

(1) Number of pages _____

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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 1006	Press
271-212	Mis.
Dated 18 4	18 .

Not to be folded or roughly handled

Read the following papers:—

No. 271. From the Superintending Engineer, 3rd Division, to the Chief Engineer for Irrigation, dated Bellary, 20th May 1871, No. 271.

With reference to your memorandum No. 118, dated 13th instant, I have the honour to forward the estimate and report, amounting to Rupees 10,916, which embraces the whole of the works in connection with the repair and improvement of the Mootialpaud Yerra Tank in the Sirwell Taluq.

2. The estimate, as you observe in paragraph 2 of your memorandum under reply, was returned by Major Mullins to be revised with reference to his remarks in memorandum No. 157, dated 14th July 1870.

3. The revised estimate, including all works, amounted to Rupees 9,325, but as in paragraph 4 of his memorandum above referred to, Major Mullins considered that the better portion of the estimate should be carried out from the "Repair allotment," and it being within the sanctioning powers of the Superintending Engineer and Collector, the estimate embracing the following items was sanctioned on the 1st of February last for execution:—

	RS.	A.	P.
Earthwork	2,554	0	8
Revetment	3,309	6	11
Old sluices	60	0	0
Sundries, at 5 per cent.	286	8	5
Compensation	600	0	0
	6,810	0	0

4. The reductions effected between the rates on earthwork and tamping, as noticed in paragraphs 1 and 2 of Major Mullins' memorandum, were on earthwork 6 pies, and on tamping 2 pies per cubic yard. Apart from these reductions, the per-centage under "Sundries and superintendence" was reduced from 10 to 5 per cent.

5. There was no alternative than to allow the amount entered for "compensation" to remain at Rupees 600, and I beg to forward copy of Mr. Supervisor Vardon's letter, No. 550, dated 1st October last, which explains several of the points in detail.

6. The ayacut under the tank is as follows:—

	RS.	A.	P.
Circar Acres 119 4 0 Assessment	732	14	0
Inam. ,, 250 15 0 Do. or quit-rent	3,334	2	8
Total Acres 369 19 0 Do.	4,067	0	8
Average revenue of last five years	4,390	6	4
Highest revenue during above period	4,513	13	0

7. I have forwarded a copy of your memorandum to Mr. Vardon, and trust to early obtain such further information you now require on those points under paragraph 3, which, from records at hand, I am unable to furnish.

*Proceedings of the Madras Government, Public Works Department,
18th April 1872.*

8. I fear, from the smallness of the allotment for the Kurnool District, there will be a difficulty in providing funds for the waste weir; I therefore trust that when Government sanction the estimate (Rupees 2,516) that the necessary funds may be provided from under "Reserve Agricultural."

9. Your remark on the revised plan for waste weir will be communicated to Mr. Vardon when intimation of sanction to the estimate is received.

10. I beg to retransmit the plans, etc., together with the papers mentioned in paragraph 1.

*Report to accompany the Mootialpaul Yerra Tank in the Siruvell Taluq, Kurnool District.
Estimate for raising and repairing the bund, repairing the sluices, and
constructing a calingulah.*

Amount of estimate Rupees 10,916, comprising the following items:—

		Earthwork to the bank.			RS. A. P.		
5,854 1/2	C. Yds.	Raising the bund	...	...	0	2	6
1,857 1/2	"	Inner slopes	...	...	0	2	6
8,558	"	Outer slopes	...	...	0	2	6
542 1/2	"	Earth backing to stone revetment	...	...	0	2	6
355	"	Extending the bund	...	...	0	2	0
17,167 1/2	"	Tamping	...	...	0	0	8
Total...					3,386	10	3
		Revetment.			RS. A. P.		
4,341	"	Re-building with old stone	...	...	0	4	0
1,464 1/2	"	Raising with new stone	...	...	1	4	0
1,012 1/2	"	Mortar or backing with stone to the new stones revetment.	...	...	0	12	0
Total...					3,697	10	0
		Old Sluices.			RS. A. P.		
No. 1 x 2		Repairing sluices	...	...	20	0	0
Total...					7,144	4	3
		New Calingulah.			RS. A. P.		
354 1/2	C. Yds.	Stone-in-chunam	...	...	4	8	0
114	R. Ft.	Coping to body wall with 3 inches thick slabs.	...	...	0	6	0
373 1/2	C. Yds.	Rough-stone work to apron	...	...	1	4	0
715 1/2	"	Earthwork or excavating foundation.	...	...	0	2	0
2	"	Teak-wood shutters to Tamboghies	...	...	18	0	0
Total...					2,231	1	9
Total...					9,375	6	0
Superintendence and sundries at 10 per cent.					910	10	0
Compensation for 6 acres of land required for sinking earth pits for the bund, 100 Rupees each acre					600	0	0
Grand Total, Estimate...					10,916	0	0

*Proceedings of the Madras Government, Public Works Department,
18th April 1872.*

2. Present extent of cultivation under the tank is acres 369-49, assessed at Rupees 4,067-0-8, yielding a revenue of Rupees 4,067-0-8.

3. If the proposed work be carried into effect no additional land will be brought under wet cultivation, nor is any increase of revenue expected on the proposed expenditure.

4. The tank is of the first class, and Government property; its area is 1,600,000 square yards, and when full it is capable of containing 3,380,000 cubic yards; its source of supply is jungle or hill streams. The tank has been neglected for several years past, and no large expenditure has been incurred on it. The bund is now in very bad condition and uneven; requires raising and strengthening to one uniform level. The stone facing of the bund has slipped and requires re-building, and new stone raised to an uniform level, or 1 foot above the crest of the calingulah. There are two sluices, both of them require slight repairs, but no calingulah exists; an estimate is submitted for a new calingulah 120 feet long, and added to the tank estimate to be constructed at the north-east extremity; at present the surplus water is allowed to escape at the south-east extremity where the soil, being soft, has formed a gully, which is encroaching on the bund and causing damage.

5. Petty repairs by the villagers have not been attended to.

6. Amount expended by Government for last repairs in 1867-68 is Rupees 286-3-8, which is a portion of estimate expended up to September 1867.

Report on Calingulah to be constructed.—The calingulah is to be built of stone-in-chunam (hammer dressed) 120 feet long, and the body wall and wing walls are to be raised; the former 3 feet and the latter 4 1/2 feet (average) above foundation, which are to be sunk 6 feet; a coping of 3 inches hammer dressed stone slabs is to be placed on the top surface of the main wall. Hard and firm soil being found at 6 feet below the bed of tank the foundations are to be built solid.

In rear of the body wall there will be a loose rough-stone apron 18 feet broad and 3 feet thick, supported in rear by a masonry retaining wall sunk 7 feet, resting on firm soil. In rear of this wall there is to be a lower apron 12 feet broad and 2 feet thick, both aprons to extend the whole length of the work; the quality of the stone to be large rough stone boulders; tamboghies are provided at the two ends to allow a larger discharge during heavy falls of rain. The approximate area of country which drains into the tank is 20 square miles, on which a rainfall of 3 inches gives 139,392,000 cubic feet then $\frac{139,392,000}{24 \times 60 \times 60} = 1,612$ cubic feet per second and $\frac{1612}{3.5 \sqrt{2.5}} = \frac{1612}{3.5 \times 4} = \frac{1612}{14} = 115$ feet, and for safety sake, 120 feet has been allowed.

Ayacut account of Mootialpaul Yerra Tank.

		RS. A. P.	
Circar	...	...	732 14 0
Inam	...	...	3,334 2 8
Total...		Acres 369 49 0	Assessment... 4,067 0 8
Average revenue of the last five years		...	4,390 6 4
Highest revenue during the above period		...	4,513 13 0

CAMP AT NUNDIAL,

11th June 1870.

28th June 1870,

(Signed) G. VARDON,

Supervisor, D P. W,

(Signed) T. A. N. CHASE,

Collector.

(Signed) A. S. MOBERLY, Lieut.-Colonel, R.E.,
Superintending Engineer, 3rd Division,

*Proceedings of the Madras Government, Public Works Department,
13th April 1872.*

ABSTRACT ESTIMATE, No. — 1570-71.

REVENUE IRRIGATION REPAIRS.

Kurnool District, Sirwell Taluq. Village Mootialpaul.

Work—Repairing the bund, revetment, and sluices of the Mootialpaul Yerra Tank.

Quantity.	Description of works.	Rate.	Amount.	Amount of each part.
	<i>Earthwork to the bank.</i>			
5,854½ C. Yds.	Raising the bund ... per C. Yd.	RS. A. P. 0 2 6	RS. A. P. 914 12 3	RS. A. P.
1,857½ "	Inner slopes ... " "	0 2 6	230 3 9	
8,558 "	Outer slopes ... " "	0 2 6	1,317 3 0	
542½ "	Earth backing to stone revetment ... " "	0 2 6	81 12 3	
355 "	Extending the bund ... " "	0 2 0	41 6 0	
17,167½ "	Tamping ... " "	0 0 8	715 5 0	3,356 10 3
4,341 "	<i>Revetment.</i>			
1,464½ "	Re-building with old stone ... " "	0 4 0	1,085 4 0	
1,042½ "	Raising with new stone Morum or backing with stones to the new stones revetment ... " "	1 4 0	1,830 5 0	
		0 12 0	782 1 0	3,607 10 0
No. 1 x 2	<i>Old Sluices.</i>			
	Repairing sluices each ...	30 0 0	60 0 0	60 0 0
	Total...			7,144 4 0
	<i>New Calingulah.</i>			
354½ C. Yds.	Stone-in-chunam ... per C. Yd.	4 8 0	1,596 6 0	
114 R. Ft.	Coping to body wall with 3 inches thick slabs per running feet.	0 6 0	42 12 0	
373½ C. Yds.	Rough stone-work to apron per C. Yd.	1 4 0	468 8 5	
715½ "	Earthwork or excavating foundation ... " "	0 2 0	89 7 4	
2	Teak-wood shutters to Tamboghies ...	11 0 0	36 0 0	2,231 1 9
	Total...			9,375 6 0
	Sundries and superintendence, at 10 per cent.			910 10 0
	Compensation for 6 acres of land required for earth for the bund.	100 0 0	600 0 0	600 0 0
	Grand Total, Estimate ..			10,916 0 0

CAMP AT ITALOOR,
28th May 1870.

(Signed) G. VARDON,
Supervisor in charge of Nundial Range.

(Signed) T. A. N. CHASE,
Collector.

(Signed) A. S. MODERLY, Lieut.-Colonel, R.E.,
Superintending Engineer, 3rd Division.

28th June 1870.

*Proceedings of the Madras Government, Public Works Department,
18th April 1872.*

No. 271A.

No. 37.

Note by the Acting Chief Engineer for Irrigation.

In July 1870 the Superintending Engineer of the 3rd Division submitted an estimate of Rupees 10,916 for repairing the bund and constructing a new waste weir to the Mootialpaul Yerra Tank in the Sirwell Taluq of the Kurnool District. The estimate was returned for revision, and it was pointed out to the Superintending Engineer that the construction of the waste weir, which is altogether a new work, would have to be provided for from the Reserve, but that for the repairs of the tank provision would have to be made from the Ordinary Agricultural allotment.

No. 157, 14th July 1870.

2. On the 28th April 1871, a revised plan and estimate for the waste weir were submitted; but as information on certain points had not been afforded, a further reference was made to the Superintending Engineer, and he was requested to resubmit the revised estimate for the repairs required to the tank. In his reply the Superintending Engineer stated that an estimate of Rupees 6,810 for the repair of the tank had been

No. 146.

No. 118, 15th May 1871.

No. 271, 20th May 1871.

sanctioned by the local authorities; these repairs are now nearly completed, and the Superintending Engineer requests early sanction for the construction of a waste weir to ensure the safety of the tank during the fall of heavy rain. The tank has not hitherto been provided with a waste weir, but, when it has been necessary to discharge flood waters from the tank, a cut has been made at one extremity of the bank; this is a dangerous and wasteful method of getting rid of the surplus water, and it is desirable that the tank should be provided with a permanent waste weir, as a large expenditure has been made on the tank, and a large revenue depends upon it, the ayacut being as follows:—

						RS.	A.	P.
Circar	...	...	Acres	119 4	Assessment	...	732	14 0
Inam	...	...	„	250 15	Do.	or quit-rent	3,334	2 8
Total .. Acres				369 19	Do.	do.	4,067	0 8
The average revenue of last five years					...	...	4,390	6 4
The highest revenue					...	...	4,513	3 0

3. The area of the basin of which the tank receives the drainage is 20 square miles, and the waste weir has been calculated by the Superintending Engineer to carry off the drainage of 3 inches of rainfall in twenty-four hours, the maximum rainfall, as recorded, having been 4½ inches in that period; the discharge provided for is probably sufficient for all ordinary storms, but with this discharge a margin of only 2 feet is left between the high water level and the crest of the bank; this is too small a margin.

4. The content of the tank is 2,253,333 cubic yards; its area 1,600,000 square yards, and its ayacut 369 acres, for which, exclusive of evaporation, 1,686,000 cubic

*Proceedings of the Madras Government, Public Works Department,
18th April 1872.*

yards are required. I have, therefore, proposed to lower the crest of the waste weir by half a foot to provide it with dam stones 1 foot high and to lengthen it to 150 feet, the weir will then discharge the requisite quantity of water with a little over 2 feet of water passing over it, and the high water will then stand 3 feet below the crest of the bund. No shutters will be provided for the weir, but the people, if they find it necessary, will be able to retain water at nearly a foot above the crest of the weir, thus retaining an extra half a million of cubic yards.

5. The amount of the estimate for the weir, as revised, is Rupees 2,740.
FORT ST. GEORGE,
23rd March 1872. (Signed) R. F. OAKES, Captain, R.E.,
Ag. Chief Engineer for Irrigation.

No. 272. ORDER THEREON, 18th April 1872, No. 1,006.

IRRIGATION, No. 14.

THE Government approve of the estimate of Rupees 2,740 and will provide funds for it in distributing a grant of 3½ lakhs under Agricultural sanctioned by the Government of India.

(True Extract.)
(Signed) R. F. OAKES, Captain, R.E.,
Acting Joint Secretary to Government.

To the Acting Chief Engineer for Irrigation.
„ Superintending Engineer, 3rd Division.
„ Controller of Public Works Accounts.

Exd. S. T. Augustin.

MEMORANDUM.

REQUESTED for reference the under-mentioned papers

*Enclosures 6th. Office Memo.
No 37- 23rd March 1872 printed in
G.O. No 1006- 18 April 1872.*

OFFICE OF THE CHIEF
ENGR. FOR IRRIGATION,
P. W. Department,
23rd April 1872
To

Mr. H. H. H. H.

Head Clerk.

The Registrar of the *Mr. Secretariat*

N^o 37

Note by the Acting Chief Engineer for Irrigation

N^o 331

In July 1870 the Superintending Engineer of the 3rd Division submitted an Estimate of Rs 10,916 for repairing the bund and constructing a new waste weir to the Mortalpaud Era Tank in the Simul Taluk of the Kurnool District. The estimate was returned for perusal and it was pointed out to the Superintending Engineer that the construction of the waste weir, which is altogether a new work, would have to be provided for from the Reserve but that for the repairs of the tank provision would have to be made from the ordinary Agricultural allotment.

12/1/70

N^o 116

2 On the 28th April 1871 a revised plan and estimate for the waste weir were submitted but as information on certain points had not been afforded a further reference was made to the Superintending Engineer and he was requested to resubmit the revised estimate for the repairs required.

15/5/71

required to the tank. In his reply the Superin-
tending Engineer stated that an estimate of Rs 510
for the repair of the tank had been sanctioned by the
Local Authorities. These repairs are now nearly com-
pleted and the Superintending Engineer requests
early sanction for the construction of a waste weir to
ensure the safety of the tank during the fall of heavy
rains. The tank has not hitherto been provided with
a waste weir, but, when it has been necessary to discharge
flood water from the tank, a cut has been made at one
extremity of the bank - this is a dangerous & wasteful
method of getting rid of the surplus water and it is
desirable that the tank should be provided with
a permanent waste weir, as a large expenditure has
been made on the tank and a large Revenue de-
pends upon it, the area being as follows

Circar Acres	119 - 11	Apesment	732 - 14 - 0
Inam "	250 - 15	"	"
Total Acres	369 - 19	"	"
The average Revenue of last 5 years		"	4390 6 11
The Highest Revenue		"	4513 - 3 - 0

3. The area of the basin of which the tank
receives the drainage is 20 square miles and the waste
weir has been calculated by the Superintending Engi-
neer to carry off the drainage of 3' of rainfall in 24
hours, the maximum rainfall, as recorded, having been
4½ in that period; the discharge provided for is pro-
bably sufficient for all ordinary storms but with this
discharge a margin of only 2' is left between the H
W level and the crest of the bank, this is too small
a margin.

4. The content of the tank is 2,253,333 cubic
yards - its area ^{1,690,000} square yards - and
its adjacent 369 acres for which, exclusive of evaporation,
1,686,000 cubic yards are required. I have therefore
proposed to lower the crest of the waste weir by ½ a
foot to provide it with dam stones 1 foot high
and to lengthen it to 150 feet. The weir will then dis-
charge the requisite quantity of water with a little
over 2' of water passing over it and the High water will
then stand 3' below the crest of the bank. No
shutters will be provided for the weir but the
people, if they find it necessary, will be able to
retain

retain water at nearly a foot above the crest of the
levee thus retaining an extra $\frac{1}{2}$ million of cubic yards
5- The amount of the estimate for the levee
as revised is Rs 2740.

For S. George
23 March 72
N. T. Nat Captain RB
Of Chief Engineer for Irrigation
to

The Secretary to Govt.
M. B.

General P. W. D. 1

N^o 1006 P. W. D. +
 Proceedings of the Madras Govt.
 Read the following

From

The Chief Engr. for } (N. E. Dec 37 9 23 March 72)
 Irrigation

The Government
 approve of the estimate
 of Rs 2740 and will
 provide funds for it
 in distributing a
 grant of $3\frac{1}{4}$ lacs
 under Agricultural
 sanctioned by the
 Government of India

W. F. D.

To The Mr. Chief Engr. for Irrigation
 Supt. Engr. 3rd Div.
 Controller of Works

Recd 19/4/72

P. W. D. 1872 Depart
 from the Chief Engr.
 for Irrigation
 to the Secretary to
 Government P.W.D.

N^o 37

Dated 23rd
 Recd 26th March 72
 Recd 26th
 Encl 14

Note on an estimate of
 Rs 10916 for repairing
 the bund & constructing a
 new waste line to the Marbat
 -hand Ena tank in the Div.
 will take Kurumb & 1/2

No 271

to 28 March 72 A. D. D. M.

N^o 1006. 18 April 72

Cp 1527
Govt. of Madras.

PUBLIC WORKS.

To *Chief Eng. for
Irrigation*

Dated

Recd.

Encl 1/4

G. O 18 April No. 1006.

Nos. 271 & 272

Mattalpaud Irra Tank,
Kurnool D. District Estimate
Rs. 10,916 for repairing
and constructing a waste
cut to the Mattalpaud
Irra Tank, Kurnool
Approved with remarks.