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*Proceedings of the Madras Government, Public Works Department,
12th December 1874.*

No. 239. Read the following letter from Lieutenant W. H. COAKER, R.E., Deputy Consulting Engineer for Railways, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 28th October 1874, No. 655:—

It is with great regret that I forward the enclosed letters* from the Agent, Madras Railway, regarding the damages sustained by the line during the late floods, which have produced a catalogue of disasters almost unparalleled.

* Nos. 960, 964, 965, dated 26th and 27th October 1874.

2. NORTH-WEST LINE.—The Government will have learned from my telegrams of the 25th and 27th instant that the bridges over the Cheyaur, Paupugnee, Chittravutty, and Pennair rivers have all been seriously damaged, and such further particulars as are at present available are given in the correspondence now submitted.

3. From the Traffic Manager's telegram of yesterday it will be observed that the damage to the Cheyaur bridge is more extensive than was at first supposed. "Three piers and girders at north side completely gone. North abutment, south bridge, gone, and 150 feet of island embankment washed away." The north abutment is situated at the deepest point of the bed, and is in connection with the screw-pile piers which were introduced when the bridge was temporarily restored in 1871. The river is still impassable, and nothing can be done until the flood subsides. In the meantime boats and stores have been despatched, and every effort will be made to establish communication as early as possible.

4. Owing to the telegraph being destroyed beyond the Cheyaur, no particulars have been received from Camalapore (on the banks of the Paupugnee), where the Chief and Deputy Chief Engineers are detained in the train conveying the inward overland mails. The outward mails are still at the Cheyaur. The particulars regarding the Chittravutty and Pennair bridges were received by the Government Telegraph.

5. The line appears to have suffered most severely between Codoor Station, 109 miles, and the Cheyaur bridge, 135½ miles. On Sunday, the 25th, the Traffic Manager, with the Telegraph Engineer and Mr. West, the Resident Engineer, left by the 9-15 A.M. train from Arconum, but were unable to get farther than within 3 miles of Codoor, where the line was breached, and the Traffic Manager made his way by road to the Cheyaur. A 30 feet arch was washed away at the 116th mile, and breaches were found at the 130th and 131st miles; but Mr. West has succeeded in restoring communication as far as Rajampett, 129½ miles, up to which point traffic of all kinds is now being worked. From thence to the Cheyaur, a distance of nearly 6 miles, Mr. Church reports that the line is "quite destroyed."

6. I fear we shall hear of similar minor damages beyond the Cheyaur, but these will be made passable in a comparatively short time; the opening of through communication must depend on the rivers falling sufficiently to allow of the use of boats for conveying passengers and mails across. Two boats were despatched from the Haggry for the Paupugnee on Sunday, but it is not yet known whether they have arrived there, or were stopped by the failure of the Chittravutty bridge.

The ordinary train service is maintained between Ghooty and Raichore and on the Bellary Branch.

7. **SOUTH-WEST LINE.**—The damages here, though not so extensive as on the North-West Line, are of a serious nature, and great anxiety has been caused by imminent danger from the Palar terminal tanks. On the evening of the 26th a telegram was received from the Chief Commissioner of Mysore stating that the Holali tank, the uppermost of the three, had burst, and that the Railway Authorities should be prepared for disaster from the two lower ones going also. Every precaution was taken, night trains between Madras and Jollarett and on the Bangalore Branch being discontinued, and the day service maintained as far as Vellore only. On the morning of the 27th a further telegram was received stating that the two lower tanks had withstood the extreme test to which they had been subjected, and we may now hope that all danger from this source has passed. Had the whole of these tanks gone it is hardly possible that the Palar bridge near Mailputty could have been saved.

8. As reported by telegram, five arches of the Goriattum bridge have succumbed. This work consists of two portions, the larger of twenty-four, and the smaller of five, arches of 30 feet (with an island between), and it is fortunately the latter which have been destroyed. Communication for mails was restored yesterday by supporting the rails which were left suspended, and laying a line of planks on the sleepers. A cradle with ropes and wire have been despatched, and will, it is hoped, be got across to-day, so that passengers and mails may be readily transferred. The temporary bridges at Mailputty and Vaniembady have interfered greatly with communication to Jollarett, as through their being washed away as soon as made up it has not been possible to run trains up to the west side of the Goriattum bridge, but endeavours are being made to accomplish this with safety to-day. Yesterday the mails were sent from Goriattum to Jollarett by trolley.

9. The destruction of the road bridge over the Palar near Vellore at present cuts off passengers from the railway, and it is probable that the grain traffic, which is here larger than at any other station on the line, will be prejudicially affected for some weeks to come.

10. Particulars of these disasters have been telegraphed to the Government of India in accordance with the Order of Government, No. 2,401, dated 24th August 1874.

11. I hoped that the Consulting Engineer would have returned in time to submit this report, but as he has not yet arrived I have thought it better to send on the Agent's letters. Colonel Shaw-Stewart and Captain Thompson were both in the mail train of Sunday on their way to Madras, and were detained at Jollarett owing to the suspension of night traffic. The failure of the Goriattum bridge cut them off, and on Monday Colonel Shaw-Stewart left by road for Vellore Station, but unfortunately reached the town of Vellore just after the road bridge over the Palar had gone. He was thus again cut off, and telegraphed that he would start for Madras by road. Captain Thompson is to-day between Vellore and Jollarett superintending the running of trains over the Mailputty and Vaniembady temporary bridges, and inspecting the arrangements for the transfer of traffic at the Goriattum bridge. Nothing can be done up the North-West Line beyond Rajampett until the floods in the rivers have subsided.

From R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Madras, 26th October 1874, No. 960.

I HAVE the honor to report, for the information of Government, that during the floods which have prevailed during the last two days damage of the most serious nature has been done to this railway both on the South-West and North-West Lines.

2. Early yesterday morning I received telegraphic information from Cuddapah to the effect that the line had been washed away at the 131st and 132nd miles, North-West Line, and that the bridges over the Paupugnee and Cheyaur rivers had been damaged and rendered impassable for trains. The extent of the damage done to these bridges has not yet been ascertained, but it is, I believe, confined to those portions of them which were temporarily erected after the accidents which occurred on the 21st of October 1870 and the 17th of June last.

3. I also received information yesterday that the temporary structures at Mailputty and Vaniembady had been so much damaged by the floods that it was considered unsafe for trains to run over them.

4. Upon this information I issued instructions yesterday afternoon that no night trains were to be run between Madras and Jollarett and between Arconum and Cuddapah, and, in informing the Postal Authorities of this, I stated that sorting carriages would be attached to the 7 A.M. train of this morning for the conveyance of the mails usually sent by the 6 P.M. train, and that the best arrangements possible, under the circumstances, would be made to run them through to their destinations.

5. Early this morning, however, I received a telegram from Colonel Sankey, the Chief Engineer to the Mysore Commission, stating that the Palar series of tanks was again in imminent danger of breaching, and warning me to adopt precautions. Upon receipt of this telegram I went to the Central Station, and issued instructions that the 7 A.M. train was to run as far as Vellore only, and I ordered the driver and guards of the train to keep a good look-out and to proceed slowly and with the utmost caution.

6. Up to the time of writing (2 P.M.) I have had no further information as to the Palar tanks, but I conclude that Colonel Sankey's anticipations have been fulfilled, as at about 11 o'clock this morning the Station Master at Goriattum telegraphed to say that five arches forming the

* 197.9 mile, South-West Line.

west portion of the Goriattum* bridge had been washed away.

7. At about the same time I also received a telegram from the North-West Line to say that the fourth and fifth south piers of the Chittravutti* bridge were carried away last night.

* 211.14 mile, North-West Line.

8. Mr. Beresford Anderson, the Company's Chief Engineer, who was on his way to Madras to resume his appointment, was in the 1-35 P.M. train from Raichore of Saturday last, which is detained at Camalapore in consequence of the damage to the Paupugnee bridge. He and Mr. Going, who was in the same train, are still at Camalapore, unable to cross the river, and Mr. Anderson telegraphed to me yesterday evening to say that it was then raining heavily there, and that nothing can be done to restore communication until the river subsides.

9. Mr. Church, the Traffic Manager, left Madras by the 7 A.M. train yesterday morning to proceed to the Cheyaur, but was unable to get further than the top of the Ballypully cutting; this part of the line he describes as "a perfect river, water 2 feet deep," and he explained that he could go no further as the water reached the fire box of the engine, and would have put out the fire. He telegraphed to me this morning from Codoor to say that he was going, if possible, to the Cheyaur river, which was reported to be impassable even for boats.

10. These disasters have particularly closed the railway except between Madras and Vellore, and I am unable at present to afford the Government any definite information as to when it is probable that we shall be able to restore through communication. I will however submit a further report when I am in possession of later information.

*Proceedings of the Madras Government, Public Works Department,
12th December 1874.*

From the same Officer, dated Madras, 27th October 1874, No. 964.

In continuation of my letter of yesterday, No. 960, I have the honor to report, for the information of Government, that last evening I received the following telegram from the Chief Commissioner of Mysore, dated Colar Road, 4 56 P.M., 26th October:—

"Holali tank breached last night. No news of effect on Baitmungalum and Ramsagar tanks, but should be prepared for disaster from their going also."

2. This morning I received the following telegram from the Chief Commissioner of Mysore, dated Bangalore, 7-45 A.M., 27th October:—

"Palar Holali tank breached. The two lower tanks stood."

3. It was reported yesterday that the temporary bridges at Vaniembady and Mailputty were fit for the passage of trains, but I regret to learn this morning that the river at Vaniembady is again in flood, and that it was not considered safe to run a train over which left Jollarett with the mails this morning. The Resident Engineer is engaged in making a temporary communication across the breach in the Goriattum bridge by means of rope, wires, and a cradle, and this will, I hope, be ready in the course of to-day.

4. In the meantime a regular service of day trains has been established between Madras and Goriattum, as shown in the enclosed special time-table and arrangements will be made for carrying on the service between the west side of the Goriattum river and Jollarett as soon as through communication is possible.

5. The Bangalore Branch remains uninjured, and trains continue to be run by day according to the published time-table.

6. Our telegraphic communication with the North-West Line beyond Rajampett is still interrupted, but I regret to say that I this morning received a message from Ghooty, through the Government telegraph, informing me that five additional piers (making seven in all) at the Chittravutty bridge had been destroyed, and that two piers of the Penar* bridge had also been carried away.

* At 283.12 mile, North-West Line.

7. I received a telegram from Mr. Church last night from the 134th mile, North-West Line, (where Mr. Winter has established a temporary telegraph station), reporting that several breaches had been made in the line, and that a 30 feet arch at the 116th mile had been washed away on Monday night. Mr. Church found the railway from Rajampett to the Cheyaur "quite destroyed," and was trying to get to the river by the ordinary road. Both the telegraph wires north of the 134th mile were broken, and there was no possibility of repairing them until the water subsided.

8. I have consequently been unable to communicate with Mr. Anderson and Mr. Going who are, I believe, still detained at Camalapore, and I have no idea when the mail from England may be expected in Madras.

9. I trust, however, to hear from Mr. Church at the Cheyaur in the course of the day, and if so, I will make a further report.

From the same Officer, dated Madras, 27th October 1874, No. 965.

In continuation of my letter of this morning, No. 964, I have the honor to annex the copy of a telegram I have just received from the Traffic Manager who has reached the Cheyaur Bridge:—

"Church, Cheyaur, to Elwin, Royapooram.

"Cheyaur still in flood and quite impassable. Weather fine but threatening rain. Three piers and girders at north side completely gone. North abutment, south bridge, gone, and 150 feet of island embankment washed away. Telegraph across bridge at present impossible. Overland mails still here."

2. The "overland mails" referred to are the outward mails which left Madras by the 6 P.M. train on Saturday, the 24th instant.

*Proceedings of the Madras Government, Public Works Department,
12th December 1874.*

No. 240.

ORDER THEREON, 12th December 1874, No. 3,491.

RAILWAY, No. 38.

THESE, and the more detailed reports that may subsequently be expected, will be communicated to the

Secretary of State for India and to the Government of India; and the Consulting Engineer will be instructed to impress upon the Railway Authorities the great importance attached by His Excellency the Governor in Council to the necessity of in future adopting such precautions as shall place the recurrence of disasters like those now recorded beyond all probability. It is understood from the actual experience gained in the reconstruction of the Cheyaur bridge, that the cause of destruction is that in many instances the foundations of piers and abutments have not been sunk to the solid bed of the rivers. Similar cautions will be given to the officers of the South of India Railway now employed on works of construction.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Consulting Engineer for Railways:

„ Chief Engineer for Irrigation.

„ Revenue Department.

Exd. S. T. Austin.

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N^o 4434
Revenue Department
Sbdt. of 1874 Madras.
PUBLIC WORKS.

THE CONSULTING ENGINEER
FOR RAILWAYS.

&c., &c., &c.

Dated December 12th.

Recd. — 15th Encl.

G., O., 12th December 1874, No. 3,491

DECEMBER.

Nos. 239 240

15/12

Damages (Madras Railway).—Reports of damages to the Madras Railway by heavy floods of October, communicated to the Secretary of State for India and to the Government of India, and certain instructions issued to the Consulting Engineer for Railways.

N^o 141
Comm^d to the
Board of Revenue

16 Dec 74

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