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MADRAS RECORD OFFICE

Government of Madras

Public Works

DEPARTMENT

G.O. No.	2352.	Press	<i>Original</i>
B.P. No.		Mis.	
Dated	16-8-	1875	
		195	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
16th August 1875.*

No. 259. Read the following letter from R. SMITH, Esq., Officiating Superintending Engineer, Nellore, to Major J. O. HASTED, R.E., Officiating Chief Engineer for Irrigation, dated Nellore, 31st July 1875, No. 41:—

ADVERTING to my preliminary report,* No. 132, dated 15th January 1874, bringing to notice that a quantity of stone pitching charged for in the accounts of the expenditure on the Survapully reservoir had not apparently been executed, I have the honor to inform you that from the investigations made since the submission of the report referred to, it appears the actual deficiency is not so great as was at first supposed, but I have to add it is extremely difficult to form even a fairly accurate estimate of the cubical contents of the revetment, as the section is so variable and irregular. According to the specification, the revetment should be 2 feet in thickness at bottom and 1 foot at top, and the sections show the decrease should be gradual and regular, but from some cause or other these details appear to have been considered immaterial by the then Range Officer, Colonel Clay. To exemplify this statement, I annex the results of three check measurements made of the same reaches of the revetment on three different occasions.

Thickness of the pitching of the Survapully reservoir in the under-mentioned reaches:—

Reaches.	ACCORDING TO FIRST MEASUREMENT—			ACCORDING TO SECOND MEASUREMENT—			ACCORDING TO THIRD MEASUREMENT—			Remarks.
	At Bottom.	At Centre.	At Top.	At Bottom.	At Centre.	At Top.	At Bottom.	At Centre.	At Top.	
40 ...	FT. IN. 1 9½	FT. IN. 1 3½	FT. IN. 1 2½	FT. IN. 1 8½	FT. IN. 1 5½	FT. IN. 1 1½	FT. IN. 1 9½	FT. IN. 1 6	FT. IN. 1 1½	* A few yards from this point the thickness of the pitching is only 10 inches.
42 ...	1 8	1 5½	1 1½	1 6½	1 4	1 0½	1 11	1 4	1 1½	
49 ...	1 2½	1 6	1 1½	1 2½	1 1½	1 1	1 11	1 2½	1 1	
50 ...	0 8½	1 3½	0 11½	1 3½	1 3½	1 0½	2 6	1 4½	1 3	
52 ...	1 1½	0 10½	1 1½	1 8	0 8½	1 1½	1 8	1* 8½	1 5½	

NOTE.—A reach is 110 lineal yards.

2. Judging from the information obtained since my first report on this pitching, the following additions have to be made to the quantities shown therein as executed:—

	Cubic Yards.
To dressed laterite revetment	1,860
„ rubble „ „	278

The total quantity of each description of revetment executed is therefore as follows:—

Dressed laterite revetment ...	11,152 + 1,860 = 13,012 cubic yards.
Rubble revetment	2,786 + 278 = 3,064 „

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16th August 1875.*

3. The subjoined abstract shows the difference between the work performed according to the accounts and the quantity actually executed as ascertained by the check measurements:—

Work executed.				Dressed Laterite revetment. C. Yds.	Rubble revetment. C. Yds.
According to register and station books	...	...	...	14,136	3,231
According to check measurements	...	...	...	13,012	3,064
Difference				1,124	167

4. From the above it will be observed that the work performed approximates much more closely to the quantities shown in the range accounts than it appeared to do from the original rough check measurements, and it is also satisfactory to be able to report that very little of the extra expenditure represents an actual loss to the State. Less work was done, it is true, than supposed, but under the system then in force—building departmentally by daily laborers—a decrease in quantity indicates nothing more serious than imperfect supervision and a misapprehension regarding the rate of working. The latter will now be corrected by decreasing the quantities and increasing the rates to correspond with the total expenditure. This adjustment will increase the cost of the pitching as annexed:—

Laterite revetment from Rs. 2-12-7 to Rs. 3-0-5 per cubic yard.
Rubble " " " 1-10-3 to " 1-11-8 "

Only one Contractor appears to have been employed, and he was apparently paid for 889 cubic yards of pitching, or for 59 cubic yards in excess of the work done by him according to the check measurements.

5. The subjoined comparative statement shows the stone quarried and carted for the Survapully reservoir pitching and the quantity of work executed:—

Description of Stone.	Quarried accord- ing to Range Accounts.	Carted accord- ing to Range Accounts.	Pitching executed accord- ing to Range Accounts.	Pitching executed accord- ing to check measurements.	Remarks.
	C. Yds.	C. Yds.	C. Yds.	C. Yds.	
Laterite	16,153	14,242	14,136	13,012	* Taken from the laterite out- ting in the legally chan- nel.
Rubble ..	"	3,087	3,231	3,064	

6. It is, I regret, impossible to obtain reliable information regarding the work done under the immediate superintendence of the Overseers marginally noted. Quantities are given in the station books, but there is nothing to show the *exact* portions of the revetment to which those quantities refer. The pitching executed under Overseer Smith's supervision is, like the generality of the revetment, very irregular in section, and the check measurements show that due care was not exercised by him when measuring up the work.

T. Koopasamy Raju.
N. Murugesam Moodelly.
S. Pardhasaradhi Naidu.
G. Kristnasamy Iyer.
Mr. Plumble.

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7. The regular record of *detailed* measurements was perhaps considered unnecessary under the departmental system of working that prevailed in those days.

8. In conclusion, I have to apologize for the delay that has occurred in the submission of this report, and to explain that it was caused by the tedious nature of the investigations and the attention that had to be devoted to other and more important duties.

No. 260.

ORDER THEREON, 16th August 1875, No. 2,352.

IRRIGATION, No. 15.

RECORDED, with reference to G. O.,
No. 532, of the 2nd March 1874. The
Government are glad to learn that although

the revetment of the Survapully reservoir was not carried out according to the sanctioned section, the measurements of work executed now approximate much more closely with the quantities shown in the accounts than the first check measurements indicated to be likely.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

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

Exd. E. C. Shunker.

Spare Copies

No. 41.

5
Superintending Engineer's Office

Vellore, 31st July 1873.

From R. Smith Esquire,

Offg. Superintending Engineer,
Vellore.

To Major J. O. Haston R.E.

Offg. Chief Engineer,
for Irrigation,

Fort St. George.

Sir,

Adverting to my preliminary

* Embodied
in G.O. No 32 report, No 32, dated 13th January
dated 2nd March
1874.

1874, bringing to notice that, a

quantity of stone pitching charged

for in the accounts of the

expenditure on the Surrapilly

Reservoir, had not, apparently,
been executed, I have the honor
to inform you that, from the
investigations made since the
submission of the report referred to,
it appears the actual deficiency
is not so great as was at first
supposed, but I have to add
it is extremely difficult to form
even a fairly accurate estimate
of the actual contents of the
reservoir, as the section is so
variable and irregular. According

7
to the specification, the revetment
should be two feet in thickness
at bottom, and one foot at top, and
the sections show the decrease should
be gradual and regular, but, from
some cause or other, these details
appear to have been considered
immaterial by the then Range
Officer, Colonel Clay. To exemplify
this statement, I annex the
results of three check measurements
made, of the same reaches of the
revetment, on three different
occasions.

Thickness of the pitching of the Hurrapilly Reservoir in the
undementioned reaches.

Reaches	According to first measurement	According to second measurement	According to third measurement
At Bottom Centre	At Bottom Centre	At Bottom Centre	At Bottom Centre
St. John St. John St. John St. John	St. John St. John St. John St. John	St. John St. John St. John St. John	St. John St. John St. John St. John
1-9 1/2	1-3 1/4	1-2 3/4	1-8 1/2
1-8	1-5 3/4	1-2 1/4	1-6 1/4
1-2 1/4	1-3 1/4	1-1 1/4	1-1 1/4
1-8 3/4	1-3 3/4	1-1 1/2	1-3 1/2
1-1 1/4	1-10 1/2	1-1 1/2	1-8 1/4

Note: A reach is 110 linear yards.

9
Judging from the information obtained, and my first report on this pitching, the following additions have to be made to the quantities shown therein as executed.

Dressed Laterite revetment	1860	Cubic Yards
Rubble	278	

The total quantity of each description of revetment executed is, therefore, as follows.

Dressed Laterite revetment
11152 + 1860 = 13012 Cubic Yards.
Rubble revetment
2786 + 278 = 3064 Cubic Yards.

3. The subjoined abstract shows the difference between the work performed according to the accounts, and the quantity actually executed, as ascertained by the check measurements.

Work executed	Spersed Laterite revetment	Rubble revetment
	Cubic Yards	Cubic Yards
According to Registered and Station Books	14,186	3,281
According to check measurements	13,012	3,064
Difference	1,174	217

4. From the above it will be observed that the work performed

approximates much more closely to the quantities shown in the Range accounts, than it appeared to do from the original rough check measurements, and it is also satisfactory to be able to report that very little of the extra expenditure represents an actual loss to the State. Less work was done, it is true, than supposed, but under the system then in force, Building departmentally, by daily labourers a decrease in quantity indicates

nothing more serious than
 imperfect supervision and a
 misapprehension regarding the
 rate of working. The latter will
 now be corrected by decreasing
 the quantities and increasing
 the rates to correspond with the
 total expenditure. This adjustment
 will increase the cost of the
 pitching, as annexed.

Laterite revetment from Rs. 2-12-7
 to Rs. 3-0-5 per Cubic Yard.

Quibble revetment from Rs. 1-10-3
 to Rs. 1-11-8 per Cubic Yard.

Only one Contractor appears to
 have been employed, and

he was appeared the paid for
 889 cubic yards of pitching for
 89 bushels yards not need of the
 work done by him, according to
 the check measurements.
 This subject is Comparative
 Statement showing the stone
 quarried and carted for the
 Surnapilly Reservoir pitching and
 the quantity of work executed

Description of Stone	Quarried according to Range account.	Carted according to Range account.	Pitching executed according to Range account.	Pitching executed according to check measure- ments.	Remarks.
	Cubic Yds.	Cubic Yds.	Cubic Yds.	Cubic Yds.	
Laterite	16133	14242	14136	13012	
Quibble	x	3087	3231	3064	* Taken from the laterite cutting in the Surnapilly Channel.

6. I regret, impossible
to obtain reliable information
regarding the work done under
the immediate superintendence
of the Overseers marginally
noted. Quantities are given in
the Station Book, but there
is nothing to show the exact
portions of the revetment to
which those quantities refer.
The pitching executed under
Overser in the supervision
is, like the generality of the
revetment, very irregular in

S. Koppasamy
Rajiv.
N. Murugesam
Kodali.
S. Parthasarathi
Raidu
G. Krishnasamy
Rajiv.
Mr. Plumber.

sections, and the sheet B with
measurements shows that no
care was not exercised by
him when measuring up the
work. I will not
The regular record of
detailed measurements was
perhaps, considered unnecessary
under the Departmental system
of working that prevailed in
those days.
8. In conclusion I have
to apologize for the delay

17

James Thompson Esq.

Yours Most Obedient Servant.

Offg. Superintending Engineer.



No. 257/60

P. W. 4875/Depos

The Offg. Subg. Engineer

to Vellore.

No. 15316.
To. The Offg. Chief Eng^r
for Irrigation
Madras.

Dated 31st July 1875

Despd 2nd August

Recd 4th " "
Recd 18th " "
No 41.

With reference to G.O.

No 532 dated 2nd

March 1874, submit

report regarding

the overpayments

made in connection

with the Survapilly

Reservoir pitching.

With order

No. 2357. Recorded with reference to G.O. No. 532 of the 2nd March

1874. The Govt are glad to learn that although the

involvement of the Survapilly Reservoir is not carried

out according to the sanctioned section, the measure

ments of work executed are approximate and more closely

with the quantities shown in the accounts, than the

first estimate measurements indicated to be likely.

16 Aug/75. With Eng. Subg. Engr. Madras. 31.8.75.

W. H. S. 18.8.75. P. H. S. 18.8.75. O. H. S. 18.8.75.

14 Aug 73. Long day. Received 1st RPTG/C & B. 31.8.73. V3

Collec of 1875 Madras.

PUBLIC WORKS.

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Date: _____

ISSUED

Rec'd

Encl.

G. U.

1875 No 216

Nos. 259-210

Surrapully Reservoir
Mellere D. - Report re-
-garding the over payments
made in connection with
the - accorded with
remittals.