

(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.	2134	Press
B.P. - No.		- Mis.
Dated	26-7-	1955

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
26th July 1875.*

No. 675

Read the following —

No 773

MEMORANDUM

The following estimates have been submitted by the Superintending Engineer,
Bellary —

	RS
Repairing a surplus weir of the Singanamalla Tank	16,370
Ayaut { Government, acres 1,996	10,213
{ Inam " 1,109	8,099
Average revenue	11,774
Highest do	14,065

There has been no expenditure on the maintenance of the tank in recent years

The weir was breached and otherwise much injured by the floods of October 1874

The tank in other respects did not suffer

The Superintending Engineer reports that the repairs provided for had made considerable progress in May last when he inspected the tank, and it is too late consequently to modify the design of the weir, but the undersigned is of opinion that a substantial crest wall, with a low-level apron in rear of good masonry, would have been a much less costly arrangement. Indeed, the amount of this estimate, without any of the large quantity of stone available, would have sufficed for an entirely new weir of the length 586 feet of the present one, being at the rate of Rupees 28 the foot run. This old native style of surplus weir should not be adopted when extensive restorations are needed. The shabbing, as it is termed in the papers, or the covering of the sloping apron with slabs of stone, is a work of very doubtful utility, and is estimated to cost about Rupees 3,750. If the rough stone be large and well packed with the length of the stones at right-angles to the slope, it will be more firm than the superimposed slabs, and this part of the estimate should be omitted. The tops of the retaining or binding walls should not project above the surface of the apron. The papers submitted have not been prepared in accordance with orders. It has not been shown what the maximum flood discharge of the catchment basin of the tank may be expected to be, and what depth would have to pass over the weirs to dispose of this. In the list of estimates the maximum water level is said to be two feet above the weir crest, while in the Report, paragraph 1, the depth, which passed over on the 25th October, is stated to have been 4½ feet, and probably this was not a maximum. The headings of the estimates are incomplete, and do not afford the Controller the means of posting up outlay properly. The tank has not been placed in its class. The main head Revenue has not been recorded, and some of the papers have no headings of any kind to show to what work they belong. Altogether it is very unsatisfactory that, after the repeated instructions given on these subjects, so little attention should have been paid to them.

2	Daimaveram Tank, Rupees 9,350	Acres 1,401
	Ayaut area	Rs 10,015
	assessment	" 7,135
	Average revenue	" 9,070
	Highest do	

A small outlay of Rupees 38 was incurred on repairs in 1873-74.

The tank has five surplus weirs, with an aggregate length of 1,462 feet. It is said that 2½ feet is the maximum water level above the crest, but no calculation of discharge in connection with the area of the drainage basin of the tank appears to have been made. Moreover, this tank is one, and the terminal tank, of a group comprising a large number of tanks, and on the proper treatment of such groups specific instructions

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26th July 1875.

have been given. The sheet containing the survey and sections of the tank is very incomplete, the position of the sections not having been noted on the plan. The water lines shown appear to represent full tank level, the value of which, with reference to the datum used, has not been noted. The level of the top of the bund is irregular, and apparently in places too low, but the first necessity is to determine maximum water level, and after plotting it to decide what margin is to be allowed, and with reference thereto what the correct level of the top of the bund should be, and the new wing walls of the surplus weirs should correspond. Most of the damage sustained, which has resulted in this large outlay, has been due to the extremely inefficient way in which the surplus weirs were constructed without foundations and with much loose stone rather than with this material judiciously disposed. Most of the work is reported to have been already done, and the estimate may be sanctioned, though it is very doubtful whether the weirs will be as secure as they might have been made had the old arrangement of dry stone aprons been abandoned for a much smaller width of substantial masonry, the water being dropped at once at the crest wall.

3. There are probably scores of tanks in the Bellary District which need to be put to rights before instead of after being extensively damaged, and they should receive early attention, in the manner pointed out in the circulars from this office.

4. The requirements of the Bellary District as regards funds will be considered in due course.

Ootacamund,
15th July 1875

(Signed) JOHN MULLINS, Lieut.-Col., R.E.,
Offg. Chief Engineer, P.W.D.

AGRICULTURAL—ORDINARY—REVENUE
BELLARY DISTRICT
Abstract

Repairing Singana Nalla Tank Surplus Weirs

Quantities	Description of Work	Rate.	Per	Amount	Amount of each part.
		RS. A. P.		RS. A. P.	RS. A. P.
456½	Cubic yards masonry hammer-dressed stone-in-chunam ...	6 0 0	C yd	2,739 0 0	
736½	Do do rough stone-in-chunam ...	4 0 0	Do	2,947 0 0	
4,222½	Do rough stone new (dry pitching) ...	1 0 0	Do	4,222 8 0	
1,578	Do mixed stone do ...	0 12 0	Do	1,884 8 0	
192	Do old stone do ...	0 4 0	Do	768 0 0	
36	Do ripping up and rebuilding revetment ...	0 8 0	Do	288 0 0	
108	Do rebuilding revetment ...	0 4 0	Do	432 0 0	
27	Do earth work ...	0 2 0	Do	54 0 0	
162	Do gravel ...	0 4 0	Do	648 0 0	
3,466½	Square yards slabbing ...	1 0 0	Sq yd	3,466 8 0	
327 45	Squares pointing ...	1 0 0	Square	327 7 8	
33 75	Do plastering 2 coats ...	4 0 0	Do	1,350 0 0	
	Total ...			15,157 13 8	
	Sundries and superintendence at 8 per cent. ...			1,212 2 4	
	Total amount of Estimate ...			16,370 0 0	

CAMP AT GOOTY,
22nd April 1875

(Signed) H. F. GILBY,
Assistant Engineer,
In charge of Gooty Range.

Proceedings of the Madras Government, Public Works Department,
26th July 1875.

AGRICULTURAL—ORDINARY—REVENUE.

BELLARY DISTRICT

Abstract

Repairing Durmaveram Tank Bund and Cahingulah

Quantities	Description of Work	Rate	Per	Amount.	Total
		RS. A. P.		RS. A. P.	RS. A. P.
	Bund				
1,570	Cubic yards old stone @	0 2 8	C yd	261 10 8	
784½	Do new " "	0 10 0	"	490 5 6	
1,814½	Do earth " "	0 1 4	"	151 3 1	
1,814½	Do tamping " "	0 0 6	"	56 11 2	959 14 5
	Breach				
3,680	Cubic yards of earth @	0 1 4	C yd	306 10 8	
3,680	Do of tamping " "	0 0 6	"	115 0 0	
480	Do of puddling " "	0 5 0	"	150 0 0	
600	Do of new stone " "	0 10 0	"	375 0 0	946 10 8
	No 1 Cahingulah.				
3,023½	Cubic feet stone-in-chunam @	0 2 3	C foot	551 11 3	
655	Square feet plastering 2 coats " "	3 12 0	Square	21 9 0	
80½	Cubic yards of old stone " "	0 2 8	C yd	13 6 3	
80½	Do of earth " "	0 1 4	"	6 11 1	596 5 7
	No 2 Cahingulah				
3,219	Cubic feet stone-in-chunam @	0 2 3	C foot	452 10 9	
1,537	Square feet plastering " "	3 12 0	Square	57 10 2	
252½	Cubic yards of old stone " "	0 2 8	C yd	42 1 10	
64	Cubic feet concrete " "	0 2 0	C foot	8 0 0	
60½	Cubic yard earth " "	0 1 4	C yd	5 8 7	463 15 4
	No 3 Cahingulah				
13,008½	Cubic feet stone-in-chunam @	0 2 3	C foot	1,829 4 10	
2,172	Square feet of plastering 2 coats " "	3 12 0	Square	81 7 2	
193	Cubic feet concrete " "	0 2 0	C foot.	24 12 0	
716½	Cubic yards new stone " "	0 10 0	C yd	447 11 4	
194½	Do old stone " "	0 2 8	"	82 6 3	
324	Do excavating foundation " "	0 1 4	"	27 0 0	
1,430	Do filling " "	0 1 4	"	119 2 8	
1,430	Do tamping " "	0 1 6	"	44 11 0	2,656 7 3
	No 4 Cahingulah				
12,578	Cubic feet stone-in-chunam @	0 2 3	C foot	1,768 12 6	
3,827	Square feet plastering 2 coats " "	3 12 0	Square	143 8 2	
635	Cubic yards of new stone " "	0 10 0	C yd	396 14 0	
89½	Do of old stone " "	0 2 8	"	14 14 2	
144	Do of excavating founda- tion " "	0 1 4	"	23 10 8	
1,567	Do of filling " "	0 1 4	"	130 9 4	
1,567	Do of tamping " "	0 0 6	"	48 15 6	2,532 4 4

Proceedings of the Madras Government, Public Works Department.
26th July 1875.

Repairing Durmavaram Tank Bund and Calingulah — (Concluded)

Work on Calingulah — (Continued)												
Quantities.	Description of Work.	Rate			Per	Amount			Total.			
	No 5 Calingulah.	RS	A	P		RS	A	P	RS	A	P	
2,638	Cubic feet stone-in-chunam	2	0	2	3	C. foot	371	0	7			
445	Square feet plastering 2 coats	"	3	12	0	Square	16	11	0			
84	Cubic yards of old stone ..	"	0	2	8	C yd.	14	0	10			
61	Do. of earth ...	"	0	1	4	"	4	4	0			
	Total ...	..	..	..	..	..	..	..	..	406	0	5
	Sundries and superintendence ...	..	..	..	..	..	..	..	..	8,63	10	0
	Grand Total ...	..	..	..	..	..	..	..	..	9,250	0	0

No 676.

ORDER THEREON, 26th July 1875, No 2,134.

IRRIGATION, No 66.

Account

The following estimates for the repair of tanks in the Bellary District are sanctioned:—

Singanamallu tank 16 370
Durmavaram do 9 370

2. The attention of the Superintending Engineer will be specially called to the remarks upon these estimates in the foregoing memorandum, and it will be expected that future estimates will be prepared with much more attention to the requirements of the works concerned, while the many important omissions in the information furnished with respect to the conditions of safety of the two large reservoirs, the repair of which is provided for in these sanctions, should be at once made good.

(True Extract)

(Signed) J. O. HASTED, Major, R.E.

Officiating Joint Secretary to Government

To the Superintending Engineer, Bellary
" Controller of Public Works Accounts
" Chief Engineer for Irrigation

Ed A Grubert
Spare Copies

No. Irrigation.

No 773

31

Memorandum.

The following estimates have been submitted by the Superintending Engineer,

Encs: 13

Bellary:

Repairing a surplus weir of the Singanamallu Tank. Rupees 16,370

Agent — { Govt. — acres 1,276 Rs 10,213
Inam — " — 1,109 " 8,097

Rising revenue — Rupees 11,775

Highest — do — " — 14,065

There has been no expenditure on the maintenance of the tank in recent years.

The weir is not breached, and otherwise much injured by the floods of October 1875. The tank in other respects did

not suffer.

The Superintending Engineer reports that the repairs provided for had made considerable progress in May last.

When he inspected the tank and it is too late consequently to modify the design of the weir, but the undersigned

is

is of opinion that an substantial crest
wall with a low level apron in rear
of good masonry, would have been a much
less costly arrangement. Indeed the
amount of the estimate, without any
of the large quantity of stone available,
would have sufficed for a substantially new
series of the length 586 feet of the present
one, leaving at the rate of Rs 1000 per
foot run. This is a rather slighter of
an apron weir should not be adopted
when extensive alterations are needed.
The masonry, as it is shown in the
specimen, or the covering of the sloping
apron with slabs of stone is a work
of very doubtful utility and is estimated
to cost about Rs 3750. If the
large stones be large and well fitted
with the length of the stone at right
angles to the slope it will be more firm
than the superimposed slabs and then
part of the estimate should be omitted.
The

The tops of the retaining or bunding
walls should not project above the
surface of the apron. The papers
submitted have not been prepared
in accordance with orders. It has
not been shown what the maximum
flood discharge of the catchment
basin of the tank may be expected
to be, and what depth would have to
pass over the weir to dispose of this.
In the list of estimates the maxi-
mum water level is said to be 2 feet
above the weir crest while in the
Report para 1, the depths which
passed over on the 25th October is
stated to have been 4 $\frac{1}{2}$ feet and
probably this was not a maxi-
mum. The headings of the estimates
are incomplete and do not afford the
Controller the means of posting up
and they are properly short. The tank has
not

is not been placed in its place. The
main head Revenue has not been
of recorded and some of the persons have
no heading of any kind below
as to what work they do. Altogether
of it is very unsatisfactory that after
the repeated instructions given and
in these subjects so little attention should
have been paid to them.

2. Burmavaram Tank - 1892-93
Against Revenue - 1401
Average Revenue - 1215
Highest - do - 1185
do - 1075

A small outlay of Rs 1000 was in-
curred on repairs in 1892-93.

The tank has a circumference with
an aggregate length of 1662 feet. It
is said that 35 feet is the normal
minimum water level. The level
but no calculation of discharge in
connection with the area of the tank
has been made.

Increase this tank is out,
and the terminal tank of a group
comprising a large number of tanks
and on the proper treatment of such
groups specific instructions have
been given. The sheet containing
the survey and sections of the tank
is very incomplete, the position of the
sections not having been noted and
the plan. The water level shown
is supposed to represent full tank level,
the value of which is not noted. The
datum used has not been noted. The
level of the top of the land is very
low and apparently in places too
low, but the first necessity is to
determine minimum water level,
and after following it to decide
what margin is to be allowed, and
with reference thereto what the correct
level of the top of the land should be
and

and therewith the wing walls of the surplus weirs should correspond. Most of the damage sustained, which has resulted in this large outlay, has been due to the extremely inefficient way in which the surplus weirs were constructed, without foundations and with much loose stone rather than with the material judiciously disposed. Most of the work is reported to have been already done and the estimate may be sanctioned, though it is very doubtful whether the weirs will be as secure as they might have been made had the old arrangement of dry stone aprons been abandoned for a much smaller width of substantial masonry, the water being dropped at once at the crest wall.

3. There are probably scarce of texts

in the Bellary District, which need
be put to rights before instead of
after being extensively damaged, and
they should receive early attention,
in the manner pointed out in
the Circulars from this Office.

4. The requirements of the Bellamy District as regards funds will be considered in due course.

(Faint handwritten notes)

*No. 1000
The offg. Secy. & Government
S.H.C.*

86. 2134. 26. 2. 25.

The attention of the
Superintendents will be
specially called to the
remarks upon these
estimates in the

foregoing memorandum,
and it will be expected
that future estimates
will be prepared with
much more attention
to the requirements of the
works concerned, and
the many important
omissions in the in-
formation furnished
with respect to the con-
ditions of safety of the
two large reservoirs, the
repair of which is pro-
vided for in the con-
ditions, should be at-
tended to as soon as possible.

W. 167

12-675-177

3d/x

App. Helling
Capt. M. H. H.
13 Enclosures

SC 13-8-75

Sept. 4/87. ✓
Cdt. of 1875 Madras
PUBLIC WORKS.

The Supergr.
Bellary

Dated

Read

Recd.

Encl

G. O. 26 July 1875, No 2134

Nos 175-176

Singaramallai & Kurma.
Sravan Sanku Bellary Dt.
The Estimates for the repair
of the — sanctioned with
Remarks