18.12.08

Judicial (1895) Department.

ORDINARY PRINTED.

G.O., No. 2291

DATED 8 Nov. 1895

INDEXED.

[Despatch Abstract.]

WELL IN THE COIMBATORE CENTRAL JAIL.

Communicating to the Public Works Department, with remarks, letter from the Sanitary Engineer regarding the further sinking of the----.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
C	5374		95	Lodged 9-12-95			
	2371		96				

Govt. of {1895} Madras.

JUDICIAL.

Issued

Recd. *Encl.*

G.O., No. 2291, 8th November 1895.

NOVEMBER.

Well in the Coimbatore Central Jail.

Communicating to the Public Works Department, with remarks, letter from the Sanitary Engineer regarding the further sinking of the —.

No. 2291, JUDICIAL, 8TH NOVEMBER 1895.

GOVERNMENT OF MADRAS.

JUDICIAL DEPARTMENT.

READ—again the following paper :—

G.O., No. 1300, Judicial, dated 27th June 1893.

Read—the following letter from the Inspector-General of Prisons, dated 19th June 1893, No. 3030 :—

I have the honour to forward herewith a letter, No. 1595, dated 12th instant, from the Superintendent, Central Jail, Coimbatore, with enclosure, recommending that, in order to give effect to G.O., No. 909, dated 2nd May 1893, a fresh well be dug near the present main-gate well and be carried down 50 feet below the level of the present well.

2. If the deepening of the main-gate well itself is undertaken, the prisoners will have to drink the water of some other well during the operations. The quality of the water in the other wells of the jail is bad, as will be seen from the analysis in the correspondence recorded in G.O., No. 529, dated 20th March 1890. The suggestion now made therefore seems to be a good one and it is stated that the increase of cost would be small.

Order—No. 1300, Judicial, dated 27th June 1893.

The Inspector-General's proposal is sanctioned on the understanding that the increase of cost will be small.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

READ—also the following papers :—

From W. B. DEWINTON, Esq., Executive Engineer, Coimbatore Division, to the Superintending Engineer, Fourth Circle, dated 31st July 1895, No. 3051.

I have the honour to request instructions as to the further sinking of the new well in the Central Jail, Coimbatore, as I think the whole question requires re-consideration.

2. So far as I can gather from the records in my office, the history of the matter is briefly as follows.

3. With the object of finding water of greater purity, that obtained from the existing wells having been pronounced "bad" by the Chemical Analyser to Government, an estimate was prepared in 1892 by the Sanitary Engineer to Government, amounting to Rs. 6,250, for deepening the existing main-gate well by 50 feet and providing steining to prevent the entry of water above a depth of 83 feet below ground surface. This estimate was reduced by the Superintending Engineer, Fourth Circle, to Rs. 5,650, and was sanctioned by Government in G.O., No. 562 W., of 20th February 1892.

4. Nothing further appears to have been done until the spring of 1893 when the Inspector-General of Jails recommends that the work proposed by the Sanitary Engineer, which is admittedly an experiment, be carried out at once, and Government endorses this view and orders the execution of the work in G.O., No. 909, Judicial, of 2nd May 1893.

5. The proposed arrangement was, however, subsequently modified and in G.O., No. 1300, of 27th June 1893, Government orders an entirely new well to be dug to a depth of 50 feet below the existing main-gate well. This would make total depth of well 100 feet below ground surface.

6. On 15th July 1893 the Executive Engineer of this division called for tenders for excavating the well to a depth of 120 feet, and in his No. 350 C.I., dated 24th July 1893, the Superintending Engineer, Fourth Circle, says he thinks the well should be 150 feet deep, and this seems to have been the depth finally contemplated, though why this additional depth was proposed there is no evidence that I can find to show.

7. When I took charge of the division in April last, I found that the well had been excavated to a depth of 90 feet from ground surface, 45 feet through soft rock and 45 feet through hard rock which had to be blasted, and that the work was waiting for the arrival of a pump from Bombay, because the springs had increased to such an extent as to overcome the existing baling arrangements.

8. The pump arrived and was erected in May and by 18th June the water had been kept down sufficiently to allow of the excavation of an additional 3 feet in depth, but this had only been done with extreme difficulty and by working the pump night and day at great expense, so that the cost of excavating this extra 3 feet in depth was Rs. 375—Rs. 300 for baling and Rs. 75 for excavation. On 18th June the pump had to be stopped for repairs to valves and plungers, and the water rose within 6 feet of its original depth.

9. This was the state of things when I inspected the work on the 19th June, and as it was evident that the pump could not cope with the water (which all or nearly all enters at the bottom of the well, so that steining would be useless) and as we were lowering the water level in all the surrounding wells, and as the cost of the work was becoming exceedingly high, I decided to stop work and submit the whole matter for further orders.

10. I have delayed this report until I could obtain an analysis of the water in the new well from the Chemical Analyser, and this analysis I now submit. It will be seen that the water is, if anything, worse than in the existing wells.

11. The present condition of the work may therefore be summarised as follows:—

(1) Well excavated 93 feet out of a total sanctioned depth of 100 feet.

(2) Expenditure to end of June Rs. 2,444 out of a sanctioned amount of Rs. 5,650. This does not include cost of pump.

(3) Probable cost of sinking the additional 7 feet Rs. 1,000, provided the pump is found to be sufficiently powerful for the work, which is more than doubtful.

(4) Strata met with to 93 feet from ground surface—

For 45 feet soft decayed gneissic rock.
For 45 feet hard decayed gneissic rock with no sign of any change.

(5) Analysis of water from new well unfavourable.

(6) The pumping of water out of new well is lowering the water level in all existing wells.

12. Under the above circumstances, and as it seems highly improbable that we shall obtain purer water so long as we remain in the stratum of rock now present, I think it is inadvisable to proceed with the work further until we have obtained the opinion of the Geological Department upon the results that may be anticipated, and if it is decided to continue sinking, I think it ought to be done with boring tools, which would give sufficient indication of the strata met with and of the quality of the water at a minimum of cost.

13. I would, in conclusion, invite your attention to the letter of the Inspector-General of Jails, published with G.O., No. 3261 W., dated 19th December 1894, in which he says "as the well has not yet gone more than a few feet through the harder strata of rock, and as it is not yet lined, there are really no means of judging with certainty whether Sanitary Board's theory will prove chimerical or not."

The well has now been sunk 48 feet into the rock, and though it has not been lined, I do not think this fact likely to affect the quality of the water to any appreciable extent, because the present springs which feed the well enter entirely at the bottom. It is therefore I consider quite possible now to form an accurate judgment of the results of the experiment so far as it has gone.

ENCLOSURE.

ANALYSES of three samples of water by the Chemical Examiner, Madras.

—		"New well." *	"Main-gate well."	"District Jail well."
Total solids	Grms. per litre.	2·050	1·670	1·610
Volatile solids	"	0·450	0·420	0·330
Chlorine	"	0·489	0·390	0·401
Total hardness	Clark's scale.	47°·250	40°·250	37°·625
Permanent hardness	,,	23°·100	16°·800	14°·700
Free ammonia	Mlgrms. per litre.	0·064	Trace.	Trace.
Albumenoid ammonia ..	,,	0·080	0·448	0·040
Nitric acid	,, (as ammonia) ..	7·500	9·750	9·000
Apparent quality of the water as inferred from the results obtained on examination		Bad.	Bad.	Bad.

* Samples were taken with great care five feet below surface of water in well.

(Signed) W. B. deWINTON,
Executive Engineer.

29th July 1895.

No. 312-W.

Copy forwarded to the Chief Engineer, Public Works Department, for favour of orders.

(Signed) J. HANNAN,
Supg. Engineer, IV Circle.

13th August 1895.

No. 837 D.

Referred to the Judicial Department for consideration, with advertence to G.O., No. 3039, Judicial, dated 10th December 1894.

(Signed) J. PENNYCUICK, Col., R.E.,
Secy. to Govt., P.W.D.

24th August 1895.

No. 2049.

Referred to the Inspector-General of Prisons for early remarks.

(By order.)

(Signed) L. DAVIDSON,
Ag. Under Secy. to Govt.

Ootacamund,
3rd September 1895.

From A. G. CARDEW, Esq., M.A., Inspector-General of Prisons, Madras, to the Chief Secretary to Government, dated Ootacamund, 6th September 1895, No. 5437.

In returning the paper referred to me for remarks by Mr. Davidson's endorsement No. 2049, dated 3rd September 1895, I have the honour to invite a reference to my letters dated 6th March 1893, No. 784 (recorded in Public Works G.O., No. 1414 W., dated 28th May 1893), and 23rd October 1894, No. 6116, from which it will be observed that the experimental sinking of a well at the Coimbatore Central Jail was undertaken on the advice of the Sanitary Board. The statement in paragraph 4 of Mr. deWinton's letter No. 3051, dated 31st July 1895, that I recommended the carrying out of the experiment is incorrect. In the earlier of my letters above referred to I stated that, in my opinion, the experiment proposed was "useless" and "that the money spent on it would be wasted," inasmuch as that there was no evidence whatever in support of the theory suggested by the Sanitary Engineer and his Assistant, while all such evidence as was available tended to show that theory to be unfounded. The results, so far as they go, confirm the remarks then made. At the same time, as was stated in my letter of the 23rd October 1894, the conditions laid down by the Sanitary Engineer have not yet been fulfilled, and it is still possible that, when they are fulfilled, the Sanitary Engineer's predictions will be realized. It is, at any rate, impossible to assert that they will not be realized, though such realization does not appear to be very probable. If, therefore, the Sanitary Engineer's theory is to be completely tested, the work must be continued. I would suggest that the opinion of that officer, regarding the propriety of continuing the experiment, should be obtained.

No. 2162.

Referred to the Sanitary Engineer for favour of early remarks.

(By order.)

Ootacamund,
13*th September* 1895.

(Signed) L. DAVIDSON,
Ag. Under Secy. to Govt.

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated Fort St. George, 8th October 1895, No. 2955.

[*Coimbatore Jail well.*]

With reference to your endorsement No. 2162, Judicial, I have the honour to make the following remarks.

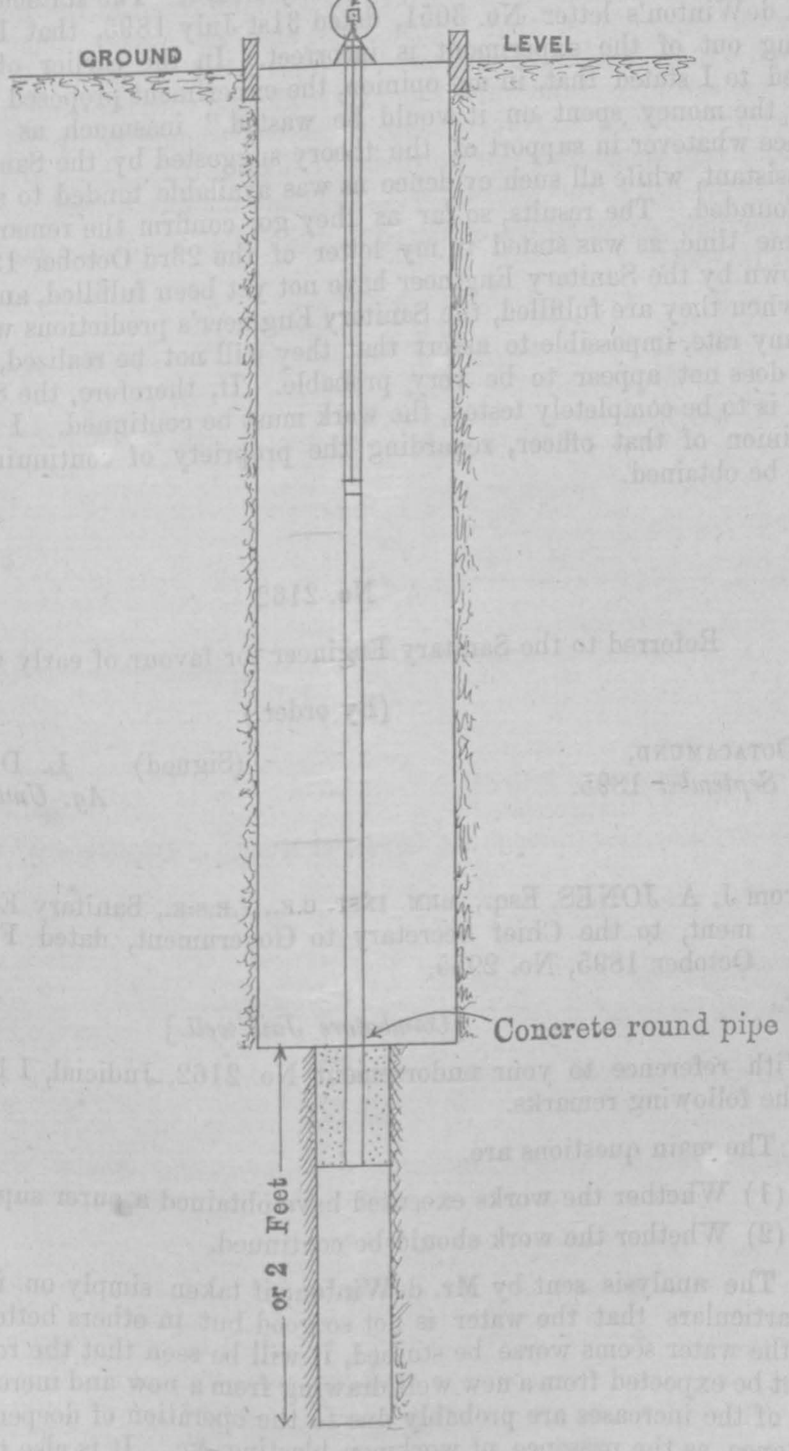
2. The main questions are.

(1) Whether the works executed have obtained a purer supply of water.
(2) Whether the work should be continued.

3. The analysis sent by Mr. deWinton, if taken simply on its merits, shows in some particulars that the water is not so good but in others better. If the items in which the water seems worse be studied, it will be seen that the results are only such as might be expected from a new well drawing from a new and increased area, and that several of the increases are probably due to the operation of deepening the well, such, for instance, as the presence of workmen blasting, &c. It is also to be noted that the existing wells have been improved by the execution of this new well, except in regard to a very much larger proportion of albumenoid ammonia in the main-gate well, which may be connected with the fact lately noticed by the Sanitary Commissioner that night-soil has been deposited within the probable drainage cone of that well.

4. While I am not prepared to say that the experiment has been as successful as hoped, I am, on the other hand, under the belief that, with a very much longer period of constant use, a superior quality of water will be obtained from the new well, and I would therefore advise Government to have this well drawn on day by day, *not intermittently*, for some months and another analysis obtained.

5. If any improvement takes place, I consider that a bore-hole ought to be put down in the bottom of the well and after it has been driven some 10 or 20 feet a water-tight pipe ought to be inserted into the bore and carried to ground level and the water from that analysed.



This will not cost much and will allow it to be eventually decided once and for all whether more money should be spent on the well or whether the jail should be included within the limits of the town supply scheme.

No. 1510.

Transferred to the Judicial Department.

Fort St. George,
24th October 1895.

(Signed) W. FRANCIS,
Ag. Under Secy. to Govt.

Order—No. 2291, Judicial, dated 8th November 1895.

The Sanitary Engineer's letter will be communicated to the Public Works Department with the request that instructions may be issued that the suggestions in paragraph 4 thereof should be followed for a period of four months, and that at the end of that time a sample of the water should be collected with care and sent for analysis, the result being reported to Government. The well should be drawn on as continuously and extensively as possible during this period, and, if it can be arranged, the quantity of water taken daily from the well should be an amount at least equal to its capacity.

2. Further expenditure on deepening the well should be postponed pending the result of this test.

(True Extract.)

Chief Secretary.

To the Inspector-General of Prisons.
" Public Works Department.
" Sanitary Engineer (through the Local and Municipal Department).

Exd. J. Henricus.

[G/9]
2,000—2-4-95.

DIARY No. 189

Ry No. 8214
4.9.95

8

Current No. 4069

G.

Jud. Department.

SANITARY ENGINEER
Register No. 3232
17 SEP 95
TO THE GOVERNMENT OF MADRAS.

Endorsement No. 2049

Referred to the Inspr.-Genl. of Prisons for early remarks

(By order)

Lionel Davidson
Ag. Under Secretary

Ootacamund
3d Septr. 1895

Dd
3/9/95

To the Inspr.-Genl. of Prisons

From

No.

Dated

Received

Enclosures

SUBJECT.

INSPECTOR-GENERAL OF PRISONS
4
MADRAS

4015

3/3064

[G./53]
3,0[illegible] 15-8-95.

18

Judicial Department.

MADRAS.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Lr 209 8/11/95

READ the following paper:—

From the Inspector General of Prisons dated 19th June 1893, No. 3030.

I have the honor to forward herewith a letter No. 1695 dated 12th Instant from the Superintendent Central Jail, Coimbatore, with enclosure, recommending that, in order to give effect to G.O. 2nd May 1893, No. 909, a fresh well be dug near the present Main-Gate well and be carried down 50 feet below the level of the present well.

2. If the deepening of the Main-Gate well itself is undertaken, the prisoners will have to drink the water of some other well during the operations. The quality of the water in the other wells of the jail is bad, as will be seen from the analysis in the correspondence recorded in G.O. 20th March 1890, No. 529. The suggestion now made therefore, seems to be a good one and it is stated that the increase of cost would

be small.

Order, 27th June 1893, No. 1300.

The Inspector General's proposal is sanctioned on the understanding that the increase of cost will be small.

(True extract)
(Signed) J. F. Price
Chief Secretary

SANITARY ENGINEER
3232
17
TO THE GOVERNMENT OF MADRAS

1/3074 of 95

84

Analyses of three samples of water by the Chemical Examiner Madras.

	* "New well"	"Main gate well"	"District Jail well"
23½	6	6	6
Total Solids — Grms per litre —	2.050	1.670	1.610
Volatile Solids — do — do —	0.450	0.420	0.330
Chlorine — do — do —	0.489	0.390	0.401
Total hardness — Clarks scale —	47°.250	40°.250	37°.625
Permanent hardness — do — do —	23°.100	16°.800	14°.700
Free ammonia — Mlgrms per litre —	0.064	trace	trace
Albumenoid Ammonia — do — do —	0.080	0.448	0.040
Nitric Acid — do — do (as ammonia)	7.500	9.750	9.000
Apparent quality of the water as inferred from the results obtained on examination	Bad	Bad	Bad

* Samples were taken with great care 5 feet below surface of water in well.

(Signed) W. B. de Winton
Executive Engineer

4795

SANITARY ENGINEER
TO THE GOVERNMENT OF MADRAS
3232
17 SEP 5

O.W.S.1
6342/95

1895
Jail
1
4069

2/3064 W.S.

No. 3057.

Executive Engineer's Office
Coimbatore Division
Coimbatore 31st July 1895

CURRENT No 4069

From
H. B. de Winton Esq
Executive Engineer Coimbatore Dn

To
The Superintending Engineer
Fourth Circle
Coimbatore

Sir,

I have the honor to request instructions as to the further sinking of the new well in the Central Jail Coimbatore as I think the whole question requires re-consideration.

2. So far as I can gather from the records in my Office the history of the matter is briefly as follows:-

3. With the object of finding water of greater purity, that obtained from the existing wells having been pronounced "bad" by the Chemical Analyser to Government, an estimate was prepared in 1892 by the Sanitary Engineer to

Government amounting to Rs: 6250 for deepening the existing main gate well by 50 feet and providing steining to prevent the entry of water above a depth of 83 feet below ground surface. This estimate was reduced by the Superintending Engineer 4th Circle to Rs: 5650 and was sanctioned by Government in G.O. No 562 J. of 20th February 1892.

4. Nothing further appears to have been done until the spring of 1893 when the Inspector General of Jails recommends that the work proposed by the Sanitary Engineer which is admittedly an experiment be carried out at once, and Government endorses this view and orders the execution of the work in G.O. No 909 Judicial of 2d May 1893.

?

1414 W 93

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√ 1808 W 93

6

6 On 15th July 1893 the Executive Engineer of this division called for tenders for excavating the well to a depth of 120 feet and in his No 350. C.J. dated 24th July 1893 the Superintending Engineer 4th Circle says he thinks the well should be 150 feet deep and this seems to have been the depth finally contemplated, though why this additional depth was proposed there is no evidence that I can find to show.

7. When I took charge of the Division in April last, I found that the well had been excavated to a depth of 90 feet from ground surface, 45 feet through soft rock and 45 feet through hard rock which had to be blasted - and that the work was waiting for the arrival of a pump from Bombay, because the springs had increased to such an extent as to overcome the existing baling arrangements.

8. The pump arrived and was erected in May and by 18th June the water had been kept down sufficiently to allow of the excavation of an additional 3 feet in depth, but this had only been done with extreme difficulty, and by working the pump night and day at great

expense, so that the cost of excavating this extra three feet in depth was Rs: 375, Rs: 300 for baling and Rs: 75 for excavation. On 18th June the pump had to be stopped for repairs to valves and plungers, and the water rose within 6 feet of its original depth.

9. This was the state of things when I inspected the work on the 19th June and as it was evident that the pump could not cope with the water (which all or nearly all enters at the bottom of the well, so that steining would be useless) and as we were lowering the water level in all the surrounding wells, and as the cost of the work was becoming exceedingly high, I decided to stop work and submit the whole matter for further orders.

10. I have delayed this report until I could obtain an analysis of the water in the new well from the Chemical Analyser, and this analysis I now submit. It will be seen that the water is, if any thing, worse than in the existing wells.

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may

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(2) Expenditure to end of June Rs: 2444 out of a sanctioned amount of Rs: 5650. This does not include cost of pump.

(3) Probable cost of sinking the additional 7 feet, Rs: 1000, provided the pump is found to be sufficiently powerful for the work, which is more than doubtful.

(4) Strata met with to 93 feet from ground surface.

For 45 feet soft decayed gneissic rock
For 45 feet hard — do — do — do —
with no sign of any change.

(5) Analysis of water from new well unfavourable.

(6) The pumping of water out of new well is lowering the water level in all existing wells.

12. Under the above circumstances, and as it seems highly improbable that

we shall obtain purer water so long as we remain in the stratum of rock now present, I think it is inadvisable to proceed with the work further until we have obtained the opinion of the Geological Department upon the results that may be anticipated, and if it is decided to continue sinking, I think it ought to be done with boring tools which would give sufficient indication of the strata met with, and of the quality of the water at a minimum of cost.

13. I would, in conclusion, invite your attention to the letter of the Inspector General of Jails published with G. O. No. 3261.W. dated 19th December 1894 in which he says "as the well has not yet gone more than a few feet through the harder strata of rock, and as it is not yet lined, there are really no means of judging with certainty whether Sanitary Boards theory will prove chemical or not".

× G.O. of 10-12-94 No 3039 P.W.

chimerical

The well has now been sunk 48 feet into the rock, and though it has not been lined, I do not think this fact likely to affect the quality of the water to any appreciable extent, because the present springs which feed the well enter entirely at the bottom. It is therefore I consider quite possible now to form an accurate judgment of the results of the experiment so far as it has gone.

I have the honor to be &c

(Signed) W. B. de Winton
Executive Engineer

No. $\frac{312}{W}$ d/13-8-95

Enclo: 1 statement

Copy forwarded to the Chief Engineer P. W. Department for favor of orders.

Supg. Engineer 4th Circle

No. 3261 W d/ 19-12-94
3741 C d/ 22-11-94
2870 W d/ 10-11-94
2693 W d/ 22-10-94
2417 W d/ 26-9-94
1092 D d/ 22-9-94
2190 W d/ 3-9-94
~~From~~ 1808 W d/ 11-7-93

The Supg. Engineer,
4th Circle.

No. 439 D d/ 21-6-93
1414 W d/ 29-3-93
692 W d/ 13-3-93
356 W d/ 9-2-93
2902 W d/ 18-10-92
23 D d/ 23-8-92
2198 W d/ 9-8-92
1565 W d/ 23-5-92

Dated 13th }
Despd. 15th } August 1895

No. 562 W d/ 20-2-92
845 W d/ 23-3-91
844 W d/ 23-3-91
654 W d/ 6-3-91
49 W d/ 7-1-91
1094 W d/ 11-11-90

No. 312
W

Enclo: 1

Well in the Central Jail
Coimbatore.

~~Forwards~~ for favor of orders Copy of Coimbatore Dr. Offr's letter requesting instructions as to the further sinking of the ___

~~P. W. CURRENT No. 6312~~

Jud. G.O. 3039 D/ 10.12.94 + papers marked for Judicial Deptt

CURRENT No. 4069
~~Enclo. 1~~

~~Recd. 17.8.95~~

CHIEF SECRETARY
26 AUG. 1895
GOVERNMENT OF MADRAS

No. 837 D. 24 August 1895

Referred to the Judicial Department for consideration with advertance to G.O. dated 10th December 1894, No. 3039 Judicial

Colonel R.E.
Secretary to Govt. P.W.D.

Recd 26th } Augt. 95
Regd 27th }
Enc. 1

CK 23/8/95

Not circulated in the P.W.D.

G.L. 5319

CURRENT No. [illegible]

JUDICIAL.

JAIL (1895) DEPARTMENT.

From

The Inspector-General of Prisons,
Madras,

To

The Chief Secretary to Government,

Dated 6th
Despatched
Received } September 1895.

Regd. 9/9

C. 4069

CHIEF SECRETARY
-9 SEP. 1895
No. 5437
GOVERNMENT OF MADRAS

Enclosures. two

Subject.

Returns with remarks the paper received under Mr. Davidson's Endorsement No. 2049 dated 3rd September 1895, regarding the further sinking of the well in the Coimbatore Central Jail.

SANITARY ENGINEER
Register No. 3232
17 SEP. 95
TO THE GOVERNMENT OF MADRAS

~~Endorsement~~ No. 2162

Referred to the Sanitary Engineer for favor of early remarks.

(By order)

Lionel Davidson

Asst. Under Secretary

Ootacamund }
13th Septr. 1895 }

Enclosure to letter No. 2955 of 1895

12/9/95

To the Sanitary Engr.
with copy of G.O.
27-6-93, No. 1300

[Form No. (4)—250—4-1-95.]

CURRENT No. 4304

No. 5437

OFFICE OF THE INSPECTOR-GENERAL OF PRISONS, MADRAS,

Dated Ootacamund, the 6th September 1895.

9B

From

A. G. CARDEW, ESQ., M.A.,
INSPECTOR-GENERAL OF PRISONS,
MADRAS,

To

THE HONOURABLE MR. J. F. Price C.S.I.
CHIEF SECRETARY TO GOVERNMENT,

SIR,

2 Enclosures.

In returning the paper referred to me for remarks by Mr. Davidson's Endorsement No. 2049 dated 3rd September 1895, I have the honour to invite a reference to my Letters 6th March 1893, No. 784 (recorded in P.W. G.O. 28th May 1893, No. 1414 W) and 23rd October 1894, No. 6116, from which it will be observed that the experimental sinking of a well at the Coimbatore Central Jail was undertaken on the advice of the Sanitary Board. The statement in para 4 of Mr. De Winton's Letter No. 3051 dated 31st July 1895 that I recommended the carrying out of the experiment is incorrect. In the earlier of my Letters above referred to I stated that, in my opinion, the experiment proposed was "useless" and "that the money spent on it would be wasted"; ~~in~~ inasmuch as that there was no evidence whatever in support of the theory suggested by the Sanitary Engineer and his Assistant, while all such evidence as was available tended to show that theory to be unfounded. The results, so far as they go, confirm the remarks then made. At the same time, as was stated in my Letter of the 23rd October 1894, the conditions laid down by the Sanitary Engineer have not yet been fulfilled

G.O. 650 RD, 13.6.93 jud

G.O. 3039 W. 12. 94 jud mis.

Ct. No. 4069 (95 in the file.

G.O. 3039 (94 jud

fulfilled, and it is still possible that, when they are fulfilled, the Sanitary Engineer's predictions will be realized. It is, at any rate, impossible to assert that they will not be realized, though such realization does not appear to be very probable. If, therefore, the Sanitary Engineer's theory is to be completely tested, the work must be continued. I would suggest that the opinion of that officer, regarding the propriety of continuing the experiment should be obtained.

I have the honour to be,
Sir
Yours ~~most~~ obdt. Servt.
A. G. Cardew.
Inspr. Genl. of Prisons

CURRENT NO. 4058

REMINDER.

No. 837 D / I

PUBLIC WORKS DEPARTMENT.

To
~~The Hon.~~ The Chief Secretary to Govt.
Judicial Deptt.

CHIEF SECRETARY
-3 OCT. 1895
GOVERNMENT OF MADRAS

1st October 1895.

No. 837 D. dated 24 August 1895
Requesting instructions as to the further sinking of the Well in the Central Jail, Coimbatore

THE undersigned has the honour to invite attention to the Endorsement ~~Order Memo.~~ noted on the margin, and to request the favour of an early reply.

C. H. B. Burton.
Under Secretary to Government,
P. W. Dept.

[illegible]
14/10.

Judicial Dept

CURRENT No. 4658

J.C. 4069/95 abs
J.C 4306/95 abs

4306

4069 3/9

2069 3-9-95

Reminder

From. P. W. Dept.

No. 837 D / I

Dated 1st }
Recd 3d } octr 95
Regd 4th }

Encl: "

Subject

Reg: an early reply to no 837 D of 24th augt 95, requesting instructions as to the further sinking of the well in the central Jail, Coimbatore.

To await the ~~receipt~~ of reply from Sany Engr to Endst d13 Sepr 95. No 2162.

D/ 25.x.95

Jp 2291 / 8.1.95 Judicial

St. 25/10/95

The reply has come pl see Ct. 5018 recd 25/10/95

29/10/95

S.E./4 25-5-94—500.

Local & Municipal Dept.

CURRENT No 3664 M

1895.

1300 = 27-6-93

From

The Sanitary Engineer
to Government,

To

~~The Chief Secretary~~
~~to Government~~
~~Local & Municipal Dept.~~

No. 2955

Dated 8 }
Despd. 9 } October 1895.
Recd. 9 OCT 95 }

Enc. 4

Subject.

Submitting certain measures for adoption to arrive at the decision whether more money is to be spent on the well in the Coimbatore Jail or whether the Jail should be included within the limits of the town supply scheme.

(With Encl 4)

14/10.

Jp 3139: 10 12 94
2485: 12 10 94
1923: 11-8 94
1300: 27 6 93
R658: 13-6 93
909: 2-5 93
464: 9-3 92
562W: 20 2 92
R1295: 21-12 91
2358: 16 11 91
880: 6 5 91 Jl
17: 6-1-91
2027: 16 12 90
529: 20-3-90
2058: 3-12 89

13 B

CURRENT No 5018

No. 1520 Jud

Transferred to the Judicial Department.

Francis.

Ag Under Secretary

V.R. 21/10/95

Fort St. George }
24th Octr 1895 }.

Encl. C Nos. 4069 & 4306 Jud retd.

Recd 25/10/95

To

The Judicial Department

5018. 1/18

S. E./6 6-9-95—1,000.

GOVERNMENT OF MADRAS.

No. 2955

OFFICE OF SANITARY ENGINEER,

Fort St. George, 8 Oct 1895.

Local & Municipal Dept.
CURRENT No. 3004 M

From

J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E.,
SANITARY ENGINEER TO GOVERNMENT,

To

The Chief Secretary to Government.
Local and Municipal Departmen

SIR,

Coimbatore Jail Well

With reference to your endorsement No. 2162 Judicial I have the honor to make the following remarks:—

2 The main questions are

(1) Whether the works executed have obtained a purer supply of water.

(2) Whether the work should be continued.

3. The analysis sent by Mr. De Winton if taken simply on its merits shews in some particulars that the water is not so good but in others better. If the items in which the water seem worse be studied, it will be seen that the results are only such as might be expected from a new well drawing from a new and
to

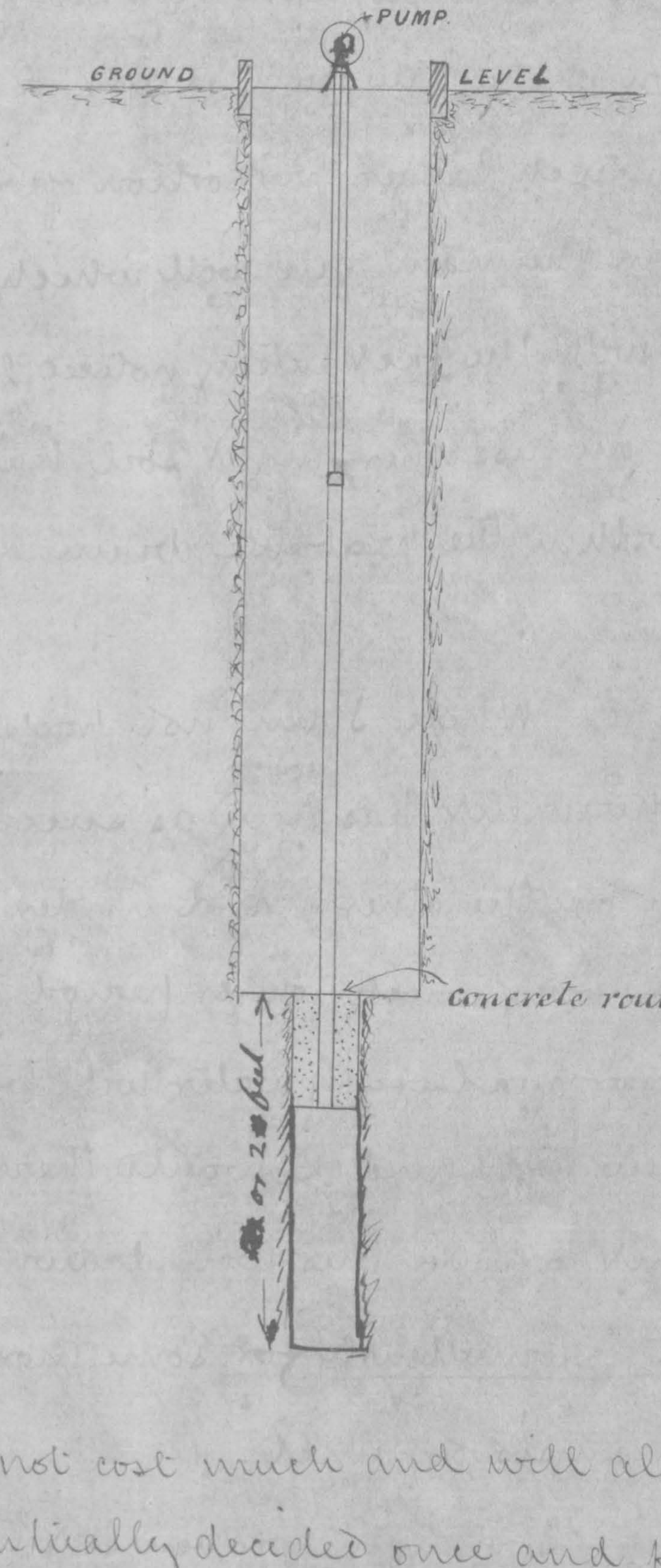
increased area and that several of the increases are probably due to the operation of deepening the well such for instance as the presence of workmen blasting &c. It is also to be noted that the existing wells have been improved by the execution of this new well except in regard to a very much larger proportion of Albumenoid Ammonia in the main gate well which may be connected with the fact lately noticed by the Sanitary Commissioner that night soil has been deposited within the probable drainage cone of that well.

4. While I am not prepared to say that the experiment has been as successful as hoped I am on the other hand under the belief that with a very much longer period of constant use a superior quality of water will be obtained from the new well and I would therefore advise Government to have this well drawn on day by day not intermittently for some months and another analysis obtained.

5 If any improvement takes place I consider that a bore hole ought to be put down in the bottom of the well and after it has been driven some 10 or 20 feet a water tight pipe ought to be inserted into the bore and carried to the ground level and the water from that analysed

Jud 22918 8/11/95

128



This will not cost much and will allow it to be eventually decided once and for all whether more money should be spent in the well or whether the Jail should be included within the limits of the town

Supply scheme

Hand

I have the honor to be
Sir
Your most obedient servant

Sanitary Engineer to Govt

RECEIVED IN THE SURVEY OFFICE
ON
15 NOV.95
MADRAS

RECEIVED IN THE SURVEY OFFICE
ON
25 NOV.95
MADRAS

Rel

W.B.H.
1.X

Regd No 2575
15-11-95

(say) four months
continuously?

Yes

To 2291
8 11 95

5/11/95

Dear Nanci

It is desirable to have as
much water as possible draw
from the well - It is not
known what amount the Jail
uses - but the least quantity t
be taken from the well dai
ought to be an amount eq
to its capacity

My dear Jones

Please see para 4 of your letter enclosed. Do you mean that the well should be drawn on by the pump three every day, as wd. the ordinary use of the well for the usual jail purposes be enough if carried on fol

---

[G./24]
248—14-11-94.

Judl. DEPARTMENT.

Papers to be read in Proceedings :—

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

A. Current No. 4069 of 1895, dated 26 Sepr. from The P.W.D.

—— 4306 —— 6 Octr. — I.G. of Prisons

Current No. 5018 of 1895, dated 25 Octr. from The Sanity. Engr. L & M. D.

ORDER.

P.S.

I don't see the good of doing anything except to order that the new well shall be drawn on as much and as continuously as possible & the results noted, after some months, by periodical analysis — I wouldn't spend any more money in the absence of proof of necessity.

4/11/95

The Sanitary Engr's letter will be comm.d to the P.W.D with the request that instructions may be issued for the carrying out of the suggestions in paras 4 & 5 of the letter and for the submission of a report thereon.

D
30.x.95

JP
1/11/95

To the P.W.D
.. I.G. of Prisons
.. Sanity. Engr.
Thro L & M. Dept.

Sinking of a new well in the Coimbatore Central Jail

C. Nos. 4069, ~~4319~~ 4638 & 5018.

CS/

Order. No 2291 d/ 8 Nov: 95

P.S.

The San. Engr's letter will be commd. to the D.P.W. with the request that the instructions may be issued that the suggestions in para 4 - thereof should be followed for a period of four months, & that at the end of that time a sample of the water should be collected with care & sent for analysis the result being reported to Govt. The well should be drawn on as continuously & extensively as possible during this period, &, if it can be arranged, the quantity of water taken daily from the well should be an amount at least equal to its capacity.

2. ~~Pending the result of this trial~~ further expenditure on deepening the well should be postponed pending the result of this test.

(for orders)

H. M.

W.C. 6.11.95 Sd 2/11/95

To I. G. of ~~Jails~~ Prisons 1 6 — desp 2/11/95

" D.P.W. - 1 "

" S. Engr. thro' L & M. 6 1 — desp 16/11/95

Print C. Nos 4069, 4304 & 5018 in full A

C 2/11

R 4/11

Sheet with diagram has been sent to the Survey Dept

No. 2291, Judicial, 8th November 1895.

After adding diagram & sketch 40 copies

19/11/95

GOVERNMENT OF MADRAS.

JUDICIAL DEPARTMENT.

Read—again the following paper:—

G.O., No. 1300, Judicial, dated 27th June 1893.

Read—the following letter from the Inspector-General of Prisons, dated 19th June 1893, No. 3030:—

I have the honour to forward herewith a letter, No. 1595, dated 12th instant, from the Superintendent, Central Jail. Coimbatore, with enclosure, recommending that, in order to give effect to G.O., No. 909, dated 2nd May 1893, a fresh well be dug near the present main-gate well and be carried down 50 feet below the level of the present well.

2. If the deepening of the main-gate well itself is undertaken, the prisoners will have to drink the water of some other well during the operations. The quality of the water in the other wells of the jail is bad, as will be seen from the analysis in the correspondence recorded in G.O., No. 529, dated 20th March 1890. The suggestion now made therefore seems to be a good one and it is stated that the increase of cost would be small.

Order—No. 1300, Judicial, dated 27th June 1893.

The Inspector-General's proposal is sanctioned on the understanding that the increase of cost will be small.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

Read—also the following papers:—

From W. B. deWINTON, Esq., Executive Engineer, Coimbatore Division, to the Superintending Engineer, Fourth Circle, dated 31st July 1895, No. 3051.

I have the honour to request instructions as to the further sinking of the new well in the Central Jail, Coimbatore, as I think the whole question requires re-consideration.

2. So far as I can gather from the records in my office, the history of the matter is briefly as follows.

3. With the object of finding water of greater purity, that obtained from the existing wells having been pronounced "bad" by the Chemical Analyser to Government, an estimate was prepared in 1892 by the Sanitary Engineer to Government, amounting to Rs. 6,250, for deepening the existing main-gate well by 50 feet and providing steining to prevent the entry of water above a depth of 83 feet below ground surface. This estimate was reduced by the Superintending Engineer, Fourth Circle, to Rs. 5,650, and was sanctioned by Government in G.O., No. 562 W., of 20th February 1892.

4. Nothing further appears to have been done until the spring of 1893 when the Inspector-General of Jails recommends that the work proposed by the Sanitary Engineer, which is admittedly an experiment, be carried out at once, and Government endorses this view and orders the execution of the work in G.O., No. 909, Judicial, of 2nd May 1893.

5. The proposed arrangement was, however, subsequently modified and in G.O., No. 1300, of 27th June 1893, Government orders an entirely new well to be dug to a depth of 50 feet below the existing main-gate well. This would make total depth of well 100 feet below ground surface.

6. On 15th July 1893 the Executive Engineer of this division called for tenders for excavating the well to a depth of 120 feet, and in his No. 350 C.I., dated 24th July 1893, the Superintending Engineer, Fourth Circle, says he thinks the well should be 150 feet deep, and this seems to have been the depth finally contemplated, though why this additional depth was proposed there is no evidence that I can find to show.

7. When I took charge of the division in April last, I found that the well had been excavated to a depth of 90 feet from ground surface, 45 feet through soft rock and 45 feet through hard rock which had to be blasted, and that the work was waiting for the arrival of a pump from Bombay, because the springs had increased to such an extent as to overcome the existing baling arrangements.

8. The pump arrived and was erected in May and by 18th June the water had been kept down sufficiently to allow of the excavation of an additional 3 feet in depth, but this had only been done with extreme difficulty and by working the pump night and day at great expense, so that the cost of excavating this extra 3 feet in depth was Rs. 375—Rs. 300 for baling and Rs. 75 for excavation. On 18th June the pump had to be stopped for repairs to valves and plungers, and the water rose within 6 feet of its original depth.

9. This was the state of things when I inspected the work on the 19th June, and as it was evident that the pump could not cope with the water (which all or nearly all enters at the bottom of the well, so that steining would be useless) and as we were lowering the water level in all the surrounding wells, and as the cost of the work was becoming exceedingly high, I decided to stop work and submit the whole matter for further orders.

10. I have delayed this report until I could obtain an analysis of the water in the new well from the Chemical Analyser, and this analysis I now submit. It will be seen that the water is, if anything, worse than in the existing wells.

11. The present condition of the work may therefore be summarised as follows:—

(1) Well excavated 93 feet out of a total sanctioned depth of 100 feet.

(2) Expenditure to end of June Rs. 2,444 out of a sanctioned amount of Rs. 5,650. This does not include cost of pump.

(3) Probable cost of sinking the additional 7 feet Rs. 1,000, provided the pump is found to be sufficiently powerful for the work, which is more than doubtful.

(4) Strata met with to 93 feet from ground surface—

For 45 feet soft decayed gneissic rock.
For 45 feet hard decayed gneissic rock with no sign of any change.

(5) Analysis of water from new well unfavourable.

(6) The pumping of water out of new well is lowering the water level in all existing wells.

12. Under the above circumstances, and as it seems highly improbable that we shall obtain purer water so long as we remain in the stratum of rock now present, I think it is inadvisable to proceed with the work further until we have obtained the opinion of the Geological Department upon the results that may be anticipated, and if it is decided to continue sinking, I think it ought to be done with boring tools, which would give sufficient indication of the strata met with and of the quality of the water at a minimum of cost.

13. I would, in conclusion, invite your attention to the letter of the Inspector-General of Jails, published with G.O., No. 3261 W., dated 19th December 1894, in which he says "as the well has not yet gone more than a few feet through the harder strata of rock, and as it is not yet lined, there are really no means of judging with certainty whether Sanitary Board's theory will prove chimerical or not."

The well has now been sunk 48 feet into the rock, and though it has not been lined, I do not think this fact likely to affect the quality of the water to any appreciable extent, because the present springs which feed the well enter entirely at the bottom. It is therefore I consider quite possible now to form an accurate judgment of the results of the experiment so far as it has gone.

Enclosure.

Analyses of three samples of water by the Chemical Examiner, Madras.

	—	"New well." *	"Main-gate well."	"District Jail well."
Total solids	Grms. per litre.	2·050	1·670	1·610
Volatile solids	,,	0·450	0·420	0·330
Chlorine	,,	0·489	0·390	0·401
Total hardness	Clark's scale.	47°·250	40°·250	37°·625
Permanent hardness	,,	23°·100	16°·800	14°·700
Free ammonia	Mlgrms. per litre.	0·064	Trace.	Trace.
Albumenoid ammonia ..	,,	0·080	0·448	0·040
Nitric acid	,, (as ammonia) ..	7·500	9·750	9·000
Apparent quality of the water as inferred from the results obtained on examination		Bad.	Bad.	Bad.

* Samples were taken with great care five feet below surface of water in well.

(Signed) W. B. deWINTON,
Executive Engineer.

29th July 1895.

No. 312-W.

Copy forwarded to the Chief Engineer, Public Works Department, for favour of orders.

(Signed) J. HANNAN,
Supg. Engineer, IV Circle.

13th August 1895.

No. 837 D.

Referred to the Judicial Department for consideration, with advertence to G.O., No. 3039, Judicial, dated 10th December 1894.

(Signed) J. PENNYCUICK, Col., R.E.,
Secy. to Govt., P.W.D.

24th August 1895.

No. 2049.

Referred to the Inspector-General of Prisons for early remarks.

(By order.)

(Signed) L. DAVIDSON,
Ag. Under Secy. to Govt.

Ootacamund,
3rd September 1895.

From A. G. CARDEW, Esq., M.A., Inspector-General of Prisons, Madras, to the Chief Secretary to Government, dated Ootacamund, 6th September 1895, No. 5437.

In returning the paper referred to me for remarks by Mr. Davidson's endorsement No. 2049, dated 3rd September 1895, I have the honour to invite a reference to my letters dated 6th March 1893, No. 784 (recorded in Public Works G.O., No. 1414 W., dated 28th May 1893), and 23rd October 1894, No. 6116, from which it will be observed that the experimental sinking of a well at the Coimbatore Central Jail was undertaken on the advice of the Sanitary Board. The statement in paragraph 4 of Mr. deWinton's letter No. 3051, dated 31st July 1895, that I recommended the carrying out of the experiment is incorrect. In the earlier of my letters above referred to I stated that, in my opinion, the experiment proposed was "useless" and "that the money spent on it would be wasted," inasmuch as that there was no evidence whatever in support of the theory suggested by the Sanitary Engineer and his Assistant, while all such evidence as was available tended to show that theory to be unfounded. The results, so far as they go, confirm the remarks then made. At the same time, as was stated in my letter of the 23rd October 1894, the conditions laid down by the Sanitary Engineer have not yet been fulfilled, and it is still possible that, when they are fulfilled, the Sanitary Engineer's predictions will be realized. It is, at any rate, impossible to assert that they will not be realized, though such realization does not appear to be very probable. If, therefore, the Sanitary Engineer's theory is to be completely tested, the work must be continued. I would suggest that the opinion of that officer, regarding the propriety of continuing the experiment, should be obtained.

No. 2162.

Referred to the Sanitary Engineer for favour of early remarks.

(By order.)

Ootacamund, (Signed) L. DAVIDSON,
13th September 1895. *Ag. Under Secy. to Govt.*

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated Fort St. George, 8th October 1895, No. 2955.

[*Coimbatore Jail well.*]

With reference to your endorsement No. 2162, Judicial, I have the honour to make the following remarks.

2. The main questions are.

(1) Whether the works executed have obtained a purer supply of water.

(2) Whether the work should be continued.

3. The analysis sent by Mr. deWinton, if taken simply on its merits, shows in some particulars that the water is not so good but in others better. If the items in which the water seems worse be studied, it will be seen that the results are only such as might be expected from a new well drawing from a new and increased area, and that several of the increases are probably due to the operation of deepening the well, such, for instance, as the presence of workmen blasting, &c. It is also to be noted that the existing wells have been improved by the execution of this new well, except in regard to a very much larger proportion of albumenoid ammonia in the main-gate well, which may be connected with the fact lately noticed by the Sanitary Commissioner that night-soil has been deposited within the probable drainage cone of that well.

4. While I am not prepared to say that the experiment has been as successful as hoped, I am, on the other hand, under the belief that, with a very much longer period of constant use, a superior quality of water will be obtained from the new well, and I would therefore advise Government to have this well drawn on day by day, *not intermittently*, for some months and another analysis obtained.

5. If any improvement takes place, I consider that a bore-hole ought to be put down in the bottom of the well and after it has been driven some 10 or 20 feet a water-tight pipe ought to be inserted into the bore and carried to ground level and the water from that analysed.

This will not cost much and will allow it to be eventually decided once and for all whether more money should be spent on the well or whether the jail should be included within the limits of the town supply scheme.

No. 1510.

Transferred to the Judicial Department.

FORT ST. GEORGE,
24th October 1895.

(Signed) W. FRANCIS,
Ag. Under Secy. to Govt.

ORDER—No. 2291, Judicial, dated 8th November 1895.

The Sanitary Engineer's letter will be communicated to the Public Works Department with the request that instructions may be issued that the suggestions in paragraph 4 thereof should be followed for a period of four months, and that at the end of that time a sample of the water should be collected with care and sent for analysis, the result being reported to Government. The well should be drawn on as continuously and extensively as possible during this period, and, if it can be arranged, the quantity of water taken daily from the well should be an amount at least equal to its capacity.

2. Further expenditure on deepening the well should be postponed pending the result of this test.

(True Extract.)

Chief Secretary.

To the Inspector-General of Prisons.
" Public Works Department.
" Sanitary Engineer (through the Local and Municipal Department).

Exd. J. Henricus.

Govt. of {1895} Madras.

JUDICIAL.

Issued

Recd. *Encl.*

G.O., No. 2291, 8th November 1895.

NOVEMBER.

Well in the Coimbatore Central Jail.

Communicating to the Public Works Department, with remarks, letter from the Sanitary Engineer regarding the further sinking of the —.

First copy sent to Press.

Returned for signature.

Despatched in print.

NUMBER OF COPIES REQUIRED.
- Order complete.
- Letter only.
- Order complete with Letter.

READ AGAIN G.O., No. DATED 189 ,

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH IN ORIGINAL.

N.B.—

A = Print in full.
F = Not to be printed.
P = Print abstract only.
Q = Print heading only.