346	0	10	41,042	13	10	303	7	0	52
4. Revenue	69,580	7	5	69,580	7	5	Nil.			63
	1,322,192	16	10	1,319,304	18	0	2,887	18	10	5,774

THOMAS R. STEEL,
Accountant.

Statement of Receipts and Disbursements on account of Preliminary and Security Deposits for the year ending 30 June, 1899.

Receipts.		Disbursements.		Balance.	
Particulars.	Amount.	Particulars.	Amount.	Particulars.	Amount.
Fixed Deposits—	£ s. d.	Fixed Deposits—	£ s. d.	Fixed Deposits—	£ s. d.
Balance on the 1 July, 1898 ..	44,289 3 11	Returned to Contractors,		Balance held on 30 June,	
Received during 1898-9	40,162 1 0	Renewed, Forfeited, &c..	45,477 17 6	1899	38,973 7 5
Cash Deposits, Preliminary or Security—		Cash Deposits, Preliminary or Security—		Cash Deposits, Preliminary or Security—	
Balance on the 1 July, 1898 ..	10,034 16 5	Refunds, Forfeitures, &c. ..	41,533 19 3	Balance held on 30 June, 1899, at Treasury	9,543 11 0
Received during 1898-9	41,042 13 10			In Public Works Account ..	303 7 0
Lodged in Treasury	303 7 0				
Not paid to Treasury					
	135,882 2 2		87,011 16 9		48,820 5 5

THOMAS R. STEEL,
Accountant, Public Works, 26/9/99.

Memorandum

Memorandum from Accountant to Under Secretary and Commissioner for Roads.

Public Works Department, N.S.W., Accounts Branch, 11 August, 1899.

SUBJECT—REVENUE ACCOUNT, 1898-9.

I SUBMIT herewith the Paymaster's Statement in connection with the Revenue Account of this Department for 1898-9.

The total amounted to £225,786 3s. 1d. From this there should be deducted £68,145 17s. 7d., for Refunds of Officers' Advances, &c., to credit of Votes, and £94,698 17s. 6d., Refunds of Stores' Issues. The net Receipts on account of Consolidated Revenue through this Department would thus be £62,941 8s. made up as follows:—

	£	s.	d.
Tolls and Rent	7,237	9	0
Sales of Property	6,109	6	2
Country Towns Water Supplies	16,373	13	1
Docking	5,667	11	0
Forfeited Deposits	1,075	0	0
Sundry Deposits	2,435	10	4
Dredging	755	0	0
Cement-testing Fees	505	12	6
Government of Victoria for Bridges	4,856	15	9
Hire, Repairs, Deductions, Royalties, &c.	17,925	10	2
	£62,941	8	0

THOMAS R. STEEL,
Accountant.

Revenue Account from 1 July, 1898, to 30 June, 1899.

Tolls and Rent.	Sales of Property.	Refunds.	Miscellaneous.	Totals.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
7,237 9 0	6,109 6 2	68,145 17 7	*144,293 10 4	225,786 3 1

* Details attached.

OWEN CARROLL,
Paymaster, Public Works Department.

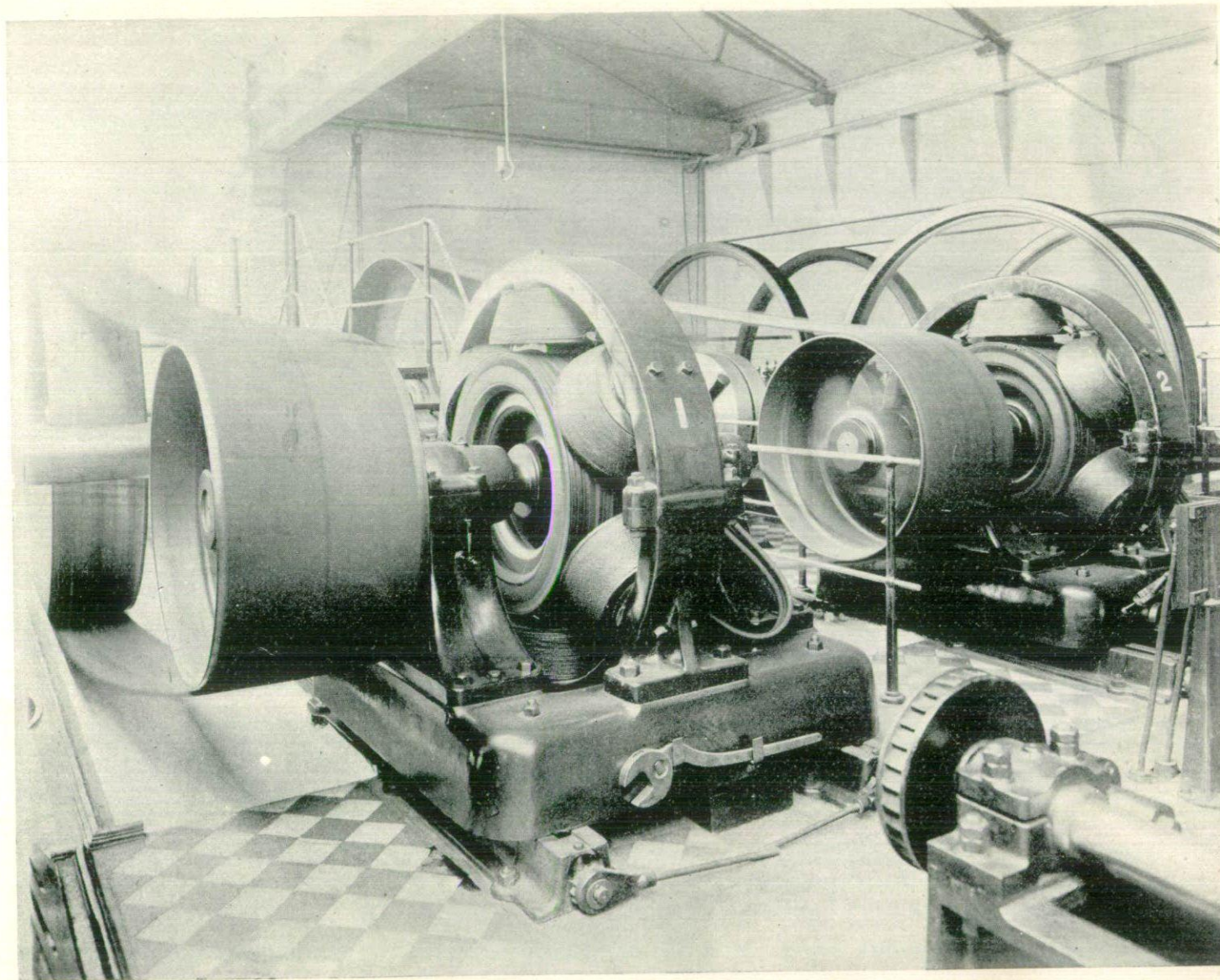
Public Works Department, Accounts Branch.

Subdivision of Miscellaneous Revenue for the year 1898-9.

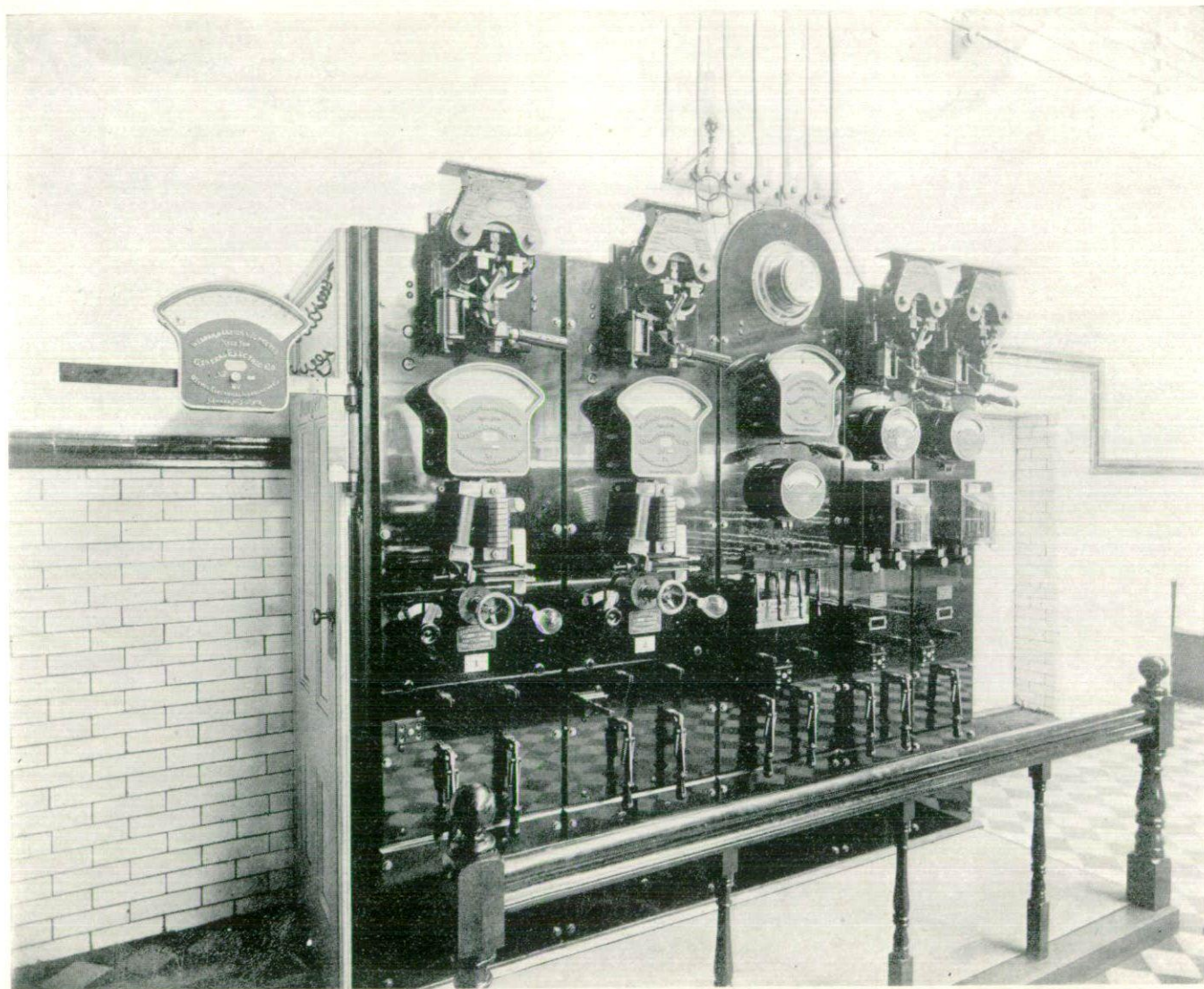
	£	s.	d.
Country Towns Water Supply	16,373	13	1
Stores Issues	94,698	17	6
Docking	5,667	11	0
Forfeited deposits	1,075	0	0
Sundry deposits	2,435	10	4
Dredging	755	0	0
Cement-testing Fees	505	12	6
Government of Victoria (various bridges)	4,856	15	9
Hire, Repairs, Deductions, Royalties, Transfers, &c.	17,925	10	2
	£144,293	10	4

OWEN CARROLL,
Paymaster, Public Works Department.

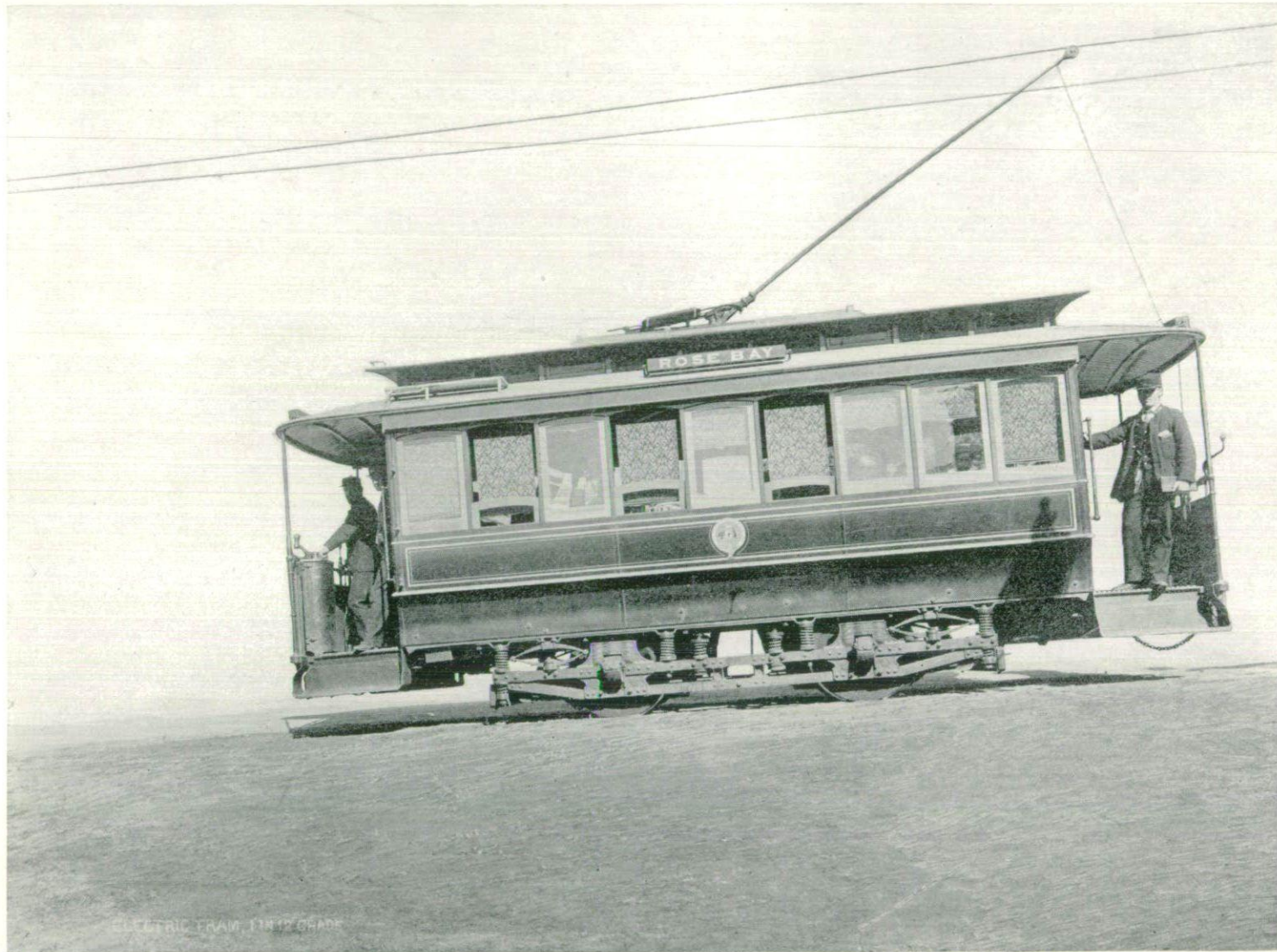
[Nineteen Plates and Five Plans.]



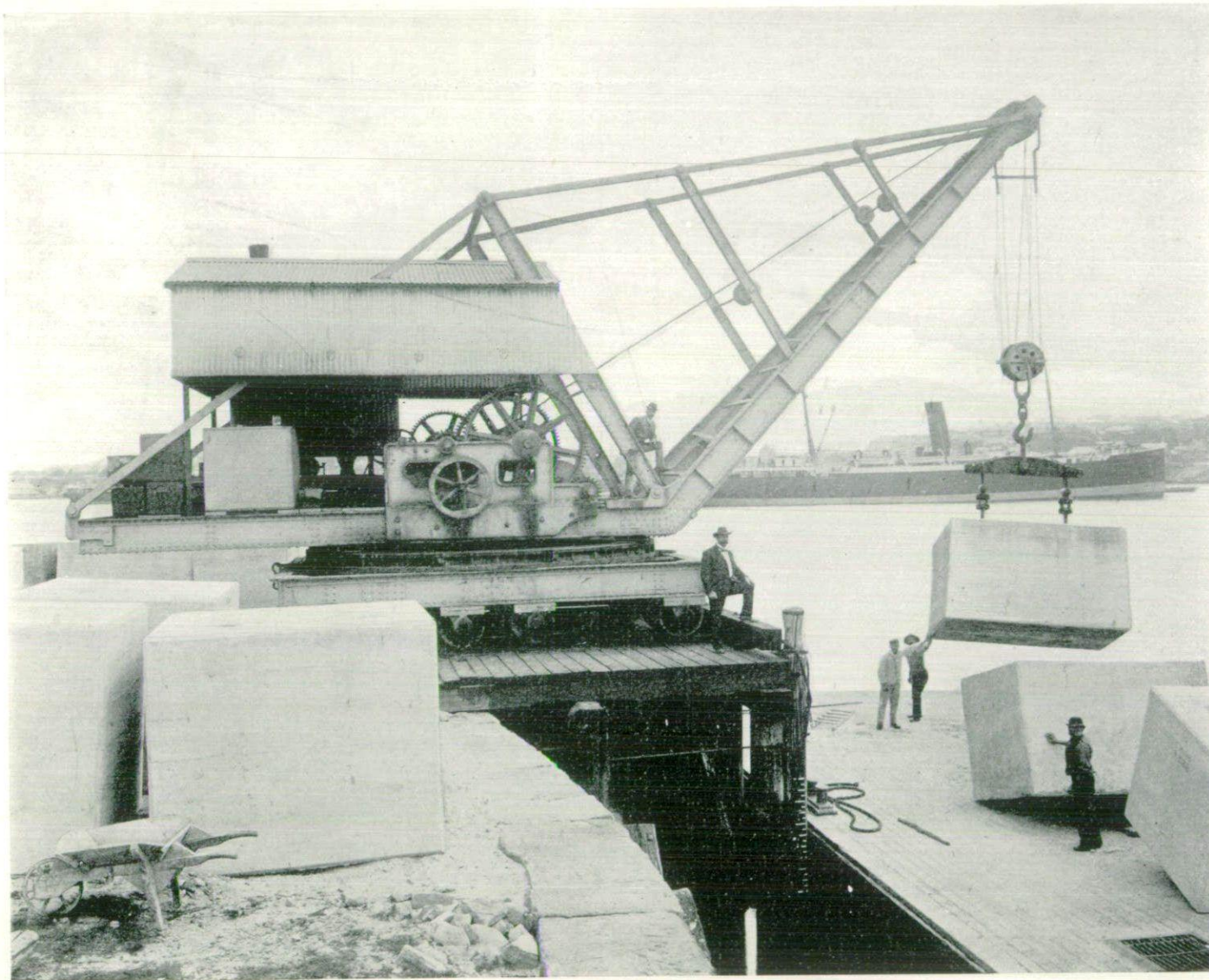
ROSE BAY ELECTRIC TRAMWAY—ELECTRIC GENERATORS AT RUSHCUTTERS BAY POWER HOUSE.



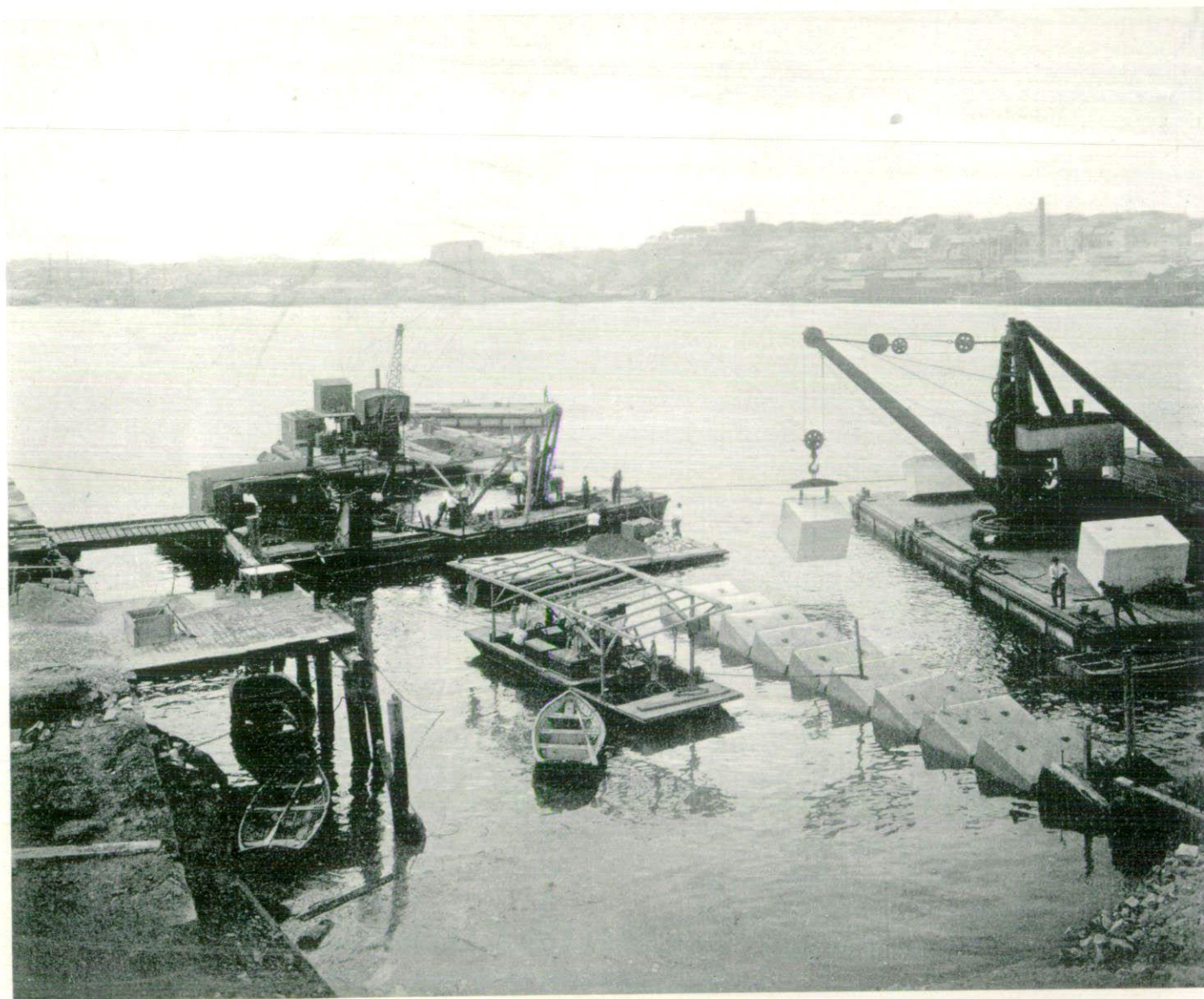
ROSE BAY ELECTRIC TRAMWAY—SWITCHBOARD AT RUSHCUTTERS BAY POWER HOUSE.



ROSE BAY ELECTRIC TRAMWAY—CAR ON 1 IN 12 GRADIENT.



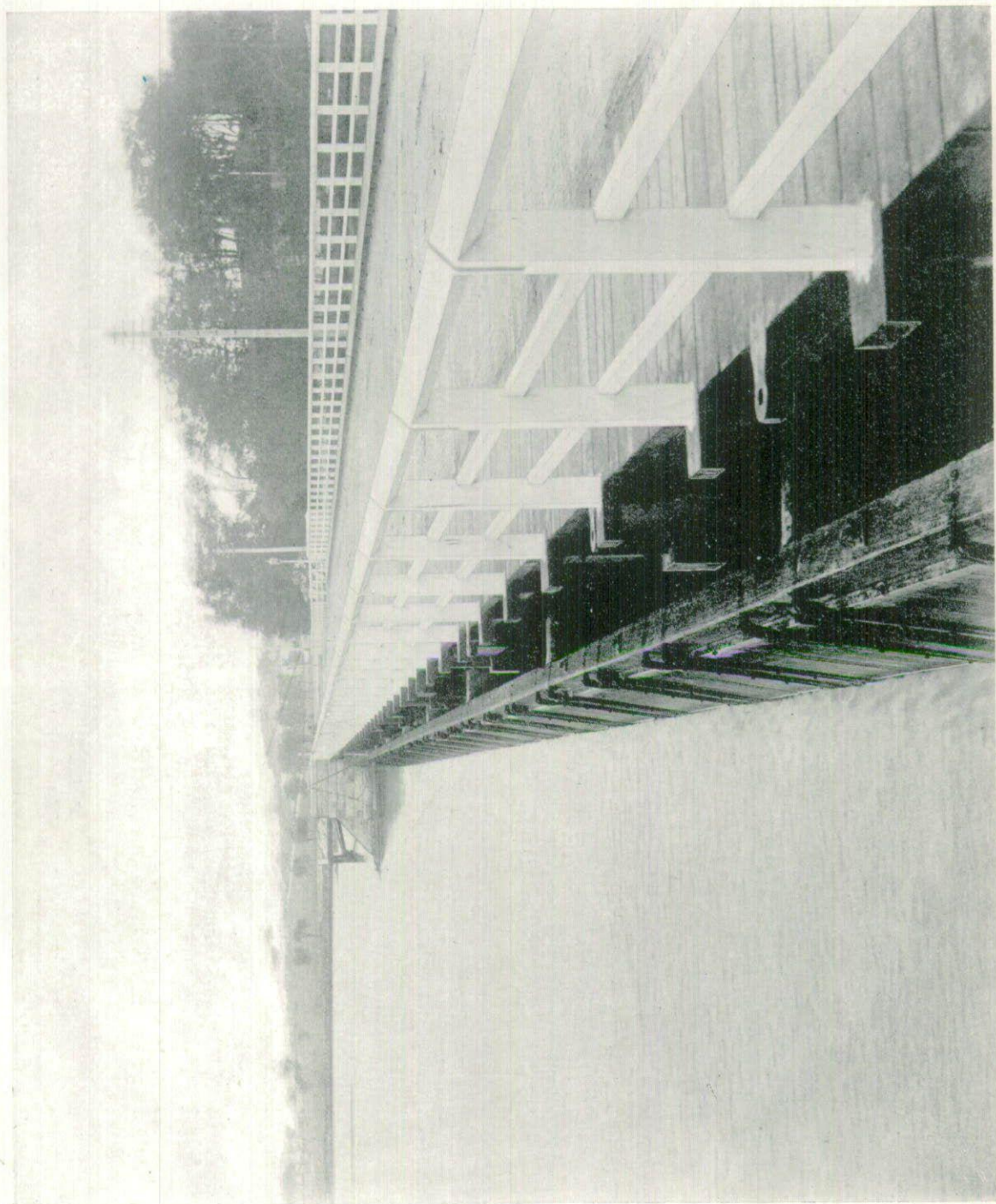
WHARF WALL ROUND DARLING ISLAND—40-TON BLOCK-SETTING CRANE.



WHARF WALL ROUND DARLING ISLAND—SETTING CONCRETE BLOCKS.



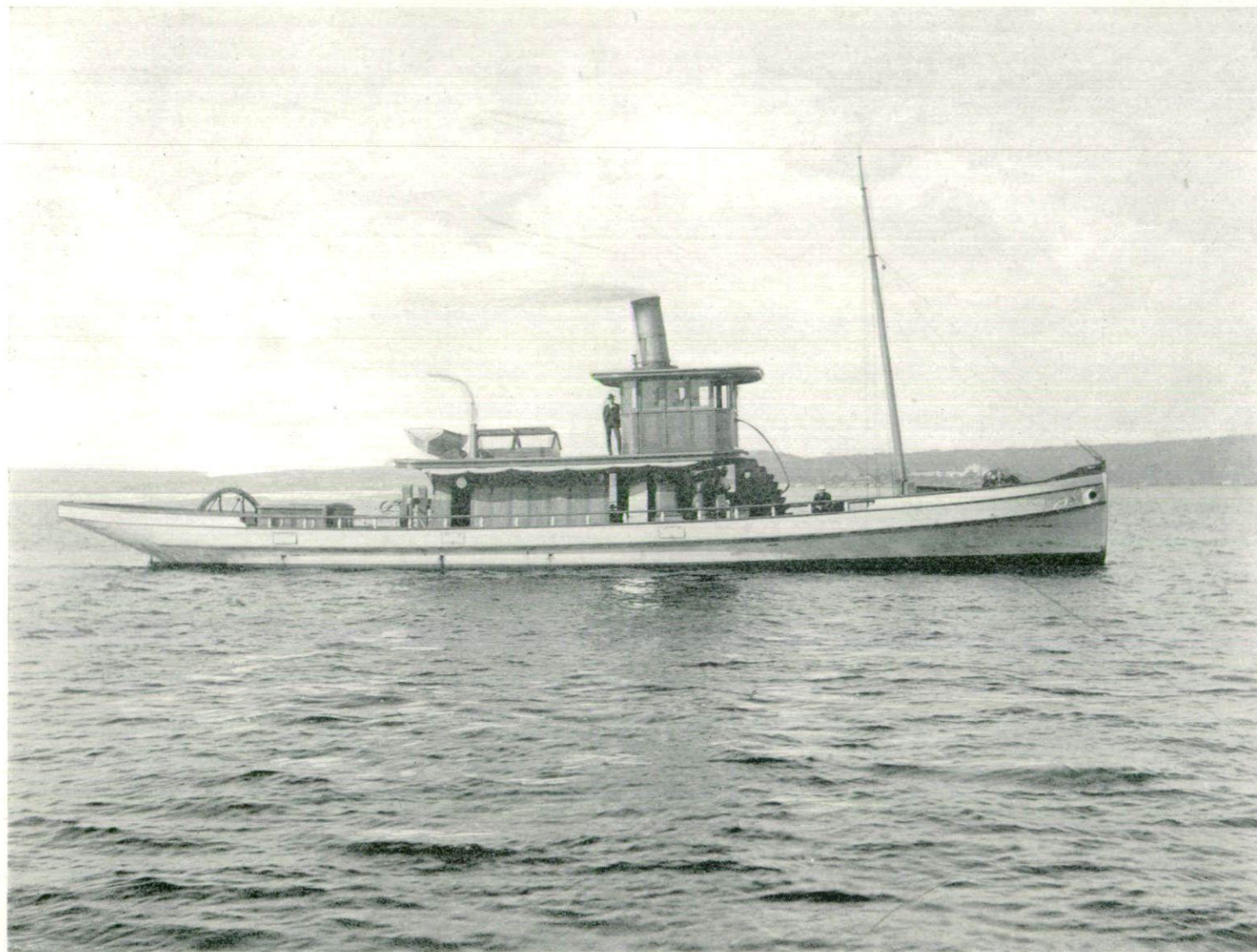
POINT PERPENDICULAR LIGHTHOUSE AND QUARTERS NORTH HEAD, JERVIS BAY.



SLUICE GATES, COOK'S RIVER DAM.



STEAM FERRY LAUNCH "HELEN"—FOR HUNTER RIVER.



S.S. "PHOENIX"—BUILT AT FITZROY DOCK.



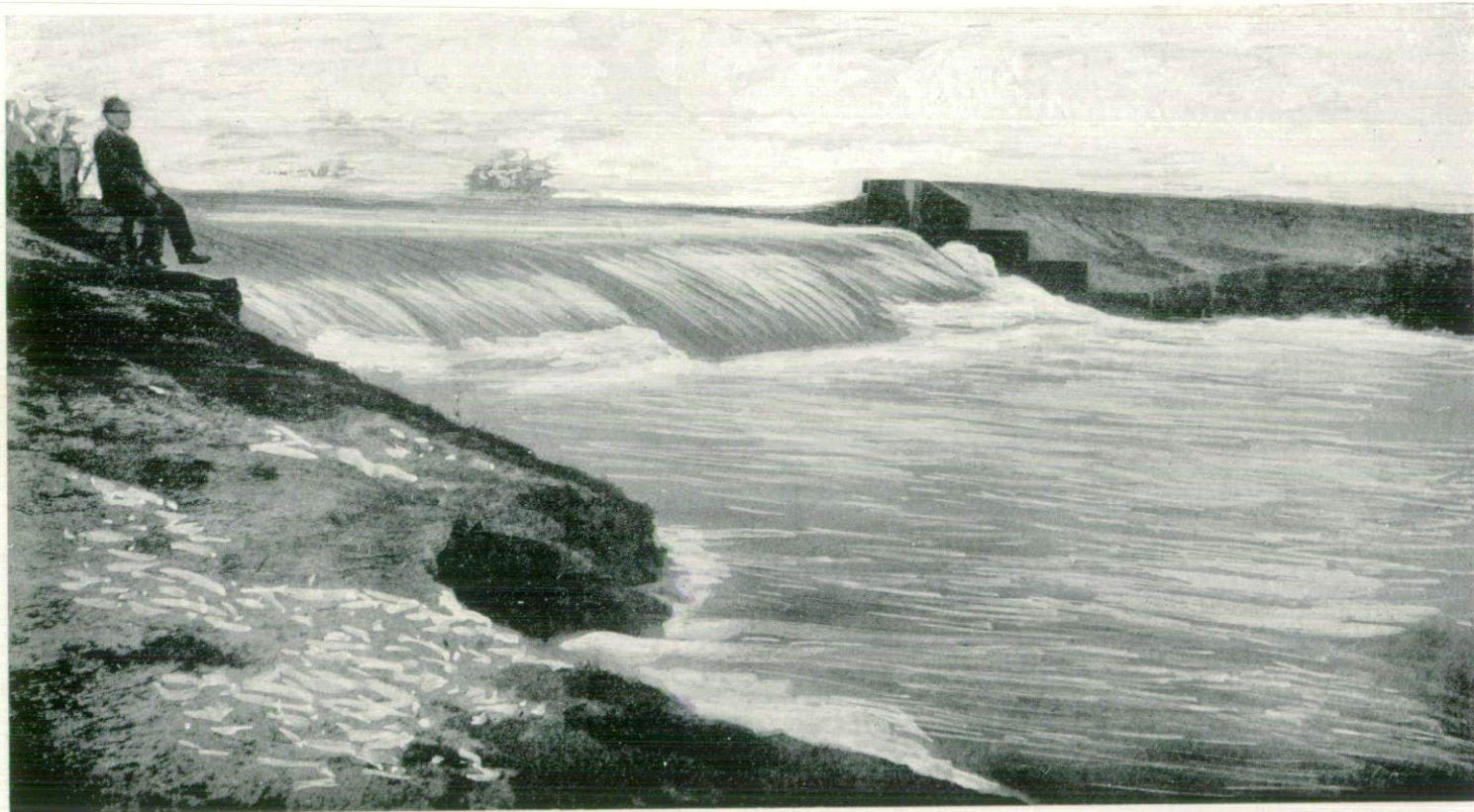
SYDNEY WATER SUPPLY—DUPLICATE 6-FOOT PIPE LINE FROM NEAR PIPE HEAD BASIN.



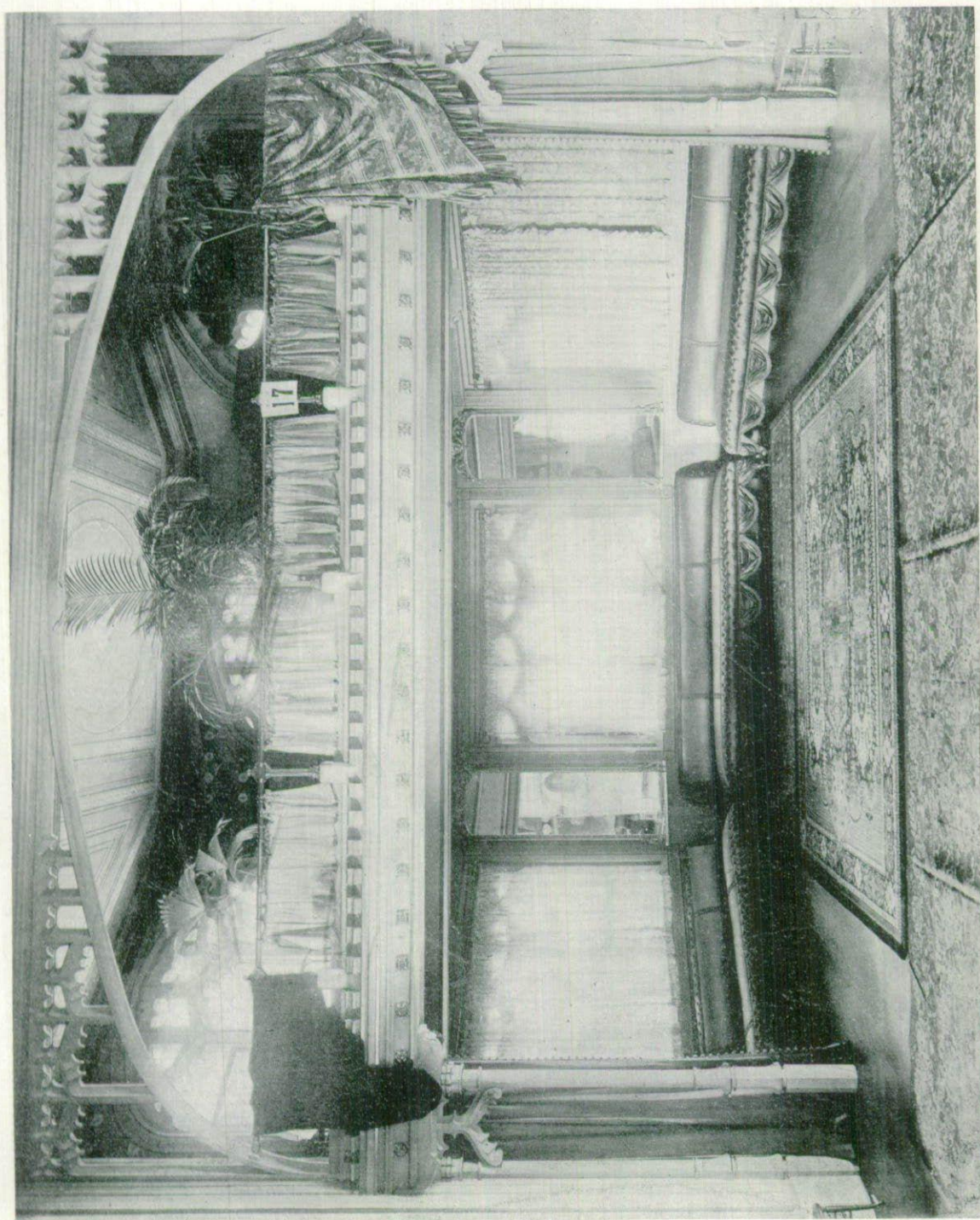
PICTON WATER SUPPLY—DAM ON BARGO RIVER.



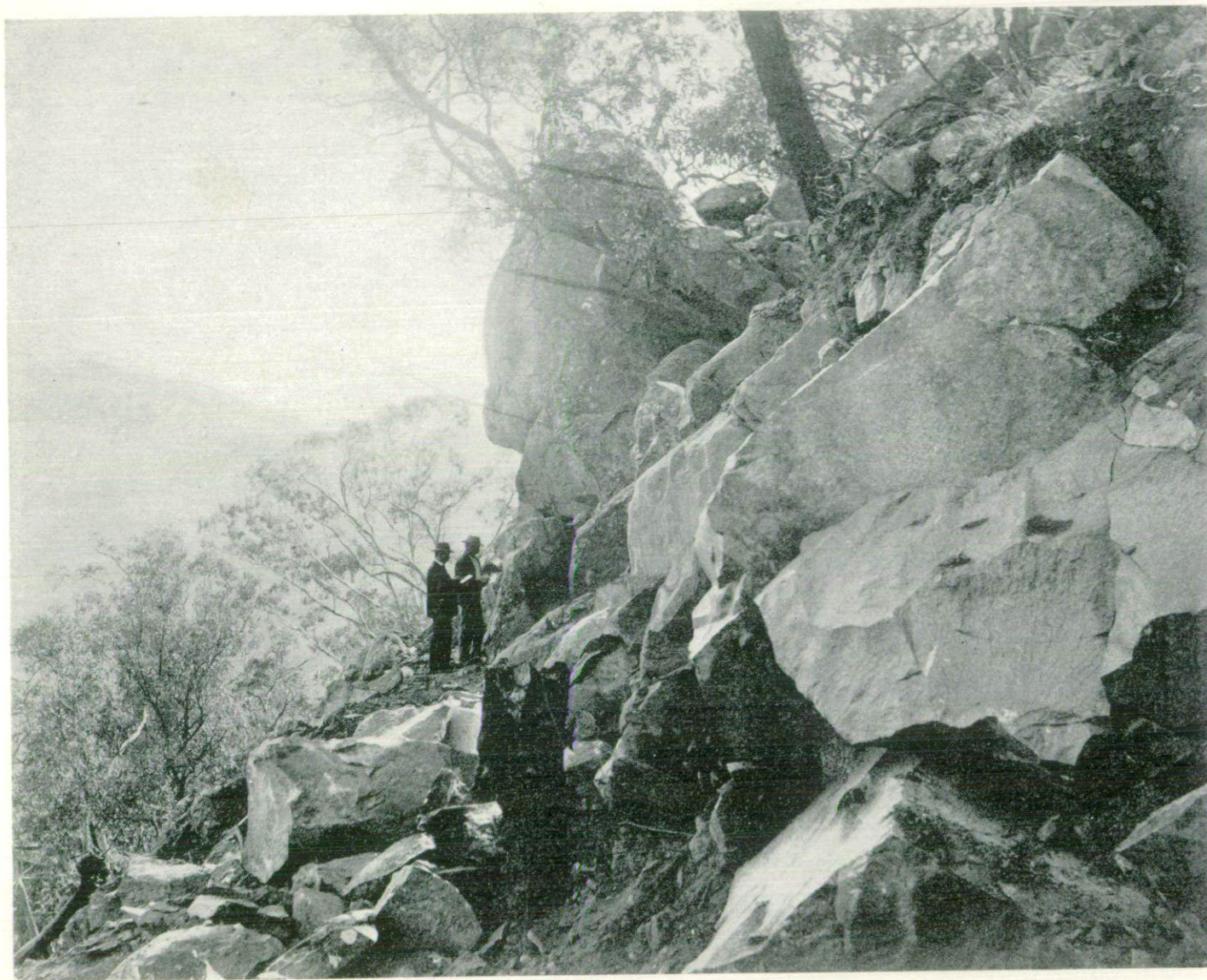
URANA CREEK—VIEW LOOKING UP STREAM. SHOWING WATER CONSERVED BY TOWN DAM.



URANA CREEK—BY-WASH OF TOWN DAM.



GOVERNMENT HOUSE—NEW WINDOW RECESS AND ORCHESTRAL GALLERY TO BALL-ROOM.



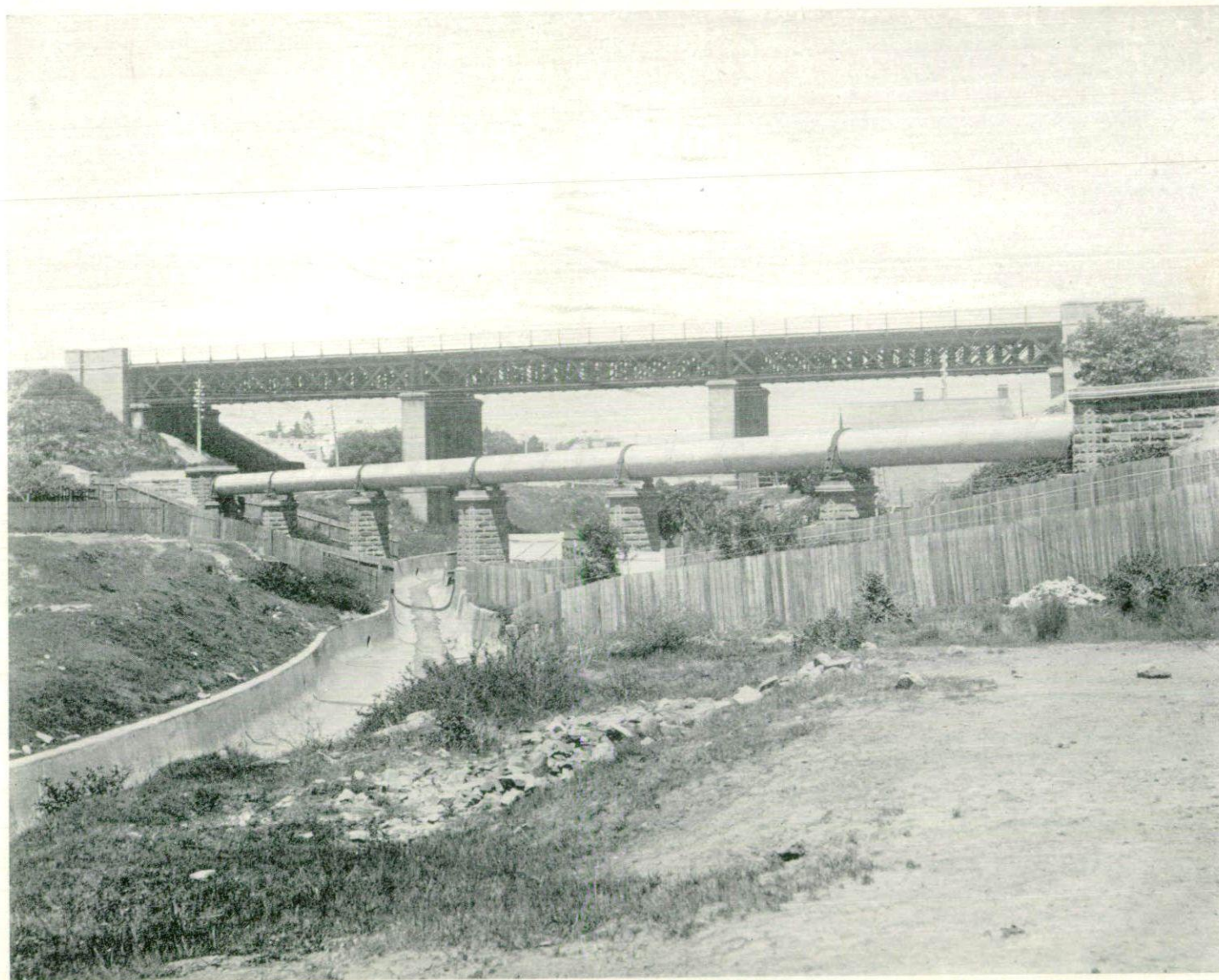
WOMBAYAN CAVES ROAD—VIEW ON KILLIECRANKIE PASS, SHOWING CHARACTER OF COUNTRY TRAVERSED.



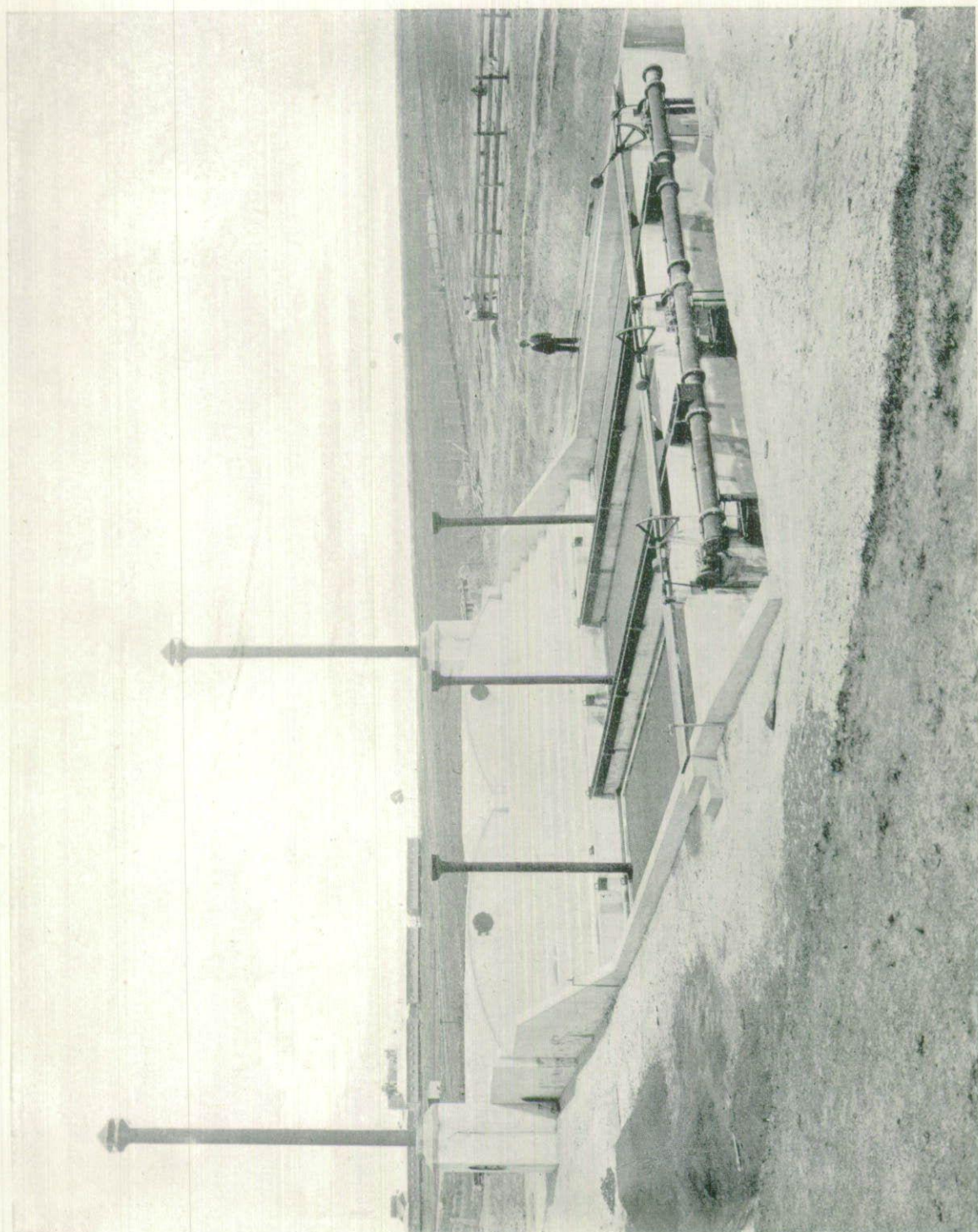
WOMBEYAN CAVES ROAD—CROSSING AT CONSECRATION CREEK.



WOMBAYAN CAVES ROAD—TUNNEL AT THE GULLIES.



WESTERN SUBURBS SEWERAGE—STEEL-PIPE SEWER ACROSS LONG COVE STORMWATER CHANNEL.

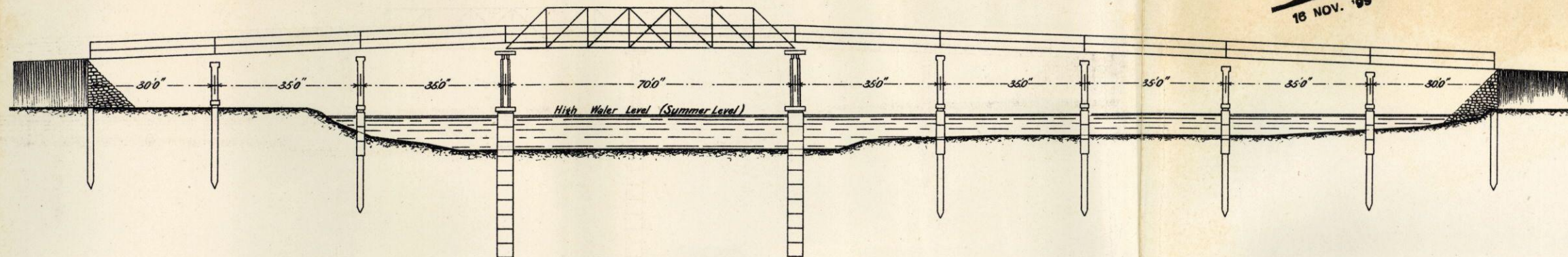


ROOKWOOD ASYLUM DRAINAGE — SEPTIC TANKS.

COCKLE CREEK BRIDGE N S W

SKETCH SHOWING USE OF MONIER CYLINDERS & PILE COVERS

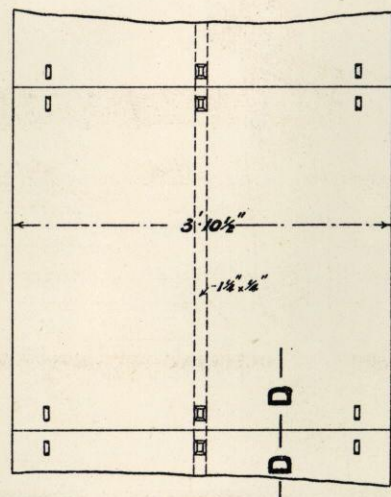
ELEVATION



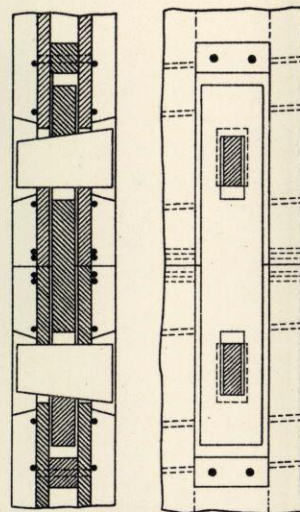
W. H. H. H.
Under Secretary for Public Works,
and Commissioner for Roads,
18 NOV. '99

DETAILS OF MONIER CYLINDERS

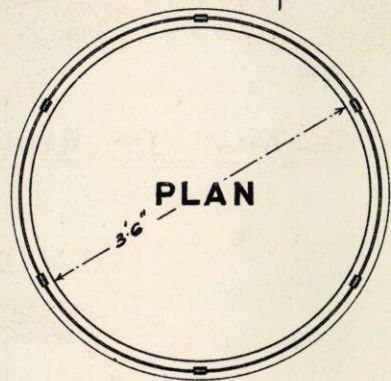
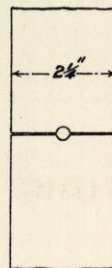
ELEVATION



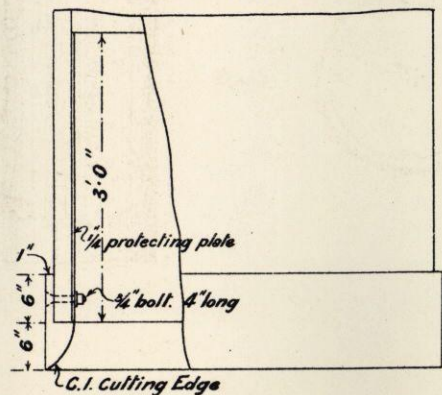
CONNECTION



SECTION AT D-D-

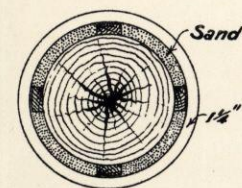


C.I. CUTTING EDGE

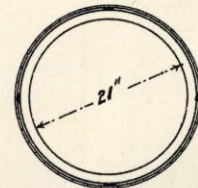


SECTIONS AT

A - A -



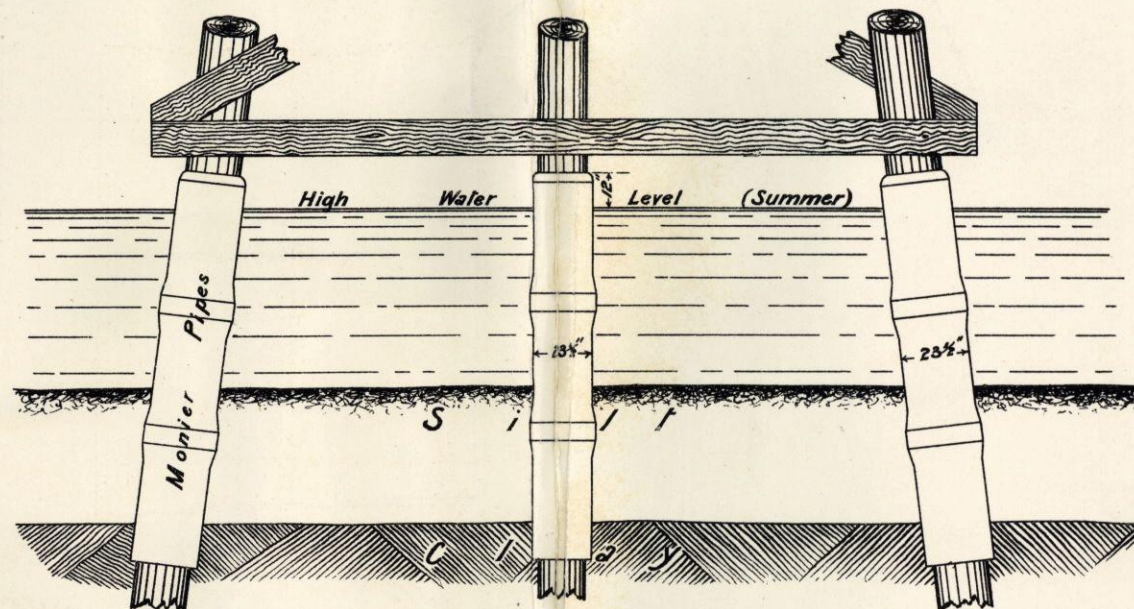
B - B -



SCALES

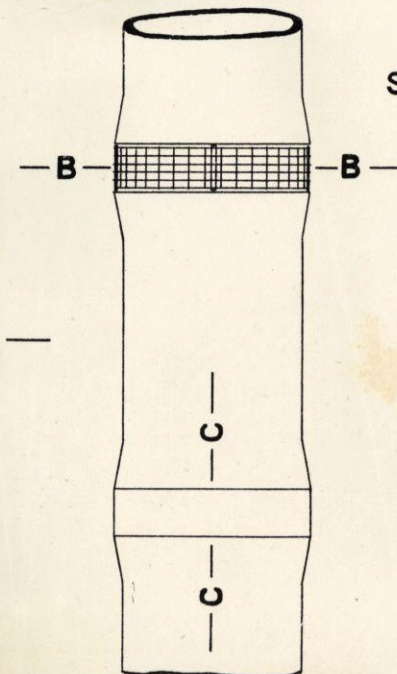


PIER

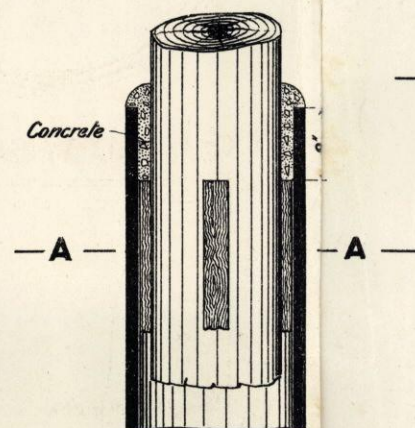


DETAILS OF PILE COVERINGS

ELEVATION



SECTION

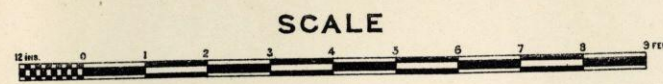


SECTION AT C-C-



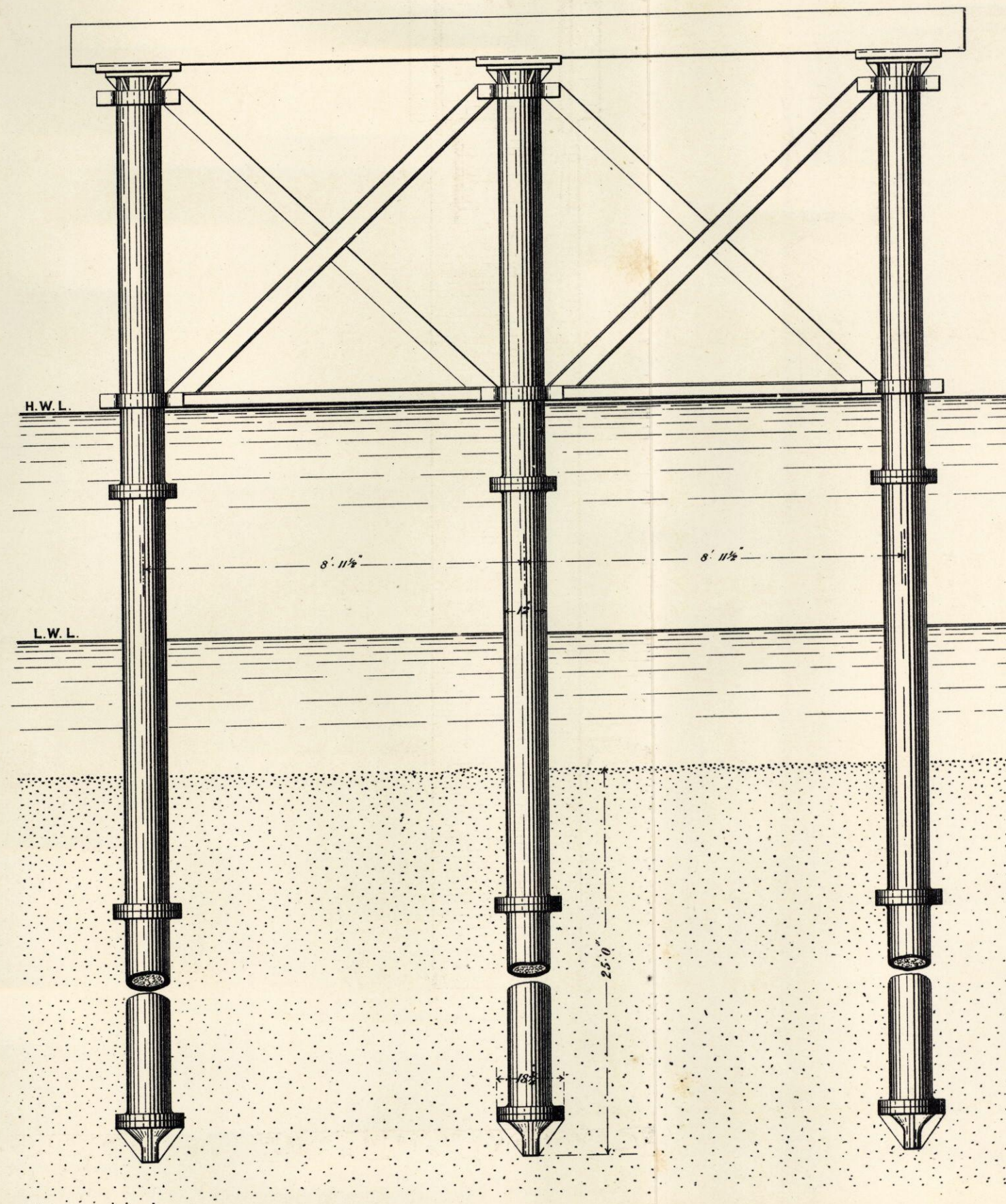
MORUYA BRIDGE

HYDRAULIC METHOD OF SINKING CAST IRON PILES

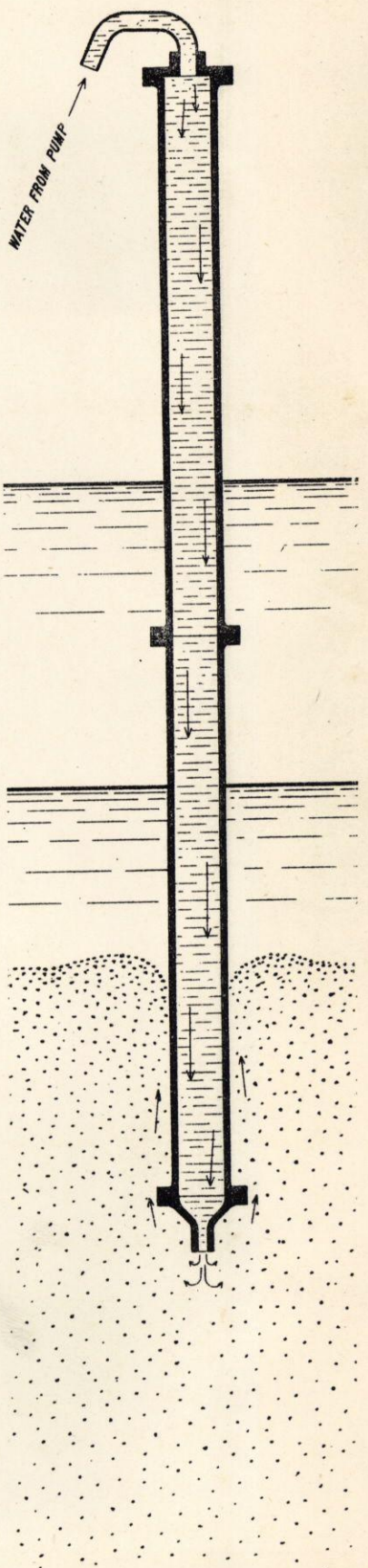


Robert Hillman
Under Secretary for Public Works
and Commissioner for Roads.
16 NOV. '99

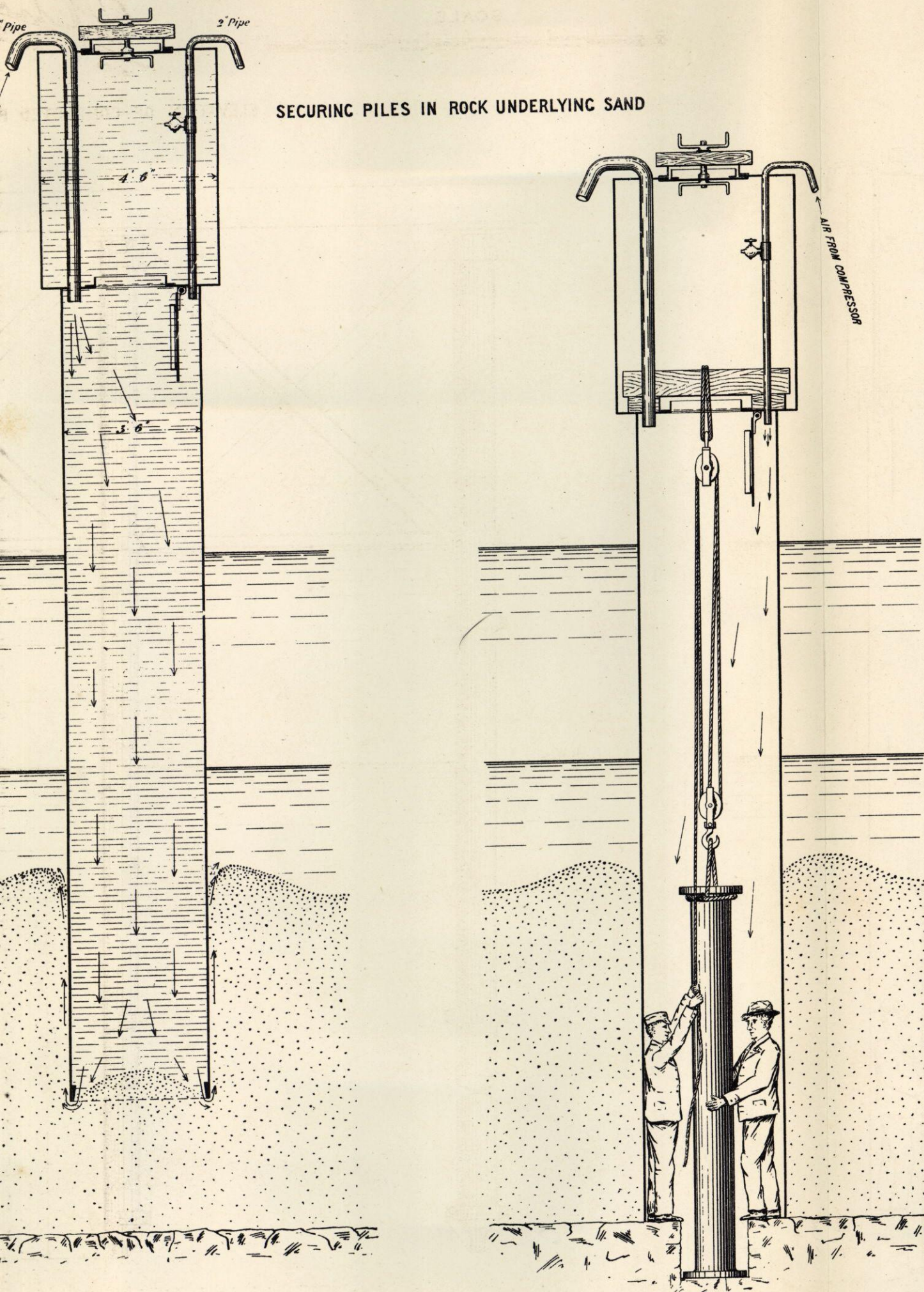
ELEVATION OF COMPLETED PIER



SINKING PILES IN SAND



SECURING PILES IN ROCK UNDERLYING SAND

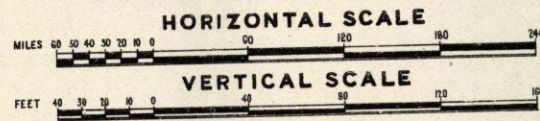


E. J. McRae
1/11/1899

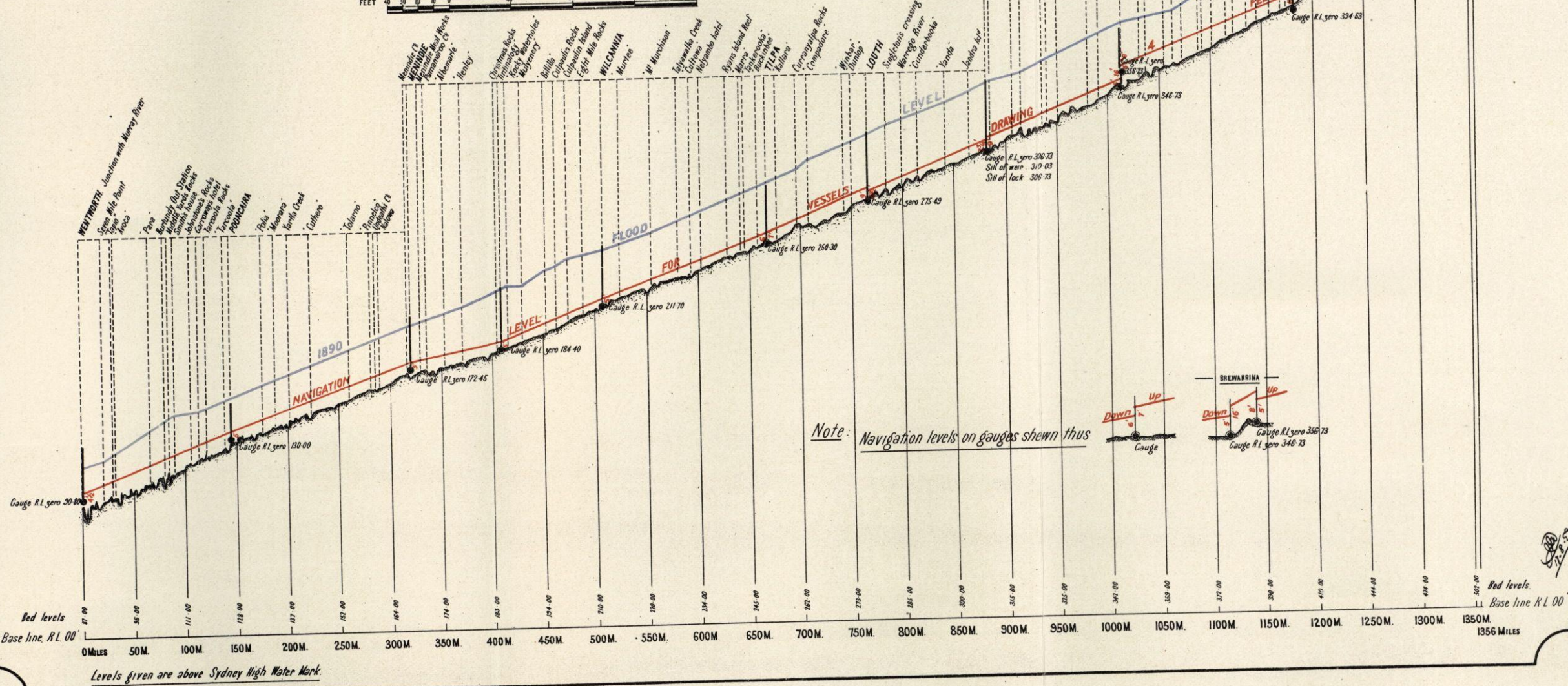
P. W. D.
WATER CONSERVATION BRANCH

DIAGRAM
LONGITUDINAL SECTION OF RIVER DARLING
from
WENTWORTH TO MUNGINDI

showing
NAVIGATION LEVEL



C. J. Barclay
3.11.59
Engineer-in-Chief
for Public Works



MAP OF NEW SOUTH WALES RAILWAYS

to accompany
PUBLIC WORKS ANNUAL REPORT

1898 ~ 1899



References to Numbers on Map showing Work of Water Conservation Branch.

No.	District.	Nature of work.
1	Coastal	Hillgrove water supply—Earth dam, service reservoir, pumping machinery.
2	Upper Darling River	Sunny Corner water supply.
3	" "	Bathurst Experimental Farm—Inlet well, &c.
4	" "	Macquarie River District improvements—Cuttings Nos. 1 and 2.
5	" "	" " Warren weir dam channel and regulator.
6	" "	" " Gin Gin weir.
7	" "	Coonamble bore.
7A	" "	Bourbah bore.
8	" "	Narran River weir and crossing.
9	" "	Bourke lock and weir, also docking arrangements.
10	Lower Darling River.....	Mount Drysdale tank.
11	" "	Gilgunnia tank.
12	" "	Fifield tank.
12A	" "	White Cliffs opal tank.
13	Murray, Murrumbidgee, and Lachlan Rivers..	Wentworth irrigation area—Engine-house, pumping machinery, channels, &c.
14	" " " " ..	Lachlan River District improvements—Middle Billabong weir and cuttings.
15	" " " " ...	Willandra Billabong regulator
16	" " " " ...	and Willandra weir and cuttings.
17	" " " " ...	Lake Cudgellico—Flood-water regulator.
18	" " " " ...	Wyalong water supply—Tanks Nos. 1 and 2.
19	" " " " ...	Trungley tank.
20	" " " " ...	Grong Grong tank.
21	" " " " ...	Yanko Creek improvements—Two contracts.
22	" " " " ...	Jerilderie dam repairs.
23	" " " " ...	Urana by-wash dam.
24	Upper Darling River.....	Bywong pump-well.
25	" "	Lachlan River District improvements—Channel from Middle Billabong Creek to Marowie Creek.
		Queen Charlotte's Vale Creek dam.



PUBLIC WORKS DEPARTMENT
WATER CONSERVATION BRANCH.
MAP
OF
NEW SOUTH WALES
SHOWING POSITIONS OF WORKS CONSTRUCTED
AND PROPOSED &c.
Scale 32 Miles to 1 Inch

REFERENCE
Water Conservation Surveys extend over the area tinted Blue
Positions of Works carried out are shown thus ○ (3) See accompanying List
Positions of Drainage Union areas do ●
Positions of Works under Water Rights Act do ○
Positions of Gauging Sites do ●
Watercourses improved by Works do —

Head Offices of Local Land Boards shewn in blue thus ⊙ BOURKE
Railways shewn thus —
Proportion of Crown Lands within area tinted Blue (up to 1894)
Murray, Murrumbidgee & Lachlan River District — $\frac{1}{2}$
Upper Darling River District — $\frac{2}{3}$
Lower Darling River District — $\frac{1}{10}$

C. Barlow
30/6/99
Engineer-in-Chief
for Public Works.