

SELECTIONS FROM THE RECORDS

OF THE

MADRAS GOVERNMENT.

Published by Authority.



ADMINISTRATION REPORT

OF THE

MADRAS PUBLIC WORKS

FOR THE

OFFICIAL YEAR 1857-58

No. LIX.

MADRAS:

PRINTED AND PUBLISHED BY H. SMITH AT THE FORT SAINT GEORGE GAZETTE PRESS.
1859.

XXVII-D

CENTRAL OFFICE OF P. W.,
FORT SAINT GEORGE,
16th December 1858.

No. 6359.

FROM THE OFFICIATING CHIEF ENGINEER,
TO THE SECRETARY TO GOVERNMENT, D. P. W.

SIR,

Enclosure 7.

Adverting to Extract Minutes of Consultation, 14th November 1858, No. 2371, and the possible delay that may occur in deciding on the question of the applicability of the Bengal Code of Public Works to this Presidency, reported on in my letters of the 30th November and 10th December 1858, No. 586. I have the honor to submit herewith the documents constituting the Annual Report on the operations of the Department required by paras. 11, 12 and 13 of the orders at page 318 of the Circular Order Book.

2. Enclosure No. 1 which was submitted by Colonel Faber on the 16th June last contains the report on the executive operations of the department contemplated in para. 11.

3. Enclosure No. 2 supplies the information required in regard to the traffic of the East Coast Canal by the orders noted in the margin. It consists of five tables marked from A to E. Table A gives a comparative statement of the toll collections during the past two years, and it will be seen from it that there has been an increase of 13,339 tons of miscellaneous produce paying a toll of Rupees 3,334-12, and of 10,836½ tons of salt on which Rupees 2,709-2 were levied. Table B gives a detailed account of the tonnage of each sort of goods that arrived at the Basin during the official years 1856-57 and 1857-58, and the amount of toll collected on it. It will be observed from this statement also that there has been a large increase on the whole in the different species of cargo carried on the canal. Table C shews the villages which make use of the canal, their produce, and the tolls they pay, from which it will be perceived, that the boats which came from the new cut between Streeharicottah and Doogoorauzpatam, have increased from 169 in 1856-57, carrying 2,895 tons, to 390 in 1857-58, carrying 6,362 tons, with an increased toll of Rupees 866-12. Table D shews the number of boats registered on the canal books of each dimension, and hence it appears that the number of new boats built in the past official year was 54, having a tonnage of 849. Table E exhibits the amount of monthly toll collected on miscellaneous produce and salt, giving Rupees 32,410-12 as the collections of the entire year.

4. Enclosure No. 3 is a Register of Boats and Traffic that passed the Shediancoopam lock Vide page 330, Circular on Cochrane's canal, and other locks on the Godavery and Kistna Order Book. channels. It is prepared in accordance with the order of Government of 5th July 1856, No. 1110.

5. As regards the results of improvements, which are required to be reported on in para. 12, of the section of the Code already quoted, I beg to state that no new works of any magnitude have been carried on during the past year, whose effect on the improvement of the country deserves special mention. The money results of works formerly constructed are detailed in the statement of remunerative works, forming an appendix to the annual progress report, and a copy of this document is herewith transmitted as enclosure No. 4, for the sake of rendering the present report complete.

11.2.11-MS

MS

46076

6. Enclosure No. 5, is a statement of Audit in the Central Office for the past official year, and exhibits the following results;—

	No.	Amount.
Bills on hand on 1st May 1857.....	458	13,41,399 10 6
Received during the official year 1857-58.....	6,119	118,12,784 7 5
Total.....	6,557	131,54,184 1 11
Passed by the Chief Engineer.....	2,037	50,28,014 5 11
Recommended for the sanction of Government.	334	2,21,852 0 9
Examined and returned for explanation or correction.....	475	12,36,330 13 1
Total disposed of...	2,846	64,86,197 3 9
Balance remaining on hand on 1st May 1858...	3,731	66,67,986 14 2

7. It will be perceived that the balance remaining on hand on 1st May 1858 was much greater than that on 1st May 1857. This is owing to the very large number of bills received in the year under review, amounting to no less than 118½ lacs of Rupees, appertaining chiefly to the unpassed expenditure up to 30th April 1856, written off in the books of the Collectors and Accountant General. The Government have been informed, by the report noted in the margin, that by the strenuous exertions made in the current year, the whole of the above arrears has been cleared off.

8. Agreeably to the observations contained in Extract Minutes of Consultation 3rd May 1858, No. 830, the classified synopsis of passed expenditure, and the list of Bills exceeding 5,000 Rupees each heretofore entered in the Annual Reports, have been omitted.

9. Enclosure No. 6, is a statement of the issues of Mathematical and Surveying instruments, as well as of machinery and tools issued to the different Districts during the year under report. The issues reported in it have been made from time to time on Indents forwarded by the District Engineers, and have been regulated by the exigencies of the Service. They do not, therefore, call for any particular remark.

10. The only point remaining to be noticed is the subject of rates and prices adverted to in para. 13 of the 1st Section of the Code. The returns received from the District Engineers do not enable me, I am sorry to say, to lay any valuable information before Government respecting this enquiry, and it is quite evident that this subject can only be properly dealt with after a careful study of the bills of actual charges in general, for no sets of rates, arbitrarily fixed for a District without reference to the extent and position of the works, can be depended on; and I can only hold out the hope of being able to furnish a reliable opinion of the moderation or otherwise of the cost of public works after a further period of scrutiny into the accounts. I must, therefore, reserve it for a future special report as already intimated in para. 7 of my letter of the 30th October last, No. 5029.

11. Finally, in compliance with a wish recorded by Colonel Faber previous to his departure on sick leave, I beg to forward, for the information of Government, copy of a report by the Superintendent of the Lithographic Press attached to the Central Office, on the work performed in that Department during the year 1857-58, and of a Memorandum prepared thereon under the orders of the Chief Engineer.

I have, &c.,

E. LAWFORD, LIEUT. COLONEL,
Officiating Chief Engineer.

CENTRAL OFFICE OF P. W.,
FORT ST. GEORGE, 14th June 1858.

No. 822 A.

FROM THE CHIEF ENGINEER,
TO THE CHIEF SECRETARY TO GOVERNMENT.

SIR,

The retrospective administration narrative of the Madras Public Works, which is now due for 1857-58, as required by the orders dated Fort William, 21st September 1855, has been influenced so largely by the still prevailing political convulsions of the North Western parts of the Anglo Indian Empire, that, although the tranquillity of the Madras Presidency can scarcely be said to have been itself disturbed, there is not a single branch of Public Works Report free from the deplorably injurious results of the wide-spread rebellion, which first broke out but a few days after the commencement of the official year, whose proceedings I am now to pass under condensed review, for the information of the Right Honorable the Governor in Council, and for transmission to the Government of India.

2. The discouraging difference between prospective expectation or promise and actual performance, which, has so curiously attached itself as an inseparable attendant of the D. P. W. ever since its recent comprehensive reform and re-organization, seemed not unlikely to be partially suspended, when the season of 1857-58 set in on the 1st May.

3. There appeared to be good reason, in the early part of last year, for expecting a less rigorous restriction in the approaching season, notwithstanding that the allotment of only 22 lacs for the improvements of 1856-57 had fallen so far below the previous anticipations; and in the meanwhile matters had been gradually settling generally down under the newly-formed professional Executive, Tanjore alone continuing to form the exception of P. W. management, being, as of old, by the Revenue Officers of the District.

4. So early as the 12th March 1857 the orders of the Madras Government on the Budget for 1857-58 were circulated to the whole of the officers in the Mofussil; greatly increased facilities were thereby created for the receipt of public funds from the District Treasuries, and with a Budget List, No. 2, amounting to Rupees 37,46,292, and with No. 3 for repairs reaching a total of 21,83,442, thus giving on aggregate of Rupees 59,29,734 available for actual expenditure, and distributed, moreover, with an equality going far to redress the previous practice of favoring certain special Districts, it must be admitted, that, however much the prospective operations on an immediate outlay of about 60 lacs of Rupees might fall short of the executive capabilities, and still more of the actual wants of the Southern Presidency, yet that no such fair and encouraging opportunity of progress had ever hitherto presented itself to the Madras D. P. W.

5. Profiting then by the useful interval so considerably and wisely bestowed by Government between the 12th of March and 1st of May 1857, many District Engineers, in full reliance on the conclusive nature of their instructions, had completed all preliminary arrangements necessary for actual operations being vigorously set on foot at day break on the very first day of the season. It must, however, now be the irksome future scope of this paper to set forth the chief causes that have unhappily combined to nullify more encouraging expectations of progress, general maintenance, and improvement than any former Departmental conjuncture.

6. By far the most influential circumstances to be enumerated, under this view, are the retrenchment* of the expenditure, and the sweeping reduction† of P. W. establishment, rendered unavoidable by the Mutinies. The former was cut down from Rupees 64,19,784 to 38 lacs on all kinds of Public Works, and the latter was reduced by nearly 25 per cent. of its entire strength, or in salaries from 16,01,454 Rupees to 12,60,810 Rupees per annum. By these means the actual operations of the year have, of course, materially suffered, having in fact been strictly confined to Military works, and to some few others of an indisputably emergent character.

7. But the foregoing restrictions thus imposed, have been found practically impossible as regards works of irrigation, for upon their due maintenance, a very great portion of the land revenue of the Madras Presidency is dependent. The damage caused by the periodical rains, and the

* Extract Minutes of Consultation, No. 461, dated 12th March 1857.

† Extract Minutes of Consultation, No. 1372, dated 17th July 1857.

‡ Government Gazette Extract 18th July 1857.

mischievous inflicted by a Cyclone which visited and devastated parts of Nellore and Cuddapah on the 2nd November 1857, rendered it absolutely necessary to relax the restriction, in the first instance, in favor of only a few Districts, but ultimately in almost every one, so that the original sum allotted* for repairs of hydraulic works, has been fully expended, and probably even exceeded. It is to be remembered that the reservoir which supplies water for irrigation, owes its existence, in most cases, to a simple weir or dam of masonry or of earth thrown across some mountain stream or channel, and that by every monsoon, sundry injuries are more or less inflicted, which, unless immediately repaired, seriously impair the performance of its function in the ensuing season. Hence, of all description of repairs, those to irrigation works are of the most urgent character, and they cannot be postponed without generally admitted injustice to the vested rights of landholders, and without serious though smaller injury to the Government Revenue.

8. Again, amongst the minor yet not to be omitted causes contributing to retard operations, may be mentioned—1st, an indisputable general rise of prices for both materials and labour throughout the Presidency; attributable, 1st, partly to the demands created by the Railway, 2ndly, partly to the impetus given some three years ago to Public Works generally, 3rdly, partly to the locally high prices of grain, and, lastly, partly perhaps to the gradual modification every where of material value, brought about by the vastly increased amount of the precious metals in circulation by the gold discoveries, and by the large introduction to every place from California, and by trade from the Australasian Colonies during the last 8 or 9 years, thus disturbing first in Europe, and now in Asia, the relation between gold and its former representative value of goods and labour. A generally alleged want of co-operation of the Subordinate Revenue Officials with those of the Department Public Works, whereby the latter, new to their executive ranges, and unacquainted with their resources, have to encounter highly formidable obstacles in procuring materials and labour unless indeed at high prices and after much loss of valuable time; the novel and exceeding insecurity attending the local transport and remittance of specie from one place to another, has also operated in its measure to greater or less delay, according to circumstances. Formerly money was sent by Tahsildars under an escort and in the custody of police or talook peons, who, known to heads of villages as in authority, were both readily protected and expedited in their journey; whilst now, on the contrary, the single lascar attached to the Executive Officer or Subordinate, is the sole custodian of treasure, and he, altogether unknown to the village authorities, is left to his own devices, so that, in not a few instances, money thus carelessly guarded or altogether unprotected, either has been abstracted really, or allegations of robbery are confidently put forth to the inferential establishment, of inadequate protection being the prevailing opinion. However, it is to be hoped, that as the officers of the Department and their servants become better known to the people within their respective ranges, the village authorities will no longer fail to pass specie forwarded from limit to limit in safety. Perhaps also the Government may hereafter reconsider the present orders, which, based on the independence of the D. P. W. of all Governmental assistance, rule, that funds whether for work peoples' wages, or for salaries of officers, shall be at the responsibility of the District Engineer from moment of Treasury issue and in transitu to place of disbursement.

9. The Extract Minutes of Consultation 461, of 12th March, gave the subjoined figured Statement as applicable for the operations of 1857-58, viz.

	List No. 1.	List No. 2.	Repairs.	Total.
Irrigation Works.. ...	1,65,000	10,82,226	12,77,316	25,24,542
Communications. ...	3,02,050	19,99,388	7,18,958	30,20,396
Buildings. ...	23,000	6,64,678	1,87,168	8,74,846
Total. ...	4,90,050	37,46,292	21,83,442	46,19,784

* Letter to Government of India, No. 560, 27th March 1857.

making thus a grand total of Rupees 64,19,784, exclusive of the Mysore and Hyderabad Military works, for which a separate provision was made as follows: including repairs,*

Mysore.....Rupees 1,05,000
Hyderabad.....,, 3,39,887

Total..... 4,44,887

10. But the despatch of the Government of India, dated 3rd July 1857, No. 3265, cut the above expenditure down to 38,00,000 Rupees in the aggregate, viz:

List No. 1. Salem Jail..... 20,000
,, ,, 2. Military Works, &c..... 4,67,075
Buildings..... 65,293
Municipal and Marine improvements..... 34,810
Irrigation..... 2,60,000
Communications..... 6,85,000
No. 3. Repairs of all kinds..... 14,67,822
Emergent Works..... 2,60,113
Secunderabad Barracks..... 3,39,887
Bangalore Barracks..... 2,00,000
Total..... 38,00,000

11. Thus by the financial demands of the Empire generally, was necessitated the stoppage of many works which had been commenced during the brief and fallacious interval adverted to in para. 5 at the beginning of the Official year, and thus also were arrested, many others that had long been under prosecution on previous sanctions.

12. The total expenditure of the year under all restrictions, and difficulties entailed upon this Presidency by the precarious position of the year's Revenue in the Upper Provinces may be reckoned at Rupees 40,87,025, for new works and repairs, namely:

For Irrigation Works..... 4,38,108
Communications... .. 4,96,080
Buildings 11,38,607
Total Rupees .. 20,72,795

and for repairs under the same heads, viz:

For Irrigation Works..... 12,70,656
Communications..... 5,34,757
Buildings..... 2,08,817

Total Rupees... 20,14,230

thus giving a grand total of Rupees... 40,87,025

13. A more detailed and classified synopsis of the expenditure is given agreeably to the orders of Government in the subjoined Statement, from which it will be perceived that the limit on the aggregate outlay fixed by the Government of India has been but very slightly exceeded, although in "repairs" it has been found quite impracticable for reasons already assigned, to restrain the cost of making good dilapidations and damages within the prescribed margin; and if the present were not rather a record of what has than of what ought to have been performed, I should have availed myself of this, as of every other occasion, to expose the erroneous principle of parsimonious maintenance of the numerous hydraulic constructions established for the artificial irrigation of rice and cane cultivation.

I. Expenditure on New Works during the year 1857-58.

	COMMUNICATIONS.				BUILDINGS.						Total.		
	Irrigation Works.	Roads and Bridges.	Navigable Canals.	Ports and Harbours.	Perry Boats.	Military.	Revenue.	Public.	Judicial.	Ecclesiastical.		Marine.	Educational.
Ganjam.....	2,712	35,304	6	383	290	476	2,153	3,784	167	175	...	...	45,450
Vizagapatam.....	...	4,322	...	...	...	5,646	2,650	4,976	...	297	220	...	18,111
Godavery Division.....	1,52,286	8,264	19,895	20,199	...	12,117	...	63	519	488	734	4	2,14,569
Kistnah Division.....	82,166	16,844	...	...	482	4,107	...	9,800	104	10	143	...	1,13,656
Nellore.....	30,561	26,061	...	...	...	1,600	538	3,687	356	...	...	...	62,803
Cuddapah.....	20,384	19,182	...	...	...	3,055	775	3,507	892	...	...	...	47,795
Bellary.....	1,889	4,095	...	...	...	39,267	1,037	245	87	...	...	...	46,620
Kurnool.....	...	38,853	...	...	...	...	4	452	...	...	...	...	39,309
Chingleput.....	5,828	46,191	337	...	...	64,361	2,402	4	934	1,789	...	...	1,21,846
North Arcot.....	73,121	56,263	...	...	...	80	300	847	880	...	...	...	1,31,491
South Arcot.....	13,131	25,787	...	2,170	...	173	...	560	52	...	...	...	41,873
Tanjore.....	3,479	30,903	6,858	1,942	...	...	243	...	1,238	...	...	...	44,663
Trichinopoly.....	25,492	5,053	...	...	...	18,380	...	...	...	...	...	...	48,925
Madura.....	185	11,827	9,103	...	...	...	2,429	60	...	...	...	15	23,619
Tinnevelly.....	11,036	8,103	...	...	...	143	946	533	...	...	...	...	20,761
Coimbatore.....	14,426	16,169	...	...	...	3,15,994	1,402	5,477	1,187	1,702	...	2,795	3,59,152
Salem.....	803	11,892	...	...	...	5,972	1,868	59	23,334	...	...	...	43,928
Canara.....	...	17,501	...	278	...	170	244	...	455	16	54	...	18,718
Malabar.....	609	17,131	...	...	...	9,653	111	42	314	80	1,056	...	28,996
Madras. { Civil Architect.....	...	...	...	...	...	1,203	...	15,716	26,522	886	...	...	44,327
East Coast Canal. { Garrison Engineer.....	...	85	...	4,170	...	49,910	4,875	1,136	...	...	11,294	...	71,470
Hyderabad.....	...	1,257	28,680	...	...	...	...	...	...	...	...	...	29,937
Mysore.....	...	...	...	...	...	3,60,570	...	...	...	...	...	...	3,60,570
Jaulnah.....	...	200	...	...	...	91,738	...	18	...	2,250	...	...	94,206
...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Rupees...	4,38,108	4,01,287	64,879	29,142	772	9,84,615	21,977	50,966	57,041	7,693	13,501	2,814	20,72,795

II. Expenditure on Repairs during the year 1857-58.

	Irrigation Works.	COMMUNICATIONS.				BUILDINGS.						Total.
		Roads and Bridges.	Navigable Canals.	Ports and Harbours.	Ferry Boats.	Military.	Revenue.	Public.	Judicial.	Ecclesiastical.	Marine.	
Ganjam.....	26,278	18,992	...	...	212	1,318	5,918	193	381	350	...	53,642
Vizagapatam.....	11,283	1,009	...	...	1,066	1,033	2,065	589	92	277	20	17,434
Godavery Division.....	3,05,077	1,555	10,672	615	834	1,251	859	261	1,474	...	...	3,22,598
Kistnah Division.....	1,23,807	19,244	120	...	...	1,220	379	196	658	2,517	100	1,48,241
Nellore.....	1,17,747	40,910	...	...	112	82	455	706	549	203	2	1,60,766
Cuddapah.....	35,422	24,067	...	...	...	509	1,174	544	50	...	...	61,766
Bellary.....	80,182	50,826	...	...	...	7,968	1,371	576	1,110	210	...	1,42,243
Kurnool.....	5,763	11,439	...	...	...	839	519	285	879	...	...	19,724
Chingleput.....	41,445	86,664	...	...	223	17,365	537	1,354	343	1,087	...	1,49,018
North Arcot.....	34,920	46,538	...	...	...	3,523	160	144	489	288	...	86,062
South Arcot.....	70,981	37,568	...	...	...	...	485	702	916	...	...	1,10,652
Tanjore.....	1,65,965	7,804	2,560	32	317	...	207	378	282	...	336	1,77,956
Trichinopoly.....	76,681	24,121	...	...	...	2,217	237	...	159	...	...	1,03,415
Madura.....	52,370	2,104	...	...	...	1,618	291	281	5	...	...	56,669
Tinnevely.....	50,773	4,979	...	...	...	875	145	55	...	141	...	56,968
Coimbatore.....	29,366	38,644	...	...	...	849	483	1,827	230	18	...	71,417
Salem.....	42,128	20,338	...	...	...	...	944	529	317	...	...	64,256
Canara.....	...	40,204	...	...	...	1,898	4,014	1,759	448	71	...	48,394
Malabar.....	468	18,157	570	...	...	6,591	1,773	3,004	488	258	228	31,537
Madras. { Civil Architect.....	...	8,469	...	...	...	8,982	...	16,522	12,991	698	...	47,876
Madras. { Garrison Engineer.....	...	2,472	...	2,749	...	58,422	5,478	3,049	...	482	...	72,652
East Coast Canal.....	...	...	8,571	...	...	...	...	...	...	...	...	8,571
Hyderabad.....	...	...	...	...	...	812	...	...	...	...	...	812
Mysore.....	...	...	...	...	...	1,549	...	...	...	4	...	1,553
Jaulnah.....	...	...	...	...	...	5	...	...	...	3	...	8
Total Rupees...	12,70,656	5,06,104	22,493	3,396	2,764	1,18,926	27,494	32,954	21,861	6,607	686	20,14,230

14. Such general observations and Statements as are requisite having been thus submitted, I now have to report on the principal local operations carried on in each District, keeping carefully in view the recent special instructions of Government.*

* Para. 12 Extract Minutes of Consultation 830, 3rd May 1858.

Ganjam.

15. The entire Ganjam expenditure of Rupees 99,092 is broken into Rupees 45,450 for New Works, and Rupees 53,642 for Repairs. The former principally comprises Roads and Bridges, the following being the most prominent, namely:

	Expenditure during the year, Rs.
Berhampore and Russelcondah Road.....	5,064
Completing the Aska Bridge.....	2,725
Chicacole and Calingapatam Road.....	9,011
Nursimpetta and Calingapatam Road.....	4,871
Re-metalling Berhampore and Aska Road.....	4,684

16. The July restrictive orders arrested the further expenditure most injuriously, but unavoidably, on the above highly useful improvements, the outlay as above cited for the most part having taken place previously; no District is more highly susceptible of development than Ganjam, and the Rupees 26,278, spent on repairing irrigational constructions are believed to have effected a measure of benefit out of all proportion with the actual expense. Rupees 18,992 have been spent on repairing Roads, Rupees 5,918 on Revenue Buildings, and Rupees 1,318 on Military Building Repairs. Large annual repairs for many future years are a necessity for this Province.

Vizagapatam.

17. Ten works of importance have been carried on in Vizagapatam, the expenditure on New Works being only Rupees 18,111, and on Repairs Rupees 17,434, making a total of Rupees 35,545 for 1857-58. The Electric Telegraph line between Coonee and Chicacole on which Rupees 4,979 were expended, and some temporary Bridges on Trunk Road No. 6, between Soobbaram and Chicacole are the specialities of the year.

18. The Custom House at Bimlipatam and new Mess Room to the Barracks at Vizagapatam were completed out of the amount above stated. The Custom House at Vizagapatam commenced in the early part of the year, was arrested in July, after an expenditure of Rupees 1,700, which with proper activity might most easily have reached the limit of Rupees 5,610 necessary for the completion of the structure. The District Engineer loudly complains of the absence of good understanding between the Subordinates of the Revenue and Public Work Departments, and observes that progress is likely to be much impeded thereby. Lieutenant Vertue lastly, further reports, that prices of materials and labor and that rates of wages are greatly on the increase in Vizagapatam.

Godavery Division.

19. Owing to pecuniary restriction, attention has principally been directed to conservancy of works already constructed, and to increase of their efficiency. The distribution of water from the Godavery Project, has been more minutely carried out and with much success during the past year.

20. These improvements for several years in Rajahmundry have had their natural effect on the labor-market of the District, for the great extension of cultivation throughout the Delta, and the increased facilities for transport have so reduced the number of labourers, that the Department no longer command the same supply it formerly did with ease, and notwithstanding that the departmental rate of wages has been raised fully 30 per cent. serious difficulty is still encountered, and a further rise of wages is to be anticipated, as the only condition of a full labor supply.

21. The season of 1857-58 has been rendered specially notable in Rajahmundry, by the unexpected catastrophe of a breach in the Muddoor branch of that vast work, to which the Delta of the Godavery owes its chief prosperity. The partial failure of the Dam which forms the key of the comprehensive project for a combined system of irrigation and navigation, hitherto without parallel in this or any other country, was calculated at first sight to undermine all that trust hitherto so confidently reposed in the permanence and absolute security of this gigantic

work, and in the soundness of the constructive principles on which it has been built. But it is not to be expected that so large and remunerative a work can have an immunity from the risks besetting all human enterprise, and the celebrated Projector, Colonel Arthur Cotton, in his report on the accident, dated Madras, 19th January 1858, drawn up after his return from personally directing the operations of repair, succeeds in shewing very clearly at what cost of precautions, the safety of the Godavery Dam can be placed beyond all risk of danger. Moreover the breach was closed in a temporary manner within six weeks from the date of its occurrence; and the accident having providentially occurred at the time when the crops were either already ripe or nearly so, no loss has resulted, except of some Sugar Cane cultivation. The total cost of repairing the accident is estimated at 60,000 Rupees, or about 7 per cent. of the first cost of the work.

22. The Expenditure on New Works during the year has been as follows:

	Rs.
Irrigation Works.....	1,52,286
Communications, including Canals.....	48,358
Buildings.....	13,925
Total	2,14,569

23. The principal Works are the following:

	Expenditure.
Towing path to the Nagaram Aqueduct.....	4,344
Eastern Delta Works.....	6,852
Widening the Samulecottah Channels.....	6,852
Central Delta Works.....	14,138
Irrigation and drainage Channels in Brecavole and Nagaram Talooks.	10,008
Samulecottah and Toonee Canal.....	12,633
Widening Palcole Channel.....	11,688
Samulecottah and Cocanada Canal.....	17,060
Nagaram Aqueduct and Channels.....	4,201
Coringa Harbour.....	7,983
Cocanada Harbour.....	5,996
Apparow Canal.....	6,741
Weyaroo Canal of Irrigation and Navigation.....	56,901

24. Under the head of Repairs, Rupees 3,22,598 have been laid out, chiefly on Irrigation Works; the most considerable item being, as may easily be supposed, the repair of the Godavery Annicut breach.

Kistnah Division.

25. The Public Works restrictive order of August last, has nowhere been found so very detrimental as in this Division. The whole Public Works were at that time progressing admirably and vigorously, the supply of materials and the internal economy of the Department being thoroughly organized, a considerable amount of labour (much of it skilled) had been collected, and there was every prospect of the great scheme of continued Irrigation and Navigation from the Kistnah being speedily and excellently worked out, when the cessation order arrived.

26. This sudden stoppage has been most injurious, many of the half finished works are reported to be rapidly deteriorating, so that when the Projects now abandoned are resumed, it will be found that much of the capital originally expended on them has been thrown away.

27. On the resumption in 1858 of one portion of the Masulipatam Canal as a Military communication, it was already most difficult to procure even unskilled labor, the skilled labor, drawn originally for the most part from such other Districts, and trained up under zealous Officers, had disappeared, whilst much of the Cooly labor of the Division had been hired by the Ryots themselves, and applied to the cultivation of the soil. The evil was aggravated by an increase of prices, especially in food and carriage, without an equivalent rise of wages, so that where, less than a year ago, labor was comparatively abundant and moderately priced, it was impossible within only six months afterwards to carry on one single Canal on an extensive scale.

28. With respect to the Irrigation of the District, the District Engineer reports that it has never, hitherto, been so extensive or so advantageous, either to the State or to the people.

29. In Masulipatam, at the commencement of the cultivating season, there was a drought, after that a heavy rain fall, and lastly, a couple of months without any rain whatever. In Guntoor the season was similar, but more severe, for there the most unusually heavy downpour, in September, breached almost every Tank in the Collectorate, and swept away miles of irrigating Channels, yet the wet crops raised under the Annicut in the two Collectorates were of more than average yield or value. In Guntoor, the damage caused by the floods was speedily made good, and the Kistnah water turned into the repaired Tanks and Canals in time to save the cultivation, which otherwise must inevitably have perished from the continuous dry weather succeeding the heavy rains.

30. The lines of communication through the Division have, owing on the one hand to the transport of Troops and Stores, necessitated by the Campaigns in Central India, and on the other, to the rise of prices and consequent desire of realizing the value of produce on hand, been in greater use in this, than in probably any other previous year. The Masulipatam and Hyderabad road in particular, has been thronged with Detachments of all arms of the Service, with a Siege Train, and with Military Stores passing into the interior, and with the return carriages bringing back inland produce.

31. Unfortunately the people themselves have suffered severely from the disordered state of other portions of the empire; a great call was made upon them for carriage, and on an insufficient voluntary quantity being supplied, the deficit was necessarily impressed.

32. From this cause many Ryots were afraid, or unwilling, to send their produce to market, and in some places sold it to speculators on the ground at a reduced price, preferring certain loss to the chance of the impressment of their carts and cattle.

33. Much oppression was exercised in this way in the collection of the required carriage; and it ended at last in whole villages taking their bandies to pieces and burying them, and driving their bullocks away into the hills.

34. The movement during the past year on the navigable Canals, could hardly be expected to shew an increase on former seasons, and until the lines are continued to some notable emporia as termini, this is not to be wondered at. At present, the 24 miles of first class navigation starting from each flank of the Annicut lead to nothing. On the completion of the Canal, however, to Masulipatam, there will, of necessity, be an extraordinary increase of traffic, for when prices are nearly 40 per cent. higher at Guntoor (under 50 miles in a straight line from Masulipatam) than at the latter place, individuals will realize great profits by the water conveyance of goods from one to the other town.

35. During the past year a temporary Coast line of Telegraph was erected by Officers of this Department from Ellore to Incole, a distance rather above 100 miles, the Kistnah being spanned by a 5th wire cable, 2,000 yards in length, suspended from hill to hill, forming a bold catenarian curve of perhaps greater single span than has ever been carried into effect, or attempted even, elsewhere.

36. The Expenditure on New Works amounts to Rupees 1,13,656, viz.

On Irrigation Works	„	82,166
Communications.....	„	17,326
Buildings.....	„	14,164

the principal items being as follows:

	Rs.
Road from Ibrampatam to the Nizam's Frontier.....	6,504
Northern high level Channel from the Boodoomair to Denderloor.....	9,848
Channel from the Poolairoo near Weeyoor to the Canal basin at Masulipatam.....	32,731
Widening and deepening the Toongaboodra Channel, and cutting a new Channel in continuation as far as Nizampatam	7,595
Western bank Channel from Vullabapooram to tide water.....	8,430
Southern high level Channel from the Toongaboodra near the Kistnah Annicut to Irganawpada.....	10,818

37. The Expenditure on Repairs amounts to Rupees 1,48,241, of which Rupees 1,23,807 are for Irrigation Works, relating chiefly to the extension and development of the system dependent on the Kistnah Annicut.

Nellore.

38. This Province was visited by a dreadful hurricane in November last, which did serious injury to the Public Works. The Pennair Annicut, Trunk Road No. 6, between Wajelly and Nellore, the Nellore, the Alloor, and the Survapully Tanks, stand signally conspicuous amongst a host of 300 smaller works, which have been injured or altogether destroyed. The Pennair Annicut breach was nearly 100 yards in length, besides that work being stripped of the greater part of the Apron along its whole length. The Tanks abovementioned have had their inner revetments, and in some cases, their supplying channels much injured, so that much more than a year's revenue will be required to restore them to their previous state.

39. Notwithstanding the restraint on the expenditure, the above disasters necessitated a large outlay on repairs, nearly 1,18,000 Rupees having been laid out on Irrigation Works alone.

40. The entire expenditure of the District amounts to Rupees 62,803 on New Works, and Rupees 1,60,766 on repairs. The principal works under the former class are Trunk Roads Nos. 6 and 7, and other lines of communication, but the works not being of a special character do not call for further notice.

Cuddapah.

41. The storm which raged in Nellore also devastated the eastern Talooks of this Province, viz., Doopaud, Cumbum, Budwail, Sidhout, and Chitwail, but the rain which fell was most singularly capricious and partial. To the south of the Goolchernoo Ghaut, not a drop of water fell, while in the adjoining Talooks, within the distance of a mile, the storm was so severe as to breach and otherwise seriously injure almost every work of Irrigation; and in the Sidhout Talook alone, which suffered the most, there were as many as 60 Tanks breached by this calamitous visitation.

42. In the utter stagnation of New Works of improvement, the chief efforts of the Public Works Department have been directed to the speedy and efficient repair of the above damages. Rupees 35,422 have been thus laid out on Irrigation works, and Rupees 24,067 on the Cuddapah Communications, proverbially the worst in the whole of the Madras Presidency. The expenditure on New Works amounts to Rupees 47,795, of which Rupees 20,384 are for works of Irrigation, and Rupees 19,182 for Road repairs. The most important of the New Works executed are the following:

	Rs.
Six Bridges and 14 Tunnel between Culloor and Kulcudda, on Trunk Road No. 11.....	6,950
Earthwork and metalling to a portion of the high Road from Cuddapah to Madras.....	8,857
New Head and Sluice to the Yennamalah Chintah Channel.....	2,314
Improvements to Budwail Tank.....	3,484

but progress was arrested by the orders of last July.

Bellary.

43. In the Bellary District no important work of any kind has been in progress except the new European Regimental Hospital at Bellary; Rupees 16,980 have been expended on the foundations and basement of the building, and a few door frames have been set up for the walls above; but want of timber has prevented further progress, the required supply being entirely dependent on the floods of the Toombuddra, for the timber depôt is at Wallabapoor, on that river, 44 miles streamward of Bellary. The Bellary Hospital was authorized for execution in list No. 1 of 1856-57, but countermanded by Extract Minutes Consultation of 25th November 1856, No. 2203. Other repairs duly executed, call for no particular notice.

44. Roads formerly made have been kept in order, but want of European superintendence caused by the unavoidably extensive reductions and retrenchments has been grievously felt. Originally made of mere gravel, the Roads require more constant attention and skill than if originally of permanent construction.

45. The Toombuddra Irrigation Channels have been cleared out thoroughly, and an increased area of 500 acres has been gained, but it is hoped that a still larger increase will be made in the current year; several large Tanks have also been repaired, and their capacity greatly increased; so that if not for the wanton and unchecked waste by the Ryots, who appropriate 3 inches of water constantly when one would amply suffice, the Rice cultivation of Bellary might be greatly extended, and thus secure a large increase of Revenue.

46. The total Expenditure on New Works is Rupees 46,620, and on Repairs Rupees 1,42,243; but the component items call for no particular remark. The inland position of this District renders its internal communications a *sine qua non* to the development of agricultural or commercial prosperity, and when good Roads are established, it may be reasonably hoped that its great Cotton producing capabilities, together with numerous other articles of export, will ensure its becoming one of the most important Districts in the whole Madras Presidency.

Kurnool.

47. The Kurnool expenditure during the year amounts to Rupees 39,309 on New Works, entirely Roads and Bridges. On the road from Kurnool to Kodamoor, Rupees 4,304, and Rupees 5,888 on the line from that town to the Nundy Canama Ghaut, have been spent. The partially laid out new trace for the Munterul Canama has cost Rupees 4,750, but the operations were insufficient to place the new line at the disposal of the Lumbarly bullocks, whose masters were most eager to profit by a great improvement, which a slight additional expenditure would have secured to this enterprising class of traders.

48. Although there was no expenditure on new Irrigation works, the repairs of several have been attended to, particularly in the Dhione Talook, under the able superintendence of Sub-Overseer Kelly. The expenditure amounted to Rupees 8,763. Attention has also been paid to the Roads and Communications, on which the expenditure reached Rupees 11,439. The work to buildings has been of too petty a character to require separate notice.

49. But even in this brief report it must not be omitted that the Public Works in Kurnool are most unsatisfactory, and very much indeed ought to be done for their improvement. There is not one single road completed and bridged, the irrigation from Tanks and Annicuts is excessively small, although (a Delta excepted) it is hardly possible to find a District with better opportunities for storing large bodies of water at a cost so proportionately small, insuring to Government a return of more than 25 per cent. on the original outlay. In fact, in many parts of Kurnool now overgrown with thick jungle, there are remains of extensive Irrigation works in decay, owing to the negligence and apathy of the Native rulers, who governed the Province before it came into the possession of the British in 1812. These works may, for the most part, be restored merely by filling up a few breaches, and constructing Sluices or Calingulabs, or other petty works necessary to replace the reservoirs in an efficient condition.

50. His Excellency the Commander-in-Chief has recently reported specially on the neglected state of this Province, as in the Military occupation of the English Government, movements of Troops being impracticable; Lieutenant General Sir Patrick Grant's Despatch is dated the 15th March 1858, and a copy was forwarded to the Commandant of Engineers (who has also drawn up a very vigorous Minute on the same subject) on the 30th April, in the Military Department. But although it is now June, and the interval since the end of April is that best suited throughout the whole year for executive operations; no communication whatever appears as yet, by some unaccountable omission, to have been made to the Department Public Works, although important instructions have to be conveyed to the District Engineer of Kurnool, which in part, if not in whole, might even thus have been fulfilled.

Chingleput.

51. Owing to a necessity for the vigorous prosecution of Military buildings in the Cantonment of Saint Thomas' Mount, ultimately to be partially supplied with defensive works, a large portion of the executive operations refers to Military works, on which, including repairs, a sum of Rupees 81,726 has been expended. The principal items are as follows:

	Rs.
Constructing Roads and Magazines on Saint Thomas' Mount.....	9,630
Double row of Gunsheds, &c., adjoining the Foot Artillery Barracks	17,397
Constructing a terraced Gun-shed and Harness room adjoining the Main Guard.....	12,154
Married new quarters (not yet completed).....	17,682
Wall and Guard of a picketing ground for the Horses of the Royal Artillery	4,684

52. Most of the foregoing, begun in October last, have been carried on with great rapidity, so as to be completed as quickly as possible, a circumstance tending, however, to enhance their cost.

53. The heavy rains of October last caused great damage to the minor Irrigation works, of which 300 were breached during the Monsoon. The Corattoor Annicut across the Cooum, and

the Casaveram Annicut across the Corteliar, at the head of the Bungaroo Channel were also breached. Three Southern arches of the Red Hill Tank Bridge on Trunk Road No. 6, fell down, in consequence of the destruction of the rear retaining wall, and also of the foundation on the upper side. Such were the most important works injured, but repairs are being carried on rapidly, and will be speedily completed. The total expenditure on Irrigation Works during the year was Rupees 47,273; of which Rupees 5,828 were on New Works, and Rupees 41,445 were on repairs.

North Arcot.

Rs.

54. The North Arcot expenditure on New Works amounts to 1,31,491; viz.	
On Irrigation Works.....	73,121
Communications.....	56,263
Buildings.....	2,027

Of the first item, however, Rupees 64,850 were laid out on the Palar Annicut project alone, the head sluices, and other subsidiary parts of which were in progress during the year; the rest of the expenditure has been appropriated to numerous small works, of which the following may be considered the most important.

Rs.

Extension of the Cheyaur Annicut project.....	1,711
A new Sluice to the Chekand Hissa tank.....	1,082
Poincy Annicut project.....	972

55. Under communications, the most important expenditure, Rupees 28,757, is for the Bridge across the river Palar on the road from Vellore to Chittoor, of which 14 arches still remain to be completed; on the road from Vellore to Arnee, Rupees 8,006 were expended; and a great feeding line to the Railway, and much more so than from Bannaverum to Sholingur, which has been exempted from stoppage; on that from Goriattum to Pollicondah, Rupees 3,643; but the further progress of these and other roads was for some time arrested by the restrictive order of July last; a bridge of 11 arches of 30 feet span, across the Agarum river on Trunk Road No. 1 was, however, completed by Captain Barber, Executive Engineer, and opened for Traffic in September 1857.

56. The expenditure on buildings does not require special notice.

57. The outlay on repairs amounts to Rupees 86,062; Rupees 34,920 being for Irrigation Works, Rupees 46,538 for roads and bridges, and Rupees 4,604 for buildings. The greater part of that on communications belongs to Trunk Roads Nos. 1 and 10, while the remainder is distributed over numerous petty items not requiring special comment.

South Arcot.

58. At the beginning of the year 1857/58 preparations were made for commencing several large works in South Arcot, but their progress were stopped under the orders of July last. Some few exceptions, however, were made, when it was necessary to advance the works to a certain stage of completion for the sake of security; such were, Bridges across the Poneaur on the Southern coast road, finished in October 1857..... 8,081 Rs.

Four bridges on the road from Tindevanum to Trinnamullay.....	3,600 „
Two bridges on the road from Oolundoorpett to Calicoimby (unfinished).....	1,644 „
Bridges on the road from Cuddalore to Salem frontier.....	1,993 „

59. No work of any importance has been executed in the Irrigation Department, except the improvement of the Vellaur Annicut Irrigation ducts, for the Oriagostee and other villages, and which were partially completed in November 1857, at an aggregate expenditure of Rupees 10,032. The Cuddalore Harbour was improved by cutting a new and more direct boat channel through a shoal, at an outlay of Rupees 2,170, thus making the aggregate expenditure on account of the improvement Rupees 7,351.

60. The entire expenditure of the District on New Works was Rupees 41,873, of which Rupees 13,131 belonged to Irrigation Works, Rupees 27,957 to communications, and 785 Rupees to buildings, the last item comprising no work requiring notice.

61. Of repairs, 70,981 Rupees were spent on Irrigation Works, the principal outlay being in the Villapooram and Southern Talooks, which were visited by a severe gale in November last; 416 is the total number of works repaired, the Perroomal Tank being the most important, and next the Goverapet channel embankment and aqueduct. Repairs to roads and buildings, respectively Rupees 37,568, and Rupees 2,113, were altogether of an ordinary character.

Tanjore.

62. After the postponement and delay caused by the summary discharge of an entire class, viz., the lower Subordinates (342 in number) at the very moment of Tanjore being subjected to a transfer in conformity with all other parts of the Presidency, it ultimately was deemed practicable to undertake the sole Executive charge of the District, even with a professional establishment and staff, admittedly entirely inadequate to the current duties of the Public Works Department. If even it were not now profitless to further debate a vexed question, when applied to at once the most important and also apparently (but perhaps not really) the most arduous of our Provinces, the present is neither the place nor time for discussing the separation of Public Works from the Revenue and Police Officers of Government, and it therefore is enough to report that the actual transfer, beset by numerous minor troubles, embarrassments, and references, was not practically completed, even ostensibly, until the 1st of January 1858. Scarcely a single favorable prediction of the successful working of the new system seems to have been placed on record; the ablest and most experienced Officers concurring in the opinion that the Meerassy system, which is to be found in its fullest development in Tanjore, would prove an insuperable obstacle to the establishment of free labor and prompt payment, the hitherto supply of workmen by the Meerassidars themselves having been most exclusive and invariable. Even at this early period, however, there have been observation and experience enough to warrant the encouraging conclusion that the native character is no less clear-sighted in the detection of its own interest in Tanjore, than in other places. The confidently foretold Meerassidar opposition has nowhere been apparent; the great landholders have been found fully accessible to the reasoning which shews, that repairs and improvements previously intended for the security or reform of their own works, and therefore for their own benefit, if executed at all, had better be done so with all available professional skill, system, and science, than desultorily and perfunctorily, and that the practise of a full day's wages for a full day's labour, payments being always prompt and punctual, is preferable to that of advances, mixed up with "tuccaree," and "kist," and other revenue accounts. In practise, therefore, the Meerassidars have proved the auxiliaries, and not the opponents of the new Public Works system; and if the same measure of assistance and the like friendly spirit had been shewn by the native fiscal Officers of Government as have been evinced by the large landholders of the Province, Tanjore might even already have been cited as a happy exemplification of the beneficial results of the Reform. But amidst other minor hindrances, not foreseen, and certainly never expected, may be cited the obstacle caused by the system of impressing coolies about the time of harvest, in order to their employment on lands under "Amanny," or the direct management of Government Officers. The Peons engaged on this duty, of course find it easy to coerce coolies from those engaged on Public Works, where they, as it were, are already collected to their hands, and they do not hesitate to remove them, notwithstanding the remonstrances of the Officers of the Public Works, whose complaints are even reported to have been sometimes disregarded by the very Collector himself. It is to be hoped, however, that such opposition, which has the effect of crippling one branch of the Service for the mere convenience rather than benefit of another, will gradually give way to a more enlightened management, which shall be cognizant of the untellable mischief of holding up to general observation two Departments of the public service, of the same Government, as acting in apparent mutual antagonism, instead of uniformly in harmonious co-operation. The difficulties, which it must not be denied, are practically great, are yet of a character that is kept as much out of sight of superior Officers as possible, and they resolve themselves rather into a petty constant warfare (if any warfare can be petty) of Subordinates, the one jealous for privileges supposed to be newly conferred, the other reluctant to forego the exercise of functions, hitherto a portion of their own current duties, than of disagreement between the higher Officers, and thus, in a hundred different ways not of easy definition, and through many various channels, small oppositions are set afoot, irritation is soon awakened, exasperation quickly ensues, and estrangement, or even hostility, are found to be rapidly developed amongst the lower of the most subordinate of all the many employées, both in the fiscal and the Public Works branches of the Service, with chance of action and re-action on higher quarters. It seems essential, then, that this evil, no imaginary one, should be taken up promptly, in view to peremptory check (whilst the spirit, still chiefly nascent, of alienation is in its infancy) by the Collector himself. It is suggested, with all deference, that a public Notification might be drawn up under his name and authority, for general circulation, with the greatest advantage; and which detailing at once, how and in what manner,

the Government servants of each Department, come in contact with each other, and how far each should be expected to bear and forbear in order to ensure good will, harmony, and efficiency should be fixed up in all the Choultries, Moosaferkhanas, and other public places of general resort, throughout the whole District of Tanjore, of course not omitting a statement of the penalties to be inflicted on breach of instructions by the servants of either and both Departments.

63. Owing to restriction of expenditure, no large New Works have been prosecuted in the Irrigation department, for only Rupees 3,479 have been so expended; but upon roads and bridges an outlay of Rupees 30,903 comprises the following principal items:—

	Rs.
Bridge across the Coleroon at Anakarun Chuttrum, open to the public, but parapet walls not yet finished.....	5,331
Bridge across the Lower Annicut on the Coleroon.....	13,434
Canal from Trimulvassel to the Coleroon.....	6,858
Bridge across the Nasoomar, the road between Manargoody and Adampatam.....	1,983
Pootaur bridge and Tunnels over channels on the road from Minnelum to Cadavassel.....	1,736

64. Considerable damage by the October's Monsoon to the Irrigation Works, particularly in the Trivady Talook, called forth a very large expenditure. Repairs to the Upper Annicut, to the Vennaur regulating Dam, and to the Cutchamungalum Annicut, and important clearances to the Pillay Voikal, have all been satisfactorily accomplished. Numerous other works have also been repaired, at a cost, altogether, of Rupees 1,65,965. On roads and canals, the amount of repairs was Rupees 10,713; and on buildings, Rupees 1,278, making an aggregate of Rupees 1,77,956 for the season 1857-58.

Trichinopoly.

65. It has been found absolutely necessary in Trichinopoly to proceed with certain Irrigation Works of improvement, the further stoppage of which would have entailed a considerable loss of that revenue to Government, which represents scarcely half the loss at the same time inflicted by the like cause on the landholders. Nor was it until loss had actually been sustained, that the orders were relaxed in favor of the extension of the Laulgoody channel to the Oodurpolium Talook, and also of the construction of an additional Apron to the Nunthayaur Annicut, needing to completion an expenditure of only Rupees 2,621. On the Coleroon main channel in the Oodurpolliem Talook, an expenditure of 11,000 Rupees placed the work in efficiency, but completion was prohibited. On improvement of the Laulgoody channel, and on the reconstruction of the Nunthayaur Annicut, Rupees 6,984 and Rupees 4,203 were respectively expended. The entire outlay amounted to Rupees 25,492 on New Works of improvement.

66. Rupees 3,470 have been laid out in repairing the Dindigul road, and Rupees 1,044 in rectifying the bed of the river Oopaur, near the new bridge on Trunk Road No. 8, from Madras to Trichinopoly; the aggregate road expenditure throughout the year being only Rupees 5,053.

67. A more than usually liberal expenditure has been made in the Military Department in the District of Trichinopoly, which forms the Head Quarters of the Southern Division of the Madras Army. The total outlay has amounted to Rupees 17,413; chiefly in the reform, improvement, and re-roofing of the old Barracks, and in constructing temporary Buildings for the European Regiment during the erection of permanent quarters. The progress has by no means been so satisfactory as was to have been expected under the urgent character of the circumstances, and under the management of so able, and generally so energetic an Executive Officer, as Lieutenant Ryves, and His Excellency the Commander-in-Chief has censured the Executive Department for their shortcomings.

68. The rains of November and December 1857, did such considerable damage to the Works of Irrigation, that an outlay of Rupees 76,681 was required for their repair, unfortunately the unusually copious rains of November 1857 were, moreover, succeeded by an absolute drought of 5½ months, to the serious injury of all common Tank fed cultivation dependant on the Talook river channels. Notwithstanding the seeming scantiness of supply, the parent streams have fully matured their crops, the value, or selling price of which, is all the greater from the suffering created by so long a total absence of rain.

69. The outlay on the repair of roads amounted to Rupees 24,121, and that on buildings to Rupees 2,613, no item worthy of special mention being included therein.

70. The District Engineer complains of the prevailing system of impressing carts on occasions of movements of the Military. The same results as detailed already in Masulipatam failing not to ensue. The Government, in Extract Minutes Consultation of the 20th May 1857, extended such protection to Public Works Officers as the nature of the case admitted, and when the urgency is *bonâ fide* so great as to override the contracts or other engagements already complete, it only remains to relieve the impressed parties from all penalty, &c., for non-supply.

Madura.

71. The Madura operations have been very limited, the entire expenditure on New Works being:—

	Rs.
Irrigation.....	185
Communication.....	20,930
Buildings.....	2,504
Total...	<u>23,719</u>

72. The bridge over the river Ambravutty, on the road from Dindigul to Paulghaut, on which Rupees 5,032 have been expended; that across the Shunmooganuddy, of which only a pier and abutment were built, at a cost of Rupees 1,413; and the roads between Sattungoody and Oorlumpaty, and between Samiaranelloor and Dindigul, on which Rupees 1,574 and Rupees 2,141 were respectively laid out, are the only works deserving mention.

73. The highly important Paumben Channel, between Ceylon and Continent of India, in the Gulph of Manaar, has been further improved by the removal of 7,120 cubic feet of stone, and 9,285 cubic feet of sand, at a total expenditure of Rupees 9,104; and this great Channel of navigation, with its rapidly increasing traffic tonnage, is slowly, but steadily advancing towards the attainment of the general depth of 13 feet shewn to be practicable, and strongly recommended by Colonel A. Cotton in 1854, at a probable expense of Rupees 3,39,300.

Vide Letter to Government,
No. 10, dated 16th January
1854.

74. Under head "Buildings," the Talook Cutcheries at Meyloor and Theroomengalum, are reported all but completed.

75. The "Repairs" amount to Rupees 56,669, of which Rupees 52,370 are for Irrigation Works, Rupees 24,121 for communications, and Rupees 2,613 for buildings; but none are worthy of special remark. It is, however, to be remarked that, influenced chiefly by the scarcity and high prices resulting from the long drought described in para. 69, which extended to Dindigul and Madura, the Government were pleased to lift the interdict from the Estimates Nos. 320, 322, and 323 in No. 2 Budget List for 1857-58, for repairing and improving a portion of the Road No. 18, between Butlagoonda and its junction with Road No. 15, at Pullaputty, and Road No. 1, between Trichinopoly and Dindigul, as well as improving Road No. 15, between Samia, Nellore and Dindigul, amounting respectively to Rupees 7,884—6,800 and 14,510. It is remarkable, however, that notwithstanding the scarcity with some of the poorer classes in both Dindigul and Madura, is but little short of starvation, and although prices are liberal for all classes, especially women and children, with prompt payment and the most considerate treatment, yet the general aversion to road work by all but Wudders is little short of unconquerable. Finally, although it involves a slight anachronism, as to date, it must be reported that no care or attention whatever having been paid by Government until the last few years, and when too late in this particular instance, to the dilapidation of Trimul Naick's palace at Madura, that most beautiful specimen of highly ornate Indian Palatial architecture has fallen to so great an extent, as to have for ever destroyed its beauty, except as a relic and a ruin.

Extract Minutes Consultation
No. 372, dated 3d March 1858.

Tinnevelly.

76. The Public Work Officers in Tinnevelly, although having to contend against the formidable opposition of the Meerassidars, who enjoyed great immunities under the old executive system, had yet had very much to encourage them at first whilst supported by a full professional

subordinate staff with a compliment of Executive Engineers for each of the several (5) Ranges into which the District has been subdivided: for having a liberal sanction in Lists 2 and 3 of 1857-58, the District Engineer was, by degrees, overcoming all opposition, the prompt and punctual payment of the Pullars overbearing the dearth of labour created by the Meerassidars. When, however, the retrenchment alike of the numerical strength of the new Executive Establishments and of the Estimates available for expenditure was enforced by the restrictive orders of the 17th July last, which at once incapacitated the District Engineer from the prompt measurement and payment of work on which he had alone to rely for success, the Meerassidars were induced to withhold their already partially conceded assistance from the Officers of the Department, who, consequently, found it most difficult to obtain any labourers at all for their Public Works. The inferior class of the population being in a state of actual, if not nominal, servitude to the landholders, and being in a great measure directly supported by them, the opposition of the Meerassidars has hitherto prevailed, especially as the inferior Revenue servants are believed to be acting in collusion, more especially in giving currency to the rumour now very prevalent throughout the Tinnevelly District, of the old system being already on the eve of re-introduction, and needing only some executive failure, from whatever cause, to be reverted to forthwith.

77. It is believed, nevertheless, that, under a continued system of regular and prompt payment, the present opposition, whether from Meerassidars or from Talook servants, or both, will gradually give way. It is also hoped that this new system, so different from and so much more liberal than any which the Tinnevelly Pullars can hitherto have seen, will tend to free this depressed people from the state of thralldom in which they are at present held by their selfish masters.

78. The expenditure of the District, in consequence of these and other difficulties, obstacles, and of the restrictive general orders, has only reached Rupees 20,761 on New Works, and Rupees 56,968 on Repairs, as follows:—

New Works.

Irrigation.....	11,036
Roads and Bridges.....	8,103
Buildings.....	1,622
Total.....	<u>20,761</u>

Repairs.

Irrigation.....	50,773
Roads and Bridges.....	4,979
Buildings.....	1,216
Total.....	<u>56,968</u>

No single work deserving special mention.

Coimbatore.

79. The Coimbatore expenditure on New Works has been as follows:—

Irrigation.....	14,426
Communication.....	16,169
Buildings.....	3,28,557
Total.....	<u>3,59,152</u>

80. The repair, improvement, and extension of the Callingaroyen channel, with new head, has cost Rupees 13,084, and is the most important irrigation operation performed in the District. The Tadapully channel, also, from the right bank of the river Bowani, has likewise had an expenditure of 1,550 Rupees, whilst all other works are not of moment.

81. The following communication repairs are to be specified, viz.:—

Bridge at Umbravutty.....	3,622
Bridge at Marchenaikenpolliem.....	4,476
Tanks and wells on the Hassanoor Ghaut....	421

82. The largest expenditure is in the Military Department, and may be given at Rupees 3,17,000, in prosecution of the noble accommodation for a full European Regiment at the hill station and sanatorium of Jackatalla on the Neilgherries, thus making already, with previous outlay, an aggregate expenditure of Rupees 9,59,411 out of the General Estimate of 15,71,500 allotted for the whole project of the buildings required in the Jackatalla Cantonment.

83. A very marked increased rate of progression cannot be denied to the operations of 1857-58, but with every exertion possible, the locality itself is said to interpose obstacles which can only be partially overcome; and it is more than questionable to my mind whether, under the present executive arrangements, further acceleration is practicable. Assuming, then, the maximum progress to be represented by the outlay of the last season, when no appeal had been omitted likely to work upon the zeal and efforts of the energetic Executive Engineer, Captain Campbell, it is not to be expected that the entire project will be fully worked out before the beginning of 1861, when a period of little, if at all, less than 12 years will have been consumed in the construction of permanent quarters for a single European Regiment of Foot.

84. If to the above aggregate of Rupees 15,71,500, be added the cost of the punishment shed, Rupees 3,270, the total will not materially differ from the aggregate Estimates of the new buildings also for a full European Regiment at Trimulgherry near Secunderabad, a project that has a total sanction of nearly Rupees 15,84,888, yet the Trimulgherry works were not commenced until 1855, and will without doubt be completed in all 1859, or commencing at least 5 years later, and having a much larger cubical content of brick masonry, (the Trimulgherry quarters are even on ampler scale than the noble buildings at Jackatalla) will be finished fully two years earlier, and it is certainly a very startling assertion that an additional period of no less than seven years should be required for the expenditure of the very same sum at Jackatalla as at Secunderabad in the Deccan.

85. Among other 1857-58 progress may be mentioned, the Civil Dispensary (Rupees 1,354) and Travellers' Bungalow (Rupees 1,677) at Coonoor. A Conservatory, too, at Ootacamund, has cost Rupees 1,498, and a School House at Coimbatore Rupees 2,595.

86. Repairs amount to Rupees 71,417, comprising Rupees 29,366, on irrigation works, Rupees 38,644 on communications, and Rupees 3,407 on buildings, none calling for special remark.

87. The drought described as vexing Trichinopoly, Madura and Salem. Dindigul, extended to Salem, and deprived many of its irrigation tanks of their usual supply. The partial loss of revenue, from withered rice crops, is a smaller evil than the sacrifice of the seed, labour, and capital of the landholder who trusted to the bounties of Heaven not being so long withheld. Much distress was relieved by employment on the Railway, and on the few works permitted to progress in the District.

88. The entire expenditure on works of irrigation was only 803 Rupees. On communications, Rupees 11,892. About 10 miles of the Yercaud cart-road to the Mullapooram Railway Station have been completed for Rupees 9,146, but as there is not a single bridge built, the road may easily remain incomplete when the Rail is opened. Three miles, too, of the line from Darampoory to Morapoor have cost Rupees 1,539; but it would seem highly desirable to at once give partial effect to all projects for feeding the approaching line of Rail, such, for instance, are the two estimates, 447 and 448 respectively, Rupees 15,280 and 24,600, for connecting Yercaud or the Shevaroy Hills with Adaumcottah Station, *via* Mullapooram; and not less necessary is No. 449 of Rupees 5,500, to connect Morapoor with the Dharampoory Station. Also No. 451, Rupees 7,500, to place the important trading town and entrepot of Vaniambaudy in connection with its own station on the Rail: for unless the interdict be removed from these feeders immediately, there will be an even greater defect of cement between the two branches of the public service, *viz.*, the Railway and Public Works Department, than has unhappily been lately displayed at Goriattum. Projects once placed in official abeyance are so easily overlooked chronically, and disturbance is so often recurring, that hence even the present little fitting occasion has been taken to solicit the authority of Government for immediate action in Salem, whilst further suggesting also that either directly, or through the Chief Secretary, the Consulting Engineer may now make known to the Central Office, Public Works, his intended Railway Station both in Coimbatore and Malabar; for such knowledge, if even furnished within the week, would be any thing but

premature. Finally, a small sum of 554 Rupees has been spent on the road between Nancul and Senkerry Droog.

89. The new Central Jail at Salem, which has also been steadily and satisfactorily carried forward under Lieutenant Gahagan, at an expenditure of Rupees 23,314, the foundations and walls above of four of the blocks being almost completed, and those of the 5th and 6th being under rapid progress. New sick stables, at a cost of 8,151 Rupees, have also been built at the Oosoor Remount Depot; whilst, finally, the District Engineer's Office and Store-sheds, &c., have also cost 1,715 Rupees during 1857-58.

90. Repairs have been as follows, *viz.*

Irrigation Works.....	42,128
• Communications.....	20,338
Buildings.....	1,790

Total.....64,256

Canara.

91. Upon the important communications of Canara, only Rupees 17,501 have been spent, being confined almost entirely to the Yellapoor, Sircy, and Hallandy road circuit.

92. Rupees 939, have been laid out on seven or eight Buildings, of which Rupees 228 on the new Jail at Honore, is the largest item.

93. Repairs, on account of the District Engineer's miserable misinterpretation of the restrictive orders of July 1857, have also been most inadequate. On the Trunk Road No. 2, Rupees 5,623 were, however, spent in alleged improvements, and on the Dharwar and Coomptah road, the energetic Lieutenant Drever spent Rupees 25,326; but notwithstanding so great an outlay, this exceedingly important line of communication is understood to be still in a disgracefully bad condition.

94. The aggregate maintenance and repair of communications, has cost Rupees 40,204, and of buildings, Rupees 8,190: the entire expenditure of the year, under all heads, being Rupees 67,112, under a District Engineer, whose health was latterly so shattered by the incredible exertions, and solar exposure of exploring and levelling the upper Godavery during the hot season of 1855, that the very functions of the brain and mental equipoise were temporarily deranged for some portions of most days latterly; and it is alike to be regretted and wondered at, that the presiding local authority did not dispossess him forcibly, if necessary, of his Office, on his malady and consequent incapacity so plainly manifesting themselves. The late District Engineer has been since sent to England on Medical Certificate.

Malabar.

95. The only irrigation work in this District, is the Dam at Chetwye, upon which a final sum of Rupees 384 has been laid out. The project itself has since been in abeyance, whilst undergoing much and severe scrutiny that should have preceded actual and costly operations under Major Selby instead of following them.

96. The deep and rapid river at Irrity, intersecting a highly important Military communication, its projected timber truss bridge has been exempted from the operation of the prevailing restriction, and Rupees 8,266 have been laid out on its partial prosecution. The abutments and three piers have been built, and the wood and iron work of one of the bays has been set up, but the early completion of the work, with so premature a monsoon, is no longer to be hoped for. Thirteen miles of road from Calicut to Paulghaut have been completed with tunnels, and twenty-nine more nearly finished with earth work only, without masonry. The expenditure during the year being Rupees 3,357. Three miles of Ghaut have been metalled on Trunk Road No. 4, at an outlay of Rupees 4,740. Communications in Malabar have cost Rupees 18,157 in 1857-58.

97. The recent alteration in the site of the buildings at Mullapooram for the Malabar Police Corps, has led to more than common expenditure in the Military Department. On new Buildings the total outlay is Rupees 11,256, comprising in the new Cantonment at Malliapooram,

a Hospital, Conjee House, Powder Magazine, Pony lines and Tank (for the mountain train Ponies) a place of Arms almost completed, and an Elephant shed under construction.

98. At Cannanore the well situated Fort has been satisfactorily repaired, and the station, which is the Head Quarters of Malabar and Canara, having been minutely examined by His Excellency the Commander-in-Chief, it is to be expected that ere long orders will reach the Department Public Works to carry out the views of improvement so earnestly enforced in His Excellency's Report of the 15th March last.

99. The Barracks at Calicut have been greatly improved by the substitution of planked flooring, and, further, have been otherwise put into much better order. The Artillery Barracks, the Magazine, and the Commissariat Cutwall's Choultry have also been thoroughly repaired, and after a delay very far from creditable to the Department Public Works, the various Military Buildings at Manantoddy in Wynaad have been extensively and satisfactorily repaired. Thus, altogether, Rupees 13,380 have been expended upon Repairs of Buildings, and, adding the Roads, (see para. 96) Rupees 18,157, the aggregate in 1857-58 is seen to have reached Rupees 31,537.

Madras.

100. The entire expenditure on Public Works at the Presidency of Madras [excluding the Municipality, for whether required by the Government or otherwise, the Central Office has not received any Reports or Accounts] during 1857-58, has reached the goodly amount of Rupees 2,36,325, notwithstanding the prevailing maintenance of the general interdict.

101. The altered departmental organization which had been ordered in the early part of 1857 so as to conform to the executive arrangements of the two sister Presidencies, has only taken full practical effect from the commencement of the last official year.

102. From the 1st of May 1857 then was abolished or superceded the large Establishment and Office of works, hitherto conducted by one of the most experienced Officers in the Corps of Engineers, who, with the very inconvenient designation of Superintending Engineer at the Presidency (thus causing confusion with the Members of the Central Office) and with the help of a Commissioned Assistant, had the entire executive charge and control, not only of all Civil, Judicial, Marine, Revenue and Military Buildings (including the part of Black Town and Fort Saint George), but also of all the extensive Barracks and Military works in the Cantonments of the three out-stations, Palaveram, Poonamallee, and Saint Thomas' Mount.

103. The appointment of Superintending Engineer being done away with, was subdivided into the two Offices at present constituted, namely, that of the "Civil Architect at the Presidency," and that of "Garrison Engineer of Fort St. George," a nearly exactly equal allotment of the previous Establishment having been assigned to each, an arrangement which, however simple or obvious, was by no means so certain of practically proving suitable to the nature and extent of the several duties allotted, as happily seems satisfactorily demonstrated by the actual expense of a first years' trial.

104. In respect to separation of duties, an almost equally simple plan suggested itself; all Civil buildings and works of whatever kind (except for the accommodation of Troops) were confided to the Civil Architect, whose Office has opened in as central and convenient a station as Colonel Atkinson (the previous Superintending Engineer at the Presidency) could discover; and the Garrison Engineer retaining his former spacious premises inside the Fort, has primarily charge of the Fortress, under the Commandant of Engineers, communicating the orders of the Right Honorable the Commander of the Garrison through His Lordship's Town Major, and for the rest, as an Officer of the Public Works, has charge not only of the whole of the Buildings within the Fortress, whether Civil or not, but is also entrusted with all Barracks and other Military Buildings of whatsoever kind outside Fort Saint George, as at Vepery and Perambore, Gun Carriage Manufactory, &c.

105. Out of the aggregate Presidency expenditure (vide para. 100) Rupees 2,36,325, the Civil Architect has expended Rupees 92,203; of which there are for New Works Rupees 44,327, and for Repairs Rupees 47,876, being almost equal to each other; and the Garrison Engineer has spent Rupees 1,44,122, of which there are for New Works Rupees 71,470, and for Repairs Rupees 72,652, also exhibiting a similar correspondence in accounts.

106. In the Civil Architect's Department the following are the most important works either executed or in progress, namely:

	Rupees.
Alterations to the Penitentiary (nearly completed).....	13,709 0 0
Erecting 4 flanking defensive towers at its angles, under execution.	5,472 0 0
Inner external long verandah also to the wards of the Prisoners, under execution.....	2,488 0 0
Additions and improvements in accommodation of Lithographic Press Office (completed).....	1,570 0 0
Improvements and additions to the General Police Office (completed).....	2,593 0 0
Granite paving for floor of Government Press Office (completed).	3,987 0 0
107. The most important works in the Garrison Engineer's Department are strengthening groins Nos. 14, 15, and 16.....	1,318 0 0
Dwarf groin near the Custom House (half done).....	1,826 0 0
Additions and alterations to the Presidency Sea Customs House (completed).....	4,825 0 0
Constructing 5 Groins to protect the Royapooram Boatmen's village (completed).....	2,708 0 0
Reform of Clive's Battery for 68 lbs and heavy Guns with Furnace for hot-shot, Store-rooms, loop-holes, &c., nearly completed.....	3,755 0 0
Minie Bullet Manufactory, $\frac{1}{2}$ completed.....	24,847 0 0
Shower bath for the European Veteran Company.....	3,586 0 0
Platforms round the washing rooms in the Gunpowder Manufactory.....	2,702 0 0
Stone platforms on the landside of the Fort.....	2,701 0 0
Shed near the Laboratory.....	3,427 0 0
Coal sheds near Boatmen's gate and Railway for conveyance of Coal ($\frac{3}{4}$ completed).....	11,248 0 0

108. It will thus be observed that, contrary to what was to have been expected, the Garrison Engineer's duties, as measured by cash outlay, is as 3 to 2 compared with the Civil Architect, and whose expenditure is less than two thirds of the minor Office. This is a circumstance with may be attributed, first, to the restriction being peculiar to Civil undertakings alone; and 2ndly, to the exceeding impetus which the Rebellion has communicated to the Store and Equipment Department of the Army, whereby expensive provision has necessarily had to be made for accommodating the machinery required by the Officers of Ordnance, Commissariat, &c.

109. It is perhaps more than probable, that in future a similar money inequality will be found the very reverse of that now under observation, and that, in point of fact, no changes or adjustments, thus far at least, seem to be required between the two new Offices.

East Coast Canal.

110. The expenditure of the Superintendent East Coast Canal in 1857-58, has reached a total of only Rupees 38,508, the East Coast Canal extension projects being in abeyance till more prosperous times of peace. The following are the principal items of outlay:

	Rupees.
Adyar and Palar Canal... ..	11,407
Improvement and repairs between Madras and Ameen Covil... ..	9,506
Revetment to east side of Town ditch between Cochrane's and Elephant bridges.	1,553
Experimental model Boats..	3,254

111. The above and other projects commenced upon early in the season were, however, like all others elsewhere, subsequently stopped, the model Boats required for stocking the virgin South Canal, forming the single solitary exception; so that adding Rupees 8,571 for amount of maintenance and repairs, an aggregate of Rupees 38,508 has to be written against the Madras East Coast Canal, a water communication which branching from the Presidency to the North

and South leads to nothing, operations having been stopped short of a well defined and promising terminus in each direction.

Mysore and Hyderabad.

112. The extensive series of Military buildings and ranges of Barracks under construction for the accommodation of Troops at Bangalore and at Trimulgherry near Secunderabad, are highly important works indeed, and they are, for 1857-58, represented respectively by Rupees 95,759 (Rupees 1,553 being for repairs) for the former, and by Rupees 3,60,570 [with only Rupees 812 for repairs] for the latter. It is in the Hyderabad Department Public Works alone that a review of the operations and transactions of the past year yields credit, satisfaction, or encouragement; for elsewhere in this Presidency the numerical strength of the Department and of its dependant Office Establishments has been reduced so far below, not simply its wants, but its necessities, that it may with perfect safety be affirmed that twice the amount saved to the Government by such retrenchments has been lost to the State by destruction of property that had been otherwise in safety.

I have, &c.,
(Signed) C. E. FABER, Colonel,
Chief Engineer.

(True Copy.)
(Signed) E. LAWFORD, Lieutenant Colonel,
Officiating Chief Engineer.

CENTRAL OFFICE OF P. W. }
FORT SAINT GEORGE,
4th June 1858.

TABLE A.
Comparative Statement of Toll Collections for the Official years 1856-57 and 1857-58.

CHARGE.	1856-57.			1857-58.			Increase.			REMARKS.
	Boats.	Tons.	Toll.	Boats.	Tons.	Toll.	Boats.	Tons.	Toll.	
Miscellaneous Produce.....	6,847	61,719	Rs. 15,429 12	6,909	75,058	Rs. 18,764 8	62	13,339	Rs. 3,334 12	
Salt.....	2,440	43,748½	10,937 2	2,415	54,585	13,646 4	25	10,836½	2,709 2	
Total.....	9,287	1,05,467½	26,366 14	9,324	1,29,643	32,410 12	37	24,175½	6,043 14	

E. C. CANAL SUPERINTENDENT'S OFFICE, }
CAMP, MADRAS, 28th May 1858.

(Signed) F. J. MOBERLY, Lieut.,
Superintendent of the E. C. Canal.

(True Copy.)

(Signed) E. LAWFORD,
Officiating Chief Engineer.

TABLE B.
Comparative Statement shewing the number of Boats, Tonnage, and the amount of Toll collected on each sort of Goods which arrived at the Basin by Cochrane's Canal during the official years 1856-57 and 1857-58.

NAMES OF ARTICLES CARRIED.	1856-57.			1857-58.			Increase.			Decrease.			REMARKS.
	Boats.	Tons.	Toll.	Boats.	Tons.	Toll.	Boats.	Tons.	Toll.	Boats.	Tons.	Toll.	
Bark (auvarum).....	2	2	0	8	21	5	4	0	19	4	0	0	0
Do. (valium).....	4	33½	8	6	83	20	12	9	49½	12	0	0	0
Bangles.....	1	5½	1	5	13	3	4	0	7½	1	0	0	0
Do. stones.....	0	0	0	0	7	1	12	1	1	1	0	0	0
Bricks.....	0	0	0	0	1	0	4	1	1	0	0	0	0
Bones.....	0	0	0	0	2	0	8	2	2	0	0	0	0
Brushwood.....	3	3	0	12	0	0	0	0	0	0	0	0	0
Chillies.....	94	1,190½	297	11	2,239	559	12	86	1,048½	262	1	0	0
Charcoal.....	13	62½	15	11	339	84	12	47	276½	69	1	0	0
Chunam.....	8	8	2	0	71	17	12	3	63	15	12	0	0
Choyaroot.....	3	18½	4	10	27	6	12	0	8½	2	0	0	0
Cocanuts.....	2	29	7	4	8	2	0	3	0	0	0	0	0
Cotton.....	1	24	6	0	19	4	12	0	0	0	0	5	4
Casango.....	2	15½	3	15	38	9	8	1	22½	5	0	1	4
Crabs.....	0	0	0	0	92	23	0	92	92	23	0	0	0
Country Potatoes.....	0	0	0	0	56	14	0	8	56	14	0	0	0
Cocanut Plants.....	0	0	0	0	4	1	0	2	4	1	0	0	0
Drum sticks.....	12	151	3	13	23	5	12	0	7½	1	15	3	0
Empty Boats.....	164	238½	59	10	175	43	12	137	0	0	0	0	0
Do. Dubbers.....	1	1	0	4	0	0	0	0	0	0	0	15	14
Faggots.....	1,248	23,099	5,774	12	27,905	6,976	4	93	4,806	1,201	8	0	0
Furniture.....	1	1	0	4	8	2	0	7	7	1	12	0	0
Gingely Oil seeds.....	11	133½	33	7	12	3	0	0	0	0	0	30	7
Gunnies.....	2	2	0	8	0	0	0	0	0	0	0	0	8
Hides.....	0	0	0	0	14	3	8	5	14	3	8	0	0
Jungle sticks.....	6	95½	23	13	200	50	0	8	104½	26	3	0	0
Do: wood.....	1	1	0	4	0	0	0	0	0	0	1	0	0
Jaggery.....	0	0	0	0	7	1	12	1	7	1	12	0	0
Mats.....	2	2	0	8	6	1	8	4	4	1	0	0	0

Mullets.....	...	...	...	...	7	1	12	3	7	1	12	...	
Mangoes.....	...	...	...	...	7	1	12	1	7	1	12	...	
Nets.....	...	...	...	...	1	0	4	0	1	0	4	...	
Oysters.....	1	1	0	4	5	22	4	17	47	11	12	...	
Piece Goods.....	40	42	10	5	89	515	8	447	380½	95	3	...	
Passengers.....	1,555	1,681½	420	2,002	2,062	156	0	43	548	137	0	...	
Paddy.....	6	76	19	0	624	71	0	41	0	0	0	...	
Palmyrah leaves.....	23	333	83	4	284	7	0	0	0	0	0	...	
Palankeens.....	10	56½	14	2	28	2	0	0	0	0	0	...	
Planks.....	53	128	32	0	11	2	12	0	0	0	0	...	
Palmyrahs.....	...	...	...	...	21	5	4	3	21	5	4	...	
Red wood.....	27	540½	135	1	605	151	4	0	64½	16	3	...	
Rattan.....	2	23½	5	15	21	5	4	0	0	0	0	...	
Rafts of timber.....	9	18	4	8	166	41	8	29	148	37	0	...	
Ropes.....	...	...	...	...	5	1	4	1	5	1	4	...	
Shells.....	1,984	18,750½	4,687	9	23,142	5,785	8	0	4,391½	1,097	15	...	
Salt-fish.....	301	410½	102	9	469	117	4	0	58½	14	11	...	
Salt.....	2,440	43,748½	10,937	2,415	54,585	13,646	4	0	10,836½	2,709	2	...	
Sundries.....	372	556½	139	2	300	75	0	0	...	...	...	...	
Straw.....	38	443½	110	13	524	131	0	7	80½	20	3	...	
Saffron.....	7	79	19	12	39	9	12	...	...	...	...	...	
Sand.....	...	...	...	...	10	2	8	4	...	...	...	...	
Sheep.....	...	...	...	...	54	13	8	3	...	...	...	...	
do. skins.....	...	...	...	...	9	2	4	3	...	...	...	...	
Tobacco.....	21	152½	38	2	681	170	4	30	528½	...	...	...	
Turf.....	87	126	31	8	...	...	...	...	...	...	...	...	
Turnarie.....	1	5½	1	5	...	...	...	...	...	...	...	...	
Wood.....	1	1	0	4	...	...	...	...	...	...	...	...	
Total.....	9,287	1,05,467½	26,366	14,932½	1,29,643	32,410	12	1,006	25,019½	6,254	15	969	844½
												211	1

E. C. CANAL, SUPERINTENDENT'S OFFICE, CAMP, MADRAS, 28th May 1858.

(Signed) F. J. MOBERLY, Lieut., Superintendent of the E. C. Canal.

(Signed) E. LAWFORD, Lieut. Col., Officiating Chief Engineer.

(True Copy.)

21-211-357
259

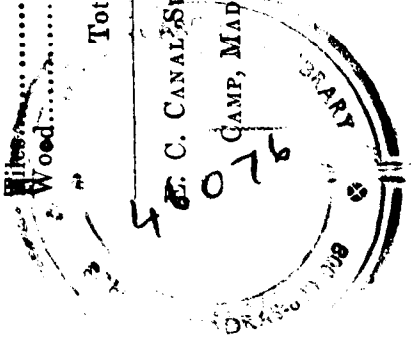


TABLE C.

Statement shewing the number of Boats, Tonnage, and the Amount of Toll collected on each sort of Goods which arrived at the Basin from each Village
by Cochran's Canal during the Official year 1857-58.

NAMES OF VILLAGES.	Wood.		Faggots.		Shells.		Salt.		Grain.		Miscellaneous produce.		Total No. of Boats.	Their Tonnage.	Amount of Toll paid at Madras.
	Boats.	Tons.	Boats.	Tons.	Boats.	Tons.	Boats.	Tons.	Boats.	Tons.	Boats.	Tons.			
Atheppett.	..	..	..	..	..	..	..	..	..	..	..	..	Rs. A.	Rs.	Rs. A.
Arumbakkum..	..	..	115	2,373	248	5,330	761	18,068	..	..	..	..	766	18,073	4,518 4
Arungum.	..	..	..	..	..	..	..	..	..	..	..	..	392	7,651	1,962 12
Beemarpallum..	..	..	112	2,993	27	480	..	..	..	..	..	..	2	34	..
Coromandel ..	9	19	136	353	142	340	..	..	..	..	..	..	175	2,934	735 8
Cushah Streechuricottah..	324	6,664	399	9,829	..	..	..	..	..	..	..	..	453	1,777	264 4
Carungal..	5	14	..	..	4	..	..	..	..	..	..	..	773	17,063	4,264 12
Chindimoney covil..	2	2	..	..	..	..	..	..	..	..	..	..	43	47	11 12
Culloor..	..	..	5	23	9	10	..	..	..	..	..	..	36	43	10 12
Chunamedum..	..	..	..	..	..	..	..	..	..	..	..	..	14	32	8 4
Calangy..	..	..	..	..	2	15	..	..	..	..	..	..	8	45	11 4
Cautocpully.	..	..	..	..	9	25	..	..	..	..	..	..	17	42	10 8
Catevauck	..	..	..	..	32	47	..	..	1	4	..	..	39	72	18 0
Curricandoo..	..	..	1	1	1	..	..	..	..	..	..	..	12	18	4 8
Cummarpallum	..	..	..	..	..	..	..	..	..	..	..	..	1	1	0 4
Doogorazpatam..	11	267	..	..	..	..	..	..	..	..	..	..	1	7	1 12
Ennore ..	1	5	1	28	21	..	..	..	5	78	..	..	121	1,266	316 8
Elloor ..	126	2,796	16	370	..	..	..	..	226	283	..	..	619	9,837	2,456 12
Elawoor..	..	71	..	..	128	2,399	..	..	7	161	..	..	160	3,510	877 8
Gondall	..	..	..	..	..	..	..	..	..	..	..	..	151	2,370	592 8
Irkum.	..	..	..	..	314	5,863	..	..	..	..	..	..	1	15	3 12
Koreerettitoo	2	35	..	..	223	4,106	..	..	..	..	..	..	326	5,893	1,473 4
Kondoorpallum	..	..	1	20	..	..	..	..	5	66	..	..	223	4,106	1,026 8
Kongeeley	..	..	1	12	..	..	..	..	..	..	..	..	..	79	182 4
Mathoopallum.	..	..	1	94	237	3,858	..	..	..	..	..	..	10	26	28 8
Manedoo	1	1	..	..	..	..	..	..	..	..	..	..	1	4	1,000 0
Manapallum..	..	..	1	26	8	..	..	..	..	..	..	..	1	45	11 4
Nattalattoo.	..	..	..	..	..	..	..	..	..	..	..	..	1	34	8 8
Nacathooroo	..	..	..	..	..	..	..	..	..	..	..	..	1	19	4 12
Omah Samoodrum	..	..	..	..	..	..	..	..	..	..	..	..	36	411	10 12
Pulicat.	1	1	..	..	20	99	..	..	24	85	..	..	2,176	2,221	612 12
Pooztheevattum..	..	..	1	21	..	..	..	..	..	..	..	..	38	423	1,917 12
Pmbly	..	..	..	..	..	..	..	..	..	..	..	..	3	18	4 3
Poondy Cornum..	8	195	240	5,640	..	..	..	..	..	..	..	..	2	3	1 4
Parombakum	1	21	1	16	..	..	..	..	..	..	..	..	0	0	1,464 4
Total....	702	14,524	1,341	27,905	1,473	23,142	5,785	13,616	58	636	159	0	3,335	8,851	32,411 12

Parovadoo..	..	..	..	..	..	..	..	..	..	..	..	..	3	7	1 12
Putray ..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	0 4
Ramapoorum	..	..	20	398	7	121	..	..	..	..	..	..	31	594	148 8
Royad-ooro Poondy	20	483	120	12	..	..	..	..	..	..	..	..	31	594	148 8
Redhypallum	2	56	14	0	..	..	..	..	..	..	..	..	31	594	148 8
Shadien Coopum	..	..	..	..	..	..	..	..	..	..	..	..	7	706	175 12
Sheeromboor	..	..	..	..	..	..	..	..	..	..	..	..	22	24	22 4
Soobah Redhypallum..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	6 0
Tudla Coopum..	89	1,774	443	8	247	5,440	1,360	0	..	..	..	..	471	9,116	2,279 0
Thaatho. p itay	..	..	..	..	..	..	..	..	..	..	..	..	25	218	54 8
Theerovuttoor..	..	..	..	..	..	..	..	..	..	..	..	..	25	218	54 8
Vulloor ..	..	..	..	..	..	..	..	..	..	..	..	..	573	13,522	3,331 0
Voyaloor ..	..	..	..	..	..	..	..	..	..	..	..	..	29	5,871	1,460 8
Vanadoo..	1	30	7	8	..	..	..	..	..	..	..	..	29	5,871	1,460 8
Yellagalavauckum	86	2,081	520	4	5	104	26	0	..	..	..	..	65	436	109 0
Total....	702	14,524	1,341	27,905	1,473	23,142	5,785	13,616	58	636	159	0	3,335	8,851	32,411 12

E. C. CANAL SUPERINTENDENT'S OFFICE,
CAMP, MADRAS, 28th May 1858.

(Signed) F. J. MOBERLY, Lieut.,
Superintendent of the E. C. Canal.

(True Copy.)

(Signed) E. LAWFORD, Lieut. Col.,
Officiating Chief Engineer.

TABLE D.

List of Boats which carry Produce.

Tonnage of Boats.	Number of Boats of each kind.	Total Tonnage of each kind.	Increase in the official year 1857-58.	
			Boats.	Tons.
I	142	142	18	18
II	10	20	1	2
III	16	48	2	6
IV	7	28	1	4
V	11	55	1	5
VI	7	42	1	6
VII	15	105	...	...
VIII	3	24	...	...
IX	2	18	...	...
X	3	30	...	...
XI	2	22	...	...
XII	1	12	...	...
XIII	4	52	...	...
XIV	4	56	...	...
XV	6	90	...	...
XVI	32	512	2	32
XVII	15	255	1	17
XVIII	26	468	1	18
XIX	33	627	...	...
XX	22	440	...	...
XXI	21	441	...	...
XXII	16	352	...	...
XXIII	21	483	1	23
XXIV	14	336	...	...
XXV	10	250	...	...
XXVI	32	832	2	52
XXVII	22	594	6	162
XXVIII	20	560	6	168
XXIX	12	348	4	116
XXX	9	270	2	60
XXXI	3	93	1	31
XXXII	4	128	3	96
XXXIII	2	66	1	33
Total...	547	7,799	54	849

E. C. CANAL SUPERINTENDENT'S OFFICE,
CAMP, MADRAS, 28th May 1858.(Signed) F. J. MOBERLY, Lieut.,
Supt. of the E. C. Canal.

(True Copy.)

(Signed) E. LAWFORD, Lieut. Col.,
Officiating Chief Engineer.TABLE E.
Statement shewing the Monthly Toll Collections on Miscellaneous Produce and Salt.

Months.	Miscellaneous Produce.				Salt.			Total No. of Boats.	Their Tonnage.	Amount of Toll levied at 4 Annas per Ton.		
	Boats.	Tons.	Toll.	Boats.	Tons.	Toll.	Rs.			A.	P.	
1857.												
May.	577	6,379	Rs. 1,594	12	335	7,722	1,930	8	912	14,101	Rs. 3,425	4 0
June... ..	652	7,247	1,811	12	262	6,191	1,548	8	914	13,441	3,360	4 0
July.	642	7,323	1,830	12	352	8,318	2,079	8	908	15,641	3,910	4 0
August	613	6,782	1,695	8	295	6,615	1,653	12	994	13,397	3,349	4 0
September....	529	5,628	1,407	0	237	5,241	1,310	4	766	10,869	2,717	4 0
October	405	4,782	1,195	8	96	2,050	512	8	501	6,832	1,708	0 0
November....	446	5,114	1,278	8	80	1,435	358	12	526	6,549	1,637	4 0
December.. ...	488	5,947	1,486	12	122	2,725	681	4	610	8,672	2,168	0 0
1858.												
January.. ...	572	6,704	1,676	0	61	1,299	324	12	633	8,003	2,000	12 0
February... ..	512	6,086	1,521	8	33	528	132	0	545	6,614	1,653	8 0
March... ..	606	6,573	1,643	4	185	4,128	1,032	0	791	10,701	2,675	4 0
April..	867	6,493	1,623	4	357	8,330	2,082	8	1,224	14,823	3,705	12 0
Total... ..	6,909	75,058	18,764	8	2,415	54,585	13,646	4	9,324	1,29,643	32,410	12 0

E. C. CANAL SUPERINTENDENT'S OFFICE,
CAMP, MADRAS, 28th May 1858.

(Signed) F. J. MOBERLY, Lieut.,

Supt. of the E. C. Canal.

(True Copy.)

(Signed) E. LAWFORD, Lieut. Col.,

Officiating Chief Engineer.

Statement shewing the financial results of remunerative works exceeding in cost

			Rs.	A.	P.
Kistnah Annicut.		Total amount of interest due upon the construction charges, Rupees 7,72,186-0-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	54,582	11	8
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	30,887	7	2
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	8,962	0	0
Pcollair Channel from Bezoarah to Patamata.		Total amount of interest due upon the construction charges, Rupees 71,715, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	5,737	3	2
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	2,868	9	7
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	7,709	10	6
		Do. do. of the year for which the account is rendered.....	5,399	14	6
Pollair Channel from Patamata to Weyoor and constructing Lock and Calingulah at Cunkapaud.	Kistnah Division.	Total amount of interest due upon the construction charges, Rupees 89,723-0-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	2,817	3	10
		Amount of interest due upon the construction charges incurred for the year for which the amount is rendered at the fixed rate of 4 per cent.....	3,588	14	9
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	8,830	0	0
		Do. do. of the year for which the account is rendered.....	10,925	12	10
Boodamair Channel from Mootalumpaud to Casarpilly.		Total amount of interest due upon the construction charges, Rupees 41,969-0-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	1,585	12	1
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	1,678	12	2
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	9,671	0	11
		Do. do. of the year for which the account is rendered.....	812	1	0
Cutting a Channel to divert a portion of the course of Boodamair River and constructing an aqueduct to carry it to Ellore High Level Channel.		Total amount of interest due upon the construction charges, Rupees 25,430-0-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	0	0	0
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	1,017	3	2
		Carried over.....	1,57,104	5	4

Rupees 10,000 each, in the Presidency of Madras for the official year 1856-57.

	Rs.	A.	P.
Total receipts up to the end of the previous year.....	1,02,739	0	0
Total receipts on account of the year for which the account is rendered.....	1,06,376	0	0
Carried over...	2,09,115	0	0

Statement shewing the financial results of remunerative works exceeding in cost

			Rs.	A.	P.
Mopedavy or Eastern Bank Channel.		Brought over.....	1,57,104	5	4
		Total amount of interest due upon the construction charges, Rupees 21,487, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	0	0	0
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	979	7	8
		Charges for maintenance, renewals, &c., of the year for which the account is rendered.....	4,256	0	0
Toongabudra Channel.		Total amount of interest due upon the construction charges, Rupees 57,460, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	1,590	12	10
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	2,298	6	5
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	2,090	0	0
		Do. do. of the year for which the account is rendered.....	3,763	12	0
Vullabhpooram Channel.	Kistnah Division.	Total amount of interest due upon the construction charges, Rupees 14,332, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	22	2	7
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	573	4	6
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	761	11	11
		Do. do. of the year for which the account is rendered.....	4,882	12	1
Nizampatam Channel.		Total amount of interest due upon the construction charges, Rupees 1,15,539, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	2,184	15	3
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	4,621	8	11
		Charges for maintenance, renewals, &c. up to the end of the previous year.....	230	0	0
		Do. do. of the year for which the account is rendered.....	4,882	12	1
Pennar Annicut.	Nellore.	Total Rupees.....	1,85,359	3	6
		Total amount of interest due upon the construction charges, Rupees 93,106-1-11, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	3,724	3	11
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at 4 per cent.....	3,724	3	11
		Amount of interest due upon the construction charges, Rupees 15,623-14-11, incurred during the year for which the account is rendered at 4 per cent.....	624	15	4
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	6,364	7	4
		Do. do. for the year for which the account is rendered.....	1,056	0	0
		Total Rupees.....	15,493	14	6

Rupees 10,000 each, in the Presidency of Madras for the official year 1856-57.

			Rs.	A.	P.
		Brought over.....	2,09,115	0	0
Pennar Annicut.....		Total Rupees.....	2,09,115	0	0
		Total receipts up to the end of the previous year.....	19,608	14	8
		Total receipts on account of the year for which the account is rendered.....	21,088	0	1
		Total Rupees.....	40,696	14	9

Statement shewing the financial results of remunerative works exceeding in cost

			Rs.	A.	P.
Palaur Annicut.....	North Arcot.	Total amount of interest due upon the construction charges, Rupees 2,31,872-8-4, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	11,354	13	1
		Amount of interest due on the construction charges, Rupees 2,19,256-1-2, incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	8,770	3	10
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	632	0	0
		Do. do. for the year for which the account is rendered.....	474	0	0
		Total Rupees.....	21,231	0	11
Ponnay Annicut.....	North Arcot.	Total amount of interest due upon the construction charges, Rupees 15,874-1-5, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	634	15	5
		Amount of interest due upon the construction charges Rupees, 30,635-1-0, incurred for the year for which account is rendered at the fixed rate of 4 per cent.....	225	6	5
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	250	0	0
		Do. Do. for the year for which the account is rendered.....	750	0	0
		Total Rupees.....	2,560	5	10
Coleroon River Lower Annicut.	North Arcot.	Total amount of interest due upon the construction charges of Rupees 1,29,050-10-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	98,078	7	7
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the do. do. ...	5,162	0	4
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	3,66,874	4	10
		Do. do. for the year for which the account is rendered.....	31,422	11	2
		Total Rupees.....	5,01,537	7	11
Vellaur Annicut.....	South Arcot.	Total amount of interest due upon the construction charges of Rupees 94,036-9-1, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	30,091	11	2
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	3,761	7	5
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	74,313	11	3
		Do. do. for the year for which the account is rendered.....	24,855	5	8
		Total Rupees.....	1,33,022	2	6
Ragavyen Voikal.....	South Arcot.	Total amount of interest due upon the construction charges of Rupees 13,602-12-7, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	4,352	14	2
		Amount of interest due on the construction charges incurred for the year for which the amount is rendered at the fixed rate of 4 per cent.....	544	1	9
		Carried over.....	4,896	15	11

Rupees 10,000 each, in the Presidency of Madras for the official year 1856-57.

			Rs.	A.	P.
Palaur Annicut.....		Total receipts up to the end of the previous year.....	15,804	0	0
		Total receipts on account of the year for which the account is rendered.....	17,414	0	0
		Total Rupees.....	33,218	0	0
Ponnay Annicut.....		Total receipts up to the end of the previous year.....	22,818	0	0
		Total receipts on account of the year for which the account is rendered.....	25,889	0	0
		Total Rupees.....	48,707	0	0
Coleroon River Lower Annicut.		Total receipts up to the end of the previous year.....	44,09,816	0	0
		Total receipts on account of the year for which the amount is rendered.....	3,31,201	0	0
		Total Rupees.....	47,41,017	0	0
Vellaur Annicut.....		Total receipts up to the end of the previous year.....	5,45,704	0	0
		Total receipts on account of the year for which the account is rendered.....	62,728	0	0
		Total Rupees.....	6,08,432	0	0
Ragavyen Voikal.....		Total receipts up to the end of the previous year.....	1,74,665	0	0
		Total receipts on account of the year for which the account is rendered.....	30,224	0	0
		Carried over.....	2,04,889	0	0

Statement shewing the financial results of remunerative works exceeding in cost

			Rs.	A.	P.
Trivaudy Annicut....	South Arcot.	Brought over.....	4,896	15	11
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	2,204	6	9
		Do. do. for the year for which the account is rendered.....	2,527	14	9
		Total Rupees.....	9,629	5	5
		Total amount of interest due upon the construction charges of Rupees 13,729-2-5, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	4,393	5	4
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	549	2	8
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	884	0	8
		Do. do. for the year for which the account is rendered.....	87	9	6
		Total Rupees.....	5,914	2	2
		Total amount of interest due upon the construction charges, Rupees 2,39,865-8-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	1,43,940	6	0
Upper Coleroon Annicut.	Tanjore.	Amount of interest, due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	9,594	10	0
		Charges for maintenance, renewals, &c., up to the previous year.....	1,05,730	11	0
		Do. do. of the year for which the account is rendered.....	13,924	15	0
		Total Rupees.....	2,73,190	10	0
		Total amount of interest due upon the construction charges, Rupees 73,739-13-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	43,724	12	0
		Amount of interest due on the construction charges incurred for the year for which the account is rendered.....	2,949	9	0
		Amount of interest due on the construction charges, Rupees 1,39,233-14-0, incurred during the year for which the account is rendered at the fixed rate of 4 per cent...	5,529	5	8
		Total Rupees.....	52,203	10	8
		Total amount of interest due upon the construction charges, Rupees 15,995, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	13,672	7	9
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	639	12	10
Lower Coleroon Annicut and South Raja Voikal.	Tanjore.	Charges for maintenance, renewals, &c., up to the end of the previous year.....	17,026	0	0
		Do. do. of the year for which the account is rendered.....	144	0	0
		Total Rupees.....	31,482	4	7
		Total amount of interest due upon the construction charges, Rupees 15,995, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	13,672	7	9
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	639	12	10
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	17,026	0	0
		Do. do. of the year for which the account is rendered.....	144	0	0
		Total Rupees.....	31,482	4	7
		Total amount of interest due upon the construction charges, Rupees 15,995, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	13,672	7	9
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	639	12	10
Chittanai Annicut across Vighay River.	Madura.	Charges for maintenance, renewals, &c., up to the end of the previous year.....	17,026	0	0
		Do. do. of the year for which the account is rendered.....	144	0	0
		Total Rupees.....	31,482	4	7
		Total amount of interest due upon the construction charges, Rupees 15,995, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	13,672	7	9
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	639	12	10
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	17,026	0	0
		Do. do. of the year for which the account is rendered.....	144	0	0
		Total Rupees.....	31,482	4	7
		Total amount of interest due upon the construction charges, Rupees 15,995, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	13,672	7	9
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	639	12	10

Rupees 10,000, each in the Presidency of Madras, for the official year 1856-57.

			Rs.	A.	P.
Trivaudy Annicut.....		Brought over.....	2,04,889	0	0
		Total Rupees.....	2,04,889	0	0
		Total receipts up to the end of the previous year.....	1,85,870	7	8
		Total receipts on account of the year for which the account is rendered.....	24,206	12	4
		Total Rupees.....	2,10,077	4	0
		Total receipts up to the end of the previous year.....	55,73,636	0	0
		Total receipts on account of the year for which the account is rendered.....	8,02,515	0	0
		Total Rupees.....	63,76,151	0	0
		Total receipts up to the end of the previous year.....	2,53,716	1	0
		Total receipts on account of the year for which the account is rendered.....	17,624	9	0
Upper Coleroon Annicut....		Total Rupees.....	2,71,340	10	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
Lower Coleroon Annicut....		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
Chittanai Annicut across Vigay River.		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0
		Total Rupees.....	1,05,457	0	0
		Total receipts up to the end of the previous year.....	1,02,004	0	0
		Total Receipts on account of the year for which the account is rendered.....	3,453	0	0

Statement shewing the financial results of remunerative works exceeding in cost

			Rs.	A.	P.
Comenpolliem Dam and Watercourse.	Coimbatore.	Total amount of interest due upon the construction charges, Rupees 42,970-0-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	48,126	4	4
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at do. do.	1,718	12	9
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	9,439	11	9
		Do. do. of the year for which the account is rendered.....	389	12	9
		Total Rupees.....	59,674	11	7
Comptah and Dharwar line.	Canara.	Total amount of interest due upon the construction charges, Rupees 2,32,847-1-11, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	9,313	14	1
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at 4 per cent.....	9,313	14	1
		Total Rupees.....	18,627	12	2
Chowghaut Yennamkul Dam.	Malabar.	Total amount of interest due upon the construction charges, Rupees 30,879-12-11, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	14,822	4	11
		Amount of interest due on the construction charges incurred for the year for which the account is rendered at the fixed rate of 4 per cent.....	1,235	3	1
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	13,910	0	9
		Do. do. of the year for which the account is rendered.....	463	6	2
		Total Rupees.....	30,430	14	11
East Coast Canal.....		Total amount of interest due on the construction charges, Rupees 3,74,581-0-0, incurred up to the end of the previous year at the fixed rate of 4 per cent.....	14,983	3	10
		Amount of interest due on the construction charges for the year for which the account is rendered at the fixed rate of 4 per cent.	14,983	3	10
		Amount of interest due on the construction charges, Rupees 93,018-0-0, incurred during the year for which the account is rendered at the fixed rate of do.	3,720	11	6
		Charges for maintenance, renewals, &c., up to the end of the previous year.....	1,28,478	9	1
		Do. do. for the year for which the account is rendered.....	4,472	0	0
		Total Rupees.....	1,66,637	12	3

CENTRAL OFFICE OF PUBLIC WORKS,
FORT SAINT GEORGE,
9th September 1858.

Rupees 10,000, each in the Presidency of Madras, for the official year 1856-57.

			Rs.	A.	P.
Commenpolliem Dam and Watercourse.		Total receipts up to the end of the previous year.....	28,620	5	7
		Total receipts on account of the year for which the account is rendered.....	916	0	6
		Total Rupees.....	29,536	6	1
Comptah and Dharwar line...		Total receipts up to the end of the previous year... ..	8,098	14	3
		Total receipts on account of the year for which the account is rendered.....	3,328	2	0
		Total Rupees.....	11,427	0	3
Chowghaut Yennamkul Dam.		Total receipts up to the end of the previous year.....	25,744	12	9
		Total receipts on account of the year for which the account is rendered.....	2,724	9	5
		Total Rupees.....	28,469	6	2
East Coast Canal.....		Total receipts up to the end of the previous year.....	5,40,307	14	8
		Total receipts on account of the year for which the account is rendered.....	25,486	2	0
		Total Rupees.....	5,65,794	0	8

(Signed) E. LAWFORD, Major,
Officiating Chief Engineer.

(True Copy.)

E. LAWFORD, Lieut. Colonel,
Officiating Chief Engineer.

Statement shewing the Issues of Mathematical, Scientific, and Drawing Instruments to the different Districts from the 1st May 1857 to the 30th April 1858.

CENTRAL OFFICE OF PUBLIC WORKS,
FORT SAINT GEORGE,
16th December 1858.

*Tenant Colonel,
Officiating Chief Engineer.*

NAMES OF ARTICLES.		Arcoo, North.	Arcoo, South.	Bellary.	Channarayana.	Chingleput.	Coimbatore.	Cuddapah.	Ganjam.	Godavary.	Kistnah.	Kurnool.	Madras.	Madura.	Malabar.	Nellore.	Salem.	Tanjore.	Tinnevely.	Trichinopoly.	Vizagapatnam.	East Coast Canal.	Mysore.	Captain Collyer.	Lieutenant Scott.	H. Cleghorn, Esq.	Officer commanding Sappers and Miners.	Total.	REMARKS.	
Barometer Aneroid....	...	...	...	1	1	2	...	...	...	1	1	3	2	1	1	...	...	...	...	...	1	...	...	...	...	...	...	13		
Boards, Drawing...	...	...	...	3	3	...	...	...	...	2	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11		
Box Magnets, pairs in wooden case...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Chains, Measuring with arrows	...	2	6	4	1	3	...	2	3	1	...	2	6	1	1	1	1	2	2	3	2	3	...	...	...	...	...	45		
Circumferencers, complete.	...	1	1	4	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13		
Clinometers.	...	1	1	1	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10		
Color Boxes, large. ...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18		
Do. Small....	...	13	4	2	5	4	...	...	...	...	...	2	7	2	2	6	1	1	5	2	1	1	...	...	...	...	...	70		
Compasses, Prismatic..	...	...	...	...	...	...	...	...	...	1	...	2	3	2	2	1	2	3	3	3	1	...	...	...	...	...	...	29		
Do. Beam....	...	1	1	1	1	3	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6		
Do. Pocket ...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5		
Do. Napier or Comprehensive.	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4		
Do. Proportional....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3		
Do. Brass, fine, points 4", 5", and 6"	...	6	...	...	...	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15		
Eidagraphs, complete....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Hallozuffill's Scales sets.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2		
Levelling Instrument Y.	...	1	1	2	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11		
Do. do. Troughton....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25		
Do. do. Dumpy	...	1	3	4	...	2	...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Do. do. Water ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Lines, Log ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Mathematical Tables (Hutton's)...	...	1	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2		
Do-Instrument Boxes, brass bound.	...	1	3	...	3	3	...	4	1	1	...	3	3	...	2	...	...	...	...	...	...	...	...	...	...	...	...	39		
Do. do. Cases, Fish Skin....	...	1	3	4	3	3	...	...	...	...	...	2	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	6		
Do. do. do. 2nd sort....	...	...	8	...	5	...	...	6	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12		
Parallel rulers, Ebony....	...	19	4	1	18	...	6	3	2	...	...	4	30	...	...	7	4	3	3	...	...	...	...	...	...	...	...	120		
Do. do. rolling, Brass...	...	3	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20		
Perambulators.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7		
Pentagraphs.	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3		
Plane Tables.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Plotting scales, sets...	...	1	4	...	3	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18		

Statement shewing the Issues of Machinery to the different Districts from the 1st May 1857 to the 30th April 1858.

NAMES OF ARTICLES.	Arcoot, North.		Arcoot, South.		Bellary.	Canara.	Chingleput.	Colombatore.	Cuddapah.	East C. Canal.	Ganjam.	Kistnah Division.	Kurtcol.	Madura.	Malabar.	Nellore.	Rajahmundry.	Salem.	Tanjore.	Trichinopoly.	Tinnevely.	Vizagapatnam.	Garrison Engineer.	Mint Master.	Arsenal.	Total.	REMARKS.
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apparatus, Boring, sets.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Blocks Iron single 6 Inches	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. double 6 do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. treble 6 do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. snatch 14 do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Circular Saw Tables, sets.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crabs, Iron, single	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. double.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cranes Transportable sets.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Engine Steam Portable 5 horse Power.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jack Screws.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Machines, Brickmaking.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mills Pug.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Machines Punching and Shearing.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plate Screw with Taps, large	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. do. small.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pumps, Portable.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rails Iron Bridge of 12 feet.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. do. of 10 feet.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. do. of 8 feet.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tools, Carpenters, sets.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peet Machine for Compressing	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

CENTRAL OFFICE OF P.W.
Fort Saint George.
16th December 1858.

(Signed) E. LAWFORD, Lieut. Colonel,
Officiating Chief Engineer.

FROM THE SUPERINTENDENT OF THE GOVERNMENT LITHOGRAPHIC PRESS,
Central Office of Public Works.

TO THE CHIEF ENGINEER,

Department of Public Works.

SIR,

In obedience to orders, I beg leave, very respectfully to submit, annexed, a statement of work executed at the Government Lithographic Press of the Central Office of Public Works, for the official year ending 30th April 1858.

2. The expense of Office Establishment, &c., the out-turn of the year, by the steady and regular working of from four to five Presses daily, and its valuation, are given in the memorandum at the foot of the statement; which, I humbly trust, though not so favorable as might be expected, will, nevertheless, be considered satisfactory; considering that this memo. is but the result of the first year's operations, with its many disadvantages, since the Department was extended in January 1857.

3. The quality of the work turned out generally, while we stand in advance in colored printing introduced during the year under review, and which has done away in several instances with the after tedious process of coloring by the hand, thereby economizing both time and expense, I shall venture to state, will be found equal, if not superior, to that turned out in the sister Presidencies.

4. Now that the Draftsmen and Printers are better up to their work, and the Department generally in a more efficient state of working order, I trust to be able, at the close of the present official year, to come forward with a comparative statement of work considerably exceeding that now submitted.

5. The largest size Lithographic Press in use, either in England or abroad, recently received from Europe for the use of this Department, which has been allowed to stand still since its receipt for the want of some simple mechanical means to work the very unweildy and heavy stones, will, (as these means have lately suggested themselves, and which will shortly be introduced) during the current year, be brought into effectual operation.

Most humbly and respectfully soliciting your favorable consideration, and that of the Government, with reference to my present reduced salary, and to the sacrifice of my private earnings.

Government Lithographic Press of
Central Office of Public Work,
Fort Saint George,
6th May 1858.

I beg to remain, Sir,
Ever your grateful servant,
(Signed) J. DUMPHY,
Superintendent and Manager.

Statement of work executed at the Government Lithographic Press, of the Central Office of Public Works, from the 1st May 1857 to the 30th April 1858.

For what Office.	Maps and other Drawings.		Circulars, Forms, &c.	
	Number of copies.	Number of impressions.	Number of copies.	Number of impressions.
Central Office of Public Works.	9,286	11,352	88,467	79,212
District Engineers through the Central Office.	...	...	6,000	2,000
Government Office, Public Department.	1,310	1,712	11,800	5,860
" " Judicial " 	36	36	...	...
" " Military " 	2,200	736	9,050	3,925
" " Public Works " 	102	102	6,600	1,300
Government Gazette Press.	8,755	9,574	900	900
Government Central Museum.	7,000	7,000	...	...
Military Board Office.	400	400	...	...
Revenue Board Office.	102	204	10,000	1,758
Adjutant General's Office.	4,360	5,240	10,200	800
Town Major's Office.	...	...	5,850	976
Collector of South Arcot.	310	310	...	...
" of Madras.	1,095	1,225	...	...
Madras University.	...	...	254	254
Conservator of Forests.	1,000	800	...	...
Inspector General of Hospitals.	...	...	1,600	400
Office of the Commandant of Engineers.	...	...	7,084	1,680
" Commander in Chief.	...	...	2,100	600
Superintending Engineers of Circle.	...	...	3,100	1,033
Male Asylum Press.	300	300	...	...

Statement of work executed at the Government Lithographic Press, &c.

For what Office.	Maps and other Drawings.		Circulars, Forms, &c.	
	Number of copies.	Number of impressions.	Number of copies.	Number of impressions.
Madras Journal of Literature and Science.....	1,660	3,165	...	...
Civil Auditor's Office.....	...	...	3,000	475
Lieutenant Taylor's Charts for sale and for distribution.....	600	600	...	...
Map to accompany the yearly Budget of the Madras Presidency (sold also to the Public).....	500	4,500	...	...
Quarter Master General's Office.....	182	182	3,539	3,028
Total...	39,228	47,438	1,70,444*	1,04,200*
Average per month.....	3,269	3,953½	14,263½	8,683½

No. of copies of drawings and writings together, for the year 2,09,672

No. of impressions of drawings and writings together do. 1,51,638 Rs. A. P.

Memo.

Rs. A. P.

Cost of Office Establishment, for the year, deducting the salaries of 3 draftsmen, exclusively employed in compiling and correcting district maps, and 1 writer..... 18,320 0 0

Contingent expenses incurred, during the year, in the working of the Office..... 548 2 4

Value of Maps and other drawings; 47,438* Impressions at 20* Rs. ₹ 100 impressions..... 9,487 9 7

Value of Circulars, Forms, &c., 1,04,200* impressions, at 7* Rs. ₹ 100 impressions..... 7,294 0 0

16,781 9 7

Cost to Government in excess of value of work returned. Rs. 2,086 8 9

(Signed) J. DUMPHY,

Superintendent and Manager.

6th May 1858.

* These are very reduced charges.

Memorandum on the foregoing Report to accompany narrative of the operations of the D. P. W. for the year 1857-58.

The out-turn of the Government Lithographic Press for the year 1857-58 has been as follows.

Maps and other Drawings.

No. of copies executed during the year..... 39,228
No. of impressions..... 47,438

Circulars, Forms, &c.

No. of copies executed during the year..... 1,70,441
No. of impressions from the stone required for the above..... 1,04,200

making a total of copies of drawings and writings together for the year of 2,09,672 made by means of 1,51,638 impressions.

The number of impressions differs from the number of copies, as a copy sometimes requires four or even more impressions, while at other times two or more copies are struck off one stone.

In the accompanying statement the authorities for whom work was done and the numbers of the copies of the Drawings and papers supplied to each is shewn in detail: this will shew the great utility of the Press which works for every Office which requires its services. The quality of work is gradually improving, and a great step in advance has been made by the introduction of printing in colours which insures accuracy at a great saving of time.

It is not easy to judge of the value of the work executed as there is no private establishment in Madras which can compete with the Government Press or in fact execute any but very inferior work. The present Superintendent had a private establishment which turned out excellent work, but he has given up private work. He has appended to the Statement already alluded to a comparison between the cost of the Government Establishment and the value of the work turned out by it—the latter is I think under-estimated, so that even in its present somewhat inexperienced state the Office has acquitted itself very well indeed.

(True copies.)

(Signed) E. LAWFORD, Lieutenant Colonel,

Officiating Chief Engineer.

PUBLIC WORKS DEPARTMENT.
Public.

No. 677.

Extract from the Minutes of Consultation under date the 23rd March 1859.

Read the following letter from the Officiating Chief Engineer.

Submits, with advertance to Extract Minutes of Consultation, 11th November 1858, No. 2371, and the possible delay that may occur in deciding on the question of the applicability of the Bengal Code of Public Works to this Presidency, certain documents constituting the Annual Report on the operations of the Department as required by paras. 11, 12 and 13, of the orders at page 318, of the Circular Order Book.

(Here enter 16th December 1858, No. 6359.)

No. 2.

ORDER THEREON, No. 677; dated 23rd March 1859.

Para. 1. The Report and Statements accompanying the above letter, are designed to shew the operations of the Department of Public Works for the Official year 1857-58, as required by paras. 11 to 13 of the Rules circulated under date the 17th June 1856. The Report is a copy of the Administration Report previously submitted by the Chief Engineer to meet the requisition* of the Supreme Government.

2. In the Budget of 1857-58 a sum of Rupees 64,19,784 was entered as the probable Expenditure that would be required to be made during the year for works of every description inclusive of Repairs, but owing to the restrictive orders of the Government of India the actual outlay has amounted to only Rupees 40,87,025, viz. Rupees 20,72,795 on account of New Works, and Rupees 20,14,230 for Repairs, the whole falling short of the Estimate by more than 23½ lacks of Rupees.

3. This Expenditure is shewn to have been on account of

	New Works.	Repairs.
	Rs.	Rs.
I. Irrigation Works...	4,38,108	12,70,658
II. Communications...	4,96,080	5,34,757
III. Buildings...	11,38,607	2,08,817
Rupees.....	20,72,795	20,14,230

4. Under the first head I, the chief Expenditure incurred for the construction or extension of Irrigation Works, or the repair of existing ones, appears in the undermentioned Divisions and Districts.

	New Works.	Repairs.
	Rs.	Rs.
Ganjam...	2,712	26,278
Godavery Division...	1,52,286	3,05,077
Kistnah Division...	82,166	1,23,807
Nellore...	30,561	1,17,747
Cuddapah...	20,384	35,422
Bellary...	1,889	80,182
Chingleput...	5,828	41,445
North Arcot...	73,121	34,920
South Arcot...	13,131	70,981
Tanjore...	3,479	1,65,965
Trichinopoly...	25,492	76,681
Madura...	185	52,370
Tinnevely...	11,036	50,773
Coimbatore...	14,426	29,366
Salem...	803	42,128

Communications.

5. The second head No. II comprizes the following communications.

	New Works. Rs.	Repairs. Rs.
Roads and Bridges	4,01,287	5,06,104
Navigable Canals	64,879	22,493
Ports and Harbours	29,142	3,396
Ferry Boats	772	2,764
Total.....	4,96,080	5,34,757

6. The great bulk of the Expenditure was on account of Roads and Bridges, and that only will be noticed.

	New Works. Rs.	Repairs. Rs.
Ganjam	35,304	18,992
Nellore... ..	26,061	40,910
Bellary	4,095	50,826
Kurnool	38,853	11,439
Chingleput	46,191	86,664
North Arcot.... ..	56,263	46,538
South Arcot	25,787	37,568
Tanjore... ..	30,903	7,804
Coimbatore	16,169	38,644
Canara... ..	17,501	40,204

7. Under the head of Buildings No. III the large disbursements appear in Bellary, Chingleput, Coimbatore, Madras and Hyderabad. The classification of the total Expenditure for Buildings is as follows:

	New Works. Rs.	Repairs. Rs.
Military.....	9,84,615	1,18,926
Revenue.....	21,977	27,494
Public.....	50,966	32,954
Judicial.....	57,041	21,861
Ecclesiastical.....	7,693	6,607
Marine.....	13,501	686
Educational.....	2,814	289
	11,38,607	2,08,817

8. The Administration Report from para. 15, notices the operations of the Department in each of the Divisions and Districts, and puts forward prominently those works of any importance that have engaged the attention of the Engineer Officers. This part of the subject does not call for much observation. The restrictive orders of the Government of India already adverted to have greatly narrowed the operations of the Department, and as a consequence, left the Engineer Officers little else to attend to than the repair and maintenance of existing works, and the continuation of some works already in progress; or as expressed in para. 5 of Colonel Lawford's letter of the 16th December "no new works of any magnitude were carried on during the year, whose effect on the improvement of the country deserves special mention." Looking to the Statements given above, it is seen that a large share of attention has been devoted to the two kinds of works most conducive to the benefit of the country, viz. Irrigation Works and Roads and Bridges. As regards the first, it is observed, that in

Irrigation Works.

the Godavery and Kistnah Divisions, and in the Districts of Nellore, Cuddapah, North and South Arcot, Trichinopoly, Tinnevely and Coimbatore, there has been considerable expenditure for the improvement or extension of works, as well as for repairs; while in the Districts of Ganjam, Bellary, Chingleput, Tanjore, Madura and Salem, the outlay was chiefly, if not almost wholly, for repairs.

GODAVERY DIVISION.	
	Rs.
New Works.....	1,52,286
Repairs.....	3,05,077
	4,57,363

P. 24.

KISTNAH DIVISION.	
	Rs.
New Works.....	82,166
Repairs.....	1,23,807
	2,05,973

P. 37.

9. In the Godavery Division where the expenditure has exceeded 4½ lacks, the principal works were the Weyaroo Canal; the Samulcottah and Toonee Canal; the Samulcottah and Cocanada Canal; some Irrigation and Drainage Channels, and other works connected with the Godavery Annicut. The large expenditure in repairs was chiefly for the repair of the breach in the Annicut.

10. In the Kistnah Division the principle works were the Northern and Southern high level Channels, and the Channel from the Poolairoo to the Canal Basin at Masulipatam, besides others of less note. The Expenditure on Repairs was for Irrigation Works, connected chiefly with the extension and development of the system dependent on the Kistnah Annicut.

11. The Hurricane of November 1857 did much injury to the works in Nellore and Cuddapah, and led to large expenditure in both Districts for Repairs. The great bulk of the expenditure in North Arcot was incurred on account of the Palar Annicut, and its subsidiary works, and for repairs to other works. The expenditure in other Districts does not call for special notice and though large in many instances has been necessitated by the circumstances of the season, as in the case of Tanjore where the Irrigation Works sustained considerable injury from the Monsoon of October 1857 and led to an expenditure which in all amounted to Rupees 1,65,965; as also in Trichinopoly where the rains of November and December 1857, caused considerable damage.

* Navigation.
P. 73.

12. The Paumbem* Channel was further improved during the year by the removal of 7,120 cubic feet of stone and of 9,285 cubic feet of sand, at a total expenditure of 9,104 Rupees; and it is stated that the Channel with its rapidly increasing traffic is slowly but steadily advancing to the attainment of the General depth of thirteen feet shewn to be practicable and strongly recommended by Colonel A. Cotton in 1854.

13. The communications in the Provinces shared in the damages sustained by the Irrigation Works, and large disbursements were made for their repair. The expenditure on Roads and Bridges has been general, but the largest appears in Chingleput and North Arcot, the amount expended in each exceeding, both for New Works and repairs, a lack of Rupees.

Roads.

14. On Buildings the chief expenditure is on account of those appertaining to the Army and comprizes several Military Works at Saint Thomas' Mount Rupees 3,15,994 for the Jackatalla Barracks on the Neilgherries; and Rupees 3,60,570 for the Hyderabad Barracks.

Buildings.
P. 51.

15. The transactions connected with the traffic from the Northward by Cochrane's Canal for the year 1857-58 are contained in the Tables lettered A to E and exhibit in comparison with 1856-57, a large increase in Tonnage and Toll.

	Boats.	Tons.	Toll.	
			Rs.	A.
1856-57.....	9,287	1,05,467½	26,366	14
1857-58.....	9,324	1,29,643	32,410	12
Increase in 1857-58..	37	24,175½	6,043	14

The chief items which contributed to the traffic of the year were the following:

	Boats.	Tons.	Toll.	
			Rs.	A.
Chillies.....	180	2,239	559	12
Firewood.....	1,341	27,905	6,976	4
Jungle sticks.....	14	200	50	0

	Boats.	Tons.	Toll.	
			Rs.	A.
Passengers.....	2,002	2,062	515	8
Paddy.....	49	624	156	0
Red-wood.....	25	605	151	4
Shells.....	1,473	23,142	5,785	8
Salt-fish.....	228	469	117	4
Salt.....	2,415	54,585	13,646	4
Wood.....	701	14,524	3,631	0
Other commodities.	8,428	1,26,315	31,588	12
	9,324	1,29,643	32,410	12

16. The Returns of the traffic on the Godavery and Kistnah Channels, and on the Eastern Coast Canal which form No. 3 of the accompaniment of Colonel Lawford's letter of the 16th December 1858, will be published in the Official Gazette for general information.

17. The Statement of the Audit of Bills as given in para. 6 of the same letter, shows a balance remaining unadjusted on the 1st May 1858 of 3,731 Bills to the amount of Rupees 66,67,986-14-2. It is not necessary to notice this part of the subject further, as from the Report of Audit received from the Central Office, dated 7th February 1859, it appears that all Bills previous to 1st February 1859 had then been adjusted, and that there was no balance remaining on that date.

Operations of the Lithographic Department.

Enclosure No. 7.

18. The Statement to exhibit the work of the Lithographic Department shows that, between the 1st May 1857 and 30th of April 1858 the number of copies and of impressions struck off and supplied to public Offices was as follows:

	Copies.	Impressions.
Maps and Drawing.....	39,228	47,438
Circulars, Forms, &c.....	1,70,444	1,04,200
	2,09,672	1,51,638.

The cost of this Press is represented at Rupees 18,868 and the value of the work, estimated at rates which the Officiating Chief Engineer considers rather low, at Rupees 16,781. Colonel Lawford thinks from this result that the Office has acquitted itself very well, an opinion in which the Government are disposed to join him.

19. In his letter of the 13th October 1858 Colonel Lawford observed, first, that the Government of India (Extract Minutes Consultation, 24th November 1855) require an Administration Report to be submitted annually in the month of June; secondly, that the Rules 11 to 13 circulated with Extract Minutes Consultation, 17th June 1856 require the submission of an Annual Report on the operations of the Department to the Local Government, which Report, amongst other points of information, is required to contain details of the results of improvements; thirdly, that a Progress Report is also submitted to the Government of India under orders dated 9th February and 7th May 1855. Colonel Lawford states that Rules 11 to 13 of the 17th June 1856 enjoining an Annual Report on the operations of the Department and on the results of improvements, are literally complied with by the Administration and Progress Reports sent for transmission to the Government of India, and he suggests that the "Annual Report" required by the three Rules be discontinued, and that in lieu of it the "Annual Progress Report" may be considered as the great Report of the Department, and that Reports on the issues of Stores and Instruments and on the rates paid for labor, &c., be separately submitted as distinct documents, or as Supplements to the Progress Report.

20. The Government were not willing at the time to disturb existing arrangements until they had the Report previously called for by them respecting the applicability of the Bengal Code of Public Works to this Presidency; but apprehensive that the question may

involve delay, Colonel Lawford has submitted a copy of the Administration Report already prepared for the Government of India as a substitute for the Report of operations required by the Rules of the 17th June 1856 merely completing it with Statements containing the further information required by those Rules.

21. This course, though its express object is to save time and trouble, is attended with some confusion and inconvenience. The requirements of the Government of India and of the Local Government are each for a specific object. The Supreme Government require a Report of Proceedings in the Public Works and other Departments, for the purpose of compiling a General Report of the Administration of the Country; whereas the Local Government require an Annual Report in order to their being kept informed of the actual working of the department. The Government think that these two distinct objects should be maintained; and that by proper arrangements this may be done without difficulty and without much additional labor. They would

call the attention of the Central Office to their Order of 24th E. M. C. 19th June 1855, No. 274. do. 26th do. „ 1055. November 1855, No. 1497 on the letter from the India Government requiring these Administration Reports. It was there

directed "that the Reports should be as brief as is compatible with perspicuity while they must at the same time present distinctly all facts of importance and which are likely to be interesting to general readers." The Report now reviewed, with some improvement would fully answer the purposes of the Annual Report on the operations of the Department required by the Local Government; but it does not meet the orders for brevity and perspicuity specially enjoined in the case of the Administration Report.

The best course perhaps would be to prepare first the Annual Report for this Government, of the Operations of the Department, and then to condense from that document the Administration Report of the Department, which would necessarily be much more brief.

Ordered that 300 Copies of the Report together with this Review be printed as a Selection for distribution.

(Signed) J. D. BOURDILLON,
Secretary to Government.

R

DI. 2118 M57

M59

46076