

No 2774W, dt 25<sup>th</sup> September 1896

Communicated to the  
Superintending Engineer, T. Birch.

(sd) D. M. C. N. C.

W.

Government { 1896 } of Madras.  
JUDICIAL.

Recd.

Enclosures.

Regd.

1896.

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G.O., No. 1332, 18th August 1896.

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AUGUST.

Well in the Central Jail, Coimbatore.

Approving the suggestion of the Executive Engineer, Coimbatore Division, that the — should not be deepened any further, and that no more money should be spent upon it except for the purpose of steining and providing proper means of drawing and distributing water.

20

The Superintending Engineer, T. Birch.

No. 1332, JUDICIAL, 18TH AUGUST 1896.

GOVERNMENT OF MADRAS.

JUDICIAL DEPARTMENT.

READ—again G.O., No. 2291, Judicial, dated 8th November 1895.

READ—also the following papers :—

From the Superintendent, Central Jail, Coimbatore, to the Executive Engineer, Coimbatore Division, dated 21st April 1896, No. 1097.

Referring to G.O., No. 2291, Judicial, dated 8th November 1895, I have the honour to report, for your information, that the well newly excavated at the Central jail main gate was, as suggested by the Sanitary Engineer in paragraph 4 of his letter to Government, No. 2955, dated 8th October 1895, regularly drawn on daily for a period of about four months, and a sample of water taken from it was sent to the Chemical Examiner for analysis this month. In forwarding herewith a copy of the Chemical Examiner's analysis, I have the honour to request you to be good enough to make the necessary report to Government.

ENCLOSURE.

|                                                   | Water from the new well. |
|---------------------------------------------------|--------------------------|
| Total solids grns. per litre .. .. .              | 2.210                    |
| Volatile solids do. .. .. .                       | 0.660                    |
| Chlorine do. .. .. .                              | 0.497                    |
| Total hardness Clark's scale .. .. .              | 33° 250                  |
| Permanent hardness Clark's scale .. .. .          | 18° 200                  |
| Free ammonia mgrms. per litre .. .. .             | Trace.                   |
| Albumenoid ammonia mgrms. per litre .. .. .       | "                        |
| Nitric acid mgrms. per litre (as ammonia) .. .. . | 18.750                   |

REMARKS.—On comparing this with the result of an analysis made last July, there is a very marked rise in the nitric acid and an equally marked diminution of the ammonias. I cannot help suspecting that this is due to former contamination. A survey of the drainage area would probably elucidate this point. Even irrespective of this, the hardness is so excessive that it alone would suffice to condemn the water.

(Signed) G. L. VAN GEYZEL,  
Surgeon-Major.

No. 1552.

Copy forwarded to the Superintending Engineer, IV Circle, for disposal, with reference to this office No. 5043 of 18th December 1895.

2. It is suggested that no more sinking or boring should be undertaken, as there is but little probability of finding good potable water, and that all money spent in future should be devoted to steining and providing proper means of drawing and distributing water.

The water is as good if not better than any used by the European residents of Coimbatore.

(Intld.) J.C.L.

COIMBATORE DIVISION,  
11th May 1896.

(Signed) F. W. ASHPITEL,  
Executive Engineer.

## No. 231 W.

Submitted to the Chief Engineer, Public Works Department, with reference to his No. 128 C., dated 9th January 1896. I fully concur in paragraph 2 of the Executive Engineer's proposals.

14th May 1896.

(Signed) J. C. LARMINIE,  
Superintending Engineer, IV Circle.

## No. 237 D.

Transferred to the Judicial Department with reference to G.O., No. 2291, Judicial, dated 8th November 1895.

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,  
Joint Secy. to Govt., P.W.D.  
23rd May 1896.

## Endorsement No. 1125.

Referred to the Inspector-General of Prisons for remarks.

(By order.)

OOTACAMUND,  
3rd June 1896.

(Signed) W. FRANCIS,  
Ag. Under Secretary.

From A. G. CARDEW, Esq., M.A., Inspector-General of Prisons, to the Chief Secretary to Government, dated 11th June 1896, No. 3735.

In returning the papers received under Mr. Francis' endorsement No. 1125, dated 3rd June 1896, I have the honour to state that I concur in the recommendation, which has the support of the Superintending Engineer, contained in paragraph 2 of the Executive Engineer's endorsement No. 1552, dated 11th May 1896. The necessary funds have been provided in the budget of the Public Works Department for the current year.

## Endorsement No. 1238.

Referred to the Sanitary Engineer for early remarks.

(By order.)

OOTACAMUND,  
18th June 1896.

(Signed) W. FRANCIS,  
Ag. Under Secretary.

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated 27th July 1896, No. 2311.

## Coimbatore Jail well.

With reference to Mr. Acting Under Secretary Francis' endorsement No. 1238 of 18th June 1896, I have the honour to inform you that the question for consideration seemed to be one which fell more within the province of the Sanitary Commissioner than the Sanitary Engineer, and I therefore requested that officer to give his opinion on the subject.

2. The following extracts from his note are forwarded for the information of Government:—

\* \* \* \* \*

"2. I think, remembering the nature of the strata sunk through, that the present analysis is favourable. The water has now a high grade of organic purity, showing that the filtration through the soil has been sufficient to deprive the water almost fully of organic matter in solution whatever may have been its former origin. In this connection, it must be held in mind that the trenches were in existence but a very short time, and are now abolished. What has to be dealt with, therefore, is water that is safe from contamination by organic matter passing through the soil, if kept free from deposited impurities in the drainage cone of a gross nature, and, in all probability, therefore, is of a good grade of bacterial purity.

\* Dr. King refers to night-soil trenches which were within the drainage cone area but have been removed.

(Signed) J. A. JONES,  
Sanitary Engineer.

from contamination by organic matter passing through the soil, if kept free from deposited impurities in the drainage cone of a gross nature, and, in all probability, therefore, is of a good grade of bacterial purity.

"3. But analysis shows that it is highly charged with salts of the most objectionable character. Again the prime object of sinking the well was apparently to get a water free from the objectionable hardness. In this respect, the water is worse than that of the other wells; but not worse than these wells were previously.

"4. What then is the hope of securing what is really sought for, viz., a water better in quality as to hardness. In this stage of the work, it is impossible to give a reply to this query. The condition under which alone a correct answer could be given is not present. In its existing unlined state, not only is the water at the lower depths received, but also the tricklings from the upper strata, which, it is well known, are highly charged with salts. Had the well been lined as the various strata were passed through, now that continual withdrawal has been practised, the result of the experiment might be regarded as definite; but, as this was not done, it must be regarded as incomplete. In short nothing but lining the well, or, still better, sinking a pipe as suggested already by the Sanitary Engineer can settle the matter.

"5. This being so, it may be asked whether the late waiting and experimenting as to continuous withdrawal has been of any good, and whether any conclusions can be deduced therefrom. I believe so, in that it has got rid of the great factor of doubt as to organic purity. In this connection, the question of 'former sewage contamination' may be put aside.

"6. Government should, therefore, I think be addressed pointing out the nature of the requirement, and the impossibility as to concluding concerning the getting rid of the salts without the tube being put down.

"7. As to the potability of the water, I believe experience in the Coimbatore jail and elsewhere points to the fact that, although the water of this composition is most undesirable for medical reasons, Natives who have been accustomed to such water for a long period would not suffer from it. I therefore think no harm need be anticipated if it were issued even as it stands if that course by reason of absence of water were necessary. But holding in memory the good organic purity of the water, I conceive it would pay to treat it for the removal of the salts by the lime and soda process—if, after a fair trial, this degree of hardness still existed—notwithstanding the existence of the tubing and a second trial, under these conditions, of continuous withdrawal."

3. It is therefore a question for Government to decide, seeing that Dr. King considers the water safe for issue in the present state of the well, whether it is prepared to go to the expense of sinking the tube as originally proposed.

## No. 918.

Transferred to the Judicial Department.

FORT ST. GEORGE,  
6th August 1896.

(Signed) W. W. PHILLIPS,  
Ag. Assistant Secretary.

ORDER—No. 1332, Judicial, dated 18th August 1896.

The suggestion of the Executive Engineer in paragraph 2 of his endorsement No. 1552, dated 11th May 1896, is approved.

(True Extract.)

J. F. PRICE,  
Chief Secretary.

To the Inspector-General of Prisons.

„ Public Works Department.

„ Sanitary Engineer, through the Local and Municipal Department.

Ead. Shaik Kareem.

*Public Works Department.*

Government { 1896 } of Madras.

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(By order.)

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Ed. Shaik Kareem.