

- (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.	8761	Press
B.P. No.		Mis.
Dated	5-6-195	195

Not to be folded or roughly handled

Read the following papers:—

No. 83. From Colonel F. J. MOBERLY, R.E., Superintending Engineer, Chingleput, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Guindy, 17th February 1875, No. 3,897.

In reply to your No. 1,059, dated 16th December, I have the honor to observe

- 1 Plan of walls across channel.
- 1 do. head sluice.
- 1 Cross section of bund.
- 1 do. of channel and bund.
- 1 Section of North Madranticum.
- 1 Survey of channel showing the alteration by Mr. Lowry.
- 1 do. do. do.
- 1 Estimate.
- 1 Specification.

that you have apparently overlooked the papers sent with my No. 734, dated 6th June 1874, regarding the Madranticum tank project sanctioned in G. O., No. 3,436, dated 6th November 1867, and said to have been completed before Mr. Lowry or I joined the district.

* Your No. 533-A, dated 24th July 1874, only enters into the question of the surplus discharge.

2. That the project has not succeeded is not the matter now in question. I await your remarks on my No. 734* before I go into that. I do not pretend to know why the designer of the project

gave Karangooly tank channel a width of 15 feet. It is cut to that width as was settled in the original design, and it did not occur to me at this period to question its correctness.

3. Agreeably to that design, the weir of Madranticum tank was raised; its crest is on the same level as those of the Goondairy and the Karangooly tanks. The bank of the Goondairy is only 3.25 feet above the crest, and was breached in 1872 by a flood which would otherwise have passed 4.75 feet over it.

4. With the weir of Madranticum at its new height, it is obvious that the Goondairy is useless, and it has never been repaired, but a small bank was run up along the top of its water-spread to carry the Karangooly tank.

5. This answered fairly well in 1873, but was swept away in 1874; and the water passed through the breach falling from 16.3 over crest at the channel head to 12.1 at the bridge.

6. To render this supply less precarious, I proposed in my No. 2,823, of 12th November 1874, to cut a channel in the rock and to put the head sluice in the bridge instead of at the outlet of the channel from the tank.

7. The villagers have anticipated my proposal and have already made a small cut, which we are bound, in my opinion, to pay for, and which is to be widened and separated by a wall from its old course.

8. The space about here is much cut up with rocks, broken ground, and old masonry; and where we rejoin the old cut, an embankment is required which will terminate at its upper end on a mass of rock and masonry; to enclose which the semi-circular wall was proposed. It may be a simple revetment. It is not easy to delineate all these small details on a sketch.

9. The whole of the sanctioned amount on original project was expended, and the accounts were closed before I took charge. The calingulahs estimated for have not been built, but I have not the means of saying what was done in lieu.

10. If the matter is re-opened as regards the project and its future, the Controller of Public Works Accounts can probably enlighten me, but I have not gone into that now. This matter has grown out of the project owing to its having

overlooked the necessity for raising the Goondairy bank, or providing means of discharge in it in proportion to the outlet at the northern end of the tank. As it stands I submit that it is a separate subject, and to be considered on its own merits apart from the main project; my remarks* on which are still unnoticed.

* No. 734, 6th June 1874.

No. 253-A.

No. 84. *Note by the Chief Engineer for Irrigation.*

WITH his letter, No. 2,823, of the 12th November last, the Superintending Engineer, Chingleput, transmitted an estimate, amounting to Rupees 3,128, for increasing the means of discharging surplus from the Madranticum tank, which in the year 1872 was in very great danger, the water having risen to 8 feet above the crest of its surplus weir, and to within a few inches of the top of the bund, while in 1874 upwards of 6 feet flowed over the weir. These excessive discharges were due to the breaching of a great number of tanks in the basin of the Cleear, which river is bunded to form the tank, and instructions were in 1873 given for the proper repair and future safety of the upper tanks both in Chingleput and North Arcot. In the former district some, and in the latter considerable, progress has been made with this very important work, but it is considered advisable to turn to account the water-way afforded by the comparatively low rocky ground to the north of the hill on which the surplus weir, about 730 feet in length, abuts, and the papers forming the enclosures of the Superintending Engineer's letter are intended to show the proposed arrangements. As at first submitted, these papers were, even with the local knowledge possessed by the undersigned, not intelligible; but a reference† to the Superintending Engineer has resulted in their being made possibly sufficiently clear to allow of the work being sanctioned.

† No. 1,059, 16th December 1874.
Superintending Engineer's No. 3,897, 17th February 1875.

2. Plans Nos. 1 and 2 show the general features of the locality. The Goondairy was formerly supplied from the Madranticum tank by a sluice from the surplus weir of the latter, and also by a channel to the north of the hill. When the Madranticum tank was enlarged, and its surplus weir raised, it would appear that the consequent modification of the Goondairy rendered necessary was overlooked, and it was extensively breached. Its retention as a work of irrigation is not necessary, the lands under it being commanded by the Karangooly tank, which is not shown in the plans, but which lies a short distance below the bridge, and it is desirable to allow surplus to discharge through the bed of the Goondairy into the Cleear. The supply of the Karangooly tank was carried through the Goondairy and under the bridge on the road leading to the bungalow, but it may conveniently be taken by a channel cut through the rock by the ryots, which is to be enlarged, and at the bridge a regulating sluice is to be constructed. The channel leading into the Goondairy is to be closed by a low wall (Plan No. 3) as modified by placing it below the off-take of the ryots' channel, and the surplus will flow over this and over a considerable space of rock (*vid: pencil notes on Plan No. 1*). It would seem, however, that on some of the rock bordering the supply channel (Plan No. 4, Section A), *viz.*, from the point marked ‡, or end of bank to

the cross section of the channel, a low wall will be required, otherwise water will run to waste before it rises to the level of the large tank* weir. It will be noticed on looking at the left end of this Section A in what a remarkable way the

* From paragraph 3 of the Superintending Engineer's No. 3,897, it would seem also that this rock is below Karangooly full tank level.

papers have been prepared, for there the proposed bund, shown in Plans Nos. 1 and 2 as running from the Goondairy bund to the edge of the channel, has its top some feet below the flood levels (in the tank) of 1872 and 1874. An explanation of this was suggested in paragraph 3 of this Office Memorandum, No. 1,059, *viz.*, that the level of the water issuing from the tank by the passage north of the hill fell several feet before it reached the point at which this bund commences and that at which the bridge stands; and this appears† to be the real state of the matter, and consequently the flood levels on the sections given in Plans Nos. 4 and 5 are wide departures from the fact, and the Superintending Engineer should have had the plans corrected before transmitting them.

† Paragraph 5 of Superintending Engineer's No. 3,897.

3. Full of errors and ambiguity as the papers are, it is desirable that a channel should be cut up to the bridge; that at the latter additions should be made to allow of the regulation of the quantity of water to be admitted to the Karangooly tank; and that the Goondairy should then be finally abandoned and surplus from the Madranticum tank allowed to flow in this direction. The head sluice vents should be only as high, or but slightly higher than the full supply‡ level below, and the iron cross bar should be placed lower, or if the arch-way be retained as shown (Plan No. 6) there should be two cross bars. It is not improbable that hereafter, when the supply to the several tanks under the north or Karangooly channel comes to be made effective, this bridge will have to be removed and more water-way given.

‡ It is somewhat doubtful what this is, but from paras. 3 and 5 of the Superintending Engineer's No. 3,897, it may be deduced that it is 8 or 9 feet above the sill, in which case the present arch is not too high.

4. As regards the estimate, it must be noticed that the rate Rupees 1½ per cubic yard for cutting the channel in hard rock is very much too high. It might be made to cost possibly almost any thing, but, if the requisite water-way be obtained without adhering too closely to the rectangular form of section, probably half this rate will suffice; indeed it may possibly be done for much less. One rupee will be very ample for entry in the estimate. The higher rate may be allowed for the very small quantity of cutting required in connection with the wall for closing the old channel. The alteration will make the first item of the estimate Rupees 1,204 instead of Rupees 2,026. In the item for adapting the bridge as a head sluice 2-inch planks for the shutters will suffice; there will then be 26 cubic feet of teakwood and Rupees 78. Also four iron bars will be required, and they may be 3 inches in diameter and (from the plan) 7½ feet long each; they will cost Rupees 67-3-0, and the total of this item will be Rupees 420 and of the estimate Rupees 2,260.

CAMP AT NILLOFF,
2nd March 1875.

(Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

Proceedings of the Madras Government, Public Works Department,
5th April 1875.

No. 85.

ORDER THEREON, 5th April 1875, No. 895.

IRRIGATION, No. 10.

His EXCELLENCY the Governor in Council sanctions the estimate of Rupees 2,260, as revised by the Chief Engineer for Irrigation, for carrying out certain improvements at the north end of the Madranticum tank in the Chingleput District, having for their object the more convenient supply of the Karangooly tank, its regulation, and the making available of some rocky ground as an additional passage for surplus from the former tank.

2. The imperfect manner in which the proposals were in the first instance submitted by the Superintending Engineer has been noticed by the Chief Engineer for Irrigation, and the Government desire to express their dissatisfaction of the want of care which was thus shown.

3. The expenditure under this sanction will be charged to the Madranticum tank improvements in continuation of the work carried out on the estimate sanctioned in G. O., No. 3,046, of the 6th November 1867.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Superintending Engineer, Chingleput.
.. Chief Engineer for Irrigation, with enclosures.
.. Controller of Public Works Accounts.

No. 25-3 A.
Note by the Chief Engineer for Irrigation.

Enclosures
17.

With his letter No. 2823 of the 12th November last, the Superintending Engineer, Chingleput, transmitted an estimate amounting to Rupees 3,128 for increasing the means of discharging surplus from the Madranticum Tank, which in the year 1872 was in very great danger the water having risen to 8 feet above the crest of its surplus weir, and to within a few inches of the top of the bund, while in 1874 upwards of 6 feet flowed over the weir.

These excessive discharges were due to the breaching of a great number of tanks in the basin of the Cleear which river is banded to form the tank, and instructions were in 1873 given for the proper repair and future safety of the upper tanks both in Chingleput and North Arcot. In the former District some, and in the latter considerable progress has been made with this very important work, but

but it is considered advisable to turn to account the waterway afforded by the comparatively low rocky ground to the north of the hill on which the surplus weir, about 730 feet in length, abuts, and the papers forming the enclosures of the Superintending Engineer's letter are intended to show the proposed arrangements. As at first submitted these papers were, even with the local knowledge possessed by the undersigned, not intelligible; but a reference to the Superintending Engineer has resulted in their being made possibly sufficiently clear to allow of the work being sanctioned.

W. 1059
Dec 1897
Superintend
W. 3877-1
February

2 Plans W. 1 and 2 show the general features of the locality. The Goondairy was formerly supplied from the Madranticum Tank by a sluice from the surplus weir of the latter, and also by a channel to the north of the hill. When the Madranticum tank was enlarged and its surplus weir raised, it would appear that the consequent modification of the Goondairy rendered necessary

necessary was overlooked and it was extensively breached. Its retention as a work of irrigation is not necessary, the lands under it being commanded by the Harangooly tank, which is not shown in the plans but which lies a short distance below the bridge, and it is desirable to allow surplus to discharge through the bed of the Goondairy into the Clear. The supply of the Harangooly tank was carried through the Goondairy and under the bridge on the road leading to the Bungelow, but it may conveniently be taken by a channel cut through the rock by the ryots, which is to be enlarged, and at the bridge a regulating sluice is to be constructed. The channel leading into the Goondairy is to be closed by a low wall (Plan W. 3), as modified by placing it below the off-take of the ryots' channel, and the surplus will flow over this and over a considerable space of rock (vide pencil notes on Plan W. 1). It would seem however that on some of the rock bordering the supply channel (Plan W. 4, Section

Section A) viz from the point marked 5, or end of bank, to the cross section of the channel, a low wall will be required, otherwise water will run to waste before it rises to the level of the large tank weir. It will be noticed on looking at the left end of this section A in what a remarkable way the papers have been prepared for there the proposed bund, shown in Plans Nos 1 and 2 as running from the Goondairy bund to the edge of the channel, has its top some feet below the flood levels (in the tank) of 1872 and 1874. An explanation of this was suggested in para 3 of this Office Memorandum No 1059, viz that the level of the water issuing from the tank by the passage north of the hill fell several feet before it reached the point at which this bund commences and that at which the bridge stands, and this appears to be the real state of the matter, and consequently the flood levels on the sections given in Plans Nos 4 and 5 are wide departures from the fact, and the Superintending Engineer should have had the plans corrected before transmitting them.

* from para 3 of the Superintending Engineer's No 3897 it would seem also that this rock is below Harangooly full tank level.

* para 5 of Superintending Engineer's No 3897

3 Full of errors and ambiguity as the papers are, it is desirable that a channel should be cut up to the bridge, that at the latter conditions should be made to allow of the regulation of the quantity of water to be admitted to the Harangooly tank, and that the Goondairy should then be finally abandoned and surplus from the Madrautium tank allowed to flow in this direction. The head sluice vents should be only as high, or but slightly higher than the full supply level below, and the iron cross bar should be placed lower, or if the arch-way be retained as shown (Plan No 6) there should be two cross bars. It is not improbable that hereafter, when the supply to the several tanks under the north or Harangooly channel comes to be made effective, this bridge will have to be removed and more waterway given.

4 As regards the estimate, it must be noticed that the rate Rupees 13, per cubic yard for cutting the channel in hard rock is very much too high. It might be made to cost possibly almost any thing but if the requisite waterway

* it is somewhat doubtful what this is, but from paras 3 and 5 of the Superintending Engineer's No 3897 it may be deduced that it is 8 or 9 feet above the sill in which case the present arch is not too high.

water-way be obtained without adhering too closely to the rectangular form of section probably half this rate will suffice, indeed it may possibly be done for much less. One Rupee will be very ample for entry in the estimate. The higher rate may be allowed for the very small quantity of cutting required in connection with the wall for closing the old channel. The alteration will make the first item of the estimate Rupees 1204 instead of 2026. In the item for adapting the bridge as a head sluice 2 inch planks for the shutters will suffice, there will then be 26 Cub. feet of teak wood and Rupees 78. Also 4 iron bars will be required and they may be 3 inches in diameter and (from the plan) $7\frac{1}{2}$ feet long each; they will cost Rupees 67-3-0, and the total of this item will be 420 and of the estimate Rupees 2260.

Camp at
Nellore. 23
March 1875.

Colonel L. A. R. L.
Chief Engineer for Irrigation.

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

to 2981. VV
71:00

was

subjected to
against

presented to
— 51. 01

Loss: 01

to 3 months
as per 3 rep
to the committee
all for the work
of the committee
to the help

to 3 months

None

P. W. 1895 Sept.
No: 1704

From

The Chief Engr for
Irrigation

Dd 2 March } 1895.
N. 17 - - -

E. 17. No: 253 A.

Note on an Estimate
for Carrying out certain
improvements at the
North end of the Mad-
ranticum tank, Chinn-
seput St.

G.O. No. 895: 5.4.75

P. W. Dept.

Proceedings of the Madras Government.
Read the following.

From

Chief Engineer for Irrigation (H-8 No. 253 A & 2 B - 2 B - 2 B)

That in a memo dated
1st October 1894
the Chief Engineer for
Irrigation has submitted
a memo dated 1st October
1894 in which he has
submitted an estimate
for carrying out certain
improvements at the
North end of the
Madranticum tank, Chinn-
seput St.

Md
19/3

His Excellency the
Governor in Council sanctions
the estimate of Rupees 2,260,
as revised by the Chief
Engineer for Irrigation, for
carrying out certain improve-
ments at the North end of
the Madranticum tank in
the Chingleput District,
having for their object the
more convenient supply of
the Flarangooly tank, its
regulation, and the making
available of some rocky
ground as an additional passage
for

for surplus from the former
tank.

2. The ~~very~~ ^{very} ~~slowly~~ and ~~imperfect~~ manner
unintelligible way in which
the proposals were in the
first instance submitted by
the Superintending Engineer,
and the confused and in
some cases erroneous informa-
-tion exhibited on the plans
are very discreditable, and it
is a matter of surprise how
this Officer could have
allowed them to leave his
office in such a state.

3. The expenditure under
this sanction will be charged
to the Madras tank im-
-provements in continuation of
the work carried out on the
estimate sanctioned in G. O
No. 3046 of the 6th November
1867.

by 3/3/75
G.M.

^{imperfect}
The manner in which the
proposals were in the first
instance submitted by the
Superintending Engineer
has been noticed by
the Chief Engineer for
Irrigation - & the
Govt & ~~must~~ desire to
express their dissatisfaction
of the want of care
shown by C.E. Muborly.

To the Supty Engr. Chief Engr. for Irrigation
Chief Engr. for Irrigation
Controller of P.W. Works
with P. H. S. S. S.
Resp'd - 6-4-75

1704 ✓

Govt. of 1875. Madras

PUBLIC WORKS.

To
Suptg Engineer
Chingleput.

Dated

Recd.

Encl.

G. O. 50 April 75, No. 895

No. 8385.

Madrastraum Tank
Chingleput Dist. The
estimate as revised by the
Chief Engr. for Spring, for
carrying out certain im-
provements at the north
end of the — sanctioned
with sanction —

Mr. R. S. Ellis, Esq.
Mr. H. H. H. Esq.
Mr. H. H. H. Esq.

2 enclosed