

(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. 3935	(2)	Press
		Mis.
Dated 5-2-		1877.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
5th February 1877. No. 395.*

Read the following :—

No. 91-W.

No. 157. *Note by the Chief Engineer for Irrigation.*

THE following estimates from the No. 1 or Northern Range are forwarded by the
Officiating District Engineer, Tinnevely,
No. 154, dated 3rd January 1877. with his letter marginally noted :—

Taluq.	Village.	Work.	Amount.
			rs.
Sattoor	Chuttrum Rettiapatty ..	Paraikulam Tank	1,490
Sankernainarcoil	Theroovengadam	Periakulam Tank and Supply Channel ..	2,630
Do.	Koelathonucal	Padanthapooly Tank	775
Do.	Palamcottay	Kallathikulam Tank	525
Total ..			5,420

2. The financial and hydraulic details of the Irrigation works concerned are exhibited in the following statement :—

I.—Financial Details.

Name of Work.	Ayacut Area.	Assessment.	Average Revenue for 5 years.	Highest Revenue for 5 years.	OUTLAY.			
					During the previous 4 years.	PROPOSED ORDINARY AGRICULTURAL, IRRIGATION.		
						Original Works.	Repairs.	Average annual proportion of charges to Revenue.
	ACRES.	RS.	RS.	RS.	RS.	RS.	RS.	Per cent.
Paraikulam Tank	92	565	696	Not stated.	357	..	1,490	53.0
Periakulam Tank and Supply Channel ..	302	1,861	1,486	1,679	Nil.	743	1,887	35.3
Padanthapooly Tank	37	194	190	223	..	245	530	81.5
Kallathikulam Tank	34	186	177	181	150	155	370	76.2
Total ..	465	2,800	2,549	..	507	1,143	4,277	46.5

II.—Hydraulic Details.

Name of Work.	Catchment Basin Area.	MAXIMUM SUPPLY.		LENGTH OF ESCAPE OR AREA OF SURPLUS SLUICE VENTS.		AVERAGE HEIGHT OF BUND.		Surplus discharged at M. T. L. per Second.	Tanks above.
		Catchments per Second.	Channels per Second.	Total.	Effective.	Above F.T.L.	Above M.T.L.		
	SQ. M.	C. FT.	C. FT.	FT.	FT.	FT.	FT.	C. FT.	No.
Paraikulam Tank	4.5	930	..	C 100 S 66 W 100 S 42	86 66 100 42	2.65	0.65	1806.1	6
Periakulam Tank and Supply Channel	3.5	762	603	S 56 W 80 W 70	56 150 150	Not stated.	..	518.0	1
Padanthapooly Tank	1.5	418	..	Nil. W 43 Nil.	Nil. 43 Nil.	1.35	0.0	0.0	Nil.
Kallathikulam Tank	1.5	410	..	W 65 Nil.	65 Nil.	4.5	2.5	408.6	1
				W 65	65	3.75	2.25	401.1	

NOTE.—The proposed dimensions of escapes and heights of bund are printed in large type. The existing dimensions in small type. The following abbreviations are used :—C.—Culmish with dam stones. W.—Weir with flush crest. E.—Escape at ground level. B.—Bund of tank. S.—Surplus sluice vent area.

Proceedings of the Madras Government, Public Works Department,
5th February 1877. No. 395.

3. The following is a summary of the work proposed to be carried out in each case.
Paraikulam Tank.—This tank is the last of a series of seven tanks, the surplus of which crosses the South Indian Railway. The bund of this tank is low and weak, being in many places only 2 and 2½ feet above F.T.L. The rough stone revetment of the front slope is in a ruined condition for a length of 100 yards. The bund needs raising and the revetment rebuilding.

The tank has a calingulah 100 feet in length with three vents in fair order and of sufficient capacity to discharge the surplus; but its crest is at three different levels, and the wing walls are exceedingly low. It is proposed to remove the dam stones and the centre wing wall so as to give a clear water-way of 100 feet, and to raise the crest to a uniform height, viz., F.T.L., and the wing walls 3-5 feet above crest level. There are four Irrigation sluices in the tank, of which three are in good condition and the other, which is in a ruined state, needs reconstruction.

The estimate provides for the necessary repairs, viz., raising and repairing the bund, reconstructing an Irrigation sluice and converting the calingulah into a weir.

Periakulam Tank and Supply Channel, Revised Estimate.—This tank, in addition to the supply it receives from its catchment basin, is supplied by a channel from the Nitchuppanathy river. The bund and masonry sluices of the tank are now undergoing repair under an estimate sanctioned by the Collector on the 16th March 1874 for Rupees 1,500, but this did not provide for rebuilding and extending the surplusing works which are necessary, or for repairing the supply channel, the bed of which is silted up and contracted, and the bank very low and weak. The tank has only at present a discharging sluice with two vents, each 4 feet x 7 feet, and the greater portion of the surplus has to be discharged through openings made in the bund at both ends. It is therefore proposed to rebuild and convert the discharging sluice at the south end into a weir 80 feet in length, and to construct an additional weir 70 feet in length at the north end. The revised estimate provides for raising and repairing the bund, repairing three Irrigation sluices, rebuilding and converting the discharging sluice into a weir at the south end, and constructing an additional surplus weir at the north end, and also for clearing the bed and raising the banks of the supply channel.

Padanthapooly Tank.—This tank is situated in the Nalli basin, the drainage of which crosses the South Indian Railway. The bund is low and weak and requires to be strengthened and raised. The tank has no masonry surplusing work or Irrigation sluice, the surplus being discharged through an opening in the bund and the lands irrigated by means of a pot or earthenware sluice.

The estimate provides for raising and repairing the bund, constructing a masonry weir and a masonry irrigation sluice in lieu of the pot sluice.

Kallathikulam Tank.—The bund of this tank is low and weak and needs to be raised and strengthened. The tank has two Irrigation sluices of masonry, one of which is in a dilapidated condition and requires to be reconstructed. The tank has no surplusing work which is much wanted.

The estimate provides for raising and repairing the bund, reconstructing a masonry weir, and for constructing a masonry weir.

4. It should be noticed with reference to the proposed alterations in the calingulah of the Paraikulam Tank, that the effect of lengthening the crest removing the dam stones, &c., will be to a great extent neutralised by the contracted approach to the surplusing work, which is badly situated, but with the sluice vent the capacity probably suffice.

Proceedings of the Madras Government, Public Works Department,
5th February 1877. No. 395.

The following statement shows the proposed distribution of the outlay recommended for sanction to the debit of several heads of account involved :—

Name of Tank.	Items of Estimate.	FUND, ORDINARY AGRICULTURAL, IRRIGATION.		Total for each Tank, &c.
		Original Works.	Repairs.	
		RS.	RS.	RS.
Paraikulam Tank ...	Raising and repairing the bund ...	...	1,140	1,490
	Reconstructing an Irrigation sluice ...	...	225	
	Improving the calingulah and converting it into a weir ...	...	125	
Periakulam Tank and Supply Channel (Revised Estimate).	Raising and repairing the bund, repairing three Irrigation sluices and supply channel ...	...	1,887	2,630
	Constructing a masonry weir ...	278	...	
	Rebuilding and converting discharging sluice into weir ...	465	...	
Padanthapooly Tank	Raising and repairing the bund ...	...	530	775
	Constructing an Irrigation sluice ...	170	...	
	Constructing a masonry weir ...	75	...	
Kallathikulam Tank	Raising and repairing the bund ...	...	243	625
	Reconstructing an Irrigation sluice ...	...	127	
	Constructing a masonry weir ...	155	...	

(Signed) A. DE C. SCOTT, Major, R.E.,
Dy. Chief Engineer for Irrigation,
for Chief Engineer for Irrigation.
FORT ST. GEORGE,
31st January 1877.
To the Secretary to Government, Public Works Department.

No. 158. ORDER THEREON, 5th February 1877, No. 395.

IRRIGATION, No. 16.
Account.

The following estimates for Irrigation works in the No. 10 or Northern Range, Tinnevely District, forwarded by the Chief Engineer for Irrigation with his memorandum marginally noted are sanctioned :—

No. 91-W., dated 31st January 1877.

Irrigation.

Name of Tank.	Provision of Estimate.	Fund, Ordinary Agricultural, Irrigation.	Amount.	Irrigation Register No.
			RS.	
Paraikulam Tank...	1. Repairing bund ...	Repairs...	1,140	299-I
	2. Reconstructing an Irrigation sluice.	Do. ...	225	
	3. Converting calingulah into weir.	Do. ...	125	
Periakulam Tank and Supply Channel (Revised Estimate).	1. Repairing tank sluices and channel.	Do. ...	1,887	300-I
	2. Weir ...	Original Works.	278	
	3. Converting discharging sluice into weir.	Do. ...	465	
Padanthapooly Tank.	1. Repairing bund ...	Repairs...	530	301-I
	2. Irrigation sluice ...	Original Works.	170	
	3. Weir ...	Do. ...	75	
Kallathikulam tank	1. Repairing bund ...	Repairs...	243	302-I
	2. Reconstructing an Irrigation sluice.	Do. ...	127	
	3. Weir ...	Original Works...	155	

Proceedings of the Madras Government, Public Works Department,
5th February 1877. No. 395.

2. These sanctions are registered as shown above, and the sanction to the revised estimate of Periakulam Tank and Supply Channel carries the Collector's and District Engineer's sanction of the 16th March 1877.

(True Extract)

Local Officer, B.E.
Secretary to Government.

B. L. Form No. 1.

OFFICE OF CHIEF ENGINEER FOR IRRIGATION,

John H. George Esq. 31st Jan 1877.

Note by the Chief Engineer for Irrigation.

No. 154

Dated 3 Jan 1877.

Letter No. 19.

The following Estimates from the No. 1 Northern Range are forwarded by the officiating District Engineer *Srinivasulu* with his letter marginally noted:—

Talug.	Village.	Work.	Rs.	Amount.
Sattors	Muttam, Pottapetty	Periakulam Tank	1590	
	Imbainadail	Periakulam Tank	2630	
		Supply Channel		
do	Keelathonnal	Padanthalapoly Tank	775	
do	Palamcottay	Kallathikulam Tank	525	
Total Rs.			5420	

2. The Financial and Hydraulic details of the Irrigation works concerned are exhibited in the following statement:—

1.—Financial Details.

Name of Work.	Acre Area.	Assessment.	Average Revenue for 5 years.	Highest Revenue for 5 years.	During the previous 4 years.	OUTLAY.		
						Proposed		
						original estimate	revised estimate	average annual proportion of charges of Revenue.
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Periakulam Tank	92	585	696	807	557	"	1140	53.0
Periakulam Tank	302	1861	1486	1577	1143	1887	35.3	
Supply Channel	87	196	190	223	"	245	500	81.5
Padanthalapoly Tank	34	186	177	181	150	155	570	76.2
Kallathikulam Tank								
Total	465	2806	2549	"	527	1143	1277	46.5

To the District Engineer, Tinnevely
" Collector of do.
" Chief Engineer for Irrigation
" Examiner of Public Works Accounts
" Revenue Department.

Name of Work.	Catchment Basin		Supply		Height of crest above T.T.L.		Area of tank		Capacity of tank	
	Area	Per cent	Area	Per cent	Feet	Feet	Sq. ft.	Sq. ft.	Cu. ft.	Cu. ft.
Paraiikulam Tank	1500	100	1500	100	1.5	1.5	1500	1500	1500	1500
Periakulam Tank	1500	100	1500	100	1.5	1.5	1500	1500	1500	1500
Supply channel	1500	100	1500	100	1.5	1.5	1500	1500	1500	1500
Nadanthipathi Tank	1500	100	1500	100	1.5	1.5	1500	1500	1500	1500
Kallathikulam Tank	1500	100	1500	100	1.5	1.5	1500	1500	1500	1500

Note:—The proposed dimensions of the proposed works are given in black. The following observations are noted:—
A.—Height of crest above T.T.L. B.—Height of tank above ground level. C.—Height of tank above T.T.L.

3. The following is a summary of the work proposed to be carried out in each case—

Paraiikulam Tank—This tank is the last of a series of seven tanks, the surplus of which crosses the South India Railway. The head of this tank is low and weak being in many places only 2 or 3 feet above T.T.L. The rough stone revetment of the front slope is in a ruined condition for a length of 100 yards. The head is in a ruined state and the revetment rebuilding.

The tank has a Kalingula height

in length, with 8 vents in fair order and of sufficient capacity to discharge the surplus but its crest is at three different levels and the wing walls are exceedingly low. It is proposed to remove the stone stones and the centre wing wall so as to give a clear waterway of 100 feet, and to raise the crest to a uniform height of 1.5 feet above T.T.L. and the wing walls 5.5 feet above crest level.

There are four irrigation sluices in the tank of which three are in good condition and the other which is in a ruined state needs reconstruction.

The estimate provides for the necessary repairs viz. raising & repairing the head, reconstructing an irrigation sluice and converting the Kalingula into a weir.

Periakulam Tank & Supply channel
Revised Estimate. This tank in addition to the supply it receives from its catchment basin is supplied by a channel from the Nitchaparamathy river. The head and masonry sluices of the tank

tank are now undergoing repair under
an estimate sanctioned by the Committee
on the 16th March 1875 for Rs 1500 but this
did not provide for rebuilding and
extending the surplus weir, which
are necessary for repairing the
supply channel the bed of which
is silted up and contracted and
the bank very low and weak. The
tank has only at present a discharging
sluice with 2 trucks each by which
the greater portion of the surplus has
to be discharged through openings
made in the bank at both ends.
It is therefore proposed to rebuild
and convert the discharging sluice
at the South end into a weir 80 ft
in length, and to construct an
additional weir 90 ft in length
at the North end. The revised estimate
provides for raising and repairing
the bank, repairing three irrigation
sluices, rebuilding and converting
the discharging sluice into a weir.

at the South end and constructing
an additional surplus weir at
the North end and also for clearing
the bed and raising the banks of
the supply channel.

Padayathaputhy Tank. This tank is
situated in the Nalli basin the drainage
of which crosses the South Indian
Railway. The bank is low and weak
and requires to be strengthened and
raised. The tank has no masonry
surplus or irrigation sluice, the
surplus being discharged through
an opening in the bank, and the
lands irrigated by means of a pot
or earthen ware sluice.

The estimate provides for raising
and repairing the bank, constructing
a masonry weir, and a masonry
irrigation sluice, in lieu of the pot
sluice.

Kalbatthikulam Tank. The bank of
this tank is low and weak and
needs to be raised and strengthened.

Sh

The tank has two irrigation sluices of masonry, one of which is in a dilapidated condition and requires to be reconstructed. The tank has no surplus work which is much wanted.

The estimate provides for raising and repairing the bund, reconstructing an irrigation sluice and for constructing a masonry weir.

It should be noticed with reference to the proposed alterations in the Rahingala of the Parachulam tank that the effect of lengthening the crest by removing the down stones will be to a great extent neutralised by the contracted approach to the surplus work which is less by situated but with sluice vent to the capacity will probably suffice.

The following statement shows the proposed distribution of the outlay recommended for sanction, to the effect

of several kinds of account involved.

Name of Tank	Items of Estimate	Fixed Estimate		Total for each tank
		Original	Revised	
Parachulam tank	Raising and repairing the bund	140		
	Reconstructing an irrigation sluice	225		1490
	Improving the Rahingala & constructing a weir	135		
	Raising & repairing the bund & repairing three irrigation sluices & supply channel	1889		
Palamthapally tank	Constructing a masonry weir	278		2650
	Rebuilding & reconstructing & discharging sluice into weir	465		
	Raising & repairing the bund	520		
Kallathikulam tank	Constructing an irrigation sluice	170		975
	Constructing a masonry weir	45		
	Raising & repairing the bund	243		
Kallathikulam tank	Reconstructing an irrigation sluice	127		525
	Constructing a masonry weir	155		

And to

Major M.

The Secretary to Govt. Public Works Dept.

Chief Engineer for Irrigation
Chief Engineer for Irrigation

Public

1877

From
The Chief Eng. for Irrigation

P.W.D.
2 1377
No. 1112

Dated 31st January 1877
Recd. 2nd Feb. 1877

Under 7.

1877-8

Tank Repairs - Tinnivelly
District - Not forwarded for
sanction, estimate for certain

N^o 157-
Cir - 2-2-77

S. I. Form No. 2.

1877-8

No. 91. W. dated 3rd May 1877.

The following Estimates for Irrigation
Works in the N^o 1 & Northern Range,
Tinnivelly District, forwarded by
the Chief Engineer for Irrigation with his
Memorandum marginally noted are sanctioned.

Irrigation.

Name of Tank.	Provision of Estimate.	Small ordinary Agricultural Irrigation	Amount	Irrigation Register No.
1. Repairing head	Repairs		140	1
2. Constructing				
Practicalam	under irrigation scheme	do	225	2
Tank No. 3	constructing to complete	do	155	3
				299-2
1. Repairing tank	Repairs		1887	1
Practicalam tank	original works		278	2
and supply channel	constructing etc.			
(Practicalam tank)	changing sluice	do	465	3
	into weir			
				300-2
1. Repairing head	Repairs		530	1
Practicalam tank	original works		170	2
Tank No. 1	do		75	3
				301-2
1. Repairing head	Repairs		243	1
Practicalam tank	constructing			
Tank No. 2	under irrigation scheme	do	137	2
				302-2
3. Weir	original works		155	3

S. I. Tinnivelly
District
Ch. En. for Irrigation
R. P. D. R.
Revenue Dept.

These sanctions are registered
as shown above & the sanction
to the Revised Estimate of Pradikula
Tank & supply channel cancels
the former sanction of the 16th
March 1875.

Dated 2-2-77
By 2/2
Cand

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
PUBLIC WORKS.

The N. E. Linnovally



1994

100

6. 0 5th Feb 1895 395

2182, 157-168

Lunko, Limerick D.

The estimate amounting
to \$5,20 for repairs
to Centur — sanctioned

Left in May

Case 1-2-1)