

Local & Munl. (1895) Department.

MISCELLANEOUS.

G.O., No. *438/m*

DATED *14th March 1895*

[Despatch Abstract.]

Madras Water-supply and Irrigation Extension Project.

Recording G.O., Public Works Department, forwarding to the Government of India a copy of the Proceedings embodying the report on the closure of the construction estimate of the--- and the index map of the system.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Appendix to G.O., No. 153 I., dated 18th February 1895.

STATEMENT of outlay on the Madras Water-supply and Irrigation Extension to end of 1893-94 compared by main and sub heads with the estimate sanctioned by the Secretary of State (*vide* G.Os, No. 849 I., dated 9th December 1881, and No. 340 I., dated 21st April 1883).

Main and sub heads.	Estimate.	Outlay to end of 1893-94.	Difference.
	RS.	RS.	RS.
<i>Direct Charges.</i>			
I. Works—			
(1) Head works—			
C. Works	88,195	88,195	...
K. Buildings	6,615	6,615	...
O. Miscellaneous	1,029	1,029	...
Total ...	95,839	95,839	...
(2) Main canals and branches—			
B. Land	73,102	65,979	7,123
D. Regulators	33,370	33,370	...
F (1). Other cross drainage works ...	36,230	59,847	— 23,617
G. Bridges	54,299	53,739	560
L. Earthwork	1,22,028	1,04,628	17,400
Total ...	3,19,029	3,17,563	1,466
(2)-A Reservoirs—			
B. Land	1,45,079	1,35,313	9,766
C. Works	1,77,836	1,67,908	9,928
L. Earthwork	5,36,120	5,33,148	2,972
O. Miscellaneous	47,622	45,753	1,869
Total ...	9,06,657	8,82,122	24,535
(3) Distributaries—			
L. Earthwork	21,425	2,275	19,150
Total ...	21,425	2,275	19,150
Total, Works ...	13,42,950	12,97,799	45,151
II. Establishment	2,19,255	2,12,547	6,708
III. Tools and plant	8,201	6,648	1,553
Grand Total ...	15,70,406	15,16,994	53,412
V. Less receipts on Capital Account ...	1,167	1,167	...
Total, Direct Charges ...	15,69,239	15,15,827	53,412
<i>Indirect Charges.</i>			
Capitalization of abatement of land revenue ...	2,13,320	2,08,120	5,200
Leave and pension allowances	...	30,098	— 30,098
Total, Indirect Charges ...	2,13,320	2,38,218	— 24,898
Total, Direct and Indirect Charges ...	* 17,82,559	17,54,045	28,514

* Exclusive of the provision of Rs. 71,904 made in G.O., No. 849 I. of 9th December 1881, for "Interest during construction" which is not now a recognized head of indirect charge.

(Signed) I. S. SHERLOCK-HUBBARD,
Examiner, Public Works Accounts, Madras.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following paper :—

No. 34 I.

Note by the Chief Engineer for Irrigation.

In paragraph 2 (c) of the letter from the Government of India printed in Proceedings of the Madras Government, No. 1020 I., dated 21st November 1893, it was laid down that the construction estimate of the Madras water-supply and irrigation extension project should be considered as closed on the 31st March 1893.

2. The revised estimate for this system amounting to Rs. 18,54,463 including indirect charges, printed in Proceedings of the Madras Government, No. 849 I., dated 9th December 1881, was sanctioned by the Secretary of State in his despatch printed in Proceedings of the Madras Government, No. 340 I., dated 21st April 1883. In the letter from the Government of India, No. 79, dated 5th March 1884, printed in Proceedings of the Madras Government, No. 307 I., dated 19th idem, the amount of this sanction was modified to Rs. 18,25,615 owing to—

(1) Excess expenditure on the Kattankal and Busykal weirs due to the alteration of sites (*vide* outlay under F. (1) other cross drainage works in the appended statement received from the Examiner of Public Works Accounts).

(2) Provision of leave and pension allowances.

(3) Elimination of interest charges from the estimate previously sanctioned.

Against the above sanction the total outlay incurred up to the end of 1893-94 amounted to Rs. 17,54,045, or Rs. 71,570 less than the sanctioned amount.

3. In the monograph on the project forwarded to the Government of India with Proceedings of the Madras Government, No. 603 I., dated 2nd August 1882, the financial results and general prospects of the project are fully dealt with.

4. The project, so far as it has been carried out, is capable, in addition to supplying the City of Madras, of irrigating 7,500 acres with a second crop on 3,200 acres as against 9,852 acres with a second crop on 4,926 acres as estimated in the revised estimate for the project. Considering the enormous importance of the water-supply to Madras, the drain which a further extension of irrigation would involve on the supply in the Red Hills and Cholavaram tanks could not, it was thought by the Chief Engineer for Irrigation, be permitted, as it would very seriously affect the Madras supply. Government in passing orders on this representation considered in G.O., No. 555 I., dated 9th July 1891, that it was not advisable at present to take any steps towards extending the irrigation under these tanks. Hence the sanctioned provision for distributaries has not been utilised and no further expenditure on Capital Account of the system is contemplated.

5. The subjoined statement exhibits the financial results of the system during and up to the end of 1893-94 :—

Expenditure.	During 1893-94.	To end of 1893-94.	Receipts.	During 1893-94.	To end of 1893-94.
Direct charges	Rs. 7,872	Rs. 5,72,664	Direct receipts in the Public Works Department.	Rs. 12,249	Rs. 1,69,233
Indirect charges	345	18,188	Irrigation revenue	20,173	4,15,660
Collection charges in the Civil department.	480	11,865	Share of enhanced land revenue..	423	9,042
Total expenditure and charges ..	8,697	6,02,717	Total receipts	32,845	5,93,935
Surplus revenue	17,948	1,20,606	Deduct portion of revenue assumed to be due to "old irrigation" less old maintenance charges.	6,200	1,14,824
Total ..	26,645	4,82,111	Net total ..	26,645	4,82,111

6. The following statement compares the particulars of the actuals of irrigation and financial results with those shown in the forecast statement printed in Proceedings of the Madras Government, No. 849 I., dated 9th December 1881 :—

	Area irrigated.				Revenue.				Working expenses.		Net revenue.	
	Estimate.		Actual.		Estimate.	Actual.			Estimate.	Actual.	Estimate.	Actual.
	First crop.	Second crop.	First crop.	Second crop.	Indirect.	Direct.	Indirect (irrigation revenue and share of land revenue).	Total.				
	ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1882-83 ..	7,489	3,416	7,454	2,870	24,501	32,336	22,208	54,544	10,116	18,336	14,385	36,208
1883-84 ..	7,827	3,631	7,436	3,118	25,760	5,572	24,019	29,591	10,206	12,120	15,554	17,471
1884-85 ..	8,164	3,847	6,033	2,771	27,019	5,529	18,218	23,747	10,297	15,795	16,722	45,048
1885-86 ..	8,562	4,063	7,057	1,697	28,280	4,109	18,959	23,068	10,388	17,633	17,892	1,53,325
1886-87 ..	8,839	4,278	7,332	1,352	29,536	12,866	20,788	33,654	10,478	47,645	19,458	13,991
1887-88 ..	9,177	4,494	7,232	2,003	30,798	9,446	20,721	30,167	10,569	21,828	20,229	8,339
1888-89 ..	9,514	4,710	7,278	2,973	32,056	11,811	22,195	34,006	10,060	14,376	21,396	19,630
1889-90 ..	9,852	4,926	7,492	3,197	33,317	11,738	22,969	34,707	10,750	10,492	22,567	24,215
1890-91 ..	9,852	4,926	7,262	3,523	33,317	10,997	22,622	32,619	10,750	10,377	22,567	23,242
1891-92 ..	9,852	4,926	6,829	1,342	33,317	14,435	16,562	30,997	10,750	19,220	22,567	11,777
1892-93 ..	9,852	4,926	7,454	1,727	33,317	12,332	19,685	32,017	10,750	13,323	22,567	18,694
1893-94 ..	9,852	4,926	7,468	1,996	33,317	12,249	20,596	32,845	10,750	8,697	22,567	24,148

7. The cyclone of the 20th and 21st November 1884 caused an extensive breach in the Red Hills tank bund for a length of 700 yards immediately to the south of the surplus sluices, when the level of the water in the tank was 3 inches below F.T.L. The sudden escape of so vast a body of water caused a lamentable loss of life and property. During the same cyclone the Cholaveram tank was also breached in two places to an aggregate length of about 700 feet. The body of water which escaped being much less than in the Red Hills tank, the damage done was not considerable. The expenditure on the restoration of the Red Hills and Cholaveram tanks amounted to Rs. 1,65,171 and Rs. 40,667 respectively. To the necessity for incurring this outlay is to be attributed chiefly the large deficit of Rs. 1,20,666 to end of 1893-94 shown in the statement in paragraph 5.

8. As required, the Red Hills reservoir has an earthen embankment 9 feet clear above the level of the weir crest, surmounted by a solid laterite in mortar parapet 3 feet in height, an ample escape for flood water by means of a flush weir and powerful set of low-level sluices, and in addition has a length of masonry dam of 600 feet only $1\frac{1}{2}$ feet above full supply level in the re-entering angle of the bank into which the water is liable to be forced by pressure of the wind which will act as a storm escape in time of need.

9. The index map of the system received from the Superintending Engineer, V Circle, with his letter No. 15 E.I., dated 16th January 1895, is enclosed for submission to the Government of India with this report.

(Signed) R. R. E. DRAKE-BROCKMAN, Colonel, R.E.,
Chief Engineer for Irrigation.

12th Feb. 1895.

ORDER—dated 18th February 1895, No. 153 I., Public Works.

Ordered that a copy of these Proceedings and the index map be forwarded to the Government of India with reference to paragraph 3 of its letter, No. 268 I., dated 6th November 1893.

[Here enter No. 154 I., dated 18th February 1895.]

(True Extract.)

Under Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, V Circle.
" Examiner, Public Works Accounts.
" Revenue Department.
" Local and Municipal Department.

Exd. R. Jenkins.
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Dated February, 18th.

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G O., 18th Feb. 1895, No. 153 I.

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FEBRUARY.
GOVERNMENT OF MADRAS

Madras Water-supply and
Irrigation Extension Project

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