

(1) Number of pages _____

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MADRAS RECORD OFFICE

Government of Madras

Public Works

DEPARTMENT

G.O. No.	<i>3455</i>	Press	<i>Original</i>
B.P. No.		Miss	
Dated	<i>7-12</i>	195	<i>1875</i>

Not to be folded or roughly handled

Note by the Chief Engineer for Irrigation.

W^o 14. 22nd August.

Enclosure II

In August 1874, the District Engineer, Mellore, brought to notice the necessity for discharging the greater part of the surplus from the catchment basin drainages of the Mellore Tank directly into the river, if possible to the west of the junction of the river embankment with the Tank bund. Mr. R. Smith pointed out that the discharge of the drainage of 17 square miles across the Delta irrigation works could not but be injurious, and that whereas he had in designing the Sarda-pully project provided by surplus works at Kana-partypad for the discharge of 6 inches of drainage, the then Superintending Engineer, considering this allowance to be unnecessarily large, ~~had~~ reduced the capacity of the surplus sluices to the discharge of about 1474

Cubic

Cubic feet a second, the estimated maximum being 3718 Cubic feet. Mr. R. Smith's proposals were approved, and some general instructions given.

No. 665-3^d.

September 1874.

3 Not long after the floods of October occurred, and so vast a quantity of water was discharged at the East end of the Tank into the Station, the Town and Delta, that it was in contemplation to breach the Tank at a point where the surplus might escape without causing so much inconvenience and damage, but this proceeding having been delayed for the reasons mentioned in para 13 of the Memo: as per margin, the water overtopped the bund and a breach occurred. Much of the water which was then received by the tank came from the river by the submergence of the head sluice and flood bank, and this will, it is hoped, be effectually prevented for the future, but the drainage of the catchment basin remains to be dealt with as before.

No. 397 A. Pros.
Madras Govt.
9 June 1875.

4 The District Engineer has transmitted estimates amounting to Rupees 24,900, and providing for the following works,

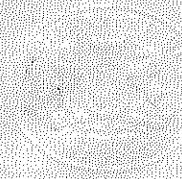
Weir in tank bund	Rupees	10,190
Channel between upper and lower weirs	"	3371
Flush causeway for road	"	739
Lower weir	"	9970
Channel to river	"	630
		<u>24,900</u>

5 The difference between full tank level and the deep bed of the Pennair is 27 feet, and the District Engineer has provided for dropping the surplus to the lower level. The deep bed of the river is however at a distance of 1 $\frac{1}{2}$ miles, and the nearest part of the river to the tank is 1200 feet distant. It is believed moreover that the deep bed of the river here has never been on the (the South) side. The deepest part of the South side of the bed is at 52.36 or 13.78 feet below full tank level and this

8720 feet

this point is 2600 feet from the tank.
It is believed therefore that it will
suffice if the lowest apron of the sur-
plus weir be placed at 50.48 instead
of at 39. - It may be added that
should, at any future time, the river
change its deep bed it will not be
difficult to add steps to the weir and
so prevent all risk of undermining.

The reason why the District
Engineer has proposed a double weir
is that the road from Nellore to Baba
Pond's Chattram has to be taken across
the surplus channel at a moderately
low level. By a slight diversion, which
has been noted in pencil on the sketch
sheet, it is thought that the necessary
accommodation can be given on the
lowest apron of the design for the upper
weir, the level of which is 55.48, and if
a drop of 5 feet be given below this
apron



apron by building a retaining wall at
its outer edge and constructing another
masonry apron with retaining wall
below, with an outer rough stone apron
beyond, the necessity for a second weir
will be obviated.

The length of the tank surplus
weir has been designed to be $195\frac{1}{2}$ feet
or deducting the space occupied by the
cast iron posts 180 feet, and it is cal-
culated that 3030 cubic feet of water
would be discharged with a depth of
3 feet going over. Looking to the size
of this reservoir and to the importance
of its perfect safety being secured, it is
not proposed to suggest that a less length
should suffice, but it may be noticed
that the capacity of the tank basin
between full tank and maximum water
level is so large, viz: between 9 and 10
millions of cubic yards, that it cannot
but modify materially the conditions
of

of discharge of a maximum flood drainage which is estimated at under 12 millions of cubic yards in the 24 hours. Probably under these circumstances a weir 120 feet long would prove to be ample.

8 Mr. R. Smith reports that he has arranged to shut out from flood water, which in 1874 rose to 1.45 feet above F.T.L., by means of cast iron posts and planks, rather than by self acting swing shutters, because it is desired towards the close of the season to retain water in the tank above F.T.L. for the use of the town. He has not mentioned to what increased level it is proposed so to retain water, and it is thought that there are risks attending such a proceeding which it may be well fully to consider before deciding to incur them. Moreover if such retention of water be deemed advisable swing shutters

shutters might nevertheless be adopted, as these could for the comparatively short period during which water would be kept above ordinary F.T.L. be secured by bolts, which could be withdrawn before the usual time for floods and freshes. On the other hand of course it might be arranged that no planking should be left standing in the post grooves at times at which a sudden accession of tank water from land drainage might reasonably be anticipated.

9 The modifications proposed will render a revision of the Estimate by the District Engineer necessary, but it is believed that the approximate cost of the single weir with the necessary alterations will not exceed Rupees 15,000, and it is recommended that this amount be entered in the Budget of 1876-77 with an allotment of Rupees 10,000, and that

as there is a provision of Rupees 5000 in
the current year's budget for this work,
Mr. R. Smith he authorized to take
immediate steps for the construction of
the weir.

Camp at
Gondloor
26 Nov 1875

Wardell
Lieut. C. R. E.
Chief Engineer for Irrigation.

To the Secretary to Government
P. W. D.

P. W. 1895 Sept.

No: 7709

From

The Chief Engr.
for Irrigation

Dated 26 Nov. 9
Recd 2 Dec 1895.

E 11 No: 1100

Notes in plans for
embank. in add. outlet
for the surplus of the
Vellore Tank.

No 3455

Public Works Dept.
Proceedings of the Madras Government
under date the 7 Dec 95

Read the following:-

From

The Chief Engineer
for Irrigation
G.O. No 1100 d/26 Nov 1895

The approximate esti-
mate of Rupees 15,000 for
constructing a weir in the
band of the Vellore Tank,
for the discharge of
surplus direct into the
Pennar, is approved for
entry in the Budget with
an allotment for 1896-97
of Rupees 10,000.-

2 The Officiating Su-
perintending Engineer will
lose no time in examining
into the details of the
arrangements

G.O. No 3455 7.12.95

arrangement suggested
in the foregoing note for
rendering a single weir
sufficient, and he will
submit a revised estimate
at an early date. In the
mean time the work, the
upper part of which is,
with the exception of slight
modifications of levels
proposed for the aprons,
the same as that designed
for the upper weir in
Mr. B. Smith's arrange-
ment for a double weir,
can be gone on with on
the provision of Rupees
5000 made in the current
year's Budget.

3 The expenditure will
be chargeable to Capital-
Permanence Account, as it is
understood that the Vellore

Lank

Lank is a work belonging
to the Delta.

By 26/11
C.M.

Ch: Engr. for Engr.
Offg. Supr. Engr. Hallowell
He He He

3653

and the South. The sum of
one lakh and thirty thousand
rupees is to be paid in the
course of the year for the
purpose of carrying out the
scheme approved by the
Government, with an
allowance of Rs 10,000 for
1876-77.