

Public Works (1896) Department.

G.O., No. 18476

DATED 20 June 96

[Despatch Abstract.]

Railway bridge across the
Vizagapatnam backwater.
Orders relating to the

Govt. of {1896} Madras.
PUBLIC WORKS.

Encl.

G.O. No. 1847 W., 20th June 1896.

JUNE.

Passing orders on the correspondence relating to the —.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—again the following paper :—

G.O. No. 247, Marine, dated 9th April 1896.

Read—also the following papers :—

*Note by the Joint Secretary to Government, Public Works Department,
Railway Branch.*

The Collector states that, in 1893, when it was decided to abandon temporarily the Ross Hill cutting at Vizagapatam and to give access to the port by a line skirting Ross Hill on the south-west, he objected to the proposal and only withdrew his opposition on the railway authorities undertaking to cross the backwater on a bridge of wooden piles. This promise he states has not been kept and reports that the railway authorities propose to block up the arm of the backwater altogether.

The history of the case appears to be as follows :—

Since the year 1858, numerous proposals have been put forward for improving the harbour at Vizagapatam. The Government of Madras came to the conclusion that it would not be possible for a reasonable sum of money to construct a harbour at Vizagapatam, but, on the construction of the East Coast Railway being sanctioned, the Secretary of State considered that the matter deserved further consideration, and in 1891 Mr. Thorowgood, an expert in these matters, was commissioned by the Secretary of State to make a further report.

It will be seen that a feature of Mr. Thorowgood's report (paragraphs 27 and 37) was to increase the tidal capacity of the estuary by removing the reclaimed land lying between high and low water. (See sketch.)

The Chief Engineer to Government of Madras, Public Works Department, in commenting on Mr. Thorowgood's report, considered that the proposal to increase the tidal capacity of the estuary was a good one pointing out the injury done to the port by the reclamation of land once covered by the tides.

In 1893 the Engineer-in-Chief, East Coast Railway (Mr. Spring), reported that the approach to the port through Ross Hill cutting (900 feet long and 98 feet deep in the deepest part) was becoming unsafe owing to the unstable character of the rock. It was not possible to flatten the slopes, because this would involve the destruction of a Mahomedan mosque on one side and a Roman Catholic church on the other. Under these circumstances he proposed a line (called hereafter the swamp line) skirting Ross Hill on the south-west and giving better access to the port than the old line through the cutting. He proposed one 40 feet opening for flood-water.

This letter was transferred to the Director-General of Railways who requested that the views of the Madras Government might be communicated. The papers were then transferred to the Revenue and Marine Departments, and a report was made by the Presidency Port Officer Captain Street. This was forwarded to the Government of India with a letter recommending that the Ross Hill cutting be abandoned and used for cart traffic and that the swamp line should be adopted.

This letter was despatched on the 18th October 1893 and on the 20th a reference from the Revenue Department was received containing a letter from the Collector Mr. W. A. Willock stating that the proposals for an approach to the port were being recast by Mr. J. R. Bell, the Engineer-in-Chief, and that the plan (Mr. Spring's) forwarded to him for report was now abandoned and asking that he might be allowed to defer his report till Mr. Bell had matured his new proposal. He adds that, in the improbable event of Mr. Spring's views being taken up, he would at once report on the subject. This letter was not forwarded to the Government of India, as it contained no information on the point at issue.

The Government of India, on receiving Commander Street's report and the recommendations of the Madras Government, remarked that the proposed line (the swamp line) would cut across the reclaimed land which Mr. Thorowgood proposed to cut away (*vide* paragraph 37 of his report above alluded to) and suggested that the Chief Engineer, Public Works Department, Madras, should express his views as to how far the proposed line affected Mr. Thorowgood's scheme.

The Chief Engineer reported that there was no objection to the line provided that a total waterway of not less than 300 feet was provided.

This letter was communicated to the Government of India who replied in January 1894 to the effect that the swamp line was approved provided that a total waterway of not less than 200 feet was given in the bank to the west of Ross Hill.

In March 1894 the Manager, East Coast Railway (Mr. Brereton), reported that he had inspected the alignment with Commander Street and that the conclusion arrived at was that the embankment ought to be continuous at the crossing of the backwater, the reason being that the water issuing from this opening at ebb tides strikes the main ebb at right angles and causes an eddy which has the effect of scouring a deep hole near the Pontoon bridge and throwing up a sand bank just beyond in the middle of the stream. He proposed therefore to close this opening and give another opening of 3 spans of 40 feet higher up.

The Manager was informed that the waterway to be given depended on the amount of water to be discharged between tides, and, as there was no diminution of the collecting ground, the whole 200 feet of waterway should be provided.

The Manager then forwarded a copy of a letter addressed by him to the Director-General of Railways in which he recommends the filling in of the pile bridge and says he is supported in this view by the Port Officer, Vizagapatam, and the Presidency Port Officer and asked for permission of the Madras Government to fill in the pile bridge.

The letter was transferred to the Chief Engineer, Public Works Department, with a note by the Consulting Engineer for Railways stating that the waterway now afforded was as under:—

	Feet.
Pile bridge, 4 spans of 24 feet =	96
Bridge at A., 3 spans of 40 feet =	120
Total	216

and recommending that the pile bridge should be closed and that if any additional waterway were found to be needed, it should be given at A.

The Chief Engineer replied that he had no objection to the pile bridge being closed and the Manager was informed accordingly.

The Manager then wrote again forwarding a copy from the Director-General of Railways in which the latter informs him that the pile bridge may be filled in if the Government of Madras desire it, but that it should be kept open until a distinct request is made.

The Chief Engineer, on being referred to, declined to make such request but said he had no objection.

This reply was communicated to the Manager.

The Manager has now been asked why he is filling in the bridge, and he replies as follows:—

"The pile bridge could not be left as it was, the piles being worm-eaten and the bridge dangerous. The swamp line may be required at any moment for carrying traffic to and from the wharf if there is any slip in Ross Hill cutting. To keep the original amount of waterway would involve entire reconstruction of the bridge—an expensive business; I compromised matters by putting in as many iron pipes (which were available from the Kistna bridge) as possible between the spans and filling them over with stone."

Although not bearing immediately on the case two letters should be mentioned, one from Mr. J. R. Bell in December 1893 in which he discusses the various possible approaches to the port and says Mr. Willock prefers the seaward approach through the town (plotted *by guess* on the sketch-plan, no plan being on record). The other letter is from Mr. Willock to Mr. Bell in which he recommends the seaward approach.

An extract from the Government Inspector of Railway's report for half-year ending June 1895 is also given below with the Senior Inspector's note thereon:—

"*Vizagapatam goods terminus*.—Reclamation works are in progress along the foreshore of creek in order that all goods arriving for shipment may be delivered at the wharf in close proximity to the boats. The approach to the wharf is liable to interruption from slips in the deep Ross Hill cutting and has the further disadvantage of involving a back shunt. The alternative swamp line is not used owing to the timber bridge of 4 spans of 24 feet at the eastern end being considered unsafe. Fears have been expressed that if this opening were closed, the régime of the creek would be altered owing to the upper opening of 3 spans of 40 feet, not allowing a sufficient quantity of water to be impounded. There seems to me to be little fear of this happening and the closing of the eastern bridge would, I think, improve matters by giving the scour a more direct line. The best course would seem to be to fill in the timber bridge and watch results; if a tendency to silt was observed, the remedy would be found in increasing the waterway of the 3/40 feet bridge."

There is nothing in the papers to show that any such promise was given by the Manager to the Collector. As far as the Government of Madras is concerned, it has expressed its opinion after consulting the Chief Engineer, Public Works Department, the Consulting Engineer for Railways, and the Presidency Port Officer and the Collector that the pile bridge may be filled in. The Collector was given an opportunity of expressing his opinion, but as shown above preferred to wait till his own and Mr. Bell's proposed alignment through the town had been matured. This proposal, however, was not accepted by the Government of India.

It does not appear that there is much harm done. The swamp enclosed by the railway is by no means cut off from tidal action, as there is still 120 feet waterway in the bridge marked A (besides these pipes at the site of the pile bridge) and it is understood that this is sufficient and is in a better situation than the old pile bridge.

(Signed) C. W. HODSON,
Joint Secy. to Govt., P.W.D.,
Railway Branch.
OOTACAMUND,
9th May 1896.

Note by the Chief Engineer, Public Works Department.

The note by the Joint Secretary, Railway Branch, explains fully the circumstances of the case.

2. I cannot find that any such promise as that mentioned by Mr. Willock was given by the railway authorities, but there was a distinct order from the Consulting Engineer for Railways to the Manager, East Coast Railway, in his letter No. 1792, dated 6th June 1895, stating that the pile bridge should be kept open, the reason why this order was not obeyed being because the piles were rotten and the whole bridge would have had to be reconstructed.

3. The condition imposed on the railway authorities that 200 feet of waterway should be provided* is now broken as by the filling in of the pile bridge, a waterway of only 120 feet is left, and it seems to me that, before the pile bridge was closed, two extra spans of 40 feet should have been

* *Vide* No. 63 R.E., dated 24th January 1894, from Secretary, Government of India, Public Works Department, to Director-General of Railways.

added to the bridge at A; however this was not carried out, and all that can be done now is to see if the present waterway of 140 feet is sufficient for the tidal action, and if not, the railway authorities should be made to increase it. 120.

9th June 1896. (Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Chief Engineer, P.W.D.

ORDER—No. 1847 W., dated 20th June 1896.

The note by the Chief Engineer, Public Works Department, recorded above, will be communicated to the Railway Branch with an intimation that, under the circumstances, His Excellency the Governor in Council will not insist on the 200 feet of waterway, as previously stipulated, being now provided; but that if the 120 feet of waterway left proves to be insufficient, it must be increased, at the expense of railway funds, by adding to the bridge at A two extra spans of 40 feet each.

2. The Superintending Engineer, I Circle, will watch the effect of filling up the pile bridge and report the result a year hence.

(True Extract.)

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

To the Railway Branch.

- " Superintending Engineer, I Circle, with sketch.
- " Collector of Vizagapatam, through the Revenue Department.
- " Marine Department.

Exd. Md. Pahlavan.
Spare Copies

No. 1847 W., d. 20 June 1896. PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Again
Read the following

GO. No. 247 Marine d. 9 April 1896

had also:—

Note by the Joint Secy to Govt. d. 9 May 1896
Noted by the Chief Engineer P.W.D. d. 9 June 1896

B.M.
Public Works

The note by the Chief Engineer P.W. Dept. recorded above will be communicated to the Railway Branch with an intimation that, under the circumstances, His Excellency the Governor in Council will not insist on the 200 feet of waterway, as previously stipulated, being now provided; but that if the 120 feet of waterway left proves to be insufficient,

it must be increased,
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funds, by adding to the
bridge at A, two extra
spans of 40 feet each.
2. The Supt. Engineer I
will watch the effect
of filling up the pile bridge,
and report the result
a year hence.

18/6/86

To,
The Railway Branch.
S.E. I will write sketch.
Collector, Tiragapattinam
thru the Secy.
Mamie Sept

I have no objection to the course proposed:
provided that the Railway authorities
consent to make two additional spans
of 40 ft. at A, should it be found
that the existing outlet is insufficient
for its purpose, and of this the P.W.D.

BS
29

16/6/96

must be the judge

#24 11.6.96

I think we might also get
a report after a year or so
on the effect of filling up the
pile bridge

BS
13/6/96

* vide No 63 S.E. dated 24 Jan 94
from Secy Gen of India P.W. Dept
to Director Genl of Railways.

No 1847 W, dt 20 June 1896 P.W.D.

Read:- L.O. No 247 M. dated 27 April 1896
" Note by the S. Secy. P.W. Dept 18/6/96

Note for orders by the
Chief Engineer P.W. Dept.

of 96

thru S. Secy. P.W. Dept.

The note by S. Secy. P.W. Dept. explains
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No 1792 dated 16 May 1895
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the reason why this order was
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and the whole bridge would
have had to be reconstructed.
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15. 11.11.96

11/01

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the railway authorities should
be made to increase it.

120
The Honorable Mr. H. W. B. C. S. S.
J. J. C. S. S.
Railway bridge across
the Vragaputamb backwater

9/6/86
E. W.

9/6/86



Revenue Board Office,
(Separate Revenue),

On Circuit, *Madras*

1st May 1886.

My dear Campbell

90 No

247 Marine, say 9 Ahl,
about the East Coast
Railway bridge across the
Vrag Backwater. I passed
by the place a few days
ago and found work still
going on. It will be easy
enough to fish up the
iron pipes which they are
setting but the stone which
they are laying them on
will be difficult to deal

with and, will throw a
very serious difficulty in
the way of vessels turning
if anything is even done
to allow of their being
brought inside. The Railway
ought I think to be made
to suspend work until
final orders are passed
on the subject

Yours truly

W. D. W. W.

Arrive the report
called for in 10.24 p.m.
19.10.94
5/5/94
28

For C. No. 4406

MEMORANDUM.

REQUESTED for reference the undermentioned papers:—

N^o 53 Cap 9.1.94. Correspondence regarding
proposed diversion of the R.C. Ry to the V. & A. Railway
Harbour. avoiding R.S. Hill cutting fd to the P. & F.

N^o 455 Cap 1.2.94

Letter from India regarding above recorded.

N^o 937 Cap. 1.3.94.

Certain correspondence regarding the V. & A. Railway
Harbour recorded.

P. W. SECRETARIAT,
Chepák, 19. ✓ 1896.

The above paper when sent to the
'P' office on 15.3.94

To

The

oak.

30 500-3 7-94.

Yf

afk

Read the following papers:-

G.O. No. 247 dated 9th April 1896. N. 247 Marine

Read also the following NOTE.

G.O. No. 247 dated 9th April 1896.
(Marine)

The Collector states that in 1893 when it was decided to abandon temporarily the Ross Hill cutting at Vizagapatam and to give access to the port by a line skirting Ross Hill on the South-West he objected to the proposal and only withdrew his opposition on the Railway Authorities undertaking to cross the backwater on a bridge of wooden piles. This promise he states has not been kept and reports that the Railway Authorities propose to block up the arm of the back-water altogether.

The history of the case appears to be as follows:-

Since the year 1858 numerous proposals have been put forward for improving the harbour at Vizagapatam. The Government of Madras came to the conclusion that it would not be possible for a reasonable sum of money to construct a harbour at Vizagapatam but on the construction of the East Coast Railway being sanctioned the Secretary of State considered that the matter deserved further consideration and in 1891 Mr. Thorowgood an expert in these matters.

O.S. 21

Ross Hill Cutting

1894

Connected papers

with K.O.R. 4/2395

matters was commissioned by the --
Secretary of State to make^a further --
report.

It will be seen that a feature
of Mr. Thorowgood's report (paras 27
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The Chief Engineer to Government
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This letter was transferred to
the Director General of Railways --
who requested that the views of the
Madras Government might be communi-
cated. The papers were then trans-
ferred to the Revenue and Marine --
Departments, and a report was made
by the Presidency Port Officer, Cap-
tain Street. This was forwarded to
the Government of India with a let-
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cutting be abandoned and used for
cart traffic and that the swamp line
should be adopted.

This letter was despatched on
the 18th October 1893 and on the --
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a letter from the Collector, Mr. W. A.
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The Chief Engineer reported that -- there was no objection to the line -- provided that a total waterway of not less than 300 feet was provided.

This letter was communicated to the Government of India, who replied in January 1894 to the effect that the swamp line was approved provided that a total waterway of not less than 200 feet was given in the bank to the West of Ross Hill.

In March 1894. The Manager, East Coast Railway (Mr. Brereton) reported that he had inspected the alignment with Commander Street and that the -- conclusion arrived at was that the embankment ought to be continuous at the crossing of the back-water the reason being that the water issuing from -- this opening at ebb tides strikes the main ebb at right angles and causes an

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an eddy which has the effect of --- scouring a deep hole near the Pontoon bridge and throwing up a sand bank just beyond in the middle of ~~the~~ the stream. He proposed therefore to close this opening and give another opening of 3 spans of 40' higher up.

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The Manager then forwarded a copy of a letter addressed by him to the Director General of Railways in which he recommends the filling in -- of the pile bridge and says he is -- supported in this view by the Port Officer Vizagapatam and the Presidency Port Officer and asked for permission of the Madras Government to fill in the pile bridge.

The letter was transferred to the Chief Engineer, Public Works Department with a note by the Consulting Engineer for Railways stating -- that the waterway now afforded was as under:-

Pile bridge	...	4 spans of 24 feet	= 96'
Bridge at A	...	3 spans of 40 feet	= 120'

216'

and recommending that the pile bridge should

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Ootacamund,
9th May 1896.

J. W.

CRW
R
9/5/96

P. W. CURRENT No. 4406

~~P. W. CNO~~

Encl. 1. plan.

Reg'd: 12-5-96
Issued 9/5/96

247 m of 9-4-96
178 m of 18-6-95
37 m of 28-1-95
140 R of 8-3-95
4055 m of 30-11-92
1278 m of 10-5-93
319 m of 7-2-93
3493 m of 21-12-92
688 m of 13-3-93
3512 m of 22-12-92
3450 m of 17-12-92
4872 m of 4-11-91
707 m of 3-3-92
398 m of 8-2-92
3469 m of 28-12-91
2982 m of 10-11-91
436 m of 12-2-92

transferred to the main
and put up with the
about the Cocanada
area.

Map
18/5/96

28/5

3930 m of 19-6-94