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MADRAS RECORD OFFICE.

Government of Madras.

Public works **DEPARTMENT.**

G.O. No. 2495 Press Mis.-

517

Dated 29. 9 1871.

Not to be folded or roughly handled

PUBLIC WORKS DEPARTMENT,
OOTACAMUND, 29*th September* 1871.

No. 517.

No. 2,495.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

ACCOUNT, No. 52.

SIR,—I am directed by the Right Honourable the Governor in Council to forward the Progress Report of Public Works in this Presidency executed from Imperial Funds during the year 1870-71.

2. A separate Progress Report of *Local Fund* expenditure will shortly be laid before the Government of India.

3. The present report will be found identical with the Administration Report of the Presidency so far as *Imperial Funds* are concerned.

4. The Original Imperial grant for Public Works proper was Rs. 81,46,200, which the Government of India subsequently reduced to Rupees 76,71,200.

5. The following statement exhibits a comparison between the modified grants and the expenditure during the years 1869-70 and 1870-71 :—

Head of Service.	1869-70.		1870-71.	
	Grant.	Outlay.	Grant.	Outlay.
	RS.	RS.	RS.	RS.
New Works.				
Military	5,72,989	5,63,626	3,34,015	3,32,353
Civil Buildings	11,35,412	11,08,146	5,24,702	5,13,329
Agricultural	14,44,204	12,01,484	22,28,169	8,00,020
Communications	8,27,927	7,74,772	2,12,256	6,24,922
Miscellaneous Public Improvement	1,32,826	1,32,753	25,796	44,749
Repairs.				
Military	1,85,227	1,83,110	2,26,503	2,23,005
Civil Buildings	80,641	1,04,081	98,438	91,804
Agricultural	10,94,344	10,72,519	11,80,981	11,44,826
Communications	7,44,718	7,44,085	8,70,828	9,14,912
Miscellaneous Public Improvement	4,912	4,763	7,090	32,694
Establishments	18,79,280	17,77,197	17,79,862	16,10,350
Tools and Plant	97,500	83,758	1,82,560	1,62,974
Total...	81,99,980	77,50,294	76,71,200	64,95,938

6. It will be seen from the foregoing statement that the total expenditure on "Works" fell short of the grant by Rupees 14,28,149, of this sum Rupees 24,483 appertain to "Ordinary" and Rupees 14,03,666 to "Extraordinary."

7. Under "Military" the outlay on New Works was Rupees 3,32,353 against a grant of Rupees 3,34,015, the difference being due to small savings. Under "Repairs Military" an expenditure of Rupees 2,23,005 was incurred with an

allotment of Rupees 2,26,503, the largest savings having occurred in the Vizagapatam and Presidency Districts. The expenditure under this head of service for "New Works" was chiefly incurred [illegible] additional barrack accommodation at St. Thomas' Mount, the Lawrence Asylum buildings at Ootacamund, the Female Hospital for European Troops and [illegible]ally quarters for the Garrison Battery at Bellary, and the Ulsoor water project at Bangalore.

8. The modified assignment for Original Works Civil Buildings amounted to Rupees 5,24,702, against which an outlay of Rupees 5,13,329 is recorded, leaving an unspent balance of Rupees 11,373, which is due to savings on the Talook Cutcherries at Namkul in the Salem, and Perambalore in the Trichinopoly District, besides numerous small savings principally on Police buildings and Minor Works. Out of an allotment of Rupees 98,438 under "Repairs Civil Buildings" an expenditure of Rupees 91,804 was incurred, leaving a balance of Rupees 6,634 unutilized at the close of the year. The works against which the largest outlay is recorded are the improvements to the Revenue Board Office buildings at Chepauk, the conversion of the Police Court building into a residence for His Highness the Prince of Arcot, the Central Jails at Cannanore and Vellore, and the Lunatic Asylum and Penitentiary at Madras.

9. An expenditure of Rupees 8,23,686 was incurred on Original Works "Agricultural Ordinary" out of a modified assignment of Rupees 3,48,169, and out of an allotment of Rupees 18,80,090 from Loan Funds outlay to the extent of Rupees 4,76,334 is registered. The failure in expending the allotment, which is especially noticeable in regard to extraordinary works, is attributed to several causes, among which the principal are the incomplete state of the estimates for works having grants but upon which expenditure was prohibited in the absence of sanctioned estimates, the retardation of work due to excessive accumulations of water till a late period in the working season, sickness in the districts, difficulties experienced in procuring labour, and to the neglect of contractors to fulfil their engagements. Rupees 11,44,826 were expended on Agricultural Repairs during the year out of an allotment of Rupees 11,80,981.

The largest outlay was incurred on the under-mentioned works :—

	Rs.
Madras Water Supply Project	1,22,855
Streeviguntum Anicut Project in Tinnevelly	97,511
Chembrumbaukum Project in Chingleput	39,585
Improvements to the Survapally Channel in Nellore...	66,980
Ryves' Canal Project in the Kistna District	38,821
Anicut across the Vellaur river at Palandorai in South Arcot	37,741
Regulating works for the principal branches of the Vennaur in Tanjore	28,170
Enlargement of channels in the Masulipatam section of the Kistna Delta	25,469
Extension of irrigation from the Western Delta of the Godavery...	22,199
Widening and improving the Samulcotta Canal ...	20,730

10. An outlay of Rs. 6,24,922 is shown against a reduced grant of Rupees 2,12,256 under New Works "Communications," the former sum, however, includes expenditure incurred in previous years on Famine Relief Works. The amount actually spent on Communications during the year was Rupees 1,93,974 under "New Works," and Rupees 8,62,375 under "Repairs."

The largest outlay on Original Works was incurred on the under-mentioned roads :—

	Rs.
Wynaad.—Tambracherry Ghaut	35,261
Madura.—Road from Paumben to the Coimbatore frontier	14,999
Wynaad.—Do. from the head of the Periah Ghaut to Manantoddy	14,994
South Arcot.—Bridge across the Vellaur on the road from Pondicherry to Negapatam	14,785
Trichinopoly.—Iron Girder Bridge across the Iyaur ...	12,165
Madura.—Road from Tondy to Dindigul	11,977
Wynaad.—Karkoor Ghaut to Goodaloor and thence to Tippacaudoo	10,000
Neilgherries.—New Coonoor Ghaut	6,977

The New Coonoor Ghaut has been opened out for wheeled traffic throughout its length, and little remains to complete Karkoor and Periah ghauts. Considerable progress was made in widening the roadway of the Tambracherry ghaut, portions of which were also metalled during the year. As explained in the accompanying report the progress made with the construction of the Ellore and Iyaur bridges was much retarded by the freshes in the rivers.

11. Under "Miscellaneous Public Improvement" an expenditure of Rupees 77,443 on "New Works" and "Repairs" is registered against a grant of Rupees 32,886. The principal works undertaken during the year, with the outlay on each, being those noted below :—

	Rs.
Reclamation of the swamp at the head of the Ootacamund Lake	2,185
Project for supplying Ootacamund with water	2,017
Cutting the inner angle of the Paumben Reef Channel...	1,284
Deeping Paumben Channel	1,142

I have the honour to be,

Sir,

Your most obedient servant.

(Signed) J. CARPENDALE, Colonel, R.E.,

Secretary to Government.

Exd. E. C. Shunker.

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ANNUAL PROGRESS REPORT

OF

PUBLIC WORKS IN THE MADRAS PRESIDENCY

FOR THE YEAR 1870-71.

THE original Imperial grant for Public Works proper was Rupees 81,46,200.

This assignment was subsequently reduced to Rupees 76,71,200, which the Government of India distributed as follows:—

		RS.
Military		6,00,000
Agricultural	Ordinary	15,96,200
	Extraordinary	18,80,000
Other services		18,35,800
Tools and Plant	Ordinary	1,30,000
	Extraordinary	20,000
Establishment	Ordinary	13,09,200
	Extraordinary	3,00,000
	Total	76,71,200

2. In this distribution, the Government of India, taking exception to the estimate for Establishments (Ordinary), reduced the grant under that head by Rupees 2,00,000, which they added to "Agricultural."

3. The following statement exhibits a comparison between the grant and outlay from Imperial Funds in 1869-70 and 1870-71. The allotments, in each case, are as they stood at the close of the years noted:—

Head of Service.	1869-70.		1870-71.	
	Grant.	Outlay.	Grant.	Outlay.
New Works.	RS.	RS.	RS.	RS.
Military	5,72,989	5,63,626	3,34,015	3,32,353
Civil Buildings	11,35,412	11,08,146	5,24,702	5,13,329
Agricultural	14,44,204	12,01,484	22,28,169	8,00,020
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Head of Service.	1869-70.		1870-71.	
	Grant.	Outlay.	Grant.	Outlay.
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Military	1,85,227	1,83,110	2,26,503	2,23,005
Civil Buildings	80,641	1,04,081	98,438	91,804
Agricultural	10,94,344	10,72,519	11,80,981	11,44,826
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Tools and Plant	97,500	83,758	1,82,560	1,62,974
Total...	81,99,980	77,50,294	76,71,200	64,95,938

MILITARY.

BELLARY.—Cantonment Water-supply.

4. The importance of this project, to provide against the results of a scanty rainfall, to which the station of Bellary is frequently subjected, has been noticed in a previous report. The supply-channel has had its depth regulated. The head sluice, the foundations of which were laid in the previous year, has been completed, and the reservoir, which has had its bund raised to a uniform level, will be ready to receive a supply this year. Only Rupees 1,856 remain to be expended to complete this project, the estimate for which amounts to Rupees 69,300.

Bellary Female Hospital for European Troops.

5. The design of the Female Hospital for European Troops has, at the suggestion of the Government of India, been considerably modified, and the requisite accommodation is now provided in a single story instead of in a double story as originally intended. The building has been roofed in, and will be shortly ready for occupation. The total outlay against an estimated expenditure of Rupees 38,000, has been Rupees 36,063, of which Rupees 20,566 were laid out in 1870-71.

Native Hospital, Bellary.

6. The Native Hospital at Bellary, which affords accommodation for forty-eight sick in two wings, has been completed at an aggregate outlay of Rupees 44,182, of which Rupees 2,982 were spent during the year.

Lock Hospital, Bellary.

7. The Bellary Lock Hospital has been completed. The outlay in 1870-71 has been Rupees 4,391 on an estimate of Rupees 15,900.

Bellary New Garrison Main Guard.

8. The Garrison Main Guard is at present located in an old Treasury in the vicinity of the building now under construction. The basement of the main building has been filled in, and all the out-houses have nearly been completed with an expenditure during the year of Rupees 6,199.

Family Quarters for the Garrison Battery, Bellary.

9. The construction of Family Quarters for the Garrison Battery at Bellary was commenced during the year, and Rupees 21,599 were expended on three of five double quarters which are ready for roofing.

Lightning Conductors to Barracks at Ramandroog.

10. The Lightning Conductors to the Barracks at Ramandroog, the construction of which was stopped on financial grounds in 1869-70, were completed during 1870-71. Outlay during the latter year has been Rupees 309.

Subaltern's Quarters in the late Civil Auditor's Office, Fort St. George.

11. These quarters are approaching completion, and Rupees 3,500 have been expended in 1870-71 against an estimate of Rupees 8,400.

CHINGLEPUT.—New Barracks, St. Thomas' Mount.

12. The lower stories of all three blocks have been finished, while the upper stories of Nos. 1 and 2 blocks have been nearly completed to the level of the roof. The central stone stair-cases and the outer wooden stair-cases of Nos. 1 and 2 blocks have been completed. The expenditure during the year has been Rupees 49,994, making a total of Rupees 1,20,176, against an estimate of Rupees 2,05,010.

Mess-house belonging to the late Madras Artillery.

13. The Mess-house belonging to the late Madras Artillery was purchased by the Government for Rupees. 43,335, and a monthly rent of Rupees 100 is realized from the officers of the Royal Artillery.

Serjeants' Mess, Library, etc. Two pavilions of Hospitals.

14. These buildings were completed in 1869-70, but, owing to financial pressure, payments to the extent of Rupees 9,680 could not be made until the following year.

Drainage of Infantry lines at Royapoorum, Presidency.

15. The estimate for remedying the defective state of the drainage of the new Infantry lines at Royapoorum amounted to Rupees 35,550, and the expenditure which during the year was Rupees 1,492, aggregates Rupees 32,550, and no more than Rupees 100 are represented to be required to complete the works.

BANGALORE.—Soojee Mill and Bakery.

16. An expenditure of Rupees 2,310 has been incurred in the construction of a chimney, and all that is required to complete the bakery is fixing the tie-rods to bind certain parts of the building together with a view to counteracting the tremulous action likely to be created by the working of the machinery.

BANGALORE.—Ulsoor Water Project. Dhobies' Well Project.

17. These works, which have for their object the supply of water to the Barracks at Bangalore, were at a stand during the year, although a sum of Rupees 20,568 was paid for work done during 1869-70. The Ulsoor Project may be said to be nearly completed while the Dhobies' Well Project needs only the fitting of a new 5-inch main, the estimate for which is under revision. The water from the Ulsoor tank has been pronounced unfit for drinking purposes, and the capability of the Dhobies' wells for furnishing a supply for that purpose, to meet the entire requirements of the Barracks, is under examination.

Gas Works in Fort St. George.

18. The additions and improvements to the Gas Works in Fort St. George consist of extending the retort house, constructing benches for retorts and bedding, and fixing the retorts. Bedding and fixing nine condensers, scrubbers, cisterns and lime purifiers, masonry well for gas holder, a syphon well, and a new chimney.

All the iron fittings, except the gas holder, have been completed. The masonry works and chimney have made considerable progress towards completion. Rupees 10,042 have been expended on the works.

Rest-house at Arconum, North Arcot.

19. A Rest-house was built at Arconum at an outlay of Rupees 3,019, and the building has been handed over to the Military authorities.

Ootacamund Lawrence Asylum.

20. The progress of the male branch of the Lawrence Asylum, which was suspended in November 1869, was resumed in December 1870, and during the last four months of the year the exterior of the building (tiling, pointing, etc.,) was entirely finished. The lofty school room, 96′ × 36,′ was completed and handed over to the Principal. Considerable progress has been made with four dormitories, and it is hoped that the male branch of the building will be completed in every respect by the end of June 1871. No progress has been made with the female branch.

CIVIL BUILDINGS.

Lunatic Asylums.

21. All the works provided for in the original estimate for the Lunatic Asylum at Madras have been completed, and a supplemental estimate of Rupees 41,500 has been framed for carrying out certain additional works which, as the arrangements developed themselves, were found to be absolutely necessary to place the establishment on an efficient footing. Of the works included in the supplemental estimate 12 solitary cells, fixing half doors and windows and punkahs to the Superintendent's quarters, and laying the foundations of the stables of the Apothecary's quarters, have been carried out with an aggregate expenditure of Rupees 31,447.

22. The Lunatic Asylum at Waltair, which was in a forward state in 1869-70, has been almost completed. The expenditure during the year has been Rupees 4,789.

23. The progress made with the new Lunatic Asylum at Calicut has been as follows :—Nine cottages for male and criminal lunatics, cottages for hospital with Superintendent's quarters and out-houses, dispensary, padded rooms, two-thirds of palisading, and all the intramural buildings have been completed. The total outlay has been Rupees 28,522, of which Rupees 6,000 have been laid out during the year.

Talook Cutcherries and Subsidiary Jails.

District.	Station.	Estimate.	Expenditure up to 1869-70.	Expenditure in 1870-71.
		Rs.	Rs.	Rs.
Chingleput ...	Trivellore ...	31,093	23,210	5,783
North Arcot ...	Wallajahpet...	10,200	8,895	856
Do. ...	Arconum ...	11,130	5,669	1,816
Do. ...	Goodiattum...	.....	1,730	9,353
Do. ...	Poloor ...	.....	9,756	9,124
Salem ..	Ahtoor ...	25,670	14,765	2,224
Do. ...	Namkul ...	25,800	9,950	891
Do. ...	Vaniembady	9,520	3,986	3,603
Malabar ...	Munjerry ...	25,000	13,326	5,000
Do. ...	Tellicherry ...	30,000	23,061	2,363
Madura ...	Teroomunga-lum ...	4,782	2,500	2,230

24. The smallness of the grants for Civil Buildings prevented, as in the previous year, any satisfactory progress being made with the Talook Cutcherries and Subsidiary Jails which were commenced in several districts in the year 1868 with a special assignment of funds. The outlay on some of the principal of this description of buildings is given in the margin.

Central Jails.

25. The operations during the year on the Central Jail at Rajahmundry, on which an expenditure of Rupees 3,21,958 had been incurred up to 1869-70 against an estimate of Rupees 3,53,263 are as follow:—Eighteen Warders' huts with cook-rooms were completed, four huts were nearly tiled, and the walls of two huts were raised 4½ feet high. The outlay during the year has been Rupees 5,846.

26. The progress made with the Central Jail at Vellore has been the completion of the central Warder's tower, the quarantine ward, the Warders and Police lines, and the Dresser's quarters. The outlay has been Rupees 38,999, some portion of which was paid for work done in the previous year.

27. The construction of the new Central Jail at Trichinopoly was commenced in December 1866 on an estimate of Rupees 3,76,000. The total expenditure up to the end of 1869-70 was Rupees 3,49,342, and that during the year has been Rupees 17,693.

28. The progress of the Central Jail at Cannanore has been advanced with an outlay during the year of Rupees 40,262. The estimate amounts to Rupees 3,27,000, and the previous expenditure was Rupees 2,39,660.

Improvements to the Jail at Bellary.

29. A sum of Rupees 9,999 has been expended on improving the old Jail at Bellary. The Jailer's quarters have been completed. The Dresser's quarters are ready for roofing, while the latrine, quarters for lepers, and for insane and contagious diseases, have all been finished. Quarters for the Jailer at Bellary, on which Rupees 3,693 were laid out in the previous year on an estimate of Rupees 5,920, have been completed with a further outlay of Rupees 2,211.

New Court Houses at Bellary and Tanjore.

30. The upper story of the new Court house at Bellary is ready for roofing. The outlay has been Rupees 19,999, and the previous expenditure was Rupees 14,999 against an estimate of Rupees 46,020.

31. A sum of Rupees 15,736 was expended during the year in completing the Civil Court house at Tanjore, the estimate for which amounted to Rupees 61,257.

Improvements to the Penitentiary.

32. In connection with the improvements to the Penitentiary, on which Rupees 39,980 had been laid out in 1869-70 and an aggregate expenditure of Rupees 84,108 has been incurred against an estimate of Rupees 1,19,650, a block of three Warders' huts with out-offices, spiral stair-cases to the juvenile wards, two latrines, archways between cells in No. 1 block, and a latrine in the contagious disease ward, have been completed with an outlay during the year of Rupees 22,677.

Post Offices.

33. The new Post Office at Salem, on which Rupees 3,625 were expended in 1869-70 upon an estimate of Rupees 4,710, has been completed with an outlay of Rupees 1,323 during the year. A Post Office has also been completed at Tanjore for Rupees 3,326.

Revenue Board Office.

34. The object and character of the improvements to the Revenue Board Office have been described in a former report. Verandahs to the lower and upper stories on the south and east faces, and on the three sides of the quadrangle of the upper story, have been built during the year. Alterations to the Reveneu Survey Office, and

the addition of an upper-story with verandahs to the upper and lower stories on the north and south faces have been considerably advanced, while the record tower has been raised to a height of 75 feet. The expenditure during the year has been Rupees 67,450.

Rooms for the Paper Currency Department.

35. An expenditure of Rupees 2,735 was incurred on the construction of two rooms for the accommodation of the Paper Currency Department in the Accountant-General's office.

Restoration of Teroomalay Naick's Palace.

36. The restoration of Teroomalay Naick's Palace at Madura has been proceeded with at an outlay of Rupees 10,000.

AGRICULTURAL.

Godavery.

37. In this district the principal works which have been in progress are:—

	Expenditure in 1870-71.
Widening and improving the Samulcotta Canal ...	Rs. 20,730
Extension of irrigation, Western Delta	,, 22,199
Widening and deepening the Cocanada Main Canal and constructing Locks and Calingulahs	,, 19,165
Canal from Ellore High Level Canal to Weyairoo ...	,, 14,517

The first of these canals, which forms one of the chief lines of navigation, and irrigates about 20,000 acres of land, has been completed, and 41 bridges and culverts have been built. The estimates for the second project not having received sanction, the progress of the extensive improvements contemplated has been very disproportionate to the grant made for it, and the outlay has been confined to the construction of the new locks at Itempoody and Peravelly, the former of which has been brought up to a level of nearly 5 feet above floor, and the latter has been commenced to be excavated. The Thossepoody and Chintapully locks have been proceeded with in connection with the third work, and the earthwork of the last project has made good progress, and at the end of March water was let down as far as the site of the newly proposed lock.

Kistna.

38. In this district the following are the principal works which have been under execution:—

	Expenditure.
Enlargement of channels on the Masulipatam section of the Kistna Delta	Rs. 25,469
Ryves' Canal	,, 38,821
Enlarging the head of the Seetanagram Main Canal...	,, 7,824

39. Of the channels on the Masulipatam or eastern side of the delta, the widening of the Main Canal between Bezoarah and Kankipad has been in progress, and the last mile and a half has been completed. The portion between Kankipad and Weyairoo has been almost finished, while from the latter place to Cowtaram about 7½ miles have been fully completed. The progress of Ryves' Canal has not been advanced as rapidly as was anticipated, endeavours to introduce a system of contracts having failed and caused delay. The Seetanagram Main Canal has been widened in the 1st, 2nd, and 4th miles.

40. The irrigation of the Kistna Delta is making a steady advance notwithstanding the scarcity of labour, the difficulty of procuring which is increasing each year.

Nellore.

41. The most important work which has been in progress in this district during the year has been the Survapully channel and its branches, which are intended to irrigate 25,500 acres. The Idagaly, Ipur, and Padapurty channels and all works connected with them have been completed. The high level channel has been nearly finished and will be shortly opened. Generally fair progress has been made with an outlay during the year of Rupees 66,980.

Cuddapah, Kurnool, and Bellary.

42. In the Cuddapah and Kurnool Districts the expenditure on irrigation works has been confined to repairs, and in the Bellary District the restoration of the Gootloor tank has been the only work of importance in progress, and the outlay on it has been Rupees 5,000.

Chingleput.

43. The Madras Water Supply Project, the Chembrumbakum Tank enlargement, and the Valloor Anicut are the principal works which have been in progress in this district. The nature and object of these works have been explained in the Administration Report of the previous year. The state of progress of the several sub-divisions of the first of these projects is as follows:—The anicut, head sluice, and upper supply-channel have been completed. The earthwork to form the embankment of the Cholaveram Reservoir has been thrown up throughout to a level only half a yard below that assigned for completion. The supply-channel to the Red Hill Reservoir has been completed throughout, as also the masonry works connected with it. The earthwork for the main embankment of the Red Hill Reservoir has been completed to the full level for half its length, and along the other half its general level is about 5 feet below that to which it is to be ultimately raised. The earthwork of the Soorapadoo bund has been completed to within one yard of the full level, and the revetment has also been raised to that level. The masonry dam forming the northern portion of the tank enclosure has been built up to a level two yards below that intended as the full supply of the reservoir.

44. In October 1870 the head sluice to the upper channel and the channel itself were damaged by a flood in the Cortilliar, and an extensive slip of the Cholaveram reservoir embankment also occurred. The necessary repairs are in progress. The expenditure on the Madras Water Supply Project during the year has been Rupees 1,22,855.

	Rs.
From Ordinary grant	... 60,701
,, Extraordinary Loan Fund	... 62,154
	1,22,855

45. Fair progress has been made with the Chembrumbakum Tank improvements, on which an outlay of Rupees 39,585 has been incurred during the year. Nearly the whole of the ayacut under the tank has been under cultivation, and the villagers consider the season the most prosperous they have had for many years.

46. The Valloor anicut has been completed.

North Arcot.

47. In this district the extension of the channel on the south side of the Cheyaur has been completed with an outlay during the year of Rupees 15,542.

South Arcot.

48. In the South Arcot District the most important work in progress has been the construction of an anicut across the Vellaur river at Palandorai, which is designed to irrigate 16,650 acres. Although an allotment of Rupees 1,00,000 was provided for this project in the Budget the expenditure did not exceed Rupees 37,741, which was laid out on the partial excavation of a channel 16 miles long and in laying the foundations of the head sluice. The setting in of the monsoon unusually early and the prevalence of cholera prevented more satisfactory progress being made.

49. The Mahmatoor anicut across the Manimuthanuddy river has been completed, with the exception of a small portion of the main channel and the minor branches. The greater part of the channel was ready to receive the early floods of the season, and the anicut and head sluice being also ready most of the tanks were well supplied during the whole season.

50. The Allungal channel, which was in progress during the previous year on an estimate of Rupees 15,330, will it is expected be open in time for the next season's irrigation.

51. An outlay of Rupees 6,069 has been incurred on the Pombay channel, which is designed to throw the waters of the Pooniaur into the Pombay river and to feed certain tanks. The works have made considerable advance towards completion, and there is nothing to hinder the next freshes in the Pooniaur passing down the channel and entering the river.

Tanjore.

52. In this district the regulating works for the principal branches of the Vennaur have been in progress with an outlay of Rupees 28,170 during the year. The foundations are being laid, and a large quantity of materials has been collected. The expenditure, however, contrasts unfavourably with the allotment of Rs. 1,00,000 for the year, and this is due to the unfavourableness of the season. Heavy falls of rain and freshes in the river in January and February prevented anything being done in the river beds till March.

53. The construction of a dam or surplus weir in the bank of the Anunda Cauvery was also satisfactorily carried out during the year at a cost of Rs. 7,452. This work, provides for the passage of the drainage of a large area of country across the Anunda Cauvery, the banks of which were formerly frequently breached.

Neilgherries.

54. Operations at Lake St. Lawrence on the Neilgherries, which are being conducted by Mr. McIvor on the silting process, have been continued during the year. Mr. McIvor has been silting out a saddle for the permanent escape. He has got down a depth of 45 feet, and has met with a large sheet of rock which has prevented his going any further. A detailed contour survey and sections of the bund site and adjoining country are under preparation.

Tinnevelly.

55. The Streeviguntum Anicut works on the Tambrapoorney have been advanced during the year with an outlay of Rupees 97,511. The estimate for this project amounts to Rupees 8,31,600, and the expenditure up to the end of the preceding year was Rupees 4,60,585, and that during 1870-71 has been Rs. 97,511. The body of the anicut for a length of 500 feet has been raised to the full height of 6 feet, and the remainder (886 feet) to a height of three feet. The cut-stone apron has been entirely completed, but a length of about 1,000 feet of the foundation of the lower retaining wall still remains to be completed. Of the remaining works 75 head sluices, 68 other masonry works, 58 tanks, and 52 channels have been completed. Cholera prevailed in the district up to the end of June and retarded work. Progress was also impeded by the contractor for this and other works in the range, having been criminally prosecuted for collusion with the Range Officer in the practice of systematic fraud. Both have been convicted by the Sessions Court.

COMMUNICATIONS.

56. The smallness of the grant for the year for Communications prevented any progress being made with the Great Northern Road from Madras towards Calcutta.

New Coonoor Ghaut.

57. The whole of this important Ghaut, which connects Coonoor on the Neilgherries with Kullar at the foot of the Hills was opened to wheeled traffic on the 2nd July 1870.

58. The 6th and 7th miles from Coonoor have been provided with parapet walls, where necessary, in addition to about half a mile on other portions of the road. No gradient on the ghaut is now steeper than 1 in 19, and the average width of roadway is 18 feet. The journey from Ootacamund to Coimbatore, a distance of 60 miles, is now performed in 8½ hours.

Karcoor Ghaut Road and Bridges below.

59. The Karcoor Ghaut road, which is especially designed to admit of coffee from South Wynaad being sent direct into Calicut for shipment to Europe, has been completed with the exception of the bridges across the Eddakara, Cheroopoya, and Nellumboor rivers. During the year a sum of Rupees 7,944 was expended in completing one bridge, in raising and gravelling heavy embankments, and improving the surface of the road where necessary.

Road from Tondy to Dindigul.

60. The road from Tondy *via* Devicotta, Tripatoor, and Nattam to Dindigul, was completed and opened for traffic during the year with an outlay of Rupees 11,977.

Road from Paumben to the Coimbatore frontier.

61. The road from Paumben through Ramnad, Madura, Dindigul, and Pulney to the Coimbatore frontier has been advanced during the year with an outlay of Rupees 14,999, and 10 miles of this line of communication remain to be completed.

Roads in Wynaad.

62. Operations on the Tambracherry Ghaut and Road to the Mysore frontier have been confined to widening the roadway where necessary. Portions

APPENDIX.

Statement showing the expenditure on Public Works in 1870-71 *from Imperial Funds as compared with the allotment for that year and with the outlay in* 1869-70.

Districts.	Allotment for 1870-71 including private contributions.	Expenditure in 1870-71.	Expenditure in 1869-70.
	RS.	RS.	RS.
Ganjam	1,30,251	76,775	1,07,782
Vizagapatam	86,422	75,657	1,63,911
Godavery	4,62,691	3,01,826	3,29,166
Kistna	3,27,636	2,13,909	3,01,878
Nellore	4,89,990	1,86,592	1,67,712
Cuddapah	97,796	1,61,814	89,837
Kurnool	55,897	58,435	65,583
Bellary	2,59,569	2,61,840	2,69,001
Presidency	2,85,274	2,82,275	4,47,809
Chingleput	8,54,538	5,30,333	7,46,963
North Arcot	2,37,366	2,89,344	2,32,439
South Arcot	3,26,464	2,52,886	2,24,539
Salem	1,04,001	86,511	1,32,455
Bangalore	1,22,505	1,21,815	2,07,441
Tanjore	3,79,144	2,93,524	2,69,493
Trichinopoly	1,88,419	1,76,554	3,04,772
Coimbatore	1,10,842	1,08,381	2,31,829
Neilgherries	97,959	93,494	3,01,816
Malabar	1,77,049	1,77,081	3,15,518
Wynaad	1,29,098	1,29,665	1,41,428
South Canara	56,078	53,531	79,441
Madura	2,02,543	1,49,926	1,40,497
Tinnevelly	5,42,162	2,50,126	6,38,808
	57,23,694	43,32,294	59,10,118
Famine Relief Works of 1868-69	...	4,05,236	...
Total...	57,23,694	47,37,530	59,10,118

Statement showing the expenditure on New Works in each District from Imperial Funds under the Budget heads.

Districts.	Military.	Civil Buildings.	Agricultural.	Communications.	Miscellaneous Public Improvement.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.
Ganjam	...	5,148	1,915	603	...	7,666
Vizagapatam	617	15,301	983	3,702	193	20,796
Godavery	...	14,173	97,272	481	3,454	1,15,380
Kistna	...	4,002	1,03,235	386	677	1,08,300
Nellore	...	14,895	74,666	2,696	...	92,257
Cuddapah	...	3,822	5,510	20,324	...	29,656
Kurnool	...	3,442	1,587	...	...	5,029
Bellary	89,466	35,418	8,361	1,337	...	1,34,582
Presidency	26,750	1,39,567	...	...	2,030	1,68,347
Chingleput	98,655	6,860	1,83,410	25,183	1,318	3,15,426
North Arcot	3,106	75,574	26,944	54,335	...	1,59,959
South Arcot	...	1,449	84,418	16,176	...	1,02,043
Salem	80	11,082	11,379	...	...	22,541
Bangalore	67,694	2,518	...	...	...	70,212
Tanjore	...	32,412	58,705	338	...	91,455
Trichinopoly	1,706	19,932	11,885	22,584	...	56,107
Coimbatore	...	10,120	9,341	1,399	...	20,860
Neilgherries	22,829	1,317	3,576	14,293	13,570	55,585
Malabar	20,845	58,704	3,224	11,980	...	94,753
Wynaad	...	24,534	...	60,254	...	84,788
South Canara	85	3,163	...	9,222	...	12,470
Madura	...	16,466	7,271	27,249	2,426	53,412
Tinnevelly	520	13,292	1,06,338	2,872	...	1,23,022
	3,32,353	5,13,191	8,00,020	2,75,414	23,668	19,44,646
Famine Relief Works of 1868-69	...	138	...	3,49,508	21,081	3,70,727
Total...	3,32,353	5,13,329	8,00,020	6,24,922	44,749	*23,15,373
* Exclusive of outlay from private contributions	...	4,424	2,349	1,325	...	8,098

APPENDIX.

Statement showing the expenditure on Public Works in 1870-71 *from Imperial Funds as compared with the allotment for that year and with the outlay in* 1869-70.

Districts.	Allotment for 1870-71 including private contributions.	Expenditure in 1870-71.	Expenditure in 1869-70.
	RS.	RS.	RS.
Ganjam	1,30,251	76,775	1,07,782
Vizagapatam	86,422	75,657	1,63,911
Godavery	4,62,691	3,01,826	3,29,166
Kistna	3,27,636	2,13,909	3,01,878
Nellore	4,89,990	1,86,592	1,67,712
Cuddapah	97,796	1,61,814	89,837
Kurnool	55,897	58,435	65,583
Bellary	2,59,569	2,61,840	2,69,001
Presidency	2,85,274	2,82,275	4,47,809
Chingleput	8,54,538	5,30,333	7,46,963
North Arcot	2,37,366	2,89,344	2,32,439
South Arcot	3,26,464	2,52,886	2,24,539
Salem	1,04,001	86,511	1,32,455
Bangalore	1,22,505	1,21,815	2,07,441
Tanjore	3,79,144	2,93,524	2,69,493
Trichinopoly	1,88,419	1,76,554	3,04,772
Coimbatore	1,10,842	1,08,381	2,31,829
Neilgherries	97,959	93,494	3,01,816
Malabar	1,77,049	1,77,081	3,15,518
Wynaad	1,29,098	1,29,665	1,41,428
South Canara	56,078	53,531	79,441
Madura	2,02,543	1,49,926	1,40,497
Tinnevelly	5,42,162	2,50,126	6,38,808
	57,23,694	43,32,294	59,10,118
Famine Relief Works of 1868-69	...	4,05,236	...
Total...	57,23,694	47,37,530	59,10,118

Statement showing the expenditure on New Works in each District from Imperial Funds under the Budget heads.

Districts.	Military.	Civil Buildings.	Agricultural.	Communications.	Miscellaneous Public Improvement.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.
Ganjam	...	5,148	1,915	603	...	7,666
Vizagapatam	617	15,301	983	3,702	193	20,796
Godavery	...	14,173	97,272	481	3,454	1,15,380
Kistna	...	4,002	1,03,235	386	677	1,08,300
Nellore	...	14,895	74,666	2,696	...	92,257
Cuddapah	...	3,822	5,510	20,324	...	29,656
Kurnool	...	3,442	1,587	...	...	5,029
Bellary	89,466	35,418	8,361	1,337	...	1,34,582
Presidency	26,750	1,39,567	...	...	2,030	1,68,347
Chingleput	98,655	6,860	1,83,410	25,183	1,318	3,15,426
North Arcot	3,106	75,574	26,944	54,335	...	1,59,959
South Arcot	...	1,449	84,418	16,176	...	1,02,043
Salem	80	11,082	11,379	...	...	22,541
Bangalore	67,694	2,518	...	...	...	70,212
Tanjore	...	32,412	58,705	338	...	91,455
Trichinopoly	1,706	19,932	11,885	22,584	...	56,107
Coimbatore	...	10,120	9,341	1,399	...	20,860
Neilgherries	22,829	1,317	3,576	14,293	13,570	55,585
Malabar	20,845	58,704	3,224	11,980	...	94,753
Wynaad	...	24,534	...	60,254	...	84,788
South Canara	85	3,163	...	9,222	...	12,470
Madura	...	16,466	7,271	27,249	2,426	53,412
Tinnevelly	520	13,292	1,06,338	2,872	...	1,23,022
	3,32,353	5,13,191	8,00,020	2,75,414	23,668	19,44,646
Famine Relief Works of 1868-69	...	138	...	3,49,508	21,081	3,70,727
Total...	3,32,353	5,13,329	8,00,020	6,24,922	44,749	*23,15,373
* Exclusive of outlay from private contributions	...	4,424	2,349	1,325	...	8,098

of the road have been partially metalled, and work has been carried on along the whole length. An arched bridge of 20 feet span has been completed at Luckadi. The Koonooth bridge has been opened for traffic, and a heavy embanked approach on each side of the river made for the Yeddathoray bridge. The outlay during the year has been Rupees 35,261.

63. On the road between the Karcoor Ghaut and Goodalore and between Goodalore and Tippacaudoo metalling has been laid over nearly half the distance. The line is in other respects complete. The expenditure has been Rupees 10,000.

64. The new Periah Ghaut has, with the exception of permanent drainage and the removal of some rock, been completed. Owing to its steepness the road from the head of the Ghaut towards Manantoddy offers obstacles to easy cart traffic. As soon as funds can be made available the improvement of this section of the line will be undertaken. During the year bridges and culverts on the portion of the road, the alignment of which will not require alteration, have been built, and the road between Manantoddy and the Mysore frontier has been improved with an outlay of Rupees 14,994.

Bridge across the Vellaur on the road from Pondicherry to Negapatam.

65. The continuance of the freshes until an unusually late period of the season prevented that progress being made with the Vellaur bridge which would otherwise have been practicable. The abutments of the bridge have been raised, one to its full height, the other eight feet; four piers have been raised to their full height with retaining walls and floorings and three sets of centring pillars have been put up. The expenditure during the year has been Rupees 14,785, and the total expenditure Rupees 34,716 against an estimate of Rupees 53,930.

Iyaur Bridge, Trichinopoly.

66. The construction of the iron girder bridge across the Iyaur was much retarded during the year by frequent freshets in the river which drains an area of about 400 square miles. Everything is ready for rolling the girders into position and for completing the work. The outlay during the year has been Rupees 12,165.

Canal between Negapatam and Vedarniem.

67. Although a sum of Rupees 10,000 was provided for the completion of the subsidiary works connected with the canal between Vedarniem and Negapatam, only Rupees 338 were expended. The land through which the channels have to be excavated is low, and the frequent falls of rain rendered it impossible to undertake the works; but the incomplete state of the subsidiary works does not interfere with the navigation of the canal which was opened for traffic in July 1869.

MISCELLANEOUS PUBLIC IMPROVEMENT.

Reclamation of the swamp at Ootacamund.

68. As explained in the previous Report the reclamation of the swamp at Ootacamund is to be effected by raising the entire area subject to inundations during the monsoon to the height of six inches above the flood level of the lake. The convict labour at command not having been concentrated on this scheme, but utilized in carrying out other public improvements at Ootacamund, the progress made during the year has been but limited. Five acres in all have been reclaimed at the head of the lake and three new roads, aggregating 3¼ miles in length, have been constructed through the bazaars, which are a considerable convenience to the public. The expenditure during the year has been Rupees 2,185.

Ootacamund Water Supply.

69. The south supply-channel has been constructed and handed over to the Ootacamund Municipality, and the main portions of the northern branch have also been finished. The lining of the Snowdon tunnel and about one-third of the supply-channel remain to be completed. The expenditure during the year has been Rupees 2,017.

Paumben Channel.

70. About 23,057 cubic feet of debris have been raised by the hand dredge, and 8,829 cubic feet of stone were blasted and removed, the cost during the year having been Rupees 1,284.

71. The channel has also been deepened with a view to its having an ultimate depth of 14 feet, and Rupees 1,142 have been spent on this account in 1870-71.

REPAIRS.

72. The total expenditure under Repairs was Rupees 24,07,241 as follows:—

	RS.
Military	2,23,005
Agricultural	11,44,826
Civil Buildings	91,804
Communications	9,14,912
Miscellaneous Public Improvement ...	32,694
	24,07,241

Statement showing the expenditure on Repairs in each District from Imperial Funds under the Budget heads.

Districts.	Military.	Civil Buildings.	Agricultural.	Communications.	Miscellaneous Public Improvement.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.
Ganjam	851	2,578	19,478	46,099	...	69,006
Vizagapatam	9,423	5,136	10,528	27,983	...	53,070
Godavery	...	3,836	1,54,241	17,519	9,590	1,85,186
Kistna	384	2,808	67,165	35,236	6	1,05,599
Nellore	...	1,606	50,109	42,620	...	94,335
Cuddapah	...	1,446	51,438	78,572	612	1,32,068
Kurnool	235	517	20,642	32,012	...	53,406
Bellary	26,954	2,500	46,834	49,700	...	1,25,988
Presidency	69,274	24,969	392	19,179	114	1,13,928
Chingleput	21,105	4,939	1,11,743	76,512	...	2,14,299
North Arcot	1,902	2,502	97,210	26,107	1,664	1,29,385
South Arcot	...	2,700	93,630	54,491	22	1,50,843
Salem	2,151	2,409	18,397	41,013	...	63,970
Bangalore	50,030	1,573	...	...	...	51,603
Tanjore	...	4,812	1,63,313	33,410	534	2,02,069
Trichinopoly	10,636	1,311	70,483	35,544	...	1,17,974
Coimbatore	144	2,235	54,016	30,638	...	87,033
Neilgherries	6,995	2,937	...	25,586	250	35,768
Malabar	19,482	11,140	1,639	48,506	236	81,003
Wynaad	...	988	...	42,639	...	43,627
South Canara	843	2,979	...	37,239	...	41,061
Madura	...	3,004	38,744	53,156	1,610	96,514
Tinnevelly	2,596	2,879	74,824	44,698	...	1,24,997
	2,23,005	91,804	11,44,826	8,98,459	14,638	23,72,732
Famine Relief Works of 1868-69	...	...	...	16,453	18,056	34,509
Total...	2,23,005	91,804	11,44,826	9,14,912	32,694	*24,07,241
* Exclusive of outlay from private contributions	...	...	2,908	2,650	1,260	6,818

Statement showing the Estimate, Allotment, and Expenditure in 1870-71 *on important Public Works in the Madras Presidency.*

Districts.	Work.	Estimate.	Expenditure up to 31st March 1870.	Allotment for 1870-71.	Expenditure during 1870-71.
		RS.	RS.	RS.	RS.
Bellary ...	Improving the water-supply to the Cantonment.	69,300	53,725	7,300 increased to 13,720	13,719
Do. ...	Female Hospital for European Troops.	38,000	15,497	35,350 reduced to 20,566	20,566
Do. ...	Hospital for Native Troops...	44,200	41,200	3,000	2,982
Do. ...	Lock Hospital and Dispensary.	15,900	11,500	4,400	4,391
Do. ...	New Garrison Main Guard.....	24,200	8,069	8,200 reduced to 6,200	6,199
Do. ...	Family Quarters for the Garrison Battery.	43,500	...	21,600	21,599
Presidency ...	Lightning Conductors to Barracks at Ramandroog.	5,635	1,586	314	309
Do. ...	Extending the Subalterns' Quarters in the late Civil Auditor's Office, Fort St. George.	8,400	3,885	3,500	3,500
Do. ...	Drainage of new Native Infantry Lines at Royapooram.	35,550	31,058	1,492	1,492
Chingleput ...	Additions and improvements to the Government Gas Works.	10,680	...	7,310 increased to 10,180	10,042
Do. ...	New Barrack accommodation at St. Thomas' Mount.	2,05,010	70,182	50,000	49,994
North Arcot.	Purchasing Mess House belonging to the late Madras Artillery.	43,600	...	43,600 reduced to 43,335	43,335
Bangalore ...	Rest House at Arconum..... ...	3,100	...	3,100	3,019
Do. ...	Soojee Mill and Bakery.....	86,743	84,554	3,000	2,310
Do. ...	Ulsoor Water Project.....	72,000	1,76,763	30,000 reduced to 20,568	20,568
Do. ...	Two Male Pavilions of Hospital on the Race Course.	1,82,060	1,71,902	9,945	9,945
Do. ...	Dhobies' Wells Project.....	...	18,074	7,500	7,497
Do. ...	Serjeants' Mess, Library, and Recreation Room for Cavalry.	51,890	42,200	9,685	9,680
Neilgherries..	Lawrence Asylum at Ootacamund.	11,80,252	8,34,425	70,200 reduced to 21,140	21,140
	CIVIL BUILDINGS.				
Vizagapatam.	Lunatic Asylum at Waltair...	60,316	43,142	8,000 reduced to 5,220	4,789
Godavery ...	Central Jail at Rajahmundry.	3,53,263	3,21,958	26,620 reduced to 5,800	5,846
Bellary ...	Improvements to the Jail at Bellary.	95,000	55,081	10,000	9,999
Do. ...	New Court House at Bellary.	46,020	14,999	20,000	19,999
Do. ...	Jailer's Quarters at do.	5,920	3,693	2,227	2,211
Presidency...	Improvements to the Revenue Board's Office buildings at Chepauk.	1,78,400	88,548	70,000 reduced to 67,450	67,450

Statement showing the Estimate, Allotment, and Expenditure in 1870-71, *etc.*—(Continued.)

Districts.	Work.	Estimate.	Expenditure up to 31st March 1870.	Allotment for 1870-71.	Expenditure during 1870-71.
	CIVIL BUILDINGS—(Concluded.)	RS.	RS.	RS.	RS.
Presidency ...	Room for the Paper Currency Department in the Accountant-General's Office, Fort St. George.	...	...	2,770	2,735
Do. ...	Improvements to the Penitentiary.	1,19,650	61,432	20,000 increased to 22,550	22,677
Do. ...	Lunatic Asylum at Locock's Gardens.	2,43,500	1,97,221	36,360	31,447
Do. ...	Converting the present Police Court into a residence for His Highness Prince Azeem Jah Bahadoor.	...	...	1,00,000	45,000
Chingleput...	Talook Cutcherry and Subsidiary Jail at Trivellore.	31,093	23,210	5,783	5,783
North Arcot.	Central Jail at Vellore ...	3,37,500	2,80,071	40,000 reduced to 39,000	38,999
Do. ...	Talook Cutcherry and Subsidiary Jail at Wallajahpett.	10,200	8,895	856	856
Do. ...	Do. do. at Arconum.	11,130	5,669	1,846	1,846
Do. ...	Do. do. at Gudiattam.	...	1,730	8,250	9,353
Salem ...	Do. do. at Poloor ...	...	9,756	9,125	9,124
Do. ...	Post Office at Salem	4,710	3,625	1,085	1,323
Do. ...	Talook Cutcherry and Subsidiary Jail at Ahtoor.	25,670	14,765	2,220	2,224
Do. ...	Do. do. at Namakal...	25,800	9,950	1,600	891
Do. ...	Do. do. at Vaniembady.	9,520	3,986	3,200	3,103
Tanjore ...	Civil Court House at Tanjore.	...			
Do. ...	Post Office at do. ...	61,257	45,519	13,000 increased to 15,737	15,736
Trichinopoly..	Central Jail do. ...	3,160		3,000	3,292
Malabar ...	Do. at Cannanore ...	3,76,000	34	17,680	17,693
Do. ...	Talook Cutcherry and Subsidiary Jail at Munjerry	3,27,000	3,49,342	40,000	40,262
Do. ...	Do. do. at Tellicherry ...	25,000	2,39,660	5,000	5,000
Madura ...	Lunatic Asylum at Calicut ...		13,326		
Do. ...	Subsidiary Jail at Terooman-galam.	30,000	23,061	2,400	2,363
	Restoration of Teroomalay Naick's Palace.	34,000	22,522	6,000	6,000
		4,782	2,500	2,009	2,230
		10,000	...	10,000	10,000
	AGRICULTURAL.				
Godavery ...	Widening and improving the Samulcottah Canal.	1,38,560	1,10,954	20,247	20,730
Do. ...	Extension of irrigation from Western Delta.	...	63,760	80,000 reduced to 54,753	22,199
Do. ...	Widening and deepening the Cocanada Main Canal and constructing Locks and Calingulahs.	1,19,680	10,128	45,000	19,165
	Canal from Ellore High Level Canal to Weyairoo.	70,460	...	15,000	14,517

Statement showing the Estimate, Allotment, and Expenditure in 1870-71, *etc.*—(Continued.)

Districts.	Work.	Estimate.	Expenditure up to 31st March 1870.	Allotment for 1870-71.	Expenditure during 1870-71.
	AGRICULTURAL—(Concluded.)	RS.	RS.	RS.	RS.
Kistna ...	Enlargement of channels in the Masulipatam section of the Kistna Delta.	1,83,100	96,860	50,000 reduced to 47,077	25,469
Do. ...	Ryves' Canal Project ...	4,14,193		50,000	
Do. ...	Enlarging the head of Seetanagaram Main Canal.	2,76,404	80,877	45,000	38,821
Nellore ...	Improvements to the Survapully Channel.	4,20,060	1,53,939	1,00,000 reduced to 99,475	7,824
Bellary ...	Restoration of the Gootloor Tank.	60,500	1,88,353	5,000	66,980
Chingleput...	Madras Water-supply Project.	6,11,759	43,522	Extraordinary 2,00,000	5,000
Do. ...	Chembrumbaukam Project ...	3,55,430	8,43,872	58,881 Ordinary 39,668	62,154 60,701
Do. ...	Anicut across the Cortelliar at Vulloor.	40,925	1,94,964	3,500 increased to 11,009	39,585
North Arcot.	Widening and deepening the branch channel of the Cheyaur at Nullalam and Tatry.	47,600	29,916	15,110	11,341
South Arcot.	Anicut across the Vallaur River at Palandorai.	1,98,235	32,490	1,00,000	15,542
Do. ...	Mamathoor Anicut across the Manimuthanady River.	55,800	...	18,200 reduced to 15,241	37,741
Do. ...	Improvements to the Allungal Channel.	15,330	33,684	11,000 reduced to 3,954	15,230
Do. ...	Pombay Channel from the Pooniar River.	51,400	3,688	20,000 reduced to 6,235	4,455
Tanjore ...	Regulating works for the principal branches of the Vennaur.	1,99,450	45,388	1,00,000	6,069
Do. ...	Constructing a dam or surplus weir in the bank of Annunda Cauvery.	7,400	91	7,400	28,170
Tinnevelly ...	Streeviguntam Anicut Project.	8,31,600	...	3,80,000	7,452
	COMMUNICATIONS.		4,60,585		97,511
South Arcot.	Bridge across the Vellaur on the road from Pondicherry to Negapatam.	53,930	19,931	20,800 reduced to 16,800	14,785
Tanjore ...	Completing the navigable canal between Negapatam and Vadarniem.	1,08,192	1,04,991	10,000 reduced to 1,000	338
Trichinopoly...	Iron Girder Bridge across the ur.	74,300	52,907	37,000 reduced to 28,893	12,165
Neilgherries.	New Coonoor Ghaut ...	2,64,000	2,57,281	6,975	6,977
Malabar ...	Karkoor Ghaut Road and Bridges below.	95,930	86,894	5,500 increased to 8,559	7,944

Statement showing the Estimate, Allotment, and Expenditure in 1870-71, *etc.*—(Concluded.)

Districts.	Work.	Estimate.	Expenditure up to 31st March 1870.	Allotment for 1870-71.	Expenditure during 1870-71.
	COMMUNICATIONS, (Concluded.)	RS.	RS.	RS.	RS.
Wynaad ...	Tambercherry Ghaut ...	5,98,762	4,30,500	30,000 increased to 35,000	35,261
Do ...	Karkoor Ghaut to Goodalaor.	4,15,036	2,06,402	15,000 reduced to 10,000	10,000
Do ...	Goodalaor to Tippacaudoo.				
Do ...	Road from head of Periah Ghaut to Manantoddy.	1,82,700	1,55,681	15,000	14,994
Malabar ...	Road from Tondy to Dindigul.	46,780	35,388	11,980	11,977
Do ...	Road from Paumben to the Coimbatore Frontier.	1,65,000	1,11,365	15,000	14,999
	MISCELLANEOUS PUBLIC IMPROVEMENT.				
Southern Districts.	Reclamation of the Swamp at the head of the Ootacamund Lake.	23,000	16,327	3,820	2,185
Do ...	Project for supplying Ootacamund with water.	18,192	11,069	4,517	2,017
Malabar ...	Cutting the inner angle of the Paumben Reef Channel.	43,340	39,221	3,000 reduced to 1,284	1,284
Do ...	Deepening Paumben Channel from 12 to 14 feet.	22,810	3,464	5,800 reduced to 1,388	1,142

No. 1495.

From Secy: to the Govt. of India

P.W.D.

Sir,

I am directed by the Right Honorable the Governor in Council to forward the Progress Report of Public Works in this Presidency executed from Imperial Funds during the year 1870-71.

A separate Progress Report of Local Fund expenditure will shortly be laid before the Govt. of India.

The present Report will be found identical with the Administration Report of the Presidency so far as Imperial Funds

are concerned.

The original Imperial grant for Public Works proper was Rs 81,46,200 which the Govt of India subsequently reduced to Rs 76,75,200

The following statement exhibits a comparison between the revised grants and the expenditure during the last seven years

Head of Service.				
New Works	Rs	Rs	Rs	Rs
Military	7,2,989	5,63,626	3,34,015	3,32,355
Civil Buildings	11,35,412	11,08,146	5,34,702	3,19,329
Agricultural	1,44,204	12,01,484	2,28,169	8,10,030
Communications	4,27,927	7,74,772	2,12,256	6,24,922
Inis: Pub: Impts	1,32,826	1,32,753	25,796	44,749
Repairs				
Military	1,85,294	1,83,710	2,26,503	2,23,885
Civil Buildings	80,641	1,10,081	98,238	91,804
Agricultural	2,34,[illegible]	16,72,519	11,80,981	11,44,826
Communications	7,44,718	7,44,185	8,70,828	9,16,913
Inis: Pub: Impts	4,912	4,763	7,090	32,694
Establishments	2,78,[illegible]	2,11,191	1,17,792	1,62,359
Tools and Plant.	97,500	83,758	1,83,560	1,62,974
Total.	81,97,9[illegible]	94,76,200	64,95,938	

are concerned.

The original Imperial grant for Public Works proper was Rs 81,46,200 which the Govt of India subsequently reduced to Rs 76,71,200.

The following statement exhibits a comparison between the modified grants and the expenditure during the last seven years

Head of Service.	1869-70 Rs	1870-71 Rs	1871-72 Rs	1872-73 Rs
New Works				
Military	7,29,789	5,63,626	3,34,015	3,33,353
Civil Buildings	11,35,412	11,08,146	5,34,702	3,13,329
Agricultural	1,44,304	13,01,484	22,28,169	8,10,030
Communications	27,929	1,74,772	2,12,256	6,24,922
Irrigation: Public Impts	1,32,826	1,32,753	25,796	44,749
Repairs				
Military	1,85,237	1,83,710	2,26,503	2,23,648
Civil Buildings	80,641	1,44,081	98,438	91,804
Agricultural	1,34,[illegible]	16,72,519	11,80,981	11,44,826
Communications	1,44,718	1,44,185	8,70,828	9,14,912
Irrigation: Public Impts	4,912	4,763	7,090	32,694
Establishments	[illegible]	[illegible]	17,79,860	16,10,350
Tools and Plant.	97,500	83,758	1,83,568	1,62,974
Total.	81,99,[illegible]	94,76,[illegible],200	64,95,[illegible]38	

stated to be the incomplete state of the estimates for works having granted upon which expenditure was prohibited in the absence of sanctioned estimates; the retardation of work due to excessive accumulations of water till a late period in the Rabi season; sickness in the districts; the scarcity of labour; and to the neglect of contractors to fulfil their engagements.

Rupees 11,44,826 were expended on Agricultural Repairs during the year as an allotment of Rs. 11,81,981 had been sanctioned for the

The largest outlay was incurred on the undermentioned works.

Guadravo Water Supply Project.	1,22,855
Shreevigunta Anicut Project in Tinnevelly.	99,511
Chembrumbakum Project in Chingleput.	39,585
Improvements to the Kurrapally Channel in Nellore.	66,980
Pyper Canal Project in the Kistna Dt.	38,821
Anicut across the Vellaur River at Palandorai in South Arcot.	37,741
Regulating works for the principal branches of the Vennaur in Tanjore.	28,770
Enlargement of Channels in the Mannilpatam section of the Kistna Delta.	25,469
Extension of irrigation from the western Delta of the Godavery.	22,199
Widening and improving the Samulcotta Canal.	20,760

An outlay of Rs. 6,24,922 is recorded against a modified

the year.

The explained in the accompanying Report the progress made with the construction of the Ellice and Lyaur bridges was much retarded by the freshes in the rivers.

Under "Miscellaneous Public Improvement" are expenditure of Rs. 1,300 "new Work" and "Repairs" is registered against a grant of Rs. 32,886. The Principal work Re-incidental Rent during the year, with the outlay on each being those noted below.

Reclamation

Reclamation of the Swamp at the head of the Botacamund Lake. } Rs 2,185

Project for supplying Botacamund with water } 2,517

Cutting the inner angle of the Pamban Reef Channel } 1,284

Deepening Pamban Channel - 1,142

Mesps 11/10/71 Victoria
Years copies of the letter
Copies of the report

Govt. of {1871} Madras.

PUBLIC WORKS.

To

The Secretary to the Govt of India

Dated

Recd. Ent.

G. O. 29 Sept 1871, No. 2495.

Nos. 577

Remarks

Quinti-annual observations regarding the Progress of Public Works in the Madras Presidency for 1870-71.