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## MADRAS RECORD OFFICE

Government of Madras

*Public Works*

DEPARTMENT

|          |           |       |
|----------|-----------|-------|
| G.O. No. | 828       | Press |
| B.P. No. |           | Mis.  |
| Dated    | 24-3-1951 | 1951  |

Not to be folded or roughly handled

No 588. Read the following endorsement of the Chief Secretary to Government, Public Department, dated Fort St. George, 6th March 1875 :—  
From Surgeon-Major W. R. CORNISH, F R C S., Sanitary Commissioner for Madras,  
to the Hon. D. F. CARMICHAEL, Acting Chief Secretary to Government,  
Public Department, dated Vizagapatam, 19th February 1875, No. 7.

With reference to Order of Government, No 173, of 10th instant, (Public Department,) I have the honor to report that, previous to receipt of that order, and during my inspection of Vizianagaram on the 10th, 11th, and 12th current, my attention was directed to the drainage works in progress in connection with the lines of the 12th Regiment, Madras Native Infantry.

2 At the date of my visit the new drain to convey the sewage under the road and across some paddy fields to a nullah (which is one of the supply-channels of the large tank) was nearly completed, the work having apparently been undertaken as emergent.

To some extent it may remove the inconvenience complained of, as regards the lines of the regiment and public road leading to the town, and as the work is so nearly completed it should be finished with a few modifications.

3. The new sewer runs across some paddy land, and if the waste water from the sepoy lines in dry weather could be used in irrigating small patches of this land, it would be better than turning the whole of the fluid refuse into the nullah. The evil of the old plan was that the sewage was brought in stone drains to the eastern angle of the lines, and there left to stagnate, or to find its way slowly into the tank. Along the old sewage channel there is cultivated land on both sides, and I found that the people were in the habit of ponding back the sewage, so as to lift it, and irrigate small patches of garden cultivation. This is undoubtedly the best use to put the sewage water to, and the nuisance complained of has arisen from the practice of damming up the natural channel, and collecting, close to the public road, large quantities of fermenting sewage. The new drain which carries the sewage across some paddy land in a north eastern direction will allow of the sewage water being led on to the land at a greater distance from the lines and public road, and considering the high level of the drain with reference to the surrounding land, there will probably be no collection of stagnant sewage and no source of offence if the cultivators are disposed to continuing the practice of using sewage water for irrigation.

4. I may mention that no provision has been made in the construction of the new drains for discharging sewage on the fields. The drain is simply intended to convey the sewage water into a nullah, which is dry for many months of the year, and where the sewage would certainly collect and be a nuisance in dry weather.

If, however, the land on either side of the new drain were laid out for garden cultivation during the dry season, it would absorb all the sewage of the Native Infantry lines, and lessen the pollution of the tank, from which many townspeople get their water supply.

5. The connections between the street drains of the lines and, what is called in the plan, the "branch" drain, or properly the "catch drain," are very imperfect, and the level of the latter appears to be too low in one or two places. The

Proceedings of the Madras Government, Public Works Department,  
24th March 1875.

connections should be formed of cut-stone, and the defective level of the catch drains remedied.

6 On the whole the drainage of the lines is very well carried out, and I trust it may be practicable to get the owners of the land to utilize the sewage, which will now be carried across their fields at a high level.

The enclosures are returned herewith.

TRANSFERRED to the Public Works Department, with reference to the orders in that department, dated the 4th February 1875, No 21.

(Signed) W. HUDLESTON,  
Chief Secretary.

No. 589. ORDER THEREON, 24th March 1875, No. 520.

MILITARY WORKS, No 16.

COMMUNICATED to the District Engineer, Vizagapatam, who will provide means of discharging the sewage for

utilization on the fields where the cultivators may be inclined to use it, and attend to the suggestion made in paragraph 5 of the Sanitary Commissioner's letter.

(True Extract.)

Colonel, R.E.,  
Secretary to Government.

Executive Engineer's Office  
N<sup>o</sup> 1154 Vizagapatam 25 November 1875  
From  
The Executive Engineer  
Vizagapatam  
To  
The offg. District Engineer  
Vizagapatam

Sir,  
I have the honor herewith to submit a survey of part of the Vizagapatam Cantonment, and also showing the proposed outlet of the drainage, together with an estimate amounting to Rs. 1000, for leading the drainage away from the lines of the 12<sup>th</sup> Regiment &c.  
2 Since the new stone drains were built in the lines, the sewage no longer stagnates, and percolates into the ground, on the spot where it is deposited, as it did formerly; but all the sewage from the general drains now gravitates to the lowest level. There it stagnates, close to the lines (front & on the survey) and threatens to cause sickness in the place. Another smaller mass of sewage stagnates near the old Range Office. A portion of the sewage

finds its way to the tank, the water of which it pollutes; but the greater part remains, seething and emitting pestilential vapours, half-way between the lines and the tank.

3. To obviate this evil, it is proposed to lead the drainage from the Cow point, where it at present accumulates (marked A on the plan) through the fields to a Nullah. Although the Nullah falls into the Tank the sewage will not ordinarily reach the tank, except during heavy rains which will tend to make the sewage innocuous. There is no better place to be found near, to lead the sewage to; and the prevailing winds do not blow from this quarter.

4. The subject was brought to the notice of the Regimental authorities by the Medical officer in charge. Copy of whose report I enclose, and the officer Commanding the Regiment called for remedial measures, which are now provided for in the Estimate.

5 The wind shifted to the east yesterday, and caused such a sickening smell throughout the Lines and the Contonment, that Dr Parker told me

This morning, he was afraid of Cholera<sup>chol</sup> breaking out, if some steps were not taken immediately to dispose of the sewage. The matter is therefore one of great importance and emergency. Under these circumstances I would propose that orders be issued to commence the work at once in anticipation of the estimate being sanctioned.

6. Survey, Levels and Estimate are  
in the Draughtsman's hands, who should  
have them ready by the 27<sup>th</sup> instant. I  
cannot wait for them, as I have to go  
to Jexprose.

I have her  
Signed / R. J. Nordmann  
Executive Engineer  
enc Copy /

M. B. Knudsen Captain  
Offg. District Engineer  
Vizagapatam

Vernanagram

N<sup>o</sup> 50

August 22<sup>nd</sup> 1874

To

The Officer Commanding  
H. No. 12<sup>th</sup> Regiment M. N. I.

Sir,

I have the honor to bring to your notice a large collection of liquid filth at the foot of the hill on which the lines are built, filling up the trench by the side of the road, which leads to the town.

2. This is the result of all the surface drainage of the lines being now conducted by stone water courses to this spot, and left to accumulate there; a state of things in my opinion most objectionable sanitarily, and a constant source of danger to the health of the Regiment.

3. I would beg to suggest that means should be taken as early as practicable to carry the drainage under the road in question, and by a channel to let it flow away to a distance from the road and the lines; otherwise very serious sickness may result.

Yours faithfully

90/100 74-8-26

11/11/75

11/11/75

I have &c.

/Signed/ R. G. Parker

Surgeon Major

12 Regiment. M. A. I.

/True Copy/

/Signed/ K. F. Nordmann

Executive Engineer

/True Copy/

M. W. Nicolle Captain

Offy District Engineer, Vizagapatnam

G.O. No 8994-8-75

1569  
M 217/75

1569  
M 217/75

\*Copy attached

1569  
M 217/75  
G.O. No 8994-8-75

Vizianagaram Dec. 18/75

From

Colonel C. Nicolle

Offy Commandant 12<sup>th</sup> Regt. M. A. I.

the Executive Engineer

Vizianagaram

No. 67

In returning the Plan and Estimate, countersigned, has the honor to forward another letter from Doctor Parker on the subject of the Fifth, and to request that the necessary steps be taken with as little delay as possible.

(Id) C. Nicolle, Colonel

Offy Commandant 12<sup>th</sup> Regt. M. A. I.

(True Copy)

M. W. Nicolle Captain

Offy District Engineer, Vizagapatnam

C 1071

Winianagram  
25<sup>th</sup> November 1894

From Surgeon Major C. A. G. Parker  
12<sup>th</sup> Regiment A. I. S.

To The Officer Commanding  
12<sup>th</sup> Regiment A. I. S.

Sir,  
On the 22<sup>nd</sup> of August last, I wrote recommending that measures should be taken as early as practicable to remove the accumulation of filth resulting from the present imperfect condition of the drainage of the lines.

Nothing has as yet been done to remedy this, but I understand that the Executive Engineer's Plan and Estimate for carrying away the sewage, are just ready.

I would beg to point out that now the rainy season is over; very foul smells are beginning to arise from the accumulated sewage. I anticipate that in the ordinary course of things, two or even three months must elapse before the sanction of Government can be obtained; in the meantime there remains imminent risk of an outbreak of Cholera or at least serious injury to the health of the Cantonment, and I would beg that if possible sanction may be obtained for carrying away this filth immediately in anticipation of the formal sanction of Government.

I have,  
(Sd) C. A. G. Parker  
Surgeon Major 12<sup>th</sup> Regiment A. I. S.

True Copy/

(signed) &c. &c. *Resident Captain*  
*Quarters Master 12<sup>th</sup> Regiment. Madras*

*True Copy /*

*M. W. Huddle Captain*

*Offg. District Engineer  
 Elimgipattam*

*to be done to 1897*

*to be done to 1897*

*1897*

*to be done to 1897*

*Estimate No 55 of 1874-75*

*Abstract Estimate of the probable cost of constructing drains to carry the sewages away from the lines of the 12<sup>th</sup> Regiment in. & vicinity at Bangalore. Forwarded at the request of the Commandant 12<sup>th</sup> Regiment in his letter No 251 of 24<sup>th</sup> August 1874.*

| <i>Quantity</i>               | <i>Particulars of work</i>                                                 | <i>Rate</i> | <i>Product</i> | <i>Amount</i> | <i>Total</i> |
|-------------------------------|----------------------------------------------------------------------------|-------------|----------------|---------------|--------------|
| <i>Tunnel to be built 149</i> |                                                                            |             |                |               |              |
| 125                           | <i>Cyds of Rubble masonry</i>                                              | 12          | <i>Cyds</i>    | 37            | 8 11         |
| 289 1/2                       | <i>Sq. of Plaster in wall 3 coats of chunam</i>                            | 3           | <i>Sq.</i>     | 11            | 3 5          |
| 30                            | <i>Rft of Laying stones</i>                                                | 12          | <i>Rft</i>     | 17            | 2 3          |
|                               | <i>Digging foundation and filling in</i>                                   |             |                | 10            |              |
| 816                           | <i>Rft Relaying cutstone channel</i>                                       | 2           | <i>Rft</i>     | 102           |              |
| 528                           | <i>Rft of cutstone channel with rubble masonry</i>                         |             |                |               |              |
|                               | <i>Same as per section</i>                                                 | 14 1/2      | <i>Rft</i>     | 484           | 72           |
| 39 1/2                        | <i>Cyds of additional rubble masonry from block</i>                        | 12          | <i>Cyds</i>    | 69            | 7 8          |
| 1370                          | <i>Sq. of Plastering with 3 coats of chunam to sides of Rubble masonry</i> | 3           | <i>Sq.</i>     | 51            | 2 4          |
| 266 1/2                       | <i>Cyds of Earthwork</i>                                                   | 1           | <i>Cyds</i>    | 22            | 14 9         |
| 5                             | <i>Rft of Cutstone slabs</i>                                               | 1           | <i>Rft</i>     | 5             |              |
| 7/8                           | <i>Cyds of Brick in chunam</i>                                             | 2           | <i>Cyds</i>    | 12            | 9            |
| 0 60                          | <i>Sq. of Plastering with 3 coats of chunam</i>                            | 3           | <i>Sq.</i>     | 2             | 5 2          |
| 131 1/2                       | <i>Cyds of Excavation</i>                                                  | 1           | <i>Cyds</i>    | 8             | 3 3          |
| 12 66                         | <i>Sq. of Cutstone slabs to cover top of drain roughly dressed</i>         | 4           | <i>Sq.</i>     | 113           | 10           |
|                               | <i>Carried Over</i>                                                        |             |                | 976           | 7 1          |

|        |                                                          |     |                  |      |       |
|--------|----------------------------------------------------------|-----|------------------|------|-------|
|        | Brought Over                                             |     | 916              | 7    | 6     |
| 87 1/2 | Cy <sup>ds</sup> of replacing earth over covering stones | 1   | Cy <sup>ds</sup> | 5    | 7 1/2 |
| 29 3/8 | Cy <sup>ds</sup> of Graveling to earthwork               | 5   | do               | 9    | 2 6   |
|        |                                                          |     |                  | 731  | 1 1/2 |
|        | Contingencies and Superintendence                        | 7 8 | Cent             | 69   | 10 3  |
|        |                                                          |     |                  | 1000 | 12 2  |
| 4/33   | Acres of Land to be taken up                             | 200 | Acres            | 24   | 3 10  |
|        | Total Rupees                                             |     |                  |      | 1025  |

Vizianagram Range Office }  
 Vizianagram 27<sup>th</sup> November 1874 }

M<sup>rs</sup>  
 D<sup>o</sup>

M W Windle Captain  
 In charge of Vizianagram Range

This is to certify that the undersigned considers that this Estimate provides for every thing necessary and that no supplementary work will afterwards be required

M W Windle Captain  
 In charge of Vizianagram Range

Kolachel

By Commandant 12<sup>th</sup> Regt M<sup>ts</sup> V.

M W Windle Captain  
 Offg District Engineer  
 Vizianagram

S. C. 2<sup>nd</sup> M<sup>ts</sup> Regt Office S. C.

W<sup>th</sup> attn 12<sup>th</sup> December 1874

For the 12<sup>th</sup> Regt M<sup>ts</sup> V.

For the 12<sup>th</sup> Regt M<sup>ts</sup> V.

Specification to accompany Estimate of  
the probable cost of constructing drains to carry  
away the sewage from the Regimental Lines.  
Estimate No 1025-75

The present channels in the Regimental  
lines, deposit the sewage from the wholes of  
the lines in two spots, which have now become  
so offensive that the Medical Officer considers  
it absolutely necessary that the sewage <sup>should</sup> be  
carried away as far as possible from the  
lines to prevent an out break of diseases  
which it is believed will be induced by  
the present system of drainage.

It is proposed to construct a cut stone  
drain with sides of 18 inches laid in rubble  
masonry 4 feet wide at bottom, and 2 1/2 feet  
in thickness from A to B and C to D. From  
B to C it will be 3 1/2 feet thick. There will be  
a width of 1 1/2 feet on each side of the cut stone  
drain, and level with the top which will  
be carefully plastered with 3 coats of chunam,  
the sewage will be led away to the bed of a  
stream 150 feet distant from the spot

Estimate No 55 of 1874-75

Bengal Nagam Range  
Bengal of a tank district

Chunam  
Masonry  
New Works

Abstract Estimate of the

probable cost of constructing

drains to carry the sewage

away from the lines of the

12th Regiment the R. Infantry

at Bangalore

1875/76

Estimate No 1025-75

1875/76

1875/76

5000-82974-8-75

A tunnel will be constructed at point A in survey plan to carry sewage under the road.

Tunnel

prevent accidents.

A strip of land 10 feet in width will be taken up so that there will be a width of 3 feet on each side of the channel.

Land to be taken up

Vizianagaram Range Office  
Vizianagaram 27<sup>th</sup> November 1874

M W Mundle Captain  
In charge of Vizianagaram Range

As the proposed channel runs across

irrigation channels, cultivation, and will thus cut off the water supply to the lower land two sluices have been provided. These sluices where the channel is in cutting will simply be slabs of stone laid across the channel and plastered over with walls at each end 4 1/2 inches thick and 1 foot high also plastered.

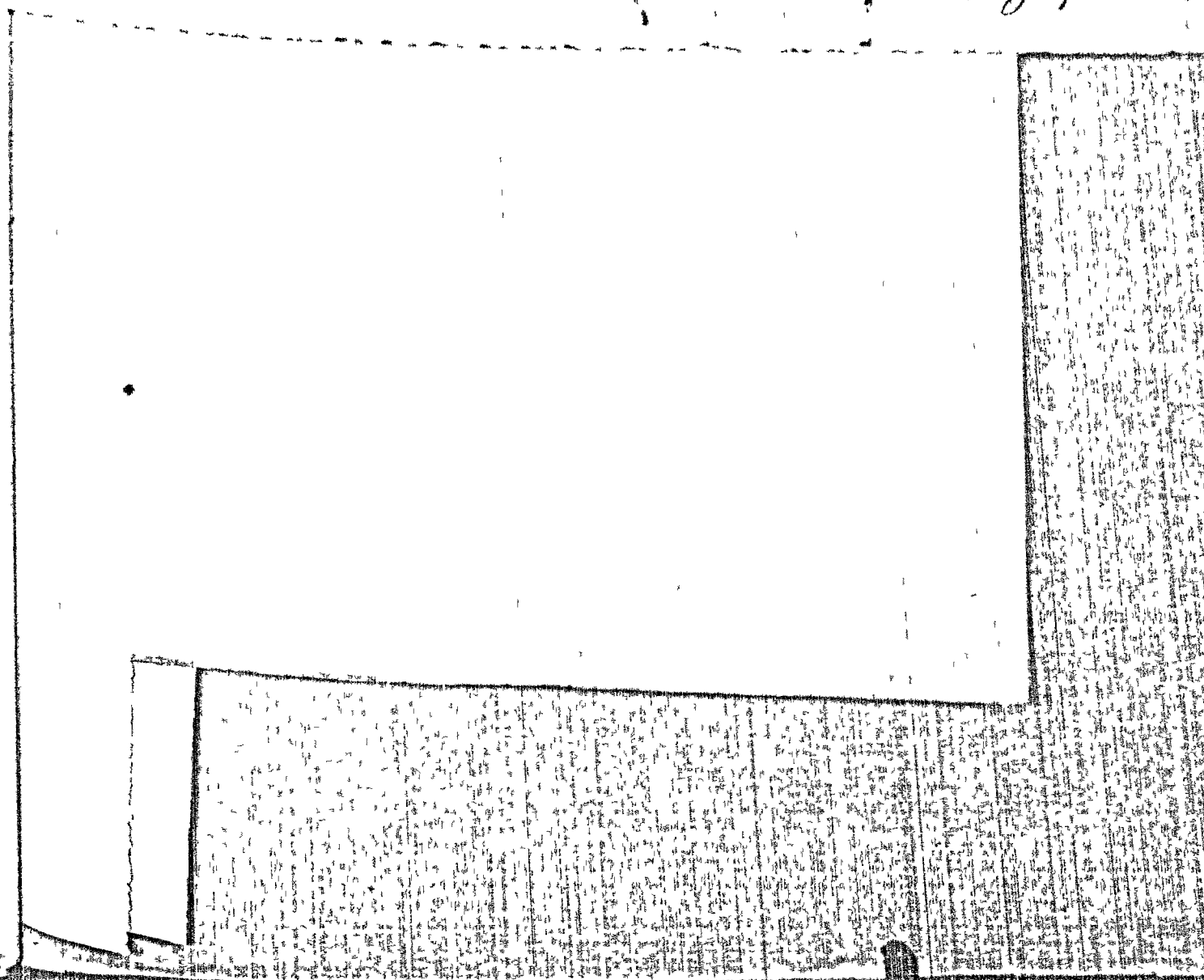
Int. 2<sup>nd</sup>

Colonel  
Offy Commandant 12<sup>th</sup> Regt M B L

M W Mundle Captain  
offy District Engineer  
Vizagapatam

Where the drain is carried on an embankment an opening will be left in the masonry under the drain 9 square.

The branch drain beginning near the old Range Office will be laid at a uniform slope and connected with the main drain so that the latter carry off the whole of the sewage. This drain will partly be in cutting, 2 feet deep and in such place will be covered over so as to



By  
J. D. <sup>Nov</sup> 1875  
1585  
1729/75

E.O. 32829 4-8-75

Specification to accompany

Estimate of the probable

cost of Constructing a main

to carry away the sewage

from the Hospital

Denver.

Estimated by 1025-11  
A. H. L. 1875

to Hon. W. B. Vinton, Chairman of  
the National Department of  
Justice, 210-942

1569

Cont. of 113751 3310137

PUBLIC WORKS.

Brigadier  
Vijayapalan

24 March 89

No. 578-589.

Regimental lines at  
Vijayapalan - Letter  
from the Sanitary Com-  
missioner, all orders  
reporting in the scheme  
of drainage for the  
lines, came to the D. S.  
Vijayapalan  
with instructions.