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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

REVENUE DEPARTMENT

G.O. No. / B.P. No.	3040	Press. / Mis.
Dated	29-9-1877	197 .

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

29th September 1877, No. 3,040.

Famine Relief.

Read the following paper:—

No. 876. From J. W. RUNDALL, Esq., Executive Engineer, on Special Duty, Palar Anicut Channels, to Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Sangrambedi, 3rd September 1877, No. 177.

Two statements.
One type design.

In order to be certain that I am carrying out your intentions, as expressed when I discussed with you the nature of the alterations to be carried out in the Palar Anicut Channels, and embodied in your memorandum, No. 14, of the 26th July, I beg to forward, herewith, two statements showing the alterations to be made in the Kaveripak Main and Govindavadi Channels and to offer the following explanations.

I have not received from the Collectors of North Arcot and Chingleput the statements of area, cultivation, and revenue applied for early in June, but the Wallajah Range Officer, Lieutenant Hamilton, R.E., has given me copies of the statements he has made out, grouping the tanks under the Kaveripak Channel.

On those for the North Arcot District and in the Ayacut statement for Chingleput received from your office I have worked out the distribution.

The acreage for the two districts is as follows:—

Main Canal (Kadaperi Branch).

	ACRES.
Three miles from head	920
Kaveripak Tank Supply-channel	12,383
Govindavadi Channel Branches	20,891
	34,194

The maximum discharge of Main Canal as fixed by you 4,000 cubic feet per second I propose to distribute as follows:—

To Kadaperi Branch.

·075 cubic feet per second or 10 cubic yards per hour, per acre ...	70	cubic feet per second.
To Kaveripak Tank Supply-channel	1,530	do.
Rather more than 0·12 cubic feet per second, 16 cubic yards per hour.		
To Govindavadi Channel	2,400	do.
Rather less than 0·12 cubic feet per second, 16 cubic yards per hour per acre.		
	4,000	do.

The Kaveripak Tank Supply-channel will carry the above quantity 1,530 cubic feet per second with but very slight alterations. I would, however, suggest that it be made capable (for reasons given hereafter) of carrying 2,000 cubic feet per second.

The Govindavadi Channel requires, as the statement now forwarded shows, considerable widening to carry the quantity assigned to it with the reduced velocity fixed by you. For a short distance I have allowed this velocity to be exceeded by 0·08 per second to keep down the widening of the channel. In addition to lengthening and raising three old drops, eleven new ones will be required; the sites for, and falls of, these I have endeavored to arrange so as to give as little earth-work as possible.

In distributing the water I have allowed ten cubic yards per acre per hour for tanks under the first branch and twelve cubic yards per acre per hour for those under the second, third, and fourth branches, leaving rather more than seventeen cubic yards per hour per acre for the tanks under Kambakal. My reasons for allowing the larger proportion to pass on are that in all probability a considerable quantity of the water entering the head of the channel will be lost by percolation and infiltration along the thirteen miles of sandy country through which the channel runs—a country, moreover, abounding in so-called "spring channels," also because the upper branches will, in a channel with so many dams or falls, get a larger proportion of the small freshes.

As regards the Kaveripak Main Channel, I have found it better to make the first drop 7·0 and the second 6 as being more economical than making them each 6·6, and I have allowed the water to stand 4·9 and 4·8 on the division sluice floors respectively to give sufficient head for each sluice.

Both in this and in the Govindavadi Channel the crests of the drops are generally allowed 6 above the normal bed-level, but at the 4th and 5¼ miles of Govindavadi Channel the crests fixed are at bed-level. Should you think this objectionable the drop must be lengthened from 100 to 124 feet. The velocity of approach in the channel has been allowed for in calculating the lengths of drops. I forward a type design for your inspection, being that for 6 miles 20 chains of the Govindavadi Channel. I have also made out an approximate estimate of the costs of these improvements. Should my method of working out the alterations be in accordance with your wishes, the regular designs and estimates will be completed.

I take this opportunity of stating that the levels of all the channels, with the exception of some further levels to ascertain whether an alteration of the Mahendravadi Channel Head is practicable, have been taken and checked. Two Surveyors are at work on the levels of tanks, and I believe that all the levels required will be completed by the end of this month.

I can now work out the details of the Kambakal and Mahendravadi Channel alterations, but shall be glad to learn whether the Main and Govindavadi Channels have been worked out as you wish.

With regard to Kaveripak Tank Supply-channel, I have already stated that it will require but slight alterations to carry the 1,530 cubic feet per second assigned to it; but as there may sometimes be water available in the river when a full supply is not required down the Govindavadi Channel and as the Kaveripak Tank Surplus is really the origin of the Cortelliar River, into which the possibility of throwing more water who, one of the points to be investigated by me, I would suggest that this channel from the division sluice on to the tank be made capable of carrying 2,000 cubic feet per second.

The Kaveripak Tank calingulahs 61 cents 5×3 with pivot shutters are capable of discharging this in addition to land drainage. Moreover, the narrow section of the Mahendravadi Channel and the great cost of widening and altering it will, I think, prevent its being feasible to use that channel as a feeder to the Cortelliar, and, though it may not be often that circumstances will admit of water being thus passed on, it might be worth while to have the power of doing so.

Enclosure No. 1.

Approximate Estimate of the Cost of Improvements and Alterations, Kaveripak Main Channel.

Quantities.	Items.	Amount.	Total.
		Rs. A. P.	Rs. A. P.
192,317	Cubic yards cutting cut at 1½ Annas	18,029 11 6	
24,297	Do. banking at 1½ Annas	1,898 3 3	
	Sundries super contingencies	1,072 1 3	
		... ...	21,000 0 0
	Drop at 1 mile	... ...	7,900 0 0
	Do. at 2 miles	... ...	7,800 0 0
	Total ...	... ...	36,700 0 0

Sangarammedi,
3rd September 1877.

(Signed) J. W. RUNDALL, Executive Engineer,
On Special Duty, Palar Anicut Channels.

Enclosure No. 3.

Approximate Estimate of the Cost of Improvements and Alterations to Govindavadi Channel.

Quantities	Items	Amount.	Total.
		Rs. A. P.	Rs. A. P.
657,905	Cubic yards channel cutting at 1¼ Annas ...	51,398 13 3	
100,838	Do. banking at 1 Anna	6,677 6 0	
	Superintendence, Sundries, and Contingencies	2,923 12 9	
			61,000 0 0
11	New drops, each	4,500 0 0	49,500 0 0
	Altering Pundi drop	...	1,100 0 0
	Do. Ramapuram drop	...	1,800 0 0
	Do. St. Andrew's ,, ...	...	1,900 0 0
	Adding three arches to St. Andrew's bridge ...	...	4,500 0 0
	Altering Athipathu bridge into a road dam ...	...	300 0 0
	Screw sluttors for division sluice	...	2,000 0 0
	Total ...	...	1,22,100 0 0

Sangramadi,
3rd September 1877.

(Signed) J. W. RUNDALL,
Executive Engineer, on Special Duty,
Palar Anicut Channels.

Abstract of Drops required.

4′ 0″	5′ 0″	6′ 6″	7′ 0″	7′ 6″
W. Ch.	W. Ch.	M. Ch.	M. Ch.	W. Ch.
2 £s 11 0	1 £s 2 39	1 £s 2 50	1 £s 1 76	1 £s 1 73	1 £s 13 0
198′ long.	168′ long.	138′ long.	109′ long.	109′ long.	109′ long.
M. Ch.	M. Ch.	M. Ch.	M. Ch.	M. Ch.	
1 £s 1 6	1 £s 7 10	1 £s 7 10			
138′ long.	109′ long.	109′ long.			
M. Ch.	M. Ch.				
1 £s 6 29	1 £s 3 50				
138′ long.	109′ long.				
M. Ch.					
1 £s 9 10					
109′ long.					

Revenue Department,
31st August 1877.

(Signed) J. W. RUNDALL,
Executive Engineer, on Special Duty,
Pulse Aniout Channels.

No. 173-I.

Endorsed to

Mr. Rundall has been informed that the way in which he has worked out the necessary improvements to the Kovvampakkam Main Channel and the Govindavadi branch of that channel appear to be suitable and are approved, as also the proposal to make the Kovvampakkam Tank Channel capable of conveying 2,000 cubic feet a second in order that when water is abundant some may be passed through the tank into the Chetpattur and in this way augment the supply in the latter.

2. It will be seen that the approximate estimates for the improvements are as follow :—

Kovvampakkam Main Channel.

	Rs.
Earth-works	21,000
Masonry	18,700
	39,700

Chetpattur Channel.

Earth-works	61,000
Masonry works	61,100
	1,22,100

The earth-works (long-that therefore amount to Rs. 82,000) and are available for the employment of famine labor if desired. It will be necessary, however, to undertake concurrently the construction of the masonry works, for otherwise the desired results will not be secured, and it may happen that the condition of the channels would be deteriorated rather than improved were they enlarged without at the same time decreasing the velocities, and certainly much of the new earthwork would be liable to damage.

3. Mr. Rundall will require the assistance of two Assistant Engineers to supervise the work under his orders.

4. It is requisite to notice that the weather is at present very unfavorable for the manufacture of bricks, and, as far as possible, rubble masonry should therefore be made use of.

5. The regular abstract estimates should be classified in accordance with the requirements of P. W. C., No. 1,998, of the 10th July 1875.

Fort St. George,
10th September 1877. (Signed) JOHN MULLINS, Colonel, R.E.,
Chief Engineer for Irrigation.

No. 877.

Order thereon, 29th September 1877, No. 3,040.

Miscellaneous.

His Grace the Governor sanctions the following approximate estimates :—

POLAR ANICUT SYSTEM.

Northern Section.

Field-Fowler.

(2) M. C. and P. Kovvampakkam Main Channel.
Name of Work—Improving &c.
Amount of Estimate—Rupees 39,700.
(3) M. C. and P. Govindavadi Channel.
Name of Work—Improving &c.
Amount of Estimate—Rupees 1,22,100.

The work will be laid out and started at once.

2. The officer marginally noted has already been posted to assist Mr. Rundall, and the latter is authorized to engage any subordinate agency that may be necessary, reporting designation and rates of pay for confirmation, and regulating the number of subordinates by the amount of labor to be supervised. An Assistant Engineer will very shortly be posted.

Mr. W. G. L. Cotton, Executive Engineer, 3rd Grade (Temporary).

3. Huts for coolies will be erected at convenient and suitable places, if necessary water and shelter from the north-east wind being duly considered.

4. Mr. Rundall will inform the Collector of Chingleput and the Commissioner of Police on what dates and at what places he will be ready to receive labor, specifying the numbers to be employed at each locality, and these officers will then arrange to draft all North Arcot people able to work from the Red Hills and Palaveram Camps to these works.

(True Extract.)

Additional Secretary to Government.

To the Public Works Department.
,, the Board of Revenue.
,, the Collector of Chingleput.
,, the ,, of North Arcot.
,, the Commissioner of Police.
,, J. W. Rundall, Esq., Executive Engineer, on Special Duty, Polar Anicut Channels.

Ext. A. S. Rodgers.

Spare Copies

Endorsement by the Chief Surgeon for
Despatch No. 173 I.D. 10 Sep. 1877

Yr. ordre.

Colonel &c.

Royal Navy Victualling Office
Camp Dungeness 6th September 1855

No 177.

From Wm J. B. Randall
Assistant Engineer in Charge
Point Church Channel

To Colonel J. Mullins R.E.
Chief Engineer for Dungeness

Sir

I do not like to be certain that from my
last interview, it appeared evident to discuss
with you the nature of the alterations to be carried
out in the Point Church Channel and embodied in
Enclosures 3. my report of the 4th the 16th July I beg to forward
2 estimate herewith 2 estimates showing the Excavation
1 Copy Report required in each of the alternative lines
drawn on the Ground and I cannot do otherwise than
the following explanation

I have not named from the
Collector of Salt Duties Chief Clerks, Establish-
ments of this Collection and Marine Officers
early as June, that the Wallpit Dyke after
the Junction Pool, was one of the Lines
should be adopted by Straping the Embankment
the Newfield Channel

The Cost for the Salt Excise
District and on the Approach Establishment
proceed from you Office I have worked out the
distribution

The average for the two Districts
is follows

Main Canal (Wallpit Dyke) (3)
(3 Miles 1 mile Road)

Enclosures 3

will be required. The sites for and position of these I have endeavoured to arrange so as to save as little earthwork as possible.

On distributing the water I have allowed 10 Cyds per acre per hour for lands on the Irish branch and 12 Cyds per acre per hour under the 2nd 3rd and 4th branches Carrying rather more than 17 Cyds per hour per acre for the Lands under Ramsbrook. The reason for allowing the larger proportion to former, are that we will probability a considerable quantity of the water entering the head of the Channel will be lost by percolation and infiltration along the 13 miles of Sandy Country through which the Channel runs a Country of Moraines, abounding in so called "Spring Channels"; also because the upper branches will run a Channel with so many Chains per Cubic yard of Excavation as the lower ones.

In designing the Ramsbrook Main Channel I have found it better to make the first drop 7 ft and the rounds 6 as being more economical than making them each 6 ft and I have allowed the water to stand 1'9" and 1'6" in the Pierced Stone Troughs respectively to give sufficient head to each drop.

Both on this and on the Grandsdale Channel the crests of the drops are generally about 6" above the normal bed Level, but at the heads of the Valley Grandsdale Channel the crests of the drops are at bed level, should you think this objectionable

Channel and to the Kanirpak South Surplus
to Kelly the origin of the Cortellier Range take
which the possibility of turning more water into
one of the ponds to be investigated by me. I
would suggest that the Channel from the Kanir-
kleiar to to the South be made capable of carrying
2000 cft/s second

The Kanirpak South Calingulas
61 vents 5'x3' with pivot shutters are capable of
discharging 800 in addition to land drainage
between the narrow section of the Melendranade
Channel and the great cost of widening and
altering it will I think prevent its being
feasible to use that Channel as a feeder to the
Cortellier, and though it may not be after
that Circumstances the limit of water being
thus handled, it might be worth while to use
the power to keep on I have the honor to be
Sir Your most Obedient Humble
Servant
J. to Randell
Executive Engineer 1st Division
Pulicat Anicut Channels

From the Engineer
in Chief
Cleveland Ohio

Office of Superintendent
Dept of
Road

Sir

Subject

Herewith I send estimate showing the alterations & removals to be made in the Breakwater and Pierhead Channel also estimate for temporary repairs

Approximate Estimate of the cost of Improvements & alterations Rocky River Entrance Channel

Quantities	Items	Amount	Total
2,317	Cubic Yds Crib Work at 12 as 1802	9 6	
4,297	" Banking 1/2 as 1898	3 3	
	Breakwater Improvements 1872	1 32,000	0 0
	Dredging 1 mile	1900	00
	" 2 miles	3,800	00
		36,700	00

Engineers Office
Cleveland Ohio
3rd Sept 1877

Inclosure
Estimate
referred to in
Letter of this date

Abstract of proposed alterations to the Penpark Branch Alt Pelar Avient System.

Point	Present Ground Level	Proposed Ground Level	Proposed Invert Level	Proposed Soffit Level	Cutting	Banking	Details
Initial Chain 0.0							
		393.04	387.04				
0.20	392.93	392.29	386.29				
0.40	389.77	391.54	385.54				
0.60	388.00	390.79	384.79	3.00'	4.36	A[illegible]	
0.80	386.14	390.04	384.04				
1 mile	386.14	383.54	387.54				
1.20	384.49	382.79	386.79				
1.40	382.66	382.04	386.04	3.00'	4.36'	A[illegible]	
1.60	380.24	381.29	385.29				
1.80	378.26	380.54	384.54				
2 mile	376.36	375.04	379.04				
2.20	376.76	374.29	378.29				
2.40	374.63	373.54	377.54	3.00'	4.36'	A[illegible]	
2.60	372.62	372.79	376.79				
2.80	371.17	372.04	376.04				
3.0			375.78				

Cross Sections
at Chainage 87

207

73

132½

172½

Dock 160' long cent 390.54
Flow 388.54 Dock wide 7'0"

718

406

191

234

119

1,150

1,092

830

583

345

Dock 160' long cent 390.54
Flow 378.04 Dock wide 6'0"

Abstract of proposed alterations & approved Estimate

Extract from Letter No 177. dated 5th Sept. from Lt Col Kenneth Mackenzie Chief Engineer to Chief Engineer

Abstract of proposed Estimate of the cost of permanent alterations to Commanded Che

Barrack Store

Hospital

Officers Quarters

Quarter Master's Department

Commissariat Department

Engineer Department

Ordnance Department

Powder Magazine

Bridge

Abstract of proposed alternations to Gra

Point	Present Bed Level	Proposed Bed Level	Proposed Surface Level	Proposed Fall per mile	Velocity per sec	Discharge per sec
Miles Chains				Ft		
0 0	364.94	364.94	369.44			
0.20	364.35	364.24	368.74			
0.40	359.63	363.54	368.04	2.80'	4.40'	24
0.52	360.05	363.12	367.62			
3 Low Pond Prop						
0.52	356.84	356.80	361.30			
0.60	355.23	356.52	361.02			
1 mile	353.69	355.82	360.32	2.80'	4.40'	24
1 4	353.09	355.68	360.18			
3 Low Pond Prop						
1 4	350.66	357.12	355.62			
1.20	349.65	350.56	355.06	2.80'	4.40'	24
1.24	348.56	350.42	354.92			
3 Low Pond Prop						
1 24	346.58	346.92	349.42			
1.40	344.09	346.36	348.86			
1 60	343.56	343.66	348.16	2.80'	4.40'	24
1.72	343.18	343.24	347.74			
3 Low Pond Prop						
1 72	340.86	337.60	341.60			
2 miles	340.39	337.28	341.28	2.16'	4.40'	24
2.20	338.12	336.49	340.49			

2.40	335.80	335.70	339.70			
2.44	335.34	335.54	339.54.	3.16'	4.40'	24
2.60	334.02	334.91	338.91			
Below [illegible] 2nd Drop						
2.60	334.02	329.41	332.91			
3 miles	332.08	328.51	332.01			
3.20	329.69	327.61	331.11	3.60	4.48	24
3.40	326.14	326.71	330.21			
3.60	324.29	325.81	329.31			
[illegible] miles	322.83	324.91	328.41			
Below Drop						
[illegible] miles	322.83	318.41	321.91			
[illegible].20	320.66	317.51	321.01			
4.40	318.33	316.61	320.11	3.60	4.48	24
4.60	315.77	315.71	319.21			
5 miles	313.38	314.81	318.31			
5.20	311.10	313.91	317.41			
Below Drop						
5.20	311.10	308.91	312.41			
5.40	309.17	308.01	311.51	3.60	4.48	24
5.56	307.40	307.29	310.79			
5.60	305.89	307.11	310.61	3.60	4.48	21
6 miles	304.10	306.21	309.71			
6.20	301.83	303.31	308.81			

[illegible] the Cortaliar and in this way augment the supply in the latter –

2

		522		
83	As above	524		66 C feet per second to [illegible] Thandalam Channel
69	121' at bottom	180	30	
		89	40	
			72	New Drop 102' long crest 261.67 Drop wall 4'6" floor 257.17
		220		
69		99		34 C. ft per sec to [illegible] Channel
35	Cut 119' at bottom		108	
			253.	New Drop 100' long crest 254.15 Drop wall 7'6" floor 246.65
		592		
35	As above	445		
		250		
		122		Kambaukal Head Present Calingula 61' long with crest 242.09. To be lengthened to 80' with crest 243.59.
[illegible] feet per sec to	Kambaukal			
do	Gorindandi Tank			Sluices discharging into Gorindandi Tank Channel to be reconstructed;

Abstract of

handled

12 / 3540

Abstract

4:6 on rib 1 at 11.00 102' long.

5:0" on rib 1 at 5.20 100' long.

6:0" on rib 1 at 2.60. 100' long.

6" 1 at 100

1 at 4 100'

2" 1 at 6. 108'

2" 1 at 9. 100'

Camp Sumathang
31st August 1906

00 Abstract

Channel 110' below mouth
Area 54.3 Sq Feet
Depth 4.6"
Hydraulic 2.1
Perim 25.12'

252

144

Secondary Drive Pipe
13 Units each 6'x 1/2" (two 6'x 5/8" for 1 bent) creo beam
Water in front 375.78. Flow 371.09
Rear flow 369.73. Apron 364.94

Finish Drift. Face 98' long with crosscut at 260.46 hole lengthened to 100 with crosscut at 364.12. Thereafter run Flat 33.42 Entrance apron retaining wall 356.80.

264

00 Abstract

289. Commencement Drive Drift through crosscut 356.35 Flow 354.28 Corporal " 356.68 apron 357.12 Face lengthened to 100 on crosscut

00 Abstract

364

Commencement Drift Downcut to be retained crosscut 100' long 351.42 Flow String 2. Corporal 360.6

00 Abstract

672 254

187

Abstract of Drive Pipe Drift
notes prior to lengthening to 100'
Crosscut 344.24 Flow 347.14
Drift with 5'6" timber
Under Tunnel 5'6" timber
Corporal flow 356.17

668

661

1.72 343.18 343.11 347.14

Base Abstract Drift

1.72	340.86	337.60	341.66		
2 miles	340.39	337.28	341.28	2.16'	4.40'
2.20.	338.12	336.49	340.49		

Below Dirk

9.60	269.31	265.57	269.07			
10 miles	267.11	264.69	268.19			
10.20	264.90	263.81	267.31	3.52	4.40	19
10.40	263.70	262.93	266.43	3.52	4.40	19
10.60	261.05	262.05	265.53			
11 miles	260.20	261.17	264.67			

11 miles	260.20	257.17	260.67			
11.20	256.85	256.29	259.79			
11.40	254.56	255.41	258.91	3.52	4.40	19
11.60	252.33	254.83	258.03	3.52	4.40	19
12 miles	250.03	253.65	257.15			

12 miles	250.03	246.65	250.15			
12.20	248.20	245.77	249.27			
12.40	246.43	244.89	248.39	3.52	4.40	19
12.60	243.88	244.01	247.51			
13 miles	243.04	243.13	246.63			
13.1		243.09	246.59			

90 Meadow 385

368

1410 600

525

540

444

214

217

505

494

347

155

123 27

299

287

63

166

Bridge of 3 spans 15' Joists
at 9 spans in the centre
about 2 1/2 feet
above the 2nd Dirk now
at a new drop 100 long
Crest 335.41 Floor 329.41 b
Small Dirk with 6'0"

72 New Dirk 100' long Crest 324
Floor 318.41 Dirk with 6'6"

300 Cubic feet per sec to a unit breadth above

Below last Dirk with 6'6"
to a new drop Dirk 108' long
Crest 305.81 Dirk with 6'6"
Floor 299.31

the Corbliar and in the
way augment the supply
in the latter -

Z -

ughly handled

Below New Orleans Ent.

6.20	301.83	299.31	302.81					
6.40	299.18	298.41	301.91					
6.58	296.90	297.60	301.10	3.60	4.48	2100	Across	424
6.60	296.20	297.51	301.01					
6.64		297.33	300.83					621

St Andrews Bay Ent.

6.64		295.06	298.56					
7 miles	294.49	294.34	297.84					
7.20	294.90	293.44	296.94	3.60	4.48	2100	Across	436
7.40	289.92	292.34	296.04					387
7.40	288.92	286.04	289.54					
7.60	287.44	285.44	288.64					
7 miles	284.84	284.24	287.74					607
8.12	283.64	283.70	287.20	3.60	4.48	2100	Across	446
8.20	282.69	283.35	286.85	3.62	4.40	2005		
8.40	281.32	282.47	285.97					273
8.60	280.65	281.59	285.09					143
8.64	279.55	278.09	278.59					87
9 miles	276.39	274.21	277.71					292
9.20	273.88	278.33	276.83					
9.40	271.71	272.45	275.95	3.52	4.40	2035	Across	528
9.60	269.31	268.57	273.07					250
								143

Above Atchafalaya Ent.

1.72	340.86	337.60	340.60					
2 miles	340.39	337.28	340.28	3.16	4.40	2035	Across	1175
2.20	338.52	336.49	340.49					

St Andrews Bay Ent. Channel 30 feet wide
Cut to 15.
3 under 20 feet

St Andrews Bay Ent. Cut to 105 feet wide
Lengthened to 108. Straight cut
Cut 297.83 to be extended

65. New Orl. Ent. 108 long
Cut 293.04 Ent. cut to 105
Flow 286.04

Gardner Ent. Cut to 105 feet wide
Built 2 entrance piles

New Orl. 105 long
Cut 282.09 Ent. cut to 105
Flow 275.09

175. New Orl. 105 long
Cut 272.07 Ent. cut to 105
Flow 265.37

No 173

Enclo 4

Submitted for the information of Government

Mr Mundell has been informed that the way in which he has worked out the necessary improvements to the Barrier Pakkam Main channel and the Coimbatore branch of that channel appear to be suitable and he is pressed, as the proposal to make the Karaipakkam Tank channel capable of conveying 2000 C.ft. a second in order that when water is abundant some may be passed through the Tank into the Cochlar and in this way augment the supply in the latter

2 - It will be seen that the approximate estimates for the improvements are as follow -

Kaverichakkam Mainchannd

Earthwork - Rs: 21000

Masonry " Rs. 700 — 26,700

Govindanadu channd

Earth work Rs. 6,000

Masonry work " 6,100 — 12,2100

The earthwork altogether therefore amount to — Rs: 82000. and are available for the employment of famine labor if desired. It will be necessary however to undertake concurrently the construction of the masonry works, for otherwise the desired results will not be secured, and it may happen that the condition of the channels would be deteriorated rather than improved were they

Madavadi Channel Palar Anicut System.

Details of Cutting Banking Details of Masonry work
Channel Square Square Yds water delivery &c

required)
Cu. Yds. Cu. Yds.
1st 1.72 1st 1.20
100' long. 100' long.
1st 1.40
100' long.
1st 8.60
105' long.

Sir Randall
Exec. Engr. Palar Division

Palar Anicut System
Govindavadi Channel

Abstract of proposed
alterations & improvements
Estimate.

Enclosure in a letter
No 177 dated 3rd Sept.
from W. I. Sir Randall
Exec Engr to Chief Engr
for Irrigation.

they enlarged without at
the same time decreasing
the velocities and certainly
much of the new earth-
work would be liable to
damage.

2nd The Anicut will require
2 Assistant Engineers to
supervise the work under
his orders.

3rd It is requisite to notice
that the weather is at
present very unfavourable
for the manufacture of
bricks, and unfavourable
rubble masonry, should
therefore be made use of.

4th The regular abstract
estimate should be modi-
fied in accordance with
the requirements of G.O.
No. 1768 of the 10th July 1876.

2nd Sheet
3rd Sept. 1877
The Joint Engrs
to Asst
P. W. Dept
Irrigation Branch

Submitted
Colonel R. B.
Chief Engr for Irrigation

23 May 1877 No 384
10 July 1877 No 469

1877

From

The Chief Engineer for Irrig.

Dated 10 Sept. 1877.
Recd 14 Sept. 1877.
Encls 4

No 173 I.

Ex 2
F. 8650

Kedampakkam Channel & Private
rivulet Channels. Interference of
Systems — Sluices & Bridges
for Rs 1,02,000 for improvement
&c &c — and report that the
earthwork may be carried
out with Convict labour

Con 11-9-77

Ex 3040.

Public Works Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 29 Sept 1877

Read the following :—

Letter from the Chief Engineer for Irrigation (M.E. No 173 I. dt 10th Sept 1877)

His Grace the Governor in Council sanctions the following approximate Estimates

Pulicat Anicut System

Northern Section

(2) M.C.W.S. Kavingarkkam Channel

Name of work — Improving do.

Amount of Estimate Rupees 26,700

(2) M.C.W.S. Sonnavaram Channel

Name of work — Improving do.

Amount of Estimate Rupees 124,100

The work is to be carried out and started at once.

Mr. C. G. L. Cotton
Exg. Capt. 3rd grade
(Temply)

2. The Officer in charge is requested to submit Monthly Returns of the Establishment employed on the work

may be necessary, reporting
designation and rates of pay
for confirmation; and regulating
the number of Natives under
the amount of Natives to be super-
vised. One Assistant Engineer will
3. Huts for Coolies will be
erected at convenient & suitable
places near water and shelter from
the North East wind being duly
considered
4. Mr Randall will inform
the Collector of ~~Ponnani~~ Chittur & Alwaye ~~& Palghat~~
what date and at what places
he will be ready to receive Coolies
specifying the numbers to be
employed at each locality
and ~~the Collector~~ will then
arrange & despatch all ~~coolies~~
from the Red Hills and
Palavaram Camps to the
works

No. 26/9.
Ad. 29/9

From Lieut Col Ward Assistant
Resident Travancore Palace
with enclosure No 2922 of 25
Instr. Lieut Dalyl. Calculation of Work
29/9/77 Lieut Col. Ward

Plan (in 1)
returned to the
Irrigation Dept on its
return on 3rd Inst

Rev 1877 Dept.

Fe No 8680

Executive Public
Works Department

Dated 27 Sept 77
Recd 29 Sept 77

No 1

Transferring with
draft G.O letter
from the Chief
Engineer for Irrigation
submitting estimate
for Rs 158803 for
improvements to
the Kavaripakam
main & Gorrindavedi
Channels, Palar
Anicut System
& suggesting that
the earth works
may be carried
out with famine
labor

B12