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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No.	1818 P.W.D.	Press Mk.
Dated	5th June 1811.	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
5th June 1871.*

No. 71. Read the following Proceedings of the Madras Government in the Revenue Department:—

Land Revenue from Madras Water Works Project.—Proceedings, Board of Revenue, submitting reports of the Acting Director of Revenue Settlement and the Collector of Chingleput on this subject, together with the Minutes of the Members of Government, transmitted to the Public Works Department. Committee to report on the points specified, nominated. (Here enter 29th May 1871, No. 939.)

No. 72. ORDER THEREON, 5th June 1871, No. 1,518.

IRRIGATION, No. 4.

His Excellency the Governor in Council resolves to forward to the Committee appointed in the foregoing

Proceedings a copy of G. O., dated 26th April 1870, No. 1,100, with the revised plans and estimates for the Madras Water Supply Project with a request that, after the fullest enquiry and consideration, the Committee will submit a detailed estimate of the total outlay which will be necessary to place the works in a satisfactory condition and of the probable charge for maintenance. They will also report their views regarding the total revenue which may be expected, and can equitably be credited to the works, on the principles prescribed for re-assessments. The Government wish that the matter, may be taken in hand immediately and disposed of as soon as possible.

[(True Extract.)]

(Signed) J. CARPENDALE, Colonel, R. E.,
Secretary to Government.

To the Revenue Department.

To G. Thornhill, Esq.

To the Actg. Director of Revenue Settlement,

„ „ Chief Engineer for Irrigation.

} With copy of G. O., No. 1,100, dated 26th April 1870.

31-7-73

Subt. of 1871 Madras.

PUBLIC WORKS.

To

THE REVENUE DEPARTMENT.

&c., &c., &c.

Dated June 5th.

Recd.

Encd.

G. O. 7th June 1871, No. 1513

JUNE

Nos. 71-72

Madras Water Works Project.—Passing orders on Proceedings of the Revenue Department submitting reports of the Acting Director of Revenue Settlement and of the Acting Collector of Chingleput on the question respecting the results under "Land-Revenue" to be anticipated from the Madras Water Works Project, together with Minutes of His Excellency the President and the other Members of Council, and appointing a Committee to report on certain points.

*Proceedings of the Madras Government, Revenue Department,
29th May 1871.*

Read the following papers:—

No. 366. Proceedings of the Board of Revenue, dated 17th December 1870, No. 7,175.

Read the following letters:—

From G. BANBURY, Esq., Acting Director of Revenue Settlement, to the Acting Secretary to the Board of Revenue, dated Madras, 24th November 1870, No. 2,031-71.

ABSTRACT.—Submitting, as directed in Government Order, 17th May 1870, No. 729, an approximate set of assessment-rates for the various soils in the Sydapet and Ponnery Taluqs of the Chingleput District.

From W. T. BLAIR, Esq., Acting Collector of Chingleput, to the Acting Secretary to the Board of Revenue, dated Sydapet, 9th December 1870, No. 527.

I HAVE the honour to reply to the Board's Proceedings, dated 10th May 1870, No. 3,155, communicating the Proceedings of Government, dated the 3rd idem, No. 630, on the subject of revising the assessment of the lands in the various villages now under the irrigation of the Red Hills and Sholaveram tanks and in those likely to benefit by them hereafter.

2. I submit, herewith, a statement (A.) showing the villages at present irrigated by the tanks in question, together with the tenure and mode of settlement prevailing in each. I also enclose a similar statement (B.) showing the villages which will derive advantage from these tanks in their enlarged condition.

3. The Board will observe from statement A. that the number of villages at present under the irrigation of the Red Hills tank is thirteen. Of these ten are ryotwary villages, and one is held on a fixed cowle, the remaining two being shotriems, viz., Teeymbakam and Chemrambakam. The villages watered by the Sholaveram tank are nine in number, all of which, with the exception of two, are purely ryotwary. The village of Nullore is partly shotriem and partly ryotwary, while the village of Warakad is a Mootah. The number of villages to which irrigation will be extended in the improved condition of the tanks is, in the case of the Red Hills tank, forty-nine, and in that of the Sholaveram tank, twenty-three. In the former group of villages seven are held on shotriem tenure, and in the latter group two are held on the same description of tenure, and four are under permanent settlement. All the above villages are at present situated partly in the Sydapet and partly in the Ponnery Taluq. At one time they constituted a portion of the late Nayer (now Ponnery) Taluq, but in 1835 the villages now under the irrigation of the Red Hills tank and those likely to be irrigated by it hereafter were transferred to the Sydapet Taluq to which they still belong. The villages watered by the Sholaveram tank and those which will be influenced by it in its improved state always formed part of the late Nayer (now Ponnery) Taluq.

4. The system under which revenue was collected in these villages during the early years after the assumption of the Jaghire by the British Government was either by annual rents or Amany management. In Fasli 1211 (A.D. 1802) this mode of settlement was abandoned, and the permanent settlement, based on the average collections of a series of years, was introduced throughout the district;

the whole of the villages comprising the district, with the exception of those held on shotriem and Inam tenure being parcelled out into sixty-one Mootahs. This system remained in force from Fasli 1212 to 1224, when from various causes the Mootahs began to revert to Government.

5. The survey and settlement of the Nayer Taluq to which the villages forming the subject of this report belonged were conducted under the orders of the then Collector Mr. Maclean, who reported the completion of the settlement of the taluq in question in October 1837. He describes the soil of the Nayer Taluq as poor and particularly sandy.

6. The mode of settlement adopted by Mr. Maclean was as follows:—The lands of a circle of villages were first surveyed and classified according to their productive powers, facilities of irrigation, and other natural advantages, and a statement of produce was then made out. This being done the next step was to deduct the swatantrams or grain-fees of the village-servants from the gross produce according to the established rate of the village, and the net produce was then divided between the Government and the ryot. The proportion of the produce thus assigned to the Government varied not only in different villages, but on different descriptions of soil according to the ancient "Warachattam" of the village.

7. According to Mr. Maclean's report the Government share on wet lands varied from 35 to 50 per cent., and the ryot's share from 40 to 50 per cent. of the net produce in the Nayer Taluq. The commutation-rate adopted by Mr. Maclean in converting the Government share of the produce of wet lands into money was 18 mercals per Pagoda, or Rs. 77 per garce.

8. The assessment on dry and garden land was not fixed upon a commutation-price of the various grains produced thereon. These grains were so frequently changed on the same soils, and the value of each sort differs so greatly in price one from the other that it was reckoned inexpedient to base the assessment altogether on returns so obtained. The dry land assessment was therefore fixed on the average collections of preceding years, corrected and checked by other standards, namely, the permanent or Mootah beriz and the collections of Faslies 1210 and 1232, reference also being had at the same time to the rates at which dry grains were sold in the markets of the district.

9. The settlement thus arrived at was also carefully compared with and tested by the average collections of a series of years, and particularly by the collections of Fasli 1232—a most favourable year for agricultural operations—as well as with the collections under the permanent settlement.

10. The result of this comparison showed an increase of 16 per cent. above the permanent settlement, and a decrease of $1\frac{3}{4}$ per cent. below the wet average collections of 23 years, and of 4 per cent. below the collections of Fasli 1232.

11. The settlement was further compared with that fixed by the "Sir Taram-dars," a superior class of assessors, who, in those days, formed a part of the regular Survey establishment, and with the beriz proposed to be fixed by the ryots themselves. Mr. Maclean's settlement was found to be $12\frac{3}{4}$ per cent. lower than the former, and $2\frac{1}{4}$ per cent. higher than the latter of these assessments.

12. The Board considered that Mr. Maclean's settlement was too light, inasmuch as it fell short of the average collections of 23 years and the collections of Fasli 1232, and suggested that it should be increased by $11\frac{1}{2}$ per cent.

Vide Board's letter to Collector, dated 8th May 1845.

13. Mr. Maltby, who replied to the Board's letter in 1846, showed in his letter, dated the 8th April, that the decrease of 4 per cent. in Mr. Maclean's settlement, as compared with the collections of Fasli 1232, was due to special causes peculiar to that year, and was confined to a portion of the taluq, namely, the Striharikottah villages, and a few villages near to Madras which were rented out at sums far in excess of their annual collections, owing to the great competition among the Mirassidars of the villages. Mr. Maltby was of opinion that generally the assessment fixed by Mr. Maclean was not too low when the soil and other natural advantages of the Nayer Taluq were duly taken into consideration, and pointed out that the soil was inferior to that of the Manimangalum Taluq, and that the means of irrigation were remarkably defective and precarious, the taluq being mainly dependant on the falling rains.

14. I beg to send a statement marked C. showing the ayacut, cultivation, waste, remissions, etc., for all the villages now under the irrigation of the Red Hills and Sholaveram tanks for as many Faslies as possible. I have endeavoured to procure this information for 25 years for all the villages, but I regret to say that I have been unable in all cases to obtain these statistics for so long a series of years, more especially as regards Jary Mootahs and shotriems; the Curnums in such villages having kept no accounts for some years and having lost the accounts for others.

15. I also send two other statements D. and E. Statement D. is an abstract showing the average cultivation, waste, and remissions in the villages now under the irrigation of the Red Hills and Sholaveram tanks, with similar particulars for the villages likely to be influenced by the tanks in their enlarged condition. Statement E. shows the particulars of ayacut, cultivation, and waste under each rate of assessment in all the villages comprised in statement D. It will be seen from statement D. that the total wet ayacut in the several Government villages now under the irrigation of both the tanks, and in those to which irrigation will eventually be extended, amounts to acres 15,146, assessed at Rs. 51,738. Out of this extent the cultivation, according to the accounts of Fasli 1279, amounts to acres 13,716, bearing an assessment of Rs. 47,004. The waste amounts to acres 1,430, assessed at Rs. 4,734, of which acres 1,036, assessed at Rs. 3,596, and extending over 77 villages, are reported by the Curnums to be fit for wet cultivation. The remaining acres 395, although assessed, are, for various reasons, said to be unfit for wet cultivation.

16. The dry area in all the above-named villages, including the Manawari lands lately transferred to poonjah, amounts to acres 20,088. Out of this dry land the extent that can be converted into wet is given by the Curnums at acres 2,775. There are also acres 1,335 of dry land in Jari Mootah and shotriem villages that could be brought under cultivation if water were available. It will, however, be shown later on in this report that there will be no water to spare for these lands.

17. The total additional area, exclusive of second crop cultivation, that may be expected in future to be irrigated under both the tanks will, therefore, be acres 3,811, which is less than the extent given in Mr. Thornhill's letter to Colonel Anderson, dated 5th December 1868, No. 400, by acres 11,096. The large difference between these two areas is owing to the statement furnished by Mr. Thornhill having been prepared on a rough estimate, and having included every acre of assessed land that was unoccupied in the villages in question, on the supposition that there would be an unlimited supply of water, and that the whole of the land included in the villages concerned would be converted into wet, without taking into account the level of the lands and other circumstances; whereas the area here given as available for future cultivation has been determined after excluding the lands in shotriems and Mootahs, making allowance for the quantity of land within the water-spread of the tanks, and after due consideration of the situation of the lands and their adaptability for wet cultivation.

18. In Major Mullins's memorandum, dated 21st January 1870, the average rate of assessment on the additional area to be brought under cultivation is stated to be under Rs. 2-4-4 per acre. The process by which this result has been arrived at is by dividing the gross assessment of the entire waste, both wet and dry, in all the villages including Mootahs and shotriems, by the area which that assessment represented without taking into account the additional revenue which the lands will yield to Government in the shape of Teerwajasti. What Major Mullins should have done was to have divided the assessment of all the waste lands, inclusive of the estimated Teerwajasti upon the dry lands, by the total area, and he would then have found the average to be

Rs. 5-3-0 per cawny.
„ 3-14-3 per acre.

Rs. 3-9-7 per acre, or Rs. 4-12-0 per cawny, which is not much below the

average rate of the district on its total nanjil ayacut, as shown in the margin.

19. The average wet assessment on the cultivated area under the Red Hills tank is Rs. 4-1-11, and under the Sholaveram tank, Rs. 3-11-8 per acre; while the average assessment under both tanks on the existing cultivated area is Rs. 3-15-8 per acre. The average wet assessment of the lands under the Red Hills tank to which it is proposed to extend the irrigation of that tank is Rs. 3-2-2, and of the lands to which it is proposed to extend the irrigation of the Sholaveram tank, Rs. 3-8-11. The average wet assessment on the entire area to which it is proposed to extend the irrigation of both the tanks amounts to Rs. 3-4-0 per acre.

20. The average assessment of the cultivated area now under the irrigation of the Red Hills tank, and of the area to which it is intended to extend the irrigation hereafter, is Rs. 3-5-8. Similarly the average assessment of the cultivated area now irrigated by the Sholaveram tank, and of the wet lands to which it is intended to extend the irrigation of that tank, is Rs. 3-9-9 per acre. The average assessment of the wet area now cultivated under both tanks, and of that to which the irrigation will hereafter be extended is Rs. 3-6-10 per acre, or Rs. 4-9-1 per cawny.

21. The average assessment of the dry area under cultivation in the villages at present under the irrigation of the Red Hills tank is Rs. 1-13-0, and in those under the irrigation of the Sholaveram tank Rs. 1-14-2 per acre; the average of

both tanks being Rs. 1-14-2 per acre. The average assessment of the cultivated dry area of the villages to which it is proposed to extend the irrigation of the Red Hills tank is Rs. 1-14-8, and of those to which the irrigation of the Sholaveram tank is to be extended Rs. 2-9-2 per acre; the average of both tanks being Rs. 2-1-6. The average dry assessment on the cultivated lands in the villages now under the irrigation of the Red Hills tank and in those which are hereafter to be brought under its influence amounts to Rs. 1-14-6, while that of similarly situated lands under the Sholaveram tank amounts to Rs. 2-5-6; the total average of the dry lands under both tanks being Rs. 2-0-11 per acre.

22. The above averages will not be found in all cases to agree with those given by the Director of Revenue Settlement. The cause of this difference is that the averages of the Settlement Department are calculated with reference to the new Survey areas, while mine are based on the old Pymaish areas, and that when striking their averages the Settlement Department have included in the wet area those dry lands upon which wet crops are usually raised by the aid of Government water. They have also deducted the 20 per cent. temporary remission of assessment recently sanctioned by Government on Manawari lands, which I have not done.

23. The new survey has brought out an average increase above the present areas of 14 per cent. on the whole of the wet, and of the same percentage on the whole of the dry lands under both the tanks combined, and I am informed by the Director of Revenue Settlement that the commutation price which he proposes to adopt in resettling the wet lands of this district is Rs. 105 per garco. The result of this increase in the survey areas and in the commutation-price above that adopted by Mr. Maclean will be to raise the average assessment of the total wet ayacut under the Red Hills tank to Rs. 3-10-6, and under the Sholaveram tank to Rs. 3-11-8 per acre. This is equivalent to an addition to the present average wet assessment of 25 per cent. in the case of the Red Hills tank and of 20 per cent. in that of the Sholaveram tank.

24. I annex a statement, exhibiting the average assessment of the wet area at present under the irrigation of both tanks, and of that to which it is intended to extend their irrigation, as compared with the average assessment which the Director of Revenue Settlement proposes to adopt:—

		Average rate per acre as per old Pymaish.			Average rate per acre as per proposed new settlement.		
		RS.	A.	P.	RS.	A.	P.
Red Hills tank	{ At present irrigated	4	1	11	4	6	6
	{ To be irrigated	3	2	2	3	6	9
	Total...	3	5	8	3	10	6
Sholaveram tank	{ At present irrigated	3	11	8	3	13	8
	{ To be irrigated	3	8	11	3	10	7
	Total...	3	9	9	3	11	8
Grand Total...		3	6	10	3	10	10

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lands, and to raise the assessment disproportionately to the profits on the inferior lands.

34. As regards the lands to be hereafter converted into wet by the water of the tanks, I consider that the Government demand for water supplied should be by a distinct water-rate. The advantage of a separate water-cess will be that the Government may demand the land-tax from the ryots whenever the supply of water is deficient and the lands cannot be cultivated with nunjah produce.

35. In the Proceedings of the Board, dated 11th October 1869, No. 7,554, on the subject of the introduction of a fixed water-rate for the whole Presidency, it is only proposed to charge the highest rate of Rs. 4 for water used from sources, the supply of water from which is *quite certain*. It has already been shown that the supply of these tanks is rather uncertain, and that their water is quite free from that alluvial deposit which renders the water of rivers like the Kistna, Godavery, and Cauvery, so fertilizing. I therefore think that the water-rate should not be higher than Rs. 3 per acre.

36. I now proceed to estimate what the returns will be from the outlay on the project, and in doing so I shall adopt the new survey areas and Mr. Banbury's proposed new rates of assessment for wet lands.

37. The Board will observe that none of the increase of assessment on the wet lands under the tanks can fairly be placed to the credit of the project, as it is in no way attributable to the enlargement of the tanks, but would have occurred all the same if they had been left in their former condition.

38. In paragraph 15 of his report, dated the 26th February 1866, No. 50, Mr. Fraser states that the united capacity of the two tanks in their unimproved state was cubic yards 45,011,813. This is much in excess of the quantity of water that can be accounted for by the extent of cultivation under the tanks, as the annexed statement will show. It is drawn up from the Cultivation Returns from Fasli 1276, which is the year referred to by Mr. Fraser in paragraph 14 of the above report, and in which the tanks received a full supply:—

	ACRES.
Wet cultivation in Government villages	3,954
Do. in Shotriems and Mootahs	356
Do. in minor Inams...	431
Dry lands converted into wet	117
Second crop cultivation	667

Lands on which shavi remission was granted ... 34

This gives— 5,525

Acres 4,858 at 6,000 cubic yards	29,148,000
Do. 667 at 4,000 do. do.	2,668,000
Do. 34 at 1,500 do. do.	51,000

31,867,000

* Note.—This is the extent of land on which the crops came to maturity. The total extent exempted was acres 5,831, but out of this extent remission was granted for waste and shavi on acres 275. The waste amounted to acres 241, and as these lands, of course, received no water at all, I have excluded them from my calculation. I have assumed that the lands on which remission was granted for shavi received one-fourth of a full supply, i.e., 1,500 cubic yards per acre.

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39. This difference, though very considerable, is, I presume, to be set down to absorption, evaporation, and wastage, and I shall therefore in the following calculations assume that Mr. Fraser's estimate as to the former capacity of the tanks is correct.

40. Fasli 1276 was an exceptionally good year, and the annexed statement shows the demand for water on both tanks on an average of from sixteen to twenty-five years:—

	ACRES.
Wet cultivation in Government villages	3,734
Do. in Shotriems and Mootahs	325
Do. in minor Inams...	393
Do. in minor Inams...	100
Dry land converted into wet	205
Second crop cultivation	4,757

Lands on which shavi remission was granted ... 222
4,980

The water required for this extent of land is cubic yards 28,466,500, so that there will be a surplus of cubic yards 16,545,313 after providing for the existing average demand for water for irrigation purposes. This surplus I propose to set off against the remissions which it has hitherto been necessary to grant under the various minor tanks in the villages hereafter to be influenced by the project, in consequence of the insufficiency of their supply.—The average of the remissions on this account amounts to Rs. 6,048 per annum.

41. The quantity of water that will be available for extension of irrigation is cubic yards 38,439,000. The return that this supply of water will produce may be estimated thus:—

	RS.
956 acres of wet land under the Red Hills tank, at Rs. 3-10-6 per acre...	3,495
223 " of wet land under the Sholaveram tank, at Rs. 3-11-8 per acre...	832
1,548 " of second crop cultivation under the Red Hills tank, at Rs. 1-13-3 per acre...	2,830
1,548 " of second crop cultivation under the Sholaveram tank, at Rs. 1-13-10 per acre...	2,886
3,163 " of dry land converted into wet, at Rs. 3 per acre	9,489
Average remissions	7,568
Total...	27,100

Deduct on account of loss of revenue on lands submerged and taken up for the supply and delivery channels ... 4,395
22,705

Add town supply ... 32,000

Grand Total... 54,705

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being a gross return of 5.25 per cent. on the present amount of the estimate of the cost of the project. Major Mullins states that a gross return of 9.45 per cent. is as little as would be likely to yield a net return of 5 per cent. on the average of years. Taking the same proportion, a gross return of 5.25 per cent. would yield a net return of 2.7 per cent.

42. The Government will doubtless be much disappointed at finding that the scheme will prove so much less remunerative as an irrigation project than they expected. This expectation, however, was based on Mr. Fraser's representation that most of the waste land under the lakes was of an unusually fruitful character. How Mr. Fraser could have made such a statement I am quite at a loss to understand, the fact being that the land in question is very unproductive.

ENCLOSURE No. 1, A.

ABSTRACT.—Statement of villages under the irrigation of the Red Hills and Cholaveram Tanks in the Chingleput District.

ENCLOSURE No. 2, B.

ABSTRACT.—Statement of villages which are expected to be benefited by the enlargement of the Red Hills and Cholaveram Tanks.

ENCLOSURE No. 3, C.

ABSTRACT.—Statement showing the ayacut cultivation, waste, remission, etc., for all the villages now under the irrigation of the Red Hills and Cholaveram Tanks.

ENCLOSURE No. 4, D.

ABSTRACT.—Statement showing the average cultivation, waste, and remission, under each tank in the villages under the irrigation of the Red Hills and Cholaveram Tanks, and those likely to be influenced by them hereafter.

ENCLOSURE No. 5, E.

ABSTRACT.—Statement showing the ayacut cultivation and waste under each rate of assessment in the villages now under the irrigation of the Red Hills and Cholaveram tanks and those to which it is proposed to extend the irrigation.

THESE reports will be submitted to Government, with reference to Government Order, 26th April 1870, No. 1,100 (Irrigation).

2. Government have called for information on three points:—

I.—As to the prospective assessment of waste lands which will be irrigated by the Madras Water Works.

II.—As to whether the present assessment on irrigated lands should be raised.

III.—As to whether a separate water-rate might be levied instead of continuing a consolidated nunjah assessment.

I. With regard to the first point the Board have only to submit the report of the Acting Director of Revenue Settlement, and to state their entire concurrence in his proposals as regards irrigated lands. He has adhered strictly to the

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but in the case of Shotriems and Inams a uniform water-rate might be levied, and the Board do not see why it should be less than Rs. 4.

3. The financial result of the Director's proposals, so far as regards the irrigation project, is to fix the gross returns at from 5.25 to 5.52 per cent. on the expenditure.

4. The Chief Engineer for Irrigation calculated the gross returns at 9.45 per cent., but in doing so, he assumed that the present rates of assessment could be more than doubled—an assumption which was improbable in itself, and based on no sufficient reason—and he also wrongly credited to the irrigation project an enhancement of the revenue which will not be attributable to it.

5. Taking into account the unexpected work which has had to be done lately, the extent to which the entry "compensation for land" has to be increased, and the annual cost of maintaining the works in repair, the Board fear that there can be no hope that the project will be remunerative, but they hope it will not be abandoned or curtailed on that account. The advantages which will be conferred on the Town of Madras and its neighbourhood by the storage of so large a body of water at the Red Hills are manifold, and many of them are of a description which cannot be represented by money-values.

No. 367. Minute by HIS EXCELLENCY the PRESIDENT, dated Madras, 30th April 1871.

THE accompanying papers embody statements respecting the expenditure on the Madras Irrigation and Water Supply Scheme, and respecting the returns which may be expected from its completion in the last degree discouraging.

2. There appear to have been mistakes and miscalculations connected with the project of every description, many of which, I fear, we must confess, might have been avoided if greater care had been exercised at an earlier period, if the scheme had been approached in a less sanguine spirit, and had been subjected to a closer scrutiny.

3. The mistakes to which I allude refer to the cost of the works, the area of land to be irrigated, and the amount of assessment to be levied from the land. The works, it is stated, will now reach an aggregate cost of Rs. 10,39,000—an excess of at least two lakhs over the amount which the Government contemplated when the scheme received their sanction.

4. The area of land classed as dry and wet, now lying partly waste and partly under dry cultivation, which can be brought under wet cultivation, amounts to only 5,577 acres in lieu of an area only limited by the amount of water available, that amount being originally estimated at a larger figure than can now be counted on.

5. The assessment to be imposed in lieu of an average of 5 or 6 Rs. per acre shrinks under the accurate analysis of the Revenue authorities to about 3 and 3½ Rs.

6. The gross returns on an outlay of Rs. 10,39,000, including wet waste lands irrigated, dry lands converted into wet, second crop assessment, charge for water to the Town of Madras, and cessation of remissions, are expected to amount

principles of his department, and where there had been a slight deviation from practice elsewhere, as in the case of straw, it has had the effect of raising the rates, so that, without examining the calculations in detail, it may be safely asserted that any change which it may be found necessary to make hereafter will not have the effect of increasing the demand. The commutation rates adopted are decidedly high. In the case of Varagu, the rate is above the price now ruling in the Madras market. The rates (for irrigated lands) are eight in number; the highest being Rs. 7, and the lowest Rs. 2. It seems to be clearly established that the soil is of an inferior description, so that Rs. 7 an acre is not too low a rate for the best of it. The neighbourhood of Madras is far from being an unmixed benefit, but such influence as is due to it is embodied in the commutation rate and the grouping.

The general effect of Mr. Banbury's proposals is to raise the present assessment on unoccupied irrigated land, which will be irrigable when the works are completed by 21 per cent. under the Red Hills tank and 20 per cent. under the Cholaveram tank; and the Board agree with Messrs. Banbury and Blair in considering this the utmost increase that the land will bear.

II. Next with regard to the present assessment on occupied irrigated land. The Board have no doubt that these rates can be raised, and the data collected by the Director show that an increase should be made, even if no new works had been begun or were contemplated. The improvement in irrigation, which is expected, has been taken into account in grouping the villages; but it contributes comparatively little to the final result, which is, that the assessment on this description of lands is raised by 25 per cent. under the Red Hills tank and by 20 per cent. under the Cholaveram tank. It is obvious, however, that this increase, resulting as it does almost entirely from a calculation of gross produce, commutation-rate and cultivation-expenses, cannot be attributed to the new irrigation works.

III. Finally, with regard to the expediency of assessing all the lands under the tanks as dry lands, and charging such as are irrigated with a water-rate. The Board, although the water-rate system is established in some parts of this Presidency, are opposed to it on principle. It disturbs the relation between assessment and profits, so that it cannot even be imagined that the proportion is uniform; and it presses heavily on the worst description of soil, whilst it reduces the amount which Settlement data show should be paid by the best land. The calculation by which the assessment is fixed rests upon the false hypothesis that the land is used to grow dry crops, and the result must, therefore, be utterly unreliable. In the present case, the introduction of a water-rate on irrigated land now under occupation would be most distasteful to the people, and would provoke resistance in the Courts. The Director proposes that the 4,000 acres of dry land, to which irrigation may be extended hereafter, should be charged a water-rate of Rs. 3 per acre, but the Board are opposed to this also. It would be unwise to assess lands lying side by side, and which are about to enjoy the same advantages, on different principles. Moreover, the assessment calculated with reference to the real net produce is, as the Board have already said, sufficiently high, and a water-rate would be too severely felt. It would be impolitic to introduce false data and stultify a settlement, merely to save Rs. 5,000 a-year. The trouble which this system will give the Revenue Department will be well bestowed in the case of Government ryots,

to only 5½ per cent.—a return which must be materially reduced if the expenses of maintenance are taken into consideration.

7. It seems probable, therefore, that the expectations entertained by this Government of the remunerative nature of the enterprise are illusory, that the work will never be really profitable as a Loan Work, and that the Supreme Government having been, most unintentionally, misled by this Government, will insist on a revision of the expenditure and on the reimbursement of a portion at least of the outlay which has been charged to Extraordinary.

8. Such being the state of the case, I think that this Government should frankly avow their neglects and errors to the Government of India, and make proposals for a settlement which shall, on the one hand, recognize the principles on which Loan Works can alone be safely undertaken, and, on the other, leave this Government in a position with reference to the expenditure not too onerous for their limited resources.

9. I would advise that the Director of Revenue Settlement, the Acting Collector of the Chingleput District, and the Secretary for Irrigation, should be directed to present a report in concert showing on careful reconsideration—

- (1), The complete outlay which must now be estimated for, in order to place the works in a satisfactory condition;
- (2), The total return which can equitably be credited to the works;
- (3), The charge for maintenance.

Having secured these data in the most authentic form, I would then advise that the Government should ascertain the amount of capital which the net return credited to the works would represent at six per cent. interest, and that the Government of India should be asked to sanction this amount of capital to be credited to Loan Funds, the balance of expenditure over and above such amount being charged to ordinary expenditure, to be reimbursed to the Government of India from the appropriations to this Presidency under the head of Ordinary in the course of a certain number of years to be determined hereafter.

10. I have taken six per cent. under the impression that this is the lowest rate at which a public work should be deemed decidedly remunerative; four per cent. representing current interest, and two per cent. representing a sinking fund for the extinction of the loan.

11. The history of this undertaking affords a striking warning of the extreme prudence—I may say, the extreme incredulity—with which irrigation projects should be received and sanctioned. It proves the impossibility of placing confidence in the first estimates of the cost of these works, however carefully prepared, and the necessity which exists for placing the Revenue authorities and the officers of the Department Public Works in close co-operation and concert at an early stage—a precaution which in this case was certainly imperfectly used.

(Signed) J. NAPIER

No. 368. Minute by the Honourable A. J. ARBUTHNOT, dated 5th May 1871.

I AGREE in the views stated, and in the proposal made in the foregoing Minute.

(Signed) A. J. ARBUTHNOT.

*Proceedings of the Madras Government, Revenue Department,
29th May 1871.*

No. 369.

Minute by the Honourable J. D. SIM.

I CONCUR also with His Lordship, except as regards the Committee. The first and third subjects to be referred to them are purely engineering questions, on which the Revenue Members can afford no aid, save perhaps as to compensation for land required. The second subject is virtually the revision of assessment, in respect to which no more can be done at present than has been done by Mr. Banbury. We cannot assess these lands on a six weeks' inquiry, without any real data and without reference to the rest of the district. Mr. Banbury's final proposals will have to be submitted in the usual way, through the Board of Revenue, with full details of produce, prices, cultivation expenses, etc., etc.. If a Committee is to be appointed, and *this* is to be part of their work, a Member of the Board of Revenue should be its President.

(Signed) J. D. SIM.

No. 370.

ORDER THEREON, 29th May 1871, No. 939.

Land Revenue.

THE Board of Revenue now submit, with their own remarks thereon, the reports of the Acting Director of Revenue Settlement and of the Acting Collector of Chingleput, on the question referred to them, respecting the results, under "Land Revenue," to be anticipated from the "Madras Water Works" or Red Hills Irrigation Project.

2. These papers, together with the Minutes of His Excellency the President and the other Members of Council, will be transmitted to the Department Public Works.

3. It has been finally settled by Government in this department that the Members of the Committee suggested by His Excellency the President shall be Mr. Thornhill, Member of the Board of Revenue (President), the Acting Director of Revenue Settlement, and the Secretary to Government for Irrigation; and that this Committee shall submit its report to Government direct.

(True Extract.)

S. J. Pannichandy
Acting Secretary to Government.

To the Board of Revenue.
.. the Public Works Department.
.. G. Thornhill Esq.
.. the Asst. Director of Revenue Settlement.
.. the Asst. Chief Engineer for Irrigation.

Exd. F. R. Bantleman.

Proceeding the ^{N. 1518} Madras Government
under date 25 June 71.
Read the following

reading of G.O.
the Rev. Secy
H.

H. No. 939 of 29th
May 1871

His Excellency the
Governor in Council
resolves to forward to
the Committee appoint-
ed in the foregoing Pro-
ceedings a copy of G.O.
dated 26th April 1870
No. 1100 with the revised
plans and estimates
for the Machan Water
Supply project with a
request that, after the
fullest enquiry and
consideration, the Com-
mittee will submit

L. D. S.

No. 484

11/29/71

To the Hon. Secy
Govt. of Madras
REVENUE.

THE BOARD OF REVENUE,

Secy, Secy, Secy.

Dated May 29th.

Food - 21

Encl.

G. O., 29th May 1871, No. 939. 1

THAY.

Nos. 863-370.

Land-revenue from Madras Water Works
P. Sect. - Proceedings Board of Revenue submit-
ting reports of the Acting Director of Revenue
Secretary and the Collector of Chingleput on this
subject together with the Minutes of the Members
of Government transmitted to the Public Works
Department. Committee to report on the points
opened, nominated.

Communicated to the Secy Engineer

No. 1518-5 June 71

Not an order

a detailed estimate
of the total outlay
which will be necessary
to place the works in
a satisfactory condition
and of the probable charge
for maintenance -
They will also report
their views regarding
the total revenue which may be expected, and
can equitably be
credited to the works,
~~with full details of~~
~~produce, prices, and~~
~~cultivation expenses &c.~~

on a revision of the
assessment of the lands
concerned, based on the
usual considerations of
produce, prices, and
cultivation expenses &c.

This must be
omitted, as an
immediate disposal
of the matter is
required - there is
no crop here -
no correct area to

1. ~~and~~ on the principles
prescribed for
(usually followed in)
the assessment - The
Government desire
that the matter ^{may} be
taken in hand im-
mediately and dis-
posed of as soon as
possible -

11/3/79

To the Rev. Secy
G. Thornhill Esq. ^{1100 7/26 April/79}
As Secy of Secy
Chief Eng. for Secy
Super. Engineer H. Div.

W. S. depts to Secy of 6/7.
P. C. 9/6/79
x Dated 15-6-79

Govt of 1871 Madras.

PUBLIC WORKS.

To the Prime Department

Date

Recd.

Exd.

G. O. 5 June 1872 No. 1518.

No. 71172

Madras Public Works Dept.

Reference is made to the
report of the District Engineer
to the Public Works Department
dated 1st June 1872 in which
it is stated that the results of the
survey of the proposed
road from the station to the
temple are as follows: