M.R.O. 1—20,002—12-8-65.

(1) Number of Pages 4

(2) Date of repair 28-1-66

(3) Initials of the Referencer

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revt. DEPARTMENT

G.O. No. / B.P. No.	101	Press / Mis.	
Dated	16-5-1873	196	.

Not to be folded or roughly handled

No. 72. Read the following letter f
to the Secretary to Governmer
4th March 1873, No. 136:—

In compliance with the instru
dated the 12th November 1870, No. 2,
I have the honour to submit a report upo
up by the Committee appointed to exam
Madras Railway.

2. In submitting this report, I ha
Committee was appointed has now bee
bridges which came within the sco
examined and reported upon. The
their final report is explained by the

Report of the Committee appointed to i
Bridges on th

The Committee have now the hon
bridge over the Naggery river, at 59 mil
was inspected by them on the 7th and 8

2. This bridge consists of thirtee
arches are built of stone, and it is belie
material. The sanctioned plan and esti
seen that the greatest depth below the
the foundations is 13 feet, and there i
in any case exceeded. Two of the p
wooden curbs or platforms, upon which the masonry was built. These two piers
went down to a depth of 10 feet only; and they were then held to be beyond the
reach of scour, although it is upon record that about 2 feet of sand intervened
between the bottom of the curb and the hard substratum. With regard to the
other piers, no accurate information is ble; but the accompanying section,*
wing the borings taken at the bridge,
d giving a maximum depth of sand of

* No. 330.

26½ feet, places it beyond doubt that the majority of the piers are far short of the
hard substratum.

3. The Committee regret that it has not been in their power to examine the
pier foundations. In the month of May 1872 a coffer-dam was constructed along-
side of one of the piers, and the sand excavated to a depth of 9 feet; but
when two powerful pumps were set to to remove the water, the sand on the
opposite side of the pier showed omin toms of subsidence, and the attempt
had to be abandoned. Although t tions could not be examined, the
Committee have no doubt as to th sfactory nature. The necessity for
abandoning the attempt to examine s additional proof of this, if such
were needed; and the Committee h ent proof, on the occasion of their
visit, of the existence of a tendenc

4. The fall of the river-bed, the accompanying section, exceeds
11 feet per mile. The proportion y allowed by the bridge is liberal,

Consulting Engineer for Railways,
Works Department, dated Madras,

l in the Order of Government,
in continuation of previous reports,
idge over the Naggery river, drawn
foundations of the bridges on the

bserve that the duty for which the
asmuch as the whole of the
vestigations have now been
elay in the submission of this

the state of the Foundations of the
Railway.

bmit the following report upon the
ains on the North-West Line, which
bruary 1873.

eet segmental arches. The piers and
hat the foundations are of the same
s are herewith forwarded. It will be
d to which it was proposed to carry
on to suppose that this depth was
known to have been founded upon

amounting to more than 28 squ
314 square miles. Looking, h
tions, and to the undoubted te
recommend that this bridge s
has been sanctioned in the cas
in their report dated the 24th M.

5. The peculiar circumstar
it necessary, when dealing with
tion the state of the river
bridge, and about half a m.
the river is very low; and

* No. 234.

from their present channel is by
case the line of railway, to the
away. A reference to the pape

2nd April 1867,	No.	1,017
23rd July	,,	,,	2,209
22nd March 1869,	,,	953
14th April	,,	,,	1,226
30th April	,,	,,	1,425

protected with a stone revetment.
extent by the heavy floods during

6. As has been already sta
way afforded by the bridge is a
are kept within its banks. Wi
far as possible, the Committee recom

(1.) The thorough repair o

(2.) The construction of an
and B on the accompanying survey.
range of hills lying to the north.
average height about 2 yards.

Three sluices would require
channels.

(3.) The construction of a
protective measure against the erosi
at this point, peculiarly liable.

The Committee believe that
they are of opinion that, taken
bridge, recommended in paragra
placing the railway beyond a
river.

7. The Committee think it
they have recommended above th

ile of a catchment basin estimated, at
nsatisfactory nature of the founda-
the Committee do not hesitate to
in a manner similar to that which
, and Goriattum bridges, as described

country in the neighbourhood render
of the bridge, to take into considera-
point about three miles from the
ge of Sathravada, the north bank of
the accompanying survey* show
in the event of the river bank
ig breached, a diversion of its waters
improbable contingency; in which
bridge, would inevitably be carried
vith the Proceedings of Government
ted in the margin will show that
ie possibility of this has been foreseen,
nd that during the years 1866 and
869, the part of the bank from which
anger was most apprehended was
evetment has been damaged to some
r months.

mittee are of opinion that the water-
as the waters of the Naggery river
to secure the safety of the railway as
the following measures:—

sting revetment along the river bank.

ment between the points marked A
to connect the river bank with a low
would be about half a mile, and its

built in it to accommodate irrigation

near the point marked C, as a further
ich the river bank is, from its outline

hese works will not be large; and
with the protective works to the
eport, they will have the effect of
of being injured by the Naggery

to the fact that the works which
hravada will be within the estate

of the Zemindar of Cavut Nuggur, whos
by their construction. They are not
disposed to bear a share of the expense.

(Signed) J. H. M. Sh

MADRAS,
4th March 1873.

(Signed

No. 73. ORDER THEREON,

RAILWAY, No. 10.

existing bridge over the Naggery ri
foundations and to the tendency to sc
approves of the recommendation that the
taken as for the Goriattum and Poiney Br
walls above and below and 18 feet clear
hard substratum, where found at a de
elsewhere on double lines of wells sunk
between the walls being floored with st

2. The Government also approv
6 of the report for retaining the wate
above bridge, and they grant authority
recommendations of the Committee, the
being meanwhile expedited.

3. The co-operation of the Cavut Nu
on beyond his acquiescence in the measure
be ascertained.

(True Ext

To the Consulting Engineer for Railways.
,, Revenue Department.

Com
will be g
North A
of the

Exd. E. C. Shuttle

y will be materially improved
ther the Zemindar would be

ART, Lieut.-Colonel, R.E.,
Consulting Engineer for Railways.

(Signed) B. ANDERSON,
Chief Engineer, Madras Railway.

MITH, Captain, R.E.,
ider Secretary to Government.

3, No. 1,021.

in the opinion of the Railway Committee, there are grounds for
nding the undermining of the
o the unsatisfactory nature of its
cellency the Governor in Council
protective works shall be under-
namely, the construction of curtain
piers, carried down to the rock or
ot exceeding 15 feet, and resting
to the hard substratum, the spaces
unam.

measures suggested in paragraph
Naggery river within its banks
immediate effect being given to the
ubmission of the necessary estimates

Zemindar can hardly be reckoned
posed to be adopted, which should

)

Colonel, R.E,
Secretary to Government.

No 101. 16 May 73

d to the Board of Revenue who
h to direct the Collector of
communicate with the Zemindar
the subject of yours of

Revenue Dept

No. 999.

Govt. of India.

PUBLIC WORKS.

To

THE CONSULTING ENGINEER

FOR RAILWAYS.

&c, &c, &c.

Read April 1873

G. O., dated April 1873, No. 1251.

ANSWER

No. 1270

Letter from Revenue Dept dated 23 May 1873

Letter from Public Works Dept. No. 1251 dated 4th April 1873—Forwarding copies of letters from the Chief Engineer, Madras Railway Company, and the Chief Engineer, South Indian Railway Company.

Under Secretary to Government.