

(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. | 3411           | Press  |
| B.P. No. |                | Mis. — |
| Dated    | 41 - 12 - 1954 |        |

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,  
4th December 1874.*

No. 84. Read the following letter from Lieutenant-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,  
dated Madras, 7th November 1874, No. 634 :—

I HAVE the honor to report, for the information of Government, that the break at Gooriattum was restored on the 5th instant, and that trains have passed over it from that date. A note by the Deputy Consulting Engineer on the temporary restoration is herewith enclosed.

2. Night traffic on the south-west line and on the Bangalore branch was resumed yesterday, so that the ordinary train service is now in force over these portions of the Madras Railway. On the north-west line the day service has been conducted from the 30th ultimo up to Cuddapah by trains running to Rajampett and from the north bank of the Cheyaur, passengers making their own arrangements for transit between these two points, a distance of about six miles. A number of jutkas have been sent up from Madras, and as country carts are easily procurable no difficulty is found in making this part of the journey. A raft is provided at the Cheyaur for conveying passengers, baggage, and mails across the portion of the river where the bridge is destroyed. It is still impossible to state when traffic will be resumed beyond Cuddapah.

*Note on temporary restoration of Gooriattum bridge, inspected and passed for traffic on the 5th November 1874.*

THE temporary structure to span the break caused by the destruction of the five arches west of the island consists of piers built up with sleepers carrying girders of the following dimensions :—  
Two of 12 feet, one of 15 feet, and one of 30 feet, in the order in which they are given from east to west.

2. The piers for the smaller girders are built up on the bed level. Between these and the 30 feet girder is a length of about 20 feet, composed entirely of sleepers built up on the debris of the two masonry piers which fell towards one another, and on the extremity of this one end of the 30 feet girder rests, the other being supported by a sleeper pier near the abutment. This last pier sank continually during its construction owing to scour, and its bottom is now about 5 feet below river bed, where it appears at last to have taken a firm bearing. The sleepers are spiked together, and are being braced vertically with tie-bars.

3. About one-third (10 feet) of the last arch remains attached to the abutment, the quality of the masonry of the whole being exceedingly good. The end of the 30 feet girder resting on the last sleeper pier reaches to within 5 feet of the face of the abutment, so that the weight of a train is carried on the haunch of the broken arch for 5 feet only, and as the rails are continuous over this with a good depth of earth and ballast, there appears to be no danger of the standing portion of the arch being broken away.

4. With a heavy goods engine passing over the temporary structure no sinking of the piers was discernible, and considering that but little of the material was on the ground until the evening of the 31st ultimo, the completion of this substantial work within so short a time may be regarded as highly satisfactory. It is proposed to put dry stone curtain walls up and down stream under the 30 feet girder, where the bed is liable to scour, and to floor between with stone on edge, by which means it is hoped that in the event of the river again rising damage to the pier may be prevented.

5. I learn that water was hardly ever before known to pass through this portion of the bridge, and as there are two distinct channels a bund has been thrown across above the temporary

*Proceedings of the Madras Government, Public Works Department,  
4th December 1874.*

work with the view of diverting the water which would enter this channel during floods, a cut being made through the intervening sand bank for carrying it into the main stream.

6. In company with the Deputy Chief Engineer I also inspected the temporary bridge at Mailputty, which suffered during the recent floods, and as the embankment has since been revetted with stone, and the scour holes filled in with boulders, it was considered that night traffic might be again resumed with safety, and the Agent was informed accordingly. Special watchmen are posted at all the temporary works, and whenever the water rises above a certain level fixed for each, the bridge is tested by running the engine over first without the train. The speed is limited to four miles per hour.

MADRAS,  
7th November 1874.

(Signed) W. H. COAKER, Lieutenant, R.E.,  
Deputy Consulting Engineer for Railways.

No. 85.

ORDER THEREON, 4th December 1874, No. 3,411.

RAILWAY, No. 12.

His Excellency the Governor in Council considers that much credit is due to the Railway officials for the speed and ingenuity with which communication across the Gooriattum river has been restored. But it is evident that the temporary bridge is easily susceptible of damage by floods throughout the rainy season; and its maintenance will require constant vigilance and unremitting care.

(True Extract.)

Colonel, R.E.,  
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. S. T. Austin.

Spare Copies

813  
*Note on temporary restoration of Gooriattum bridge inspected and passed for traffic on the 5 November, 1874.*

1. *The temporary structure to span the break caused by the destruction of the five arches west of the island consists of piers built up with sleepers carrying girders of the following dimensions: two of 12 feet, one of 15 feet, and one of 30 feet: in the order in which they are given from east to west.*

2. *The piers for the smaller girders are built up on the bed level - Between these and the 30 feet girder is a length of*

of about 20 feet composed entirely of sleepers built up on the debris of two masonry piers which fell towards one another, and on the extremity of this one end of the 30 feet girder rests, the other being supported by a sleeper pier near the abutment. This last pier sank continually during its construction owing to scour, and its bottom is now about five feet below river bed, where it appears at last to have taken a firm bearing. The sleepers are spiked together, and are being braced vertically with tie-bars.

3 About one third (10 feet) of the last arch remains

4 remains attached to the abutment, the quality of the masonry of the whole being exceedingly good. The end of the 30 feet girder resting on the last sleeper pier reaches to within five feet of the face of the abutment, so that the weight of a train is carried on the haunch of the broken arch for five feet only, and as the rails are continuous over this with a good depth of earth and ballast, there appears to be no danger of the standing portion of the arch being broken away. With a heavy goods engine passing over the temporary structure no sinking of the piers was discernible, and considering that

that but little of the material was on the ground until the evening of the 31<sup>st</sup> ultimo, the completion of this substantial work within so short a time may be regarded as highly satisfactory. It is proposed to put dry stone curtain walls up and down stream under the 30 feet girder, where the bed is liable to scour, and to floor between with stone on edge, by which means it is hoped that in the event of the river again rising damage to the pier may be prevented.

I learn that water was hardly ever before known to pass through this portion of the bridge, and as there are  
two

5  
two distinct channels, a bund has been thrown across above the temporary work with the view of diverting the water which would enter this channel during floods: a cut being made through the intervening sandbank for carrying it into the main stream.

b. In company with the Deputy Chief Engineer I also inspected the temporary bridge at Mailputty which suffered during the recent floods, and as the embankment has since been revetted with stone, and the scour holes filled in with boulders, it was considered that night traffic might be again resumed with safety,  
and

1  
J. M. 7025/74  
P. S. 74 Dec 14  
L. M. 1884

SIR

2. Right traffic on the  
south-west line and on the Bangalore  
branch

branch was resumed yesterday, so that the ordinary train service is now in force over these portions of the Madras Railway. On the north-west line the day service has been conducted from the 30<sup>th</sup> ulthind up to Buddapak by trains — running to Rajampett and from the north bank of the Cheyair, passengers making their own arrangements for transit between these two points, a distance of about six miles. A number of juthas have been sent up from Madras, and as country carts are easily procurable no difficulty is found in making this part of the journey. A raft is provided at

at the Cheyair for conveying passengers,  
baggage, and mails across the portion  
of the river where the bridge is  
destroyed. It is still impossible  
to state when traffic will be resumed  
beyond Luddapah.

Have the honor to be  
Sir

Your most obedt servant.

W. H. Barker      L. R. E.

for one Engineer for  
Railways

Madras  
7 November  
1874  
R. B. W. F.

St. Department

Proceedings of the Madras Road.

Read the following:-

From the Joint Engineers  
for Ryo: } (N. E. No 684 of 4th Dec 1874)  
3411

His Excellency the  
Governor in Council  
considers that much  
credit is due to the  
Railway Officials for  
the speed and ingenuity  
with which commu-  
-nication across the  
Coriattum River has  
been restored. But it  
is evident that the  
temporary bridge is  
easily susceptible  
of damage by floods.

27/11

15/11

23/11

J. M. 1874 Madras  
Engineering for  
Railway Department.

From  
The Consulting Engineer  
for Railways,

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

Dated 27th Nov. 1874.  
Recd.

Encl. No. 684.

Forwarding  
with view to a sub-  
by the Dy. Engr. in  
charge the construction  
of the bridge at the  
Coriattum bridge.

L.O. No. 3411. 4-12-74.

Copy

Encl. No. 684.  
Madras Engineering Department.

throughout the rainy season; and the rev. its maintenance  
 - parability under will require con:  
 which they labour. stout vigilance  
 as to its maintenance & unremitting  
 with unremitting v. care  
 - gillance is very great.

Lyons

I am, Sir,  
 Dear Sir,  
 In reply to your letter of the 11th inst. in relation to the  
 maintenance of the  
 ... I am, Sir,  
 Very respectfully,  
 Yours,  
 Wm. H. ...

W.H.  
 11/2/74

No 84-85  
 1874  
 e. 21-11-74  
 21-11-74

Conf. Secy for O. G.  
 Dec 25/12/74

7025 ✓

Govt. of Madras.

PUBLIC WORKS.

<sup>20</sup>  
~~Not sent to Govt  
for filing in Rys.~~

Dated

Recd.

Encl. /

G. O. 4 Dec 1885, No. 3411

Nos. 84-85.

Gorattum Pier

Considering that much credit is due to the Railway officials for the speed and ingenuity with which communication across the River has been restored -