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.		Press / Mis.
94, 95,	48.	
Dated	8-1-	1873.

Not to be folded or roughly handled

No. 94. Read the following letter from the Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 29th November 1872, No. 661 :—

I HAVE the honour to submit, for the information of Government, a letter* from the Agent of the Carnatic Railway Company, giving cover to a report from the Chief Engineer upon the extent of the injury sustained by the line between Arconum and Conjeveram upon the 23rd instant. A report† from the Acting Deputy Consulting Engineer, who inspected the line on the 25th instant, is also submitted.

* No. 640, 26th November 1872.

† Dated 27th November 1872.

2. It will be seen that further information as to the cause and the estimated amount of damage is promised by the Agent in a few days, and that in the meantime, "pending some arrangement as to whom, or to what account, these damages are to be chargeable," he requests that an advance of Rupees 2,000 may be made "to the debit of a suspense account, and not as advance on the ordinary Capital or Revenue Advance Accounts." I do not consider the case to be one to which paragraph 11 of Lord Halifax's despatch, dated the 9th March 1864, is properly applicable, and, in my opinion, the whole cost of the repairs to the line should be treated as a charge to Revenue. In any case, as was ruled* by the Government of India in the case of the Cheyaur bridge restoration, the expenditure must be met from the Revenue balances, and I have advised the Agent accordingly.

* *Vide* G. O., 10th January 1872, No. 68.

3. A copy of Lieutenant Christie's report has been communicated to the Agent, and his attention has been drawn to the suggestions made in it. I have requested that the sufficiency or otherwise of the waterway provided in the bridge over the Cortelliar river may form the subject of a special report by the Chief Engineer.

From the Agent and Manager of the Carnatic Railway Company, (Limited,) to the Consulting Engineer for Railways, dated Madras, 26th November 1872, No. 640.

I REGRET to have to report, for the information of Government, that I received intimation by telegraph from Arconum on Saturday morning last that considerable damage had been done to the line between Arconum and Conjeveram by the bursting of tanks and consequent flooding of the Cortelliar river.

2. The train did not arrive at Arconum on Saturday morning, the 23rd instant, and the telegraph line having been washed down, no information as to the nature or extent of the damage could then be ascertained.

3. At my request the Chief Engineer, accompanied by one of his Assistants (Mr. Jenkinson), proceeded to Arconum by the next ordinary train which left Madras at 2 P.M. on the 23rd instant, but having arrived there only at the edge of dark, and the water being still very high, little could be done that night.

4. Early next morning (Sunday) an inspection of the line was made, and I enclose a copy of the Chief Engineer's report which shows that no less than five bridges and culverts have been burst up or washed away, and considerable damage done to the line from the 2nd to the 15th mile. Mr. Jenkinson remains upon the spot with instructions to have repairs to the banks effected as

rapidly as the flood will admit, but I fear it will be several days before the traffic can be resumed.

5. Further information as to the cause and estimated amount of damage done will be submitted in a few days; in the meantime funds will be required to meet the unexpected outlay which will be entailed, and pending some arrangement as to whom, or to what account, these damages are to be chargeable, I submit an advance of Rupees 2,000 should be made to the Company to the debit of a suspense account, and not as advance on the ordinary Capital or Revenue Advance Accounts.

From the Chief Engineer, to the Agent and Manager of the Carnatic Railway Company, (Limited,) dated Madras, 25th November 1872, No. 623.

I BEG to report, with reference to injuries which have been caused to the open line by the late floods, as follows:—

2. From the 2nd to the 15th mile the water flowed over the rails for nearly half the distance, carrying away in some cases the culverts and small bridges, in others injuring the embankment only, while in others merely the ballast was washed away. I subjoin a memorandum of the position and extent of the various breaches, with remarks as to the cause of the flood at each place as far as was ascertained and reported to me at the time of my inspection.

3. I am glad to be able to say that the Cortelliar bridge has withstood the flood and is apparently perfectly uninjured; there is, however, a gap in the embankment on either side, through which the water was running in a torrent; the level of the flood stood about 1 foot above the rails on the bridge, and about 4 feet higher than the bottom of the girders.

4. The bridges that have been carried away and injured are two small bridges 12 and 10 feet openings, and four culverts of 6, 3, and 1½ feet spans; all the culverts appear to have been those originally built for the Trunk Road and utilized by the Railway and seem to have blown up. With reference to the others, I have been unable to form an opinion as to the manner in which they first gave way on account of the water which was running through them.

5. The telegraph posts were carried away near the Cortelliar bridge and all communication was consequently interrupted. I was enabled to restore the telegraph connection on the morning of the day following that of the accident.

6. From the information I could gather on the spot, the floods appear to have been at their height at about 4 A.M. of Saturday, the 23rd instant

7. With reference to the restoration, the smaller gaps are being filled up now; but the time of completing the repairs for resuming traffic will depend upon the abatement of the flood in the Cortelliar. I hope that the train may be able to resume by the first of next week.

8. I am endeavouring to obtain full and accurate information, and will report to you more fully hereafter as to the causes which gave rise to floods having risen to a height hitherto unknown along our line, and what steps I consider should be taken on our part, if possible, to prevent a recurrence of such wholesale destruction of our works. There is, however, I think not the least doubt that in almost every instance the unusual floods have been due to the breaching of tanks immediately above the line; and without entering into the question as to whether such casualties could have been prevented, I would point out that not only is it almost impossible to provide sufficient waterway to pass the drainage of the country under such circumstances, but if it were possible to do so, I think it is not reasonable that we should be called upon to bear the expense of it.

9. In this connection, I would suggest that the Consulting Engineer should be applied to to obtain from the officers of the Public Works Department such information as is available relative to the breaching of tanks emptying into the Cortelliar river and in the neighbourhood of our line, as well as copies of the memoranda of rainfall that occurred at the recording stations nearest to our line.

MEMORANDUM.

Miles.	Particulars.	Remarks.
14	For 33 joints, ballast and part of embankment were washed away. South abutment of the 12 feet opening destroyed.	In consequence of two tanks bursting. Government bridge enlarged.
13	One 1½ feet culvert carried away	In consequence of Parangaroomboor tank broke. Government culvert.
12	For 11 joints, ballast and part of embankment were washed away.	
11	For 10 do. do.	
10	For 2 joints, embankment and ballast washed away at both ends of the 10 feet girder bridge.	
8	For 69 joints, ballast and part embankment washed away, and 6 feet arch blown up.	In consequence of Pullore Tank bursting. Built by Government.
7	For 21 joints, ballast and part embankment washed away	
6	3 feet arch burst	In consequence of the flood at the adjacent tank. Built by Government.
5	For 25 joints, ballast washed away.	
4	For 87 joints, ballast and nearly all embankment washed away. Bridge injured.	At the Cortelliar bridge breach on north side about 200 feet, that on the south being about 60.
3	10 feet opening and 3 feet arch carried away.	In consequence of Paroomachey and several other tanks bursting. Three feet arch built by Government.

(Signed) F. S. DIBBLEE,
Chief Engineer.

From the Acting Deputy Consulting Engineer for Railways, to the Consulting Engineer for Railways, dated Madras, 27th November 1872.

I HAVE the honour to report that on my return on Sunday evening from the scene of the accident at the 61st mile, South-West Line, Madras Railway, I met at Arconum the Chief Engineer of the Carnatic Railway, and learnt that the floods on the night of Friday, the 22nd instant, had done much damage to that line; and as Mr. Jenkinson, Assistant Engineer, was to return next day to Arconum to arrange for carrying out the necessary repairs, I decided to go over the line with him.

2. The damage done I found to be as follows:—

2nd Mile.—One 3 feet culvert burst.
3rd ,, —40 yards of bank washed away.
,, ,, —One abutment of a 10 feet timber bridge carried away.
,, ,, —120 yards of bank washed away.
,, ,, —40 yards ballast washed away.
,, ,, —70 yards bank washed away.
,, ,, —60 yards of the bank abutting on the north end of the Cortelliar bridge carried away, as well as about 30 yards of bank a short distance from the south abutment of the bridge. The bridge appeared to be uninjured.
,, ,, —80 yards of ballast washed away.
6th Mile.—200 yards of ballast more or less washed away.
,, ,, —10 yards bank washed away.
,, ,, —45 yards bank washed away.
,, ,, —60 yards bank washed away.
6th Mile.—3 feet culvert carried away.
,, ,, —15 yards bank carried away.

6th Mile.—10 yards bank carried away.
,, ,, —60 yards bank carried away.
7th Mile.—40 yards length of ballast washed away.
,, ,, —350 yards length of bank washed away.
8th Mile.—6 feet culvert carried away.
,, ,, —50 yards of bank carried away.
9th Mile.—10 yards of bank carried away.
12th Mile.—60 yards of bank carried away.
,, ,, —70 yards of ballast carried away.
13th Mile.—One 18-inch culvert carried away.
,, ,, —200 yards of bank carried away.

3. The damage done to the approaches of the Cortelliar bridge and that in the 12th mile are evidently due to insufficient provision of waterway; but in every other case the injuries to the line appear to have been caused by the bursting of overlying tanks.

4. Mr. Jenkinson is on the spot to superintend the execution of the necessary repairs, which he hoped to complete by the end of the current week; but looking to the present state of the weather, it is improbable that the line will so soon be restored to a fit condition for traffic.

5. Apart from the damage done by recent floods the line is in an unsatisfactory condition. The sleepers are not properly packed up, the rails having in many places a considerable cant even on straight portions of the line; the drains are not kept clear. Even on the sharpest curves the rails appear to have been laid without being previously bent to the curves; the rails are now everywhere much bent from wear.

6. In one or two places I noticed that the top wire of the fence is little more than two feet above the surface of the public road, and I was informed that the road had recently been raised. In such a case the fence should also have been raised and some additional provision should have been made for the drainage of the line. At present the surface drainage of public road runs on to the railway.

7. The telegraph posts are not numbered, and it is therefore impossible to specify the exact locality of any observed defect.

8. The platform wall of the Pulloor Station requires pointing.

9. The Agent of the Carnatic Railway Company does not submit to this office reports of the periodical inspections of the open line by the Chief Engineer. It would be satisfactory to know whether such inspections are ever made.

No. 95. ORDER THEREON, 8th January 1873, No. 48.

RAILWAY, No. 13.

HIS Excellency the Governor in Council will await the further report promised, on the receipt of which instructions regarding the tanks, to the breaching of which the Chief Engineer of the Railway Company attributes the floods, will be issued.

2. The state of the open line, described by the Deputy Consulting Engineer, appears to indicate some laxity in the periodical inspections. The Consulting Engineer will report further on this subject.

(True Extract.)

Colonel, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.
Exd. S. T. Austin.

Memorandum to accompany letter No: 623.

Miles	Particulars	Remarks
11	for 33 Joints, ballast & part of Embankment were washed away. South abutment of the 12 ft opening destroyed.	In consequence of two tanks bursting — Government Bridge interfered.
13	1-4" Culvert carried away	In consequence of Paneyaroor tank & breach — Government Culvert
12	for 11 Joints ballast & part of Embankment were washed away	
11	" 10 Do Do	
10	" 2 Joints Embankment & ballast washed away at both ends of the 10' Girder bridge	
8	" 60 Joints ballast & part Embankment washed away & 6' arch blown up	In consequence of Pulloor tanks bursting — Built by Government
7	" 20 Joints ballast & part Embankment washed away	
6	3' Arch burst	In consequence of the flood at Kavaraipet tank — Built by Government
5	" 25 Joints ballast washed away	
4	80 Do ballast & near half Embankment washed away — Bridge uninjured	At the Cortelliar Bridge, Breaches are North side about 200 ft. that on the South being about 60
3	10' Opening & 3' Arch Carried away	In consequence of Paneyaroor, Kavaraipet & Sivan at Chittoor tanks bursting — 3' Arch built by Government.

Fredk Dobbs
Chief Engineer

inst - but having answered these only

Carnatic Railway Company, Limited,

AGENT'S AND MANAGER'S OFFICE,

MADRAS, Nov. 26th 1872

No 620

From The Agent & Manager
Carnatic Ry Co Limd

To Lieut Col. J. H. Shaw Stewart RE
Cons: Engr for Railways
Madras.

Sir

I regret to have to report for the information of Govt that I received intimation by Telegraph from Arconum on Saturday morning last that considerable damage had been done to the line between Arconum and Coiyeram by the overflow of Tanks and consequent flooding of the Cortilear River.

The train did not arrive at Arconum on Saturday morning the 23rd inst and the telegraph line having been washed down no information as to the nature or extent of the damage could then be ascertained.

At my request the chief Engineer accompanied by one of his Assistants (Mr Tomkinson) proceeded to Arconum by the next ordinary train, which left Madras at 2 P.M. on the 23rd inst. but having arrived there only

Dated

Received Cuddalore 26th

by the Consg: Engineer for Railways

Dated

Received Cuddalore 26th Novr. 1872

Consulting Engineer for Railways

Sir,

I have the honour to acknowledge

that I duly received on Tuesday evening the

the decease of the accident at the Bridge

Sent the Head Clerk to Madras (Railway Office)

at Cuddalore, the Collector of the

Carnatic Railway, a mob assembled that the

floods on the night of Friday the 22nd

inundated and done much damage to the

line; and as all the Gentlemen, Assistant

Engineer, went to return next day to

Cuddalore

From

The Agent & Manager

Carnatic Ry Co's Limited

Madras

To

The Consg: Engr.

for Railways

Dated 26th Novr.
Recd. 26. } 1872

No 640.

Reports considerable damage to the open line between Cuddalore and Conjeeveram by the flooding of the Coleroon River with remarks.

Proceed to arrange for carrying out the necessary repairs. I decided to go over the line with him.

The damage done I found to be as follows,—

2nd mile . . . One 3' culvert burst.

3rd " . . . 40 yards of bank washed away.

" . . . One abutment of a 10' timber bridge carried away.

" . . . 120 yards of bank washed away

" . . . 40 yards ballast washed away.

" . . . 70 yards bank washed away.

" . . . 60 yards of the bank abutting on the north end of the Corbelliar bridge, carried away, as well as about 30 yards of bank a short distance from the south abutment of the bridge

The

The bridge appeared to be uninjured

3rd mile . . . 80 yards of ballast washed away.

6" mile . . . 200 yards of ballast more or less washed away.

" " . . . 10 yards bank washed away.

" " . . . 45 yards bank washed away.

" " . . . 60 yards bank washed away.

" " . . . 3' culvert carried away.

" " . . . 15 yards bank carried away.

" " . . . 10 yards bank carried away.

" " . . . 60 yards bank carried away.

7" mile . . . 40 yards length of ballast washed away.

" " . . . 350 yards length of bank washed away.

8" mile . . . 6' culvert carried away.

" " . . . 50 yards of bank carried away.

9" mile . . . 10 yards of bank carried away.

12" mile

12" mile ... 60 yards of bank carried away.
" " ... 70 yards of ballast carried away.
13" mile ... One 18" culvert carried away.
" " ... 200 yards of bank carried away.

The damage done to the approaches of the Corbelear bridge, and that in the twelfth mile, are evidently due to insufficient provision of waterway; but in every other case the injuries to the line appear to have been caused by the bursting of overlying tanks.

Mr Jenkinson is on the spot to superintend the execution of the necessary repairs, which he hopes to complete by the end of the current week; but looking to the present state of the weather it is improbable that the line will so soon be restored to a fit condition for

for traffic.

Apart from the damage done by recent floods the line is in an unsatisfactory condition. The sleepers are not properly packed up, the rails having in many places a considerable cant even on straight portions of the line. The drains are not kept clear. Even on the sharpest curves the rails appear to have been laid without being previously bent to the curve. The rails are now everywhere much bent from wear.

On one or two places I noticed that the top wire of the fence is little more than two feet above the surface of the public road, and I was informed that the road had recently been raised. In such a case the fence should

should also have been raised and some additional provision should have been made for the drainage of the line. At present the surface drainage of the public roads runs on to the railway.

The telegraph posts are not numbered and it is therefore impossible to specify the exact locality of any observed defect.

The platform wall of the Pulloor Station requires pointing.

The Agent of the Carnatic Railway Company does not submit to this office reports of the periodical inspections of the open line by the Chief Engineer. It would be satisfactory to know whether such inspections

inspections are ever made.

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

Madras
27th November 1872

Chas. Mc Christie Lieut. R.E.
Ag. Dy Cons: Engineer for
Railways

Cor. M. Hrs Railway

8 1/19

Railway Department. CONSULTING ENGINEER'S OFFICE,

No. 661

From

LIEUT.-COLONEL J. H. M. SHAW STEWART, R.E.,

Consulting Engineer for Railways,

To

COLONEL G. W. WALKER, R.E.,

Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

I have the honour to submit, for the information of Government, a letter* from the Agent of the Carnatic Railway Company, giving cover to a report from the Chief Engineer upon the extent of the injury sustained by the line between Arconum and Conjeveram upon the 23rd. instant. A report* from the Acting Deputy Consulting Engineer who inspected the line on the 25th. instant, is also submitted.

2. It

No. 640 26th. November 1872.

dated 27th. November 1872.

From
The Hon'ble Superintendent
Port Blackwood

To
The Secretary to Government
Public Works Department
Madras

Dated 27th. Nov. 1872.
Rec'd 29th. Nov.

Reporting on the state of the Line and of the Carnatic Railway after the passage of the Floods on 23rd. Nov. 1872.

P. Dr. S. 9838 72.

2. It will be seen that further information as to the cause and the estimated amount of damage is promised by the Agent in a few days; and that in the meantime, "pending some "arrangement as to whom or to what "account these damages are to be charg-"eable; he requests that an advance of Rs 2,000 may be made "to the debit of "a suspense account, and not as ad-"vance on the ordinary Capital or "Revenue advance accounts." I do not consider the case to be one to which paragraph 11 of Lord Halifax's despatch, dated the 9th March 1864, is properly applicable, and in my opinion the whole cost of the repairs to the line should be treated as a charge to Revenue. In any case, as was ruled [x] by the Govern-ment of India in the case of the Cheyaur bridge restoration, the expenditure must

[x] vide G.O. 10th January 1872 N:68.

be

be met from the Revenue balances, and I have advised the Agent accordingly.

3. A copy of Lieutenant Christie's report has been communi-cated to the Agent, and his attention has been drawn to the suggestions made in it. I have requested that the sufficiency or otherwise of the waterway provided in the bridge over the Carbeliar river may form the subject of a special report by the Chief Engineer.

I have the honour to be
Sir
Your most obedient servant
Charles Thomas Lieut. R.E.,
for Cons: Engr. for Railways

Madras
29th November
1872

Public Works Department

Proceedings of the Madras Government

Read the following:-

From the Secretary to Govt. No. 1111 dated 17th Novr. 1872

To the Chief Engineer

- nor we Council will await the further report promised on the receipt of which instructions regarding the tenders, to the breaching of which the Chief Engineer

- neer of the Railway Company attributes the floods, will be viewed - the state of the open line, described by the Deputy Consulting Engineer

P. W. 1872 Depart
Pro. of Govt. for Januy
RAILWAY DEPARTMENT.

1872.

From No. 5933.

The Consulting Engineer
for Railways,

To

The Secretary to Government,
P. W. Department,
Fort Saint George.

Dated 29 } November 1872.
Recd. 2nd } Decr

Encl 4.

No. 661

Forwarding with remarks letter from Agent Carnatic Railway Company to report from the Chief Engineer regarding damage done to the open line from Accounts by Conservancy No. 48-8 Dated 19-

No. 614

for the Description Book

appears to indicate some
laxity in the periodical
inspections. The Com-
-pulling Engineer will
report further on this
subject.

Genl. O.T.S.

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Lo.

Re. the Longtenge for Ryan

Dublin 9/1/73

Lt. Dublin Retd. 7th

No. 5933

Govt. of {1872} Madras.

PUBLIC WORKS.

To The Consulting Engineer for Railways

Dated

Recd. Encl. 1

G. O. 8th Jany 1872, No. 48.

Nos. 94 & 95

Carnatic Railway. Papers relative to letter from the Engineer forwarding a report on the damages occasioned to the open line from Arconum to Conjeveram.