M.R.O. 14—10,000—21-4-22.

# MADRAS RECORD OFFICE.

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## Government of Madras.

Revenue DEPARTMENT.

G.O. No. 1036 Press Mis.

215. 216

Dated 10. 5. 1862

***Not to be folded or roughly handled***

## *Proceedings of the Madras Government, Revenue Department, 10th May 1862.*

No. 215. Read the following Proceedings of the Board of Revenue, dated 28th March 1862, No. 2,069:—

Read the following papers.

From J. I. MINCHIN, Esq., Collector of Kurnool, dated 15th January 1862.

(In Cons. 20th January 1862, No. 341.)

From Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer Irrigation and Canal Company, dated 20th February 1862.

(In Cons. 21st February 1862, No. 1,026.)

From H. NEWILL, Esq., Director of Revenue Settlement, dated 22nd February 1862, No. 198/20.

(In Cons., 24th February 1862, No. 1,090.)

1. Ordered that the above papers be submitted to Government, with reference to their Proceedings, dated 10th December 1861, No. 2,267, Public Works Department, Canal Irrigation, calling upon the Board to "report without delay on the best mode of realizing the returns from "the Company's Works."

2. The opinions of the gentlemen whose letters are above recorded in the order of receipt, are briefly as follows:—

Mr. Minchin reports that Captain Beatty, the Acting District Engineer, is of opinion that the price of the water should be collected by the Revenue authorities according to the area irrigated, at the rate of Rupees 5 per acre; and in a later part of his letter he stated that it is to be presumed the rate named by Captain Beatty was intended for a consolidated average land and water tax, as a water rate of Rupees 5 *in addition* to the land assessment would be ruinously heavy and would not be met where irrigation was general.

3. Mr. Minchin is himself in favor of the plan suggested by Captain Beckley when District Engineer of Kurnool, that the distribution of the water for irrigation should be left entirely in the hands of the Company's Officers, while the Government Officers should collect the water rate on account of the Company with the public revenue, the Company being credited with their dues on a yearly adjustment of accounts.

4. He objects to the plan that the Government should purchase the water from the Company by volume and retail it to the Ryots, on the grounds that it would be very difficult to fix the wholesale price, and that Government might possibly be often found to have purchased at a loss; that it would place the interests of Government and the Company in an antagonism, as it would be the sole object of the Company's Officers to throw as large a volume of water through the regulating outlets, irrespective of the wants of the several localities; that the supply would be largest when least needed, and might often fail altogether at the time of greatest need; that the Officers of the Company would have no interest in the minor details connected with the extension of irrigation, and that thus the efficiency of all works that must perforce be left in their hands would have to be maintained by constant supervision and control, the Company's profits being in no way involved in their good or bad condition.

5. Under the system approved by Mr. Minchin the public interests as well as those of the Company would alike be dependant on the zealous exertions of its Officers.

6. Government would be fairly entitled to charge the Company with the cost of collection at the rate of the existing District charges for collecting the land revenue.

7. Mr. Minchin would apply the same system to lands now irrigated as well as unirrigated, but in the former case he would fix a dry rate assessment on the lands, and would debit the Company with the difference between this rate on the 11,000 acres now irrigated and the wet rates now levied, which aggregate about one lac of Rupees. He estimates the difference between the dry and wet rates at about Rupees 67,000 yearly.

8. He assumes that the water rate will be fixed at Rupees 3 as in the Godavery and Kistna Deltas, and postpones the consideration of the water rate to be charged on a second crop, as it cannot practically arise in the Kurnool District until Reservoirs shall have been formed.

9. Mr. Minchin would thus charge for the water according to the area irrigated. Lieutenant-Colonel Rundall is equally opposed to the plan by which Government should purchase the water from the Company, but he would charge for the water to the Ryots by *volume*, and he would leave the collection of the price in the hands of the Company's Officers. He does not consider that the water rate ought to be necessarily the same as in the coast Deltas as the article is more valuable in the inland Deltas where the rain fall is small; and he would fix the rate between Rupees 6 and 7 per acre for all lands *thoroughly* irrigated, which the Board gather to mean irrigated sufficiently for two crops supposing it be necessary to charge for it by area. He does not state at what rate he would charge for the water by volume, but the Board infer that he would determine how much water should be considered ample irrigation according to season for a given area, and charge on that assumed area at the above rate according to the quantity of water supplied. He states that he considers $1\frac{1}{2}$ cubic yards of water per hour per acre to be sufficient for the monsoon crop; and $2\frac{1}{2}$ cubic yards for the summer crop, but that the point must be decided before work has far advanced in order to calculate the size of the branch channels.

10. Mr. Newill submits a Memorandum on the subject by Colonel H. C. Cotton, the Chief Engineer of the Company, and expresses himself in favor of a water rate on the irrigated area, the collection of which should be made by the Government Officers, together with that of the land revenue, the distribution of the water being left in the hands of the Company's Officers.

11. Mr. Newill would not object to the trial of Rupees 4 per acre as the water rate with a half charge for a second crop, sugar cane being charged as two crops.

12. Colonel Cotton is in favor of an uniform water rate, and that the distribution of the water be made by the Company's Officers, the collection of the water rate being made by the Government Officers.

13. He proposes Rupees 4 per acre per crop for the water rate.

14. He objects to Mr. Minchin's proposal that the Company should be debited for all lands now irrigated at the difference between present Nanja and future Punja rates, but is willing that the Company should be debited with the water rate on this extent of present wet cultivation at the same rate as will be levied on dry land converted into wet.

15. After careful consideration of the subject the Board are decidedly of opinion that the collection of the amount due by the Ryots an account of water supplied, must remain in the hands of the Government Officers.

16. The distribution of the water should, they consider, be made by the Officers of Government and of the Company conjointly.

17. They would impose the charge for the water in the form of a consolidated Nanja assessment, the difference between which and the Punja assessment, as fixed on the corresponding class of unirrigated land, would form the gross profits resulting from the irrigation.

18. The system is not so simple as that of a separate water rate, but it is far more exact and fair in its operation, and will produce more satisfactory results; while it will have a very beneficial influence in promoting harmonious action in the matter of the distribution of the water, the interests of Government, of the Company, and of the Ryot alike demanding that the *best* land shall be irrigated first. It will at once dispose of the question of the number of crops and nature of the produce, and in the only really satisfactory manner.

19. The plan for Government to purchase the water by volume from the Company at a fixed charge, and then to make their own terms with the Ryots according to the area irrigated, does not at all commend itself to the Board, and would, in their opinion, give rise to endless discussion and most unsatisfactory results. It may be sufficient to indicate here as objections of very serious magnitude, the immense difficulty of determining a fixed value for a certain quantity of water when applied in the way of irrigation to suit all classes of soil alike, and the equally great difficulty of combining with the system of purchase by volume wholesale, the consideration of the remissions which must be allowed to the Ryots when the imperative necessity arises under whatever system may be adopted, and which in point of fact ought to reduce the profits of the year from the irrigation works.



20. The consolidated Nanja assessment appears to the Board from every point of view to be the preferable system, and its adoption is free from any difficulty now that the operations of the Survey and Settlement Departments are being carried on in the District.

21. It should be distinctly provided that remissions on account of failure of supply will, when necessary, be allowed to the Ryots under the rules, the corresponding deduction being made from the gross profits of the year as calculated on the area under irrigation.

22. The Government should also be allowed a fair per centage for the cost of collection. Arrears could be realized under the existing Law without further legislation.

23. As to the existing wet cultivation, its assessment should be revised and placed relatively on the same footing as the newly irrigated land, and its area being carefully and exactly ascertained by the Survey Department, it should be altogether excluded from the accounts common to Government and the Company. It would be the duty of the Government Officers to see that this area received its full fair share of water from the works, but the Board do not consider that the Company have any right to a profit from these lands, and their exclusion from the accounts appears the simplest and fairest arrangement.

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Read the following letter from JAMES INNES MINCHIN, Esq., Acting Collector of Kurnool, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Chepauk, dated Kurnool, 15th January 1862, No. 1.

SIR,

1. With reference to the order of Government of the 10th December 1861, No. 2,267, on the best mode of realizing the returns from the Company's works of Irrigation in this district, I have the honor to forward the opinion of the Acting District Engineer, as called for in the Board's Proceedings, dated 13th December, No. 6,966.

2. Captain Beatty is of opinion that the price of the water should be collected by the Revenue authorities, according to the area irrigated, at the rate of Rupees 5 per acre.

3. So far back as the 14th August 1860, I furnished the Consulting Engineer with my own opinion on this subject. In that communication I endeavoured to show that it was impossible, alike in the interests of the people and of the Company, to leave the collection of the water rate for irrigation in the hands of the Company's Officers. I objected to those dues being collected by a separate establishment, paid for by the Company, but subordinate to the Collector, on the ground of the wastefulness of employing a separate Establishment, when the existing Officers of Government could perfectly perform the duty.

4. I inclined therefore to support another proposal made by Captain Rundall, that Government should purchase the water from the Company by volume as discharged through a regulated outlet from a main canal, and dispose of the same to the Ryots by means of their own Revenue Officers.

5. According to this scheme the Officers of the Company would be responsible solely for the main works, and for supplying water to each village by one branch canal: the distribution of the water, and the construction of all irrigating channels resting either with the villagers, or the Government Department of Public Works.

6. I did not venture to suggest anything concerning the wholesale price at which the water should be purchased by Government from the Company, but I proposed that it should be retailed to the Ryots at the water rate of Rupees 3 per acre, as fixed for the Godavery and Kistna Deltas, and I assumed that the wholesale rate, payable by Government, would be moderate enough, for the retail profit to cover all the expenses of collection and distribution by Government Officers.

7. At the close of my letter I alluded to a further scheme suggested by Captain Beckley, then District Engineer, that the Government Officers should collect the water rate on account of the Company with the public revenue, the Company being credited with their dues on a yearly adjustment of the accounts.

8. While acknowledging the evident fairness of such an arrangement towards the Company, I objected to it on the ground that Government would be performing gratis a work which could not otherwise be carried out by the Company except at much expense, and (which was of more importance) that this system would create difficulty in apportioning the due share of water rate to the Company wherever their water might be supplied to villages in which there was existing Government irrigation.

9. In the long interval that has elapsed since I addressed Colonel Rundall on this subject, I have seen reason to alter some of the views I then held, and I am now of opinion that the simple arrangement advocated by Captain Beckley is preferable to the more complicated scheme suggested by the Consulting Engineer.

10. The first difficulty that would arise in carrying out Colonel Rundall's suggestion, would be to fix the price at which Government should purchase the water by volume. After incurring the expenses of collection and distribution it might possibly arise that Government had purchased the water at a loss.

11. Under this system also the sole interests of the Officers of the Company would be to throw as large a volume of water as possible through the regulated outlets of the main Canal, irrespective of the wants of the several villages for irrigation. In fact Government might often have to purchase far more water than it could dispose of, especially at those seasons of the year when the Engineers would be desirous to get rid of a superfluous supply, and when water for cultivation is least needed.

12. All these difficulties might probably be overcome by minutely detailed arrangements rigorously enforced, but the objection urged by Captain Beckley has here great weight ; the Officers of the Company would have no personal interest in the minor details attendant on the extension of irrigation : the efficiency of all such works left in their hands would have to be maintained by constant supervision and control, and not by the interests of the Company being involved therein. It would be obviously preferable to work upon a system by which the public interests as well as those of the Company would be alike dependant on the zealous exertions of its Officers.

13. By leaving the distribution of water for irrigation entirely in the hands of the Company's Officers, and collecting its price with the land revenue of the District, the above object would be obtained, together with full security to the Company for the collection of their dues. Under such an arrangement it would be but right and proper that Government should deduct a fair per centage for the cost of collection, which might be calculated at the rate of the existing District charges for collecting the land revenue. The fund thus obtained would pay for any increase in the establishment, which the increase in the work of the District might hereafter entail.

14. The difficulty in apportioning the due share of water rate to the Company, whenever their water might be supplied to villages in which there is existing Government irrigation, can only be obviated by Government itself purchasing the whole water supplied by the Company, and distributing it according to its own interests. Even here some loss must be borne on existing irrigation, as it would be impossible to maintain the present high rates of wet assessment in this District after irrigation had become general. The comparative insignificance of the existing wet assessment, however, renders it more easy to make an arrangement that will be fair alike to Government and the Company, leaving the latter a free field for the development of their enterprise.

15. I have prepared a return, showing the revenue raised from irrigated cultivation of every description for the last twenty years in the four Táluqs of Kurnool proper, to which the operations of the Company in this District will probably be confined. This return shows that the revenue from wet cultivation has rarely realized one lac of Rupees, being about one-eighth of the whole land revenue of the four Táluqs in question. The fluctuations are however less than might be anticipated, and while the revenue has seldom fallen 10 per cent. below its highest amount, I do not consider that from the nature of the water supply it would ever have admitted of much increase, except by some great work, such as has been undertaken by the Company.



16. I consider it fair therefore to calculate, that had the Company not taken up these works, the revenue drawn from about 11,000 acres of wet cultivation in these four Táluqs would have been about one lac of Rupees yearly. There is no doubt that this wet cultivation is very highly assessed, and that such high rates could not be continued if irrigation were general in the District, instead of being confined to the most fertile spots, brought to the highest pitch of culture.

17. Were the works undertaken by Government, the loss on existing cultivation would be compensated by the large increase of irrigated land, but as I think the gains from this source should in this case go entirely to the Company, it is evidently but fair that they should bear the loss entailed by their works on the revenue of existing wet cultivation.

18. I would propose therefore that in the Revenue Settlement now being carried out, the four Táluqs of Kurnool proper should be assessed solely with dry rates, including of course the 11,000 acres of existing wet cultivation. That a water rate of Rupees 3 per acre should be charged on all irrigated land ; that the land assessment and the water rate should be alike collected by the Government Revenue Officers, and that the whole of the latter should be credited to the Company at the close of each Fasli year, deducting in the first place the per centage fixed for the cost of collection, and the loss sustained by Government in receiving only the dry assessment on the 11,000 acres of existing wet cultivation, instead of the present wet rates.

19. As the existing wet cultivation is confined to the most fertile land in these Táluqs, the dry rates fixed on it, according to the intrinsic value of the soil would be high, and might probably average Rupees 3 per acre : the loss of revenue on this land, which the Company would have to make good from their water rate would be therefore about Rupees 67,000 yearly, a price which I should think they would gladly pay to obtain the fair field for their enterprise that would be afforded by the arrangement I propose.

20. If such terms be considered too favorable to the Company, it must be remembered that their success financially will at once relieve Government from the payment of their guaranteed interest, while on the terms of the contract Government will itself share in their profits after reaching a certain amount. Placing the matter on the lowest footing the interests of Government and the Company are identical, while the former will obtain a direct benefit in the improvement in the condition of the people, and the gradual extension of cultivation which the works of the Company may be fairly expected to produce.

21. I have taken it for granted that the moderate water rate, fixed for the Godavery and Kistna Deltas will be adopted in Kurnool. I conclude that in naming a water rate of Rupees 5 per acre, Captain Beatty intended a combined land assessment and water rate to that average amount. A water rate of Rupees 5 per acre in addition to the land assessment would be ruinously heavy, and could not be met where irrigation was general. There is nothing in the circumstances of this District that would warrant granting to a private Company a higher rate than the Government has fixed on water supplied from its own works on the Godavery and Kistna rivers.

22. I will not here discuss the subject of the water rate for a second crop : until the construction of Reservoirs this question will not be raised practically in this District.

*Return showing the Revenues raised from irrigated cultivation of every description for the last twenty years or from Fasli 1251 to 1270, in the four Táluqs of Kurnool proper.*

| Fasli. | Nundicotcoor. | | Ramallakota. | | Sirwell. | | Nundial. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Rupees. | Acres. | Rupees. | Acres. | Rupees. | Acres. | Rupees. | Acres. | Rupees. | Acres. |
| 1 | 7 | 8 | 9 | 10 | 11 | 2 | 3 | 4 | 5 | 6 |
| 1251 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 1252 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 1253 | ... | ... | 17,608 6 8 | ... | 23,505 8 7 | 1,793 | 31,091 3 10 | ... | 94,480 0 11 | ... |
| 1254 | ... | ... | 21,939 41 1 | 2,360 | 17,490 7 11 | 1,882 | 26,024 0 0 | 1,738 | 90,739 8 8 | 7,973 |
| 1255 | ... | ... | 13,461 13 8 | 1,972 | 18,750 2 6 | 1,930 | 27,359 0 5 | 1,851 | 82,178 3 4 | 8,014 |
| 1256 | ... | ... | 14,164 3 6 | 2,104 | 19,788 9 6 | 2,028 | 28,156 5 9 | 1,976 | 77,594 13 3 | 8,450 |
| 1257 | ... | ... | 18,625 2 11 | 2,433 | 20,660 14 8 | 2,088 | 31,437 8 9 | 2,351 | 80,911 15 11 | 9,384 |
| 1258 | ... | ... | 14,504 7 9 | 2,218 | 21,417 2 3 | 2,058 | 32,718 2 9 | 2,477 | 90,789 14 0 | 9,476 |
| 1259 | ... | ... | 11,952 2 2 | 1,867 | 21,298 5 5 | 2,007 | 33,481 14 0 | 2,484 | 89,463 2 7 | 9,196 |
| 1260 | ... | ... | 2 0,788 9 9 | 2,512 | 20,594 4 4 | 1,948 | 33,209 5 4 | 2,444 | 88,021 3 0 | 9,814 |
| 1261 | ... | ... | 22,165 12 4 | 2,602 | 20,713 4 6 | 2,039 | 29,732 2 10 | 2,510 | 96,132 13 2 | 9,511 |
| 1262 | ... | ... | 22,122 3 3 | 2,625 | 16,880 13 5 | 2,083 | 34,811 10 8 | 2,478 | 95,519 3 5 | 10,217 |
| 1263 | ... | ... | 22,066 15 1 | 2,618 | 20,252 3 6 | 2,114 | 33,912 0 0 | 2,483 | 97,005 9 0 | 10,277 |
| 1264 | ... | ... | 21,323 1 4 | 2,627 | 20,538 6 7 | 2,128 | 33,022 1 9 | 2,492 | 97,865 4 2 | 10,275 |
| 1265 | ... | ... | 20,746 18 8 | 2,624 | 20,198 14 0 | 2,163 | 33,135 3 1 | 2,540 | 97,537 9 4 | 10,357 |
| 1266 | ... | ... | 18,247 3 0 | 2,587 | 20,969 9 3 | 2,484 | 33,738 9 4 | 2,559 | 96,769 2 1 | 10,390 |
| 1267 | ... | ... | 27,995 9 10 | 4,456 | 21,241 11 2 | 2,200 | 35,208 12 0 | 2,560 | 95,598 8 6 | 12,430 |
| 1268 | ... | ... | 15,249 0 9 | 2,065 | 20,741 4 10 | 2,325 | 29,687 0 11 | 2,576 | 1,07,915 6 2 | 9,925 |
| 1269 | ... | ... | 13,114 13 2 | 1,883 | 20,603 4 4 | 2,608 | 32,288 13 10 | 2,564 | 87,805 9 1 | 9,693 |
| 1270 | ... | ... | 17,491 2 0 | 2,365 | 25,514 11 8 | 2,759 | 32,349 15 8 | 2,683 | 89,174 9 11 | 10,773 |
| | | | 16,210 13 1 | 2,269 | 28,000 9 3 | | 34,670 2 9 | 2,790 | 98,719 10 10 | 10,981 |
| | | | Average... | | | | | | 1,02,793 0 2 | 9,841 |
| | | | | | | | | | 92,771 0 0 | |

(Signed) JAMES INNES MINCHIN,
*Acting Collector.*

Kurnool, Collector's Office,
15th January 1862.



From Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to the Secretary to the Board of Revenue, dated Fort Saint George, 20th February 1862, No. 62.

SIR,

1. With reference to the Sub-Secretary's letter* of the 13th December last, the reply to which has been unavoidably delayed till my return to the Presidency, I have the honor to observe that in my letter† of the 2nd August 1860, I forwarded to the Board copy of a letter addressed to the Collectors of Bellary, Kurnool and Cuddapah, in which I requested them to favor me with their views on several propositions relative to the amount and mode of collection of the water rate, and added my hope that the Board also would assist me in the subject. From the Collectors of Bellary and Kurnool I have received the accompanying replies,‡ which I beg to forward for the Board's perusal.

* No. 6,967.

† No. 39.

‡ Nos. 274 & 350, to be returned.

2. Before determining the mode in which the returns from the Company's works are to be realized, it is necessary in the first place to consider the parties who are interested in the question.

(1.) The suppliers, or proprietors of the works.

(2.) The consumers, or the cultivators.

(3.) The Government, who benefit from the prosperity of both the others, sharing directly in the net profits of the first, and indirectly in those of the second.

3. The object of the first parties is, to dispose of the greatest volume they can within a given time. That of the second, to utilize that volume to the most economical extent, either by its application to the greatest possible area, or else to the most valuable products, while it is the obvious interest of Government to further the respective objects of both the other parties to the utmost.

4. Such being the case it would seem at first sight questionable, whether the Government should avail themselves of the option reserved to them in the 5th Clause of the arrangement entered into by the Secretary of State with the Company, to purchase the water themselves, and whether their interests would not be better secured by adopting such means as would ensure its most rapid and extensive consumption, leaving the self-interest of the consumers to regulate its application to the greatest advantage.

5. By sharing the profits the Government virtually become *sellers* of water, and it seems somewhat anomalous and inconsistent that they should sell it to themselves. For my own part I do not consider that it will be advantageous to the Government to assume such a position, and I likewise do not share in those numberless fears which have been expressed in the many papers written on the subject, or in the opinion that the Government can and should be the only dealers in water with cultivators.

6. It cannot be gainsayed that the correct principle is to sell water by volume. One objection urged against this mode is that the discharge may be made to vary according to the form of the outlet, but it is not impossible to fix a standard model, and as the Government have the power of deciding the rates, they may insist on such a model as shall ensure the discharge of rather more than the stipulated unit of measurement. Another objection is, the difficulty of fixing the minimum quantity that shall be so disposed of, as in the event of one man requiring water for a small patch, while his neighbour may reject it altogether, it will not be possible to supply *his* wants. It may be so, but if water is the valuable article it is considered such cases will be exceptional, and I know of no reason why attention to them should necessarily set aside adherence to a fundamental principle; but if it is not valuable, then it is better not to attempt at all to force an unacceptable article on the market. When water is coveted, it is certain those who require it will themselves devise methods of overcoming such a difficulty as above quoted, and it is better that their arrangements should be spontaneous. The "right of passage" is said to be beset with difficulties, but when the general community are interested in the irrigation of

the land, individual cases cannot be allowed to interfere, and the same act of the Legislature which now overrules individual obstructiveness to the public weal in other cases, will suffice to remove the difficulty in irrigation politics. There is little doubt, but as individuals are now found who take the lead in village communities and regulate matters connected with social and domestic economy that similar persons will be selected to regulate amongst themselves the distribution of water supplied from a common sluice, when it is once known that requisitions from single applicants to small areas will not be entertained, but that openings for a certain area will alone be attended to.

7. If, as said before, the water is a valuable commodity, the same parties who have used it once, will want it again, and as they will know that it can only be obtained after payment of the supply of the past year, I do not think there is a risk of many bad debts: for what is worth having is worth paying for. Undoubtedly cases may arise when the money will not be realized, but they will be the exceptions, and may without much compunction be written off like the bad debts of any other dealer to profit and loss.

8. I do not myself see what necessary connection there is between the Government and the Ryot in the purchase of water, or why if the Company are willing to manage its distribution and the collection of the sales, why the Government should saddle themselves with either the expense or the trouble of managing it for them.

9. In the Ryotwary Districts the Government has already made its terms with the Ryot for the rent of the land, and, as said before, if water increases the value of his land, it may safely be left to his self-interest to pay the Government demand, as well as the price of the water.

10. The whole question appears to me based on this one point; the value of the water and the price demanded for it. If the one is great and the other reasonable, the distribution and time of payment may safely be left to be arranged between the suppliers and consumers.

11. By this method the most interested parties will be entrusted with the sale of the water, while the consumers will be left at liberty to employ it to the greatest advantage. The results seem to me obvious, that the maximum amount will be consumed in the most economical manner, and therefore with the greatest benefit to the consumers, while the Government will receive the lion's share as it profits on both hands at the same time, without incurring any expense.

12. Should there be however unanswerable objections to the above arrangement, and it be deemed imperative that the Government should become the purchasers of the water, the only safe plan that occurs to me of ensuring for themselves a return for their purchase money, is to fix a consolidated net assessment on all lands, under the influence of the Company's Channels.

13. This method is, however, opposed to the *economical* use of water, and obliges as a rule the cultivation of crops which consumes the most water. It cannot therefore be so extensively beneficial, as it necessarily confines the use of the available quantity of water within smaller limits. It also introduces a fruitful element of dispute between the Ryots, the Revenue authorities, and the Officers of the Company, as to the amount of water supplied, for though the Company may still be paid for the volume calculated at a certain unit per acre, yet there will be no counteracting element at work, to prevent one man wasting the water which his neighbour requires after it has left the sluice.

14. This method however has the advantage of simplicity of arrangement and economy of cost in collection, but it is obtained, as it appears to me, at the expense of the consumers. Apart from the latter consideration it resolves itself into a question of arithmetic, whether the saving in expense and risk of collection is sufficient to compensate for the benefits which would be derived by a more extended use of the available quantity of water. My own opinion is to the contrary.

15. Regarding the amount to be paid for the water, it appears to me that this point cannot be decided only on general principles, but that regard must be had also to local circumstances, and that the value of water, like that of any other commodity, will vary in different localities. Apart from the question as to the actual amount of the water rate, I therefore do not consider that a value assigned in Rajahmundry is applicable to Bellary, Kurnool or Cuddapah. Water is certainly more valuable in the last three Districts than in the former, inasmuch as the rain fall is not only less in quantity but less certain.



Paragraphs 6, 7 and 8.

16. The Government in their Proceedings of 15th July 1856, pronounced the principle of a water rate should be proportioned to the cost of the water, rather than to its value to the recipient.

17. The Board of Revenue in their Proceedings of 19th May 1857, considered that the principle of assessment should be with reference to the respective advantages of each District, determining the rate for the water by the wants of the State, the maximum being the sum which the Ryot is able to pay, the minimum the amount required to reimburse expenses incurred in furnishing water with fair interest.

18. The Government, in their review of the Board's Proceedings, admit that the cost at which the water is supplied, is not the sole point to be considered in fixing the charge, which should be determined rather on *combined* consideration of cost of supply, and general increased value given by conversion of dry land into wet.

19. Applying then the first of these different principles to the irrigation from the Company's Canals; the cost of supplying the water, supposing that no more than 4,00,000 acres are irrigated, will amount on an expenditure of 100 lacs to 25 Rupees per acre, but assuming one-fifth of the expense to be due to navigation, the cost will be reduced to 20 Rupees. In the Godavery District the cost on the present limited area amounts to about 8 Rupees, but eventually when the whole Delta is irrigated to Rupees 6. The water rate for each crop has been fixed there at 3 Rupees.

20. Following that standard and adhering to the same ratio, the water rate would be Rupees $7\frac{1}{2}$ on the Company's Canal.

21. But according to the principle laid down by the Board, the minimum charge required to reimburse expenses, and to furnish a fair interest for the outlay would be about 15 per cent. on Rupees 20. Allowing 5 per cent. of it to be needed for repairs, conservancy, and expenses of distribution and collection, would leave only 10 per cent. interest as the fair outlay, exclusive of any accumulated interest and depreciation and this sum would be Rupees 3 per acre. To compare the sum with the maximum which the Ryot will be able to pay, no better authority can be consulted than the clear report written by Mr. Bayley after his survey and assessment of the Kurnool District in 1843. In it he gives as the result of much patient investigation, eight rates, varying from Rupees 10 to Rupees 2 as a fair assessment on properly irrigated lands, while the *average* assessment he states may be inclusive of a second crop from 8 to 10 Rupees per acre.

22. To ascertain, then, how much of this is due to irrigation, a comparison must be made with the rates fixed for dry land, and these as given at pages 20 and 24, vary from 4 Rupees to 4 Annas; leaving out all land assessed at less than 1 Rupee, the increased value given by the water will be seen to be between 6 and 7 Rupees per acre for two crops, and if Mr. Bayley's method of assessment be taken as a guide (and I doubt of any better available) that the second crop be assessed at only half the first, the respective rates will be 4 Rupees for the first and 2 Rupees for the second crop; or an average of 5 Rupees in the event of parties wishing to compound for sugar cane and other products requiring water all the year round.

23. By the application of these several principles, and a comparison of their results with those arrived at after a special investigation and survey by so experienced a Revenue Officer as Mr. Bayley, the fair water rate would appear to lie between 6 and 7 Rupees for all lands thoroughly irrigated. It must be remembered, while making the comparison, that Mr. Bayley's best sources of irrigation were tanks; whereas the water for the first crop from the Company's Canal will be the highly silt—charged water of the Tumbuddra, which affords manure as well as irrigation. The *existing* rates in Kurnool are considerably higher, but they can of course form no standard of comparison, as they are affected by purely local causes.

24. There is, however, one point connected with the system of a consolidated Nanja assessment; and that is the amount of water which is to be considered sufficient to irrigate an acre of land. This is a point of importance, for it will be profitable for neither the Government nor the Company that water should be wasted, while it is necessary for the protection of the Ryot

that there should be a sufficiency. In ordinary years when the crop is assisted by the monsoon, less water will suffice, while in years of drought a larger quantity must be afforded to a given area. An average may, however, be struck, and if in years of drought the land should require more than the channel can supply, remissions will have to be made, and this is one of the risks which will attend the system.

25. In the Godavery one cubic yard per hour per acre is found to be sufficient for the monsoon crop, but in Bellary, Kurnool and Cuddapah it will probably require more. In my letters of the 9th March and 23rd November 1860, I stated that I considered 1½ cubic yard would probably be sufficient for the monsoon crop, and 2½ for the summer crop, but this is a point which will have to be decided beforehand in order to calculate the sizes of the branch channels. It forms one of my objections to the lump assessment system, and will I fear prove a prolific source of dispute.

26. I do not enter into further particulars of regulating and distributing the available supply, as the minor rules must depend on what system the Government may be pleased to adopt. On this point being fixed, the Establishments and all other similar points will receive attention. In the meantime I offer the abovementioned opinions as the result of much consideration of the subject.

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From JAMES INNES MINCHIN, Esq., Acting Collector of Kurnool, to Captain F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, dated Kurnool, 14th August 1860, No. 350.

SIR,

1. I have the honor to acknowledge receipt of your letter No. 40 of the 2nd August, calling for my opinion on certain points, previous to submitting to Government a definite scheme for the collection of dues on account of water supplied by the Irrigation Company's works.

2. You have offered for my consideration three propositions with the above view.

(1.) That Government should purchase the water from the Company by volume, as discharged through a regulated outlet from a main canal, and dispose of the same to the Ryots by means of their own Revenue Officers;

(2.) That the Company should themselves sell the water to villages, or individuals, and collect the dues through their own Officers;

(3.) That the water should be disposed of to the public on account of the Company, and their dues be collected by means of a separate establishment paid by themselves, but under the authority of the Collector and his Assistants, while independant of the subordinate Revenue officials.

3. I will first consider the two latter propositions, both of which in my opinion would be attended with serious difficulties.

4. The second proposition would involve the existence in every Táluq of two distinct Revenue Establishments, under different authorities, one the officials of the Government for the collection of the land rents, the other the servants of a private Company for the collection of the rates on water, and could not but result in a clashing of authority, confusion to the Ryots, and probable loss to the Company.

5. I doubt also whether it would be possible for the servants of a private Company to enforce a prompt collection of their dues. They would hardly be invested by the Government with the power of collecting them by distraint, and unless they possessed this power, which I consider would be most objectionable in private hands, they would be certain to be subjected to grievous delays, and opposition in the fair enforcement of their rights by the dilatory process of the Civil Courts.

6. In paragraph 6 of your letter under reply, you suggest that the Company should secure themselves from such risks, by receiving the price of water from the Ryots by instalments,



in the same way as the general revenue of the country is paid into the Treasury, and you ask whether any objection would exist to such a course. I presume that the security to be thus obtained by the Company would consist in their power of cutting off the supply of water, in case of the failure of payment of any instalment. In this District, which has been treated as purely Ryotwar since the assumption of our rule, it would be necessary for the Company to treat with every individual Ryot, for the supply of water, and recovery of the rate, and not with whole village communities. It would therefore be an impossibility for them to cut off the water supply of any individual defaulter, without inflicting grievous loss on the rest of the community. While therefore there can be no objection to payments of water rate being made by instalments, as a convenience to the people, with which object alone the Government revenue is thus collected, I consider that to make this system a source of security to the Company, by empowering them to cut off the water supply on alleged cases of default, would be a source of great oppression, and would place in the hands of the servants of the Company a power that might be turned to the worst uses, and which has never been claimed by the Government, as an engine for the collection of its dues. I believe that the interests of the Company and the proper administration of the District, would be alike ruined by the adoption of the second proposition.

7. The third, which is a modification of the above, is not open to such serious objections. The establishment employed for the collection of the water rates, while paid by the Company, would be under the sole authority of the Collector, and would in fact be Government servants. In such a case, they would of course possess the powers of distraint requisite to carry out their duty, and thus the interests of the Company would be secured. Being under the same authority as the Revenue Officers, the clashing of the separate departments would not be productive of so much confusion as in the previous case. Under such a system the Government would in fact engage to collect their dues for the Company, credit them with their receipts, and debit them with the expenses of collection.

8. The scheme is open however to the obvious objection of its employing two separate Establishments in a District, where one would suffice, and thus entailing a most needless outlay on collection. It must also be borne in mind that irrigation to some extent already exists in the District, and that under the above system difficulties must arise wherever the water supplied by the Company's works is brought into a village, where wet cultivation is already paying an assessment to the Government, for an existing precarious supply. Even if the proportions of water rates and wet assessment, could be fairly adjusted between the Company and the Government, the former could afford so far to undersell the latter, that all existing wet cultivation might possibly be abandoned.

9. This objection will become of greater importance, as the operations of the Company are extended to the Districts of Cuddapah and Nellore, where there is much more existing wet cultivation than in Kurnool.

10. This brings me naturally to the consideration of your first proposal, that Government should purchase the water from the Company in the first instance, and dispose of it to the Ryots on its own account. This appears to me the most suitable system that can be adopted, under a state of things which is confessedly an experiment in India, and the success of which is of such importance for its future improvement.

11. It is evident that the objections I have urged against the preceding propositions will be in a great measure obviated by the adoption of this arrangement. I consider it also the one best calculated to assure the success of the Company in a financial point of view. Although they might possibly dispose of their water at a higher rate to villages and individuals, I believe that the cost of collection, and the difficulties of every kind they would experience, would more than counterbalance any such increased profit, and that it is impossible for a private Company to perform at a moderate outlay functions, which the Government already possessing establishments for the administration of the country, can carry through without any additional expense.

12. If for no other reason, I consider that the collection of the water rate should be entrusted to the existing Revenue Government officials, to prevent the positive waste that would be incurred by employing a separate Establishment.

13. The objection that may be urged against this system, is that it would deprive the Company's Officers of all interest in the due distribution of the water to villages, the extension of wet cultivation, and even the proper efficiency of all their works, except those necessary for the supply of a large volume of water through the main canal. There is no doubt that under such a system the efficiency of the minor works for distributing the water, must be placed under the rigid control of an Officer of the Government, and the distribution of the water to villages should be entrusted to the same authority.

14. I am not of opinion that the existing District Establishment in the Revenue Department possesses officers qualified for such a duty. The expense of such a separate establishment as would be necessary, need not be great, and would fairly be incurred by the Government, as an outlay necessarily attendant on the retail disposal of the water purchased wholesale from the Company. An Assistant to the Consulting Engineer, resident in the District, with a few intelligent Overseers to look after the Natives in charge of sluices, would be all that would be required. I consider that the distribution to fields should be left entirely to the village officials, subject to the control of the Revenue authorities. Such a course is consonant with existing practice, and no other arrangement would probably be found to work so satisfactorily.

15. With regard to the questions you have raised in paragraph 3 of your letter under reply, as to the method I would recommend for recovering, on account of Government, the value of the water consumed by the Ryots, you will agree that this is a mere matter of revenue detail : if the Government bind themselves to purchase all the water that can be supplied by the Company through a main canal, it can be of no consequence to the Company in what way the Government make use of it, even should they, by following an illiberal policy, not succeed in disposing of it to the Ryots, and allow it to flow waste into the sea. I trust however that this question of Revenue detail may not be re-opened on this occasion, but that the system authorized by Government after the most ample discussion for the Godavery and Kistna works, may be carried out in Kurnool.

16. I would propose for this District a fixed water rate per acre of Rupees 3 for the first crop, and upees 2 for the second, allowing the Ryot to compound by a consolidated rate of Rupees 4 per acre at his option, when no enquiry would be made as to whether one or two crops were raised. I would leave the consolidated rate entirely as a matter of option, as I believe that the water supply of the Tumbuddra will not be so plentiful as that under the Godavery and Kistna Anicuts, and but little land will probably receive a certain supply of water for a double crop.

17. I object to the system of varying the rates according to the crop that may be raised. Less water is of course required for a crop of raggy, sudza, or indigo, than for a single crop of rice, and theoritically it appears fair therefore to charge less. But all inquisitions of this nature are acknowledged to open a door for fraud and corruption, and the simpler the system the better. The proposed water rate of Rupees 3 per acre is so moderate that it could be paid easily whatever crop were grown. Sugar cane, plantains, and betel gardens would of course pay for a double crop, as they use water throughout the year.

18. The second crop of paddy in Kurnool is of less value than the first : it has always hitherto been charged at only half the rate, and though I do not consider such a difference necessary, I would still charge for it a lower water rate, though possibly the amount of water used may be of equal if not greater value.

19. I shall not attempt to make any calculations as to the value of water in this particular District for cultivation, as shown by the increased value of an irrigated over an unirrigated crop. The rates sanctioned by Government for the Godavery and Kistna Delta are very moderate, and I have no doubt that they can be paid, leaving a large margin for profit, by the Ryots of Kurnool.

20. Having stated my general preference for the scheme you have proposed, that the water of the Company be purchased by the Government wholesale, and disposed of by the latter on



their own account, I am not unaware of the objections which may possibly be urged to such an arrangement. I do not lay much weight on what will probably be advanced by the more zealous advocates of the Company, that in this way Government will be making a profit out of their water, which ought to fall to themselves. I consider that the true interest of the Company will be best ensured by a system, which will save them from all expense and risk of distribution and collection, and that any profit which the Government may make on the water will be but a fair equivalent for relieving them of that risk and outlay.

21. A stronger objection appears to be that by this arrangement the officers of the Company will lose all interest in the details of distribution, and the extension of wet cultivation, and that some difficulty may be experienced in enforcing the perfect efficiency of the minor works. It will be necessary to lay down beforehand with a precision that cannot admit of dispute, what works must be carried out, and kept up by the Company for the purposes of distribution, in return for the purchase of their water wholesale by the Government. The line should, I think, be drawn at what may be called supply channels for villages, for the due efficiency of which the responsibility should rest on the Company, and be enforced by the Resident Assistant to the Consulting Engineer. It would be impossible to require the Company to create and keep in repair the thousands of miles of petty channels, which would be required for the distribution to fields. Most of these should be left to the labor of the Ryots, and where any village channel might be necessary, which could not reasonably be thus constructed and repaired, it should be taken up by the Public Works Department of the District.

22. It will be obvious that in the above sketch for the working of the scheme you have proposed, I take it for granted that the water will be sold by the Company by volume, at a price which will permit of the Government taking on itself the expense of distribution and collection of the rate, in both of which operations, I believe that a private Company would meet with insuperable difficulties. I am convinced that it would be a suicidal policy on the part of the Company to grasp at the increased profits, which may appear attainable if they retain the water in their own hands, and attempt to dispose of it at their own risk.

23. Since the receipt of your letter I have conversed freely on this subject with Mr. Beckley, the District Engineer, and have received much assistance from his practical acquaintance therewith, acquired in the Godavery Delta. Mr. Beckley lays great stress on the necessity of securing the personal interest of the servants of the Company, in the extension of its operations, which he considers will be lost by the adoption of the above scheme. He has therefore suggested a further arrangement, which I shall bring to your notice.

24. I believe that Mr. Beckley agrees with me in considering that the collection of the water rate can only be entrusted safely to the existing Revenue Establishment. Instead, however, of the Government collecting the water rate on its own account, after purchasing the water wholesale from the Company, he proposes that the rate should be collected by the Government on account of the Company. The whole duties of distribution would under this system rest with the Company's Officers, who would have a personal interest in the efficiency of their works, and the extension of their operations.

25. Under such a system it is evident that Government would be performing gratis for the Company, a duty which though it might not cause increased expenditure to themselves, could not be performed by the Company except at much risk and outlay. Under this system also there would be great difficulty in apportioning the due shares of water rate to the Company, wherever the water is supplied to villages in which Government irrigation already exists. In fact it appears to me that this difficulty could only be overcome by the Company purchasing the existing works of irrigation from the Government, in every village to which their operations might extend : an outlay of capital which would probably be considered inconsistent with their original scheme.

26. In spite, therefore, of the apparent equity of Mr. Beckley's suggestion, I am inclined to think that his plan would not work so satisfactorily with regard to the existing interests involved, as that of the Government purchasing the water wholesale and disposing of it on their own account.

From A. HATHAWAY, Esq., Collector of Bellary, to Captain F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, dated Bellary, 4th September 1860, No. 274.

SIR,

1. In reply to your letter of the 2nd ultimo, No. 40, I have the honor to offer the following observations.

2. If the Government become purchasers of water, according to the volume which is discharged through a regulated outlet from a main channel, the present establishment of the Revenue Department will not suffice to conduct the distribution of water to fields. A wate distributor, on a salary of 4 Rupees per mensem, would therefore be required to be employed under the control of the Tahsíldár, for every two outlets, capable of commanding irrigation to 120 to 150 acres of land. It will, however, be necessary that village Headmen should see that the water distributors are punctual in the discharge of their duties, and report the contrary to the Tahsíldár, who should, if necessary, bring the matter to the notice of the Collector.

3. If the water is purchased by the Government according to volume, and the value paid over to the Company, I would recommend that instead of a separate assessment, as a water rate, a lump assessment, at so much per acre, varying according to the class of the land, and independent of the crop grown, be fixed; the full amount of this assessment being charged for lands cultivated with a single crop; adding 50 per cent. extra for such lands as may be cultivated with a second crop.

4. If the Company be left to undertake the distribution of water to Ryots, their servants may receive the price of water from the cultivators in all ordinary cases; and I am aware of no objection to the Company's servants collecting their dues by coercive means, if authorized to do so by a Legislative Act.

5. As the Government servants collect the revenue from land, it may be expected that they will attend regularly to the equitable distribution of water. I therefore suppose that it will be most acceptable to the Ryots, if this work is undertaken by Government servants, rather than by those of the Company.

6. In the event of the sale of water by the Company to individuals, or to village communities, it will not be necessary for the Government to undertake the collection of the price of water; but, on the contrary, the Company may realize it, either according to instalments, or such other agreements as may be entered into between the Company and the cultivators. Whenever the Company's servants commit extortion, the aggrieved party should obtain justice in the Civil Courts; and any act of dishonesty, such as abuse of authority, &c., on their part, will be inquired into, and dealt with regularly by the magistracy.

7. I do not think that in the present state of native society, any establishment could be formed, which, by having no personal interest in the results, might be looked upon as an impartial adjudicator on disputes arising between the Ryots and the Company's servants.

8. It will be very difficult to fix a separate assessment as a water rate, as the cultivators will grow whatever crop they choose, and take such an amount of water as may be required for each description of crop. Moreover, they cannot be expected to cultivate the same crop every year. It would be very inconvenient to alter the water rate as changes take place in the description of crop grown.

9. Until it can be fairly proved that any system of Canals can be organized through this district, I do not think that the item of saving from facility of water carriage can be admitted into the calculation.



From H. NEWILL, Esq., Director of Revenue Settlement, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, dated Salem, 22nd February 1862, No. 198/20.

SIR,

1. With reference to the Proceedings of the Madras Government, dated 10th December 1861, No. 2,267, and the Board's Proceedings, dated 13th December 1861, No. 6,967, calling for my opinion as to the best mode of realizing the returns from the works of the Irrigation Company in Kurnool and also, in case of the water being purchased, as to the price to be paid for it, and the price to be charged for it to the Ryots, I have the honor to submit the following remarks.

2. I hoped to have had the opportunity of personally consulting the Company's Officers as to their views in the matter, but in the absence of this beg to enclose a paper from the Chief Engineer of the Company.

Dated 14th February 1862.

3. The terms arranged between the Government and the Irrigation Company as defined in the Government Order above quoted are:—

(1.) "That it should be left to the Government to decide in what manner the return from "the works constructed shall be levied, and the Government shall have the option of purchasing "the water supplied for irrigation at a price to be agreed upon with this Company."

(2.) "That all surplus returns from such works after the payment of all expenses of "maintenance and establishments, and the guaranteed minimum interest shall be divided equally "between the Government and the Company."

4. The object in the proposal for the Government to purchase the water by volume appears to be, to secure independent action in the arrangements for realizing the revenue and to avoid any inconvenient interference on the part of the Company, and it seems to me that the course suggested has no particular advantages in securing this object, while inconvenience and loss might arise from the Government bargaining for a larger quantity than the Ryots would be prepared to utilize, or from the required volume being discharged not altogether at the most seasonable times. The interests of the Government and of the Company are so far identical that they are sharers in the direct profits, and it does not seem desirable to separate them by the independent arrangement above alluded to.

5. It will be observed that Colonel Cotton, the Chief Engineer of the Company, arrives independently at the same conclusion, and "sees no way in which such a system could be satisfactorily carried out."

6. By adopting a water assessment independent of the land assessment, on the same principle as the settlement in the Godavery and Kistna Deltas, the profits of the water will be kept distinct, and a correct basis be afforded for their division. The collection of the water assessment along with the land assessment by the Revenue Officers will be simple and attended with little or no extra expense. The interference of the Company will be avoided and also the cost of a separate establishment which would occur in the event of the Company being left to collect the water assessment. Both the Government and the Company are interested in the water assessment, but the Government only in the land assessment, and it is easy to see how any mis-management on the part of the Company in such transactions may result in loss not only of water assessment but also of land assessment, for when irrigated land is thrown up by the Ryots both assessments are concerned. There may be mis-management also on the part of the Government servants, but in this case, the Government has the remedy in their own hands, which they would not in the other case. It may, however, be safely averred that the Government Officers will as efficiently conduct this task as servants employed by the Company, while there is likely to be less irregularity and vexation to the Ryots by the regular Revenue servants undertaking the duty in connection with the land revenue collection.

7. The Chief Engineer of the Company also takes this view, and futher proposes that the distribution of the water should be made by the Company's Officers, returns being supplied by

them to the Revenue authorities. The Company would thus direct their exertions to the extension of irrigation according to local circumstances and requirements. The distribution of water in the Godavery and Kistna Deltas is in the hands of the professional Department of Public Works. I see no difficulty in a similar arrangement being made with regard to the professional Officers of the Company.

8. The question now remains as to the amount of water rate to be charged in Kurnool. The irrigation works in Kurnool have not the same advantages in physical circumstances as the works in the more favored locality of the Deltas in the Northern District. The relative cost of providing the water will necessarily be greater, while also the more arid plains of Kurnool will require a larger supply of water to the acre. On the other hand, it may be said that the plains of Kurnool are less productive than the fertile Deltas alluded to, but at the same time the produce will for some time at least be comparatively scarcer and of higher value to the Ryots. The question is, can the rate of Rupees 3 an acre determined for the Godavery and Kistna Deltas be raised to meet the increase in the quantity and cost of water for the acre?

9. I have not the means of going minutely into data for calculations on this point, but I may say generally that had the works been entirely a Government undertaking I should have advocated the retention of the Rupees 3 water rate adopted for the Godavery and Kistna Deltas, as there are large indirect profits which accrue to the State from such works in addition to the direct returns of water assessment, but the Irrigation Company's interest extend to the latter alone, and it appears fair that it should be considered in this aspect alone without reference to the further advantages derived by Government. I therefore do not see objection to the trial of a water assessment of Rupees 4 an acre for a paddy crop with a half charge for a second crop, sugar cane may pay the same as a double crop as requiring water for the same period.

10. The works have not yet come into operation and the charge per acre can be duly weighed by the Ryots beforehand, which was not the case in the Godavery and Kistna works. A short experience will test the suitability of this rate, and for a time at least it may be no positive disadvantage that the Ryots are induced to bring only the more productive soils under irrigation.

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## MADRAS IRRIGATION AND CANAL COMPANY.

KURNOOL, 14TH FEBRUARY 1862.

*Notes by the Chief Engineer on the subject of returns to be realized from the Company's works.*

1. The Director of Revenue Settlement has invited my communicating to him my views with respect to the returns to be realized from the irrigation of land by means of the Company's works, and he has kindly afforded me the perusal of the papers on which the Government concluded the arrangements for the Kistna and Godavery Deltas.

2. The arrangements consist of a fixed and uniform water assessment upon all irrigated land amounting to Rupees 3 per acre for one paddy crop, and Rupees 6 for two crops, and the same for sugar and all such crops as require the same supply of water.

3. These arrangements fix distinct assessments on the land, and on the water, and as water alone is that on which the Company is entitled to revenue, a consolidated rate would involve complicated arrangements in determining the Company's dues. A graduated land assessment in which is considered the "irrigable properties of soil" (or capacity for benefiting by irrigation) may be considered to affect the Company in that particular, as those lands would bear a higher water assessment which possess that capacity in a higher degree, but I think it would not benefit the Company to go into so close an arrangement for obtaining revenue from their water. In my opinion a uniform water rate would on the whole be more satisfactory both in the return it would yield and in facility of collection.

4. It has been proposed that the Government should purchase the Company's water at a rate to be mutually agreed upon. I see no difficulty in determining the value of the water and fixing the rate to be paid by the Government, and there would be no difficulty in measuring out from the Company's main supply channel, the water required and to be paid for by the Government. This system would be decidedly the most simple, and would, so far, best suit the Company, but I deem it objectionable, on the ground that it would not realize a full revenue to the Company. I view it as essential, that the Company's Officers should carry their influence beyond the main supply, into the entire distribution of the water, at least until all the land commanded by the main channel is under irrigation and paying water rate. I think that the Revenue and Public Works Establishment would not promote the extension of irrigation or attend to the distributing works so fully or so carefully, as an establishment working for the Company, and whose interests are its express concern. I think this conclusive against the proposition that the Government should purchase the water required for irrigation at the main supply channel unless indeed the whole volume carried by the main channel were purchased at once and used at the discretion of the Government, but this would for some time be a loss to the Government, and it would always be liable to interfere with the navigation. I see no way in which this system could be satisfactorily carried out.



5. I will suppose it admitted that the land and water are separately assessed, and that the Government do not purchase the water wholesale from the Company to dispose of it by retail to the cultivators and proceed to the consideration of the water rate to be charged for land irrigated by the Company's channels.

6. In considering the question with a view to the fair claims and best interests of the Company, I think the following principles should be admitted :—

I. The Company is entitled to the market value of the water (or rather to that share of it which the contract gives them, viz., half the excess above their 5 per cent. and the costs of repairs and collections), and the market value must be considered with reference to the demand.

II. In spreading irrigation through the Districts where so little now exists the high assessment which the cultivator can now well afford to pay is not to be expected generally, but the reduced rate must be that at which it will be the interest of the cultivator freely to purchase it when wet cultivation becomes general.

III. The water assessment established by the Government for the Godavery and Kistna Districts, was determined on after a thorough consideration of the subject, by the most experienced and able advisers, and the rate decided on as most fit for the Government to levy, and the landholders to pay, was acknowledged by all to be "extremely moderate."

IV. There is not the same reason for extreme moderation in arranging the assessment for the Company. The Government receives indirect returns in a thousand ways which the Company will not, the Company's dues are quite irrespective of national sources of revenue.

V. It is not to the advantage of the Company that so heavy a rate should be fixed as would retard the spread of irrigation and delay the full realization of the returns. A light assessment therefore is expedient.

VI. Communication with markets by the Company's navigable Canals is an advantage to the cultivators, and will enable them to pay a higher rate than if this advantage was not possessed.

7. The assessment fixed by the Government for the Delta lands under the searching inquiry carried out by the Revenue and Engineer Officers may be considered a good guide to assessment here, but the circumstances differ much. As the Government benefits largely by the improved condition of the Districts watered, through indirect sources of Revenue, it may be policy to lay a low rate upon the water, but the Company is not so situated, and the question is what water rate will be freely paid. It is clear from the Order of Government, 9th April 1861, No. 795, after sifting the opinion of fifteen Revenue and Engineer Officers and that of the Board of Revenue that the assessment fixed at 3 Rupees for each crop in the Godavery and Kistna Districts was considered "extremely moderate." The present rates in the Nundial and Serawall Táluqs in which the irrigation is commanded by the channels, average 12½ and 10½ Rupees per acre for land and water collectively. Mr. Minchin assesses the land at a rate of 3 Rupees, though the general dry assessment does not exceed I believe 1½, but taking it at 3 Rupees the present water rate is 9½ and 7½. Now the fall from this to 3 Rupees appear an excessive sacrifice, and not necessary. It must be borne in mind that this irrigation will not be dependant upon tanks but upon a channel invariably full. The Soonkasala Anicut will keep the supply regular during the first crop season and *some* great Reservoir or Reservoirs, the sites of which are not yet sanctioned by the Government, will make the supply for the remainder of the year equally sure, so that the cultivator will proceed with confidence, and his profits will be sure. At present, water is profitably raised by annual power 15 feet from wells for paddy irrigation, the cost of raising being at least Rupees 30 per acre.

8. It seems, however, unnecessary to enter into the details of the expenses and returns of cultivation. As they would be found to vary greatly in different positions, no true average could be drawn, applicable to an extensive irrigated area, and the general irrigation of the District will so alter all the circumstances, that conclusions drawn from present cost and prices, would not be applicable.

9. No doubt the spread of irrigation through the District will necessitate a reduction of the assessment and the Government will lose revenue upon the old watered lands while the general revenue will be enhanced by the general improvements. The water rate will require to be equalized. The Company's rates should be such as can be freely paid, and the Government

rates will necessarily fall to the same; 9⅓ or 7½ Rupees for the water for one crop cannot be continued, but I see no reason for its being lowered to Rupees 3 merely because the Government has found it expedient to establish that general rate on the coast.

10. I have no doubt that a rate of 4 Rupees on one crop land and four for second crops, or Rupees 8 for land fully irrigated through the year, would be realized without at all checking the extension of irrigation. And this I consider the ground upon which the rate should be fixed. If a higher rate were tried at first with a view to after consideration, and adjustment there would be uncertainty and a want of confidence which would disturb and delay the full irrigation of the tracts commanded by the Company's works. If possible the arrangements made now should be established as permanent, and I think 4 Rupees for each crop quite sufficiently moderate.

11. Mr. Minchin in his letter to the Board of Revenue of the 15th ultimo, proposes that all existing irrigation in the four Táluqs of Kurnool Proper should be made over to the Company, and that the Company should pay to the Government the amount of Revenue now derived from it, taking the average of the last twenty years, the Company drawing from it only the newly established water rate, by which they would pay for an arrangement of no advantage whatever to them (though perhaps facilitating collection and accounts). The land above the level of the Company's channels now watered from small tanks could not be transferred to the Company under the present arrangements, as they would not form a part of the scheme authorized by the Government. How far such an arrangement might suit the Company when their unguaranteed Capital is set free, must be a future question.

12. I see no objection to the transfer to the Company of all irrigated land commanded by the channels, the Company paying to the Government the water-rate which they will receive from the same land.

13. As the Government will in the general spread of irrigation be compelled to lower their assessment on these lands, to the general rates to be now established, whether the land is made over to the Company or not, the transfer will be no loss to the Government, and it would simplify the distribution of water, prevent any possible questions as to the sources from which lands have derived water, and facilitate the collection of the water rates of villages or Districts.

14. While I consider it quite essential that the distribution of the water should be conducted by the Company's establishment, I think the collection of the rates should be in the hands of the Government Revenue Officers. The Company's Officers could render returns of the lands to which water is supplied, and in the collection of the general revenue it would add little to the business of the Collector's establishment to levy the water rates with all other rates and taxes.

(Signed) H. C. COTTON,
*Chief Engineer.*

No. 216.

ORDER THEREON, 10th May 1862, No. 1,036.

1. Pursuant to paragraph 3 of the Order in the Public Works Department, dated 10th December 1861, No. 2,267, the Board of Revenue report on the best mode of realizing returns from the works of the Madras Irrigation and Canal Company.

2. The Governor in Council has carefully considered this report and the opinions expressed by the several Officers who have been consulted on the subject; and he concurs generally in the recommendations of the Board, as set forth in paragraphs 15, *et seq.*

3. The Governor in Council is of opinion that the consolidated Nunja assessment proposed by the Board (paragraph 17) would be by far the fairest mode of dealing with the question as between the Company and the Ryots; and that as between the Company and the Government the difference between the Nunja and Punja assessment should be the measure of the amount credited to the Company.

4. The collection of the assessment will, as suggested in paragraph 15, be left to the Government; whose Officers must, as now, be the judges of the nature and extent of the remission required; and a reasonable charge for collection will be placed to the debit of the Company.

5. The distribution of the water which the Board propose (paragraph 16) to entrust to the Officers of Government and of the Company conjointly, should, the Government think, be left altogether to the Company, which has constructed the works, and which will have to maintain them in a proper state of repair. At the same time it will be necessary that the Collector through his Officers should be made cognizant of the state and condition of the works, and whether they fulfil their object; because the Government having guaranteed the interest of the capital of the Company, has a distinct interest in the maintenance and proper management of the works.

6. The existing wet cultivation should, as suggested in paragraph 23, be carefully ascertained and its area excluded from the account as between the Company and the Government. If the works of the Company interfere with the supply of water to these lands, of course this loss must be made good; but if the lands become available for a second crop in consequence of a supply of water furnished by the Company, there will be a fair claim as against the Government for any assessment resulting from such an application of the additional water.

(Signed) J. D. SIM,
*Secretary to Government.*

of the Survey and Settlement Departments are being carried on in the District.

21. It should be distinctly provided that remissions on account of failure of supply will when necessary be allowed to the Ryots under the rules, the corresponding deduction being made from the gross profits of the year as calculated on the area under irrigation.

22. The Government should also be allowed a fair percentage for the cost of collection. Arrears could be realized under the existing law without further legislation.

23. As to the existing wet cultivation its assessment should be reviewed and placed relatively on the same footing as the newly irrigated land and its area being carefully and exactly ascertained by the Survey Department, it should be altogether excluded from the accounts common to Government and the Company. It would be the duty of the

the Government Officers to see that this area received its full fair share of water from the works, but the Board do not consider that the Company have any right to a profit from these lands, and their exclusion from the accounts appears the simplest and fairest arrangement.-

/A true Extract/

E Rudkin
Secretary

To
J. D. Sim Esq
Secretary to Government N.D.

- Anyhow it is difficult to make a satisfactory arrangement but the Board's plan seems to me the best. The Board have not however provided for the case where old single crop Punjab land becomes double crop by the end of the Company's additional water Ell

Exd Ellen dy

I concur generally in the recommendation of the Revenue Board that as many reasons exist under an uniform charge per canal water unfair both to the Company and the Ryot. I have already alluded to them in former minutes upon the system of Assessment on the Sobraon Bhi Canal and I need not allude to them here - I therefore am of opinion that the consolidated Punjab Assessment would be by far the fairest mode of dealing with the question as between the Company & the Ryots - and that as between the Company & the Government the difference between the Punjab & Punjab Assessment should be the measure of the amount to be credited to the Company - The collection of the Assessment must be left to the Govt officers who alone must be the judges of the nature and extent of the remission required - A reasonable charge for collection will be placed to the debit of the Company - -

In reference to the distribution

of the water. This should be left altogether in the company who have constructed the works and who would have to maintain them in a proper state of repair at the same time it would be necessary that the Collector through his officers should be made cognizant of the state & condition of the works & whether they fulfil their objects, because the Govt having guaranteed the interest of the Capital of the Company has a distinct interest in the maintenance & proper management of the works. —

The existing net cultivation should be, as suggested, carefully ascertained & drawn excluded from the account as between the Company & the Govt of the works of the company with the supply of water to them of course this, loss must be made good before they lands become available for a remission on account of a deficiency of water furnished by the Company there will be a fair claim as against the Govt for any apparent resulting from such an application of the additional water — however this better that these latter matters should be left to adjust themselves, the general principle being once settled

As observed by the President — Heads of detail must be left to work out itself — and experience can alone lead to a satisfactory result

J. W.

~~N 880~~ Revl Deptt

N. 1036-

Proceedings of the Madras Government

Under date the ~~2d April~~ 12th May 1862.

Read the following

Proceedings of the Board of

Revenue-

Submitting with the Board's remarks, papers in reply to the Order of Govt calling for a report on the best mode of realizing the returns from the works of the Irrigation and Canal Company.

Here enter 28th March 1862 N. 2069

Pursuant to para 3 of the Order in the Public Works Department dated 10th December 1861 No. 2267, the Board of Revenue report on the best mode of realizing returns from the works of the Madras Irrigation and Canal Company-

2. The Governor in Council has carefully considered this report and the opinions expressed by the several Officers

Officers who have been consulted on the subject, and he concurs generally in the recommendations of the Board, as set forth in paras 15 et seq.

3. The Governor in Council is of opinion that the consolidated kunjah assessment proposed by the Board (para 17) would be by far the fairest mode of dealing with the question as between the Company and the Ryots; and that as between the Company and the Government the difference between the kunjah and Punjah assessment should be the measure of the amount credited to the Company.

4. The collection of the assessment will, as suggested in para 15, be left to the Government; whose Officers must, as now, be the judges of the nature and extent of the permission required; and a reasonable charge for collection will be placed to the debit of the Company.

5. The distribution of the water which the Board propose (para 16) to entrust to the Officers of Government and of the Company conjointly, should, the Government think, be left altogether to the Company who has constructed the works, and who will have to maintain them in a proper state of repair. At the same time it will be necessary that the Collector through his Officers should be made cognizant of the

the state and condition of the works, and whether they fulfil their objects; because the Government having guaranteed the interest of the Capital of the Company, has a distinct interest in the maintenance and proper management of the works.

6 The existing wet cultivation should, as suggested in para 23, be carefully ascertained and its area excluded from the account as between the Company and the Government. If the works of the company interfere with the supply of water to these lands, of course this loss must be made good; but if the lands become available for a second crop in consequence of a supply of water furnished by the Company, there will be a fair claim as against the Government for any assessment resulting from such an application of the additional water.

7. The Board of Revenue will issue instructions for giving effect to this order.

11 Copies to the
Board of Revenue Cy's 23.
13 Dr of Rev. Settlement "
1 Agent Irrig. Lds "
3 Consg Engineer Do "
11 Public Works Depart "
7 Supt of Rev. Survey "
1 Collr of Kurnool 24

Returns from Irrigt. Co's
Works.

Copy in a letter to England D/10th
September No. 58 of 1862.
Pro: No. 113=114
10-12-61

Revenue 1862 Septr.
Pro: of Govt for May.

No. 1036.

Pro: of the Madras Govt.
D/10th May 1862.

Passing orders
on Board's Proceedings
submitting papers reporting
on the best mode of realizing
the returns from the I & C
Company's works.

No. 215 & 216.

Para 4 of B