

(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.	1883	Press	Original
B.R. No.		Mis.	
Dated	25. 7.	195	1876

Not to be folded or roughly handled

No. 420. Read the following letter from Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 11th July 1876, No. 339:—

I HAVE the honor to report that the North-West Line of the Madras Railway was inspected by me during last week, in company with the Officiating Chief Engineer.

2. Taken as a whole, the line is in excellent order. Additional ballast is required in a few places, but the want is being supplied. A great part of this line runs through black-cotton soil; and the embankments, which are chiefly formed of that material, absorb an excessive quantity of ballast before becoming thoroughly consolidated. This is especially the case from the Goondacul junction northwards to Raichore, and westwards to Bellary; where unremitting attention and care on the part of the Resident Engineer has at last brought the line nearly up to the general high standard.

3. The fencing seemed to be efficient all over the line. The aloe fence has not thriven equally everywhere. In some places the plants have suffered either from drought, or some other cause, and seem never to have been able to make head; but in all such places they are supplemented with a wire fence.

4. The station-houses and buildings were in good order. The compounds were clean, and the conservancy seemed up to the mark. The refreshment-room arrangements at Arconum and Raichore are good; at Tadputri the room is too small, and a proposal to build a new room is under consideration. At Adoni, the construction of an engine-shed and turn-table is in progress.

5. The bridge over the Huggry is still in progress. It will be remembered that the original design consisted of thirty-four 70-foot openings, spanned by iron girders, resting on piers formed of screw piles. Subsequent borings proved that the depth of sand in the eastern part of the bed was greater than had been supposed, and it was determined in 1871 to substitute iron cylinders for the piles in twenty-four out of the thirty-three piers. After the destructive floods of 1874, it was resolved to use cylinders for the remaining nine piers also. As at present arranged, the foundations of this bridge will consist of sixty-six cast-iron cylinders, each 6 feet in diameter, carried down to rock, and filled with concrete. In the twenty-four old piers, thirty-eight cylinders had been sunk to the full depth on the 30th June, and ten cylinders require to go down somewhat further. In the nine new piers, the sinking of ten cylinders had been begun on the 30th June. Up to that date, thirty-seven of the cylinders had been filled with concrete. The greatest depth reached has been $64\frac{1}{2}$ feet below the bed of the river, and this will probably be the maximum depth throughout the bridge. The rate of progress is necessarily slow; as, under the advice of the Company's Consulting Engineer in London, it is considered essential that the face of rock upon which each cylinder rests should be accurately levelled, before filling the cylinder with concrete. This renders necessary the use either of the pneumatic apparatus, or of the diving dress; and will add largely to the expenditure of time and money in the construction of the bridge.

6. At the Pennair bridge the whole of the repairs to the old structure have been finished. These repairs are specified in the papers printed with the Proceedings of Government, dated the 21st April and the 24th May 1876, Nos. 1,012 and 1,301. A report from the Railway authorities upon the alternative questions of restoring or

*Proceedings of the Madras Government, Public Works Department,
25th July 1876. No. 1,883.*

reconstructing the bridge is awaited; but for the present it is satisfactory to feel assured that the bridge is now better able to resist the action of floods than it has ever been.

7. At the Paupugnee and Chittravutty bridges nothing has been done since the completion of the temporary repairs noticed in the Proceedings of Government, under date the 28th June 1875, No. 1,792. As in the case of the Pennair bridge, a report from the Railway authorities upon the future treatment of these rivers is awaited.

8. At the Cheyair bridge, work is almost at a stand-still, awaiting the arrival from England of material for the cylinders. The necessity for additional material arose partly from the unexpectedly great depth to which the cylinders went down, and partly from the extra 3 feet in height to which it was determined to carry the piers. After the sinking of the cylinders has been completed, the same slow and costly process of levelling the rock face to receive each cylinder, as at the Huggry, will have to be carried out. The maximum depth to be dealt with at the Cheyair is much greater than at the Huggry, being 93 feet below the river bed, so that the prospect of completing the bridge is distant. In the mean time, traffic is carried safely over the old bridge, which, as is the case with the Pennair bridge, is better fitted to resist flood action now than at any previous time.

9. It is satisfactory to be able to report that the traffic upon this line is looking up. It has been unusually dull since the beginning of this year; but the returns for April and May show a decided improvement, especially at Bellary and Adoni. There appears, however, to be a good deal of cholera and other diseases still prevalent in the Bellary and Cuddapah Districts, and this necessarily tends to check the development of traffic.

No. 421. ORDER THEREON, 25th July 1876, No. 1,883.

RAILWAY, No. 42.

ORDERED to be recorded.

2. The Government would be glad to be furnished at an early date with details of the arrangements which may be finally determined on in the case of the Pennair, Paupugnee, and Chittravutty rivers. The nature of the work renders progress with the Huggry bridge slow; while at the Cheyair work is stated to be almost at a stand-still, pending the receipt from England of material for the cylinders. This is much to be regretted. In the mean time, the arrangements for the accommodation of the traffic both here and at the Pennair are believed to be safe.

3. It is satisfactory to be assured of improvement in the traffic prospects of the North-West Line.

(True Extract.)

Colonel,

Offg. Under Secy. to Govt., P.W.D.

To the Consulting Engineer for Railways.

Ed. W. H. French.

Spare Copies

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,

Madras, 11 July 1876.

No. 339

From

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

Consulting Engineer for Railways,

To

MAJOR-GENERAL G. W. WALKER, R.E.,

Secretary to Government,

Public Works Department,

Fort Saint George.

SIR,

I have the honour to report that the North-west line of the Madras Railway was inspected by me during last week, in company with the officiating Chief Engineer.

2. Taken as a whole, the line is in excellent order. Additional ballast is required in a few places, but the want is being supplied. A great part of this line runs through black cotton soil; and the

the embankments, which are chiefly formed of that material, absorb an excessive quantity of ballast before becoming thoroughly consolidated. This is especially the case from the Goondacul junction northwards to Raichore, and westwards to Bellary; where unremitting attention and care on the part of the Resident Engineer has at last brought the line nearly up to the general high standard.

3. The fencing seemed to be efficient all over the line. The aloe fence has not thriven equally everywhere. In some places the plants have suffered either from drought, or some other cause, and seem never to have been able to make head; but in all such places

5
placed they are supplemented with a wire fence.

4. The station houses and buildings were in good order. The compounds were clean, and the conservancy seemed up to the mark. The refreshment-room arrangements at Arcotum and Raichore are good; at Tadpatri the room is too small, and a proposal to build a new room is under consideration. At Adoni the construction of an engine-shed and turn-table is in progress.

5. The bridge over the Huggry is still in progress. It will be remembered that the

the original design consisted of
thirty-four 70-foot openings
spanned by iron girders resting
on piers formed of screw piles.
Subsequent borings proved that
the depth of sand in the eastern
part of the bed was greater than
had been supposed, and it was
determined in 1871 to substitute
iron cylinders for the piles in
twenty-four out of the thirty-three
piers. After the destructive
floods of 1874, it was resolved
to use cylinders for the remain-
ing nine piers also. As at
present arranged, the foundation
of this bridge will consist of 66
cast iron cylinders, each 6 feet

7
in diameter, carried down to
rock, and filled with concrete.
In the twenty-four old piers,
38 cylinders had been sunk
to the full depth on the 30th
June, and 10 cylinders require
to go down somewhat further.
In the nine new piers, the sinking
of 10 cylinders had been begun
on the 30th June. Up to that
date, 37 of the cylinders had
been filled with concrete. The
greatest depth reached has been
64½ feet below the bed of the
river, and this will probably
be the maximum depth through-
out the bridge. The rate of
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as, under the advice of the
Company's Consulting Engineer
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sential that the face of rock
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pneumatic apparatus, or of the
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time and money in the construc-
tion of the bridge.

6. At the Pennar bridge
the whole of the repairs to the
old structure have been finish-
ed. These repairs are specified

9
in the papers printed with the
Proceedings of Government
dated the 21st April and the
24th May 1876, Nos 1012 and
1301. A report from the
Railway Authorities upon
the alternative questions of
restoring or reconstructing
the bridge is awaited; but
for the present it is satisfac-
tory to feel assured that the
bridge is now better able to
resist the action of floods
than it has ever been.

7. At the Paipaignee and
Chittravitty bridges nothing
has been done since the com-
pletion of the temporary repairs
noticed in the Proceedings of

of Government under date the
28th June 1876 No 1792. As
in the case of the Pennar
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treatment of these rivers is
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8. At the Cheyau bridge,
work is almost at a stand-
still, awaiting the arrival from
England of material for the
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ly from the unexpectedly great
depth to which the cylinders
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115
to carry the piers. After the
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The maximum depth to be dealt
with at the Cheyau is much
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being 93 feet below the river bed,
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the bridge is distant. In the
meantime, traffic is carried
safely over the old bridge, which,
as is the case with the Pennar
bridge, is better fitted to resist
flood action now than at any
previous

previous time.

9. It is satisfactory to be able to report that the traffic upon this line is looking up.

It has been unusually dull since the beginning of this year;

but the returns for April and

May show a decided improve-

ment, especially at Bellary and

Adoni. There appears however

to be a good deal of Cholera

and other diseases still preva-

lent in the Bellary and Cud-

dapah Districts, and this

necessarily tends to check the

development of traffic.

Have the honor to be, Sir,

Your most Obedt Servant,

Warrant. L. G. R. C.

Cons. Eng. for Railways

21st May 1893

21st May 1893

21st May

21st May

5028-6-75 No 1792
- 21-4-76 - 1012
- 24-5-76 - 1201.

1876 Department
No. 4984

No 1003

Public Works Department.

PROCEEDINGS of the MADRAS GOVERNMENT

Under date the

Read the following

From the Engineer
for Railways

No. 339 of 11 July 1876

Ordered to be re-
corded.

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be glad to be furnished
at an early date with de-
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No 420

Deliv. 21.7.76 P.M. 25.7.76
Civ. Co. 4.7.76 P.M. 21.7.76
Dep't to Secy 13.7.76

Dated

11 July

1876.

Received

No. 339

To

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

From

The Consulting Engineer
for Railways,

RAILWAY DEPARTMENT.

Respectfully acknowledge
receipt of the copy of the
report on the progress of
the work during the
last week.

pending the receipt from
England of material for
the Cylinders. This is
much to be regretted
~~although perhaps the delay~~
is unavoidable. In
the meantime the ar-
rangements for the ac-
commodation of the traf-
fic both here and at the
Perrair are believed to
be safe.

It is satisfactory
to be assured of improve-
ment in the traffic pros-
pects of the North West
Per
Air line.
Dec

Confess for Railways
Dec 17/86

x^o att^o

[Faint, illegible handwritten text]

N^o 420/21

[Faint, illegible handwritten mark]

4984

Gobt. of 1870 Madras.
PUBLIC WORKS.

To

the Com^r & Eng^r for P.W.

P. D.

Date

Issued

Recd

Encl

G. O. 25th July 1870. No 1483

Woc 420/21

North West Line

Madras Railway.

*Let^r from the Com^r & Eng^r
for P.W. reporting the
result of his inspection
of the ———— records
with remarks*

*Let^r P.W. Eng^r
15-8-70*