

Public Works (1898) Department.

G.O., No.

601 9

DATED

9th August 98

[Despatch Abstract.]

Contribution Work. The execution by the
Govt of the — of constructing a sluice
to Kadamkane More tank in Walhaph 29,
N. Arcot Dt, sanctioned.

Dr. —

16/8

[illegible]

CURRENT No. ~~32 N.A.~~
6472

From The Supg. Engineer
4th Circle.

Order

No 601 I 27 9.8.98.

The execution by
the P. W. Dept of the work
referred to is sanc-
tioned.

No. 163
Of 9

Dated 28th July 1898

Received 2 1878

Registered 4-8498

Enclosures ~~3~~ 4 (blank)

Spare copies ✓

SUBJECT.

Kadambanellore tank.

Requesting to obtain
Sanction of Govt to carry
out the ~~work~~ of constg. a
sluice in the ——— being
treated as contribution work

To
The Chutrup for I.
Suprup, W. Arch with
26 I. W. 4 encls.

100
1/8/95

BACK PAPERS.

FURTHER PAPERS.

Superintending Engineer's
Office: Coimbatore. July, 98.

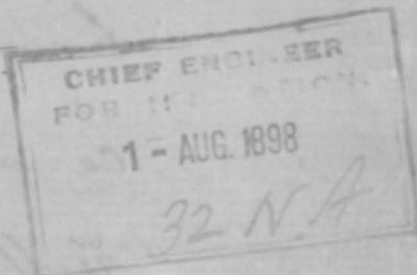
Letter from S. W. Peors Esq:
Executive Engineer, North Arcot
Division, No. $\frac{435}{5.8}$ dated 25th July, 98.

The mittador of Hadam-
bandlore village in Walajah Taluk
having applied for a sluice being
constructed to the tank of that
village in place of that which
existed before and which was
flocked up when the tank bund
was widened, an estimate for
the same amounting to 80 has
been prepared. The sluice is to
irrigate 24 acres, of which 14
acres belong to the mittador. The
Collector of the District has agreed
with me that the mittador is
to

to pay his share of contribution
for the work and has accordingly
been asked to collect Rs 57-1-6
including Establishment, and
Tools and Plant charges.

I have the honour there-
fore to request that sanction of
Government may be obtained
to the work under reference being
treated as a contribution work.

Enclose the estimate



No. 163 d/28-7-98

Copy forwarded to the Chief Engineer for Irrigation
for favour of obtaining sanction of Government to carry out this
contribution work.

Enclosure 3
1 Estimate
1 Report
1 Plan.

Approved

Superintending Engineer
4th Circle

Coimbatore
28th July 1898

6020
9-8-98

No. 283 I.
GOVERNMENT OF INDIA,
PUBLIC WORKS DEPARTMENT.
CIVIL WORKS.

Irrigation.

Simla, the 21st July 1898.

Review of the Revenue Report of Irrigation Works in Sind for
1896-97.

Read—

Letter No. 409 I., dated 23rd June 1898, from the Government of Bombay, Public Works Department, forwarding the Revenue Report of the Irrigation Department in Sind for 1896-97, together with the Resolution of that Government reviewing the same.

OBSERVATIONS.—There are altogether in Sind 15 works for which Capital and Revenue Accounts are kept. The number of Major Works, all of which are classed as productive, is 8 or two more than in the previous year, the two additional works being the Naulakhi and the Nasrat Canals. Of these Major Works four are in operation and four under construction. The seven Minor Works are all in operation.

GENERAL OUTLAY.

2. The capital expenditure incurred on these works during the year amounted (in round numbers) to 17 lakhs, being 10 lakhs in excess of the previous year. Of this 10 lakhs, 7 lakhs were spent on the Eastern Works, rather more than in the previous year, and the new Dad canal accounted for most of the balance.

The expenditure on Minor Works was confined to the Fuleli canal and amounted to Rs. 78,899, but the sale of a piece of land on the Sukkur canal for Rs. 1,000 reduced the total capital expenditure on these works to Rs. 77,899.

The total capital outlay to the end of the year amounted to 125½ lakhs for Major and 37¼ lakhs for Minor Works.

MILEAGE OF CHANNELS.

3. The aggregate length of main and branch canals amounted to 5,971 miles at the close of the year and is 30 miles in excess of the total length in operation in 1895-96, the increase being due to the new channels completed in the Shikarpur canals district and Western Nara district. There was no change in the aggregate length of navigable channels.

AREA IRRIGATED.

4. The areas irrigated by all the Sind irrigation works during the year were as follows:—

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
Government lands	1,878,615	365,516	2,244,131
Jághir lands	163,778	26,570	190,348
Foreign (Khelát territory)	58,778	4,099	62,877
	<u>2,101,171</u>	<u>396,185</u>	<u>2,497,356</u>

In addition to the above an area of 154,166 acres was irrigated a second time for another crop, so that the total crop area irrigated amounted to 2,651,522 acres.

The kharif area exceeds the average of the previous five years by 316,443 acres or 18 per cent. and is the highest on record, whereas the rabi area fell short of the average by 155,780 acres or 28 per cent. The increase under kharif is said to be due to the favourable inundation while the decrease in rabi is attributed to the early and rapid fall of the river.

The total area of 2,497,356 acres (excluding the double cropped area) exceeds the total of the previous year by 400,579 acres and the average of the five preceding years by 160,662 acres, and approaches very nearly to the record area of 1894-95.

The Government of India concur with the Commissioner in Sind in considering this result very satisfactory in view of the fact that the inundation of the year was barely an average one.

The areas of the principal crops irrigated during the year were:—

Rice	...	...	...	...	...	Acres.
Jowari	...	...	...	...	...	727,502
Bajri	...	...	...	...	...	682,035
Wheat	...	...	...	...	...	363,662
... areas under P...	...	...	...	...	...	213,014

The areas under Rice and Jowari are the highest on record. The estimated value of the

The estimated value of the crops irrigated is nearly 630 lakhs of rupees, the value per acre being Rs. 25. The average rate levied for the use of water was Rs. 2-2-0 or one-twelfth of the value of the crop.

WORKING EXPENSES.

5. The working expenses of the Major and Minor Works for which capital accounts are kept were as follows :—

	Total working expenses.	Rate per acre irri- gated.	Average rate per acre for five previous years.
	Rs.	Rs.	Rs.
Major Works	3,28,504	0.52	0.66
Minor Works	6,14,055	0.73	0.77

The low rate per acre of the working expenses on Major Works is very satisfactory. On Minor Works for which capital accounts are kept the working expenses were rather above the normal. They are, however, below the figures of 1894-95, and cannot be considered excessive. The rate per acre is rather less than the average rate of the past five years. Taking both Major and Minor Works together the working expenses amounted to Rs. 9,42,559 or 0.66 per acre, the percentage on gross revenue assessed being 31.80.

These rates compare very favourably with those of previous years. To arrive at the results obtained from the outlay of Government capital on these works the maintenance of old works which have not been affected by it must be deducted from the figures given above. These charges amounted during the year to Rs. 9,013 for Major and Rs. 1,96,242 for Minor Works so that the working expenses on improvements effected by the investment of Government capital amounted to Rs. 3,19,401 for Major Works and Rs. 4,17,813 for Minor Works.

On Minor Works for which only Revenue Accounts are kept the working expenses were Rs. 9,62,450 as compared with Rs. 12,93,800 in the previous year. These amounts include the expenditure on works of improvement which is only shewn under working expenses because no capital accounts are kept of these works.

The expenditure on Agricultural Works was considerably in excess of that of the previous year.

FINANCIAL RESULTS.

6. The financial results of the Sind Canals in operation during the year were as follows :—

Works for which Capital and Revenue accounts are kept.			Capital outlay to end of year.	Gross Revenue due to improvements.	Working expenses on improvements.	Net revenue due to improvements.	Return on capital outlay.
			Rs.	Rs.	Rs.	Rs.	Per cent.
Major Works	...	...	98,12,849	11,09,840	3,19,401	7,90,439	8.05
Minor Works	...	...	37,25,271	11,93,618	4,17,813	7,75,805	20.83

The figures given above represent the results due to the outlay of Government Capital on Irrigation Works in Sind, and do not include the receipts from, and maintenance charges of, the old Irrigation Works. Including this old irrigation the gross receipts amounted to Rs. 11,46,897 for Major Works and Rs. 17,81,112 for Minor Works, the net revenue from both Major* and Minor Works including old irrigation being Rs. 19,85,450.

All the Major Works gave higher returns than in the preceding year except the Desert canal. A breach in the canal bank necessitated the closure of the Head Works of this canal and by the time the repairs were finished the river had fallen. Large remissions were consequently necessary and while the gross receipts were less than in 1895-96 the working expenses were much heavier and the canal returned only 2·91 per cent. on its capital outlay as compared with 5·35 in the previous year. But this deficiency was more than made good by the excellent results obtained on the Unharwah, Begári, and Eastern Nára works. The first of these canals returned the large profit of 17·14 per cent. as compared with 9·83 in the previous year while the returns yielded by the Begári and Eastern Nára were 15·4 and 6·21 per cent. respectively, against 13·13 per cent. and 4·28 per cent. in 1895-96.

The improvement on the Minor Works for which both Capital and Revenue Accounts are kept was even more striking, these canals returning 20·83 per cent. on their capital outlay against 10·04 per cent. in the previous year.

Taken together the Major and Minor Works in operation during the year returned a dividend of 11·56 per cent. on the capital invested in them.

The accumulated interest charges on the four Major Works in operation amounted to Rs. 78,80,216 up to the end of the year and the accumulated net revenue to Rs. 1,12,06,489. The surplus of Rs. 33,26,273 represents the contribution made by these works to the revenues of the country.

The Minor Works for which only Revenue Accounts are kept gave very satisfactory results during the year. The gross revenue yielded by them amounted to Rs. 23,80,186 and the expenditure of the year being only Rs. 9,62,490, the net revenue obtained amounted to the large sum of Rs. 14,17,696.

On Agricultural Works the expenditure, incurred chiefly on embankments of which there are 713 miles, exceeded the revenue collected by Rs. 5,16,125.

GENERAL REMARKS.

7. The results obtained during the year are, in the opinion of the Government of India, very satisfactory and reflect credit on the officers concerned with the administration of the canals. Notwithstanding the fact that the floods were only moderate the area irrigated was considerably above the normal and was exceeded only once previously in a year of abnormally high floods. On the works of which capital accounts are kept the net revenue (exclusive of that due to the old irrigation works) was the highest on record and yielded the high return of $11\frac{1}{2}$ per cent. on the capital invested.

Good progress was made with the new Jamrao and Dad canals, on the former of which 13 lakhs were spent during the year. When these works are in full operation the Sind canals will yield still higher returns and, regarded from a purely financial point of view, will bear favourable comparison with the best irrigation works in India.

8. The report was not received by the Government of India until the 27th June last though it was due on the 15th November. The great inconvenience caused by this delay has been referred to in the review on the Irrigation Report on the Deccan and Gujarat works and the attention of the Bombay Government is again invited to the subject.

ORDER.—Ordered, that a copy of this Review with the Report and Resolution by the Government of Bombay, be forwarded to the Revenue and Agricultural Department, for information.

Ordered, also that a copy of this Review be forwarded to the Government of Bombay for information, and that copies of the Review with the Report and Local Government's Resolution be forwarded to the Local Governments noted on the margin in the Public Works Department, for information.

Ordered further, that this Review with the Local Government's Resolution be published in Part I of the *Gazette of India*, and that copies of the Review be forwarded to Her Majesty's Secretary of State for India.

J. S. BERESFORD,
Offg. Joint Secy. to the Govt. of India.

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The Minor Works for which only Revenue Accounts are kept gave very satisfactory results during the year. The gross revenue yielded by them amounted to Rs. 23,80,186 and the expenditure of the year being only Rs. 9,62,490, the net revenue obtained amounted to the large sum of Rs. 14,17,696.

On Agricultural Works the expenditure, incurred chiefly on embankments of which there are 713 miles, exceeded the revenue collected by Rs. 5,16,125.

GENERAL REMARKS.

7. The results obtained during the year are, in the opinion of the Government of India, very satisfactory and reflect credit on the officers concerned with the administration of the canals. Notwithstanding the fact that the floods were only moderate the area irrigated was considerably above the normal and was exceeded only once previously in a year of abnormally high floods. On the works of which capital accounts are kept the net revenue (exclusive of that due to the old irrigation works) was the highest on record and yielded the high return of 11½ per cent. on the capital invested.

Good progress was made with the new Jamrao and Dad canals, on the former of which 13 lakhs were spent during the year. When these works are in full operation the Sind canals will yield still higher returns and, regarded from a purely financial point of view, will bear favourable comparison with the best irrigation works in India.

8. The report was not received by the Government of India until the 27th June last though it was due on the 15th November. The great inconvenience caused by this delay has been referred to in the review on the Irrigation Report on the Deccan and Gujarat works and the attention of the Bombay Government is again invited to the subject.

ORDER.—Ordered, that a copy of this Review with the Report and Resolution by the Government of Bombay, be forwarded to the Revenue and Agricultural Department, for information.

Ordered, also that a copy of this Review be forwarded to the Government of Bombay for information, and that copies of the Review with the Report and Local Government's Resolution be forwarded to the Local Governments noted on the margin in the Public Works Department, for information.

Ordered further, that this Review with the Local Government's Resolution be published in Part I of the *Gazette of India*, and that copies of the Review be forwarded to Her Majesty's Secretary of State for India.

J. S. BERESFORD,
Offg. Joint Secy. to the Govt. of India.

GOVERNMENT OF INDIA.
PUBLIC WORKS DEPARTMENT.
CIVIL WORKS.

Irrigation.

Simla, the 21st July 1898.

Review of the Revenue Report of Irrigation Works in Sind for 1896-97.

Read—

Letter No. 409 I., dated 23rd June 1898, from the Government of Bombay, Public Works Department, forwarding the Revenue Report of the Irrigation Department in Sind for 1896-97, together with the Resolution of that Government reviewing the same.

OBSERVATIONS.—There are altogether in Sind 15 works for which Capital and Revenue Accounts are kept. The number of Major Works, all of which are classed as productive, is 8 or two more than in the previous year, the two additional works being the Naulakhi and the Nasrat Canals. Of these Major Works four are in operation and four under construction. The seven Minor Works are all in operation.

CAPITAL OUTLAY.

2. The capital expenditure incurred on these works during the year amounted (in round numbers) to 17 lakhs, being $7\frac{1}{4}$ lakhs in excess of the expenditure of the previous year. Of this outlay over $16\frac{1}{4}$ lakhs are debited to Major Works, rather more than 13 lakhs being spent on the Jamrao canal alone, while the Eastern Nara works and the new Dad canal accounted for most of the balance.

The expenditure on Minor Works was confined to the Fuleli canal and amounted to Rs. 78,899, but the sale of a piece of land on the Sukkur canal for Rs. 1,000 reduced the total capital expenditure on these works to Rs. 77,899.

The total capital outlay to the end of the year amounted to $125\frac{1}{2}$ lakhs for Major and $37\frac{1}{4}$ lakhs for Minor Works.

MILEAGE OF CHANNELS.

3. The aggregate length of main and branch canals amounted to 5,971 miles at the close of the year and is 30 miles in excess of the total length in operation in 1895-96, the increase being due to the new channels completed in the Shikarpur canals district and Western Nara district. There was no change in the aggregate length of navigable channels.

AREA IRRIGATED.

4. The areas irrigated by all the Sind irrigation works during the year were as follows :—

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
Government lands	1,878,615	365,516	2,244,131
Jághir lands	163,778	26,570	190,348
Foreign (Khelát territory)	58,778	4,099	62,877
	<u>2,101,171</u>	<u>396,185</u>	<u>2,497,356</u>

In addition to the above an area of 154,166 acres was irrigated a second time for another crop, so that the total crop area irrigated amounted to 2,651,522 acres.

The kharif area exceeds the average of the previous five years by 316,443 acres or 18 per cent. and is the highest on record, whereas the rabi area fell short of the average by 155,780 acres or 28 per cent. The increase under kharif is said to be due to the favourable inundation while the decrease in rabi is attributed to the early and rapid fall of the river.

The total area of 2,497,356 acres (excluding the double cropped area) exceeds the total of the previous year by 400,579 acres and the average of the five preceding years by 160,662 acres, and approaches very nearly to the record area of 1894-95.

The Government of India concur with the Commissioner in Sind in considering this result very satisfactory in view of the fact that the inundation of the year was barely an average one.

The areas of the principal crops irrigated during the year were :—

	Acres.
Rice	727,502
Jowari	682,035
Bajri	363,662
Wheat	213,014

The areas under Rice and Jowari are the highest on record.

The estimated value of the crops irrigated is nearly 630 lakhs of rupees, the value per acre being Rs. 25. The average rate levied for the use of water was Rs. 2-2-0 or one-twelfth of the value of the crop.

WORKING EXPENSES.

5. The working expenses of the Major and Minor Works for which capital accounts are kept were as follows :—

	Total working expenses.	Rate per acre irrigated.	Average rate per acre for five previous years.
	Rs.	Rs.	Rs.
Major Works	3,28,504	0.52	0.66
Minor Works	6,14,055	0.73	0.77

The low rate per acre of the working expenses on Major Works is very satisfactory. On Minor Works for which capital accounts are kept the working expenses were rather above the normal. They are, however, below the figures of 1894-95, and cannot be considered excessive. The rate per acre is rather less than the average rate of the past five years. Taking both Major and Minor Works together the working expenses amounted to Rs. 9,42,559 or 0.66 per acre, the percentage on gross revenue assessed being 31.80.

These rates compare very favourably with those of previous years. To arrive at the results obtained from the outlay of Government capital on these works the maintenance of old works which have not been affected by it must be deducted from the figures given above. These charges amounted during the year to Rs. 9,013 for Major and Rs. 1,96,242 for Minor Works so that the working expenses on improvements effected by the investment of Government capital amounted to Rs. 3,19,401 for Major Works and Rs. 4,17,813 for Minor Works.

On Minor Works for which only Revenue Accounts are kept the working expenses were Rs. 9,62,450 as compared with Rs. 12,93,800 in the previous year. These amounts include the expenditure on works of improvement which is only shown under working expenses because no capital accounts are kept of these works.

The expenditure on Agricultural Works was considerably in excess of that of the previous year.

FINANCIAL RESULTS.

6. The financial results of the Sind Canals in operation during the year were as follows :—

Works for which Capital and Revenue accounts are kept.	Capital outlay to end of year.	Gross Revenue due to improvements.	Working expenses on improvements.	Net revenue due to improvements.	Return on capital outlay.
	Rs.	Rs.	Rs.	Rs.	Per cent.
Major Works	98,12,849	11,09,840	3,19,401	7,90,439	8.05
Minor Works	37,25,271	11,93,618	4,17,813	7,75,805	20.83

The figures given above represent the results due to the outlay of Government Capital on Irrigation Works in Sind, and do not include the receipts from, and maintenance charges of, the old Irrigation Works. Including this old irrigation the gross receipts amounted to Rs. 11,46,897 for Major Works and Rs. 17,81,112 for Minor Works, the net revenue from both Major and Minor Works including old irrigation being Rs. 19,85,450.

All the Major Works gave higher returns than in the preceding year except the Desert canal. A breach in the canal bank necessitated the closure of the Head Works of this canal and by the time the repairs were finished the river had fallen. Large remissions were consequently necessary and while the gross receipts were less than in 1895-96 the working expenses were much heavier and the canal returned only 2.91 per cent. on its capital outlay as compared with 5.35 in the previous year. But this deficiency was more than made good by the excellent results obtained on the Unharwah, Begari, and Eastern Nara works. The first of these canals returned the large profit of 17.14 per cent. as compared with 9.83 in the previous year while the returns yielded by the Begari and Eastern Nara were 15.4 and 6.21 per cent. respectively, against 13.13 per cent. and 4.28 per cent. in 1895-96.

The improvement on the Minor Works for which both Capital and Revenue Accounts are kept was even more striking, these canals returning 20.83 per cent. on their capital outlay against 10.04 per cent. in the previous year.

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