

(1) Number of Pages 76
 (2) Date of repair 22. 8. 66
 (3) Initials of the Referencer _____

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revy DEPARTMENT

G.O. No. 567 Press
 B.P. No. 13. 18. (101-102) Mis.

Dated 8. 5. 1874 196—.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
8th May 1874.*

Read the following papers:—

No. 101. Proceedings of the Board of Revenue, dated 10th March 1874,
No. 527.

Read the following letter from J. R. DANIEL, Esq., Acting Collector of Vizagapatam, to
J. GROSE, Esq., Secretary to the Board of Revenue, dated 20th January 1874,
No. 56:—

I HAVE the honour to address the Board on the subject of Bishop Tissot's scheme for the reclamation of the swamp lying to the west of the town of Vizagapatam; the swamp was granted to the Bishop on favourable terms under certain conditions, because it was believed that the swamp was a cause of malaria to the town, and its reclamation would be a public benefit: the effect of the reclamation on the harbour which it is under contemplation to form, appears not to have been fully considered, and I wish now to draw the attention of Government to the injury which this reclamation has caused and must continue to cause to the bar, river, and harbour works.

2. My attention has for some months been directed to this question, but I was unwilling to bring the matter before Government until I had obtained from the Engineer, the results of the recent surveys which have been made on the bar and in the mouth of the river. I have now received a letter* from Major Beatty in which

* Copy of which and its enclosures, together with the plan in original, is enclosed.

he explains fully, and I think incontestably, that the effects of the attempted reclamation on the harbour are most injurious.

3. A small portion of the swamp was granted to the Bishop, under G. O., No. 636, dated March 11th, 1868, on an assessment of Rupees 22 per annum.

4. An additional 1,000 acres was granted to him under G. O., No. 722, dated March 17th, 1869, on an equal assessment of Rupees 88, and the Bishop bound himself to reclaim 100 acres of the swamp every year.

5. Under G. O., No. 3,007, dated November 22nd, 1869, Dr. Tissot was allowed to hold the 1,000 acres free of assessment for ten years, but he was to abide by the condition to reclaim the swamp at the rate of 100 acres per annum, allowing one year for preparation. Lastly, in G. O. dated July 7th, 1871, No. 1,169-A, the free grant was extended from ten years to twenty-one years. A certain portion of the swamp to be fixed by the Collector, with the sanction of the Board to be reclaimed triennially, in default the grant to lapse to Government.

6. This is the last G. O. on the subject: the Bishop in his letter, dated October 3rd, 1871, (*vide* Board's Proceedings, No. 4,539, dated October 30th, 1871), attempted to obtain a modification of the former terms by allowing him forty years, and also permission to sell the work to any one able to undertake on the ground that the penalty of depriving him of the work done in case of failure, was too great. The Board however say that they are unwilling to trouble Government any further in the matter, and say that Government will not be disposed to shew any rigour in the enforcement of the penalty if it can be proved that the Bishop has done his best at every triennial inspection by the Collector.

7. As the case stands now, therefore, the terms on which the grant is given are rent-free for twenty-one years on condition of reclaiming a certain portion of the swamp every year to be fixed by the Collector with the sanction of the Board. I cannot find that any definite extent has been so fixed. When the term was ten years, the extent to be reclaimed was to be 100 acres allowing for the reclamation of the whole in ten years. As the term has been extended to twenty-one years, the whole ought to be reclaimed at the rate of 47 acres per annum.

8. As to what has actually been reclaimed, the District Engineer's letter shows that the extent of land which the Bishop has undertaken to reclaim is 1,595 acres, and the extent he has actually reclaimed in three-and-a-half years is about 13½ acres, though his operations have extended to about 81 acres; and the District Engineer calculates that it would at the present rate take 600 or 1,000 years to reclaim the whole 1,595 acres. The Bishop has not reclaimed a reasonable

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extent, and I think, therefore, that it is clearly made out that under the terms on which the swamp was given, the grant lapses to Government, if they wish to exact the penalty, and it is for the Government to decide whether or not they shall claim the exaction of the penalty.

9. It seems to me imperative on the part of Government to resume the land in the interests of the harbour and the harbour works.

10. When the land was originally handed over to the Bishop, the harbour scheme had apparently not been taken up, and the effect upon these works was not adequately considered: the only professional opinion which appears to have been given was that of Lieutenant Dorward, who, in reply to the question of the Collector, May 8th, 1871, stated as his opinion that the reclamation will not injure the port because the amount of storage for tidal water taken away will be compensated by forcing the water to flow to a higher level in the river. This opinion has been falsified by results. The bar and the river have silted up since the water was excluded from this land. The bund which has been thrown up by the Bishop, excludes the tide from an area of ground about two square miles in extent, and prevents three million cubic yards of water from flowing out through the mouth of the harbour and scouring the bar.

11. I think the letters of the District and Executive Engineers prove beyond a doubt that this Reclamation scheme is most detrimental to the harbour works. As to the primary object for which the swamp was given to remove a cause of malaria from the town, the statistics do not shew any improvement in the health of the town, and I should be inclined to believe that a half reclaimed swamp would be more injurious than a swamp open to the tides.

12. Regarding compensation, I would ask the Government if they determine to resume the land, to allow him liberal compensation for the work he has done, and permission to retain so much of the swamp at the end farthest from the sea as may be found, on professional inspection, not to affect injuriously the flow of tidal water.

13. I will, on my return to Vizagapatam, if authorized by Government, determine in communication with the Bishop, the amount of compensation.

14. I wished to bring before Government the results of the late Survey of the harbour, and the opinion of the Engineers regarding the harbour works to be executed.

I have not yet received the letter from the District Engineer, but expect it shortly. I have, however, been unwilling to delay the submission of this letter to Government, for I think it of the greatest importance to the future success of the harbour that the land now given away to Bishop Tissot should be resumed.

15. If Mr. Parkes who is, I believe, at present in Madras, could find time to visit the port of Vizagapatam, he would be able to give the Government his opinion regarding the best kind of harbour, and I hope he may be able to visit it.

ENCLOSURE No. 1.

From Major J. BEATTY, R.E., District Engineer, Vizagapatam, to J. R. DANIAL, Esq.,
Acting Collector of Vizagapatam, dated Ramabhadrapuram, 24th December 1873,
No. 166A.

As requested in your letter No. 1,700, of 10th ultimo, I have the honour to furnish you

1. Mr. Nordmann's observations on injury done to the Port.
 2. Opinion of Master Attendant and boatmen.
 3. Plan of Reclamations.
- with information as to the effect produced by Bishop Tissot's bunds on the depth of water at the mouth of the Vizagapatam river, and I take the opportunity of making some general remarks on the subject, which it seems to me has never yet received due consideration in all its bearings.

2. From the papers you lately sent me, I for the first time learnt the history of this Reclamation scheme, and the extent of land supposed to be affected. The survey operations lately carried out by Mr. Nordmann, have thrown additional light upon it.

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3. The first grant to Bishop Tissot appears to have been made in G. O., No. 636 of 11th March 1868. He was then allowed to have 237 acres, for which he was to pay a quit-rent of Rupees 22, or at the rate of $1\frac{1}{2}$ Annas per acre per annum.

4. In August 1868 the Bishop made a fresh application, on the ground that the first grant would be useless to him, if the whole of the contiguous swamp (said to be four times the extent of that already granted to him) were not added to it. He was allowed, according to G. O. No. 722, of 17th March 1869, to take 1000 acres more, for which he was to pay 88 Rupees a year; but the terms of the grant were that he was to have a year for preparation, apparently dating from 15th May 1869, and that after 15th May 1870, he was to reclaim 100 acres a year.

5. On the 8th September 1869 the Bishop again memorialized Government; and by G. O., No. 3,007, of 22nd November 1869, he was permitted to keep the land, free of assessment, for ten years from 15th May 1870, provided he reclaimed 100 acres a year.

6. Even these easy terms, however, did not satisfy him, for in April 1871, we find him making a new application; this time for an extension of the period of reclamation from ten to forty years. In G. O., No. 1,169, of 7th July 1871, the conditions were altered for the third time; he was granted 1,000 acres free of assessment for twenty-one years, but still required to reclaim a portion of the swamp annually, the extent of that portion to be fixed by the Collector.

7. The Bishop next applied on 3rd October 1871 for a re-consideration of the terms of the grant, but the Board of Revenue declined to trouble Government further, observing that it was not to be supposed Government would show any rigour in enforcing the penalty of resumption if it could be proved that the Bishop had *done his best*, at every triennial inspection by the Collector.

8. But none of these papers were communicated to the Public Works Department, and when I wrote my report of 1871, to accompany estimates for improving the mouth of the river, I was quite unaware that the scour produced by the ebbing tide off $2\frac{1}{2}$ square miles of swamp had been permanently cut off. For in paragraph 9 of that report I wrote—

"In the present state of the river whatever tends to cut off or diminish the re-flow of tidal water from the swamp is a detriment to the scour at the river's mouth, and to the maintenance of a channel at the bar.

"I am, therefore, decidedly of opinion that farther reclamations in the swamp should not be encouraged, at least until the mouth of the river has been improved."

Had I then known the extent of land *taken possession of* by the Bishop, I should have foretold, with confidence, what has since taken place.

9. It seems to me the great mistake in this matter was that of allowing the Bishop to have the land on condition of reclaiming so much of it every year, subsequently interpreted to mean "doing his best" in the opinion of the Collector. He should have submitted a survey and levels of the site, accompanied by plans and estimates, exhibiting the position and dimensions of the bunds, drainage channels, and sluices, fixed with reference to the levels, and specifying the time within which the works would be completed, or handed over to Government at a fair valuation according to the estimate.

10. There are several questions to be considered in connection with this reclamation scheme; for instance—

(1.) Has Bishop Tissot made reasonable progress during the three-and-a-half years since 15th May 1870?

(2.) What effect, if any, has this work had on the health of the town?

(3.) What effect has it had on the mouth of the river?

(4.) Should things be allowed to continue as they are, and if not, what changes are expedient?

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11. What Bishop Tissot has actually done is to throw up a slender encircling bund and a few cross bunds to keep out the tide water. These are quite insufficient for the purpose, and I am told have been repeatedly breached, at one time by high tides, at another by the land freshes. He has also erected a few sluices, most inadequate for the safe discharge of the floods that break in upon him from the land and from the sea, and it seems that he also uses these sluices, under some peculiar view of the best way to reclaim land, for swamping* the lower parts of the ground with sea-water and allowing it to stagnate.

* Vide Mr. Nordmann's statement at page 3.

12. The fact is the Bishop's works do not form an adequate protection against the tides, they are not sufficient to receive (if it were desirable) as into a tank the drainage of the Kylassa and Waltair hills; and there are literally no drainage works; for the few sluices in the bund have plainly been put there, and are used principally for its protection, and not for any purpose of draining and so reclaiming the land; which part of the work has evidently been left completely in the hands of Nature herself, unaided by any artificial works whatever. In short the Bishop's idea of the way to reclaim land seems to be, shut out the sea-water as cheaply as you can, mend your bund when it breaches, and leave Nature to do the rest.

13. Again, the survey of the port and backwater lately made shows that the Bishop's bunds prevent the tides flowing over about 1,614½ acres of swamp, or upwards of 2½ square miles.

† See plan at N. O. P. Q.

From this total, we must deduct Mr. Warfield's old farm† of 19.09 acres, and the balance of swamp which the Bishop has undertaken to reclaim is found to be about 1,595 acres. He has made a Coconut garden‡ of 11.75 acres, and has a bit of dry cultivation§ of 1.75 acres on the edge of the swamp near Nabobpeta. These 13½ acres may be considered the extent of land reclaimed in three-and-a-half years.

‡ See plan at G. H. I.
§ And at E.

14. In addition to this, 22½ acres have been twice ploughed, but nothing has yet been sown upon them; 35½ acres have been once ploughed but not sown; and 9.33 acres have been ploughed and planted or sown, but nothing has yet grown upon them. So that the Bishop's farming operations appear to have extended to about 81 acres, but he has only as yet been able to grow anything on 13½ acres. I cannot vouch for the strict accuracy of these figures, because my surveyors have not consulted the Bishop or his Assistants regarding the boundaries, and the survey was made during the rainy season when the swamp, as yet utterly unreclaimed, was in a most impassable state. But inquiries were made of any persons who happened to be on the spot, and appeared to possess a knowledge of these matters, and I believe the matters will be found approximately correct.*

15. At this rate, the Bishop would reclaim 155 acres in forty years, and he would be 410 years reclaiming 1,595 acres. But the fact is we cannot expect the work to progress in future even at the pitiful rate it has hitherto done, for the coconut tope and bit of dry cultivation are situated on the highest and best ground, at the extreme upper edge of the swamp, and the rate of progress during the second triennial period will probably be still more miserable, so that he would require 600 or 1,000 years to reclaim the whole 1,595 acres.

16. The only reasonable inference from all this is, either that the work is far beyond the power and means at the Bishop's disposal, and that he does not know what he is about, or that his intention is merely to hold the land (at the mercy of Government, if he cannot get it more completely into his power) and look for remuneration to selling it at high prices in an unreclaimed state, when the growth and increasing prosperity of the town creates the requisite demand. And there is no doubt that when Harbour works are carried out, the whole of that swamp will become exceedingly valuable. It is admirably adapted as a site for spoil banks, docks and warehouses, and eventually no doubt, as it becomes well raised by the materials dredged from the river and backwater, the town itself will extend over it.

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17. Mr. Minchin promised that Dr. Tissot, would drain the swamp, which was a source of malaria, and that this highly philanthropic work would effect a great public benefit to the town of Vizagapatam and its vicinity, and again that it would be of the greatest utility to the town in a sanitary point of view. Mr. Melville further observes, the land in its present state is believed to be the cause of much of the sickness in the town, the effluvia from it sometimes being very offensive. The second question then to be considered is, if Bishop Tissot has not made much progress towards converting the swamp into pleasant gardens or fruitful fields, have his efforts at least been successful in producing a beneficial effect on the health of the town?

18. For an answer to this question I have, with the obliging permission of the Vice-President, made an examination of the records of the Municipality, and find that the Register of Deaths shows the following totals:—

Year.	From 1st December 1869 to 30th November 1873.	Percentage on a population of 32,000.
1869-70	732	2.3
1870-71	807	2.5
1871-72	1,436	4.5
1872-73	821	2.6
Mean rate of mortality, about 3 per cent.		

The great increase in 1871-72 was doubtless due to the high prices of provisions in the early part of the year, caused by the failure of the north east monsoon in 1871, and the influx of starving poor from the country, and doubtless many feeble, old people, and sickly or delicate persons and children would fall victims at such a time to the want of sufficient nourishment. The other totals show a tolerably regular increase in number of deaths such as may simply be the result of increasing population.

As the number of deaths continues to increase in spite of the large expenditure by the Municipality on the cleansing and drainage of the town, I can see no reason to conclude that Bishop Tissot's reclamations have had the expected result of improving the climate of Vizagapatam.

It is even not impossible that the vigorous sanitary efforts of the Municipality would have sensibly affected the rate of mortality, if the malaria arising from the swamp had not been much increased by the half-measures of Bishop Tissot. A Reclamation scheme, worthy of the name, should effectually protect the land from an irruption of sea or river water, and from the drainage of the surrounding country, while it should also provide adequate means for getting rid of local rain-fall; the land would then cease to be a swamp and a source of malaria, even if not an acre were cultivated.

19. The further question therefore arises, if the Bishop's scheme is not likely to benefit Government or the town of Vizagapatam for many generations, and if no other public spirited individual or enterprising Company is prepared to take up the work in earnest, should things be allowed to continue in their present state? Of course, there is no doubt that any *bona fide* attempt to reclaim the swamp should be encouraged on the ground that the Medical men are, I believe, unanimously of opinion that if successful, it would be a great blessing to the inhabitants, and our present excellent Civil Surgeon, in his report, printed with G. O., No. 1,076 of 30th July 1873, observes:—

"I cannot help thinking that the swampy land lying to the west of the town must be productive of malaria which influences considerably the health of the town."

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As the number of deaths continues to increase in spite of the large expenditure by the Municipality on the cleansing and drainage of the town, I can see no reason to conclude that Bishop Tissot's reclamations have had the expected result of improving the climate of Vizagapatam.

It is even not impossible that the vigorous sanitary efforts of the Municipality would have sensibly affected the rate of mortality, if the malaria arising from the swamp had not been much increased by the half-measures of Bishop Tissot. A Reclamation scheme, worthy of the name, should effectually protect the land from an irruption of sea or river water, and from the drainage of the surrounding country, while it should also provide adequate means for getting rid of local rain-fall; the land would then cease to be a swamp and a source of malaria, even if not an acre were cultivated.

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as a port; and it seems never to have been considered for a moment that this Reclamation scheme aimed, though unconsciously, a death blow at the shipping interest of the place. Calculating the average rise of the tide which should take place on that part of the swamp enclosed by the bund at only one foot, six inches (but it is more, three or four feet in many places), there are three million cubic yards of water prevented from rushing out to scour the river and the bar twice in every twenty-four hours.* As you have observed before, whatever tends to diminish the re-flow of tidal water from the swamp, is a detriment to the scour at the river's mouth, and to the maintenance of a deep channel over the bar.

* Sections across the swamp cannot well be taken at present owing to the late heavy rains. But a month hence it may be practicable to do so.

2. I think therefore that, not only should further reclamations in the swamp be stopped, but the large area already partly reclaimed should be taken back by the Government as soon as possible; liberal compensation being paid, if necessary. The longer this resuscitation of the swamp is delayed, the greater will be the compensation become that must eventually be paid if Vizagapatam is ever to be made a harbour of such importance as it may reasonably lay claim to, on the ground of its exceptional natural advantages and increasing trade. The work so far done in reclaiming the swamp, though it has already done palpable injury to the harbour, does not represent a great money value. A slender bund has been thrown up, with its crest two or three feet above high water, to keep the tide out of the enclosed part. A few sluices have been inserted to let the drainage out, as well as to admit occasionally a certain quantity of tide water for the purpose of letting it stagnate in the deeper parts of the swamp in order to silt these up.

3. The effect of the reclamation so far accomplished, although it has only been at work a short time, is plainly visible; and if it proceeds at the rate it has done, and is not speedily checked, it is hard to say where the mischief that is being wrought will end. Among the boat people, fishermen and other inhabitants of the town, there is a strong conviction about the effect of reclamation. It is distinctly maintained by them that spots are now high and dry at low water that formerly were deeper; and they ascribe, with sound natural instinct, the cause to the reclamation bund, and date the deterioration and silting up of the harbour from the erection of the bund. But we have more precise data to prove the deterioration that has taken place. There are sections taken of the backwater in 1868 before the bund was made, along some of the same lines on which I have just taken soundings. From these sections it appears that there were depths of 28' 27' and 26' of water in mid-stream at the upper, or Theppa River Ferry, whereas my greatest soundings now show only 25 feet, and that in one single instance. Further on, a line of section from the "Rocky Island" to the northern shore the depths shown on the old section between the deep channel and the northern shore are 13', 10', 9', 8', 7', 5', 3', 2', while my late soundings only shew 5', 3', 2', 1'. The deep channel itself which is close to the Island, seems to have been scoured out but to the north of it the bottom has been raised to an alarming extent. Again on a line of section midway between the two previous ones, the old section shows 23 depth lines varying from 10' to 7', with a few side depths of 5' 4', and 3', while on my chart of soundings there are only two depths of 8' the remainder varying from 6' to 1' on the southern bank, while a large strip near the northern bank is dry at low water. At the upper ferry, near the landing place, the ferry boat can no longer be used at half ebb, because there is not sufficient depth; this was not the case formerly; and a little to the south west of the landing place where my soundings shew 0, there is a sand bank steadily forming which was not in existence in former years; such facts speak for themselves.

(True Extract.)

(Signed)

J. BEATTY, Major, R.E.,

District Engineer.

(True copy.)

(Signed)

J. H. SNAITH,

Ag. Prinl. Asst. for Acting Collector.

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ENCLOSURE No. 3.

Extract from a letter of the Master Attendant of Vizagapatam, dated 15th November 1873, giving his opinion and that of the native boatmen on the silting up of the river's mouth.

In my opinion the bunding up of the swamp and the bund across the river opposite the magazine is the cause of the river's mouth having less water on it; the water which used to cover the swamp as well as the water which used to go round Ross Hill and past the Magazine where the bund runs across the river now stops it from flowing any further, is the cause of the mouth of the river being silted up. There is not the same quantity of water coming into the river as formerly, therefore the scour is not so great at ebb tide to keep the bar open as formerly before the bunds were raised.

2. After receiving your letter I mastered about thirty or forty Tindals, and made enquiries of them; what was their opinion why the water on the bar as well as in the river was not as before; the only answer was from one and all that the flow of water into the river was not so great or strong since the bunds have been allowed to be made, and the water has not the same space to cover as before, therefore the tides are not so strong either at ebb or flood. I should here state these remarks have been made to me several times by the boatmen that the tides do not run so strong as formerly.

(True Extract.)

(Signed)

J. BEATTY, Major, R.E.,

District Engineer.

(True Copy.)

(Signed)

J. H. SNAITH,

Ag. Prinl. Asst., for Acting Collector.

ENCLOSURE No. 4.—Plan.

THE Board agree with the Collector that it is of supreme importance to the port that Dr. Tissot's attempts to reclaim the swamp should be abandoned, but they see difficulties in the way of resuming the grant. The Collector will accordingly communicate with Dr. Tissot, informing him of the views expressed by the Engineers, and accepted by the Board, and ascertain on what terms Dr. Tissot will consent to give up the swamp.

2. A copy of these Proceedings will be submitted for the information of Government.

No. 101A. From H. G. PRICHARD, Esq., Government Solicitor, Madras, to C. G. MASTER, Esq., Acting Secretary to Government, Revenue Department, Ootacamund, dated 11th April 1874, No. 198 (Confidential).

ABSTRACT.—Forwards copy of the Advocate-General's opinion relative to Government resuming the grant of swamp land situated west of town of Vizagapatam granted to Bishop Tissot, and returns the plan and enclosures relating thereto.

No. 101B. Proceedings of the Board of Revenue, dated 9th April 1874, No. 791.

Read again Board's Proceedings, dated 10th March 1874, No. 527.

Read also the following letter from J. R. DANIEL, Esq., Acting Collector of Vizagapatam, to J. GROSE, Esq., Secretary to the Board of Revenue, dated 17th February 1874, No. 192:—

With reference to my letter, dated January 20th, No. 56, I have the honour to forward, at his own request, a copy of the Memorandum written by the Revd. P. Richard regarding the reclamation of the swamp at the mouth of the river.

*Proceedings of the Madras Government, Revenue Department,
8th May 1874.*

as a port; and it seems never to have been considered for a moment that this Reclamation scheme aimed, though unconsciously, a death blow at the shipping interest of the place. Calculating the average rise of the tide which should take place on that part of the swamp enclosed by the bund at only one foot, six inches (but it is more, three or four feet in many places), there are three million cubic yards of water prevented from rushing out to scour the river and the bar twice in every twenty-four hours.* As you have observed before, whatever tends to diminish the re-flow of tidal water from the swamp, is a detriment to the scour at the river's mouth, and to the maintenance of a deep channel over the bar.

2. I think therefore that, not only should further reclamations in the swamp be stopped, but the large area already partly reclaimed should be taken back by the Government as soon as possible; liberal compensation being paid, if necessary. The longer this resuscitation of the swamp is delayed, the greater will be the compensation become that must eventually be paid if Vizagapatam is ever to be made a harbour of such importance as it may reasonably lay claim to, on the ground of its exceptional natural advantages and increasing trade. The work so far done in reclaiming the swamp, though it has already done palpable injury to the harbour, does not represent a great money value. A slender bund has been thrown up, with its crest two or three feet above high water, to keep the tide out of the enclosed part. A few sluices have been inserted to let the drainage out, as well as to admit occasionally a certain quantity of tide water for the purpose of letting it stagnate in the deeper parts of the swamp in order to silt these up.

3. The effect of the reclamation so far accomplished, although it has only been at work a short time, is plainly visible; and if it proceeds at the rate it has done, and is not speedily checked, it is hard to say where the mischief that is being wrought will end. Among the boat people, fishermen and other inhabitants of the town, there is a strong conviction about the effect of reclamation. It is distinctly maintained by them that spots are now high and dry at low water that formerly were deeper; and they ascribe, with sound natural instinct, the cause to the reclamation bund, and date the deterioration and silting up of the harbour from the erection of the bund. But we have more precise data to prove the deterioration that has taken place. There are sections taken of the backwater in 1868 before the bund was made, along some of the same lines on which I have just taken soundings. From these sections it appears that there were depths of 28' 27' and 26' of water in mid-stream at the upper, or Theppa River Ferry, whereas my greatest soundings now show only 25 feet, and that in one single instance. Further on, a line of section from the "Rocky Island" to the northern shore the depths shown on the old section between the deep channel and the northern shore are 13', 10', 9', 8', 7', 5', 3', 2', while my late soundings only shew 5', 3', 2', 1'. The deep channel itself which is close to the Island, seems to have been scoured out but to the north of it the bottom has been raised to an alarming extent. Again on a line of section midway between the two previous ones, the old section shows 23 depth lines varying from 10' to 7', with a few side depths of 5' 4', and 3', while on my chart of soundings there are only two depths of 8' the remainder varying from 6' to 1' on the southern bank, while a large strip near the northern bank is dry at low water. At the upper ferry, near the landing place, the ferry boat can no longer be used at half ebb, because there is not sufficient depth; this was not the case formerly; and a little to the south west of the landing place where my soundings shew 0, there is a sand bank steadily forming which was not in existence in former years; such facts speak for themselves.

(True Extract.)

(Signed) J. BEATTY, Major, R.E.,
District Engineer.

(True copy.)

(Signed) J. H. SNAITH,
Ag. Prinl. Asst. for Acting Collector.

*Proceedings of the Madras Government, Revenue Department,
8th May 1874.*

ENCLOSURE No. 3.

Extract from a letter of the Master Attendant of Vizagapatam, dated 15th November 1873, giving his opinion and that of the native boatmen on the silting up of the river's mouth.

In my opinion the bunding up of the swamp and the bund across the river opposite the magazine is the cause of the river's mouth having less water on it; the water which used to cover the swamp as well as the water which used to go round Ross Hill and past the Magazine where the bund runs across the river now stops it from flowing any further, is the cause of the mouth of the river being silted up. There is not the same quantity of water coming into the river as formerly, therefore the scour is not so great at ebb tide to keep the bar open as formerly before the bunds were raised.

2. After receiving your letter I mustered about thirty or forty Tindals, and made enquiries of them; what was their opinion why the water on the bar as well as in the river was not as before; the only answer was from one and all that the flow of water into the river was not so great or strong since the bunds have been allowed to be made, and the water has not the same space to cover as before, therefore the tides are not so strong either at ebb or flood. I should here state these remarks have been made to me several times by the boatmen that the tides do not run so strong as formerly.

(True Extract.)

(Signed) J. BEATTY, Major, R.E.,
District Engineer.

(True Copy.)

(Signed) J. H. SNAITH,
Ag. Prinl. Asst. for Acting Collector.

ENCLOSURE No. 4.—Plan.

THE Board agree with the Collector that it is of supreme importance to the port that Dr. Tissot's attempts to reclaim the swamp should be abandoned, but they see difficulties in the way of resuming the grant. The Collector will accordingly communicate with Dr. Tissot, informing him of the views expressed by the Engineers, and accepted by the Board, and ascertain on what terms Dr. Tissot will consent to give up the swamp.

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Read again Board's Proceedings, dated 10th March 1874, No. 527.
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8th May 1874.*

The Right Revd. Dr. Tissot is absent, and Mr. Richard has drawn this upon his behalf.

2. I do not propose to make any remarks upon it at present; there are two questions to be considered: whether the reclamation scheme is injurious to the harbour, and whether the land should be resumed or not by the Government. I am waiting for the return of Bishop Tissot when I shall be able to inspect with him personally what has been done, and I shall be in a position to state the exact nature of the reclamation.

ENCLOSURE No. 1.

MEMORANDUM of observations in reference to the letter of the District Engineer, Vizagapatam, to the Collector of Vizagapatam of 24th December 1873, No. 116A, forwarded to the address of the Right Revd. Dr. Tissot, with letter from Acting Principal Assistant for Collector, dated 20th January 1874.

The District Engineer desires that the swamp lands granted to Dr. Tissot in Vizagapatam, finally under G. O. of 7th July 1871, No. 1,169A, should be resumed at once, with certain limitations suggested in paragraph 27 of his letter.

II.—He seems to complain that the said Government Order, and all other papers connected with the grant, were never communicated to the Department Public Works; asserts that the engagement of the Government with the Bishop, which he terms unfortunate, would never have been permitted had the Superintending Engineer been consulted; remarks that it was attended with a "great mistake;" and then indulges in invectives and insinuations against the Bishop.

III.—He labours to show how the Government could break their engagement, and to induce them to do it.

a. He struggles to establish that the main object which, in his opinion, induced the grant, is not yet secured.

b. And foretells alarming disadvantages in a continuance of the engagement.

IV.—The District Engineer, however, cannot help admitting that the object which influenced the grant is good and can be attained, and when attainable, should over-ride all other considerations. But he thinks such object, according to his estimation of the present state of things reported, will take a long time to attain, and therefore, although the alarming disadvantages he foretells could, he says, otherwise be guarded against, he requires Government to break their engagement at once.

1. In reference to I., Government cannot yield to the desire of the District Engineer, because, *inter alia*, from the date of the Government Order, it will be three years only in July next, when, if not before, it is confidentially hoped that the triennial inspection of the undertaking

by the Collector* it can be proved that the Bishop has done his best.

* Vide Board's Proceedings, dated 26th October 1871.

2. As far as Revd. Mr. Richard is aware, Mr. Melville, then Acting Collector, wrote to† Dr.

† Vide letter No. 455, dated 11th May 1871.

Tissot that he had taken the opinion of Lieutenant Dorward, then incumbent of Major Beatty, and made the submitting of the Bishop's application, which eventually resulted in the said Government Order, subject to his Lordship's agreeing to do certain works which had been suggested by the Executive Engineer of the Range.

The District Engineer says:—"He (the Bishop) should have submitted a survey and levels of the site, accompanied by plans and estimates, etc." He expects the Bishop would have taken all this trouble in reference to lands which had never probably engaged anybody's attention, it may be presumed not even that of Major Beatty who has been for so many years in this district

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from the time of Colonel Rundall, who seems to have recommended their reclamation. An open reeking waste of which Mr. Minchin writes:—"The land is at present worthless, and the swamp

* Vide Board's Proceedings, No. 632, dated 17th October 1863.

† Vide Board's Proceedings, dated 18th October 1869.

is a source of malaria to the town of Vizagapatam, the success of the applicant will be a great benefit to the town of Vizagapatam;" and in another letter†:—"The land is quite worthless, unless reclaimed, whilst its reclamation is a work of very great cost and difficulty, but at the same time, if successful, would be of the greatest utility to the town in a sanitary point of view" * * * ; "there is not the slightest prospect of the work being undertaken by any one else" * *. Dr. Tissot has only the funds of the Mission to lay out on the enterprise."

But the District Engineer seems to be *unmindful* of all this; he expects it should be converted into pleasure gardens and fruitful fields; and what is more, he so far forgets things as to ignore that Dr. Tissot, or the Mission he belongs to, has no other interest in the undertaking than the interests of the inhabitants, and especially of the orphans and paupers which they have at heart. Regarding the other two inferences in the same paragraph, Mr. Minchin informed Government at the onset what means Dr. Tissot had at his disposal, and so long as the Bishop endeavours to imitate the example of those religious bodies who in the History of Europe are the pioneers of reclamation, and, on the other hand, keeps steadily in view the falls and wastes of the Public Works Department, it is to be hoped that the Bishop will know what he is about.

It is to be regretted that in volunteering any remarks on a subject of such importance, affecting, as it does, the sanitary advantages of the town, and especially the interests of a large number of orphans and paupers in Vizagapatam, that the District Engineer should not have taken the trouble of satisfying himself about the facts of the matter by a personal inspection of the swamp lands, or by any reliable data.

Dr. Tissot, or any of his Clergymen, if applied to, would have gladly afforded Major Beatty any information to facilitate his arriving at real facts and just inferences. Certainly more ample and reliable than what seems to have resulted on inquiries made, not by Major Beatty, nor even by Mr. Nordmann, but by the Major's Surveyors, of any idler who happened to be loitering on the spot.

The District Engineer says (5) "I cannot vouch for the strict accuracy of these figures, because my Surveyors have not consulted the Bishop or his assistants regarding the boundaries, and the survey was made during the rainy season when the swamp, as yet utterly unreclaimed, was in a most impassable state. But inquiries were made of any person who happened to be on the spot and appeared to possess a knowledge of these matters"; but yet believes the results stated to decimal precision will be found approximately correct. The fact is they are in no way correct. The Engineer seems to have been equally misled by Mr. Nordmann's statement into mistaking rain-water for sea-water, which has betrayed him into the unhappy remark:—"It seems he also uses these sluices under some peculiar view of the best way to reclaim land, for swamping the lower parts of the ground with sea-water and allowing it to stagnate."

Equally incorrect is what he was told as to the bund being repeatedly breached; the fact being that never but once since the cyclone of 1870 there was any breach at all, and then, to so slight an extent that about a dozen coolies working for half a day repaired the damage done.

The great error seems to have arisen by mistaking the rain-water of the downfall from the adjacent hills, which was purposely confined in the *intake* with the view of freshening the soil, for sea-water, the existing sluices having hitherto proved sufficient for the purposes of drainage when required. The object of Dr. Tissot has been to allow the whole *intake* to remain for some time under the influence of stagnant fresh water, and thus enable the soil, which has so lately been supersaturated with salt-water with all its chemical combinations, to part with so much of its saline and other particles as may be in excess for the purpose of vegetation. Work has been carried on more or less in reference to the full extent of the area granted by Government, the whole now forming one large intake; the curious reasoning therefore adopted in the 15th para-

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graph of the District Engineer's letter is utterly inapplicable. In reference to G. O. of 7th July 1871, Dr. Tissot stated that being an extraordinary undertaking it would not be easy to fix what portion he could drain triennially, that some portions requiring years to overcome and others a few months he should be allowed to follow his own plan without any restriction, and the Board fully alive to the importance and difficulty of the undertaking have been pleased to declare that—
“It is not to be supposed that the Government will show any rigour in the enforcement of the penalty of resumption, if it can be proved that the Bishop has done his best at every triennial inspection of the undertaking by the Collector.”

The Bishop has indeed been more successful than he expected, and should the District Engineer take the trouble of paying the works a visit on that side of the swamp where a nucleus of a village has been formed by the Bishop, he will find that the whole intake is now perfectly dry and only needs a *catch drain*, etc., to have the whole of it perfectly drained during the heavy rains, which works in the plan of Dr. Tissot, as understood by Revd. Mr. Richard, have been put off to freshening certain portions. At all events the District Engineer fails to show how the Government, in reference to their engagement, can interfere before the end of the triennial period on a state of things *alleged to have existed months ago* during the rains. Very little is indeed needed to see the unfairness of the District Engineer's inferences from the register of deaths in the Municipal Office. The statement speaks for itself. There is nothing to show what was the mortality previous to the undertaking, and besides who does not know, when the registration first came into force, ignorant people, for reasons which existed only in their imaginations, evaded or neglected making reports of deaths or births. Is it only gradually they have been reassured? It is such data then that would warrant the assertion that mortality has not decreased. Then again it seems to have escaped the District Engineer that it is quite possible that mortality may not decrease, and yet the people enjoy better health and comfort being freed from such loathsome diseases—as for instance, elephantiasis, hydrocele, etc. Moreover, none should look for sanitary results in two or three years after the beginning of such an undertaking, more especially when the exhalations from the sewers emptied into the backwater continue, and the large sheet of stagnant and putrid water immediately at the back of the town north of the General Hospital, and separated from the swamp by a regular road, is allowed to remain by the Municipality as a sink for filth and dirt, upon which its little fish seem to feed and die, the whole sending forth most noxious exhalations, chiefly to those localities from which the majority of cases apply for relief at the Dispensary.*

A. Board of Medical Officers consisting of Dr. Mayer, late Deputy Inspector General, Indian Medical Department, Dr. Morton, and Dr. H. Adam, late Civil Surgeon, have recorded their opinion of the swamp lands in question—“that if the whole could be reclaimed a great public benefit would be conferred, and even if this could be done in part some benefit would accrue.”

From this it is clear that the reclamation works should not be stopped even for a single day, whilst prompt measures should be taken to remove the nuisance above alluded to.

b.—If it be borne in mind that what is termed the Vizagapatam River in the 1st paragraph of District Engineer's letter is a tidal estuary, the water from the sea ebbing in and out, Mr. Richard is of opinion it would be difficult to understand how “Bishop Tissot's Bunds (which, according to the District Engineer,† are quite insufficient for the purpose of keeping out the tide water, the whole swamp‡ being during

* 173d Annual Report of Civil Dispensary of Vizagapatam for 1868.
† District Engineer's letter, paragraph 11.
‡ Paragraph 14.

the survey impassable with water) could possibly interfere with the depth of water anywhere in the stream. One would certainly incline to the belief, considering the immense open tract country, something like ten or twelve square miles forming the *waterspread* of the stream, that the depth of the stream could certainly never be affected, and, if at all, to the extent represented by the District Engineer. There is nothing to interfere with the securing effects of the land fresher. It is evident that that the comparison of soundings, upon which the District Engineer relies, is not satisfactory even as reported. It appears, Mr. Waters found eleven feet of water about six weeks

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after the freshes of the monsoons in 1869, but it does not appear how long after the freshes in 1873 he found only six and a half feet. What were the soundings on the bar before the laying of the bunds? Mr. Waters was not then in Vizagapatam. Besides it is not easy to take soundings on the bar, and it is less easy to imagine how Mr. Waters would make sure of sounding each time in the very same place. Then, in reference to the soundings at the Western Thepparevu Ferry, the drift of this remark would apply with equal if not greater force, especially as it is not affirmed that the different soundings were taken at the same time of year and tide and in the same circumstances.

And even assuming that any part of the estuary is really less deep now than it was, could the District Engineer assure Government that such change is not temporary and cannot be due to any other cause?

Moreover, Mr. Richard would make bold to say that the inundation, the District Engineer would apprehend, is utterly impossible; for the simple reason, *inter alia*, that the mouth of the river cannot be well choked with sand before the next heavy land freshes can burst the barrier, which, however, the Engineer lays down as a necessary condition.

Mr. Richard has never heard of the tradition alluded to by the District Engineer, which places the river's mouth in the centre of the present town; but he has been told for a positive fact that not long since the sea was very far away, when people were actually able to walk up to the *Dolphin's Nose*.

IV. But the District Engineer affirms:—“Of course there is no doubt that any *bona fide* attempt to reclaim the swamp should be encouraged.” In such case, however, all the disadvantages he alleges must occur. Then he thinks§ that if the mouth of the river is to be kept open “we should either breach the bunds to admit of the sea flowing as formerly over the

† District Engineer's letter paragraph 19.

§ Paragraph 24.

swamp,” or “the protection works for the river's mouth should at once begin.”

Mr. Richard would beg to affirm most emphatically that the present effort of Dr. Tissot is indeed a *bona fide* attempt. Should they therefore be satisfied on indisputable authority that the possible disadvantages are really such as are represented by the District Engineer, Government will sooner sanction the river improvements, if required, rather than stop a work which is decidedly necessary for the sanitation of the town, and break faith with Dr. Tissot, *that is*, with the orphans and poor of the district.

VIZAGAPATAM,
11th February 1874.

(Signed) P. RICHARD,
Catholic Clergyman and Manager
of the Catholic Orphanage of Vizagapatam.

(True Copy.)

(Signed) J. R. DANIEL,
Acting Collector.

THESE papers refer to the necessity of resuming the swamp which Dr. Tissot is reclaiming to prevent great injury to the Vizagapatam Harbour.

2. On the representations of the Collector and the District Engineer, the Board came to the conclusion that the attempts to reclaim the swamp must be stopped, but they believe the only way in which this can be done is to compromise with Dr. Tissot or to take the land under the Land Acquisition Act.

3. After reading the Revd. Mr. Richard's letter, the Board are not altogether satisfied as to whether the reclamation scheme must be put an end to, and they resolve to submit these papers to Government in order that the opinions of the

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8th May 1874.

Sanitary Commissioner and the Inspecting Engineer for Ports and Communications may be obtained, if possible, after a personal inspection of the ground.

4. The matter is one which demands immediate inquiry.

No. 102.

ORDER THEREON, 8th May 1874, No. 567.

Miscellaneous.

THE reports from the Collector and District and Executive Engineers contained in the first Proceedings above

recorded are conclusive as to the damage done to the Vizagapatam river by the reclamation works so far as they have gone, and it is equally clear that the grantee has not been able to carry out his Agreement with Government. He has been in possession four years. The last order (G. O., 7th July 1871, No. 1,169A) was that "a certain portion of the swamp, to be fixed by the Collector with the sanction of the Board, (was) to be reclaimed triennially; in default, the grant to lapse to Government." At the rate named in paragraph 7 of Mr. Daniel's present letter, 47 acres per annum, the Bishop should have reclaimed 188 acres, whereas the extent actually reclaimed is $18\frac{1}{2}$ acres, though his operations have extended over 81 acres.

2. The Government have taken the opinion of the Advocate-General on the question whether they can resume the grant under the circumstances stated, and, in accordance with the advice which he has given, they resolve to instruct the Board of Revenue to inform Dr. Tissot that the grant is cancelled.

3. Any fair claim to compensation will be favourably considered.

(True Extract.)

(Signed) C. G. MASTER,
Acting Secretary to Government.

To the Board of Revenue.

.. the Government Solicitor.

to the Public Works Dept.

Exd. F. B. Bantleman.

26-2-19

29-7-74
13-12-92
19-10-92
11-2-02
5-10-13
Recd. 13-2-02. 12 July 1974

Obdt. of 1874

REVENUE.

THE BOARD OF REVENUE.

do, do, do.

Dated May 8th.

Recd.

Encl.

G. O., 8th May 1874, No. 667.

MAY.

No. 101-102.

Resumption of Swamp Land in Vizagapatam District granted to Dr. Tissot for Reclamation.—Directs Board of Revenue to intimate to Tissot the — by Government, and states that any claim to compensation will be favourably considered.



17.8

No. 527.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 10th March 1874.

Read the following letter from J. R. DANIEL, Esq., Acting Collector of Vizagapatam, to J. GROSE, Esq., Secretary to the Board of Revenue, dated 20th January 1874, No. 56:—

I HAVE the honour to address the Board on the subject of Bishop Tissot's scheme for the reclamation of the swamp lying to the west of the town of Vizagapatam; the swamp was granted to the Bishop on favourable terms under certain conditions, because it was believed that the swamp was a cause of malaria to the town, and its reclamation would be a public benefit: the effect of the reclamation on the harbour which it is under contemplation to form, appears not to have been fully considered, and I wish now to draw the attention of Government to the injury which this reclamation has caused and must continue to cause to the bar, river, and harbour works.

2. My attention has for some months been directed to this question, but I was unwilling to bring the matter before Government until I had obtained from the Engineer, the results of the recent surveys which have been made on the bar and in the mouth of the river. I have now received a letter* from Major Beatty in which

* Copy of which and its enclosures, together with the plan in original, is enclosed.

he explains fully, and I think incontestably, that the effects of the attempted reclamation on the harbour are most injurious.

3. A small portion of the swamp was granted to the Bishop, under G. O., No. 636, dated March 11th, 1868, on an assessment of Rupees 22 per annum.

4. An additional 1,000 acres was granted to him under G. O., No. 722, dated March 17th, 1869, on an equal assessment of Rupees 88, and the Bishop bound himself to reclaim 100 acres of the swamp every year.

5. Under G. O., No. 3,007, dated November 22nd, 1869, Dr. Tissot was allowed to hold the 1,000 acres free of assessment for ten years, but he was to abide by the condition to reclaim the swamp at the rate of 100 acres per annum, allowing one year for preparation. Lastly, in G. O., dated July 7th, 1871, No. 1,169-A, the free grant was extended from ten years to twenty-one years. A certain portion of the swamp to be fixed by the Collector, with the sanction of the Board to be reclaimed triennially, in default the grant to lapse to Government.

6. This is the last G. O. on the subject: the Bishop in his letter, dated October 3rd, 1871, (*vide* Board's Proceedings, No. 4,539, dated October 30th, 1871), attempted to obtain a modification of the former terms by allowing him forty years, and also permission to sell the work to any one able to undertake on the ground that the penalty of depriving him of the work done in case of failure, was too great. The Board however say that they are unwilling to trouble Government any further in the matter, and say that Government will not be disposed to shew any rigour in the enforcement of the penalty if it can be proved that the Bishop has done his best at every triennial inspection by the Collector.

7. As the case stands now, therefore, the terms on which the grant is given are rent-free for twenty-one years on condition of reclaiming a certain portion of the swamp every year to be fixed by the Collector with the sanction of the Board. I cannot find that any definite extent has been so fixed. When the term was ten years, the extent to be reclaimed was to be 100 acres allowing for the reclamation of the whole in ten years. As the term has been extended to twenty-one years, the whole ought to be reclaimed at the rate of 47 acres per annum.

8. As to what has actually been reclaimed, the District Engineer's letter shows that the extent of land which the Bishop has undertaken to reclaim is 1,595 acres, and the extent he has actually reclaimed in three-and-a-half years is about 13½ acres, though his operations have extended to about 81 acres; and the District Engineer calculates that it would at the present rate take 600 or 1,000 years to reclaim the whole 1,595 acres. The Bishop has not reclaimed a reasonable

26-2-19

29-1-1874
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1-7-13
Rev. B. D. Q. 12 July 1874

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REVENUE.

THE BOARD OF REVENUE.

to
to
to

Dated May 8th.

Recd.

Encl.

G. O. 8th May 1874, No. 567.

MAY.

No. 101-103.

Resumption of Swamp Land in Vizagapatam
District granted to Dr. Tissot for Reclamation.
Directs Board of Revenue to intimate to
Tissot the — by Government, and states that
any fair claim to compensation will be favourably
considered.



17. P

No. 527.

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3. A small portion of the swamp was granted to the Bishop, under G. O., No. 636, dated March 11th, 1868, on an assessment of Rupees 22 per annum.

4. An additional 1,000 acres was granted to him under G. O., No. 722, dated March 17th, 1869, on an equal assessment of Rupees 88, and the Bishop bound himself to reclaim 100 acres of the swamp every year.

5. Under G. O., No. 3,007, dated November 22nd, 1869, Dr. Tissot was allowed to hold the 1,000 acres free of assessment for ten years, but he was to abide by the condition to reclaim the swamp at the rate of 100 acres per annum, allowing one year for preparation. Lastly, in G. O. dated July 7th, 1871, No. 1,169-A, the free grant was extended from ten years to twenty-one years. A certain portion of the swamp to be fixed by the Collector, with the sanction of the Board to be reclaimed triennially, in default the grant to lapse to Government.

6. This is the last G. O. on the subject: the Bishop in his letter, dated October 3rd, 1871, (*vide* Board's Proceedings, No. 4,539, dated October 30th, 1871), attempted to obtain a modification of the former terms by allowing him forty years, and also permission to sell the work to any one able to undertake on the ground that the penalty of depriving him of the work done in case of failure, was too great. The Board however say that they are unwilling to trouble Government any further in the matter, and say that Government will not be disposed to shew any rigour in the enforcement of the penalty if it can be proved that the Bishop has done his best at every triennial inspection by the Collector.

7. As the case stands now, therefore, the terms on which the grant is given are rent-free for twenty-one years on condition of reclaiming a certain portion of the swamp every year to be fixed by the Collector with the sanction of the Board. I cannot find that any definite extent has been so fixed. When the term was ten years, the extent to be reclaimed was to be 100 acres allowing for the reclamation of the whole in ten years. As the term has been extended to twenty-one years, the whole ought to be reclaimed at the rate of 47 acres per annum.

8. As to what has actually been reclaimed, the District Engineer's letter shows that the extent of land which the Bishop has undertaken to reclaim is 1,595 acres, and the extent he has actually reclaimed in three-and-a-half years is about 13½ acres, though his operations have extended to about 81 acres; and the District Engineer calculates that it would at the present rate take 600 or 1,000 years to reclaim the whole 1,595 acres. The Bishop has not reclaimed a reasonable

extent, and I think, therefore, that it is clearly made out that under the terms on which the swamp was given, the grant lapses to Government, if they wish to exact the penalty, and it is for the Government to decide whether or not they shall claim the exaction of the penalty.

9. It seems to me imperative on the part of Government to resume the land in the interests of the harbour and the harbour works.

10. When the land was originally handed over to the Bishop, the harbour scheme had apparently not been taken up, and the effect upon these works was not adequately considered: the only professional opinion which appears to have been given was that of Lieutenant Dorward, who, in reply to the question of the Collector, May 8th, 1871, stated as his opinion that the reclamation will not injure the port because the amount of storage for tidal water taken away will be compensated by forcing the water to flow to a higher level in the river. This opinion has been falsified by results. The bar and the river have silted up since the water was excluded from this land. The bund which has been thrown up by the Bishop, excludes the tide from an area of ground about two square miles in extent, and prevents three million cubic yards of water from flowing out through the mouth of the harbour and scouring the bar.

11. I think the letters of the District and Executive Engineers prove beyond a doubt that this Reclamation scheme is most detrimental to the harbour works. As to the primary object for which the swamp was given to remove a cause of malaria from the town, the statistics do not shew any improvement in the health of the town, and I should be inclined to believe that a half reclaimed swamp would be more injurious than a swamp open to the tides.

12. Regarding compensation, I would ask the Government if they determine to resume the land, to allow him liberal compensation for the work he has done, and permission to retain so much of the swamp at the end farthest from the sea as may be found, on professional inspection, not to affect injuriously the flow of tidal water.

13. I will, on my return to Vizagapatam, if authorized by Government, determine in communication with the Bishop, the amount of compensation.

14. I wished to bring before Government the results of the late Survey of the harbour, and the opinion of the Engineers regarding the harbour works to be executed.

I have not yet received the letter from the District Engineer, but expect it shortly: I have, however, been unwilling to delay the submission of this letter to Government, for I think it of the greatest importance to the future success of the harbour that the land now given away to Bishop Tissot should be resumed.

15. If Mr. Parkes who is, I believe, at present in Madras, could find time to visit the port of Vizagapatam, he would be able to give the Government his opinion regarding the best kind of harbour, and I hope he may be able to visit it.

ENCLOSURE No. 1.

From Major J. BEATTY, R.E., District Engineer, Vizagapatam, to J. R. DANIAL, Esq.,
Acting Collector of Vizagapatam, dated Ramabhadrapuram, 24th December 1873,
No. 166A.

As requested in your letter No. 1,730, of 10th ultimo, I have the honour to furnish you

1. Mr. Nordmann's observations on injury done to the Port with information as to the effect produced by Bishop Tissot's bunds on the depth of water at the mouth of the Vizagapatam river, and I
2. Opinion of Master Attendant and boatmen. take the opportunity of making some general
3. Plan of Reclamations. remarks on the subject, which it seems to me has never yet received due consideration in all its bearings.

2. From the papers you lately sent me, I for the first time learnt the history of this Reclamation scheme, and the extent of land supposed to be affected. The survey operations lately carried out by Mr. Nordmann, have thrown additional light upon it.

3. The first grant to Bishop Tissot appears to have been made in G. O., No. 636 of 11th March 1868. He was then allowed to have 237 acres, for which he was to pay a quit-rent of Rupees 22, or at the rate of 1½ Annas per acre per annum.

4. In August 1868 the Bishop made a fresh application, on the ground that the first grant would be useless to him, if the whole of the contiguous swamp (said to be four times the extent of that already granted to him) were not added to it. He was allowed, according to G. O. No. 722, of 17th March 1869, to take 1000 acres more, for which he was to pay 88 Rupees a year; but the terms of the grant were that he was to have a year for preparation, apparently dating from 15th May 1869, and that after 15th May 1870, he was to reclaim 100 acres a year.

5. On the 8th September 1869 the Bishop again memorialized Government; and by G. O., No. 3,007, of 22nd November 1869, he was permitted to keep the land, free of assessment, for ten years from 15th May 1870, provided he reclaimed 100 acres a year.

6. Even these easy terms, however, did not satisfy him, for in April 1871, we find him making a new application; this time for an extension of the period of reclamation from ten to forty years. In G. O., No. 1,169, of 7th July 1871, the conditions were altered for the third time; he was granted 1,000 acres free of assessment for twenty-one years, but still required to reclaim a portion of the swamp annually, the extent of that portion to be fixed by the Collector.

7. The Bishop next applied on 3rd October 1871 for a re-consideration of the terms of the grant, but the Board of Revenue declined to trouble Government further, observing that it was not to be supposed Government would show any rigour in enforcing the penalty of resumption if it could be proved that the Bishop had *done his best*, at every triennial inspection by the Collector.

8. But none of these papers were communicated to the Public Works Department, and when I wrote my report of 1871, to accompany estimates for improving the mouth of the river, I was quite unaware that the scour produced by the ebbing tide off 2½ square miles of swamp had been permanently cut off. For in paragraph 9 of that report I wrote—

"In the present state of the river whatever tends to cut off or diminish the re-flow of tidal water from the swamp is a detriment to the scour at the river's mouth, and to the maintenance of a channel at the bar.

"I am, therefore, decidedly of opinion that further reclamations in the swamp should not be encouraged, at least until the mouth of the river has been improved."

Had I then known the extent of land *taken possession of* by the Bishop, I should have foretold, with confidence, what has since taken place.

9. It seems to me the great mistake in this matter was that of allowing the Bishop to have the land on condition of reclaiming so much of it every year, subsequently interpreted to mean "doing his best" in the opinion of the Collector. He should have submitted a survey and levels of the site, accompanied by plans and estimates, exhibiting the position and dimensions of the bunds, drainage channels, and sluices, fixed with reference to the levels, and specifying the time within which the works would be completed, or handed over to Government at a fair valuation according to the estimate.

10. There are several questions to be considered in connection with this reclamation scheme; for instance—

- (1.) Has Bishop Tissot made reasonable progress during the three-and-a-half years since 15th May 1870?
- (2.) What effect, if any, has this work had on the health of the town?
- (3.) What effect has it had on the mouth of the river?
- (4.) Should things be allowed to continue as they are, and if not, what changes are expedient?

11. What Bishop Tissot has actually done is to throw up a slender encircling bund and a few cross bunds to keep out the tide water. These are quite insufficient for the purpose, and I am told have been repeatedly breached, at one time by high tides, at another by the land freshes. He has also erected a few sluices, most inadequate for the safe discharge of the floods that break in upon him from the land and from the sea, and it seems that he also uses these

* Vide Mr. Nordmann's statement at page 3.

sluices, under some peculiar view of the best way to reclaim land, for swamping* the lower parts of the ground with sea-water and allowing it to stagnate.

12. The fact is the Bishop's works do not form an adequate protection against the tides, they are not sufficient to receive (if it were desirable) as into a tank the drainage of the Kylassa and Waltair hills; and there are literally no drainage works; for the few sluices in the bund have plainly been put there, and are used principally for its protection, and not for any purpose of draining and so reclaiming the land; which part of the work has evidently been left completely in the hands of Nature herself, unaided by any artificial works whatever. In short the Bishop's idea of the way to reclaim land seems to be, shut out the sea-water as cheaply as you can, mend your bund when it breaches, and leave Nature to do the rest.

13. Again, the survey of the port and backwater lately made shows that the Bishop's bunds prevent the tides flowing over about 1,614½ acres of swamp, or upwards of 2½ square miles.

† See plan at N. O. P. Q.

From this total, we must deduct Mr. Warfield's old farm† of 19.09 acres, and the balance of swamp which the Bishop has undertaken to reclaim is found to be about 1,595 acres. He has

‡ See plan at G. H. I.
§ And at E.

made a Coconut garden‡ of 11.75 acres, and has a bit of dry cultivation§ of 1.75 acres on the edge of the swamp near Nabobpeta. These 13½ acres may be considered the extent of land reclaimed in three and-a-half years.

14. In addition to this, 22½ acres have been twice ploughed, but nothing has yet been sown upon them; 35½ acres have been once ploughed but not sown; and 9.33 acres have been ploughed and planted or sown, but nothing has yet grown upon them. So that the Bishop's farming operations appear to have extended to about 81 acres, but he has only as yet been able to grow anything on 13½ acres. I cannot vouch for the strict accuracy of these figures, because my surveyors have not consulted the Bishop or his Assistants regarding the boundaries, and the survey was made during the rainy season when the swamp, as yet utterly unreclaimed, was in a most impassable state. But inquiries were made of any persons who happened to be on the spot, and appeared to possess a knowledge of these matters, and I believe the matters will be found approximately correct.*

15. At this rate, the Bishop would reclaim 155 acres in forty years, and he would be 410 years reclaiming 1,595 acres. But the fact is we cannot expect the work to progress in future even at the pitiful rate it has hitherto done, for the coconut tope and bit of dry cultivation are situated on the highest and best ground, at the extreme upper edge of the swamp, and the rate of progress during the second triennial period will probably be still more miserable, so that he would require 600 or 1,000 years to reclaim the whole 1,595 acres.

16. The only reasonable inference from all this is, either that the work is far beyond the power and means at the Bishop's disposal, and that he does not know what he is about, or that his intention is merely to hold the land (at the mercy of Government, if he cannot get it more completely into his power) and look for remuneration to selling it at high prices in an unreclaimed state, when the growth and increasing prosperity of the town creates the requisite demand. And there is no doubt that when Harbour works are carried out, the whole of that swamp will become exceedingly valuable. It is admirably adapted as a site for spoil banks, docks and warehouses, and eventually no doubt, as it becomes well raised by the materials dredged from the river and backwater, the town itself will extend over it.

17. Mr. Minchin promised that Dr. Tissot, would drain the swamp, which was a source of malaria, and that this highly philanthropic work would effect a great public benefit to the town of Vizagapatam and its vicinity, and again that it would be of the greatest utility to the town in a sanitary point of view. Mr. Melville further observes, the land in its present state is believed to be the cause of much of the sickness in the town, the effluvia from it sometimes being very offensive. The second question then to be considered is, if Bishop Tissot has not made much progress towards converting the swamp into pleasant gardens or fruitful fields, have his efforts at least been successful in producing a beneficial effect on the health of the town?

18. For an answer to this question I have, with the obliging permission of the Vice-President, made an examination of the records of the Municipality, and find that the Register of Deaths shows the following totals:—

Year.	From 1st December 1869 to 30th November 1873.	Percentage on a population of 32,000.
1869-70	732	2.3
1870-71	807	2.5
1871-72	1,436	4.5
1872-73	821	2.6
Mean rate of mortality, about 3 per cent.		

The great increase in 1871-72 was doubtless due to the high price of provisions in the early part of the year, caused by the failure of the north east monsoon in 1871, and the influx of starving poor from the country, and doubtless many feeble, old people, and sickly or delicate persons and children would fall victims at such a time to the want of sufficient nourishment. The other totals show a tolerably regular increase in number of deaths such as may simply be the result of increasing population.

As the number of deaths continues to increase in spite of the large expenditure by the Municipality on the cleansing and drainage of the town, I can see no reason to conclude that Bishop Tissot's reclamations have had the expected result of improving the climate of Vizagapatam.

It is even not impossible that the vigorous sanitary efforts of the Municipality would have sensibly affected the rate of mortality, if the malaria arising from the swamp had not been much increased by the half-measures of Bishop Tissot. A Reclamation scheme, worthy of the name, should effectually protect the land from an irruption of sea or river water, and from the drainage of the surrounding country, while it should also provide adequate means for getting rid of local rain-fall; the land would then cease to be a swamp and a source of malaria, even if not an acre were cultivated.

19. The further question therefore arises, if the Bishop's scheme is not likely to benefit Government or the town of Vizagapatam for many generations, and if no other public spirited individual or enterprising Company is prepared to take up the work in earnest, should things be allowed to continue in their present state? Of course, there is no doubt that any *bonâ fide* attempt to reclaim the swamp should be encouraged on the ground that the Medical men are, I believe, unanimously of opinion that if successful, it would be a great blessing to the inhabitants, and our present excellent Civil Surgeon, in his report, printed with G. O., No. 1,076 of 30th July 1873, observes:—

"I cannot help thinking that the swampy land lying to the west of the town must be productive of malaria which influences considerably the health of the town."

20. I hold, however, that there is now sufficient evidence to show that while no reasonable progress is being made in reclaiming the swamp, and no good effect produced on the public health, the reclamation should cease, because they are rapidly working the ruin of the port, and must eventually endanger the safety of the town itself.

For if the present mouth of the river be once well choked with sand before the next heavy land freshes can burst the barrier, the whole swamp will be submerged, the backwater turned into a lake, and all the lower part of the town inundated.

I have been told that there is a tradition among the old inhabitants of Vizagapatam that the river's mouth was at a former period, how long since is not known, in the centre of the present town, and would not be difficult to make it break through there once more.

21. In my report, above mentioned, I quoted from Rankine as follows:—

"The prevailing tendency of the tides like that of the waves, is to choke and fill up estuaries, river channels, and other inlets."

"This tendency of the tidal and littoral currents has been largely aided since 1869 by the diminution of the scour from the backwater caused by Bishop Tissot's bunds, the effects of which have now been ascertained."

"On the 4th December 1869, about six weeks after the heavy freshes of the north east monsoon, Captain Waters found eleven feet of water on the bar." In December 1873, there is not more than six-and-half feet of water at the bar. It is therefore pretty clear that the bar, which is the place where the largest amount of silting would naturally occur, has been silted up about four-and-half feet. The Master Attendant's chart of soundings which is the only old record we have to refer to regarding the part of the river, does not show clearly the general state of the bar in 1869, but it exhibits most distinctly what was the depth of water from that place up the river for a considerable distance. Hence we find, by comparing the soundings of 1869 with those of 1873, that the river's mouth has been silted up three feet, as far as the eastern or Yarada ferry. Further up the river, three quarters of a mile from the mouth, at the western or Thoppa Rewu ferry, a careful section was taken in 1868 by this department in connection with the Backwater Bridge project, and hence we have the means of accurately testing the damage done there, and we find, as might be expected, so far from the bar, that there is now two feet less water than there was in 1868.

22. These figures ($4\frac{1}{2}$, 3', 2') however, do not represent the full extent of the mischief done to the river's mouth by Bishop Tissot's unhappy experiment. For the year 1870 was marked by its extraordinary floods, which proved so disastrous to the Bishop's bunds, when 13.4 inches of rain were registered at the Vizagapatam Observatory in the four days, 21st to 24th October inclusive, and the Reclamation works had to be begun afresh. These floods must have had a powerful scouring effect on the bar, such as does not occur more than once in twenty years, and it was probably cleared to a depth of fifteen feet or more below low water of springs. Unfortunately no soundings were then taken, or we should have been able to estimate more correctly the rate at which the choking up process has since been proceeding, which has so alarmed the native boatmen of the port. This much at least is certain, that the injury done dates from December 1870, when the Bishop began to re-construct his bunds, and there is good reason to believe that the bar has since been rising at an average rate of two feet per annum. It should also be remembered, that as the bar rises, the scour must diminish, and the natural tendency of the littoral current to choke and fill up the river channel must be vastly augmented.

23. Hitherto the place has been noted as a first class port for native crafts of 50 to 250 tons, on account of its excellent docks, mentioned in Carmichel's Manual of the district. At the present rate of silting, it seems highly probable that the mouth of the river will be completely choked with sand within a very few years, and the ruin of the port completed.

24. I send you some remarks on the subject by Mr. Nordmann, who has given the matter great attention. I do not agree with him that any Reclamation scheme in that swamp is altogether objectionable. But I do protest against Bishop Tissot's method of proceeding about it,

which is doing more harm than good. And I do think that one thing or other should be done, if the mouth of the river is to be kept open; we should either breach the bunds to admit of the sea flowing as formerly over the swamp and so restore the old scour, or the protective works for the river's mouth should be at once begun. If Reclamation works in any form be continued, river improvements become essentially necessary to the safety of the town and port.

I also send you the opinion of the Master Attendant and the Native boatmen, which you will observe entirely coincides with my own.

25. If we have a failure of the north-east monsoon in 1874, such as occurred in 1868 and 1871, the choking up process will be immensely accelerated, and in the spring of 1875, we may see the river's mouth completely closed; if on the other hand, 1874 should be a year of great floods, such as those of 1870, the final and inevitable result of leaving things in their present state may be delayed for a few years.

26. Government should now step in and put a stop to what is going on until the Harbour and Reclamation projects, so intimately connected with each other, can be undertaken simultaneously and vigorously prosecuted to completion. If Government be not prepared to undertake these works, a public Company, with sufficient means, should be invited to do it, and given every encouragement. But whatever is done, the present arrangement with the Bishop should be brought to a close forthwith; this is indispensable both in the interests of Government and the inhabitants of the town of Vizagapatam.

27. In terminating the present unfortunate engagement with the Bishop, which I feel certain would have never been permitted had the Superintending Engineer been consulted, he will of course be dealt with liberally. I beg to suggest that he be allowed as much land as he could reclaim in the balance of the term of twenty-one years already agreed upon, about 67.5 acres in addition to his cocoanut garden. Warfield's old farm, and his own bit of dry cultivation near Nabobpet, making in all about 100 acres. This should be given him along the upper edge of the swamps farthest from the river's mouth and the backwater, and include his present cocoanut plantation. It might be given him, free of assessment, and without conditions, up to 15th May 1891, together with payment for his bunds and sluices at a fair valuation. If he entered on the work, as I suppose he did with an honest intention of accomplishing it, he must have long since found it far beyond his powers, and be glad to withdraw from it on such favourable terms.

(True Copy.)

(Signed) J. F. SNAITH,
Acting Principal Assistant,
for Acting Collector.

ENCLOSURE No. 2.

Extract from a Report by Mr. K. F. Nordmann, Executive Engineer, dated 23rd October 1873.

In the salt swamp we possess the natural means of scouring the river mouth and the bar; and the natural facilities thus offered can be very largely increased by a small expenditure. The salt swamp may be considered the heart and soul of Vizagapatam harbour. If the salt swamp were entirely shut against the access of the tide, the river mouth and the backwater must silt up, owing to the cessation of the re-flow of that tide water which now, unaided by art, keeps the harbour and the channel over the bar at certain depths. But unfortunately one-half of that valuable swamp has been alienated from the good purpose for which nature seems to have specially designed it. A bund has been thrown up to keep the tide out of an area of upwards of two square miles of the best part of the swamp, in order to reclaim land for cultivation, habitations, etc. This has only been done, I believe, in the last two or three years. It was done unostentatiously; permission was apparently easily obtained; no doubt, the intentions of those offering or asking to reclaim the swamp seemed beneficent. But sight was lost altogether of the claims of Vizagapatam

as a port; and it seems never to have been considered for a moment that this Reclamation scheme aimed, though unconsciously, a death blow at the shipping interest of the place. Calculating the average rise of the tide which should take place on that part of the swamp enclosed by the bund at only one foot, six inches (but it is more, three or four feet in many places), there are three million cubic yards of water prevented from rushing out to scour the river and the bar twice in

every twenty-four hours.* As you have observed before, whatever tends to diminish the re-flow of tidal water from the swamp, is a

detriment to the scour at the river's mouth, and to the maintenance of a deep channel over the bar.

2. I think therefore that, not only should further reclamations in the swamp be stopped, but the large area already partly reclaimed should be taken back by the Government as soon as possible; liberal compensation being paid, if necessary. The longer this resuscitation of the swamp is delayed, the greater will be the compensation become that must eventually be paid if Vizagapatam is ever to be made a harbour of such importance as it may reasonably lay claim to, on the ground of its exceptional natural advantages and increasing trade. The work so far done in reclaiming the swamp, though it has already done palpable injury to the harbour, does not represent a great money value. A slender bund has been thrown up, with its crest two or three feet above high water, to keep the tide out of the enclosed part. A few sluices have been inserted to let the drainage out, as well as to admit occasionally a certain quantity of tide water for the purpose of letting it stagnate in the deeper parts of the swamp in order to silt these up.

3. The effect of the reclamation so far accomplished, although it has only been at work a short time, is plainly visible; and if it proceeds at the rate it has done, and is not speedily checked, it is hard to say where the mischief that is being wrought will end. Among the boat people, fishermen and other inhabitants of the town, there is a strong conviction about the effect of reclamation. It is distinctly maintained by them that spots are now high and dry at low water that formerly were deeper; and they ascribe, with sound natural instinct, the cause to the reclamation bund, and date the deterioration and silting up of the harbour from the erection of the bund. But we have more precise data to prove the deterioration that has taken place. There are sections taken of the backwater in 1868 before the bund was made, along some of the same lines on which I have just taken soundings. From these sections it appears that there were depths of 28' 27' and 26' of water in mid-stream at the upper, or Theppa River Ferry, whereas my greatest soundings now show only 25 feet, and that in one single instance. Further on, a line of section from the "Rocky Island" to the northern shore the depths shown on the old section between the deep channel and the northern shore are 13', 10', 9', 8', 7', 5', 3', 2', while my late soundings only shew 5', 3', 2', 1'. The deep channel itself which is close to the Island, seems to have been scoured out but to the north of it the bottom has been raised to an alarming extent. Again on a line of section midway between the two previous ones, the old section shows 23 depth lines varying from 10' to 7', with a few side depths of 5' 4', and 3', while on my chart of soundings there are only two depths of 8' the remainder varying from 6' to 1' on the southern bank, while a large strip near the northern bank is dry at low water. At the upper ferry, near the landing place, the ferry boat can no longer be used at half ebb, because there is not sufficient depth; this was not the case formerly; and a little to the south west of the landing place where my soundings shew 0, there is a sand bank steadily forming which was not in existence in former years; such facts speak for themselves.

(True Extract.)

(Signed)

J. BEATTY, Major, R.E.,
District Engineer.

(True copy.)

(Signed)

J. H. SNAITH,
Ag. Prinl. Asst. for Acting Collector.

ENCLOSURE No. 3.

Extract from a letter of the Master Attendant of Vizagapatam, dated 15th November 1873, giving his opinion and that of the native boatmen on the silting up of the river's mouth.

In my opinion the bunding up of the swamp and the bund across the river opposite the magazine is the cause of the river's mouth having less water on it; the water which used to cover the swamp as well as the water which used to go round Ross Hill and past the Magazine where the bund runs across the river now stops it from flowing any further, is the cause of the mouth of the river being silted up. There is not the same quantity of water coming into the river as formerly, therefore the scour is not so great at ebb tide to keep the bar open as formerly before the bunds were raised.

2. After receiving your letter I mustered about thirty or forty Tindals, and made enquiries of them; what was their opinion why the water on the bar as well as in the river was not as before; the only answer was from one and all that the flow of water into the river was not so great or strong since the bunds have been allowed to be made, and the water has not the same space to cover as before, therefore the tides are not so strong either at ebb or flood. I should here state these remarks have been made to me several times by the boatmen that the tides do not run so strong as formerly.

(True Extract.)

(Signed)

J. BEATTY, Major, R.E.,
District Engineer.

(True Copy.)

(Signed)

J. H. SNAITH,
Ag. Prinl. Asst., for Acting Collector.

ENCLOSURE No. 4.—Plan.

The Board agree with the Collector that it is of supreme importance to the port that Dr. Tissot's attempts to reclaim the swamp should be abandoned, but they see difficulties in the way of resuming the grant. The Collector will accordingly communicate with Dr. Tissot, informing him of the views expressed by the Engineers, and accepted by the Board, and ascertain on what terms Dr. Tissot will consent to give up the swamp.

2. A copy of these Proceedings will be submitted for the information of Government.
(True Copies and Extract.)

To the Acting Secretary to Government, Revenue Department,
,, the Acting Collector of Vizagapatam, with Plan, to be returned.

Secretary.

Ed. G. A. Turton.

C25handed 174-1802

117

So. 11-567-8 May 74

5-11 March 1874 No. 159-5
- 2 Feb 1874 - 36-37
- 17 March 1874 - 427-29
- 22 March 1874 - 530-41
- 22 March 1874 - 235-51
- 7 April 1874 - 64-15
- 15 April 1874 - 100-100
15-12-92

Received

MARCH.
No. 527.

Swamp land—to west of town of Vizagapatam, granted to Bishop Tissot for reclamation. Concurrence expressed with Collector that reclamation is objectionable. Collector to ascertain on what terms Dr. Tissot will consent to give up the swamp.

PROCEEDINGS, 10TH MARCH 1874, No. 527.

Encl. 2

Board of Revenue,
MADRAS.
No 866

Resumed 1874. Defile

Recd 11/7/74

No. 791.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 9th April 1874.

Read again Board's Proceedings, dated 10th March 1874, No. 527.

Read also the following letter from J. R. DANIEL, Esq., Acting Collector of Vizagapatam, to J. GROSE, Esq., Secretary to the Board of Revenue, dated 17th February 1874, No. 192:—

With reference to my letter, dated January 20th, No. 56, I have the honour to forward, at his own request, a copy of the Memorandum written by the Revd. P. Richard regarding the reclamation of the swamp at the mouth of the river. The Right Revd. Dr. Tissot is absent, and Mr. Richard has drawn this upon his behalf.

2. I do not propose to make any remarks upon it at present; there are two questions to be considered: whether the reclamation scheme is injurious to the harbour, and whether the land should be resumed or not by the Government. I am waiting for the return of Bishop Tissot when I shall be able to inspect with him personally what has been done, and I shall be in a position to state the exact nature of the reclamation.

ENCLOSURE No. 1

MEMORANDUM of observations in reference to the letter of the District Engineer, Vizagapatam, to the Collector of Vizagapatam of 24th December 1873, No. 116A, forwarded to the address of the Right Revd. Dr. Tissot, with letter from Acting Principal Assistant for Collector, dated 20th January 1874.

The District Engineer desires that the swamp lands granted to Dr. Tissot in Vizagapatam, finally under G. O. of 7th July 1871, No. 1,169A., should be resumed at once, with certain limitations suggested in paragraph 27 of his letter.

II.—He seems to complain that the said Government Order, and all other papers connected with the grant, were never communicated to the Department Public Works; asserts that the engagement of the Government with the Bishop, which he terms unfortunate, would never have been permitted had the Superintending Engineer been consulted; remarks that it was attended with a "great mistake;" and then indulges in invectives and insinuations against the Bishop.

III.—He labours to show how the Government could break their engagement, and to induce them to do it.

a. He struggles to establish that the main object which, in his opinion, induced the grant, is not yet secured.

b. And foretells alarming disadvantages in a continuance of the engagement.

IV.—The District Engineer, however, cannot help admitting that the object which influenced the grant is good and can be attained, and when attainable, should over-ride all other considerations. But he thinks such object, according to his estimation of the present state of things reported, will take a long time to attain, and therefore, although the alarming disadvantages he foretells could, he says, otherwise be guarded against, he requires Government to break their engagement at once.

1. In reference to I., Government cannot yield to the desire of the District Engineer, because, *inter alia*, from the date of the Government Order, it will be three years only in July

27P

27
opinion of the swamp lands in question—"that if the whole could be reclaimed a great public benefit would be conferred, and even if this could be done in part some benefit would accrue."

From this it is clear that the reclamation works should not be stopped even for a single day, whilst prompt measures should be taken to remove the nuisance above alluded to.

b.—If it be borne in mind that what is termed the Vizagapatam River in the 1st paragraph of District Engineer's letter is a tidal estuary, the water from the sea ebbing in and out, Mr. Richard is of opinion it would be difficult to understand how "Bishop Tissot's Bunds (which, according to the District Engineer,* are quite insufficient for the purpose of keeping out the tide water, the whole swamp† being during

* District Engineer's letter, paragraph 11.
† Paragraph 14.

the survey impassable with water) could possibly interfere with the depth of water anywhere in the stream. One would certainly incline to the belief, considering the immense open tract country, something like ten or twelve square miles forming the *waterspread* of the stream, that the depth of the stream could certainly never be affected, and, if at all, to the extent represented by the District Engineer. There is nothing to interfere with the scouring effects of the land freshes. It is evident that the comparison of soundings, upon which the District Engineer relies, is not satisfactory even as reported. It appears, Mr. Waters found eleven feet of water about six weeks after the freshes of the monsoons in 1869, but it does not appear how long after the freshes in 1873 he found only six and a half feet. What were the soundings on the bar before the laying of the bunds? Mr. Waters was not then in Vizagapatam. Besides it is not easy to take soundings on the bar, and it is less easy to imagine how Mr. Waters would make sure of sounding each time in the very same place. Then, in reference to the soundings at the Western Thepparevu Ferry, the drift of this remark would apply with equal if not greater force, especially as it is not affirmed that the different soundings were taken at the same time of year and tide and in the same circumstances.

And even assuming that any part of the estuary is really less deep now than it was, could the District Engineer assure Government that such change is not temporary and cannot be due to any other cause?

Moreover, Mr. Richard would make bold to say that the inundation, the District Engineer would apprehend, is utterly impossible; for the simple reason, *inter alia*, that the mouth of the river cannot be well choked with sand before the next heavy land freshes can burst the barrier, which, however, the Engineer lays down as a necessary condition.

Mr. Richard has never heard of the tradition alluded to by the District Engineer, which places the river's mouth in the centre of the present town; but he has been told for a positive fact that not long since the sea was very far away, when people were actually able to walk up to the *Dolphin's Nose*.

14. But the District Engineer affirms:—"Of course there is no doubt that any *bona fide* attempt to reclaim the swamp should be encouraged." In such case, however, all the disadvantages he alleges must occur. Then he thinks that if the mouth of the river is to be kept open "we should either breach the bunds to admit of the sea flowing as formerly over the swamp," or "the protection works for the river's mouth should at once begin."

Mr. Richard would beg to affirm most emphatically that the present effort of Dr. Tissot is indeed a *bona fide* attempt. Should they therefore be satisfied on indisputable authority that the possible disadvantages are really such as are represented by the District Engineer, Government will sooner sanction the river improvements, if required, rather than stop a work which is

28
31. P. X
decidedly necessary for the sanitation of the town, and break faith with Dr. Tissot, *that is*, with the orphans and poor of the district.

VIZAGAPATAM,
11th February 1874.

(Signed) P. RICHARD,
Catholic Clergyman and Manager
of the Catholic Orphanage of Vizagapatam.

(True Copy.)

(Signed) J. R. DANIEL,
Acting Collector.

These papers refer to the necessity of resuming the swamp which Dr. Tissot is reclaiming to prevent great injury to the Vizagapatam Harbour.

2. On the representations of the Collector and the District Engineer, the Board came to the conclusion that the attempts to reclaim the swamp must be stopped, but they believe the only way in which this can be done is to compromise with Dr. Tissot or to take the land under the Land Acquisition Act.

3. After reading the Revd. Mr. Richard's letter, the Board are not altogether satisfied as to whether the reclamation scheme must be put an end to, and they resolve to submit these papers to Government in order that the opinions of the Sanitary Commissioner and the Inspecting Engineer for Ports and Communications may be obtained, if possible, after a personal inspection of the ground.

4. The matter is one which demands immediate inquiry.

(True Copies and Extract.)

J. G. Gole
Secretary.

To the Acting Secretary to Government, Revenue Department.
,, the Acting Collector of Vizagapatam.

Exd. W. H. French.

14/11/74 1874
 To the Hon. Secy
 of the
 Public Works
 Dept.
 A letter from the
 Secy of the
 Public Works
 dated 20 January 1874
 36.

PLAN

of Tisso's Reclamations

9122

X

901, 1871, 1874, 1875

13-12-74

1284-
 1874.

Board of Revenue,
 MADRAS.

PROCEEDINGS, 9TH APRIL 1874, No. 791.

29/4/74
 Encl.

Received

18/12/74

APRIL

No. 791.

Swamp Land—to west of town of Vizagapa-
 tam, granted to Bishop Tissot for reclamation. —
 Papers referring to necessity of resuming — in
 order to prevent alleged injury to Vizagapattin
 Harbour, submitted to Government, with recom-
 mendation that opinions of Sanitary Commis-
 sioner and Inspecting Engineer for Ports and
 Communications may be obtained.

10713

S.O. 1874-5 May 1874

1. I have not before me the Govt orders in which the several concessions made by Govt to Dr. Tissot were conveyed; but the result, as set forth in Mr. Daniel's letter of 10th March 1874 and Major Beattie's letter, enclosure No. 1, appears to be that Dr. Tissot holds 1000 acres free of assessment for 21 years, but is bound to reclaim a portion of the Swamp triennially, the amount to be settled by the Collector; in default of such portion being re-claimed the grant to lapse to Government. No definite amount appears to have been fixed, (para 7 of Mr. Daniel's letter,) and therefore the Bishop may contend that, however

12
12
Opinion

35. P

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Opinion

35.9

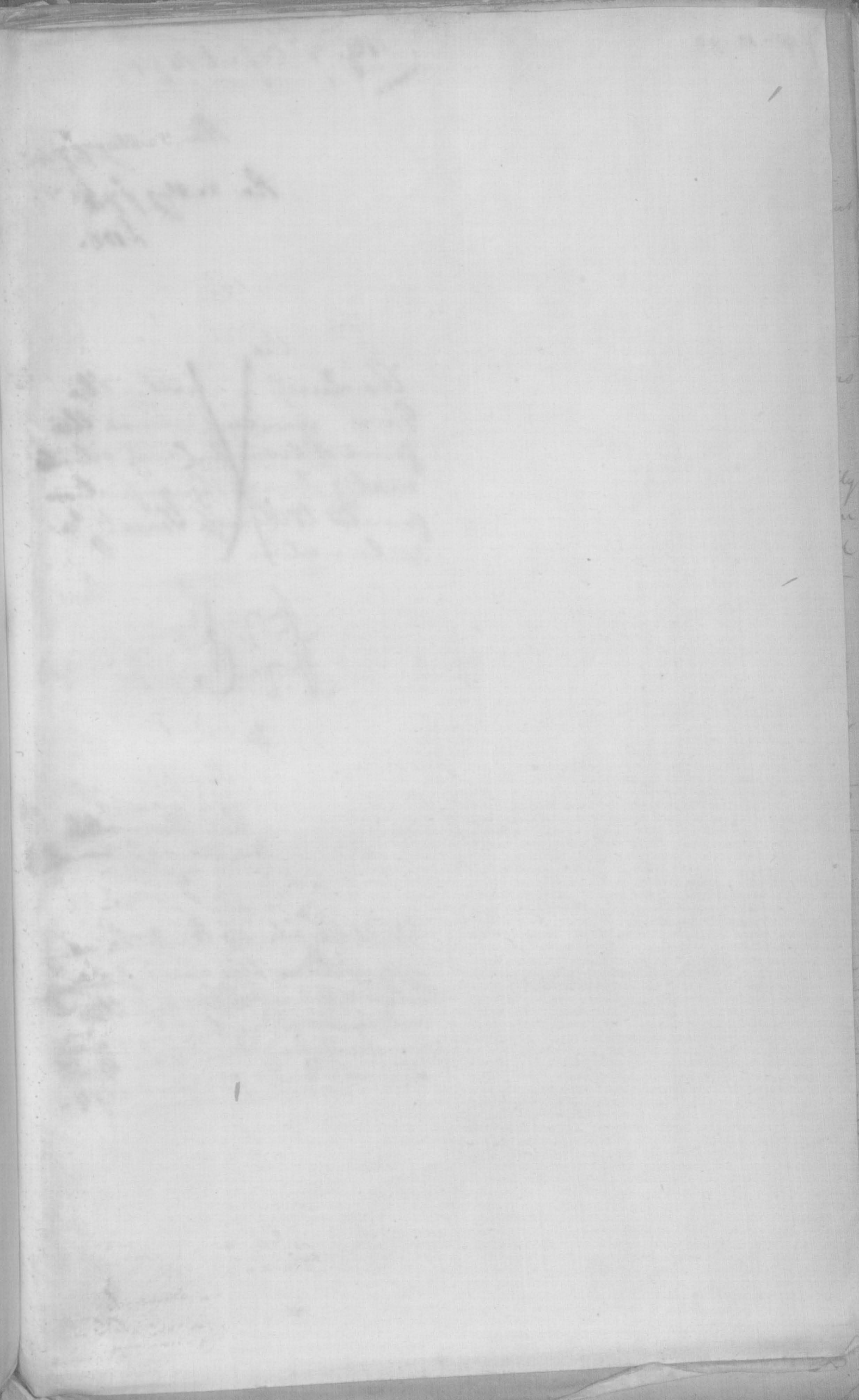
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however small the portion reclaimed by him may be, the contingency on which the grant was to lapse, viz, his failure to reclaim the amount prescribed by the Collector at a triennial inspection, has not occurred. The position of the Bishop is further strengthened by the order of the Board of Revenue, 30th October 1871, upon the Bishop's petition for still more indulgent terms: this order must certainly be taken as indicating that the penalty of resumption would not be enforced if at a triennial inspection, it appeared that the Bishop "had done his best."

2. Notwithstanding the above considerations the circumstances appear to me such as to enable
Gov^t

3. In case, however, of Dr. Lissot
choosing to object, I think the
best course would be to tender
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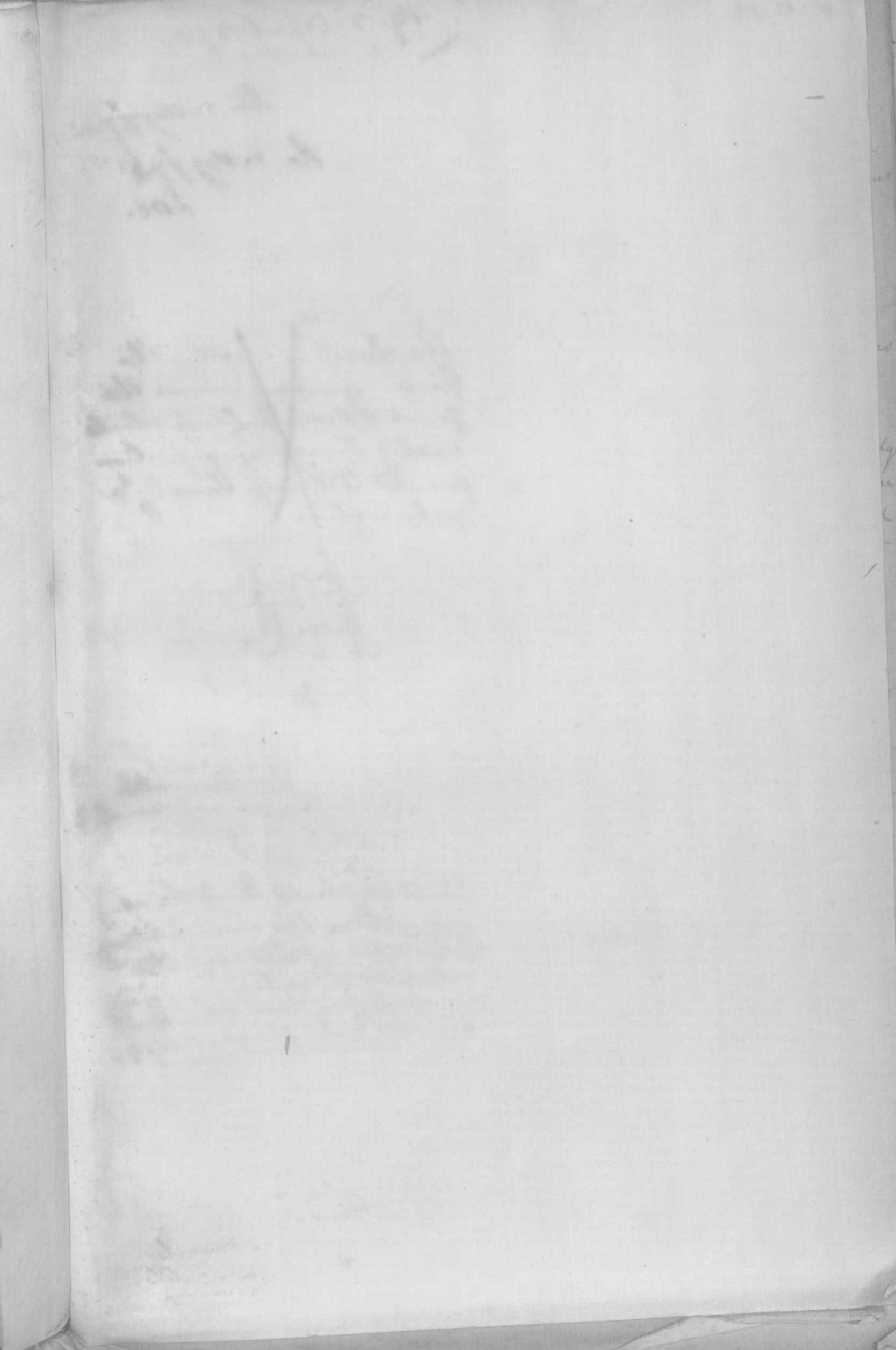


4218



Recd
J. C. 8 May 1874 No. 567.

...



14. 7th April 1874

Re 2 May 74
1801.

Re
The Direction respecting the
Government can resume the
grant of Swamp Land situated
west of Town of Vagayapatam
granted to Bishop Tissot for
reclamation.

A.V.C.

10. 4. 74

The Honorable
Mr. Advocate General.

Will be pleased to advise as
requested in the accompanying
Demi Official letter of the
acting Secretary to Government
Revenue Department to the Govt.
Secretary dated 1st April 1874.

Pachard
Government Secretary

Opinion

5th P

1. I have not before me the Government Orders in which the several Concessions made by Government to Dr. Tissot were conveyed; but the result, as set forth in Mr. Daniels letter of 10th March 1874 and Major Beattie's letter enclosure No. 1 appears to be that Dr. Tissot holds 1000 acres free of assessment for 21 years, but is bound to reclaim a portion of the Swamp triennially the amount to be settled by the Collector in default of such portion being reclaimed the grant to lapse to Government. No definite amount appears to have been fixed (para 7 of Mr. Daniels letter) and therefore the Bishop may contend that however small the portion reclaimed by him may be the contingency on which the grant was to lapse, viz. his failure to reclaim the amount prescribed by the Collector at a triennial inspection, has not occurred. The position of the Bishop is further strengthened by the order of the Board of Revenue 30 October 1871 upon the Bishops petition for still more indulgent terms: this order must certainly be taken as indicating that the penalty of resumption would not be enforced if at a triennial inspection it appeared that the Bishop had done his best.

2. Notwithstanding the above consideration the circumstances appear to me such as to enable Government with safety to cancel the

because the Collector and Board of Revenue might insist on an amount of reclamation which the grantee could not effect; and I have no doubt that the Court would uphold the Government in its cancellation of a concession, made in total ignorance of the material facts of the case which has never been properly carried out by the grantee and which now proves fatal to the very interests which grantee and grantee alike had in view at the time of its being made.

/Signed/ H. S. Cunningham
Advocate General
9.4.74

(True Copy)
H. G. Richard
Government Solicitor

the grant Dr. Tissot has already been informed of the reasons which lead Government to desire its cancellation. As his position throughout has been that his reclamation scheme is, before all a philanthropic one it is hardly probable that he will object to its abandonment now that its disastrous results have been made apparent. All that he can with decency demand is compensation for money actually spent labor bestowed and for crops, groves or other increment of a like nature - owing to his exertions.

3. In case, however of Dr. Tissot choosing to object I think the best course would be to tender him a fair compensation and inform him that it has been found necessary to cancel the grant. It might be pointed out to him that his efforts during the last 3 1/2 years have satisfactorily shown that the task which he has undertaken is one entirely beyond his powers, and that instead of the reclamation proceeding at the rate of 100 acres per annum as originally contemplated, only 13 1/2 acres have been reclaimed, and only 8 acres have been operated upon at all. The indulgence, which the Government might under other circumstances have been disposed to show, is precluded by the discovery that the work in question is not only useless but absolutely fraught with ruin to the Town and Harbors.

4. If Dr. Tissot is still unconvinced I think he ^{may be} safely left to do his worst. His grant clearly is of no pecuniary value -

Confidential

No. 198.

57.8

Madras 11 April 1874.

From,

H. C. Prichard,
Government Solicitor,
Madras.

To,

C. G. Master Esq^r,
Acting Secretary to Government
Revenue Department,
Ootacamund.

Sir,

I have the honor to acknowledge the receipt of your letter of the 1st instant together with its enclosures, requesting the Advocate General's Opinion as to whether Government can resume the grant of Swamp land situated west of Town of Vizagapatam granted to Bishop Tissot for reclamation.

2. I submitted the matter for the consideration of the Advocate General and I now forward herewith a copy of his Opinion and return the enclosures which accompanied your letter under acknowledgment.

I have the honor to be,
Sir,

Your most Obedient Servant,
H. C. Prichard
Government Solicitor

Recd
11/1/74

Enclosure in letter from
the Government Solicitor
regarding the reclamation of
Swamp land, dated 11/1/74.

Pls. 178 May/74
In 13 24/10/74.

65. P

Memo.

11th April 1874. No 198.

20th April 1874

61. P

Dear Sir,

I am directed to forward, confidentially, for the opinion of the Advocate General the accompanying Boards Proceedings dated 10th March 1874. No 527, also Boards Proceedings 30 Oct 1871. No 4539.

The question which the Government wish to put to Mr. Cunningham is whether they can resume the grant under the circumstances reported. The last order on the subject (referred to in para 5 of the (collective letter) left the extent of the annual (reclamation) unfixed. I am, Sir,

S^d/C. G. Master
To the Govt Secy. As Secy. Asst

I add that any form of compensation is favorably considered.
2/4

20th April

30/4

The Advocate General now sends the opinion which the Government desired to have before them on the question whether they could resume the grant of Swamp lands to Bishop Sicut. Vizagapatam the circumstances connected with which are fully detailed in Boards Proceedings 10th March 1874 No 527.

Mr. Cunningham says "the circumstances appear to me such as to enable

13-12-72

Dec: 1874. Duple

1874. No 1171

The Government desire to know the effect of the proposed Revenue Department.

Dated 11th April 1874

11th April 1874. No 1171

There is a copy of the Advocate General's opinion relative to the proposed Revenue Department. It is a copy of the opinion of the Advocate General, dated 10th March 1874. It is a copy of the opinion of the Advocate General, dated 10th March 1874. It is a copy of the opinion of the Advocate General, dated 10th March 1874.

Ind. to Adv.

No 567-8 May 1874

107 J.
RC 22 RC 23
RC 24

65. R

Memo.

Read the following letter from Govt. Solicitor relative to the resumption of the Swamp land granted to Bishop Tissot at Vizagapatam.

H.C. 11th April 1874. No 198.

The Advocate General now sends the opinion which the Government desired to have before them on the question whether they could resume the grant of Swamp made to Bishop Tissot at Vizagapatam the circumstances connected with which are fully detailed in Boards Proceedings 10th March 1874 No. 527.

M^r. Cunningham says "the circumstances appear to me such as to enable

To follow the advice & resume the grant - The circumstances are such as to lead me to think that any fair claim to compensation will be favorably considered
27/4 1874

108 25/4
No 30/4

Copy of the letter from the Advocate General to the Government dated 11th April 1874. The letter is in the file of the Board of Revenue. The letter is in the file of the Board of Revenue. The letter is in the file of the Board of Revenue.

108 25/4 - 8 May 74

107 J.
R 14 May 74 R 13 R 8
228 April 74 R 14 R 14

Memorandum
 Description of swamp
 granted to Bishop
 of Maryland.

C. No. 866.

From Board of Revenue
 Dated 10 March 1874.

FOR ORDER

The reports from the Collector and District & Executive Engineers are conclusive as to the damage done to the Reclamation works so far as they have gone and it is finally clear that the grantee has not been able to carry out his agreement with Govt. He has been in possession four years. The last order (S.O. 7-1 July 1871 No. 1) was that "acertain portion of the swamp - 566 acres - by the Collector with the sanction of the Board, to be reclaimed annually; to lapse to the Govt. At the rate named in paragraph 7 of Mr. Daniel's present letter - 47 acres per annum. The Bishop has reclaimed 188 acres whereas the extent of actually reclaimed is

R 1st May 1874
 C 22nd April 1874 R 24th RC 24th

13 1/2 acres tho' his operations have extended over 81 acres.

2 It is to be noted that in passing the order of 22 Nov 1869 No 300 of H. E. Lord Napier ~~not~~ pointed out as a reason for limiting the period of consideration of assessment that the swamp "might become valuable property."

3 There appears to be a difference of opinion between the District & Executive Engineers as to the ultimate necessity of retaining the swamp in its present condition. Capt Beatty looks forward to it being covered with docks & ware houses. On the other hand regards it as the heart and soul of the Vizagapatnam Harbour.

CU
No final order have yet been passed about the formation of a harbour at Vizag. merely a survey has been sanctioned at a cost of 1600 Rs or so - CU

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He must assist
for the
the
Ch. 7 are well
the locality and
much he will
bring the
meeting the
ft. Alexander - who
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cannot - being
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seems not to
first. If a
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private individuals
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support the
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Revenue Department

N. 567

7319

Proceedings of the Madras Government
Under date the 8th May 1874.

Read the following papers.

Pro. Board of Revenue, expressing
concurrence with Collector of Vizagapatam
that reclamation of Swamp land to
west of town of Vizagapatam, granted
to Bishop Tiesot, is objectionable.

N.E. 10 March 1874 N. 527.

Letter from the Government Solicitor
forwarding Advocate General's opinion
relative to the above.

N.E. 11 April 74 N. 198.

Pro. Board of Revenue, submitting
papers referring to necessity of
resuming Swamp land granted to
Bishop Tiesot and recommending
that opinions of Sanitary Commis-
sioners and Inspecting Engineers
for Ports and Communications may
be obtained.

N.E. 9 April 74 N. 791.

The reports from the
Collector and District and
Executive Engineers contained
in the first Proceedings above
recorded are conclusive as to
the damage done to the
Vizagapatam River by the
reclamation

115

4/5

MR 6/5

Proceedings of the Madras Government.
Under date the 8th May 1874.

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Letter from the Government Solicitor forwarding Advocate General's opinion relative to the above. } H.E. 11 April 74 N. 198.

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1874
4/5
H.E. 6/5

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Mr. Darnley's present letter - 47
acres per annum - the Bishop
should have reclaimed 188 acres,
whereas the extent actually re-
claimed is 13 1/2 acres though
his operations have extended
over 81 acres.

2. The Government have
taken the opinion of the Advocate
General on the question whether
they can resume the grant
under

Note. The subsequent Proceedings
of the Board of Revenue dated
9 April 1874 N^o 791 (the third paper
recorded above) were received sub-
sequent to the circulation of
Memo: on the Advocate General's
opinion. This paper was also
sent round subsequently, but
may have escaped observation,
in which case, attention is invited
to it.

under the circumstances stated
and in accordance with the
advice which he has given, they
resolve to instruct the Board
of Revenue to inform D. J. J. J.
that the grant is cancelled.

3. Any fair claim to
compensation will be favorably
considered.

Yours
J. J. J.

14 To the W^d of Rev Secy 19 May/74
4. For Solicitor
To the Public Works Depto:-

107-102

76

p

29
Description of some plants
in the region, given to
St. Louis population.

1874

1874

66