

(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.	1183	Press
B.P. No.		Mis.
416-411		
Dated	24-3	1873.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
24th April 1873.*

No. 410. 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, 13th March 1873, No. 154:—

In continuation of my letter No. 6 of 7th January 1873, I have the honour to forward, for the consideration of Government, the accompanying letter* from the Agent of the Madras Railway Company, with reference to the state of the Moottavady and Talunga Tanks in the North Arcot District.

2. The Chief Engineer in his letter No. 139, of 5th instant, states that these tanks breached no less than four times in the last year, and caused the disastrous accident on the night of the 22nd November 1872, when a goods train ran into a gap caused by the railway embankment having been washed away. Fortunately no loss of life occurred, but the damage to the rolling stock is estimated at Rupees 5,545.

3. The question of the danger to the railway from the insecure state of tanks in its vicinity has been under the consideration of Government on former occasions, and in the Order of Government No. 535, of 28th February 1872, the Government were pleased to order the Superintending Engineers of the 3rd, 4th, 5th, 6th, and 7th Divisions to depute competent officers to examine all tanks in which breaches might affect the sections of the line within the limits of their respective divisions.

4. From the accompanying list of cases in which interruption to traffic was caused by the bursting of tank bunds on the line of the Madras Railway, it appears that during the last nine years the traffic has been interrupted on an average once a year from this cause, and the loss of revenue has therefore been considerable. Mr. Anderson considers the question of such vital importance that he does not think it "too much to ask that an officer should be specially deputed to supervise and keep in proper repair all tanks so situated as to constitute an element of danger to the railway during floods."

From R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R. E., Consulting Engineer for Railways, dated Madras, 7th March 1873, No. 176.

With reference to my letter No. 11, of the 8th of January last, and to the correspondence noted therein, as well as to my subsequent letter* upon the subject of the state of tanks in the vicinity of the railway, I have the honour to request that you will be so good as to submit to the Government the enclosed copy of a further communication† from the Chief Engineer on the same subject, in which special reference is made to the state of the Moottavady and Talunga Tanks.

From BERESFORD ANDERSON, Esq., Chief Engineer, to R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, dated Madras, 5th March 1873, No. 139.

I FORWARD herewith copy of a letter from the Resident Engineer, 1st Division, South-West Line, and will ask you to be good enough to request the particular attention of Government to the condition of the Moottavady and Talunga Tanks.

Agent and Manager

*Proceedings of the Madras Government, Public Works Department,
24th April 1873.*

2. It would be impossible to over-estimate the risks to which our line is subjected owing to improperly constructed or ill-maintained tank bunds, and I feel that I cannot too often bring the subject forward for the consideration of Government.

3. In the present case two tanks, most critically situated as regards the railway, are shown to have breached no less than four times in one year, seriously threatening the safety of the line on three occasions, and culminating in the disastrous accident at the 60th mile on the night of 22nd November 1872. Such a state of things constitutes a very substantial grievance.

4. The Railway Company has, at vast expense, strengthened and protected the bridges likely to be endangered by the bursting of tanks; but it is plain that in such a case as that of the 60th mile the bridge is saved at the expense of the neighbouring embankment, and the danger to life and property is in no wise lessened. The question is one of such vital importance to the Railway Company, and so nearly affects the interests of the travelling public and of the Government, that I do not think it is too much to ask that an officer should be specially deputed to supervise and keep in proper repair all tanks so situated as to constitute an element of danger to the railway, during floods.

5. I enclose a list of the interruptions to traffic which have resulted from the bursting of tank bunds during the past ten years.

From W. R. ROBINSON, Esq., Resident Engineer, to the Deputy Chief Engineer of the Madras Railway Company, dated Arcot, 24th February 1873, No. 106.

I wish to draw your attention to the number of times last year the Moottavady tank burst. This tank is situated in the North Arcot district, north of the line at 61-5, the surplus water flowing through the 9 feet girder bridge at 60-10 into the Talunga tank, through which the line passes. Whenever one tank bursts the other bursts also. Both tanks burst on the following dates, 2nd of May, 12th of October, again towards the end of the same month, and on the 22nd of November. There is also a terrific rush of water through the 6 feet arch at 60-16 whenever the Moottavady tank bursts.

List of cases in which interruption to traffic was caused by the bursting of tank bunds on the line of the Madras Railway.

Date of report of accident.	Position.	Nature of breach.
21st November 1864.	Breach at 62nd mile, North-West Line.	Bursting of a large tank known as Govindarajcoopum, about 10 chains to the west of the point where the bund is crossed by railway; the ballast and part of embankment were washed away.
Do. do.	Breach at 78th mile, North-West Line.	Bursting of a tank bund some 4 or 5 miles up to the valley, 2 feet culvert washed away, and a breach about 40 feet wide was made in the embankment.
30th do.	Breach at 62nd mile, North-West Line.	Bursting again of the Govindarajcoopum tank and the line breached as on the 19th November.
25th July 1865 ...	Breach at 180th mile, Bangalore Branch.	Bursting of a tank bund carrying away a portion of the embankment.

*Proceedings of the Madras Government, Public Works Department,
24th April 1873.*

List of cases in which interruption to traffic was caused by the bursting of tank bunds, etc.—(Concluded.)

Date of report of accident.	Position.	Nature of breach.
8th December 1865..	Breach at 71½ mile, 80th mile and 96th mile, North-West Line.	Bursting of Pootoor tank bund (71½ mile), completely carrying away a bridge of 3.15 feet arches, and leaving a gap of 120 feet. Bursting of Coyampettah tank bund (80th mile), carrying away a 12 feet and a 6 feet arch, and leaving gaps of 140 and 120 feet respectively. Several bridges in this locality were more or less damaged by scour.
7th July 1863 ...	Breach at 171st mile, North-West Line.	Bursting of a tank bund between Cuddapah and Camelpoor by which three arches of 5.30 feet arch bridge at 171st mile were washed away.
4th August 1869 ...	Breach at 173rd and 175th miles, Bangalore Branch.	Bursting of eight tanks at Colar, east abutment of 2.20 feet bridge at $\frac{173}{10}$ miles completely destroyed. Flooring of 2.15 feet arch at $\frac{173}{10}$ miles carried away, and south-east wing wall fallen in the newel of 30 feet arch at $\frac{168}{10}$ miles swept away.
3rd November 1870.	Breach at 163rd and 168th miles, North-West Line.	Bursting of tanks in the neighbourhood of Cuddapah, the pier of double 9 feet girder bridge at $\frac{163}{10}$ miles gave way, also the east abutment of the 12 feet girder bridge at $\frac{168}{10}$ miles.
17th do. 1871 ...	Breach at 292nd mile, South-West Line.	Bursting of the bund of a tank near Somanoor.
26th do. 1872 ...	Breach at $\frac{40}{1}$ South-West Line.	Bursting of the bund of Talunga tank.

(Signed) BERESFORD ANDERSON,
Chief Engineer.

No. 411. ORDER THEREON, 24th April 1873, No. 1,183.

RAILWAY, No. 47.

COMMUNICATED to the Chief Engineer for Irrigation in continuation of G. O., No. 963, of 28th March 1873.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

To the Chief Engineer for Irrigation.
.. Consulting Engineer for Railways.
.. District Engineer, North Arcot.

Exd. S. T. Austin.

Supt and Manager

No. 176

MADRAS RAILWAY.

AGENT AND MANAGERS' OFFICE.

Madras, 7th March 1873.

From

Robert B. Munn Esq

Agent and Manager of the M. R. Company

To

Lieut Colonel J. H. M. Shaw Stewart R.E.

Consulting Engineer for Railways.

SIR,

With reference to my letter No 11 of the 8th of January last, and to the correspondence noted therein, as well as to my subsequent letter upon the subject of the state of Tanks in the vicinity of the Railway I have the honour to request that you will be so good as to submit to the Government the enclosed copy of a further communication from the Chief Engineer on the same subject, in which special reference is made to the state of the Moorthwad and Talunga Tanks.

No 142-24
February
1873

No 139-5
March 1873

I have the honour to be

Sir

Your most obedient Servant

R. B. Munn

Agent and Manager

Madras Railway Company
No. 139 Chief Engineer's Office
Madras 5th March 1873

The Agent and Manager
Dear Sir

I forward herewith copy of a letter from the Resident Engineer 1st Division South West Line and will ask you to be good enough to request the particular attention of Government to the condition of the Mottavady and Talunga tanks.

2 It would be impossible to over-estimate the risks to which our line is subjected owing to improperly constructed or ill-maintained tank bunds, and I feel that I cannot too often bring the subject forward for the consideration of Government.

3 In the present case two tanks, most critically situated as regards the Railway, are shown to have breached no less than four times in one year, seriously threatening the safety of the line on three occasions, and culminating in the disastrous accident at the 60th Mile on the night of 22nd November 1872. Such a state of things constitutes a very substantial grievance.

4 The Railway Company has at vast expense strengthened and protected the bridges likely to be endangered by the bursting of tanks, but it is plain that in such a case as that of the 60th mile, the bridge is saved at the expense of the

MADRAS RAILWAY.

From

The Agent and Manager.

To

The Consulting Engineer

for Railways.

Date 5th March 1873
Recd. 5th Mch.

No. 146.

Forwarding copy of a letter from the Resident Engineer on the subject of the state of the Mottavady & Talunga tanks.

D. M. 1676/73
146 dated 13/3/73 8:410.

neighbouring embankment, and the danger to life and property is in no wise lessened. The question is one of such vital importance to the Railway Company, and so nearly affects the interests of the travelling public, and of the Government, that I do not think it is too much to ask that an Officer should be specially deputed to supervise, and keep in proper repair all tanks so situated as to constitute an element of danger to the Railway during floods.

I enclose a list of the interruptions to traffic which have resulted from the bursting of tank bunds during the past 10 years.

Yours faithfully
/sd/ Beresford Anderson
Chief Engineer

Madras Railway Company
Resident Engineer's Office
Arcotum 24th February 1873

My dear Sir

I wish to draw your attention to the number of times lost year the Mottavady tank burst. This tank is situated in the North Arcot district, north of the line at the surplus water flowing through the 9 feet girder bridge at $\frac{5}{6}$ into the Thalunga tank through which the line passes. Whenever one tank bursts the other bursts also. Both

tanks burst on the following dates. 2nd of May, 12th of October, again towards the end of the same month and on the 22nd of November. There is also a terrific rush of water through the 6 feet arch at $\frac{5}{6}$ whenever the Mottavady tank bursts.

Yours very truly
/sd/ W. R. Robinson
Resident Engineer

S.

The Deputy Chief Engineer

/True Copy/
/sd/ Beresford Anderson
Chief Engineer

/True Copy/
/sd/ W. R. Robinson
Agent and Manager

Wm

Ms. 24. 2. 1873
18. 4. 10.

List of cases in which interruption to Traffic was caused by the bursting of tank bunds on the line of the Madras Railway.

Date of Report of accident	Position.	Nature of Breach
1864		
November 21	Breach at 62 nd mile N.H.C.	Bursting of a large tank known as Govindaray coo-pum, about 10 Chs. to the west of the point where the bund is crossed by railway, the ballast and part of embankment were washed away.
	Breach at 78 th mile N.H.C.	Bursting of a tank bund some 4 or 5 miles up the valley, 2 feet culvert washed away and a breach about 40' wide was made in the embankment.
	30 Breach at 62 nd mile N.H.C.	Bursting again of the Govindaray coo-pum tank and the line breached as on the 19 th Nov.
1865 July	25 Breach at 180 th Mile	Bursting of a tank bund carrying away a portion of the embankment
December	Bangalore Branch	
	8 Breach at 71 ¹ / ₂ mile, 80 th Mile and 76 th Mile. N.H. line	Bursting of Pootor tank bund (71 ¹ / ₂ ms) completely carrying away a bridge of 3.15 ft arches and leaving a gap of 120 feet. Bursting of Cozampettah Tank bund (80 th mile) carrying away a 12' and a 6' arch and leaving gaps of 140 & 120 ft. respectively. Several bridges in this locality were more or less damaged by scour.

P.N. 1676/73.

Date of Report of accident	Position	Nature of Breach
1868 July	7 Breach at 171 st mile N. H. L.	Bursting of a tank bund between Cuddapah and Camalapoor by which 3 arches of 5.30 ft arch bridge at 171 st mile were washed away.
1869 August	4 Breach at 173 rd & 175 th miles Bangalore Branch	Bursting of eight tanks at Polar East abutment of 2.20 ft Bridge at 175 miles completely destroyed. Flooding of 2.15 ft arch at 173 miles carried away & south east wing wall fallen in the neutral of 30 ft arch at 168 miles swept away.
1870 Nov	3 Breach at 163 & 168 mile N. H. Line	Bursting of tanks in the neighbourhood of Cuddapah, the Pier of double 9 ft girder bridge at 163 miles gave way, also the East abutment of the 12 ft girder bridge at 168 miles.
1871 Nov	17 Breach at 292 nd mile S. H. L.	Bursting of the bund of a tank near Somamoor.
1872 Nov	26 Breach at 40 S. H. Line	Bursting of the bund of Talunga Tank.

/sd/ Beresford Anderson
Chief Engineer

/True Copy/
[Signature]
Agent and Manager

Wm

Railway Department.

CONSULTING ENGINEER'S OFFICE,

No. 154

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,

In continuation of my letter
No. 6 of 7th January 1873. I have the honour
to forward for the consideration of Govern-
ment the accompanying letter from the
Agent of the Madras Railway Company
with reference to the state of the Mettara
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2. The Chief Engineer in
his letter No. 139, of 8th instant states that
these tanks breached no less than five
times in the last year, and caused the
disastrous accident on the night of the
22nd November 1872, when a goods train

ran

No. 176-7th
March 1873.
with enclosures.

ran into a gap caused by the Railway embankment having been washed away. Fortunately, no loss of life occurred, but the damage to the rolling stock is estimated at Rs 5545.

3. The question of the danger to the Railway from the insecure state of Tanks in its vicinity, has been under the consideration of Government on former occasions, and in the Order of Government No. 535 of 28th February 1872, the Government were pleased to order the Superintending Engineers of the 3rd, 4th, 5th, 6th and 7th Divisions to depute competent Officers to examine all Tanks in which breaches might affect the sections of the line within the limits of their respective Divisions.

4. From the accompanying list of cases in which interruption to traffic was caused by the bursting of tank bunds on the line of the Madras Railway, it appears that during the last

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nine years the traffic has been interrupted on an average once a year from this cause, and the loss of Revenue has therefore been considerable. Mr. Anderson considers the question of such vital importance that he does not think it too much to ask that an Officer should be specially deputed to supervise and keep in proper repair all Tanks so situated as to constitute an element of danger to the Railway during floods. —

I have the honour to be
Sir

your most obedient servant

Madras
3rd March 1873

W. H. Baker Esq. M.A.
for hono. Eng. for Railways

1876
Cohb. of 1873

PUBLIC WORKS.

To the Chief Engineer
Immigration

Recd.

Encl 2

24th April No 1183

105.412.4411

Under Secretary and Secretary
General, North West B.
Colonial Prime Minister
Submitting Correspondence
relating to the State of the
Frontier, and the Chief
Engineer's suggestion.

28 February 1873
1873

P. W. 1873

RAILWAY DEPARTMENT.

1873

From

The Consulting Engineer
for Railways,

To

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

Dated 13th March 1873
Recd. 14th March 1873

No. 154

Under Secretary General
will enclose from
the report and to
the Secretary to the
and the Secretary to the
in the report and
with an order

For information in continuation of P. W. 963 of 28 March 1873
Communicated to the Chief Engineer
11th April 1873
1873