M.R.O. 1—77,006—8-6-37.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

G.O. No. 24,25	13	Press / Mis.
Dated 6 - 1 -		1873.

Not to be folded or roughly handled

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Proceedings of the Madras Government, Public Works Department, 6th January 1873.

No. 24. Read the following Endorsement of the Consulting Engineer for Railways, dated Madras, 2nd December 1872, No 667 :—

From the Agent and Manager of the Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 29th November 1872, No. 867.

With reference to my letter No. 860 of yesterday, I have the honour to enclose for your information a copy of the Chief Engineer's letter No. 558 of this date, containing further information in regard to the present state of the line.

2. I request that you will be so good as to give your special attention to the concluding portion of the letter in which Mr. Anderson points out the great damage which is threatened to the railway by the attempts which are being made to repair the bund of the Talunga Tank, the bursting of which on the 23rd instant occasioned the breach at the 60th mile, South-West Line. I trust that you will move the Government to take some immediate action in the matter.

From BERESFORD ANDERSON, Esq., Chief Engineer, to the Agent and Manager of the Madras Railway Company, dated Madras, 29th November 1872, No. 558.

In continuation of my letter No. 551 of yesterday, I have to report that I have just returned from an inspection of the line between this and Arconum.

2. Very heavy rain fell on the 27th and 28th instant, and the whole country is fearfully flooded. All along the line of railway, at both sides, the water runs like a rapid river. The bridges and earth-works have been most severely tested, but I am happy to say I have no damage of importance to report, and I was able to travel at the usual speed this morning.

3. At the 60th mile an attempt, which nearly resulted in the destruction of our new diversion, was made to repair the gaps in the bund of Talunga Tank, the breaching of which occasioned the accident of the 23rd instant.

4. These gaps were so far repaired as to store up a large volume of water in the tank ; but they gave way before the pressure caused by the rains of the 27th, and another stoppage of traffic was nearly the result, as the water rose to the top of our new embankment.

5. I beg that you will point out to the Government the danger likely to result from any fresh attempts to repair this tank until the weather becomes more settled. I understand that the villagers are again engaged in stopping the breaches so that immediate action will have to be taken to secure the safety of this part of our line.

From the Acting Deputy Consulting Engineer, to the Consulting Engineer for Railways, dated Madras, 30th November 1872.

I have the honour to report that I yesterday inspected the South-West Line of the Madras Railway between Perambore and Arcot.

2. The flood-waters were considerably lower than when I last went over this portion of the line on the 23rd and 24th instant. Although the Cortilliar was still a swollen and turbid stream, I was informed that it had fallen as much as ten feet. The water in the side channels along the line was certainly flowing *into* the Cortilliar yesterday, whereas on the 23rd and 24th instant the Cortilliar was full to overflowing, and its waters rushing along the south slope of the railway embankment towards the east and west from the bridge.

3. At the 8th mile, 20th Telegraph Post, a culvert was still discharging furiously.

4. In the 34th and 35th miles there was also a great rush of water passing through the bridges from the south towards the north.

5. At the 50th mile, 8th and 9th Telegraph Posts, the embankment had slipped on the south side, but not badly, and a working party was repairing it.

6. At the 52nd mile, 15th and 16th Telegraph Posts, two other slips had occurred, but they were not dangerous. Working parties were not employed upon them yesterday, but no doubt they will be repaired in due course.

7. On the morning of the 23rd instant a wing-wall on the south side of a bridge at the 59th mile, 3rd and 4th Telegraph Posts, was carried away, and the line was slightly diverted so as to be carried over the north side of the bridge. The Resident Engineer informs me that stout beems with long bearings on either side of the span were laid under the line, so that in the event of the arch being insecure the safety of the train is provided for.

8 When the accident occurred on the 23rd instant at the 60th mile, 1st Telegraph Post, the line was diverted and carried round the breach. This has been well and substantially done, and there is no reason why trains going at a rate of not more than three or four miles an hour should not pass over it.

9. The Chief Engineer of the line informs me that the tank which, from its bursting, caused the disaster at the 60th mile, was subsequently partially repaired by the villagers, but during the recent heavy rains it naturally breached again, and on the night of the 28th instant the water escaping from it rose on the north side of the line to rail-level, and all but carried away the loop-line or diversion which had been carried round the break in the main line.

10. It would be well if the repairs of the tank could be delayed until the present uncertain state of the weather is at an end, and they could be carried out with some certainty of their being really substantial.

11. Bearing in mind the recent catastrophe, and that so long as the tank exists it will be a source of danger to the railway embankment, it is, I think, very desirable that a calingulah of ample size should be provided for the tank surplus water.

12. The rest of the line appears to be in excellent order, and all the other bridges and culverts appear unshaken, although it is not probable that they will ever again be subjected to a more severe trial of their stability than they have just passed through.

The floorings which have lately been put in under many of the bridges have no doubt been in no small degree conducive to their safety.

13. If the weather holds up and the bridges and culverts prove, on careful inspection, to be as unshaken as they appear to be, I see no reason why night-traffic should not be resumed along this portion of line. All the tanks likely to breach must, I fancy, have done so by this time. There should, however, be very clear caution signals placed on each side of the diversions at the 59th mile, 3rd Telegraph Post, and the 60th mile, 1st Telegraph Post. The speed of the trains at these two places, moreover, should not exceed three or four miles an hour.

14 Whilst travelling by engine during the recent floods my attention has been naturally particularly directed to the caution and danger *day* signals, shown by watchmen along the line; and I have seen enough fully to convince me that it would be almost impossible to select a more unsuitable colour for *flag signals than green*. When green flags are rather old and weather-beaten, and the back ground happens (as it almost always does) to be green also, it is almost impossible to see them, when held steadily in a horizontal position, especially if the wind happens to be blowing either up or down the line, and only the "edge," so to speak of the flag, can be seen.

15. Even when the flag material is new and the colour unfaded, it is difficult to see against a green back ground.

16. White would be an infinitely better colour, I believe, for caution signals than green, and I see no reason why it should not be adopted. When the line is clear, and all is right, no signals are required; or if any, the hand of the watchman held out is sufficient indication of its being so.

17. It would, I think, be a good rule not to allow line watchmen to wear red cloths or handkerchiefs when on duty. I have several times within the last few days been under the impression that red danger signals were being exhibited, when on coming nearer I found that *the real signals which I had not seen were green flags*, and that the watchmen had on either red cloths or had red handkerchiefs thrown over their shoulders. I spoke to the Driver of the engine

Proceedings of the Madras Government, Public Works Department,
6th January 1873.

on which I travelled yesterday upon the subject, and he told me that some days previously he had been deceived as I had been, and had commenced to pull up his train when he discovered his mistake.

SUBMITTED for the information of Government, with reference to correspondence on the same subject previously submitted.

2. The Collector of North Arcot has been asked to issue such orders as, in his opinion, are necessary to prevent further attempts being made to repair the Talunga Tank until the weather shall have become more settled.

3. A copy of Captain Thompson's report has been sent to the Agent, and his attention has been drawn to paragraphs 8 and 13. He has also been asked to give his opinion upon the subject referred to in the concluding paragraphs of the report.

4. The District Engineer of North Arcot has been written to regarding the want of a calingulah referred to in paragraph 11.

(Signed) J. H. M. SHAW-STEWART, Lieut.-Colonel, R.E.,
Consulting Engineer for Railways.

No. 25. ORDER THEREON, 6th January 1873, No. 13.

RAILWAY, No. 4.

ORDERED to be recorded.

2. THE Chief Engineer for Irrigation will see that the subject of providing for the future safety of the tank is not lost sight of.

(True Extract.)

Colonel, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.
" Chief Engineer for Irrigation.
" District North Arcot.

Exd. F. R. Bantleman.

Madras Railway Company
No 558. Chief Engineer's Office
Madras 29th November 1872

The Agent and Manager,
Dear Sir,

In continuation of my letter No 557 of yesterday, I have to report that I have just returned from an inspection of the line between this and Arconum.

2. Very heavy rain fell on the 27th and 28th instant and the whole country is fearfully flooded. All along the line of Railway, at both sides, the water runs like a rapid river. The bridges and earth-works have been most severely tested, but I am happy to say I have no damage of importance to report, and I was able to travel at the usual speed this morning.

3. At the 60th mile an attempt, which nearly resulted in the destruction of our new diversion, was made to repair the gaps in the bund of Talungar Tank, the breaching of which occasioned the accident of the 25th instant.

4. These gaps were so far repaired as to store up a large volume of water in the tank, but they gave way before the pressure caused by the rains of the 27th, and another stoppage of traffic was nearly the result, as the water rose to the top of our new embankment.

5. I beg that you will forward

to the Government the danger likely to result from any fresh attempts to repair this tank until the weather becomes more settled. I understand that the villagers are again engaged in stopping the breaches so that immediate action will have to be taken to secure the safety of this part of our line.

Yours faithfully
Sgd Reresford Anderson
Chief Engineer.

/True Copy/

J. N. Sellis.
for the Agent & Manager.

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Madras
30th November
1872

From Capt. Rob. Thompson
RE
Actg. Dy. Con. Engr. for Rlways.

To Lt. Col. J. N. M. Shaw Stewart
Royal Engineers
Consulting Engineer for
Railways

Sir

(1) I have the honour to Report that I yesterday inspected the South West Line of the Madras Railway between Perambore and Arcd.

(2) The flood waters were considerably lower than when I last went over this portion of the Line on the 23rd and 24th Inst. Although the Cuttings was still a swollen and turbid

Substantially done and there is no reason why trains going at a rate of not more than three or four miles an hour should not pass over it.

(9) The Chief Engineer of the Line informs me that the bank which from its bursting caused the disaster at the 60th mile, was subsequently partially repaired by the villagers, but during the recent heavy rains it naturally breached again and on the night of the 28th instant, the water escaping from it rose on the North-side of the Line trail road, and all but carried away the Coaps line or diversion which had been carried round the break in the main line.

(10) It would be well if the repairs of the bank could be delayed until the present uncertain state of the weather is at an end, and they could be carried out with some certainty of their being really substantial.

(11) Bearing in mind the recent Catastrophe; and that so long as the bank exists it will be a source of danger to the Railway Embankment it is much very desirable that a Culvanella of ample size should be provided for the bank surplus water.

(12) The rest of the line appears to be in excellent order and all the main bridges and culverts appear unshaken although it is not probable that they will ever again be subjected to a more severe trial of their stability than they have just passed through. The floorings which have lately been put in under many of the bridges have no doubt been in no small degree conducive to their safety.

(13) If the weather holds up and the bridges and culverts some on careful inspection below as unshaken as they appear below, I see no reason why night traffic should not be resumed along this portion

clothes or handkerchiefs when on duty. I have several times within the last few days been under the impression that red danger signals were being exhibited, when on coming nearer I found that the red signals which I had not seen were green flags and that the watchmen had on either red clothes or had red handkerchiefs thrown over their shoulders. I spoke to the Driver of the Engine on which I travelled yesterday upon the subject and he told me that some days previously he had been deceived as I had been and had commenced to pull up his train when he discovered his mistake.

I have the honour to be
Sir
Your obedient Servt
Robt Thompson
Capt R.E.

Offg D.G. Com. Dep. Insp. Rlways

P.C. Br. 5984/72.

Ft. Mch. 12.

No 667.

Submitted for the information of Government with reference to correspondence on the same subject previously submitted.

2. The Collector of North Arcot has been asked to issue such orders as in his opinion are necessary to prevent further attempts being made to repair the Talinga tank until the weather shall have become more settled.

3.

To

The Secretary to Government
P.W. Department
Fort St. George.

3. A copy of Captain Thompson's report has been sent to the Agent, and his attention has been drawn to paragraphs 8 & 13. He has also been asked to give his opinion upon the subject referred to in the concluding paragraphs of the report.

4 The District Engineer of North Arcot has been written to regarding the want of a Cabigulah referred to in paragraph 11.

Madras 2 Dec 1872

Lieut Col RE
Con Engineer for Rys

P. W. 1872 Depart
From No 5984
The Consulting Engineer
for Railways
To
The Secretary to Govt
P. W. Dept

Dated 2nd
Rec'd 4th } Dec. 1872

Enc: 3. Ff. 667.

No. 13 - 6th Dec. 1872 - Submitting with observations letter from Agent of the Indus Rly & report from Captain Thompson regarding the late break in the line between Sholinghur and Arcot -

With an Order

No. 13 Ordered to be recorded.
The Chief Engineer for Irrigation will see that the subject of Protection for the future safety of the Canal is attended to.
Dec. 21/12/72.

Middle Pass Rly
Chief Engr for Irrig
Madras
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No. 5984

Govt. of {1872} Madras.

PUBLIC WORKS.

To The Consulting Engr for Railways

Dated

Recd. Encl. 3

G. O. 6th Sept 1872, No 13.

Nos 24 & 25

Gradas Railway. Re-

ports, submitted by the Engrs. on the state of the a portion of the S. B. Line & the Madura Ry. Recorded with Remarks.