

(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.	1512	Press	<i>Original</i>
B.P. No.		Mis.	
Dated	9 - 6 -	1874	195

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
9th June 1874.*

Read the following letters :—

No. 145. From Colonel F. J. MOBERLY, R.E., District Engineer, Chingleput, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Guindy, 11th October 1873, No. 1,774.

I HAVE the honour to report that on receiving G. O., No. 1,245, of 19th September 1872, Financial Department,*

Two Maps.

* Communicated with the Collector's letter No. 232, dated 3rd October 1872.

I desired the Range Officer to commence work on the Lalakal Project.

I was, however, surprised to find that there was no plan or estimate for this work, the sanction for it having been accorded in the Public Department, and only communicated by the Government in Department Public Works, in a docket, No. 98 of 12th July 1871.

2. Mr. Ottmann, to whom reference was made, replied that he had taken no levels.

3. Mr. Lowry, therefore, as soon as he could find leisure, proceeded to examine the ground. His estimate is less in amount than Mr. Ottmann's as far as his specification goes, but it is quite insufficient for a really efficient channel.

4. I forward, herewith, Mr. Ottmann's map. You will observe that the Lalakal runs immediately below the (2) Amby and Poothery tanks, the surplus waters of which must pass the Lalakal on their way to the Vagavathy, for this passage are provided aqueducts 25 and 26 feet wide.

5. Last year all these tanks were discharging for many days through cuts made at the ends of the banks, the quantity of water which passed from them was not gauged.

6. Our principal difficulty in proceeding with this work is, however, the want of water. There was none in the spring head for several months of this year, if this be the case after such exceptional floods as those of last year I fear we have no reason to expect a supply in ordinary years. It must be remembered that if there is rain to feed this spring it will also fill the low lying reservoirs of Conjeveram. This doubt is strengthened by the statements of the Amby and Poothery villagers, who are in no way interested in the project, and who assert that the spring is entirely dependent on local rains.

7. Under the circumstances I believe it to be my duty to submit the subject for the consideration of Government.

8. The correspondence appears to have commenced between Mr. Ottmann, then in charge of Conjeveram Range, and the Municipality of Conjeveram, and with the exception of letters mentioned in margin, referring to the question of liability for the repair of injured masonry works, was carried on in the Public Department.

No. 145A. From the same Officer, dated Camp at Caliampoondy, 23rd April No. 262.

In reply to G. O., No. 133, 21st instant, I have the honour to observe that my report on the Lalakal was forwarded to you on the 11th October 1873, No. 1,774.

Brought over ————— 1640 4896 1376

Culvert alteration at Cistern of Surmatheesthuni

See appendix D
Branch to Yagambra Esmeran Couil Holuns,
from Dividing Dams at C. widening both sides to 34 ft

Deepening	1	1 1/2	516
Turfing slopes	1	1/2	172
Hedging sides	(2)	3 1/2	2408

688

East of above to Street widening above ————— Total 2328

Deepening	36	1 1/2	127 1/2
Turfing slopes	1	1/2	112 1/2
Hedging sides	(2)	3 1/2	698

170

Culvert for street. See appendix E

North and East of above to Mel Madanathay
Excavating Channel

Turfing slopes	100	2 1/2	250
Hedging sides	(2)	2 1/2	20

20

Culvert for street &c. See appendix F

Branch to Senajinga Poluin. Excavating
Channel along Couil Wall up to where it enters
the wall

Turfing slopes	360	2 1/2	900
Hedging one side	(2)	2 1/2	180

360

South branch from Culvert F to Mungala
theesthuni &c. Excavating Channel along Couil
Wall to first Cistern

Turfing slopes	1400	2 1/2	3500
Hedging one side	(2)	2 1/2	40

40

Repairs of the several Cisterns in connection with
Mungala theesthuni. See appendix G

Couil. Kotalalcesmeru Couil &c. Cisterns &c.
Constructing parapet walls there. See appendix C

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Total Earthwork 10 Cans 2328

Total Earthwork 10 Cans 2328

Total Turfing

Total Hedging

Abstract

Quantity Description of Charges

Rate of Amount

2328	6 1/2 yards Earthwork	10 Cys	121
2320	6 1/2 yards Earthwork / any stiff /	12	169
12199	1/2 yards Turfing / Carted /	3 2	381
3194	Linear yards Posts & rails hedging with transoms thous fencing &c. complete	4 12	151
3	Corries for maintaining hedging / watering /	3 8	63
	for 6 months		

Total Rupees ————— 885

Appendix

Water supply
Constructing masonry works along the line of Channel B, repairing & improving
the present cisterns on lines of conduits, and altering the Culvert on
the branch to Surmatheesthuni

Branch Channel

Description of work	Measurement	Contents
A Culvert for Cart Road 4 yards	(1)	12 1/2 7 1/2 140 7 1/2
General foundations of body	(2)	7 1/2 2 2 60
Retaining walls to ends of above	(4)	3 2 1/2 1106
Wings	(2)	12 2 3 1/2 168
Side walls above	(12)	12 7 1/2 42
Backing over covering stones & side walls	(4)	3 2 4 96
Wings to limit of backing	(2)	12 1/2 1 1/2 3 112 6
Parapets		

————— 724 1/2

————— 26 3/4

Covering stones ————— 12 5 1 1/2 30

Excavating foundations & filling ————— 4 3 3 36

————— 4 1 3 12

————— excavating Total Cans 48

Plastering	21	3	"	"	72
	28	4	"	"	112
	25	7 1/2	"	"	187 1/2
	12	1 1/2	"	"	18
Total Sq. feet					389 1/2
Plastering Total Squares	3	20			70

Supplies & Baling 1/10 per cent
 B Plastering inside of cisterns at Kuravathuram
 Conil Column & rising Parapet wall all round.

Foundation to wall round	(1)	16	1 1/2	1 1/2	36
Wall above	(1)	16	1 1/4	2	40
Total C. feet					76
Brick in Chumam C. yds					2 3/4
Plastering		12	2	"	24
		12	6	"	72
		11	1 1/4	"	13 3/4
		21	2	"	42
Total Sq. feet					151 3/4
Plastering Total Squares					151 3/4

Covering over approach to cisterns to prevent chocking

General foundations	(1)	6	4	1 1/2	36
Retaining wall to end of do	(1)	4	1 1/2	1 1/2	9
Side walls	(2)	6	1	1	12
Covering bricks on edge	(1)	6	3	1	18
Parapet	(1)	3 1/2	1	1 1/2	5 1/4
Total C. feet					80 1/4
Brick in Chumam C. yds					2 26 1/4

Plastering	3 1/2	4 1/2	"	"	16 1/2
	12	1	"	"	12
	4	1	"	"	4
Total Sq. feet					31 1/2
Plastering Squares					81 1/2

Excavating foundations and filling	2	2	2		8
Earth work C. yds					8

Supplies
 C. Dismantling Dams at branching of Channels.
 For South Channel. General foundations

Wall above (1 1/2 unit)	22 1/2	1 1/4	3		118
	21	1 1/2	3		94 1/2
Total C. feet					212 1/2
Brick in Chumam C. yds					7 1/4

Signed A. Ottomani

Plastering	44	3	"	"	132
	16	1 1/2	"	"	24
Total Sq. feet					156
Plastering Total Squares					156

Excavating foundations &c	5	1 1/2	1		7 1/2
Total Excavating found &c					7 1/2
Leak shutter	(1)	2	3	1/2	1
Leak wood C. feet					1

For east Channel. General foundations	24	1 3/4	3		126
Wall above 1/3 ft unit	21	1 1/2	3		94 1/2
Total C. feet					220 1/2

Brick in Chumam C. yds					8 1/2
Plastering as above					156
Plastering Total Squares					156

Excavating foundations and filling	6	1 1/2	1		9
Excavating foundations C. yds					9
Leak shutter	3 1/2	3	1/2		13 3/4
Leak wood Total C. feet					1 1/4

Grass stones	(4)	4	3/4		1
Supplies, baling &c					

D. Reconstruct Culvert at Kuravathuram Cistern.
 Floor to be lowered 1 1/2 feet.

Dismantling old work	Body	50	6	1 1/2	1200
	Wing	10	3	6	180
	Cistern Wall	6	3	8	144
Total C. feet					1524
Dismantling Total C. yds					56 1/2

General foundations	(1)	50	6	1 1/2	460
Retaining wall	(1)	6	2	2	24
Wings	(2)	3	2 1/2	3 1/2	52 1/2
Side Walls	(2)	50	2	2 1/2	500
Backings	(1)	50	5 1/2	1/2	137 1/2
Wings	(2)	3	1	2	36
Parapet	(1)	10 1/2	1 1/2	3	47 1/4
Cistern Wall	(1)	6	3	8	144

Total C. feet					1391 1/2
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Brick in Chumam Total C. yds					57 1/4
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Covering stones from old works	(50)	3	1	1/2	
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Plastering	100	2	"	"	200
	14	3	"	"	42
	10 1/2	7 1/2	"	"	78 1/4
	9	1 1/2	"	"	13 1/2
Total Sqr feet					334 1/4

Plastering Total Squares $3 \frac{34}{100}$

Excavating foundation and filling	13	3	3	117
	2	1	2	4

Excavations Total C^{yds} 121

Sundries

E. Valant. to Yagambraapuram street of 6 yards

General foundation to body	(1)	15 1/2	7 1/2	1 1/2	174 1/4
Retaining Walls	(2)	7 1/2	2	2	60
Wings	(4)	3	2 1/2	3 1/2	105
Side walls	(2)	15	2	3 1/2	210
Backing over covering stones	(1)	15	7	1/2	82 1/2
Wings to level of backing	(4)	3	2	4	96
Parapets	(2)	12 1/2	1 1/2	3	112 1/2
Total C ^{feet}					810 1/4

Bricks in Chumam Total C^{yds} 30

Covering stones	Drops in Chusam Total C ^{feet} 30			
	(15)	5	1	$\frac{1}{2}$ 2 $\frac{1}{2}$
Covering stones Total C ^{feet}				2 $\frac{1}{2}$
Excavating foundations and filling	5	3	3	45
	4	1	3	12

Excavations Total C^{yds} 57

Plastering	30	3	"	"	90
	28	4	"	"	112
	25	7 1/2	"	"	187 1/2
	12	1 1/2	"	"	18
Total Sqr feet					407 1/2

Plastering Total Squares $4 \frac{47}{100}$

Sundries

F. Covering over the two branches of the channel across the Madanawathi opposite west entrance of Yagambra casuarina house

General foundation to South branch	(1)	44 1/2	7 1/2	1 1/2	501 1/4
Ret. walls at ends of above	(2)	7 1/2	2	9	80
Three wings foundation		8	2 1/2	3 1/2	70
					650 1/4

Signed J. Ottmann.

630 1/4

General foundation to North branch	(1)	44 1/2	6	1 1/2	400 1/2
Ret. Walls at ends of above	(2)	6	2	2	48
Three wings foundation		8	2 1/2	3 1/2	70
West connecting wing foundation	(1)	25	2 1/2	3 1/2	258 1/4
Side walls above	(4)	44	2	3 1/2	1232
Six wings above		16	2	4	128
Connecting wing		25 1/2	2	4	204
Backing north branch	(1)	44	5 1/2	1/2	121
Backing south branch	(1)	44	7	1/2	154
Parapets		64 1/2	1 1/2	3	290 1/4
Total C ^{feet}					3496

Bricks in Chumam Total C^{yds} 129 13/27

Excavating foundation	16	3	3	135
	16	2	3	90
	16	1	3	48

Excavating foundation Total C^{yds} 273

Covering stones North branch	(44)	3 1/2	1	1/2	
Total C ^{feet}					
South branch	(44)	5	1	1/2	
Total C ^{feet}					

Plastering	(4)	44	3	"	528
		65	4	"	260
		9	1/2	"	4 1/2
		64 1/2	7 1/2	"	480 1/4
		12	1 1/2	"	18
Total Sqr feet					1293 1/4

Plastering Total Squares $12 \frac{93}{100}$

Sundries

G. Repairs of existing right system on the lines of Can. dints, and providing parapet walls thereto.

Foundation to parapets		18 1/2	1 1/4	1 1/2	48 1/4
Walls above		18	1 1/2	2 1/2	67 1/2
Total C ^{feet}					115 3/4

Bricks in Chumam Total C^{yds} 1 1/2

Plastering - Inside present system	12	8	"	"	96
Parapets	12	2 1/2	"	"	30
	18	1 1/2	"	"	60
	24	2 1/2	"	"	213
Total Sqr feet					213

Plastering Total Sqr feet $2 \frac{13}{100}$

Teak shutter with battens &c. ————— 3 3 1/2 1 1/2
 9 1/3 1/6 1/2
 Teak wood 6 feet ————— 2.

Sundries.

Abstract.

Quantity	Description of Charges	Rate	Amount
A. Chest for Cart Road.			
27	Cyrs Brick in Chumam	3 8	cyd 96
12	Covering Stones	1 12	each 21
45	Cyrs Excavating foundation	" 16	cyd 14 8
4	Squares Plastering	2 8	Sqr 10
	Baling of Sundries		14 8

Total Rupees 145

B. Repairs of Cistern of Anantrandecoruram

8	Cyrs Brick in Chumam	3 8	cyd 18
2	Squares Plastering	2 8	Sqr 5
8	Cyrs Excavating foundation and filling	" 16	cyd 1
	Sundries		1

Total Rupees 25

C. Dividing Dams at branching of Channels.

16	Cyrs Brick in Chumam	3 8	cyd 56
8	Squares Plastering	2 8	Sqr 8
9	Cyrs Excavating foundation	" 16	cyd 1
1	Teak shutter 2 1/2 X 3 complete with battens &c.	4	each 14
1	do 3 1/2 X 3 handles &c.	6	each 7
4	Grass stones	1 8	each 6
	Sundries, baling &c.		7

Total Rupees 89

D. Reconstruction of Culvert at Anantrandecoruram

56 1/2	Cyrs Dismantling	" 6	cyd 21
51 1/2	Cyrs Brick in Chumam	3 8	cyd 180
3 1/2	Squares Plastering	2 8	Sqr 9
121	Cyrs Excavating foundation & filling	" 16	cyd 11
69	Covering stones from old works replacing &c.	" 2	each 6
	Sundries		22

Total Rupees 249

E. Culvert to Nagambraapuram street

30	Cyrs Brick in Chumam	3 8	cyd 105
4	Squares Plastering	2 8	Sqr 10
15	Covering stones	1 12	each 26
57	Cyrs Excavating foundation & filling	" 16	cyd 5
	Sundries		8

Total Rupees 154

F. Covering over the two branches across all.

Madanathur.

129	Cyrs Brick in Chumam	3 8	cyd 461
13	Squares Plastering	2 8	Sqr 33
27 3/4	Cyrs Excavating foundation	" 16	cyd 26
44	Covering stones 3 1/2 ft	1 8	each 66
44	do 5 ft	1 12	each 77
	Sundries		30

Total Rupees 683

G. Repairs &c. of existing eight cisterns on lines of Caudinte.

4	Cyrs Brick in Chumam	3 8	cyd 14
2	Squares Plastering	2 8	Sqr 5
1 1/2	6 feet Teak shutter with battens, bolts, handles complete	8	each 12
	Sundries		4

For 1 Cistern 35

Total for 8 Cisterns 280

Signed S. P. Ottum.

	Amount
1. For Channels	
Earthwork	
Turfig	290
Khorapully hedging with bamboo fencing complete	381
3 rd Cistern for maintaining hedging materials for 6 months	151
2. For Masonry	
1. Culvert of 4 yards for cart track A	145
1. Repairs of Cistern of Ananakkundeeswarai Canal Kolam B	26
1. Dividing Dam at branching of Channels C	89
1. Culvert at Survaathoertham for road D	249
1. Culvert of yards to yagambapuram Street E	164
1. Covering Channels across Mel Madanthe P	683
8 Cisterns of Caudints repairs G	230
Superintendence	130
<u>Total Rupees</u>	<u>2,640</u>

Specification

- Channel. The Estimate allows for improvement of present Channel and its several branches; by deepening and sloping as to give a bottom width of one yard, and slopes of $1\frac{1}{2}$ to 1. These slopes are to be wholly covered from bottom to top, with an overlap at top. All the open Channel will be hedged in, with "Khorapully", supported for present, with bamboo thorn fencing, for protection. This hedging, it is intended to maintain till it has grown well and can be left to look after itself.
- Masonry. The first work on the line is, Item A. A culvert for a village Road. This is after the usual style, and needs no particular description. Item B. Is the next, and consists merely of the repairs and improvements of the cisterns of Ananakkundeeswarai Canal Kolam to prevent its choking &c.

Item C. Comes next, and consists of simple "division sluice" to regulate the supplies, to the "Survaathoertham branch" and the "main". These will be merely walls, across the channels, pierced with openings, and fitted with grooved stones & shutters. Item D Is on the "Survaathoertham branch" & consists of the lowering (by reconstruction) of the Road culvert, which being on too high level, does not permit of that Kolam being supplied, except during floods. This is a very necessary alteration.

Item E Is a culvert on the main Channel, at the first street crossing. This is a work of the usual kind.

Item F Is a double culvert, at the next street adjoining Pagoda for carrying the two branches across the street. This is also of the usual style.

Item G. Provides for building parapet walls, round the cisterns on lines of caudints and securing them with "trap doors", to prevent choking and fouling. The work is so simple, that no particular explanation is necessary.

General remarks - A large quantity of granite covering stones is needed for the masonry works. Their purchase forms a large item of cost. The Municipality might take possession of one of the very many Mundasams in ruins, and thus provide for the works. or some of these may be purchased at a trifling cost.

All the masonry works, require to be laid out, by careful levels so as to avoid mistakes.

3rd Range Office }
18th February 1871 } Signed S. Ottmann
Sub. Engineer in charge.
3rd Range.

Part II

Conjeveram Municipality

Water Supply

g-o. No 1512-9-6-44-

Branch Channel

Estimate for Repairing and
improving the Branch channel
from "Lalakah" that supplies
the Town.

Rapes 2,640

Water Supply

Conjeveram Municipality

Worke. Repairing the "Lalakah" Channel from
spring head up to dividing dam, as also all its masonry work.

Main Channel

Particulars of Works.

Total Measure
Length - in fms
Content
Earth Work
1 Anna 1/4 Anna 2 Annas

1 Spring Pond.

Deepening on West side	32	12	1	"	"	384
Deepening on South side	92	8	1	"	"	736
Deepening pond	92	25	1	"	"	2300

2. Channel.

Widening channel both sides for herms	360	3	1	"	"	1080
Deepening Do	"	4	1	"	"	1080
Widening east of above for herms	800	440	1/2	3/4	"	495
Deepening Do	"	4	1	"	"	1320
Widening east of above for herms to Head sluice	1200	400	2	1	"	800
Deepening Do	"	4	1	"	"	1200

Head sluice & aqueduct alterations &c

See Appendix A.

Opening out Channel above & below & inside sluice	1248	48	8	3	"	720
Widening east of above for herms	1760	608	3	1	"	1524
Deepening Do	"	4	1	"	"	1524
Widening east of above for herms to large mango tree	396	400	3	1	"	1200
Deepening Do	"	4	1	"	"	1200

Widening east of above for herms to cart tracks	840	444	3	1	"	1332
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Deepening Do	"	4	1	"	"	1332
Widening east of above for herms	1600	760	3	1/2	"	3420
Deepening Do	"	4	1	"	"	2280

Carried over " 20,507 3,420

Brought Over		20507	3420		
Widening east of above for herms to Puttany surplus, aequeduct	2	240	400	3 1/2	1800
				1/2	1200
Deepening Do					
Aqueduct alteration. See Appendix B		852	612	1 1/2	918
Widening for herms east of above to Irrigation Channel under sluice of Puttany				1/2	1836
Deepening Do					
Under sluice alteration. See Appendix C		1352	800	2	1000
Widening for herms east of above to Irrigation under sluice of Pirookhany for Puttany				1/2	1500
Deepening Do					
Under sluice alteration. See Appendix C		516	724	1 1/2	1388
Widening for herms east of above to old under sluice				1/2	2772
Deepening Do					
Under sluice alteration. See Appendix D		844	328	2	666
Widening for herms east of above to Irrigation under sluice of Achewent Puttany				1/2	984
Deepening Do					
Under sluice alteration. See Appendix C		1244	400	1 1/2	600
Widening for herms east of above to Road Tunnel				1/2	1200
Deepening Do					
Road Tunnel Alteration. See Appendix E		564	1080	1 1/2	1620
Widening for herms east of above to Dividing Dam				1/2	2430
Deepening Do					
To end of Channel		324	1570		
Total		16902			
Total		23507			
Total		3420			

1881 S. Ottomani

Abstract

Quantity	Description of Charges	Rate	Amount
3420	60 yards Earthwork	2	6840
23507	60 yards Earthwork	1	23507
16902	60 yards Earthwork	10	169020
Total Rupees			2777

Appendix

Water Supply

Main Channel

Cooperans Municipality
Works. - Alterations of the masonry works referred to in the Estimate of Channel repairs.

Particulars of works

Contents
Measurements
Cubic
Superficial

A.	Constructing revetments about wings of Head Sluice and Aqueduct of Ambli surplus to prevent its breaching into and choking Channel & opening out the surplus Channel into Vagavathi.	80	3/4	4	240
	Revetment in extension of fair wing including foundation	80	7		560
	Surfing the above banks	80	7		560
	Subbanking in rear of above	80	11	3/4	960
	Opening out old surplus Channel into Vagavathi	320	1/2	1	1760
B.	Dismanthling the ruined Aqueduct of the Puttany Sur.	20	1	2	40
	plus some rollers and in the way	10	2	1/2	10
	Dismanthling works to permanent level	24	1	4	96
	Total C. yds Dismanthling				146
	C. Reconstructing the under sluices which are in ruined condition & extending them, to prevent breaches.				

General foundation to under chime	(1)	16	6 1/2	1 1/2	156
Reconstructing walls at ends	(2)	6 1/2	2 1/2	2	65
General foundation cisterns	(2)	6	2 1/4	1 1/2	33 3/4
Retaining walls at ends	(2)	2 1/2	2 1/2	2	25
Foundation to wings	(4)	7 1/2	2 1/2	3 1/2	262 1/2
Side walls	(2)	16	2	2 1/2	160
Backing over covering stones	(1)	16	6	1/2	48
Retaining wall of Acqueduct	(2)	6	2	1 1/2	108
Cistern walls	(2)	3	2	1 1/2	54
Wings	(1)	7 1/2	2	7 1/2	150
				Cs feet	1362 1/4
				Bricks in Chumans	60 1/2
Covering stones	(16)	4	1	1/2	
Excavating foundation & filling		12	3	4	144
Dismantling old works		4	4	4	64
Rough Plastering		12	8	"	92
		8 1/2	3	"	25
		22	2	"	44
				Square feet	368
				Rough Plastering squares	3 1/2
		32	2	"	64
		72	4 1/2	"	324
		16	7 1/2	"	120
		8	3	"	24
		44	2	"	88
		22	3	"	66
				Square feet	686
				Line Plastering squares	6 1/2
D. Dismantling abandoned under chime					
Dismantling under chime to level of basement	6	1	2	12	
	3	2	1/2	3	
	8	1	3	24	
				Total Cys dismantling	39
E. Altering Road Culvert by adding an additional					
Foundation to side walls and wings	110	3	3 1/2	420	
Retaining walls to do	33	2 3/4	1	90 3/4	
Side walls wings to top of covering stones	5 1/2	2	2 1/2	27 1/2	
Stone Courses	37 1/2	2 1/2	5 1/4	518 1/2	
	18	2	1 1/2	54	

/Sof S. Ottaviani

Backing over covering stones	29	6	1/2	87
Parapets	7 1/2	1 1/2	3	12 3/4
			Total Cs feet	1376 1/2
			Bricks in Chumans	60 1/2
			Cs yards	47 1/2
33 Covering stones each	66	4 1/4	"	313 1/2
Plastering	18	6 1/4	"	121 1/2
	18	7 1/2	"	135
	27	4 1/4	"	128 1/4
			Total Sq feet	698 1/4
			Plastering squares	11 28/100
	4	1	3	12
	4	1/2	1	2
			Dismantling C yards	14 1/4
	4 1/4	1 1/4	1 1/2	26 1/4
	13	3	1 1/2	54
			Excavating foundation C yards	80 1/4

Quantity	Description of Charges	Rate	Amount
A. Acqueduct & head chime	2.3 - Cys	525	"
240 Cs yds Rough Stone Retirement	" 10	50	"
960 Cs yds Earthwork	" 1 1/2 yds	12	"
560 Cs yds Surfing	" 1 - Cys	110	"
1760 Cs yds Earthwork	Rupres	697	"
B. Dismantling ruined Acqueduct	6 - Cys	55	"
146 Cs yds Dismantling old works, so as not to injure covering stones	Rupres	55	"
C. Reconstructing under chimes that are in ruined condition and extending them	38 - Cys	177	"
50 1/2 Cs yds Bricks in Chumans	18 - Cys	6	"
3 1/2 Cys Rough Plastering	28 - Cys	18	"
6 1/2 Cys Line Plastering	16 Cys	14	"
144 Cs yds Excavating foundation & filling	6 - Cys	24	"
64 Cs yds Dismantling old works without injuring covering stones	" 8	8	"
16 Covering stones to be got from dismantled works cart hire & fixing		25	"
Sundries & Baking	Rupres	272	"

D. Dismantling abandoned under sluice			
39	60 yds dismantling with care as not injuring covering stones	6 Cys	15 "
		Rupies	15 "
E. Altering Road Tunnel			
47 27	Cyds Brick in Chumans	38	165 "
6 28	Cyds Plastering	28	18 "
14	Cyds Dismantling old works	4	4 "
80 14	Cyds excavating & filling	16	7 "
33	Leaving stones from old work cartage and filling &c	8	17 "
	Sundries		19 "
		Rupies	230 "

General Abstract

1.	Channel Repairs	2777 "
2.	Masonry Head Sluice and Acqueduct Repairing	697 "
	Dismantling Pitting surplus acqueduct /B/	55 "
	Alterations of under sluices /C. C' and C'/ 272 Rs each	816 "
	Dismantling abandoned under sluice /D/	15 "
	Altering Road Culvert /E/	230 "
	Superintendence	230 "

Total Rupies 4820 "

No 3 Range
16 February 1871

/s/ S. Ottomano
Sub Engineer
No 3 Range

Water Supply

Main Channel

Comptroller Municipality

Specification To accompany Estimate.

1. Earthwork. The spring Pond is to be deepened as prescribed in Estimate in doing which the soil from excavation should be removed beyond the crest of banks, so as not to wash in again. A fair rate is allowed for the work to be done. In the Channel, an average deepening of one yard is allowed, with bottom width of 2 yards and slopes of 1 to 1. The slopes might properly be 2 to 1 for the soil, but the work will be very expensive, and as the dyke will be constantly clearing the channel the easier slope will soon be realized. A certain amount of widening is also provided, so as to give berms on both sides, which will prevent channel choking, from falling in of sides, and further assist the work of clearing according to custom. This widening is to be performed with slopes of 1 1/2 to 1. All the soil from excavation is to be removed beyond banks, so as not to wash in again.

The work of repairing Channels is catenated up to "dividing Dams" any beyond which the repairs become purely "village works" and in which the "Town Supply" has no interest.

2. Machinery. Of the works provided in the several items the following explanation will show the intention thereof.

Item A. This is the present head sluice of the Channel and it is also an Aqueduct, carrying the waters of the "Ambi Sanki Sumpus" into the "Vazavathy River". The work is in perfect order but owing to want of length of wing, and the soil being sand, the Sumpus has long ceased to run as intended, but breaches on all sides into the Spring Channel and is one great cause of the ruin thereof. It is now intended to repair the Channel into the "Vazavathy" and to construct settled banks about the wings of aqueduct, so as to prevent breaching and keep the Spring Channel clear. Without such provision to keep out the Sumpus it will be impossible to keep the Channel in order.

Item B. This is an old aqueduct for carrying the "Puttari Sanki Sumpus" from S.W. Kalingula across Spring Channel into the "Vazavathy".

The aqueduct is quite in ruin & the Channel is vagrantly quite covered up. The cost of restoring both works will be immense - and it is necessary not now advisable as the "Puttari Sumpus" is discharged by the larger Kalingula at N.E. end - when the "Puttari Sanki" is about being repaired (for which an estimate is being prepared) provision will be made, for building up this Kalingula to high water line. It is one of small water way so can't do much injury to the Channel if at any time water escapes over it.

Item C. These are under sluices conveying three Channels from "Puttari Sanki" across the Spring Channel. They are all quite out of order & must be rebuilt in providing for which the length of under tunnel is increased so as to place the Cisterns outside the banks & prevent mischief to both Channels by breaches. The style of work is of the usual description & needs no particular notice.

Item D. This is an old under sluice, abandoned & quite in the way of the Channel, which should be removed to basement level.

Item E. This is the Road Tunnel of the "Chingleput".

to Looapen Chintling / District / Road. The water
way is quite inadequate, and it is intended to add
another vent thereto.

In conclusion. From the works that will be
dismantled, lots of granite ^{covering} stones will be got and
available for the work now proposed. For what
fall short the stone might be got from any of the
many old mined "mundapuns" about the town
which the Municipality might assume charge of
or purchase.

The work of widening & deepening the Channel
must be commenced at the tail end and carried
upwards and when brought up to the spring, it
should be opened out, and the spring drained;
after which only the deepening of spring should
be undertaken.

The spring where it borders on the Vazavathy
River should be secured from corrosion and
injury during floods, by promoting growth
of herbage Chinkling &c.

No. 3. Range Office, 1801 of Ottumare
18 February 1875. Sub Engineer in charge
No. 3 Range

No. 3100
Memo.

Requested for reference the undermentioned papers.

Two maps of the Local project forwarded with a
letter from the St. Eng. Comptrol. to the Secy to
Govt. of 11th Oct 73 No. 1774 - printed with G.O. No. 1512
of 27th June 1874.

Supg. Eng. Office
Supt. to
Supt. of the
Supt. of the

Christa Rao H. H. H.
Supt. Eng. Office

The District Assistant Registrar
to the Secy to Govt. P.W.D.
12 Plans supplied 11-2-75
J. H. George

1512

P. W. D.

Proceedings of the Madras Government,
187

Under date the

Read the following:—

From The St. Cyprian College (P.W.D. No. 1774 dated 11/1/83)
do do (P.W.D. No. 262 dated 23/1/84)

M
13/4

The Government are much displeased to find that, after so long an interval, the water supply of Conjevaram appears to be in no better condition than before the orders approving of the immediate improvements of the Lalakot, determining how funds were to be provided, and sanctioning the execution of certain work from Agricultural Repair funds were.

were passed.

2. The work to be done presented no difficulties whatever. District Engineer had Mr. Ottum's reports showing what the object of the work to be done was, and what was necessary to secure that object. The clearing of an old channel, and the repair or reconstruction of a few masonry works could have been proceeded with at once, just as hundreds of such works are taken up year by year all over the country, directly that the way in which the cost was to be defrayed had been determined; and, if the levels of the bed of the channel

channel were not sufficiently fixed by the old masonry works, a couple of days at most would have sufficed for all that was necessary in this respect.

3. The District Engineer mentions that two aqueducts are required for passing the water of the Assiniboine and Red River into the Lake of the Assiniboine, but there is nothing whatever to show that the dimensions proposed by him are correct; neither has he submitted plans and estimates. The navigation drainage discharge must be provided for, and the best and cheapest manner of

of doing this will prob-
ably be to pass ordinary
drainage under the channel
and extraordinary floods
across it by inlets and out-
lets.

4. With regard to the
water supply, the Govt
are surprised to find that
Colonel Maberly should
have entertained any doubts
on the subject. It has not
been supposed that the
Lalokot will supply Con-
jeveram in the same way
that Madras is supplied
from the Red Hills Lake.
The channel is to be made
sufficient for filling the
tanks at Conjeveram when
there is water in the Naga-
vathy.

The S. P. District Supts
at here in 1855
water.

12
Nagavathy, or for so long
as the springs may last.
It is decided to exclude from
the channel surface drain-
age from ground in the
neighbourhood of habita-
tion and to put into the
town reservoir as much of
the best water as had
in the neighbourhood as
may be available.

5. The Engineer will
now take care that there
is no further delay, and
that the channel is made
sufficient at once. Should
Mr. Atterman's proposal be
found to require modifica-
tion, the necessary alterations
must

must be promptly de-
termined and estimated
for, but the clearances
down to the dividing dam
and below that to the com-
mencement of the covered
channels should be carried
out immediately, and the
rest of the work the moment
that the details can be est.
-ltd.

Comm.

To
The Ch. Engrs for London ✓
The St. Engrs. Dept. with 2
original estimates of 1871 ✓

Cable ✓

Feb. Sept 18 ✓

S. Engrs. dis. p. 18 to all 18/8/74

145-146

in 12/5/74 Rb 15/5/74

5563 2516
Govt. of 1874 Madras.

PUBLIC WORKS.

Mile Impr. for
Irrigation

Dist.

Revd.

Encl. 2 Plans

G. O. 9 June 1874, No. 1512

Nos. 145-146.

Water supply of
Conjeveram Town
Chingleput District

Passing orders on
the subject of the
improvement of the
Lalakai for the
water supply of
Conjeveram —