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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No. / B.P. No.	148	Press / Mis.
Dated	24-1-1873	196 .

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department,
18th January 1873.

Read the following papers:—

No. 342. From the Assistant Secretary to the Government of India, Public Works Department, to the Joint Secretary to Government, Public Works Department, (Irrigation Branch,) dated Fort William, 28th November 1872, No. 1,021-I.

In acknowledging the receipt of your letter No. 2,521 of the 25th ultimo, forwarding a Note by the Acting Chief Engineer for Irrigation explaining that it was Mr. Fraser, and not Mr. Thornhill, who by an erroneous estimate misled the Government of Madras originally as to the return to be obtained from the Madras Water Works Project, I am directed to draw your attention to the last paragraph of this office letter No. 768-I. of the 9th September last, and to repeat the request that the Government of India may be furnished with a *complete* copy of the correspondence (including the Special Committee's Report) which accompanied Colonel Carpendale's letter No. 2,172 of the 23rd August 1871, submitting the revised scheme for sanction.

2. I am also to inquire whether any, and if so what, notice has been taken by the Government of Madras of Mr. Fraser's error above mentioned.

No. 343. From the Superintending Engineer, 3rd Division, to the Secretary to Government, Public Works Department, dated Bellary, 30th November 1872, No. 2,011.

I have the honour to enclose a letter from Mr. Fraser, C.E., Executive Engineer of Bellary, requesting that certain correspondence regarding the Red Hill Lake enlargement may be furnished to him.

No. 581, dated 28th November 1872.

From W. FRASER, Esq., C.E., Executive Engineer in charge of Bellary Range, to the Superintending Engineer, 3rd Division, dated Bellary, 28th November 1872, No. 581.

My attention has been drawn to a paragraph in the *Madras Athenæum and Daily News* of the 12th instant, in which allusion is made to some correspondence between the Supreme and Madras Governments regarding the Madras Water Works.

2. The question discussed appears to be *by whom were the Madras Government misled* regarding the profitable return from the storage works, that is, the area of land and the probable quantity of water available for irrigation.

3. From the article in question it seems that, eventually, the Madras Government arrived at the conclusion that they had been misled by the statements in my report.

4. As I consider this conclusion unjust towards me, and as I am desirous of placing the facts in my defence before the Government, I have the honour to request that you will be good enough to obtain for me a copy of the correspondence referred to.

No. 312.

No. 344. *Note by the Chief Engineer for Irrigation.*

Mr. W. Fraser having seen in the *Athenæum and Daily News* of the 12th ultimo an article on the Madras Water Works Project, in which it is stated that

the Government were misled relative to the probable returns from that project by him, has applied for a copy of the correspondence to enable him to place the facts before Government.

2. The part of the article in the *Athenæum and Daily News* to which Mr. Fraser refers is an exact re-production of paragraph 2 of the letter No. 2,521, dated 25th October last, to the Government of India, and that Officer is therein stated to have misled this Government on two points, namely, as to the probable return from new lands to be brought under irrigation, and as to the quantity of water likely to be available for irrigation.

3. Mr. Fraser's statement on the first point is contained in the last part of paragraph 20 of his report, printed in Proceedings, Madras Government, of the 11th April 1866, No. 1,102, and it runs thus:—"The general difference between the assessment on dry and wet cultivation in the vicinity of Madras is 5 Rupees an acre, but as the land to which this water could be applied pays nothing now, we may take the increase at 7 Rupees an acre, which on 8,571 acres would amount to nearly 60,000 Rupees a year." He goes on to say "if this calculation is even nearly correct, the return on the irrigation part of the project alone would yield a fair percentage on the entire amount proposed to be expended." Upon what information Mr. Fraser based his remark that 5 Rupees an acre is the "general difference between the assessment on dry and wet cultivation" is not apparent from the papers, but it would seem that he supposed that the anticipated revenue returns would be subjected to examination in detail, and confessedly the area he expected to irrigate was defined merely as a portion of the large extent of waste lands known to be commanded by the proposed reservoirs, so that his argument could at best have been founded only on analogy.

4. The Government unfortunately appear to have mistaken Mr. Fraser's assumption for an ascertained fact; paragraph 7 of the Order on the report accepts the calculations given in the latter; and, in paragraph 6 of the letter No. 1,376 of the 30th April 1866, to the Government of India, they speak of the waste land to be irrigated as being "susceptible of being improved to yield an assessment which, though calculated by Mr. Fraser at 7 Rupees, may, in the opinion of this Government, range considerably higher, owing to the proximity of the lands to the Presidency."

5. So far as I am able to judge Government were misled on this point, not so much, if at all, by Mr. Fraser, as by the geographical position of the land which until quite a recent date, it was thought might properly be assessed at a high rate. It was, indeed, only after an accurate investigation made by the Director of Revenue Settlement that the real circumstances of the land were discovered, and it became known that, notwithstanding its proximity to the Madras market, it would bear but a very low, instead of an exceptionally high, rate of assessment.

6. There is a remark in Mr. Fraser's report which is apparently much at variance with the opinion of the Committee. He says (paragraph 19 of the report) "most of the waste lands under these lakes is of an unusually fruitful character, being, for the most part, alluvial deposit." The Committee, on the other hand, allude* to "the poverty of the soil," and again at the end of paragraph 11 they say, "The apparent leniency (referring to low average rate of assessment) is readily accounted for by there being no really good regada or other rich lands to take into account."

* Report, Proceedings, Madras Government, 23rd August 1871, paragraph 9.

7. The second point on which Mr. Fraser is deemed to have misled the Government is the quantity of water likely to be available for irrigation. There have been many opinions on this subject; the data have all along been, and still are, very imperfect, and there is nothing better than opinions, or deductions from insufficient data, even now available. Comparing, however, Mr. Fraser's calculations, which will be found in paragraph 18 of his report, with the latest conclusions, namely, those contained in the report of the Committee and its Appendix A, the following results will be exhibited.

8. Mr. Fraser estimated that the lakes would hold in round numbers 138½ millions of cubic yards, and, on the one hand, he intimated that he did not take credit for any additional supplies, which undoubtedly would be received, nor, on the other hand, did he make any deduction for evaporation and absorption. He showed, moreover, that deducting the water to which existing cultivators under the tanks had a claim, there would remain 93½ or 114 millions of cubic yards, according as that claim was taken to include the average supply received, or the maximum retainable by the unimproved reservoirs, and then he assumed that 100 millions might be safely taken as the quantity to be disposed of; allotting 40 millions to the supply of Madras, the remaining 60 millions were supposed to be available for the extension of irrigation. Turning now to the report of the Committee and its appendix, it will be seen that the late Major Ryves made his calculations in a somewhat different manner. He thinks that the tanks may receive and store in such a season as 1870, the only year for which a detailed record of the freshes was in existence, 200 millions of cubic yards between June and December; but, on the supposition that the freshes of that year were more than usually favourable, he takes 160 millions as the quantity likely to be stored, and from this he deducts 45 millions for evaporation and 32 millions for town supply, leaving 83 millions for existing and prospective irrigation. He allows 7,545½ cubic yards per acre instead of the 7,000 allowed by Mr. Fraser, both allowances being hypothetical; and, making this allowance on 4,980 acres of existing cultivation the balance available for extension of irrigation becomes 45 millions of cubic yards against Mr. Fraser's 60 millions. Now, the area of the two lakes when quite full is about 32 millions of square yards, and so the above allowance of 45 millions of cubic yards for evaporation is at the rate of nearly 1½ yards in depth over the maximum area. During a considerable part of the irrigation season, however, the diurnal loss by evaporation would be more than compensated for by rainfall and local drainage, so that it is perhaps more than probable that Major Ryves' deduction is in excess of what is necessary. At any rate there would seem to be nothing misleading in Mr. Fraser's calculations of quantity. His views of the capability of the Cortiliar to fill the tanks has so far been confirmed, for there has been no want of water hitherto; the rest depends upon the special circumstances of the season, and no one can accurately estimate the details upon which the quantity of irrigation water will depend with-

Proceedings of the Madras Government, Public Works Department,
18th January 1873.

out far more information in the shape of records of supply received, an
by evaporation, rainfall, etc., than is at present, or indeed is likely to b

9. I may notice in conclusion that the full level of the water in t
ram tank has been fixed* for
at 1 yard below Mr. Frase
5 yards above the old calin
level, the reason being that
in the arrangements for crossing the Boosykal valley by a single ban
instead of a double bank and aqueduct, caused the flooding of valuable
it was thought advisable therefore to reduce this submergence to a m
lowering the full supply level in the reservoir. This alteration reduced t
of the reservoir by about 8 millions of cubic yards, and of this Mr. Fraser
had no knowledge, while it is uncertain, and unascertainable from his
dum, whether Major Ryves was acquainted with this fact.

* *Vide* paragraph 7, Clause 12 of the Executive Engineer's letter No. 1, dated 1st January 1870, printed in Proceedings, Madras Government, 26th April 1870, No. 1,100.

FORT ST. GEORGE. (Signed) J. MULLINS, Lieut.-Colon
11*th December* 1872. *Chief Engineer for*

No. 345. ORDER THEREON, 18th January 1873, No. 171.

IRRIGATION, No. 28.

ON a further consideration
cumstances attending the fir
of the Madras Water Works
submitted by Mr. W. Fraser, the Special Executive Engineer employed o
ration, the Right Honourable the Governor in Council is of opinion that
cannot be held responsible for the difference which has been found to ex
the rate of assessment on waste lands under the tanks as at first esti
that which, after investigation, it has been deemed practicable to im
Fraser's assumed rate has been shown to be incorrect, but as he was no
on this particular subject, and as he manifestly did not expect the Gov
accept his calculations without these being first confirmed by the Reven
the Government (who omitted thus to verify them) were themselves
for the erroneous estimate of the financial value of the project, on
recommendation for its sanction by the Government of India was based

2. The Government are likewise of opinion that Mr. Fraser's
the quantity of water likely to be available for the extension of irr
as accurate as could reasonably have been expected, taking into accou
available, which data were clearly set forth in his report.

3. The Government of India will be informed of the conclusio
His Excellency in Council has now arrived, and His Grace the Secret
for India will also be addressed on this subject.

(Here enter No. 172, dated 18th January 1873.)
(True Extract.)

Lieut.-Colo
Joint Secretary to Governme

To W. Fraser, Esq.
To the Chief Engineer for Irrigation.
,, Revenue Department.
Exd. E. C. Shunker.

Revenue Dept.

Pr. 211.

Govt. of {1873} Madras.

PUBLIC WORKS.

To

W. FRASER Esq.,

&c., &c., &c.

Dated January 18th.

Read. 24th *Encl.*

G. O., 18th January 1873, No. 171.

JANUARY

Nos. 342-345

Madras Water Works Project.—Passing orders on papers on the subject of the erroneous estimate of the anticipated return from the Madras Water Works Project.

W. 148.

Comm^r. to the Bd. of Rev

23/1.

24th Jan. /73.

13 Folds 69 — by Clerk 24/Jan 7