GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From the Consulting Engineer for Railways, dated Madras, 15th March 1890, No. 191.

From the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 12th March 1890, No. 6848/276.

I have the honor to submit, for the consideration of Government, a letter from the Board of Directors of this Company embodying their views on the subject of the incidence of the cost of the extra waterway at $\frac{291}{18\text{-}19}$, South West Line, rendered necessary by the condition of the Nilambúr tank. The facts bearing upon the case have been very fully dealt with in Proceedings of Government and in correspondence, and I enclose for convenient reference a *résumé* of the more important part of the correspondence on the subject recorded in this office.

ENCLOSURES.

From the Secretary, Madras Railway Company, to the Agent and Manager, Madras Railway Company, dated 61, New Broad Street, London, 24th January 1890, No. 826.

Nilambúr Tank.

I have submitted to the Board your letter No. 1914, on the subject of the incidence of the cost of the extra waterway at $\frac{291}{18\text{-}19}$, South West Line, together with the *résumé* of the correspondence recorded in your office in connection with the Nilambúr tank.

2. The question now under consideration differs entirely from that of the Telangai tank, regarding which the orders of the Board were conveyed to you in their letter No. 814, dated 31st May last, because the then existing requirements in the present case were fully provided for at the time the railway was constructed.

3. The conditions which then existed as regards the regulation of the discharge of water from the Nilambúr tank have been entirely altered through the action of the Government in the alteration of the form of the bund, and the final abandonment of the tank. It has now become necessary, in order to carry off the drainage water, the course of which has been completely changed, to provide additional waterway at the two-arched bridge (15 feet spans), in the 291st mile, while the three-arched bridge, of similar spans, in the 292nd mile, has become partially or wholly useless.

4. In these circumstances it appears to the Board quite clear that the cost of the provision of the extra waterway in question should be borne by the Government and not by the Company, and it seems equally apparent that for a time the Madras Government fully recognized their responsibility with respect to the apportionment of the drainage water to the respective capacities of the railway bridges.

5. The equitable adjustment of charges in a case of this nature seems to the Board to be contemplated and provided for in the clause of the draft Railway bill quoted by the Agent. The Board trust that this matter may still be capable of adjustment with the Government in India, and they request that you will inform them of the result of your further representations, made in conformity with their instructions.

NILAM[BUR TANK.

As the correspondence in connection wit[h the Nilambúr tank, situated near the 291st mile, South West Line, has now become somewha[t voluminous, I have, for the purposes of convenient reference, made the following *résumé* of the [most important portions of the records in my office, and of the views held by the Railway official[s.

2. From letters printed with G.O., 14t[h December 1871, No. 3151, it will be seen that, in November 1871, the Nilambúr tank burst, a[nd caused considerable damage to the line.

3. When reporting on this subject, the t[hen Chief Engineer thus stated his opinion regarding the failure of the tank :—

"8. The quantity of rain that fell on t[he 15th instant is described as having been something very unusual, but the failure of the tank bund is, in my opinion, attributable to the change that has taken place in the character of the tank since its first construction.

With G.O., No. 3151, dated 14th December 1871.

"9. The bund appears in the first inst[ance to have been well and carefully made, and was originally probably about 20 feet in height at the highest point. In process of time, however, the bed of the tank silted up, and at the date of my examination the depth of silt at the eastern breach was no less than 11 feet. As the tan[k silted up slight additions seem to have been made to the height of the bund, and this newer p[ortion, not having been constructed with the same care as the older portion, was incapable of re[sisting the effects of a flood such as that of the 15th."

4. He further explained that the over[flow from the tank passed off by two calingulahs : opposite the smaller or eastern of these there was a railway bridge consisting of two 15-feet arches, and opposite the larger or western calingulah a similar bridge of three 15-feet ar[ches.

With G.O., No. 3151, dated 14th December 1871.

With G.O., No. 3151, dated 14th December 1871.

5. Mr. Anderson added in letter No. 634 :—

"The breaching of the bund has comple[tely changed the condition under which the drainage of the valley was effected. Whilst the bund [remained intact, the bulk of the surplus drainage water was carried over the western calingulah, and through our treble 15-feet arched bridge at 192nd mile 11th telegraph post. A much [smaller quantity found its way over the eastern calingulah, and through our double 15-feet [at 291st mile 18th telegraph post. Now, however, the whole drainage of the valley flows thr[ough the breach, and missing the treble 15-feet altogether, has to find its way through the do[uble 15-feet, a bridge that is manifestly inadequate for the purpose."

6. On 14th December 1871 the Governm[ent passed the following order No. 3151 :—

"Orders have already been issued by telegram to close the breach. These reports will now be communicated to the Superintending Engineer of the 7th Division, with a view to his reporting on the cause of the tank breaching, and on the capacity of the calingulahs for the discharge of floods. He should also furnish any available information as to the condition of the bund of the tank immediately prior to the floods which destroyed it."

7. In his letter No. 192 of 4th December 1871, the Acting Superintending Engineer, 7th Division, wrote :—

"The Collector agrees with me for the reasons given below, and as the tank remaining as it is will cease to be a source of danger to the Railway, that it is undesirable to repair it."

On this letter the Government passed the following order, 19th January 1872, No. 169 :—

"The breach in the Nilambúr tank was ordered to be closed on the report of the Consulting Engineer for Railways printed with G.O., No. 3151, dated 14th December 1871, but as it appears that by the cultivation of the bed of the tank, and the conversion of the nunjah land under it into punjah, there will be no loss of revenue, the repair of the tank need not be undertaken.

"No apprehension of danger to the Railway need be entertained by leaving the tank in its present condition, as the Chief Engineer of the Company has reported in his letter to the Agent, dated 22nd November 1871, No. 625, that ample provision has been made for the free passage of all water that could go over the calingulahs of the tank."

8. On 24th January 1872 the Acting Consulting Engineer for Railways wrote to the Secretary to Government, Public Works Department, letter No. 32 :—

"With reference to G.O., No. 169 of the 19th instant, I have the honor to bring to your notice that though the Chief Engineer of the Madras Railway states in his letter of 22nd November, in paragraph 5, that the tank bund is provided with two calingulahs, which are represented by bridges of corresponding capacity on the railway, in the subsequent letter of 27th November, No. 714, the Agent quotes from the Chief Engineer :—'The breaching of the bund

With G.O., No. 280, dated 29th January 1872.

G.O., No. 3151, dated 13th December 1871.

has completely changed the condition under which the drainage of the valley was effected. Whilst the bund remained intact the bulk of the surplus drainage water was carried over the western calingulah, and through our treble 15-feet arched bridge at 192nd mile 11th telegraph post. A much smaller quantity found its way over the eastern calingulah, and through our double 15-feet at 291st mile 18th telegraph post. Now, however, the whole drainage of the valley flows through the breach, and missing the treble 15-feet altogether, has to find its way through the double 15-feet, a bridge that is manifestly inadequate for the purpose.'

"If the water draining into the tank were discharged by the calingulah channels, there would be no apprehension of danger to the railway, but the drainage is now concentrated at the breach near the eastern calingulah, thus the railway has only the double 15-feet bridge to carry off the water, and the three 15-feet arches to the west receive none at all."

9. The Government in their order on this letter, G.O., 29th January 1872, No. 280, said :—

"This letter will be communicated to the Superintending Engineer of the 7th Division, with reference to G.O., No. 169, dated 19th January 1872.

"The Superintending Engineer will take the necessary steps for ascertaining what extent of repairs will be necessary to ensure the drainage of the valley discharging in the same proportion as formerly through the two Railway bridges."

With G.O., No. 946, dated 11th April 1872.

10. Writing with reference to this order the Acting Superintending Engineer, 7th Division, in his letter No. 280 of 21st March 1872, stated :—

"The Nilambúr tank is supplied by several jungle streams, all at different levels ; to divert these so as, under the orders now replied to, they should discharge their waters as already arranged for by the railway under-drainage, would be a most expensive undertaking, while it would still be a dangerous one, as there would be many more chances of breaches occurring in the different diversions, &c."

11. On this letter the Government passed the following order, 11th April 1872, No. 946 :—

"Under the explanation here given the Government approve of the restoration of the Nilambúr tank at an estimated expenditure of Rs. 4,300, as the most satisfactory way of ensuring the safe diversion of the drainage, and of obviating renewed injury to the railway ; but they are of opinion that the Collector might fairly call on the ryots to perform some portion of the earthwork, and the reduction of the estimate which this arrangement will effect should be reported when an allotment will be made. Meanwhile the work will be proceeded with."

With G.O., No. 992, dated 17th April 1872.

12. Referring to this order the Consulting Engineer for Railways wrote on 5th April 1872 letter No. 166 :—

"In the Order of Government, dated the 29th January last, No. 280, the Superintending Engineer of the 7th Division was instructed to take the necessary steps for ascertaining what extent of repair was required to insure that the drainage of the valley in which the Nilambúr tank is situated should be discharged through the two railway bridges in the same proportions as formerly.

"By a letter from Colonel Farewell, dated the 30th ultimo, I learn that after personal inspection he has recommended that the tank in question should be repaired, and that he has submitted to Government an estimate for the work.

"I have the honor to point out that it is of great importance that these repairs should be executed with as little delay as possible. It is doubtless within the recollection of the Government that the breaching of the Nilambúr tank damaged the railway so seriously as to cause an interruption in the traffic for three days ; and there can be little doubt that, under existing circumstances, a heavy fall of rain would again endanger the safety of the line. I trust, therefore, that you will be so good as to move the Government to sanction the necessary outlay at once, and to issue such instructions to the Superintending Engineer as will insure that the tank in question shall be placed in an efficient state of repair before the coming monsoon."

13. It will be seen (3) that the Chief Engineer recorded that on 15th November 1871 there was an unusually heavy rainfall, but that in his opinion the failure of the tank was not due to this but to the faulty manner in which the upper portion of the bund was constructed.

14. In G.O., No. 3151, the Superintending Engineer was specially directed to report on the condition of the bund immediately before its failure, but he in no way impugned the correctness of the account given by the Company's Chief Engineer, or questioned the opinion expressed by him regarding the cause of the failure.

15. At the time the railway was constructed, the water draining into the tank was discharged over two calingulahs ; the western one being much the larger of the two. To carry off this discharge two railway bridges were built, the larger bridge being placed opposite the larger calingulah.

16. From the Consulting Engineer's letter quoted in para. 8, it is clear that so long as the water draining into the tank was discharged over the calingulahs there was no danger to the line.

The breaching of the bund, however, totally altered the conditions under which the drainage of the valley was effected, and allowed the great bulk of the water to pass down to the smaller of the two railway bridges which was incapable of carrying it off.

17. The importance of duly proportioning the drainage to the capacities of the two railway bridges was fully recognized in G.O., No. 280 (9) :—

"The Superintending Engineer will take the necessary steps for ascertaining what extent of repairs will be necessary to ensure the drainage of the valley discharging in the same proportion as formerly through the two railway bridges."

18. It was found, however, that if the artificial distribution of the water, which was caused by the tank bund and the relative capacities of the calingulahs, were changed by the abandonment of the tank, it would be very difficult to proportion the discharge through the railway bridges to suit their relative sizes (10).

19. It was therefore ordered that the tank bund should be restored at an estimated expenditure of Rs. 4,300, "as the most satisfactory way of ensuring safe diversion of the drainage, and obviating renewed injury to the railway." In the same order the Government stated that they were of opinion that the Collector might fairly call upon the ryots to perform some portion of the earthwork.

20. The bund was accordingly repaired, and on 18th October 1884 it again burst, but without causing injury to the railway.

21. On 13th November 1884 the ring bund fixed temporarily during the repairs to the sluice was breached, and the water rose to a height of four feet above the springing of the arches of the double 15-feet bridge at $\frac{291}{18\text{-}19}$ miles.

With G.O., No. 169, dated 19th January 1872.

22. On 11th February 1885, the Collector of Coimbatore wrote :—

"The Collector agrees in thinking that the tank may be a source of danger to the railway, and is of opinion that it should either be kept in thorough repair, or as it is, or that its area should be so reduced by lowering the calingulah as to make it quite safe.

"But there is some truth in saying that the abandonment of the tank will affect the supply of water in the garden wells under the tank. As there is a breach now in the bund, probably it is not a source of danger for the present. The Collector suggests that it may be left as it is for 2 or 3 years to see whether it has any effect on the wells under the tank, and then a decision can be made whether it should be repaired, or it should be abandoned, or the bed sold."

23. This was referred to the Company's Chief Engineer, who, with regard to the proposal to make a trial for a short time if the abandonment of the tank would affect the wells, stated that he saw no objection to the further trial asked for by the Collector being made.

24. The result of this trial is not reported in the papers sent to me, but nothing was done to repair the bund.

25. In October 1887 this part of the line was again flooded, and the water rose to the crown of the arches of the double 15-feet bridge at $\frac{291}{18\text{-}19}$.

26. Writing to the Consulting Engineer on 16th January 1888, I gave brief account of what had previously occurred, and pointed out that unless the tank bund were repaired, or other arrangements made for dividing the drainage water in proportion to the capacities of the two bridges, it would be necessary to increase the waterway at the smaller bridge.

27. I added :—

"Under these circumstances it appears to be unfair to call upon the Railway Company to provide for conditions which did not exist when the line was made, and which only arose from the failure of the Government to carry out its obligations. I have therefore the honor to request that sanction may be given to go on with the work at once, so as to complete it before next monsoon, and that the Railway Company may be recouped by Government for the expenditure thus incurred.

"In the meantime plans, and an estimate of the cost of the work, will be prepared."

28. When forwarding the estimate to the Consulting Engineer, on 3rd March 1888, letter No. 215, I said :—

"I consider the cost of providing this additional waterway should be borne by the Government and not by the Railway Company. I have therefore not submitted the estimate in the usual course to the Government Examiner of Railway Accounts, nor has any provision been made for the work in the Railway budget."

29. In his reply, letter No. 211 of 13th idem, the Consulting Engineer wrote :—

"I concur with your Chief Engineer in considering that the safety of the travelling public requires that the bridge should be built, and I venture to point out to you that, in my opinion, the Railway Company incur a very grave responsibility in delaying the construction of the work.

"The incidence of the charges, I would remark, is a matter entirely beside the question of the safety of the line, and I trust that on reconsideration you will submit the estimate in due course and make provision in the current budget to meet the required outlay."

30. On 11th April 1888 the sanction of Government was communicated "to the estimated expenditure of Rs. 9,487 for the proposed extension of bridge No 260 at the 291st mile, South-West Line," and the enlarged bridge was opened for traffic in the following June.

31. On 20th June 1889 I wrote the following letter No. $\frac{2963}{240}$/685 to the Consulting Engineer :—

"In my letter No. 36 of 16th January 1888 I had the honor to state my views regarding the incidence of the cost of extension of bridge No. 260 at $\frac{291}{18\text{-}19}$, South West Line.

"It was admitted on all sides that, in the event of the Government deciding to abandon the Nilambúr tank, additional waterway should be provided to meet the altered conditions. In your letter No. 211 of 13th March you stated that the incidence of the cost was entirely beside the question of the safety of the line, and during the same month I submitted a plan and an estimate amounting to Rs. 9,487. This was sanctioned in due course, and the additions to the bridge were completed in August, leaving the incidence of cost still an open question.

"3. Briefly stated the facts of the case are these :—

(i) Before the railway was constructed, the natural flow of the water, which was chiefly towards $\frac{291}{18\text{-}19}$, was altered by the formation of the Nilambúr tank.

(ii) In that bund there were two calingulahs, and these were represented by bridges of corresponding capacity on the railway, viz., three 15-feet arches at $\frac{292}{10\text{-}11}$ and two 15-feet arches at $\frac{291}{18\text{-}19}$.

(iii) So long as the tank bund was in good order and the water discharged over these calingulahs, the corresponding railway bridges were quite sufficient to carry off the water.

(iv) On the abandonment of the tank the whole conditions of the drainage of the valley were changed; and the water, reverting to its original courses, flowed towards the smaller of the two bridges which consequently has had to be enlarged.

"4. A case of this kind was mentioned by one of the delegates at the Railway Conference held last year at Simla, and to provide for such cases the following clause was inserted in the draft Indian Railways Bill :—

(iii) Where a railway administration has provided suitable accommodation for the crossing of a road or stream, and the road or stream is afterwards diverted by the act or neglect of the person having the control thereof, the administration shall not be compelled to provide other accommodation for the crossing of the road or stream.

"The bill has not yet become law, but I presume the clause I have quoted, which may be regarded as expressing the opinion of the law officers of the Government of India, will be considered as virtually deciding that the Company is not in this instance liable for the cost of the increased waterway."

32. The order of Government on this letter was—(G.O., 16th August 1889, No. 900 R.) :—

"The 'proposed clause in the draft Railway Bill' alluded to by the Agent and Manager, which it is assumed from Resolution No. 11, page 3, of the Proceedings of the Conference was suggested at an informal discussion of the Railway bill, could have no application to the case under consideration in which the Government admit no liability."

33. On receipt of this order I wrote on 26th August letter No. $\frac{2963}{249}$/959 :—

"I have the honor to acknowledge the receipt of G.O., dated 16th August 1889, No. 900 R. As the ruling of the Government of Madras, regarding the incidence of the cost of the extra waterway which had to be provided, owing to the abandonment of the Nilambúr tank on 292nd mile, South West Line, is so completely at variance with what I believe to be the views of the law officers of the Government of India, regarding the equitable adjustment of such charges, I have the honor to request that the papers may be forwarded to the Government of India.

"I fully understand that a suggestion made at an informal discussion of the Railway bill could in no way be binding on the Government, but the fact of this suggestion having been accepted by the law officers of the Government of India, and afterwards incorporated into the draft bill, shows that in their opinion such a clause was equitable, and was a desirable addition to the law.

"It was to provide for cases such as that under notice that this special clause was introduced, and I trust the fact of the bill not yet having become law will not be allowed to affect the equitable adjustment of the charge."

34. Upon this the Government passed the following Order, 16th October 1889, No. 1110 R.

"The Agent is mistaken in supposing that the refusal of Government to admit liability in the Nilambúr case was based on the fact that the proposed clause in the Railway bill has not yet become law. The case is not one to which the clause, even if it were passed into law, would

apply. His Excellency the Governor in Council sees no reason to forward the papers to the Government of India as requested."

35. Hitherto, it has always been understood, that the authority possessed by the Secretary of State under the contract, was delegated to the Government of India, who in turn delegated a portion of it to the Madras Government, who again delegated a portion to the Consulting Engineer. Thus, in every day working—

(1) Estimates under Rs. 5,000 are sanctioned by the Consulting Engineer as the delegate of the Madras Government.
(2) Those between Rs. 5,000 and Rs. 25,000 go to the Government of Madras.
(3) Whilst those beyond Rs. 25,000 must be submitted to the Government of India.

36. If then estimates above Rs. 25,000, regarding which no question of principle has been raised, have to be submitted to the Government of India, it seems strange that when an important question is presented, involving a principle on which the incidence of the cost of works far exceeding the limit of Rs. 25,000 may depend, and when it has been officially stated that it is believed the views of the Government of India do not agree with those of the Government of Madras, that the right of appeal to the Government of India should be denied.

37. This right of appeal, which I regard as a matter of the utmost importance, has been very seldom exercised, and there has been no abuse of the privilege.

38. There can be no question that we have a right of appeal to the Secretary of State; but an appeal to him, instead of in the first instance to the Government of India, would in most cases lead to unnecessary delay, as the subjects would probably be referred to the Government of India for an expression of their views.

39. In conclusion, I will briefly sum up the points to which attention is specially invited.

40. I consider that the Railway Company should not be charged with the cost of the increased waterway because—

(1) They provided fully for the discharge of the drainage of the valley under the conditions which existed when the railway was constructed.
(2) These conditions were entirely altered by the breaching of the tank bund.
(3) The failure of the tank bund in 1871 was caused by the imperfect construction of the upper portion of the bund.
(4) The bund was never afterwards repaired in a sufficiently strong manner.
(5) The drainage of the valley was consequently diverted, by the act or neglect of Government, from the course in which it flowed when the railway was constructed.

41. I also consider that the right of appeal to the Government of India is a privilege of great importance; it has hitherto been freely admitted by the Government of Madras, and has on some occasions proved of great advantage to the Company.

(Signed) FRANCIS B. HANNA,
Agent and Manager.

6th November 1889.

Submitted for the orders of Government with reference to G.O., No. 1110 R., dated 16th October 1889.

ORDER—dated 18th August 1890, No. 1211 R., Public Works.

Ordered that the Government of India be addressed.

(Here enter No. 1212 R., dated 18th August 1890.)

(True Extract.)

Major, R.E.,
Under-Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
" Examiner, Guaranteed Railway Accounts.
" Revenue Department.
" Chief Engineer for Irrigation.

Exd. J. Moses.
Spare Copies

RAILWAY.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated August, 18th.

Recd. *Encl.*

G.O., 18th Aug. 1890, No. 1211 R.

AUGUST.

Nilambur Tank

Ordered that the Government of India be addressed on the subject of the incidence of the cost of extra waterway on the South West Line of the Madras Railway rendered necessary in consequence of the bursting of the —.

PUBLIC WORKS DEPARTMENT.

Railway.

LETTER—from

LIEUTENANT-COLONEL T. GRACEY, R.E.,
Officiating Joint Secretary to the Government of Madras,
Public Works Department,
Railway Branch.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
PUBLIC WORKS DEPARTMENT,
SIMLA.

SIR,

I am directed to forward copies of the correspondence marginally noted for the orders of the Government of India regarding the incidence of the charge of Rs. 9,487 for giving additional waterway at mile $\frac{291}{18\text{-}19}$, Madras Railway, South West Line, consequent on the bursting of the Nilambúr tank, and in connection therewith I am to make the following remarks.

Letter from the Agent and Manager, Madras Railway, No. 6848/276, dated 12th March 1890, with two enclosures, embodied in the Proceedings of this Govt., No. 1211 R., dated 18th August 1890.

2. The Nilambúr tank burst in consequence of very heavy rain and the water discharged itself through the breach instead of over the calingulahs at each end of the bund. The Government repaired the tank. It burst again, however, and the Government then abandoned it.

3. The result of the bursting of the tank was that the water instead of discharging through two bridges on the railway line all discharged through one which was not sufficiently large to carry it off safely and had therefore to be enlarged. The question therefore seems to be whether there was any act or neglect on the part of the Government which necessitated their action on the part of the Railway Company.

4. Any admission of the legal liability of the Government would be tantamount to declaring that the construction of a railway affects and limits the pre-existing rights of all owners of lands situated on a higher level than the railway itself, and of the State as well in respect of State lands so situated. It is to be observed moreover that the Railway Act (IX of 1890) while it fixes (section 11) a limit of ten years from a railway being first opened as the time within which private owners of land can claim the construction of additional accommodation works by the Railway Company at its own cost, reserves the right of the State to demand such accommodation at the

cost of the Railway Company at any time, and only absolves the Company, in the former case, from such liability when it can be shown that the need for such additional accommodation has arisen out of the act or neglect of the owner.

I have the honor to be,
Sir,
Your most obedient servant,

Lieut.-Colonel, R.E.,
Offig. Joint Secy. to Govt., P.W.D.,
Railway Branch.

OOTACAMUND,
18th August 1890.

Exd. J. Moses.
Spare Copies

RAILWAY.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated August, 18*th*.

Read. *Encl.*

G.O., 18th Aug. 1890, No. 1212 R.

AUGUST.

Nilambur Tank

Forwarding for orders correspondence on the subject of the incidence of the cost of extra waterway on the South West Line of the Madras Railway rendered necessary in consequence of the bursting of the —.

(No. II.)

No. 6848
276

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 12 March 1890.

From

The Actg *Agent and Manager*,
S.M. R. Co.;

To

The *Consulting Engineer for Railways.*

SIR,

I have the honour to submit for the consideration of Government a letter from the Board of Directors of this Company embodying their views on the subject of the incidence of the cost of the extra waterway at 29 1/16-19 South West Line rendered necessary by the conditions of the Nilambur tank. The facts bearing upon the case have been very fully dealt with in proceedings of Government and in correspondence and I enclose for convenient reference a *resumé* of the more important part of the correspondence on the subject recorded in this office.

I have the honour to be,
Sir,
Your most obedient Servant,

H. Southill

Actg. Agent & Manager.

REGISTER
No. 336
FILE
No.

Sn. 2.

P. W. Secl
2728/90

MADRAS RAILWAY.

From

The Agent and Manager.

To

The Consulting Engineer
for Railways.

Returns

Dated 12 March 1890
Recd. 13.3.90
Answd
No. 276

Submits for orders of Govt. 8/4

Communicating Govt's
views regarding the
incidence of the cost
of the extra water way
provided by the Co.
in the Nilambur Tank
& returning the
correspondence on the
subject recorded in
this office

Print

No. 826.

MADRAS RAILWAY COMPANY,

61, NEW BROAD STREET,

LONDON, 24*th January*, 1890.

SIR,

Nilambur Tank.

I have submitted to the Board your letter No. 1,914, on the subject of the incidence of the cost of the extra water way at $\frac{291}{18-19}$ South West Line, together with the *résumé* of the correspondence recorded in your office in connection with the Nilambur Tank.

2. The question now under consideration differs entirely from that of the Telangai Tank, regarding which the orders of the Board were conveyed to you in their letter No. 814, dated 31st May last, because the then existing requirements in the present case were fully provided for at the time the Railway was constructed.

3. The conditions which then existed as regards the regulation of the discharge of water from the Nilambur Tank have been entirely altered through the action of the Government in the alteration of the form of the bund, and the final abandonment of the Tank. It has now become necessary, in order to carry off the drainage water, the course of which has been completely changed, to provide additional water way at the two-arched bridge (15 feet spans), in the 291st mile, while the three-arched bridge, of similar spans, in the 292nd mile, has become partially or wholly useless.

4. In these circumstances it appears to the Board quite clear that the cost of the provision of the extra water way in question should be borne by the Government and not by the Company, and it seems equally apparent that for a time the Madras Government fully recognized their responsibility with respect to the apportionment of the drainage water to the respective capacities of the Railway Bridges.

5. The equitable adjustment of charges in a case of this nature seems to the Board to be contemplated and provided for in the clause of the draft Railway Bill quoted by the Agent. The Board trust that this matter may still be capable of adjustment with the Government in India, and they request that you will inform them of the result of your further representations, made in conformity with their instructions.

I am, Sir,

Your obedient Servant,

(Sd.) Julian Byrne

Secretary.

To the Acting Agent and Manager,
Madras Railway,
Madras.

Cols
13.5.1?
Sn 336
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2728/90

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2 8P

MADRAS RAILWAY,

MADRAS.

NILAMBUR TANK.

As the correspondence in connection with the Nilambur Tank, situated near the 291st mile South West Line, has now become somewhat voluminous, I have, for the purposes of convenient reference, made the following *résumé* of the most important portions of the records in my office, and of the views held by the Railway Officials.

2. From letters printed with Government Order 14th December 1871, No. 3151, it will be seen that in November 1871, the Nilambur Tauk burst, and caused considerable damage to the line.

3. When reporting on this subject, the then Chief Engineer thus stated his opinion regarding the failure of the tank.

With G. O. No. 3151, 14-12-71.

8. "The quantity of rain that fell on the 15th instant is described as having been something very unusual, but the failure of the tank bund is, in my opinion, attributable to the change that has taken place in the character of the tank since its first construction.

9. "The bund appears in the first instance to have been well and carefully made, and was originally probably about 20 feet in height at the highest point. In process of time, however, the bed of the tank silted up, and at the date of my examination the depth of silt at the eastern breach was no less than 11 feet. As the tank silted up slight additions seem to have been made to the height of the bund, and this newer portion, not having been constructed with the same care as the older portion, was incapable of resisting the effects of a flood such as that of the 15th."

Do.

4. He further explained that the overflow from the tank passed off by two calingulahs: opposite the smaller or eastern of these there was a Railway bridge consisting of two 15 feet arches, and opposite the larger or western calingulah a similar bridge of three 15 feet arches.

Do.

5. Mr. Anderson added in letter No. 634.

"The breaching of the bund has completely changed the condition under which the drainage of the valley was effected. Whilst the bund remained intact, the bulk of the surplus drainage water was carried over the western calingulah, and through our treble 15 feet arched bridge at 192nd mile 11th telegraph post. A much smaller quantity found its way over the eastern calingulah, and through our double 15 feet at 291st mile 18th telegraph post. Now, however, the whole drainage of the valley flows through the breach, and missing the treble 15 feet altogether, has to find its way through the double 15 feet, a bridge that is manifestly inadequate for the purpose."

6. On 14th December 1871, the Government passed the following Order No. 3151 :—

"Orders have already been issued by telegram to close the breach. These reports will now be communicated to the Superintending Engineer of the 7th Division, with a view to his reporting on the cause of the tank breaching, and on the capacity of the calingulahs for the discharge of floods. He should also furnish any available information as to the condition of the bund of the tank immediately prior to the floods which destroyed it."

7. In his letter No. 192 of 4th December 1871, the Acting Superintending Engineer, 7th Division wrote :—

"The Collector agrees with me for the reasons given below, and as the tank remaining as it is will cease to be a source of danger to the Railway, that it is undesirable to repair it."

On this letter the Government passed the following order 19th January 1872, No. 169.

"The breach in the Nilambur Tank was ordered to be closed on the report of the Consulting Engineer for Railways printed with G. O., No. 3151, dated 14th December 1871, but as it appears that by the cultivation of the bed of the tank, and the conversion of the Nunjah land under it into Punjah, there will be no loss of revenue, the repair of the tank need not be undertaken."

"No apprehension of danger to the Railway need be entertained by leaving the tank in its present condition, as the Chief Engineer of the Company has reported in his letter to the Agent, dated 22nd November 1871, No. 625, that ample provision has been made for the free passage of all water that could go over the calingulahs of the tank."

8. On 24th January 1872, the Acting Consulting Engineer for Railways wrote to the Secretary to Government P.W.D., letter No. 32.

With G.O., No. 280. 29-1-72.

"With reference to G.O., No. 169 of the 19th instant, I have the honour to bring to your notice that though the Chief Engineer of the Madras Railway states in his letter of 22nd November, in paragraph 5, that the tank bund is provided with two calingulahs, which are represented by bridges of corresponding capacity on the Railway, in the subsequent letter of 27th November No. 714, the Agent quotes from the Chief Engineer :—'The breaching of the bund has 'completely changed the condition under which the drainage of the 'valley was effected. Whilst the bund remained intact the bulk of 'the surplus drainage water was carried over the western calingulah, 'and through our treble 15 feet arched bridge at 192nd mile 11th 'telegraph post. A much smaller quantity found its way over the 'eastern calingulah, and through our double 15 feet at 291st mile '18th telegraph post. Now, however, the whole drainage of the 'valley flows through the breach, and missing the treble 15 feet 'altogether, has to find its way through the double 15 feet, a bridge 'that is manifestly inadequate for the purpose.'"

G.O., No. 3151, dated 13th Decr. 1871.

"If the water draining into the tank were discharged by the calingulah channels, there would be no apprehension of danger to the railway, but the drainage is now concentrated at the breach near the eastern calingulah, thus the Railway has only the double 15 feet bridge to carry off the water, and the three 15 feet arches to the west receive none at all."

9. The Government in their order on this letter G. O. 29th January 1872, No. 280 said :—

"This letter will be communicated to the Superintending Engineer of the 7th Division, with reference to G. O., No. 169, dated 19th January 1872.

"The Superintending Engineer will take the necessary steps for ascertaining what extent of repairs will be necessary to ensure the drainage of the valley discharging in the same proportion as formerly through the two railway bridges."

With G. O. No. 946, 11-4-72.

10. Writing with reference to this order the Acting Superintending Engineer, 7th Division in his letter No. 280 of 21st March 1872 stated :—

"The Nilambur tank is supplied by several jungle streams, all at different levels; to divert these so as, under the orders now replied to, they should discharge their waters as already arranged for by the Railway under-drainage, would be a most expensive undertaking, while it would still be a dangerous one, as there would be many more chances of breaches occurring in the different diversions, &c."

11. On this letter the Government passed the following order 11th April 1872, No. 946.

"Under the explanation here given the Government approve of the restoration of the Nilambur tank at an estimated expenditure of Rs. 4,300, as the most satisfactory way of ensuring the safe diversion of the drainage, and of obviating renewed injury to the Railway; but they are of opinion that the Collector might fairly call on the ryots to perform some portion of the earthwork, and the reduction of the estimate which this arrangement will effect should be reported when an allotment will be made. Meanwhile the work will be proceeded with."

With G. O. No. 992, 17-4-72.

12. Referring to this order the Consulting Engineer for Railways wrote on 5th April 1872, letter. No. 166.

"In the Order of Government, dated the 29th January last, No. 280, the Superintending Engineer of the 7th Division was instructed to take the necessary steps for ascertaining what extent of repair was required to insure that the drainage of the valley in which the Nilambur tank is situated should be discharged through the two railway bridges in the same proportions as formerly.

"By a letter from Colonel Farewell, dated the 30th ultimo, I learn that after personal inspection he has recommended that the tank in question should be repaired, and that he has submitted to Government an estimate for the work.

"I have the honour to point out that it is of great importance that these repairs should be executed with as little delay as possible. It is doubtless within the recollection of the Government that the breaching of the Nilambur tank damaged the railway so seriously as to cause an interruption in the traffic for three days; and there can be little doubt that, under existing circumstances, a heavy fall of rain would again endanger the safety of the line. I trust, therefore, that you will be so good as to move the Government to sanction the necessary outlay at once, and to issue such instructions to the Superintending Engineer as will insure that the tank in question shall be placed in an efficient state of repair before the coming monsoon.

13. It will be seen (3) that the Chief Engineer recorded that on 15th November 1871 there was an unusually heavy rainfall but that in his opinion the failure of the tank was not due to this, but to the faulty manner in which the upper portion of the bund was constructed.

14. In G. O. No 3151, the Superintending Engineer was specially directed to report on the condition of the bund immediately before its failure, but he in no way impugned the correctness of the account given by the Company's Chief Engineer, or questioned the opinion expressed by him regarding the cause of the failure.

15. At the time the Railway was constructed, the water draining into the tank was discharged over two calingulahs; the western one being much the larger of the two. To carry off this discharge two railway bridges were built, the larger bridge being placed opposite the larger calingulah.

16. From the Consulting Engineer's letter quoted in paragraph 8, it is clear that so long as the water draining into the tank was discharged over the calingulahs there was no danger to the line. The breaching of the bund, however, totally altered the conditions under which the drainage of the valley was effected, and allowed the great bulk of the water to pass down to the smaller of the two Railway bridges which was incapable of carrying it off.

17. The importance of duly proportioning the drainage to the capacities of the two Railway bridges was fully recognized in G. O. No. 280(9).

"The Superintending Engineer will take the necessary steps for ascertaining what extent of repairs will be necessary to ensure the drainage of the valley discharging in the same proportion as formerly through the two railway bridges."

18. It was found, however, that if the artificial distribution of the water, which was caused by the tank bund and the relative capacities of the calingulahs, were changed by the abandonment of the tank, it would be very difficult to proportion the discharge through the Railway bridges to suit their relative sizes (10).

19. It was therefore ordered that the tank bund should be restored at an estimated expenditure of Rupees, 4,300, "as the most satisfactory way of ensuring safe diversion of the drainage, and obviating renewed

injury to the Railway." In the same order the Government stated that they were of opinion that the Collector might fairly call upon the ryots to perform some portion of the earthwork.

20. The bund was accordingly repaired, and on 18th October 1884, it again burst, but without causing injury to the Railway.

21. On 13th November 1884, the ring bund fixed temporarily during the repairs to the sluice was breached, and the water rose to a height of four feet above the springing of the arches of the double 15 feet bridge at $\frac{291}{18\text{-}19}$ miles.

With G. O. No. 169, 19-1-72.

22. On 11th February 1885, the Collector of Coimbatore wrote:—

"The Collector agrees in thinking that the tank may be a source of danger to the Railway, and is of opinion that it should either be kept in thorough repair, or as it is, or that its area should be so reduced by lowering the calingulah as to make it quite safe.

"But there is some truth in saying that the abandonment of the tank will affect the supply of water in the garden wells under the tank. As there is a breach now in the bund, probably it is not a source of danger for the present. The Collector suggests that it may be left as it is for 2 or 3 years to see whether it has any effect on the wells under the tank, and then a decision can be made whether it should be repaired, or it should be abandoned, or the bed sold."

23. This was referred to the Company's Chief Engineer, who, with regard to the proposal to make a trial for a short time if the abandonment of the tank would affect the wells, stated that he saw no objection to the further trial asked for by the Collector being made.

24. The result of this trial is not reported in the papers sent to me, but nothing was done to repair the bund.

25. In October 1887, this part of the line was again flooded, and the water rose to the crown of the arches of the double 15 feet bridge at $\frac{291}{18\text{-}19}$.

26. Writing to the Consulting Engineer on 16th January 1888, I gave brief account of what had previously occurred, and pointed out that unless the tank bund were repaired, or other arrangements made for dividing the drainage water in proportion to the capacities of the two bridges, it would be necessary to increase the water way at the smaller bridge.

27. I added:—

"Under these circumstances it appears to be unfair to call upon the Railway Company to provide for conditions which did not exist when the line was made, and which only arose from the failure of the Government to carry out its obligations. I have therefore the honour to request that sanction may be given to go on with the work at once, so as to complete it before next monsoon, and that the Railway Company may be recouped by Government for the expenditure thus incurred.

"In the meantime plans, and an estimate of the cost of the work, will be prepared."

28. When forwarding the estimate to the Consulting Engineer, on 3rd March 1888, letter No. 215, I said :—

"I consider the cost of providing this additional waterway should be borne by the Government, and not by the Railway Company. I have therefore not submitted the estimate in the usual course to the Government Exaiminer of Railway Accounts, nor has any provision been made for the work in the Railway Budget."

29. In his reply, letter No. 211 of 13th idem, the Consulting Engineer wrote :—

"I concur with your Chief Engineer, in considering that the safety of the travelling public requires that the bridge should be built, and I venture to point out to you that, in my opinion, the railway company incur a very grave responsibility in delaying the construction of the work.

"The incidence of the charges, I would remark, is a matter entirely beside the question of the safety of the line, and I trust that on reconsideration, you will submit the estimate in due course, and make provision in the current budget to meet the required outlay."

30. On 11th April 1888, the sanction of Government was communicated "to the estimated expenditure of Rs. 9,487 for the proposed extension of bridge No. 260 at the 291st mile South West Line," and the enlarged bridge was opened for traffic in the following June.

31. On 20th June 1889, I wrote the following letter No. $\frac{2963}{240}$/685 to the Consulting Engineer :—

"In my letter No. 36 of 16th January 1888, I had the honour to state my views regarding the incidence of the cost of extension of bridge No. 260 at $\frac{291}{18\text{-}19}$ South West Line.

"It was admitted on all sides that, in the event of the Government deciding to abandon the Nilambur Tank, additional waterway should be provided to meet the altered conditions. In your letter No. 211 of 13th March, you stated that the incidence of the cost was entirely beside the question of the safety of the line, and during the same month, I submitted a plan and an estimate amounting to Rupees 9,487. This was sanctioned in due course, and the additions, to the bridge were completed in August, leaving the incidence of cost still an open question.

3. "Briefly stated the facts of the case are these :—

(i.) Before the Railway was constructed, the natural flow of the water, which was chiefly towards $\frac{291}{18\text{-}19}$, was altered by the formation of the Nilambur tank.

(ii.) In that bund there were two calingulahs, and these were represented by bridges of corresponding capacity on the Railway, viz. three 15 feet arches at $\frac{292}{10\text{-}11}$ and two 15 feet arches at $\frac{291}{18\text{-}19}$.

(iii.) So long as the tank bund was in good order and the water discharged over these calingulahs, the corresponding railway bridges were quite sufficient to carry off the water.

(iv.) On the abandonment of the tank the whole conditions of the drainage of the valley were changed; and the water, reverting to its original courses, flowed towards the smaller of the two bridges which consequently has had to be enlarged.

4. "A case of this kind was mentioned by one of the delegates at the Railway Conference held last year at Simla, and to provide for such cases the following clause was inserted in the draft Indian Railways Bill.

(iii.) Where a railway administration has provided suitable accommodation for the crossing of a road or stream, and the road or stream is afterwards diverted by the act or neglect of the person having the control thereof, the administration shall not be compelled to provide other accommodation for the crossing of the road or stream.

"The Bill has not yet become law, but I presume the clause I have quoted, which may be regarded as expressing the opinion of the law officers of the Government of India, will be considered as virtually deciding that the Company is not in this instance liable for the cost of the increased waterway.

32. The order of Government on this letter was :—(G. O. 16th August 1889, No. 900 R.)

"The 'proposed clause in the draft Railway Bill' alluded to by the Agent and Manager, which it is assumed from Resolution No. 11, page 3, of the Proceedings of the Conference was suggested at an informal discussion of the Railway Bill, could have no application to the case under consideration in which the Government admit no liability."

33. On receipt of this order I wrote on 26th August, Letter No. $\frac{2963}{249}$/959.

"I have the honour to acknowledge the receipt of Government Order, dated 16th August 1889, No. 900 R. As the ruling of the Government of Madras, regarding the incidence of the cost of the extra waterway which had to be provided, owing to the abandonment of the Nilambur tank on 292nd mile, South West Line, is so completely at variance with what I believe to be the views of the Law Officers of the Government of India, regarding the equitable adjustment of such charges, I have the honour to request that the papers may be forwarded to the Government of India.

"I fully understand that a suggestion made at an informal discussion of the Railway Bill, could in no way be binding on the Government, but the fact of this suggestion having been accepted by the Law Officers of the Goverument of India, and afterwards incorporated into the draft Bill, shews that in their opinion such a clause was equitable, and was a desirable addition to the Law.

"It was to provide for cases such as that under notice that this special clause was introduced, and I trust the fact of the bill not yet having become law, will not be allowed to affect the equitable adjustment of the charge."

34. Upon this, the Government passed the following order 16th October 1889, No. 1110 R. :—

"The Agent is mistaken in supposing that the refusal of Government to admit liability in the Nilambur case, was based on the fact that the proposed clause in the Railway Bill has not yet become law. The case is not one to which the clause, even if it were passed into law, would apply. His Excellency the Governor in Council sees no reason to forward the papers to the Government of India as requested."

35. Hitherto, it has always been understood, that the authority possessed by the Secretary of State under the contract, was delegated to the Government of India, who in turn delegated a portion of it to the Madras Government, who again delegated a portion to the Consulting Engineer. Thus, in every day working——

(1.) Estimates under Rs. 5,000, are sanctioned by the Consulting Engineer, as the delegate of the Madras Government.

(2.) Those between Rs. 5,000 and Rs. 25,000 go to the Government of Madras.

(3.) Whilst those beyond Rs. 25,000 must be submitted to the Government of India.

36. If then estimates above Rupees 25,000, regarding which no question of principle has been raised, have to be submitted to the Government of India, it seems strange, that when an important question is presented, involving a principle on which the incidence of the cost of works far exceeding the limit of Rs. 25,000 may depend; and when it has been officially stated that it is believed the views of the Government of India do not agree with those of the Government of Madras—that the right of appeal to the Government of India should be denied.

37. This right of appeal, which I regard as a matter of the utmost importance, has been very seldom exercised, and there has been no abuse of the privilege.

38. There can be no question that we have a right of appeal to the Secretary of State; but an appeal to him, instead of in the first instance to the Government of India, would in most cases lead to unnecessary delay, as the subjects would probably be referred to the Government of India, for an expression of their views.

39. In conclusion, I will briefly sum up the points to which attention is specially invited.

40. I consider that the Railway Company should not be charged with the cost of the increased waterway because :—

(1.) They provided fully for the discharge of the drainage of the valley under the conditions which existed when the Railway was constructed.

(2.) These conditions were entirely altered by the breaching of the tank bund.

(3.) The failure of the tank bund in 1871, was caused by the imperfect construction of the upper portion of the bund.

(4.) The bund was never afterwards repaired in a sufficiently strong manner.

(5.) The drainage of the valley was consequently diverted, by the act or neglect of Government, from the course in which it flowed when the Railway was constructed.

41. I also consider that the right of appeal to the Government of India is a privilege of great importance; it has hitherto been freely admitted by the Government of Madras, and has on some occasions proved of great advantage to the Company.

6th November 1889.

FRANCIS B. HANNA,

Agent and Manager.

Gn 336/2

PW Lr 2728/90

FORM No. 1.

PUBLIC WORKS DEPARTMENT.

OFFICE OF CONSULTING ENGINEER FOR RAILWAYS,

Madras, 15th March 1890.

Print

Letter from the Agent and Manager, Madras Railway, No. 6848/276, dated 12th March 1890, with two enclosures.

No. 191

SUBMITTED for the orders of Government with reference to G.O. No 1110R, dated 16th October 1889.

Print

Sidney Smith
Major RE,
for Cons. Engr. for Rys.

15/3-90

B A

No. 1211R

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 18th Augt/90

READ the following

Endorsement from the Consg: Engr: for Rys. } No. 191 dated 15th March 1890

Ordered that the Government of India be addressed

No. 1212R, dt. 18th Augt/90.

To
The Consg: Engr for Rys
— " — Exr Gl. Rijaseln:
— " — Revenue Depte:
— " — Chief Engineer for Irrigation

A

Print

No. 1212 R

Government of Madras,

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

104

To

The Secretary to the Government

of India, P. W. Department

Simla

18th August 1890.

SIR,

I am directed to forward copies of the correspondence marginally noted for the orders of the Govt. of India regarding the incidence of the charge of Rs 9,487 for giving additional waterway at mile 291/18-19, Madras Railway, South west line, consequent on the bursting of the Nilambur bank and in connection therewith I am to make the following remarks.

2. The Nilambur bank

burst

Letter from the Agent and Manager Madras Railway No. 6848/276 dated 12th March 1890, with two enclosures, embodied in the Proc: of this Govt. No. 1211 R, dated 18th August 1890.

No 900 R - 16th Augt/89.
" 1110 R - 16th Octo/"
" 3151 - 11th Decr/71
" 2267 - 6 - Septr/71
" 280 - 29th Jany/72.
" 169 - 19th —do—
" 946 - 11th April/72.
" 992 - 14th —do—
" 578 R - 11th July/88.
" 155 I - 1st March/88.
" 210 (Legislative depart) - 20th Septr/64
" 191 (— do —) - 14th Augt/64
The Indian Railways Bill.

B

No. 1211 - 12 R, 18th Augt/90.

the right of the State to demand such accommodation at the cost of the Railway Company at any time, and only absolves the Company, in the former case, from such liability when it can be shown that the need for such additional accommodation has arisen out of the act or neglect of the owner.

A

In 1212 R 3 18 Aug 90.

offs. R.

11 Aug 5/9/90