

no 959 W. 30-3.87

P.W.C. No 21

P.W.C. No 3139

B. No. 1140 Wd/25 April 1887

Gobt. of (1887) Madras.
FINANCIAL.

G.O. 2139 Wd/26.8.86.
" 601 Wd/28.2.87

12.50

Comd. to the
Comd. to the
Chief Engr for
Chief Engr for
Irrigation and
Irrigation and
Supp Engineers in
Supp Engineers in
contn of G.O. No.
contn of G.O. No.

959 Wd/30/3/87
959- W. 8/30/6/87

Wm
18.4.87

2/4/87

Issued

Recd. 18.4.87

Encl.

G.O., 9th April 1887, No. 469.

B. No 1140 Wd/25 April 1887
959 W

APRIL.

Stationery.

Ordering transmission to the Secretary of State
of an indent for the Imperial hand-made paper
required for the use of the Public Works Depart-
ment.

Ch. Engr for Irrig
Ch. Engr for Irrig

Ch. Engr for
Ch. Engr for

2/4/87

19-4-87. No 487 Q. 2/4/87

19 25. 4. 87

601 W 28.2.87

B. No. 1143 Wd/26 April 1887

Communicated to
the S.S.V Circle, in
Continuation of G.O.
No 601 Wd/28 Feb 1887.

Wm
15.4.87

2/4/87

22.4.87

2/4/87

S.S.V circle. 2/4/87

P.W.C. No. 21

Govt. of (1887) Madras.

FINANCIAL.

Issued

Recd. 18.4.87 Encl.

G.O., 9th April 1887, No. 469.

APRIL.

Stationery.

Ordering transmission to the Secretary of State of an indent for the Imperial hand-made paper required for the use of the Public Works Department.

GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

19th February 1887, No. 1011.

Sanitary.

Read the following papers:—

No. 219. From Colonel W. H. BURTON, R.E., Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department; dated Chepāk, Madras, 13th October 1886, No. 3517.

In reference to G.O., No. 2139-W, dated 26th August 1886, giving cover to a memorandum of the Army Sanitary Commission, I have the honor to inform you that scarcely a correct description of the barracks is given in para. 12, and that in my opinion the sickness amongst the troops may, in some measure, be due to the following:—

- (1) The men in all the barracks live on stone floors in several places raised less than 12 inches above the ground, and rarely more than 24 inches above the ground.
- (2) That none of the barrack floors are damp-proof.
- (3) That all the rain-water falling from the roofs soaks into the ground equally under the barrack floors as in the surrounding ground, owing to the absence of efficient surface gutters round each barrack by which such water might be led away.

2. This is a defect duly noted against the Secunderabad barracks in para. 17, and to it is attributed the sickness at Secunderabad; perhaps the sickness at Bangalore is due as much to this as to the water which ought by theory to be so very bad as to be unfit to drink, but is not in my humble opinion so very bad when ample in quantity.

3. I would call attention to the growing evil at Bangalore of the number of small communities which are allowed to spring up and multiply on ground (sometimes the property of Military Department and sometimes private property) in and about the cantonment; the municipal authorities take but scant notice of the conservancy requirements of such places; the number of inhabitants in the so-called syce and grasscutters' lines of the Mounted Corps seldom seemed to me to be regularly checked and limited.

4. As to para. 16, the action of the Municipality and Sanitary authorities at the station in past years in regard to the drainage of Shoolay has been such as to saturate the valley between the British cavalry stables and the Arab parade ground (site of one Native Cavalry, one Native Infantry Regiment) with sewage. The British Cavalry riding schools near this have recently, I understand, had to be abandoned, and the Public Works Department were called upon to make more riding schools in consequence but a little further off.

5. The whole valley requires, in my opinion, to be agriculturally drained, enclosed, and laid down in grass, and the bund of the small Sonehalli tank to be breached.

6. I may say (para. 13) that admission of water down the western channel of the Ulsoor tank might be regulated, so that all stagnant water left in the present unhealthy-looking swamp, called the Sappers' Pontoon Ground, might be passed away, without entering Ulsoor tank, at small cost. This would greatly diminish the impurity washed into the Ulsoor tank by the monsoon rains; this is an improvement more readily described at the tank side than in writing from here.

7. There are but few latrines and urinals in and about the closely built over outlying portions of Bangalore; if the number and sites for these places were laid down by some authority which had not to pay for them, the use of the smaller feeders of the Ulsoor tank would no longer be used as latrines and urinals; the Municipal Commission will take a very long time before it voluntarily supplies enough latrines and urinals, and it is the executive authority alluded to in para. 16.

8. I believe that, if remedies such as I have here suggested be adopted, the sanitary condition of the troops at Bangalore would be greatly benefited.

No. 3594-C.

Transferred to the Military Department, with advertence to G.O. (Military) No. 4761, dated 9th August 1886.

15th October 1886.

(Signed)

J. O. HASTED, Colonel, R.E.,
Secretary to Government, P.W.D.

No. 6565.

Referred to His Excellency the Commander-in-Chief.

(By Order.)

19th October 1886.

(Signed)

A. KENNEY-HERBERT, Lt.-Col.,
Secretary to Government.

To the Quarter Master General.

No. 220. From Brigadier-General E. FAUNCE, Quarter Master General, Madras Army, to Lieutenant-Colonel A. KENNEY-HERBERT, Secretary to Government, Military Department; dated Ootacamund, 7th February 1887, No. 262-B.

With reference to para. 2 of Proceedings of Government, No. 4761, dated 9th August last, bringing to notice the unhealthy conditions prevailing at Secunderabad and Bangalore referred to in the memorandum of the Army Sanitary Commission on the health returns of British troops in the Madras Command for 1884, and the recommendations made in para. 23 of that memorandum embodied in the Proceedings of Government above quoted, I am desired to submit the following report for the information of Government:—

I.—BANGALORE.

* Proceedings of Government, No. 6229, dated 6th October 1886.

(a) The question of the improvement of the water-supply of Bangalore is now in the hands of Government.*

(b) The sanitation of the town receives every attention from the Municipality, the whole place being cleaned out daily, the streets daily swept, and the drains flushed once or twice weekly during the hot weather; the flushing of the drains daily throughout the year cannot be carried out as funds are insufficient and water is not always available, and when available it has to be carried long distances by carts, which is costly.

Endeavours are also being made to remedy the evil brought to notice in para. 16 of the report of the Army Sanitary Commission, regarding the main drain of Richmond Town and Shoolay, by extending it a mile beyond the barracks and the riding school, and, it is hoped, that thus all cause for complaint will be removed.

The Municipality has also recently improved one of the chief feeders to the Ulsoor tank, with the result that so much of the sewage of the town does not flow

into the tank now as formerly. The work of deepening the Ulsoor tank was also undertaken by the Municipality in 1885, but owing to the rains the work was stopped and the tank having been pretty full ever since, further work has been impossible. A small tank above the Ulsoor tank was also purchased last year by the Municipality at a cost of about Rs. 7,000, with the object of allowing the drainage from the open country on that side to flow into the Ulsoor tank and so increase and improve its waters.

II.—SECUNDERABAD.

(a) The matter of a pure water-supply, in combination with a drainage scheme for the town of Secunderabad, is now under the consideration of, and is being dealt with by, the Resident at Hyderabad, in communication with the Government of India. Its completion is admitted to be a necessity and is believed to be purely a financial question.

The water-supply of the troops is believed to be above suspicion, yet enteric fever prevails. If it arises from water as stated by the Deputy Surgeon-General, Bangalore, then the theory of the General Officer Commanding the Bangalore Division that one chief cause is that soldiers drink impure water, &c., when visiting native huts, &c., is strengthened.

(b) With reference to wet cultivation at this station, the Military authorities have repeatedly and continuously moved the Resident to have such cultivation put a stop to in the vicinity of the barracks occupied by British troops; but although frequent promises have been made, no improvement has actually taken place and can hardly be expected, unless Government are prepared to pay the owners of the paddy-fields the difference between the value of wet and dry cultivation. As regards the Native troops, it has been decided that the expense of compensating the owners of a very limited area of paddy cultivation in cantonment for the loss they would suffer would be prohibitive.

(c) The General Officer Commanding the Hyderabad Subsidiary Force reports that it is impracticable to raise the floors of the barracks so as to have thorough ventilation underneath and to protect ground floors from sub-soil damp. None of the plinths can be considered low, and as the water drains freely away from the barracks, the tendency for moisture to rise through the stone floor is minimised. The only remedy considered at all likely to prove successful in effectually resisting damp is to point the joints in the stone with asphalt; an estimate for this work has been called for, and it will be carried out as soon as funds are available.

(d) About 2,000 trees were planted in the year 1884-85 in the vicinity of the barracks and lines of British and Native troops at Secunderabad. It is believed that the remark of the Surgeon-General, regarding the want of trees as a protection against unhealthy winds, referred to the hutting lines of Native troops, and not to the substantially built barracks of the British portion of the garrison.

III.—KAMPTEE.

Steps are being taken to carry out at once some of the suggestions made by the Deputy Surgeon-General, Nagpur Force, towards improving the latrine accommodation for the British Infantry Regiment at this station, such as the removal of the front splash boards of the latrines and the raising of pans so as to touch the seats, and the General Officer Commanding is of opinion that, by devoting more attention to the use of dry-earth by carrying out these alterations and by cleansing the pans by fire before they are tarred, the offensive smell complained of may be diminished.

The Deputy Surgeon-General, Nagpur Force, has brought to notice other points, such as the provision of asphalt flooring, want of ventilation, walls coming down to the ground, level partition being too high, the existence of a double row of seats, &c., but these appear to be defects inherent to the standard plan on which the latrines were built, and therefore a matter for consideration of Government in the Public Works Department.

7. There are but few latrines and urinals in and about the closely built over outlying portions of Bangalore; if the number and sites for these places were laid down by some authority which had not to pay for them, the use of the smaller feeders of the Ulsoor tank would no longer be used as latrines and urinals; the Municipal Commission will take a very long time before it voluntarily supplies enough latrines and urinals, and it is the executive authority alluded to in para. 16.
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No. 3594-C.

Transferred to the Military Department, with advertence to G.O. (Military) No. 4761, dated 9th August 1886.

15th October 1886.

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Government, P.W.D.

No. 6565.

Referred to His Excellency the Commander-in-Chief.

(By Order.)

(Signed) A. KENNEY-HERBERT, Lt.-Col.,
Secretary to Government.

19th October 1886.

To the Quarter Master General.

No. 220. From Brigadier-General E. FAUNCE, Quarter Master General, Madras Army, to Lieutenant-Colonel A. KENNEY-HERBERT, Secretary to Government, Military Department; dated Ootacamund, 7th February 1887, No. 262-B.

With reference to para. 2 of Proceedings of Government, No. 4761, dated 9th August last, bringing to notice the unhealthy conditions prevailing at Secunderabad and Bangalore referred to in the memorandum of the Army Sanitary Commission on the health returns of British troops in the Madras Command for 1884, and the recommendations made in para. 23 of that memorandum embodied in the Proceedings of Government above quoted, I am desired to submit the following report for the information of Government:—

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No. 221. *From Brigadier-General E. FAUNCE, Quarter Master General, Madras Army, to Lieutenant-Colonel A. KENNEY-HERBERT, Secretary to Government, Military Department; dated Ootacamund, 7th February 1887, No. 263-B.*

In returning Reference Order No. 6565 of 19th October last, referring letter No. 3517 of 13th idem from the Superintending Engineer, V Circle, regarding cause of sickness among the British troops at Bangalore, and in continuation of this office letter No. 262-B of this date, I have the honor, by order, to state that, in the opinion of the Medical authorities at that station, the prevalence of enteric fever is due chiefly to the impure water-supply as borne out by statistics and as mentioned in my letter of this date quoted above; the question of the improvement of this water-supply is now in the hands of Government.

2. With reference to dampness of floors of barracks being a source of sickness amongst troops, I am to say that the Deputy Surgeon-General, Bangalore Division, does not concur in the opinion expressed by the Superintending Engineer, and that no complaints have ever been made on this subject; surface drains, however, to receive and carry off rain-water from the roofs, would no doubt be an improvement, but the cost of providing such drains would be very great. Should Government desire it, estimates will be called for and submitted.

3. The measures adopted for the improvement of the drainage of Shoolay are detailed in this office letter of this date quoted above.

No. 222. *ORDER THEREON, 19th February 1887, No. 1011.*

Ordered that the foregoing correspondence be forwarded to Her Majesty's Government.

2. The defects in regard to the construction of the latrines at Kamptee brought to notice in the concluding portion of the Quarter Master General's letter No. 262, dated 7th February 1887, will be referred to the Government of India for the issue of such orders as may be deemed necessary.

3. It is observed that the Government of India have been addressed in the Public Works Department with reference to the provision of funds to carry out the Bangalore water-supply project.

Proceedings of Government, No. 2293-W,
dated 20th September 1886.

No. 223. *To the Secretary to the Government of India, Military Department; dated 19th February 1887, No. 1012.*

(True Extract.)

(Signed) A. KENNEY-HERBERT, Lt.-Col.,
Secretary to Government.

To the Quarter Master General.

- " Adjutant-General.
- " Surgeon-General, Her Majesty's Forces, Madras.
- " Sanitary Commissioner, Madras.
- " Public Works Department.

Exd. E. C. Shunker.

B. No 601 W of 28 Feb 1887
Communicated to the
Supg Engineer I Circle
with reference to his
No 3517, dated 13th October 1886
Sd/-

Govt. of (1887) Madras.
MILITARY.

To
THE QUARTER MASTER GENERAL,
&c., &c., &c.

Dated February, 19th.

Issued

Recd.

Encl.

G.O., 19th February 1887, No. 1011.

B. No 601 W of 28 Feb 1887

FEBRUARY.
Nos. 219-224.

Sanitary.

British troops at Bangalore and Secunderabad.—Correspondence reporting on the cause of sickness among the —, forwarded to Her Majesty's Government, and the defects in regard to the construction of the latrines at Kamptee brought to notice by the Quarter Master General, referred to the Government of India for issue of the necessary orders.

With order

Sanitary

No. 2332

Government of Madras.

MILITARY DEPARTMENT,

Ootacamund, the 21 April 1887.

Read the following
From the Quarter Master General,
No 846B, dated 19 April 1887.

With reference to the
last clause of para 3 of letter No
3517 of 13 October 1886, from the
Superintending Engineer I Circle
to the Chief Engineer Public Works
Department embodied in O.G. No
1011 of 19 February last, I have the
honor, by order, to state that after
making full enquiries, the
General Officer Commanding
Bangalore Division reports,
that the numbers of followers of
the mounted corps are regularly
checked and limited to the
accommodation afforded, and
only relations of the followers
are permitted to live in the
Lines.

Order

+ P.W.D. No
601 W of 28.2.87

2023-4-87



Order:- Copy furnished to the
Public Works Department, for com-
munication to the Superintending
Engineer V Circle.
(True Extract)

Herbert D. G. S.

Secretary to Government

The Public Works Department.

PWC No 3139

GP 2139 Wd 16.8.86.
" 601 Wd 28.2.87

R 25. 4. 87

601 W 28.2.87

B. No. 114 3 Wd 26 April 1887

Communicated to
the S. S. I Circle, in
Continuation of GP.
No 601 Wd 28 Feb 1887.

Wm
15.4.87

John
22/4/87

GP 75/W No 22.4.87

John
27/4

S. S. I circle. 26/4

Geo

GP. No 861 Wd 4.86
B. No. 1118 Wd 4-5.86
" 1581 Wd 22.6.86
" 2489 Wd 24.9.86

B. No 1151 Wd 26 April 1887

Sanctioned
Sanctioned

Wm
15.4.87

John
23/4/87

From

THE SUPERINTENDING ENGINEER,

V Circle,

To

THE

Chief Engineer
P. R. Dept.

Dated

Reed.

19 April 1887

ENCLOSURES.

B. No 1151 Wd 26 April 1887

No. 305

House rent of Rs 18
on account of Perint
Connor Comms Dept.

Requesting sanction
for the payment of
under the
circumstances explained.

S. S. I Circle

S. S. V C

Exam. P. W. Accts.

GP 75/W

No 23.4.87

27/4

27/4