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2. Date of repair. 11/1/57
3. Initials of Referencer.

M.R.O. 1-22,400-22-11-80.

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.
Recd 8/3/57

G.O. No.	572	Press
		Mis.
73-74.		
Dated	7 — 3 —	18 57

Not to be folded or roughly handled

Fort Saint George, Public Works Consultation of 8th March 1859.

No. 73. Read the following letter from Colonel C. E. FABER, Chief Engineer; to J. D. BOURDILLON, Esq., Secretary to Government, dated 21st February 1859, No. 8088.

SIR,

I do myself the honor to submit for the consideration of Government, the accompanying Estimate, amounting to Rupees 1,480, for repairing the Vasurpaudy Tank, and for facing the South Bank with a masonry wall.

2. The circumstances which have led to the preparation of the Estimate are as follows. On the 26th November last, the Consulting Engineer for Railways brought to notice, the insecure state of the Vasurpaudy Tank Bund, and stated, that it was likely to cause great damage to the line of rail unless immediate measures were adopted to avert it.

3. Accordingly, the Acting Civil Architect, Captain Winscom, was instructed to secure the Tank in question, and to submit to the Central Office, a report specially on the breach referred to by the Railway authorities.

4. In his letter No. 685, dated 30th November 1858, Captain Winscom submitted the Report called for, and on the 23rd December following furnished the foregoing Estimate, in which provision is made for the following items.

	Rs.	A.	P.
1,956 Cubic yards Earthwork including tamping... ..	122	4	0
2,000 yards Removing Prickly Pears... ..	40	0	0
11,400 Cubic feet Brick in Chunam for retaining wall,... ..	1,246	14	0
Sundries... ..	70	14	0
Total Rupees...	1,480	0	0

5. Considering the great necessity that exists for the early completion of the work, in order to secure the Tank from future danger, I have the honor to request the sanction of Government for the execution of the same on emergency.

Letter from Captain C. C. JOHNSTON, Officiating Consulting Engineer for Railways; to Colonel E. LAWFORD, Officiating Chief Engineer, dated 26th November 1858, No. 256.

SIR,

Referring to Extract Minutes of Consultation, Financial (Railway) Department, No. 577, dated the 26th Ultimo, I have the honor to forward a copy of a further communication from the Agent and Manager of the Madras Railway, annexing one from the Resident Engineer of the Madras Division, again bringing to notice the insecure state of the Bunds of several Tanks contiguous to the line of Rail, in view to the necessary steps being at once taken for placing them in an efficient condition.

2. The Agent's letter, in original, will be forwarded to Government, but as some time will necessarily elapse before it reaches you, I have deemed it advisable to furnish you with a copy, and of which circumstance the Government shall be informed.

From N. B. ACWORTH, Esq., Agent and Manager; to Captain C. C. JOHNSTON, Officiating Consulting Engineer for Railways, dated 25th November 1858, No. 796.

SIR,

With reference to your letter, No. 777 of the 8th Instant, informing me that Government had drawn the attention of the Public Works Department to the damage done to the Railway Works, by the bursting of the Bunds of the Mardallium and Moottoowarry Tanks, with a view to their immediate repair, and that of other Tanks so situated, that their breaching would injure

Fort Saint George, Public Works Consultation of 8th March 1859.

22nd November 1858.

the Railway, I have the honor to transmit for the information of Government, a copy of a further communication received by me from the Resident Engineer of the Madras Division, in which he alleges the very insecure state of the Vasurpaudy Tank Bund, and of other Bunds along the line of Railway, from which it would appear, that damage to the line is very probable, unless immediate steps are taken to avert it.

2. I am sure, I need not urge upon you the importance of the least possible delay being allowed in giving effect to the orders of Government already passed upon this subject.

From W. HENDERSON, Esq., Resident Engineer; to J. M. HEPPEL, Esq., Chief Engineer, dated Chinnamapet, 22nd November 1858.

MY DEAR SIR,

In my report for last month, I had occasion to notice the very insufficient condition in which many of the Tank Bunds along the line in this Division are allowed to remain.

2. Last year considerable damage was done by the bursting of the Vasurpaudy Tank Bund during the monsoon, and I had occasion to notice the particularly insufficient condition of that bund.

3. That Bund is now in a worse condition than it was then, the earth of which it is composed being left exposed to all the action of Sun and Rain, and the Bund is consequently cut up by Rain channels or gutters of considerable size throughout nearly its whole length.

4. Early on the 16th Instant, this Bund gave way under the pressure of the but half filled Tank, and the escaped waters after scouring the surface of the country, burst the temporary surface water dams of the bridge under construction at 2 miles, 34 chains, and rushed through with a head of over two feet in the length of 14 feet of the completed abutments. This great rush of course scoured away all earthwork exposed to its action, and caused a slip of the embankment which must have stopped the running of Trains, but that the line was well supported by long bearing beams. No apparent damage has yet been done to the brickwork, but as a portion of the foundations had still to be put in, it is possible I shall have to report some damage.

5. On Wednesday morning (17th) I went to the spot, and found the rush undiminished. The same afternoon I inspected the breach in the Tank Bund, and found it to extend to a length of about 50 feet. As the safety of the works at 2 miles, 34 chains was endangered by the continued rush of the escaping waters, and the only appearance of an intention to stop the breach was two coolies cutting Karkapullay boughs, I directed my Inspector to see the Village authorities in charge; and to go on with stopping up the breach. The next day the breach was stopped by order of the Government Engineer in charge, but again broke out on the night following. On Friday 19th, assistance was given by my Inspector, but the breach is not yet made good.

6. The flood waters also broke through a drain made across the Gantz. road for the temporary drainage of the adjoining compounds, and partially stopped up the road.

7. I would again urge the necessity of calling the attention of Government to the exposed and insufficient condition of many of the Tank Bunds along the line. The loss of water consequent on breaches of Bunds involves a loss of Revenue to Government, as well as a loss to the Ryots; but there is also the attendant danger to house property, and to the safety of the line, from the great rush of the escaping waters, whilst the expense of placing the Bunds in sufficient condition, would not much exceed the cost of stoppage and making up a single heavy breach. I have no hesitation in saying, that breaches of the Vasurpaudy Tank Bund will continue to occur with every heavy monsoon, unless it be put in a much more effective condition.

8. I would observe however, that the Government Officers are quite aware of the importance of protecting Tank Bund earth by turfing, and planting shrubs. The planting of shrubs I find strongly recommended at page 44 of the "Circular and standing orders of the Department of Public Works," published last year, whilst in reference to turfing, I find at page 356 of the same book an order of Government that "the work must be done."

Fort Saint George, Public Works Consultation of 8th March 1859.

From Captain G. V. WINSCOM, Acting Civil Architect, P. D.; to the Chief Engineer D. P. W., dated 30th November 1858, No. 685.

SIR,

With reference to your Extract of Proceedings* No. 5843, dated 27th November 1858, I have the honor to report to you, that I consider the Vasurpaudy Tank is in a perfectly safe state at the present time, but have ordered the bank to be thickly planted with quick growing shrubs on the south side, against which the waves break.

2. The breach alluded to by the Railway Engineer happened at a point where the banks had been a good deal worn away by the people having made a path-way across it. It would have been stopped at once, had the Merrassidar been a little active and willing.

3. It was caused both by the waves wearing away the spot, and by the influx of water from Tanks more to the west, which had burst their banks. If the breach had not happened, the tail of the Tank would have had to be cut, and the same disturbance to the Railway works would have happened, as the drainage of the country is there very nearly to the south, and the Rail therefore runs nearly directly across the natural water shed. This leads me to observe (though I am averse to remark on works not under my immediate charge) that provision for the drainage of the country, appears to have been very much neglected on the Railway.

4. The Vents are far too far apart in my opinion, considering the very heavy rains that sometimes falls, and I cannot but think, that without they have a good tunnel at every quarter of a mile, they will always experience some discomfort during the monsoon. The whole country to the north of the Railway was a considerable sheet of water long before the Vasurpaudy Tank burst, and I moreover remark, that at the Vasurpaudy crossing the ramp on the North side is an obstacle to the free flow of the water sewes, still further to dam them up.

From Captain C. C. JOHNSTON, Officiating Consulting Engineer for Railways; to Colonel E. LAWFORD, Officiating Chief Engineer, dated 22nd December 1858, No. 287.

SIR,

With reference to Extract from your Proceedings, No. 6179, dated the 10th Instant, I have the honor to forward, for your information, a transcript of a communication from the Agent and Manager of the Madras Railway, relative to the condition of the Vasurpaudy Tank Bund.

From N. B. ACWORTH, Esq., Agent and Manager; to Captain C. C. JOHNSTON, Officiating Consulting Engineer for Railways, dated 21st December 1858, No. 841.

SIR,

With reference to the report of the Acting Civil Architect, embodied in the Proceedings of the Public Works Department, of which a copy accompanied your letter, No. 869, of the 11th Instant, I have the honor to state, that from a Report of the Resident Engineer of the Railway, I have just received, I learn that he is of opinion, that the Vasurpaudy Tank Bund is not at present in a sufficiently secure condition.

2. He states that "the black earth of which it is made up, is exposed without covering of shrubs or turf. It is cut up along nearly its whole length by deep ruts, or rain water channels, and it has been breached by at least two monsoons in succession at spots about ten chains apart."

3. I trust that these defects will have the attention of the Acting Civil Architect.

No. 74. ORDER THEREON, No. 512; dated 7th March 1859.

With this letter the Chief Engineer submits an estimate amounting to Rupees 1,480, for repairing the Vasurpaudy Tank, and for facing the South Bank with a masonry wall, and requests sanction for the execution of the work on emergency.

Fort Saint George, Public Works Consultation of 8th March 1859.

2. Before sanctioning the estimate the Government would wish to have a more precise opinion from the Chief Engineer, as to the necessity of the proposed masonry wall, a kind of work never hitherto, he believes, in use in this Presidency, for the protection of Tank Bunds, and far more expensive than the means commonly used. The Vasurpaudy Tank is believed to be of small size, though the Chief Engineer gives no information on the subject; and the Government wish to know whether the means suggested in the last para. of Mr. Henderson's letter, without date, viz. to plant the bank thickly where the waves strike it, would not be fully sufficient. Had this cheap and easy expedient been adopted by the Local Officers, there would apparently have been no cause for any thing further; but the 3rd para. of the letter just referred to, appears to shew that the Bund has been much neglected, and Colonel Faber will call on the proper Officer to explain the circumstance.

3. The Governor in Council cannot but observe that this small estimate, after two months delay, is now sent up without a word of information, as to the Revenue from the Tank, without any opinion of the Collector on the proposed repair, without any Plan, and with scarcely any description of the work recommended.

(Signed) J. D. BOURDILLON,
Secretary to Government.

Railway Department

Consulting Engineer's Office.

No 256

From, Captain C. C. Johnston,

Officiating Consulting Eng^r for Railways

To, Colonel E. Lawford

Officiating Chief Engineer, D. P. W.

Sir, Referring to Extract Minutes of Consultation

Financial / Railway / Department, No 577 dated

the 26th Ultimo, I have the honor to forward a

copy of a further communication from the Agent and Manager of the Madras Railway, annexing one from the Resident Engineer of the Madras Division, again bringing to notice the insecure state of the bunds of several Tanks contiguous to the line of Rail, in view to the necessary steps being at once taken for placing them in an efficient condition.

2 The Agent's letter, in original, will be forwarded to Government, but at some time will

necessarily

necessarily elapse before it reached you, I have
deemed it advisable to furnish you with a copy,
and of which circumstance the Government
shall be informed.

Madras, } I have ft
26th November 1858. } J. B. Johnston Esq. Captain
Off. Consulting Engineer for Railways.

To, }
Mr 96 } Madras Railway
From, N. B. Neworth Esq.

Agent and Manager:
Captain C. B. Johnston
Inspecting Consulting Engineer
for Railways.

Sir,
With reference to your letter N^o 777 of the
8th instant informing me that Government had
drawn the attention of the Public Works Depart-
ment to the damage done to the Railway Works
by the bursting of the bunds of the Mandallium
and Mootowarry Tanks with a view to their
immediate repair, and that of other Tanks so
situated

22nd Nov 58.

3
situated, that their breaching would injure the Railway.
I have the honor to transmit for the information of
Government, a copy of a further communication
received by me from the Resident Engineer of the
Madras Division, in which he alleges the very
insecure state of the Veyasurpaudy Tank bund, and
of other bunds along the line of Railway, from which
it would appear, that damage to the line is very
probable, unless immediate steps are taken to avert it.
2 I am sure, I need not urge upon you the
importance of the least possible delay being allowed
in giving effect to the orders of Government already
passed upon this subject.

Madras, }
25th November 1858. }

I have ft
J. B. Neworth
Agent and Manager

Madras Railway, Madras Division
Resident Engineer's Office.
Chinnamapet 22nd November 1858.

To, J. B. Keppel Esq.
Chief Engineer.
My Dear Sir,

In my report for last month I had
occasion

occasion to notice the very insufficient condition in which many of the tank bunds along the line in this Division are allowed to remain.

2 Last year considerable damage was done by the bursting of the Veydurpaudy tank bund during the monsoon, and I had occasion to notice the particularly insufficient condition of that bund.

3 That bund is now in a worse condition than it was then, the earth of which it is composed being left exposed to all the action of sun and rain, and the bund is consequently cut up by rain channels or gutters of considerable size throughout nearly its whole length.

Early on the 16th instant, this bund gave away under the pressure of the but half-filled tank, and the escaped waters after scouring the surface of the country, burst the temporary surface water dams of the bridge under construction at 2 miles 3 1/2 chains, and rushed through

through with a head of over two feet in ^a the length of 1 1/2 feet of the completed abutments. This great rush of course scoured away all earthwork exposed to its action, and caused a slip of the embankment which must have stopped the running of trains, but that the line was well supported by long bearing beams. No apparent damage has yet been done to the brickwork, but as a portion of the foundations had still to be put in, it is possible I shall have to report some damage.

On Wednesday morning (17th) I went to the spot, and found the rush undiminished. The same afternoon I inspected the breach in the tank bund, and found it to extend to a length of about 50 feet. As the safety of the works at 2 miles 3 1/2 chains was endangered by the continued rush of the escaping water, and the only appearance of an intention to stop the breach was two coolies cutting Kiarkapulay boughs, I directed my Inspector to

to see the Village authorities in charge, and to go on with stopping up the breach. The next day the breach was stopped by order of the Government Engineer in charge, but again broke out on the night following. On Friday 17th assistance was given by my Inspector, but the breach is not yet made good.

The flood waters also broke through a diain made across the Ganth road for the temporary drainage of the adjoining compounds, and partially stopped up the road.

I would again urge the necessity of calling the attention of Government to the exposed and insufficient condition of many of the Tank bunds along the line. The loss of water consequent on breaches of bunds involves a loss of Revenue to Government, as well as a loss to the Ryots; but there is also the attendant danger to house property, and to the safety of the line, from the great rush of

of the escaping water, whilst the expense of placing the bunds in sufficient condition, would not much exceed the cost of stoppage and making up a single heavy breach. I have no hesitation in saying, that breaches of the Vyjaspandy Tank bund will continue to occur with every heavy monsoon, unless it be put in a much more effective condition.

I would observe however, that the Government Officers are quite aware of the importance of protecting Tank bund earth by turfing, and planting shrubs. The planting of shrubs I find strongly recommended at Page 44 of the "Circular and standing orders of the Department of Public Works" published last year, whilst in reference to turfing, I find at Page 356 of the same book an order of Government that "the work must be done."

True copy
John A. Wilson
for Chief Engineer
True copy
J. B. Newborth
Agent and Manager

I am Sir
Signed W. Henderson
Resident Engineer.

True copies
J. C. Johnston Captain
S. R. Cond. Engr for Railways.

No 685 Civil Architects Office
From, Captain G. V. Winscom,
Acting Civil Architect R. D.

To, The Chief Engineer D. P. W. D.
Fort Saint George

Sir,
With reference to your extract of Proceedings with its enclosures
No 5863 dated 27th November 1858, I have the honor

to report to you, that I consider the Veyssurpandy
Tank is in a perfectly safe state at the present
time, but have ordered the bank to be thickly
planted with quick growing shrubs on the south
side, against which the waves break.

2 The breach alluded to by the Railway
Engineer happened at a point where the banks
had been a good deal worn away by the people
having made a path way across it. It would
have been stopped at once, had the Mirra Sidar,
been a little active and willing.

3 It was caused both by the waves wearing
away the spot, and by the influx of water from
Tanks more to the west, which had burst their
banks. If the breach had not happened the
tail

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tail of the Tank would have had to be cut, and
the same disturbance to the Railway works would
have happened, as the drainage of the country
is there very nearly to the south, and the rail
therefore runs nearly directly across the natural
water shed. This leads me to observe (tho I am
averse to remark on works not under my
immediate charge) that provision for the drainage
of the country, appears to have been very much
neglected on the Railway.

4 The Vents are far too far apart in
my opinion, considering the very heavy rains
that sometimes falls, and I cannot but think,
that without they have a good tunnel at every
quarter of a mile, they will always experience
some discomfort during the monsoon. The whole
country to the north of the Railway was a
considerable sheet of water long before the
Veyssurpandy Tank burst, and I more over
remark, that at the Veyssurpandy crossing the

the ramp on the North side is an obstacle to the free flow of the water sewers, still further to dam them up.

I have the honor to
Civil Architects Office,
Madras, 30th Nov 1858.
Sd/- J. V. Minscom 2nd Capt.
Sd/- Civil Architect

Railway Department. Consulting Engineers Office.
No 287

Sir,
Captain C. C. Johnston,
Officiating Consulting Engineer
for Railways.

Colonel C. Lawford
Officiating Chief Engineer D. O. W.

Sir,
With reference to Extract from your Proceedings
No 179, dated the 10th instant, I have the honor to
forward, for your information, a transcript of
a communication from the Agent and Manager
of the Madras Railway, relative to the conditions
of the Veydurpandy Tank Bund.

Madras
22nd Decr/58
I have the honor to
Sd/- C. C. Johnston, Capt.
Off/- Cons. Eng. for Railways.

Madras Railway
Madras, 21st Decr/58.

No 861.

To,
Captain C. C. Johnston
Off/- Consulting Engineer
for Railways

Sir,
With reference to the report of the Acting
Civil Architect embodied in the Proceedings of
the Public Works Department of which a copy
accompanied your letter No 869 of the 11th
instant, I have the honor to state, that from
a Report of the Resident Engineer of the
Railway, I have just received, I learn that
he is of opinion, that the Veydurpandy Tank
bund is not at present in a sufficiently
secure condition.

2 The states that "the black earth of which
it is made up, is exposed without covering of
shrubs or turf. It is cut up along nearly
its whole length by deep ruts, or rain water
channels, and it has been breached by at
least

18 December/58.

least two monsoons in succession at spots.
about ten chains apart.

3 I trust that these defects will have
the attention of the Acting Civil Architect.

I have &c
Signed H. B. Neworth
Agent and Manager

/ True copy /

Signed E. C. Johnston Esq
Offt Consulting Engineer for
Railways.

True copies (

W. M. M. Major
S. Sup. Eng. C. C.

Railway

N. 8088

19
Central Office of P. Works,
Fort Saint George, 21st February 1859.

From, The Chief Engineer,

To, The Secretary to Government P. W. D.

Sir,

I do myself the honor to submit for the consideration of Government, the accompanying Estimate, amounting to Rs 1480, for repairing the Velurpandy Tank, and for facing the South Bank with a masonry wall.

2 The circumstances which have led to the preparation of the Estimate are as follows. On the 26th

November last, the Consulting Engineer for Railways brought to notice, the insecure state of the Velurpandy Tank Bund, and stated, that it was likely to cause great damage to the line, unless immediate measures were adopted to avert it.

3 Accordingly, the Acting Civil Architect, Captain Winscom, was instructed to secure the Tank in question, and to submit to the Central Office, a report specially on the breach referred to by the Railway authorities.

4 In his letter N 685 dated 30th November 1858,

Captain
Winscom

Enclosure in a letter

from the Chief Engineer

to the Secretary to Government

Dated 21st Feb 1859.

N. 8088

1859.

Copy of correspondence

regarding the insecure

state of the Velurpandy

Tank Bund.

Captain Winscom submitted the Report, called for, and
on the 23rd December following, furnished the foregoing
Estimate, in which provision is made for the following items.

1956 ¹²² Earthwork, including tamping	Rs. 122-4-
2000 yds Removing Cracked Beams	40-
11400 ¹²⁶ Bricks in Chumam for retaining wall	126-11-
Lunaries	70-11-
	<u>1180-</u>

5. Considering the great necessity that exists
for the early completion of the work, in order to secure
the Tank from future danger, I have the honor to
request the sanction of Government for the execution
of the same on emergency.

Central Office of P.W.
Fort Saint George,
21st February 1859
W.B.

I have the honor to be,
Sir,
Your most Obedt Servant
Edwd. John Colonel
Chief Engineer.

To,
The Secretary to Government
P.W.D.

73
P. W. DePaul

No. 512

Extract from the Minutes of Consultation
Under date the 7th ~~of~~ ^{March} 1859

Read the following
letter from the Chief Engineer

(Haverhill 21st Feb 1859. No. 8088)

With this letter the
Chief Engineer submits
an Estimate amounting
to Paper 1150, for repair-
ing the Casapandy Tuck
and for facing the South
Bank with a masonry
wall, and requests sanc-
tion for the execution of
the work on emergency.

2 Before sanctioning
the Estimate the Govern-
ment would wish to
have a more precise
opinion from the Chief
Engineer.

At

Ly

W

Will

9th Dec 16th March 1859 10:5:10

DD M
16 Dec 1859 - Department
11. 12. 5.

Chief Engineer

to the Hon. Secy of War

22nd March 1859

No 8088

Enclosure 1

Estimate of 1st March 1859
submitted for sanction

Estimate amounting to

Paper 1150, for repairing

the Casapandy Tuck

and for facing the South

Bank with a masonry

wall.

Estimate for 1st March

Engineer as to the ne-
cessity of the propo-
sition, with a kind
of work ^{little} ~~now~~ ^{to} ~~be~~ ⁱⁿ use
in this Presidency, for
the protection of banks
banks, and far more ex-
pensive than the means
commonly used. The Eu-
ropean tank is believed
to be of small size, though
the Chief Engineer gives
no information on the
subject, and the Govern-
ment wish to know
whether the means sug-
gested in the last Para-
graph of Mr. Henderson's letter
without date, vizt to plant
the bank thickly where
the waves strike it, would
not be fully sufficient.
Had this cheap and easy
expedient been adopted
by

25
by the local Officers there
would apparently have
been no cause for any-
thing further; but the
3^d Para of the letter just
referred to, appears to show
that the bank has been
much neglected, and
Colonel Fisher will es-
call on the proper Officer
to explain the circum-
stances.

3. The Governor in
Council cannot but
observe that this small
estimate, after two or
months delay, is now
sent up without a
word of ^{information} as to the Revenue
from the tank, without
any opinion of the
Collector on the proposed
repair, without any
Plan, and with a
scarcely

scarcely any description
of the work recom-
mended.

SW

10 Copies to the Chief Engr. Dated 8th

29th Jan 1859 Kennedy 828 nos

7008

2nd Mr Porter 1859 29th 110
29th to 1st March.

24p 572.

(1)
Abstract of 11th of Jan.

29th March 1859.

23 on the 24th 1859 22. 11th 1859
2nd 825 in 1859

Before mentioning the
estimate of 1854 89 for repairing
the Scurry family bank, and for
being the South Bank with a
masonry wall, deciding to
have a more free will union
than the Chief Engineer had
the necessity of the proposed
masonry wall and observing
that the small estimate after
two months delay is now sent
up without any sort of information
about the matter.

29th 828 1859.

225th 1859 125th 1859