

P. W.
Maine (1899) Department.

G.O., No. 121 W

✓ DATED 12 Jan^y '99

1000

207/1/99

[Despatch Abstract.]

Water Supply Scheme of the Central
Jail at Portland

Revised Estimate of Rs 18,580 for the

—, sanctioned, with remarks

100
4

2/12/98

20/11

Water-supply Scheme of the Central Jail at Coimbatore
Revised estimate of Rs. 18,580 for the —, sanctioned, with remarks.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From A. G. CARDEW, Esq., M.A., I.C.S., Inspector-General of Prisons, to the Chief Secretary to Government, dated Ootacamund, 8th October 1898, No. 5986.

With reference to G.O., No. 911 W., dated 2nd April 1898, I have the honour to forward, for the approval and sanction of Government, plans and estimates amounting to Rs. 18,580 for the water-supply scheme of the Coimbatore Central Jail.

2. It seems clear from Mr. Burlton's report accompanying the estimates that the objections to Mr. Malet's estimate which were taken in paragraph 3 of the Chief Engineer's note, dated 28th March 1898, were founded on some misapprehension. The inflow into this well is so rapid that the difficulty has all along been, not to get enough water in, but to get enough water out to enable the well to be lined. The Executive Engineer now proposes, in view of the difficulty of getting the last 8 feet of water out of the well, to stop the steining at 15 feet from the bottom. So far as the supply of water is concerned, unless the springs are interfered with by the steining, there is not much reason to fear a deficiency.

3. A revision of Mr. Malet's estimate seems, however, to have been called for on other grounds. One of these is the necessity which is stated to have been found for constructing a ramp which the present Executive Engineer proposes to make permanent. This item will apparently cost Rs. 2,670 plus Rs. 420 for a cover to the entrance. It is, in my opinion, inexpedient to have a ramp or steps, down to a drinking-water well. The presence of these steps would undoubtedly facilitate pollution of the water-supply just in proportion as it facilitated access to the water. With such steps in existence, there is a strong tendency, should any small hitch or difficulty occur with the pump, to put a gang of convicts to fetch water up the steps in chatties. Nor does there appear to be any strong reason for retaining the ramp. The Coimbatore soil is full of lime and consolidates well, and if the steining is well put in, and the soil behind it well tamped down, no water-logging should occur.

4. Another point in the present estimate which does not commend itself to me is the abandonment of Mr. Malet's proposal to put the distributing tank at the well. This tank at present stands on masonry arches near the centre of the Jail, at a distance of 730 feet from the well. Mr. Malet proposed to move the tank to the side of the well, so that the water would be delivered into the tank by the pumps and would be distributed thence by pressure. This tank was erected by the Public Works Department only 5 or 6 years ago, being, I believe, brought all the way from Lovedale on the Nilgiris. In any case its removal from its present site to the well does not appear to be a very arduous undertaking. On the other hand the retention of the tank in its present position will, as I understand, impose on the pumps the additional labour of driving every ounce of water a distance of 730 feet further than would otherwise be the case. This seems a very serious addition to the work to be done by the pumps, and by the men who work them, and if I understand the proposals correctly I am strongly of opinion that the tank should be moved to the well.

5. The question as to the pumps to be employed remains. The Superintending Engineer, in forwarding the plans, writes as follows :—

Instead of the pumps designed by Mr. Moss and estimated to cost Rs. 1,850, I should be inclined to substitute an aërmotor.

I wrote to Mr. Brown at Calicut who is the agent of the Chicago Aërmotor Company giving particulars of our requirements, and after communicating with America he is able to give a quotation which is about Rs. 2,000 less than the estimated cost of the pumps.

Coimbatore is an ideal place for an aërmotor as there are few days in the year when there is not enough wind to work one.

Pumps worked by convicts are seldom satisfactory. They are continually getting out of order, and give a lot of trouble.

I regret that I am unable to offer any opinion regarding aërmotors as I have no experience whatever regarding them, and as I have no information as to the number of calm hours to be expected monthly at Coimbatore. If the labour of raising water by employment of convicts on a pump could be saved and the same result produced by the use of an aërmotor, the advantage would be great, but it would, on the other hand, be decidedly awkward if, at any season of the year, there were not enough wind to raise the necessary supplies of water. The adoption of an aërmotor would, therefore, appear to me an experiment as to the working of which at Coimbatore nothing is known, and the information in the Superintending Engineer's letter above quoted is far from definite. Another objection to my mind is that the aërmotor is proposed to be got from America, whereas the pumps would be of English or local make. The amount provided in the revised estimate for the pumps is Rs. 1,850 and it is presumed that this is for two pumps, as the report distinctly says that two pumps will be provided. It is thus not clear how the aërmotor could cost Rs. 2,000 less than the pumps. But it is certain that if an aërmotor is adopted, it will be necessary to add an additional storage tank to guard against want of water on days when the aërmotor does not work. On these grounds, therefore, the adoption of pumps appears preferable.

No. 2241, Judicial.

Transferred to the Public Works Department.

FORT ST. GEORGE,
25th October 1898.

(Signed) A. R. KNAPP,
Ag. Under Secretary.

From A. H. GARRETT, Esq., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 6th December 1898, No. 632/W.

With reference to your memo., No. 5314 C., dated 25th November 1898, I have the honour to forward copy of a statement received from the District Medical and Sanitary officer giving information about the wind at Coimbatore from November 1897 to October 1898.

2. As the statement does not show how long the wind was blowing each day, its velocity, and consequently the motive force available, cannot be calculated.

3. An aërmotor, however, requires a very gentle breeze and as the pump is capable of delivering 10,000 gallons in four hours, there would, I imagine, be very few days in the year when the wind pressure would be insufficient.

4. But should this ever happen, the well might be worked by convicts as at present, or recourse might be had to the other wells.

5. At present, there are two wells outside the jail and two inside. Of the outside wells, the one which has been deepened by us is not used at present for the supply of drinking-water, and the other well which is used for drinking purposes generally runs dry in the hot weather.

6. Of the two inside wells, one supplies a very precarious supply of good drinking-water, and water from the other is only used for bathing purposes. The water of which there is always a good supply, is pumped up into a cistern measuring 14 × 14 × 5.

7. The drinking-water supplied from the outside well is carried by an iron pipe to a masonry cistern about 4 feet square, inside the jail, from which it is distributed by water-carts.

8. If we put up an aërmotor it would be advisable to substitute for the small masonry cistern one capable of holding about a week's supply of drinking-water, but even if this were not done, it would always be possible to fall back on the existing methods of supply in case of the wind failing for any length of time.

9. The employment of an aërmotor would thus be attended by no risk at all. They seldom get out of order, which is far from being the case with ordinary pumps worked by convicts, and I strongly recommend that one should be tried at the Coimbatore jail.

Note by the Chief Engineer, Public Works Department.

The estimate for a water-supply scheme for the Coimbatore jail, amounting to Rs. 18,580, is recommended for sanction with the following remarks:—

- (1) The steining should be stopped 15 feet from the bottom of the well.
- (2) The door at the head of the ramp should be kept locked and the key in Jail Superintendent's possession. This will prevent the drawing of water by chatties.
- (3) The distributing tank should be provided at the well.
- (4) An aërmotor, as recommended by the Superintending Engineer, in his letter No. 632/W., dated 6th December 1898, is considered likely to prove an economical and efficient substitute for pumping, and is recommended.

(Signed) W. B. DEWINTON,
Chief Engineer.

23rd December 1898.

ORDER—No. 121 W., dated 12th January 1899.

The revised estimate, amounting to Rs. 18,580, for the water-supply scheme of the Central Jail at Coimbatore, is sanctioned in supersession of the estimate of Rupees 5,650, sanctioned in G.O., No. 562 W., dated 20th February 1892, for deepening the main gate well of the jail.

2. The outlay incurred on the work to end of 1897-98 was Rs. 4,250, and the current year's grant is Rs. 6,650. As the work has practically been stopped pending sanction to the revised estimate, there is no likelihood of any additional allotment being utilized in the current official year. The balance of the estimate will therefore be provided in the estimates for 1899-1900.

3. The Superintending Engineer's proposal to substitute an aërmotor for pumps is approved.

4. Attention is drawn to the Chief Engineer's note read above.

5. The sanction accorded in paragraph 1 of these Proceedings has been registered as Provincial No. 102 W. of 1898-99, and classified as Civil Buildings—Original Works.

(True Extract.)

Under Secretary to Government.

To the Superintending Engineer, IV Circle,
with twenty-two enclosures.

„ Examiner, Public Works Accounts.
„ Judicial Department.

Exd. T. K. Narayana Aiyangar.

Read the following:—

Print

Letter from the Inspector-General of Prisons, No 5986 dy 8th October, 1898

Endorsement thereon in the Judicial Dept., No 2241 dy 25th October, 1898

Letter from the Suptg Engineer, IV Circle, No 632 W dy 6th December, 1898

Note by the Chief Engineer, P.W.D dy 23-12-98

Circulated to

His Excellency the Governor (2)

The Honourable Mr. Wintlebotham (1)

ORDER.

I am not clear how this work affects "Judicial", but I see no objection to the project.

6-1-99

Filed S. 9.1.99

30

For perusal
Am ACR
11-1-99

T. A.
B. P.
C. S.

The revised estimate, amounting to Rs. 18,580, for the water supply scheme of the Central Jail at Coimbatore, is sanctioned, in supersession of the estimate of Rs. 5,650, sanctioned in G.O. No. 562 W. d. 20th February, 1892, for deepening the main gate well of the jail.

2. The outlay incurred on the work to end of 1897-98 was Rs. 4,250, and the current year's grant is Rs. 6,650. As the work has practically been stopped pending sanction to the revised estimate, there is no likelihood of any additional allotment being utilised in the current official year. The balance of the estimate will therefore be provided in the estimates for 1899-1900.

3. The Suptg Engineer's proposal to substitute an aërmotor for pumps is approved.

4. Attention

4. Attention is drawn to the Chief Engineer's note read above.

5. The sanction accorded in para 1 of these Proceedings has been registered as Provincial No 102 W of 1898-99, and classified as Civil Building Original Works.

AK
22.12.98

[Signature]
22.12.98

Note The estimate is reviewed in the accompanying technical note and the Chief Engineer's note read above.

AK
22.12.98

[Signature]
22.12.98

[Signature]

To the S.E. Circle with 2 anchors
.. Engr. P.W. Dept
.. Judicial Dept

22.11.98

22.12.98

60

note by E.W.

The estimate for a water supply scheme for the Coimbatore Taluk, amounting to Rs 18,580, is recommended for sanction with the following remarks:-

- (1) The steining ^{did} be stopped 15 ft from the bottom of the well.
- (2) The door at the head of the ramp should be kept locked and the key in Taluk Superintendent's possession. This will prevent the drawing of water by chatties.
- (3) The distributing tank ^{did} be provided at the well.
- (4) An Aeromotor, as recommended by the Super Engineer, in his letter No. 662 dated 6th Decr 1898, is ~~approved~~ considered likely to prove an economical & efficient substitute for pumping, & is recommended.

E.W.

AK

22.12.98

[Signature]
22.12.98

Public Works (1898) Department.

CURRENT No. 10172

From The Supt. Engineer,
4th Circle.

Order

W
The Aeromotor might be approved,
the S.R.'s letter being printed with
sanctioning C. Parry & Co have tried
one of these Aeromotors with
excellent results.

No. 632
W

2. The other points are
- remark is required can be
bodied in an E. W. Note, based
on your remarks of 21st with
Technical Note & estimate
sanctioned A.R.

Dated 6th December 1898

Received 3
Registered 8.12.98

Enclosures One.
Spare copies ✓

SUBJECT.

Pressure of wind in connection
with the Central Jail work
at Coimbatore -
Forwards a statement
showing the — & recommends
the trial of an Aeromotor.

W this SW
M. 12
to Memo no 531
for forwarding of
note
14/12/98

BACK PAPERS.

No.	Date.
5314C	25.11.98
3 plans	
4443C	10.11.98
3073C	5.7.98
2737C	21.6.98
2759C	8.6.98
2384C	4.5.98
911W	2.4.98
1332Jdt	18.2
2774W	25.7.98. P.C.
565W	20.2.92

FURTHER PAPERS.

No.	Date.

6 0
4 8
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AERMOTORS.

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&c.

FROM THE CELEBRATED

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KALLAI,

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Southern India.

No. 6
W

Office of the Superintending Engineer,
FOURTH CIRCLE,
Coimbatore 6th December 1898.

48

From A. H. Garrett Esq
Superintending Engineer,
Fourth Circle, Coimbatore.

To The Chief Engineer
P. W. Department, Madras.

Enclosures. 1.
Statement.

Sir,

With reference to your Memo
No 5314C dated 25th November 1898, I
have the honour to forward copy of
a statement received from the District
Medical and Sanitary Officer giving
information about the wind at Coim-
batore from November 1897 to October 1898.

2 As the statement does not show
how long the wind was blowing each
day, its velocity and consequently the
 motive force available cannot be cal-
-culated.

3 An Aermotor, however, requires
a very gentle breeze and as the pump
is

is capable of delivering 10,000 gallons in 4 hours there would, I imagine on very few days in the year when the wind pressure would be insufficient.

4 But should this ever happen the well might be worked by convicts as at present or recourse might be had to the other wells.

5 At present there are two wells outside the jail and two inside. Of the outside wells the one which has been deepened by us is not used at present for the supply of drinking water, and the other well which is used for drinking purposes generally runs dry in the hot weather.

6 Of the two inside wells one supplies a very precarious supply of good drinking water, and water from the other is only used for bathing purposes. The water, of which there is always a good supply is pumped up into a cistern measuring $14 \times 14 \times 5$.

7 The drinking water supplied from the outside well is carried by an iron pipe

to a masonry cistern about 4 feet square inside the jail from which it is distributed by water carts.

58
8 If we put up an Aeromotor it would be advisable to substitute for the small masonry cistern one capable of holding about a week's supply of drinking water, but even if this were not done, it would always be possible to fall back on the existing methods of supply in case of the wind failing for any length of time.

9 The employment of an Aeromotor would there be attended by no risk at all. They seldom get out of order, which is far from being the case with ordinary pumps worked by convicts, and I strongly recommend that one should be tried at the Coimbatore jail.

I have the honor to be

Sir,

Your most obedient servant

Ansamed.

Superintending Engineer & Circle

6.12.90

Statement showing the daily force of the wind at the Meteorological Observatory, Coimbatore.

Date	November 1897	December 1897	January 1898	February 1898	March 1898	April 1898	May 1898	June 1898	July 1898	August 1898	September 1898	October 1898	Remarks.
1	39.3	45.3	56.3	33.6	27.3	78.1	14.7	13.0	126.1	116.5	71.2	3.3	
2	53.3	40.6	44.3	31.1	31.2	35.9	29.6	24.2	193.1	154.0	46.9	13.8	
3	30.5	88.0	48.6	62.7	42.1	41.1	13.6	14.2	204.6	127.7	30.7	13.0	
4	37.2	76.3	63.3	91.5	51.1	30.0	23.2	18.4	124.6	143.4	39.5	10.5	
5	62.4	85.6	62.8	35.0	60.4	28.0	44.9	71.0	89.6	183.8	41.9	13.2	
6	46.6	91.6	40.6	13.7	49.1	54.0	20.7	122.1	124.7	204.8	70.3	5.0	
7	41.2	97.7	50.7	24.5	54.1	23.2	51.6	132.9	130.9	209.7	52.4	23.8	
8	22.4	96.5	50.6	14.3	43.9	21.1	45.4	131.8	56.0	268.4	65.4	35.7	
9	47.5	84.4	49.2	21.5	41.9	24.7	48.5	110.1	85.3	206.4	128.1	16.3	
10	22.5	80.9	45.2	22.2	63.1	64.9	39.1	181.5	59.6	198.1	140.9	11.0	
11	41.1	48.8	65.5	24.5	68.1	43.1	55.4	116.7	83.1	160.9	136.5	4.4	
12	49.4	41.4	53.4	28.4	61.0	50.1	54.8	125.6	123.1	183.7	145.5	24.6	
13	25.7	66.2	53.7	24.9	71.0	65.3	32.8	132.2	126.8	145.6	117.3	41.5	
14	22.8	44.6	73.8	34.9	71.8	81.0	31.6	167.2	120.2	72.5	121.0	18.5	
15	70.0	57.5	81.1	27.9	75.1	91.2	27.3	199.1	106.4	62.3	97.4	7.0	
16	43.3	42.5	55.6	34.5	70.9	69.3	35.9	161.8	77.3	64.7	56.8	7.1	
17	44.8	38.7	38.2	30.7	31.5	32.1	31.0	146.3	59.0	80.0	48.1	13.6	
18	49.3	44.3	35.3	31.3	41.1	51.6	31.7	149.9	86.9	89.5	33.4	8.4	
19	35.9	71.2	32.3	36.9	51.9	25.4	31.0	93.5	49.3	39.2	61.7	4.8	
20	38.9	61.3	30.8	31.9	40.6	13.3	20.4	141.4	77.1	65.6	44.2	5.7	
21	40.3	47.3	40.7	40.8	51.1	42.7	28.5	127.1	189.4	67.8	35.0	12.5	
22	50.6	82.4	74.2	28.3	43.0	13.1	22.7	137.2	222.2	76.1	37.5	12.6	
23	39.5	98.1	30.0	30.8	50.9	11.6	15.3	138.2	270.9	125.5	36.5	9.0	
24	74.3	55.7	34.5	38.4	72.9	15.7	7.0	147.0	283.0	73.7	8.1	27.5	
25	24.3	60.5	31.4	30.5	81.1	24.8	9.0	116.0	250.7	56.0	16.1	6.9	
26	35.7	48.3	39.9	40.2	66.0	30.8	11.5	99.8	192.6	49.1	6.7	9.1	
27	31.1	51.5	33.7	42.6	68.1	25.1	9.7	69.8	201.0	59.0	17.2	8.2	
28	33.1	55.8	39.8	48.0	51.0	41.3	21.7	57.7	204.9	40.5	25.5	12.7	
29	44.5	91.9	39.2		70.9	9.8	12.4	156.7	115.7	57.2	42.5	10.2	
30	33.6	120.0	38.4		47.9	10.1	9.2	170.4	105.4	83.8	7.3	4.4	
31		81.8	33.5		55.0		14.0		100.7	104.3		8.9	

The figures show miles of air during 24 hours in a day.

Coimbatore
5th December 1898

(True copy)

Enured.

(Signed) G. S. Williams M. D. Capt. R. M.
Acting District Medical Substantary Officer

Superintending Engineer
Tenth Circle

No. 5314C d/ 25-11-98

P. W. Dept.

Memo.

With reference to the estimate of Rs. 18,580 for the water supply scheme of the Central Jail, Coimbatore submitted by the Suptg. Engineer, IV circle through the -- Judicial Department, the undersigned

has the honour to request that the ~~supply particulars regarding wind pressure~~ Suptg. Engineer will be so good as ~~at Coimbatore~~ to report whether the wind pressure on ordinary days at Coimbatore is sufficient to work an ~~motor~~ ^{also} whether one of the existing pumps in ^{can} the Jail ~~may~~ be fixed for use by -- convict labour when the wind fails.

ACK
24-11-98.

showing what the wind pressure is for how many days in the year it may be expected to be sufficient to work an also motor, and how many consecutive days it ^{is likely} may be expected to fail

[Handwritten signatures and initials]

To
The Superintending Engineer,
IV Circle.

[Handwritten signature]

29/11/98

[Handwritten signature]

Chand... 344 of...

Current No. 8879

Letter No. 2241

Dated 25th October 1898

From the Judicial Department

NOTE BY TECHNICAL SECTION.

Name of work Water supply scheme
of the Coimbatore Jail.
Est R² 18,580.

The original estimate of R² 5,650 was sanctioned in G. O. 10562 W dated 20th Feb 1892 for deepening the main gate well. It was afterwards decided to excavate a new well and a revised estimate for Rs 10,900 was submitted for sanction which included expenditure already incurred and for that necessary to complete the work, including a distributing tank and a system of pipes for carrying water to certain parts of the Jail. This was reviewed in Technical note dated 11-3-98. Flag H.

This estimate was returned unsanctioned in G. O. 10911 W dated 2nd April 1898 for revision with reference to paras 3 & 4 of note by the Chief

Ac. C
Issue letter to 38 IV
with reference to W's para 4 below
Ac. H
22-11-98.
DW

- W
In order whether
- (1) Training is to be stopped 15' from bottom
 - (2) Ramps to be omitted
 - (3) Distributing tank at well to be provided.
 - (4) Acromotor to be preferred to pumps. If so, whether 12 hours' storage is to be provided.
 - (5) Other arrangements in the Billon's estimate, approved.

Ac. H
13-11-98. 1850
Pump Acromotor 2000 lbs

- (1) No
- (2) As the ramp has been excavated already it will be unnecessary to remain as it will give easy access to the well for repairs of pumps & if the door is kept locked, the key in Jail is not a horseman there and he will be prevented from getting water by Chakras.

- (3) No
- (4) Ask 28 for information about would become at Coimbatore one of the existing pumps in the Jail (P. W. 6043 280-5-98) be used for use by convict labour when the revision is made. (5) No

Superintending Engineer

Engineer Flag C.

The Sups Engineer Circle now forwards for sanction of Govt, through the Inspector General of Prisons, with his letter No 620 dated 1st October 1898 a complete revised estimate amounting to Rs 18,580, which includes the 4 items of Rs 6,810 already incurred, and provides for all that is absolutely necessary to complete the well itself, with a ramp as per plan II, and for the execution of a system of water distribution to various parts of the Jail shown on Sheet III as detailed in Executive Engineer's report accompanying the Estimate Flag B.

The chief additions are

- (1) an increased diameter of the well.
- (2) the construction of a permanent ramp with a slab stone covering, &
- (3) an elaboration of the distribution arrangement.

It is pointed out in para

1 of this report that the

It is a sheer misnomer to term it a 'revised estimate', there being no resemblance to the original estimate.

I conclude this means that the excavation of the 12' diameter well was stopped when it appeared that so large a drain was not required. There is nothing to show at what stage the well excavation is at.

increasing the interior diameter of the well from 7 ft to 12 ft on the supposition that the rate of inflow was unknown. It is noted that the well was once pumped dry and filled up again 28½ feet in depth in 4 hours, and it is argued from this that the requirements of the Jail are adequately met without increasing the diameter to 12 feet which, however, has been allowed

for the top half of the well. The question arises whether this inflow can be counted upon throughout the year, if so, the proposals seem sound.

The excess of Rs 12,930 or 229 per cent of the revised estimate over the original estimate, is due to the following causes.

(a) Deviation from Org. Est	Rs 1,160
(b) Insufficient provision in original estimate	Rs 4,150
(c) Increase in rate	Rs 26
(d) Items not provided for in original estimate	Rs 8,310
Total	Rs 13,646
Savings	Rs 716
Net excess	Rs 12,930

Item a - Excess due to diameter of well being increased from 7½' to 12' and 14' respectively.

and steining of well from
"Brick in Cement" and "Brick
in brick mortar" to "Brick
moulded brick in Portland
Cement".

Item b. Original lump sum
provision of Rs 2,000 for
Pumping charges found
insufficient.

Item c. due to increase in
rate of 'Pointing in Cement'
from Rs 2-2-0 to Rs 3-8-0.

Item d. The following
entries have not been
provided for in the original
Estimate.

Item No

15 - Concrete in Cement for
filling interstices between
brickwork Rs 145

16. Guide beams wrought
and put up Rs 72

$\frac{8}{20}$ - Providing pump to
well with movable
platform Rs 1,545

21 - Providing pipes for
carrying water from
Main Gate Well to
Central Jail Rs 2,850

22 - Coping over tank
& constructing an entrance
to the Main Gate Well Rs 2,670

3. Expenditure incurred in
cutting portion of tank Rs 161

$\frac{11}{24}$ - Expenditure incurred
at site Rs 257

26. Expenditure likely to be in-
curred till work is commenced
Rs 319
Total Rs 8,310

An Aeromotor would be a
poor experiment. If it only
saves our intermittent supply
by additional storage will
swallow up the saving in
capital cost. On the other hand
the maintenance charges of the
pumps will be saved by using
an Aeromotor. Meteorological
observations might show
how many days storage
would be safe to adopt.

Ramps might be omitted &
the Distributing tank at the
Well provided.

The Supt Engineer is in favor
of substituting an Aeromotor
in lieu of the Pumps designed
by Mr. Mass Supt. P. W. Work.
Shakes vide his letter No 620
dated 1st October 1898 Flag
G. but this is not approved by
the Inspector General of Prisons
vide para 5 of his letter No
5986 to the Chief Secretary
to Government Flag A.

In the above quoted letter
paras 3 & 4 the Inspector
General of Prisons also
disapproves of the tank
and water distribution ar-
rangements proposed by
the Executive Engineer &
detailed in paras 7 & 9
of his report, and prefers
Mr. Malet's proposals made
in Estimate submitted by
him for Rs 10,900 returned
un sanctioned.

Steining. This is commenced
at a higher level in present
estimate viz. 15 feet instead
of 7 feet from the bottom.

5 feet is considered ample
by the Executive Engineer
to keep all surface drain-
age from percolation.

Ramp. No lining has been
given to the sides of the
ramp; unless the rock
is very fine it is doubtful
if it will stand perpendicularly
to a depth of 55 feet - 3 1/2
wide. There will be very little light
down the ramp.

Rates. Data has been sub-
mitted in principal items.
It is proposed to get the
bikes from Messrs Richardson
& Crundall.

With reference to the Executive
Engineer's proposal to fill
with concrete & cement
the intensions between the
brickwork the bricks
proposed will bricks to
be used.

10.11.98
15.11.98

APK
17.11.98.

I think S.E.'s proposals are
best.

H.O. For

Public Works

Judicial (189⁸) Department.

CURRENT No. 8879
42/4



From

The Insptr: Genl of Prisons,
Ootacamund

Order

Endorsement :- N^o 2241, dt 25-10-98

No. 5986.

Transferred to the Public
Works Department.

Dated 8th October, 1898

Received

Registered

Enclosures

Spare copies

A. A. Napp.

Ag Under Secretary.

For St. Group
Oct/98

Amr.

Recd.
21/10/98

T
For scrutiny
Rm
21.10.98

SUBJECT.

Forwards for the approval &
sanction of Govt: Plans & Estimates
amounting to Rs 18,580 for the water
supply-scheme of the Coimbatore
C.J.

2.

The Public Works Dept

BACK PASS

G.O.	No.	Departm
630	19.4.98	
1332	18.8.96	

FURTHER PAPERS.

G.O.	No.	Department.	Date.

H.O. Form No. 2 (1900)—June 1897.

No. 5986.

OFFICE OF THE INSPECTOR-GENERAL OF PRISONS,
Dated Ootacamund 8th October 1898.

From

A. G. CARDEW, Esq., M.A., I.C.S.,

INSPECTOR-GENERAL OF PRISONS,

To

THE CHIEF SECRETARY TO GOVERNMENT.

SIR,

I 630
Enclosures. 194.82

With reference to G.O.No.911/W,dated 2nd April 1898,I have the honour to forward for the approval and sanction of Government Plans & Estimates amounting to Rs 18580 for the water supply-scheme of the Coimbatore Central Jail.

2. It seems clear from Mr.Burlton's report accompanying the estimates that the objections to Mr.Malet's estimate which were taken in para 3 of the Chief Engineer's Note dated 28th March 1898 were founded on some misapprehension.The inflow into this well is so rapid that the difficulty has all along been,not to get enough water in,but to get enough water out to enable the well to be lined.The Executive Engineer now proposes,in view of the difficulty of getting the last 8 feet of water out of the well,to stop the steining at 15 feet from the bottom.So far as the supply of water is concerned,unless the springs are interfered with by the steining,there is not much reason to fear a deficiency.

3. A revision of Mr.Malet's estimate seems,however, to have been called for on other grounds.One of these is the necessity which is stated to have been found for constructing a ramp which the present Executive Engineer proposes to make permanent.This item will apparently cost Rs 2670 plus Rs 420 for a cover to the entrance.It is,in my opinion,inexpedient to have a ramp or steps,down to a drinking water well.The presence of these steps would undoubtedly facilitate pollution

of

of the water-supply just in proportion as it facilitated access to the water. With such steps in existence, there is a strong tendency should any small hitch or difficulty occur with the pump, to put a gang of convicts to fetch water up the steps in chatties. Nor does there appear to be any strong reason for retaining the ramp. The Coimbatore soil is full of lime and consolidates well, and if the steining is well put in, and the soil behind it well tamped down, no water-logging should occur.

4. Another point in the present estimate which does not commend itself to me is the abandonment of Mr. Malet's proposal to put the distributing tank at the well. This tank at present stands on masonry arches near the centre of the Jail, at a distance of 730 feet from the well. Mr. Malet proposed to move the tank to the side of the well, so that the water would be delivered into the tank by the Pumps and would be distributed thence by pressure. This tank was erected by the Public Works Department only 5 or 6 years ago, being, I believe, brought all the way from Lovedale on the Nilgiris. In any case its removal from its present site to the well does not appear to be a very arduous undertaking. On the other hand the retention of the tank in its present position will, as I understand, impose on the Pumps the additional labour of driving every ounce of water a distance of 730 feet further than would otherwise be the case. This seems a very serious addition to the work to be done by the Pumps, and by the men who work them, and if I understand the proposals correctly I am strongly of opinion that the tank should be moved to the well.

5. The question as to the Pumps to be employed remains. The Superintending Engineer, in forwarding the Plans, writes as follows:-

" Instead of the pumps designed by Mr. Moss and estimated to cost Rs 1,850 I should be inclined to substitute an aeromotor.

I wrote to Mr. Brown at Calicut who is the agent of the Chicago Aeromotor Company giving particulars of our requirements, and after communicating with America he is able to give a quotation which is about Rs 2,000 less than the estimated cost of the pumps.

Coimbatore is an ideal place for an Aeromotor as there are few days in the year when there is not enough wind to work one.

Pumps worked by convicts are seldom satisfactory. They are continually getting out of order & give a lot of trouble."

I regret that I am unable to offer any opinion regarding Aeromotors as I have no experience whatever regarding them & as I have no information

information as to the number of calm hours to be expected monthly at Coimbatore. If the labour of raising water by employment of convicts on a pump could be saved and the same result produced by the use of an Aeromotor, the advantage would be great, but it would, on the other hand, be decidedly awkward if, at any season of the year, there were not enough wind to raise the necessary supplies of water. The adoption of an aeromotor would, therefore, appear to me an experiment as to the working of which at Coimbatore nothing is known, and the information in the Superintending Engineer's letter above quoted is far from definite. Another objection to my mind is that the aeromotor is proposed to be got from America, whereas the Pumps would be of English or local make. The amount provided in the revised estimate for the Pumps is Rs 1,850 & it is presumed that this is for 2 pumps, as the Report distinctly says that two Pumps will be provided. It is thus not clear how the Aeromotor could cost Rs 2,000 less than the Pumps. But it is certain that if an Aeromotor is adopted, it will be necessary to add an additional storage tank to guard against want of water on days when the Aeromotor does not work. On these grounds therefore, the adoption of Pumps appears preferable.

I have the honour to be,

Sir,

Your most obedient servant,

A. G. Cardew.
Insptr: Genl of Prisons.