

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 898	Press Mis.
296.298	
Dated	26.5.19 1864

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
26th May 1864.*

Read the following papers:—

No. 296. From Major-General S. O. E. LUDLOW, Consulting Engineer for Irrigation and Canal Company, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Mount Road, 1st April 1864, No. 174:—

SIR,

1. I have the honor to forward, for the consideration and orders of Government, a letter* from the Interim Agent of the Madras Irrigation and Canal Company, giving cover to another from the Chief Engineer and an Extract from a letter† from the Secretary to the Board of Directors, on the subject of the submerged lands.

Vide Proceedings of Government, No. 3,605 of 7th December 1863.

* Dated 10th February 1864.

† Dated 18th December 1863, No. 6.

2. The Board are of opinion, as appears from their Secretary's letter, that the Company are legally entitled by the terms of the Agreement to receive from Government the whole of the submerged land free of any payment, inasmuch as they had a right to select the cheapest and most suitable line they could, due regard being had not to jeopardize public safety or adjacent property, and were, moreover, bound in the selection of the line to have due regard to the provision of storage for water.

3. They affirm that the line selected by their Chief Engineer and the single banked mode of construction were the most suitable, firstly, as furnishing traps for the deposit of silt; secondly, as providing reservoirs for the storage of water; and thirdly, as the most economical plan that could have been adopted.

4. But though they believe themselves to be legally entitled to demand from Government the gratuitous cession of the land they are unwilling to resort to litigation, and would rather, for peace sake, compromise the matter, provided Government will agree to make an abatement on their demand of three lacs for the land; but what price they would agree to pay is not stated, though I presume that their Agent is invested with discretionary power of action in the matter.

5. With reference to the three points affirmed as above detailed by the Board, I have to observe that as silt traps none of the tanks below Kurnool and but one of those above, viz., the capacious reservoir in the 6th mile at Yeddaroor, which is amply sufficient for the purpose, can be considered as really necessary.

6. That as reservoirs, though containing in the aggregate about 50 or 60 millions of cubic yards of water above the level of the Canal bed, they are practically of little use, and indeed no stress has, that I am aware of, ever been laid by the Chief Engineer on their utility on this score. But as a means of equalizing the supply and supplementing it in case of any temporary stoppage or deficiency at the head they are likely to be of considerable service.

7. The Company's Engineers selected the present course of the Canal and adopted the mode of construction in their judgment most suitable and economical according to the knowledge of the ground and circumstances which they at first had. But there can be little doubt now that they formed an exaggerated Estimate of the advantages, and to a great extent, ignored the defects of the single bank system of construction, especially the risk attending high banks, the necessity for revetting them, and the difficulty and cost of their construction in places where the soil was rocky. They appear also to have had a morbid dread of cuttings, and to have avoided them in some cases, where they might have been adopted with much advantage.

8. After several examinations of the ground and a careful consideration of all the circumstances, my professional opinion is that an equally good, indeed better, course might have been selected for the Canal at the same or even less expense than will now be incurred, and which would at the same time have obviated the formation of all the principal tanks.

9. But assuming this opinion to be correct the fact should have been pointed out when the plans of the Canal were submitted and before they were sanctioned.

10. The single bank system might further have been reasonably objected to not simply on account of the sacrifice of so much valuable land but as interrupting the local communications for

miles together and as seriously compromising the safety of the works and country below; but these objections were not raised or, if raised, not persisted in.

11. It is, I think, evident that when the Government *originally* agreed to make a gratuitous gift* to the Company of the land necessary for the construction of the works, they never contemplated the adoption of a system which would submerge large valleys. It is necessary, however, to remark that long before the Deed† of Agreement was formally signed, both parties to it were in possession of the plans of the works showing the novel system adopted, and were fully aware that the works had actually been partially carried out according to those plans.

12. The plans proposed by the Company's Engineer were, however, adopted in the first case (that of the 1st Section) without objection, comment or condition, and in the case of 2nd and 3rd Sections with the imposition of the condition of payment for the submerged lands. Whether by adopting those plans at all, Government forfeited any of their rights, or whether under their own rules‡ it was competent to them when adopting them to impose the condition of payment, are questions which it is not in my province to discuss. The legal Officers of Government will be best able to advise them on these.

13. But whatever decision may be arrived at on these points I am of opinion that as many of these tanks as possible should be dispensed with. If any compromise therefore is to be made it would be far better to adopt the proposal now made by the Chief Engineer, viz., to abandon the two principal tanks (those of Ulloor and Teroogopully, if a free grant be made of all the other submerged lands, than to accept the proposal of the Board of Directors to pay for all the submerged lands at a reduced rate, an arrangement which supposes the retention of all the tanks. Indeed, even if it should be decided that Government have a right to demand full payment for all the submerged land, still viewing the general unpopularity and individual hardship attending the submersion of so much valuable land and the standing risk to the works (in the safety of which Government are an interested party) entailed by the formation of these two large tanks, I would strongly urge that some sacrifice be made to get rid of them.

14. The extent of the sacrifice which Government would have to make in acceding to Colonel Cotton's proposal may be seen from the account embodied in my letter No. 10‡, dated 19th November 1863. The whole value of all the submerged lands (below Kurnool) is there shown to be 3,00,000 Rupees or rather 3,10,250, one-third only of which sum is compensation which Government would have to pay, the remaining two-thirds representing the equivalent in capital for loss of revenue.

15. The abolition of the Teroogopully and Ulloor Tanks would save 1,94,950 or nearly two-thirds of the whole, leaving a balance of Rupees 1,15,300 only, one-third of which would have to be paid by Government to others. But the whole of this would not be pure loss. A portion of the land will in process of time silt up and be available for cultivation or plantation and much of it be yearly culturable when the Canal is not at its full height, and land so cultivated will be much more valuable than it now is owing to the fertilizing effect of the silt brought down by the Canal.

16. In the case of the Ulloor Tank the Chief Engineer proposes to carry the Canal round the valley, crossing the stream by an aqueduct at a higher point. He over-estimates at Rupees 22,090, the additional expense which will be entailed on the Company by this diversion. For I believe that it would cost as much or nearly as much to complete and secure the partially executed bank across the valley as it will to carry the Canal round the valley and build the aqueduct.

17. In the case of the Teroogopully Tank he proposes to throw up a second bank and carry the Canal over the jungle stream by an aqueduct. This plan will necessitate some raising of the main bank both at the tank and above, and will somewhat raise the level of the water

increasing the over-spread in the adjacent tank above. But this draw-back is much more than compensated by the advantages which will be gained by the abolition of the tank. In estimating the additional cost, Rupees 87,809, entailed by this work also, allowance has not been made for the heavy cost of revetment which will be required to secure the single bank if the tank is to remain.

18. I approve, however, generally of the plans now submitted, and though the alterations will not entail quite so large an *additional* outlay as the Chief Engineer represents still the pecuniary sacrifice made by the Company will be considerable, and in the case of the Ulloor Tank the Canal is lengthened by nearly two miles, some consideration is therefore I think due to them for these concessions.

19. Having thus stated my views on the professional points affecting this question and briefly alluded to such others as appear to me to have any important bearing upon it, I beg to submit the matter to Government for decision.

Referred to the Revenue Department.

CHEPAUK,
4th April 1864.

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government, P. W. D.

No. 296A. MINUTE BY THE HONORABLE THE PRESIDENT.

I think it would perhaps be advisable to accede to the proposal of a compromise, subject however to the distinct understanding that the Government will not for the future assent to any plan which involves the submersion of lands as a means of avoiding the difficulty of passing across valleys.

(Signed) W. T. DENISON.

No. 296B. MINUTE BY THE HONORABLE T. PYCROFT.

Perhaps this will be best. It will get rid of two monster tanks, and will deprive the Company of all pretext for saying that we have delayed and embarrassed them in the execution of their work.

Other land to a considerable extent will probably be taken up in lieu of the land submerged, so that the loss of assessment will not be so much as supposed.

Cheapest—all things considered—the value payable by them of the submerged land included. I doubt it. The water spread will be for the most part shallow and evaporate quickly.

(Signed) T. PYCROFT.

No. 297. MINUTE BY THE HONORABLE E. MALTBY.

1. As the President and the Honorable Mr. Pycroft consider that under the circumstances in which the Government is placed, it is advisable to accede to the compromise proposed by the Company's Chief Engineer, Colonel Cotton, I will not raise objection to this course, but I feel bound to explain my reasons for assenting to such a sacrifice, and to record my opinion that the claim of the Company to be permitted to submerge any quantity of land in making their Canal without paying for it, is unsustainable.

2. There can, it appears to me, be no question that the Canal from the Toombuddra to the sea which the Company was allowed to construct, was to be a Canal in the true sense of the term, and not a series of broad lakes or tanks by which large areas of land would be submerged, and the communications of the country interrupted. It was on this understanding that land was to be given to the Company for the Canal, and that this Government allowed work to be commenced, on the application of the Company's servants, before regular Plans and Estimates were completed (No. 745, 13th April 1860). Government ordered that as a preliminary measure the land required for the Canal should be staked out for the purpose of its being made over to

the Company's Engineer, and arrangements were also directed to be made to ensure to the villagers in the neighbourhood sufficient means for crossing the Canal. I do not however find that the Consulting Engineer, Captain (Lieutenant-Colonel) Rundall has paid due attention to these instructions.

3. The Company appear to rest their claim on the arguments that they were to be supplied with the land required for the Canal, and that they were bound to construct the Canal in the cheapest manner. The reply is that the Canal was intended to be a Canal in the real sense of the word, and that such a Canal as the Company's Engineer planned did not comply with the conditions that neither life nor property were to be endangered by it. It is shown that that portion of the line which comprises the 2nd to the 5th Section will not merely endanger but actually submerge land valued at three lacs of Rupees, and there must moreover be considerable risk to the country under the Canal when a strong wind drives a large expanse of water against a single embankment. It may further be remarked that paragraph 7 of the Company's indenture clearly implies a Canal with banks, and that the present Consulting Engineer does not consider that the cheapest plan has been fixed on by the Company's Engineer or that the proposed submersion of these extensive tracts forms any necessary part of the scheme.

4. Government heard nothing of a Canal with a single embankment, until it was found necessary in consequence of an error about levels to carry the head of the Canal from Kurnool to Soonkasala 18 miles higher up the Toombuddra where a new Anicut was built. This change of head involved an entirely new line of Canal from Soonkasala to the Hindri river at Kurnool. To facilitate the construction of this new line thus suddenly found necessary, the Government sanctioned the Canal being made on the single bank principle across one or two vallies where no land of much value would be submerged.

5. Afterwards Lieutenant-Colonel Rundall forwarded with his recommendation Plans for continuing the Canal eastward of Kurnool from the 18th to the 43rd mile. It does not appear that the land had been previously staked out or that the Collector of the District had been consulted, but Lieutenant-Colonel Rundall remarked, "For nearly the whole of this distance the Canal runs along the steep slope of the country, and is carried with a single embankment except at those spots where it is taken across short projecting spurs or where a double embankment is absolutely necessary. It thus presents the appearance of a series of tanks connected by short cuts, its course therefore is much less direct and consequently its length is considerably increased. The Chief Engineer states that he preferred carrying the Canal with these detours to adopting a more direct course as thereby nearly all rock cutting is avoided, &c."

On receiving this report Government called on the Consulting Engineer to consider and report what would be the effect of extending a surface of water over so large an area. They remarked that the loss by evaporation and soakage must be very great, and that much cultivable land would be submerged.

6. Lieutenant-Colonel Rundall in reply repeated his recommendation of the Chief Engineer's plans, and stated that owing to the rocky soil the loss by soakage would be inappreciable, and that the land to be submerged was "for the most part unfit for cultivation," and small in extent compared with that which would be brought under the influence of irrigation. On this assurance Government sanctioned the plans provisionally, remarking that no report had been forwarded on these works from the Collector or District Engineer "whose opinion especially on the probable effect of the Canal, as now designed, on existing sources of irrigation and Government lands is essential." The Order therefore added, "Those Officers will now be requested to report to Government on the subject without delay, and the sanction now granted is subject to any orders which Government may pass on their reports."

The necessity for issuing the above order was the more surprising as in the preceding April Government had approved a scheme, proposed on their instructions by the Consulting Engineer, for keeping the District Engineer informed of the exact sites and nature of projected works. Government looked to the District Engineer both to protect existing works of irrigation from interference and injury, and also to see that proper measures were taken for enabling the villagers and their cattle to cross the Canal.

7. Before these reports were received the Agent of the Company applied that the lands required for the 2nd and 3rd portions of the Canal might be given over, and in ignorance apparently of how the case stood, Lieutenant-Colonel Horsley, who had just become Secretary to Government in the Department Public Works, obtained an order for the purpose. Before however this order reached Kurnool it was revoked by one issued on the 24th January in consequence of telegraphic information from the Collector of Kurnool that the lands to be submerged were of much value. Afterwards on receiving the reports of the Collector and District Engineer, and learning that the lands to be submerged in these two portions of the line were worth Rupees 62,500, Government directed that the whole question of these lands should be re-considered, and that the Consulting Engineer should report on a bridge and a sluice which the District Engineer pronounced necessary if the Canal was made in the manner proposed.

8. After receiving further reports and explanation the Government remarked, "It is evident that the Company cannot claim to be furnished with land by the Government when their Engineer chooses to adopt a mode of construction not absolutely required and prefers inundating a valley by damming up its outlet rather than carrying the Canal across it by an aqueduct." It was therefore decided that only so much land should be furnished by Government as would be required for the construction of the Canal with double embankments and "that any land required beyond this must be paid for by the Company." To prevent delay the Chief Engineer was allowed to proceed with his plan, but on the understanding that the submerged land was to be paid for by the Company.

9. Subsequently sanction was given for executing the 4th and 5th portions of the Canal (from 44th to 72nd mile) with a similar stipulation as to the lands which would be submerged.

10. Finally, the present Consulting Engineer, Colonel (now Major-General) Ludlow, pointed out in his general Report of 29th October 1862, the expensiveness of a Canal on the single bank system, if it was made sufficiently strong to stand the wash of waves when a strong wind blew across a broad water-spread. He added that revetments would be "essentially necessary" for the safety of the bank, but that he could not find any provision for this purpose in the Estimates. He also commented on the injury done to the people by the submersion of much valuable land, without any adequately compensating advantage being gained by this mode of constructing the Canal. Government concurred in this view, and repeating their decision that they were only called on to furnish such land as was required for an ordinary Canal with two banks, remarked, "looking both to the safety of the works and of the people who may live below the banks, the Governor in Council is of opinion that the Company's Engineer should be requested to arrange his plans for the whole of the sections of the work not commenced so as to retain the water of the Canal between two banks, providing of course for the drainage of that part of the country which is below the surface water of the Canal."

11. Such is a brief outline of this question, and I see nothing in the present papers to alter my opinion that the Government is not called on to pay for the tracts of land which the Company

may wish to submerge by constructing their Canal on the peculiar single bank system. I consider that the Government undertook only to furnish such land as was required for an ordinary double-bank Canal and for the necessary "Warehouses, Offices, and other conveniences," and I am further of opinion that the Company can claim no right to construct a Canal on the single bank plan, because it appears the cheapest plan as far as their own interests are concerned, when by adopting this course they destroy by submersion much valuable land and endanger life and property below the single embankment. This last consideration is no hypothetical one, as the recent destruction of the Canal between Soonkasala and the Hindri has proved the danger. On that occasion the principal breach occurred at a spot where a large body of water had been spread over the surface of the ground to enable a valley to be crossed on the single bank plan, and but for the fortunate proximity of the Toombudra, into which the water escaped, disastrous consequences must have occurred to the people in the vicinity. In future, therefore, I would only allow the single bank plan to be adopted in exceptional cases and under very careful precautions.

12. In assenting under these circumstances to the compromise proposed by the Chief Engineer, I am consequently influenced not by any idea that the Company ought to escape paying for the lands which they submerge, but by the arguments of Major-General Ludlow, who shows in paragraph 13 of his letter that the single bank system is so dangerous and so prejudicial to the public interests that it is advisable for Government to make a sacrifice for the purpose of inducing the Company not to act generally on the permission which they received to construct their Canal, in the 2nd, 3rd, 4th and 5th portions on the single bank plan, subject to the condition that the Company was to pay for the tracts of land which they thereby submerged.

13. This permission was given reluctantly and for the purpose of avoiding any appearance of causing delay to the Company's operations. The Government mistrusted the single bank plan, but were assured by their Consulting Engineer, Lieutenant-Colonel Rundall, that it would not be found open to objection, and are now advised, rightly I believe, to submit to a large pecuniary* sacrifice to induce the Company to make this portion of their Canal on a sounder and safer principle. This arrangement will of course be made, as observed by the President, on the distinct understanding that the Government will not for the future assent to any plan which involves the submersion of lands to lessen engineering difficulties.

14. In conclusion I must express regret that notwithstanding past experience, Lieutenant-Colonel Rundall should have still failed to appreciate correctly his position as Consulting Engineer. In that capacity it was eminently his duty to obtain correct information by personal inspection and communication with the local authorities regarding the Company's project, so as to be able to advise the Government on all points which affected its interests, or the convenience and welfare of the people along the line of the Canal. The papers connected with this question show however that he has continued to make himself the mouth-piece of the Irrigation Company.

In his letter of 21st May 1861, No. 6, he entered in Class A without any application for instructions, those lands which were to be submerged, thus leading the Company's servants to think that Government was to pay for all these lands as a matter of course. His letter also of 11th November 1861, No. 60, laying before Government plans for the 2nd and 3rd portions of the line was so much an echo of the Chief Engineer's views that Government had to call for the opinions of its local Officers, the Collector and District Engineer. The result of such lax attention to the public interests has been that the Kurnool Collector felt it his duty to telegraph to Government on learning that permission had been sought to submerge much valuable land on the plea that it was "for the most part unfit for cultivation," and that Government has now to make a large sacrifice to undo the effects of a permission which they were led to grant on Lieutenant-Colonel Rundall's assurances. As that Officer is no longer the adviser of Govern-

ment, I need not continue these remarks, but I have alluded to the subject to show the importance of always placing the office of Consulting Engineer in safe and experienced hands.

22nd April 1864.

(Signed) E. MALTBY.

No. 298.

ORDER THEREON, 26th May 1864, No. 898.

1. With the foregoing letter the Consulting Engineer for the Irrigation and Canal Company forwards, with his opinion, certain communications from the Chief Engineer and Agent to the Company relating to the question of submerged land in Kurnool.

* Recorded in G. O. 7th December 1863,
No. 3,605, Public Works Department.

2. The land immediately under discussion is that described in General Ludlow's letter* of 19th November last, No. 104, as likely to be submerged by the Canal in its course to the eastward of the Hindri Aqueduct. It is valued by the Collector at three lacs of Rupees, of which one lac appears to be payable to the Ryots, while the remaining two-thirds represent the value, capitalized at 5 per cent., of the Government assessment.

3. The Government have already affirmed the principle that land submerged for the convenience merely of the Company should be paid for by them not only in cases where this stipulation was expressly recorded, such as the present, but also where, as in the section above the Hindri Aqueduct, no positive notice that payment would be required was made to the Company's Officers.

4. This principle is now objected to by the Company, whose argument (as set forth in their Secretary's letter which forms an enclosure to the report recorded above) seems to be that they are at liberty to select any line for their Canal, and to adopt the cheapest course as well as mode of construction, so long as the safety of life and property is not endangered; that they are bound to provide for the storage of water for keeping up the supply during the year, and in furtherance of this object to seize and secure every means of storing water in large or small quantities; that the tanks formed along the line by adopting the single-bank system are necessary and useful as reservoirs and receptacles of silt; that the Government have power to make reasonable alterations in their plans, but not to alter the plans so as to substitute a new line with two embankments, and that the Government were bound to grant all the land required and could not attach to their sanction of the plans, the condition that the submerged land should be paid for.

5. It appears, however, from Colonel Cotton's letter that the Company are willing to waive what they consider their legal rights if the Government will consent to receive a price lower than that already set upon the land by the Collector. The exact amount which they are willing to pay is not mentioned.

6. The Chief Engineer Colonel Cotton, on behalf of the Company, proposes a compromise, viz., that the Company should alter the Canal so as to dispense with two of the tanks, the remaining submerged land being made over by Government gratuitously. The value of the land submerged by the two tanks to be abandoned is Rupees 1,84,700, and that of the remainder Rupees 1,15,300.

7. General Ludlow remarks that as silt traps none of the tanks below Kurnool can be considered as really necessary; that as reservoirs they are practically of little use, though as a means of equalizing the supply and supplementing it in case of any temporary stoppage or deficiency they are likely to be of considerable service; that the Company's Engineers formed an exaggerated estimate of the advantages and, to a great extent, ignored the defects of the single

bank system of construction; and that at the same or even less expense a better course might have been selected for the canal; and the formation of all the principal tanks have been rendered unnecessary. General Ludlow considers also that the single-bank system might have been objected to, not only on account of the valuable land submerged, but also as interrupting the local communications for miles together and as seriously compromising the safety of the works and the country below them. But these objections, he considers, should have been made and upheld before the plans were sanctioned.

8. General Ludlow further points out that the plans of the works showing the novel system adopted were in the hands of both parties before the deed of Agreement was executed, though he considers it clear that in undertaking to grant land for the Canal gratuitously, Government never contemplated the adoption of a system which would submerge large vallies.

9. He is further strongly of opinion that as many of the tanks as possible should be dispensed with, and he recommends the acceptance of Colonel Cotton's compromise in preference to the transfer of all the land at a reduced rate.

10. Before recording his decision on this recommendation His Excellency the Governor in Council considers it his bounden duty to reiterate his opinion that the claim of the Company to submerge any quantity of land in making their Canal without paying for it, is unsustainable.

11. The Canal from the Toombudra to the sea which the Company was allowed to construct was to be a canal in the true sense of the term, and not a series of broad lakes or tanks by which large areas of land would be submerged and the communications of the country interrupted. It was on this understanding that land was to be given to the Company for the Canal, and that the Government allowed work to be commenced, on the application of the Company's servants, before regular Plans and Estimates were completed.

12. Government heard nothing of a Canal with a single embankment until it was found necessary, in consequence of an error about levels, to carry the head of the Canal from Kurnool to Soonkasala, 18 miles higher up the Toombudra, where a new Anicut was built. This change of land involved an *entirely new* line of Canal from Soonkasala to the Hindri river at Kurnool. To facilitate the construction of this new line thus suddenly found necessary, the Government sanctioned the Canal being made on the single bank principle across one or two vallies where no land of much value would be submerged.

Order of 31st May 1861, No. 1,016.

13. But the Government can find nothing in the correspondence either then or subsequently to give countenance to the idea that in sanctioning the construction of a portion of the Canal in this peculiar fashion they therefore were bound to make good the entire cost of the land so submerged. Neither can they for a moment admit that the Company are entitled to claim a right to construct a Canal on the single bank plan, because it appears the cheapest as far as their own interests are concerned.

14. Had they, in the first instance, known what has subsequently been brought to their notice by General Ludlow they would most assuredly have declined to allow any departure from the usual course. It has been shown that a Canal planned on the single bank system possesses none of the merits which might justify such a radical change in Canal-making. On the other hand, not only is a large extent of valuable land submerged, but the country beneath is put in jeopardy and life and property endangered. This last consideration is no hypothetical one, as the recent destruction of the Canal between Soonkasala and the Hindri has proved. On that occasion the principal breach occurred at a spot where a large body of water had been spread over the surface of the ground to enable a valley to be crossed on this plan; and but for the fortunate proximity of the Toombudra into which the water escaped disastrous consequences must have resulted.

15. Under all the circumstances of the case His Excellency the Governor in Council has resolved to accede to the compromise proposed by Colonel Cotton and recommended by General Ludlow, but at the same time desires it to be distinctly understood that he is influenced, not by any idea that the Company should escape paying for the land which they submerged, but by the arguments of the Consulting Engineer, who shows in paragraph 13 of his letter that the single bank system is so dangerous, and so prejudicial to the public interests, that it is advisable for Government to make a sacrifice by lessening the amount of the evil resulting from the adoption of the Plan by the Company and assented to by the Government with the condition that they should pay for the tracts of land which they thereby submerged.

16. The Government submit to this large pecuniary loss on the understanding that they will not for the future assent to any plan which involves the submersion of lands as a means of avoiding the difficulty of passing across vallies.

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

Note.

1. These papers relate to the question of submerged land in Kurnool.

2. In their orders marginally noted Government decided that the

Irrigation Company should be required to pay for the land submerged above Kurnool.

3. The present reference relates to land submerged in the 2nd, 3rd, 4th and 5th sections below Kurnool.

This land is valued by the Collector at Rs 3 lacs of which one lac appears to be payable to the Ryots while the remaining two

G. O. 29th September/63 No 1784.
- 11th March/64 - 428.

I think it would perhaps be advisable to accede to the proposal for compromise, subject however to the distinct understanding that the Govt will not for the future assent to any plan which involves the submersion of lands as a means of avoiding the difficulty of passing across valleys.

MD

Perhaps this will be best. It will get rid of those monster tanks, & will deprive the Comptroller of all pretext for saying that he has delayed & can do no more in the execution of the work. FP

two-thirds represent the value - capitalised at 5 per cent - of the Government assessment -

4. The Company's argument (as set forth in their Secretary's letter)

Other land to a considerable extent is probably to be taken up in lieu of the land to be merged so that the loss of assessment will not be so much as supposed.

seems to be that they are at liberty to select any line for their canal

and to adopt the cheapest course as well as mode of construction - so long

cheapest - all things considered - the value payable by him of the submerged land included -

as the safety of life and property is not endangered -

that they are bound to provide for the storage of water for keeping up the supply during the year, and in furtherance of this object to seize and secure every means of storing water in

large

large or small quantities that the Tanks formed along the line by adopting the single Bank system are necessary and useful as reservoirs and receptacles of silt, that the Government have power to make reasonable alterations in their plans, but not to alter the plans so as to substitute a new line with 2 embankments and that the Govt were bound to grant all the land required and could not attach to their sanction of the plans, the condition that the submerged

submerged land should
be paid for.

5. The Company are
represented by Col^l.
Cotton to be willing
to pay a lower price
for the land than that
set on it by the Col^l.
but the amount is not
mentioned.

6. Col^l. Cotton him-
self proposes a com-
promise. viz that the
Company should alter
the Canal so as to dis-
pense with two of the
Tanks, the remaining
submerged land being
made over by Govt. gra-
tuitously. The value
of

8
of the land submerged
by the two abandoned
^{the abandoned}
Tanks, is Rs. 1,84,700- and
that of the remainder
Rs. 1,15,300.

7. Col^l. Ludlow re-
marks that as silt-
traps none of the Tanks
below Kurnool can be con-
sidered as really neces-
sary. that as reservoirs
they are practically of
little use, though as a
means of equalising the
supply and supplement-
ing it in case of any
temporary stoppage or
deficiency they are likely
to be of considerable service
that the Company

+ I don't think the water-sprunt
will be for the most part
shallow & comparatively
quickly

Engineers

Engineers formed an ex-
aggerated estimate of
the advantages and to
a great extent ignored
the defects of the single
bank system of construc-
tion and that at the
same or even less expense
a better course might
have been selected for
the Canal and the for-
mation of all the prin-
cipal tanks have been
rendered unnecessary.

General Ludlow considers
also that the single bank
system might have
been objected to, not
only on account of
the

9
the valuable land sub-
merged but also as in-
terrupting the local com-
munications for miles
together and as seriously
compromising the safety
of the works and the
country below them. But
these objections, he considers,
should have been made
and upheld before the
plans were sanctioned.

3. General Ludlow
further points out that
the plans of the works
showing the novel sys-
tem adopted were in the
hands of both parties be-
fore the deed of agree-
ment was executed, and
though he considers it
clear

clear that in undertaking
to grant land for the
Canal gratuitously, the
Government never
contemplated the adoption
of a system which would
submerge large valleys.

9 General Ludlow
is strongly of opinion
that as many of the Tanks
as possible should be dis-
pensed with and he re-
commends the acceptance
of Col. Cotton's compro-
mise in preference to the
transfer of all the land
at a reduced rate.

10. In the case
of all these Sections
(unlike the first bit
above Kurumb / Nay.
Grant for the Sub.

10
merged land was
in fact as a con-
dition of the sanction
orders requested.

L. D. S.

clear that in undertaking
to grant land for the
Canal gratuitously, the
Government never
contemplated the adoption
of a system which would
submerge large valleys.

9 General Ludlow
is strongly of opinion
that as many of the Tanks
as possible should be dis-
pensed with and he re-
commends the acceptance
of Col. Cotton's compro-
mise in preference to the
transfer of all the land
at a reduced rate.

10. In the case
of all these Sections
(unlike the first bit
above Kurumb / Nay.
Grant for the Sub.

10
merged land was
in fact as a con-
dition of the sanction
orders requested.

L. D. S.

285

Cave above
L. 1000

Minute

As the President & the Honble Mr. Pugh
consider that under the circumstances
in which the Govt is placed it is
advisable to accede to the compromise
proposed by the Company's Chief Engineer
Colonel Cotton I will not ^{raise} object to
claim any reasons for ^{claiming} ~~objecting~~ to such a sacrifice on
this course, but I feel bound to record
my opinion that the claim of the
Company to be permitted to submerge
any quantity of land in making their
canal without paying for it is unsus-
tainable, ~~that for a second time~~
the proper interests of Govt have been
diverted attention from their consulting
Engineer Lt Col Randall.

There can, it appears to me, be no
question that the Canal from the
Tombura to the sea which the
Company was allowed to construct
was to be a Canal in the true
sense of the term & not a series

of broad lakes or tanks by which
large areas of land would be sub-
merged & the communications of
the country interrupted. - It was
on this understanding that land was
to be given to the Company for the
Canal, and that the Govt. allowed
work to be commenced, on the appli-
cation of the Company's servants, before
regular plans & estimates were com-
pleted. - ~~But in fixing the order~~ ^{ordered that}
(No 745-13 April 1860) Govt. directed that
as a preliminary measure the land
required for the Canal should be staked
out for the purpose of its being made
over to the Company's Engineers and
arrangements were also directed to be
made to ensure ^{in the neighbourhood sufficient} to the villagers the
means for crossing the Canal, ~~but~~ ^{however}
no ~~not~~ ^{not} ~~found~~ ^{found} that the Consulting
Capt (Lt Col) ^{attention to these} ~~Engineer~~ ^{has paid due} instructions.
3. - The Company appear to rest their
claim on the arguments that they
were to be supplied with the land
required for the Canal & that they

were bound to construct the Canal
in the cheapest manner - The reply
is that the Canal was intended
to be a Canal in the real sense
of the word - & ^{as the Company's Engineer} that such a plan
did not comply with the conditions
that neither life nor property were to
be endangered by it. It is shown that
that portion of the line which comprises
the 2nd to the 5th Section will not merely
in danger but actually submerge land
valued at three Lacs of Rupees, and
there must moreover be considerable
risk to the country under the Canal
when a strong wind drives a large
span of water against a single in-
strument. - It may further be remarked
that Para 7 of the Company's Indenture
clearly implies a Canal with banks
- & that the present Consulting Engineer
is not consider that the cheapest plan
- been forced on by the Company's Engineer
that the ^{proposal} submersive of these extensive
into forms any necessary part of the
case. -
Govt. heard nothing of a Canal with

a single embankment until it was
in consequence of an error about levels
found necessary to carry the head

of the Canal from Tarnool to Tork.
- Sela 18 miles higher up the Tumbura
where a new sluice was built -

This change of land involved an en-
tirely new line of Canal ^{from} between Torkhale
to the Hendri river at Tarnool -

To facilitate the construction of this new
line they suddenly found necessary the
Govt sanctioned the Canal being made
on the single bank principle across one
or two valleys where no land of much
value would be submerged

5 - Afterwards Lt Col Randall forwarded
with his recommendation plans for
continuing the Canal ^{section of Tarnool} from the 18th
to the 43rd mile - It does not appear
that the land had been previously stated
out or that the ^{Collector of the District} District authorities had
been consulted - but Lt Col. Randall remarked
"For nearly the whole of this distance the
Canal runs along the steep slope of the
country & is carried with a single em-
bankment except at those spots where
it is taken across short projecting spurs
or where a double embankment is absolutely

13 3
necessary - It thus presents the appearance of
a series of tanks connected by short cuts - its
course therefore is much less direct & conse-
quently its length is considerably increased -
The Chief Engineer states that he preferred car-
rying the canal with these detours to adopt-
ing a more direct course as thereby nearly
all rock cutting is avoided etc" -

On receiving this report Govt called on
the Consulting Eng^r to report what would be
the effect of extending ^{the} surface of water over
so large an area - They remarked that
the loss by evaporation & soakage must
be very great & that much valuable land
would be submerged.

Order of
16 Nov 81
No 2131

6 - Lt Col Randall in reply repeated his re-
commendation of the Chief Engineer's plans, &
stated that owing to the rocky soil the loss
by soakage would be ^{inappreciable} & that the land
to be submerged is "for the most part unfit
for cultivation" & small in extent compared
with that which would be brought under the
influence of irrigation - On this appearance
Govt sanctioned the plans ^{provisionally} conditionally, remarking
that no report had been forwarded on these
works from the Col^l or District Engineer
whose opinion especially on the probable effect

recd of
24 Dec/61
No 2369 -

of the Canal, as now designed, in existing
sources of irrigation & Govt lands is ^{essential}
~~Govt~~ The order therefore added "These Officers
will now be requested to report to Govt on
the subject without delay & the sanction
now granted is subject to any orders which
Govt may pass on their reports"

recd of
9 April/61
No 714 -

- The receipt ^{upon} of the above order was the more
surprising as in the preceding April
Govt had approved a scheme, proposed
on their instructions by the Can Engineer,
for keeping the District Engineer informed
of the exact sites & nature of projected
works - Govt looked to the District
Engineer both to protect existing works
of irrigation from interference & injury
& also to see that proper measures
were taken for enabling the Villagers
& their cattle to cross the Canal -

J. - Before the above reports were received
the Agent of the Company applied that the
lands reserved for the 2nd & 3rd Portions of
the Canal ^{might be given over} and in ignorance apparently
of how the case stood St. L. Hooley, who
had just become Secretary to Govt in
the D. P. W. obtained an order for the purpose

14

41

Before however this order could have reached
Thurnool it was revoked by me issued
on the 24 Jan in consequence of ^{telegraphic} infor-
mation from the Cms. of Thurnool that
the lands to be submerged were of much
value - Afterwards on receiving the
reports of the Cms. & District Engr. & learning
that the lands to be submerged in these two
Portions of the line were worth Rs 62500
Govt directed that the whole question of
these lands should be reconsidered &
that the Consult. Engineer should report
on a bridge & a sluice which the District
Engr. pronounced necessary if the Canal
was made in the manner proposed -
After receiving further reports & explana-
-tions the Govt remarked "It is evident
that the Company cannot claim to be
furnished with land by the Govt when
their Engr. chooses to adopt a mode of con-
struction not absolutely required & proposes
"moulding a valley by damming up
its outlet rather than carrying the Canal
"a cross it by an aqueduct" ~~and~~ It was therefore
decided ~~passed~~ that only so much land should
be furnished by Govt as would be required

for the construction of the Canal with double embankments & "that any land required beyond this must be paid for by the Company" To prevent delay ^{Order of 17 March/62 No 459} the Chief Engineer was allowed to proceed with his plan, but on the understanding that the submerged land was to be paid for by the Company.

9. - Subsequently sanction was given for executing the 4 & 5th portions of the Canal (from 44th to 72nd mile) with a similar

^{Order of 11 April 1862 No 736.} stipulation as to the lands which would be submerged.

10. - Finally the present Consulting Eng. Colonel (now Major General) Tallow pointed out in his General Report of 29 Oct/62 ~~pointed out~~ the ~~great~~ expense of a Canal on the single bank system, if it was made sufficiently strong to stand the wash of waves when a strong wind blew across a broad water spread. He added that restrictions would be "essentially necessary" for the safety of the bank but that he could not find any provision for this purpose in the estimates. He also commented on the injury done to the people by the submergence of ^{comparatively} valuable land without any adequate advantage being gained by this mode of constructing

Order of 19 Dec/62 No 3045

the Canal - Govt concurred in this view, & repeating their decision that they were only called on to furnish such land as was required for an ordinary Canal with 2 Banks. remarked "Looking both to the safety of the works & of the people who may live ^{below} the banks the Govt in Council is of opinion that the Company's Engineer should be requested to arrange his plans for the whole of the sections of the work not commenced so as to retain the water of the Canal between two Banks providing of course for the drainage of that part of the country which is below the surface water of the Canal."

11. - Such is a brief outline of this question and I see nothing in the present papers to alter my opinion that the Govt is not called on to pay for the ^{tracts of} land which the Company may wish to submerge by constructing their Canal on the peculiar single bank system. - I consider that the Govt undertook only to furnish such land as was required for an ordinary double-bank Canal & for the necessary "Warehouse Offices & other inconveniences", and I am

further of opinion that the Company
can claim ^{no} right to construct a Canal
on the single bank plan, because it
appears the cheapest plan so far as their
interests are concerned, when by
adopting this course they destroy by
submersion much valuable land.

~~land~~ & endanger life & property
below the single bankment. This
last consideration is so hypothetical
one as the ^{present} destruction of the Canal between
Sourashtra & the Hudee has proved the
danger - On that occasion the principal
breach occurred at a spot where a large
body of water had been spread over the
surface of the ground to enable a valley
to be cropped on the single bank plan
& but for the proximity of the Tombahra
into which the water escaped ~~the water~~
disastrous ^{occurred to the people in the vicinity.}
consequences must have followed.

In future therefore I would only allow
the single bank plan to be adopted in
exceptional cases & under very careful
superintendence.

12. - In ^{these} circumstances ^{therefore} to the Compro-
mission proposed by the Chief Engineer.

in P 15. Major General Suddow gives
Rs 115,000 as the value of the sub-
merged lands regarding which Govt
is to relieve the Company.

consequently ^{not} influenced by any idea that
the Company ought to escape paying
for the lands which they submerge,
but by the arguments of General
Suddow ^{in P 13 of his letter} who shows that the single
bank system is so dangerous & so
prejudicial to the public interests
that it is advisable for Govt to make
a sacrifice ^{for the purpose of} inducing the Company
not to act generally on the permission
which they received to construct their
Canal in the 2nd 3rd 4th & 5th Portions on
the single bank plan, subject to the
condition that the Company was to
pay for the tracts of land which they
thereby submerged.

13. - This permission was given reluctantly
& for the purpose of ^{causing} ~~free~~ avoiding any
appearance of delay to the Company's
operations - The Govt. mistrusted the
single bank system but were forced
by their consulting engineer, ^{St. Colonel} St. Colonel Randell, that it would
not be found open to objection & are
now advised, rightly I believe, to submit
to a large pecuniary sacrifice to induce
the Company to make this portion of their
Canal on a sounder & safer principle.

This arrangement will of course be made, as observed by the President on the distinct understanding that the Govt will not for the future spend to any plan which involves the submergence of lands to relieve engineering difficulties.

74 - In conclusion I must express regret that notwithstanding past experience Mr. Ed. Randall should have still failed to appreciate correctly his position, as Consulting Engineer. - In that capacity it was eminently his duty to obtain correct ^{by personal inspection & communication with the local authorities} information regarding the Company's projects so as to be able to advise the Govt on all points which affected its interests, or the convenience & welfare of the people along the line of the canal. The papers connected with this question show however that he ^{has} continued to make himself the mouthpiece of the Irrigation Company. - In forwarding the plans & estimates for the 2nd & 3rd portions of the Canal.

In his letter of 21 May/61 No 6 he entered in Chap. A without any application for instructions, those lands which were to be submerged, thus leading the Company's servants to think that Govt was to pay for all these lands

as a matter of course. ~~and~~ ^{also} ^{the} letter of 11 Nov/61 No 60 laying before Govt plans for the 2nd & 3rd portions of the Line was so much an echo of the Chief Engineer's views that Govt had to call for the opinions of its local officers, the Collector & District Engineer. - The result of such lax attention to the public interest has been that the ^{Manager} Collector felt it his duty to telegraph to Govt on learning that permission had been sought to submerge much valuable land on the plan that it was "for the most part unfit for cultivation", and that Govt has now to consent to make a large sacrifice to undo the effects of ^{a permission} ~~an order~~ which they were led to grant on Mr. Ed. Randall's assurances. - As that Officer is no longer the adviser of Govt I will not continue these remarks, but I have alluded to the subject to show the importance of placing the office of Consulting Engineer in safe & experienced hands -

L. M. Atty

22nd April/64

Copy in a letter to Eng
of 23 July/64 N 21-Mur

Revenue & Co. Dept
Pro: of Govt for allay
No 1046

Minute by the Hon.
rable Mr. Maltby

Dated 22nd } April 1864
Recd 23rd }

On the claim of
the Irrigation Company
to be permitted to sub-
merge any quantity
of land in making
their Canal without
paying for the same

26th May/64
848

N 297-

R. D.

N 898.

Proceedings of the Madras Government
Under date the 26th May 1864.

Read the following
letter from the Consulting
Engineer for Irrigation and
Canal Company.

N 296
Forwards for considera-
tion and orders of Government
a letter from the Agent together
with one from the Chief Engineer
on the subject of submerged lands
below the Hindoo & Squeedat.

(Here enter 1st April 1864)
N 174

Minute by the Hon. Mr. Maltby
E. Maltby

22nd April
With the foregoing
letter the Consulting Engineer
for the Irrigation and
Canal Company forwards
with his opinion certain
communications from the Chief
Engineer and Agent to the
Company relating to the
question of submerged land
in

in Hindoo?

2. The land immedi-
ately under discussion is

that described ⁱⁿ General

Sudlow's letter of 17th November

last 1810- as likely to be

submerged by the Canal in

its course below the Hindri

Aqueduct. It is valued

by the Collector at three lacs

of Rupees of which one lac

appears to be payable to the

Ryots, while the remaining

two thirds represent the value

capitalized at 5 per cent.

of the Government assess-

ment.

3. The Government

have already affirmed

the principle that land sub-

merged for the convenience

merely

* Recorded in G.O. 7th
Decr/63 no 3665 P.W.D.

to the Eastward of

G.O. 17th March 1862
no 459
P.W. Dept.

G.O. 29th Sept/63 no 1784
G.O. 11th March/64 no 428
Rev. Dept.

merely of the Company
should be paid for by
them not only in cases
where this stipulation was
expressly recorded, such as
the present, but also where,
as in the section above
the Hindri Aqueduct, no
positive notice that pay-
ment would be required
was made to the Company's
Officers.

4. This principle is
now objected to by the Com-
pany whose argument,
(as set forth in their Secretary's
letter which forms an
enclosure to the report
recorded above) seems to be
that they are at liberty to
select any line for their canal
and

mentioned.

6. The Chief Engineer Colt Cotton, on behalf of the Company, proposes a compromise - viz. that the Company should alter the Canal so as to dispense with two of the Tanks, the remaining submerged land being made over by Govt. gratuitously. The value of the land submerged by the two Tanks to be abandoned is Rs 134,700. and that of the remainder Rs 115,300.

7. General Sutlow remarks that as silt traps none of the Tanks below Humood can be considered as really necessary; that as reservoirs they are ^{practically}

practically of little use, though as a means of equalising the supply and supplementing it in case of any temporary stoppage or deficiency they are likely to be of considerable service; that the Company's Engineers formed an exaggerated estimate of the advantages and, to a great extent, ignored the defects of the single bank system of construction, and that at the same or even less expense a better course might have been selected for the Canal, and the formation of all the principal tanks have been rendered unnecessary.

General

General Ludlow considers also that the single-bank system might have been objected to, not only on account of the valuable land submerged but also as interrupting the local communications for miles together and as seriously compromising the safety of the works and the country below them. But these objections, he considers, should have been made and upheld before the plans were sanctioned.

8. General Ludlow further points out that the plans of the works showing the novel system adopted were in the hands of

of both parties before the deed of agreement was executed, though he considers it clear that in undertaking to grant land for the Canal gratuitously, Govt. never contemplated the adoption of a system which would submerge large valleys.

9. He is further strongly of opinion that as many of the Banks as possible should be dispensed with, and he recommends the acceptance of Col. Cotton's compromise in preference to the transfer of all the land at a reduced rate.

10. Before recording his decision on this recommendation His Excellency the

the Governor in Council con-
siders it his bounden duty
to reiterate his opinion that
the claim of the Company to
submerge any quantity of
land in making their canal
without paying for it, is
unsustainable.

11. The Canal from the
Tombudra to the sea which
the Company was allowed to
construct was to be a canal
in the true sense of the term,
and not a series of broad
lakes or tanks by which
large areas of land would be
submerged and the commu-
nications of the country in-
terrupted. It was on this
understanding that ^{land} was to be
given to the Company for the
canal.

174
Canal, and that the Govt. ^{was}
allowed work to be commene-
ed, on the application of the
Company's servants, before
regular Plans and Estimates
were completed.

12. Government heard
nothing of a Canal with
a single embankment until
it was found necessary,
in consequence of an error
about levels, to carry the
head of the Canal from
Kurnool to Loonkasala,
18 miles higher up the
Tombudra, where a new
Anicut was built. This
change of land involved
an entirely new line of
Canal from Loonkasala to the
Pindri river at Kurnool.

To

To facilitate the construction of this new line they suddenly found necessary, the Government sanctioned the Canal being made on the single bank principle across one or two valleys where no land of much value would be submerged.

Order of 31st May 1861
1861/6.

13 But the Government can find nothing in the correspondence either then or subsequently to give countenance to the idea that in sanctioning the construction of a portion of the Canal

in this peculiar fashion they therefore were bound to make good the entire cost of the land so submerged. Neither can they for a moment admit that the Company are entitled to claim a right to construct a canal on the single bank plan because it appears the cheapest as far as their own interests are concerned.

14 Had they, in the first instance, known what has subsequently been brought to their notice by General Ludlow they would most assuredly have declined to allow any departure from the usual course. It has been shown that a canal planned on the single bank system possesses none of the merits

merits which might
justify such a radical
change in canal-making.
On the other hand not
only is a large extent
of valuable land sub-
merged but the country
beneath is put in jeopar-
dy and life and proper-
ty endangered. This
last consideration is
no hypothetical one as
the recent destruction of
the Canal between Loon-
kasala and the Min-
dri has proved. On that
occasion the principal
breach occurred at a
spot where a large body
of water had been spread
over the surface of the
ground to enable a valley
to be crossed on this plan,
and but for the fortu-
nate proximity of the
Loombudra into which
the water escaped disastrous
consequences

26
consequences must have
resulted.

15. Under all the cir-
-cumstances of the case
His Excellency the Governor
in Council has resolved
to accede to the compro-
-mise proposed by Colo-
-nel Cotton and recom-
-mended by General Sir
-low, but at the same
time desires it to be
distinctly understood
that he is influenced,
not by any idea that
the Company should re-
-scape paying for the
land which they sub-
-merged, but, by the
arguments of the Consult-
-ing Engineer who shows
in para 13 of his letter
that the single bank
system is so dangerous, and
so prejudicial to the
public interests, that it
is advisable for Govt

to

16. The Govt submit to this large pecuniary loss on the understanding that they will not for the future assent to any plan which involves the subversion of lands as a means of avoiding the difficulty of passing across valleys.

17. The subject of
para 14 of the Hono-
rable E. Mathyses
minute

21st Express to the McCapt. with 8 boxes Sept. 30th 1894
Wm. B. P. R. A.

Minute will be con-
 sidered in the Public
 Works Department.

J. M.

Copy in letter to Cury
of 23 July 1864 No 21 - mis

G. No. 369-370

24-12-62

366-367

29-9-63

130-132

11-3-64

G. W. G. No. 1560

21-7-60

167-168

7-12-63

Revenue 1864 Dept.
No. of Govt for May.

24898.

Pro. of the Challadras Govt.
of 26th May 1864.

Proceedings of P. M. G. G.
of 24 Aug 1864 C. No. 2254

Question regarding
the submerged lands in
Hurnool decided.

18296-296A-296B

297+298.

May 1864 0017

CH. 1864