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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2230	Press
380-381	Mis.
Dated 16-7	1865.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
16th September 1865.*

No. 380. Read the following Proceedings of the Madras Government in the
Military Department:—

Communicating certain correspondence
with a view to orders being issued for
the removal of certain cess-pools and
drains situated in the vicinity of the
Royal Artillery Barracks at Bangalore. } (Here enter 11th Sept. 1865, No. 3,378.)

No. 381. ORDER THEREON, 16th September 1865, No. 2,730.

MILITARY WORKS, No. 20.

Communicated to the Superintend-
ing Engineer of the 5th Division, who
will be requested to instruct the Execu-
tive Engineer at Bangalore to give his immediate attention to the orders in para-
graph 2.

(True Extract.)

(Signed) J. H. M. SHAW STEWART, Major, R. E.,
Under Secretary to Government.

To the Superintending Engineer, 5th Division.
„ Controller of Public Works Accounts.

Military Department.

Exd. S. T. Augustin.

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MILITARY DEPARTMENT.
PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following papers :—

Memorandum from the Quarter Master General, Head Quarters, Ootacamund, 28th August 1865, No. $\frac{446}{8555}$; to the Secretary to Government, Military Department, Fort Saint George.

Forwarded to Government.

2. The Commander-in-Chief entirely concurs in the measures taken, and proposed to be taken by Major General Haines, in regard to the sickness prevalent in the Lines in question; and His Excellency would further strongly urge upon Government to authorise the improvement to the drainage, and to the removal of cess-pools, referred to in paragraphs 6 and 7, to be immediately undertaken. A complete remedy cannot be expected till the introduction of the dry system is authorised in its entirety.

3. The removal of unauthorised followers to another site at a compensation charge of Rupees 739, and the re-construction of the Lines of the authorised followers, seem to be indispensably necessary, if success is to attend the measures in view. The neighbourhood is well known to be a standing nuisance, which has baffled all attempts hitherto to put down. It is now shown to be also a serious evil, the suppression of which is of vital consequence to the health of the Troops in the vicinity.

From the Officer Commanding Mysore Division, Head Quarters, Bangalore, 24th August 1865, No. 288; to the Quarter Master General, Head Quarters, Ootacamund.

I have the honor to forward, for the information of His Excellency the Commander-in-Chief, the documents as per margin, bringing to notice the existence of sickness of a severe type among the followers of the Royal Horse Artillery and other inhabitants of that neighbourhood.

A, B, C, D, E and F, respectively.

2. The people under reference occupy a piece of ground lying directly between the Horse Artillery and the new Cavalry Barracks, and have gradually spread to within about 70 yards of the nearest of the latter buildings.

3. Although there would still appear to be some semblance of regularity in the original formation of these Lines, yet for years past huts have been run up at the unrestrained option of individuals, which has resulted in a confused, complicated and irregular mass of building.

4. The Officiating Deputy Inspector General of Hospitals informs me, that no less than 106 deaths have occurred among the comparatively small population occupying this locality, during the past three months, and that fever of a malignant type is the prevailing cause. He is moreover, apprehensive, lest the disease assume an infectious form and spread to the European soldiery in the vicinity.

5. It will be unnecessary for me to enter into the various causes of this sickness; as a perusal of the documents, which accompany this report, will place His Excellency in possession of all the details of the case.

6. In the document marked A, Dr. Balfour brings to notice the objectionable discharge from the urinals and lavatories of the new Barracks into masonry cess-pools. The Sanitary Commissioners notice the same defective arrangement in page 17 of their Bangalore Report.

Paragraphs 89, 90.

7. One of these cess-pools, which is situated at the head of the valley occupied by the followers of the Royal Horse Artillery is now alleged to be a cause of the disease, and I would respectfully suggest, that Dr. Balfour's remedies obtain immediate sanction.

8. As regards the suggestions contained in letter E, I beg to state

I. That I have not considered it desirable to take any measures for the prohibition of brick-making.

- II. That the well has been filled up.
- III. That dry earth has been thrown over all objectionable animal matter in the Tannery, though I have not directed the closing of that establishment.
- IV. That the attention of the Officer Commanding Royal Artillery has been drawn to the necessity of preserving strict cleanliness in the latrines.
- V. That all interments in the neighbouring Mahomedan burial ground have been prohibited since the month of March.
9. Notwithstanding however, all that has, or may be done locally, I beg to state that I consider the removal of all unauthorised followers from, and the re-construction (on a proper and regular plan) of the huts of all authorised followers in this locality, to be a matter of imperative necessity for the welfare of the European Troops occupying the neighbouring Barracks—and should His Excellency concur in this opinion, I would propose, that the Madras Government be moved to grant compensation to the extent of Rupees 739 to the attainment of this object.
10. I enclose Proceedings of a Committee assembled by the Officer Commanding Royal Artillery, showing a list of the inhabitants, and the value of their property.
11. It will appear from the lists of unauthorised followers, that no less than 28 belong to the Light Field Batteries, and I have ordered their immediate removal to their own Lines.
12. This accomplished, and allowing the too expensive, and decently constructed dwellings marked X on the south and of a better description marked O on the north side of the nullah to remain intact, there will remain 86 unauthorised followers to receive 739 Rupees compensation, and to be provided with fresh sites for the re-construction of their huts. The latter, I am happy to say I can guarantee.
13. I would then entirely re-construct the Lines of the authorised followers on the original site, and on the north side of the nullah.
14. I trust His Excellency will concur in my opinion, that the people termed unauthorised followers have by lapse of time, and unmolested practice, so far acquired a right to establish themselves in this locality, as to render their removal elsewhere, without receiving compensation for the value of their huts, a great hardship.
15. I would in conclusion draw His Excellency's attention to paragraphs 92 and 93 page 17 of the Sanitary Commissioners' Report on Bangalore, which bears directly upon the subject under reference.

A.

EXTRACT from the Diary dated 29th October 1864, of Deputy Inspector General Balfour, Acting Mysore Division.

The following are the changes which have presented themselves to me in the course of my work, as needed; but on which, they being of a more permanent character, I have not taken action

* * * * *
 * * * Refuse fluids from the latrines, the latrines and the cook-houses of the blocks on the old Race Course, all collected by drains into two main conduits which convey the fluids into two cisterns, the one on the north east and the other on the south west of the race grounds plateau. These cisterns are emptied by means of Cathern hose and barrel carts, which drive in a hollow way, to the sides of the cisterns, at a lower level. These have seemed to me most unhappy arrangements—alike as to the original and great and current expensiveness of them.—Even if the lavatory waters be not required for gardens, or it could not be used to water the trees around, there is yet no need to convey it to so remote a spot as the latrine fluids,—it might be poured out or scattered about at any neighbouring lower level, and thus render carriage unnecessary other than that needed for the latrine fluids and cook-room washings.

The water cisterns at the end of the latrines, on the race ground for flushing their channels should be removed, the dry system at once introduced and all the refuse carted off, direct from the latrines and urinaries.

A shallow pan shaped-cistern outside the lavatories could hold their refuse waters. The covered drains now converging to the two cisterns should be broken up, as also should these two cisterns, which would then be useless.

The cost of all these very important charges, would I think be recovered in a few months lessened expenditure for the cartage from and service of the two large cisterns on the north east

and south west of the grounds. These proposed changes read large on papers; but they are of simple execution, and could easily be carried out in a day or two. I regard these points as of an urgent sanitary character.

B.

From the Officer Commanding Royal Artillery, Mysore Division, Head Quarters, Bangalore, 7th August 1865, No. 343; to the Deputy Assistant Quarter Master General, Mysore Division, Bangalore.

I have the honor to enclose copy of a letter addressed to me by the Medical Officer in charge of Royal Artillery, bringing to notice the great prevalence of Typhoid Fever among the followers in the Lines of Royal Horse Artillery, and suggesting their removal to some temporary buildings, &c., &c., to prevent the possible chances of sickness attacking the European Soldiers, which I request you will have the goodness to bring before the Major General Commanding the Station for his consideration.

C.

From Surgeon Major W. JOHNSTON, Royal Horse Artillery, Bangalore, 6th August 1865, No. 131; to the Officer Commanding Royal Artillery.

My attention having been directed to the prevalence of disease, said to be fever, among the Native followers inhabiting the huts, included within the circle of the Artillery Lines where it is intersected by the Nullah, having its origin in the North East angle of the old Race-course, I made it my duty, in association with Quarter Master Knox to examine the affected locality, when I found the report had not been exaggerated.

2. I inspected several huts and found, their crowded inmates, two, three or even four wretched spectral creatures struggling with the disease in its various stages; empty huts were even pointed out to me whose inhabitants had all been destroyed by the disease.

3. Examination of the sick satisfied me as to the nature of the disease. Typhoid Fever initiated in and aggravated by the foul and unnatural conditions common to the Native poor of India. No doubt, external conditions, some of them susceptible of correction or even removeable, exist in the vicinity of the affected locality. Witness, an example, the foul closed cess-pool half way up the nullah aforesaid which receives the contents of the urinals and lavatories of the Race Course Barracks, and from which, at all times, is exhaled a stench sickening and offensive to the last degree. But without doubt, the true source of this fever is to be found in conditions which can scarcely be reached; race, prejudices and customs leading the people to prefer living in narrow crowded localities and in small huts huddled together, where ventilation is all but impossible.

4. It is certain that Typhoid Fever may, under given conditions acquire contagious properties and epidemic development; that this type of Fever prevails epidemically among the Native population of Bangalore, I am well assured, but how long it may be thus limited who shall decide?

Recently Gunner Smith of the D Brigade Royal Horse Artillery, all but succumbed to an attack, while the two sons of a Gunner, recently living in the close vicinity of the affected locality, are now under treatment in Hospital for a like attack.

5. Clearly it is incumbent on me to seek to have this subject brought to the notice of higher authority, and I respectfully solicit that this may be done with as little delay as possible, in order to ascertain whether the statement now advanced is correct, when, if so, means may be at once had recourse to, to mitigate the evil and thus prevent the further extension of the disease and its eventual appearance among the Artillery under your command.

What these means are I leave to others to indicate, though, I take permission to suggest that the sufferers should be at once separated from the locality, by being removed to temporary buildings where they should be liberally supplied with means essential, successfully to combat such a disease, among which medicine occupies a very humble place.

D.

From the Deputy Inspector General of Hospitals Ceded Districts, Acting in Mysore Division, Bangalore 8th August 1865, No. 1357; to the Officer Commanding Mysore Division.

I have the honor to recommend that a new site be allotted for the huts of those Horse-keepers of the Royal Artillery, who are now located in a line of huts running north and south on the

western part of that quarter, and that such aid as you may deem suitable, be given to those humbler people, to enable them to erect their dwellings.

2. Yesterday morning, Surgeon Major W. Johnston, M. D., Royal Artillery, brought to my knowledge the existence of a Typhoid fever, there; and, on examining, this morning, it was mentioned to me that 86 persons in that line, grown up and young, had died in the past four or five months, and that one or two families have almost died off.

3. Both last year, when acting here, for three months, and since my re-arrival on the 29th May last, I have been watching with anxiety all the ground skirting those lines on the west and south. For, at the south-west corner of that line of huts is the cistern for the reception of the refuse lavatory and urinary water, from the northern part of the high ground; there is likewise a large enclosure, used as a latrine for the humble people in that vicinity; and there are three wells for their drinking water only 10 or 50 yards distant, from that public latrine, and the water being brought from a depth of about 8 yards, brings it from the level of the latrine. There is immediately on the north of that line of huts and higher up the slope, the site on which the horse litter is daily thrown and allowed to rot into manure; and which though now in less than usual quantity is giving forth, even now, its usual nauseous odour, increased by the horse dung cakes spread over the neighbouring ground to dry. Also, higher up, there is a Tannery with 50 pits, 45 of which are for tan, and the usual mal-odours are from that factory.

4. I have the honor to submit, as the earliest mode that occurs to me of at once allowing those humble people to escape from the action of such injurious agents, the advantages of your granting permission for the erection of new lines of huts for those residing in the infected locality, on a suitable ground; and as sickness has probably already impoverished them, perhaps some labor or pecuniary aid could be placed at the disposal of the builders. And I beg to recommend the digging of a few large and suitable wells, for all the people in that quarter in sites removed from all possible sources of pollution. I would, also, submit for your approval, that the horse litter site be placed more remote from habitations, and that what of the litter is not utilized daily be daily burned or daily removed beyond all dwellings.

5. The retention of a Tannery so near to human dwellings is opposed to all sanitary experience, and I submit the subject of its discontinuance from that site as a matter, for your favorable consideration.

6. The refuse water from the lavatories, latrines and urinaries, could in a few days be separated; the urinaries and latrine fluids could be collected in a small cistern and carted away, at the same time as the latrine refuse, and the lavatory fluids could be collected in another larger cistern and be available for gardening purposes, at least for those soldiers gardens a little away from the barracks.

E.

From the Deputy Inspector General of Hospitals, Ceded Districts, Acting in Mysore Division, Bangalore, 9th August 1865, No. 1368; to the Deputy Assistant Quarter Master General, Mysore Division.

I have the honor, as ordered in 2148 of yesterday, to report to the Major General as to the remedial means to be adopted for the existing evils noticed in Surgeon Major W. Johnston's letter, 131 of 6th instant, now re-enclosed.

2. In paragraph 3, that Officer points to two unsatisfactory conditions and their remedies, viz., a cess cistern at the south-west angle of the infected locality, and recommends its removal; and he also alludes to the huddled up small ill-ventilated huts of the people there, as a hurtful custom of the people of this country, and the true source of the disease, and he recommends that the sufferers be at once separated from the locality by being removed into temporary buildings and supplied with the means of combating with such a disease.

3. In my letter, No. 1357 of yesterday, I brought these and other points to notice with several recommendations, and I would now add, to those, the prohibition of brick burning, and digging of clay in all the south and east of that quarter.

4. Also there is one well to which very many resort, in the compound of Mr. Knox's Horse-keeper. It is due east, and below the cess cistern, and the drinking of its water should be wholly prevented by being at once filled up.

Also, until final orders can be issued, I would recommend that the centre galleys of the lines of huts should be carefully swept, but further disturbance of the earth avoided.

Also that the drains throughout that quarter might be attended to by the Engineering Department, and made V shaped.

That the working of the Tannery might be stopped until final orders can be received. It should not be cleaned out at present, but dry clean earth should be thrown over all places, to soak up and destroy the filthy wet animal matter which I saw yesterday.

The utmost care should be taken to preserve cleanliness in the men's and women's latrines, and entirely to prevent any part of the cistern water being poured into the neighbouring drain.

The sweeping of the lines attended to; all interments of Mahomedans (there are two burial places) should be prohibited.

I have again to-day re-examined the lines of huts in every direction and have also caused them to be examined by Apothecary White; * and so far as can be learned, the sickness appears to have been only this year, and only since about April last.

The great sickness and mortality has been in the three lines of huts, on the west, that is; those lying to the south and underneath the Tannery and litter ground, and on the east of the cisterns and latrines, and it is all these that should be re-located.

The roofs of many huts are greatly dilapidated, and the gases from their rotting thatch may have added to the evils. But the repairs should not be made at present, other accommodation should be provided and the entrances should be blocked up.

I would further mention that my views as to the cistern above alluded to, were recorded in my Diary of the 29th October 1864, and I attach an extract from it.

I was acting here in 1864, only two and a half months, and wrote that amongst other Memoranda, before leaving.

F.

Extract from the Diary of Deputy Inspector General of Hospitals, E. Balfour, Ceded Districts, Acting in Mysore Division dated 14th August 1865.

11 1/2 to 2 P. M. visited the Horse-keepers lines, where the sickness has been; the outlets of the Tannery still need attention. The smell from the Bratties very disagreeable; and two small pools of water should be allowed to escape. The lines clean; the smell from the men's latrine very strong; the well which I recommended to be filled up is in the compound of Mr. Knox's Gariwala, not the Ghorawala, as I caught the name. A person stated that Captain Holmes had to-day ordered its water not to be used, but it should be filled up. The Tannery should be wholly removed from this; I see that this course is recommended at paragraph 16, page 7 Proceedings of Government No. 2894 of 7th instant. The lodging of litter and the making of Bratties in that locality, should at once be discontinued, and the old litter covered over with clean earth. A new site or rather new sites should be selected and more remote from latrines; some of the people look thin and spare. A note from Captain Holmes, sent to me by Surgeon Major W. Johnston, M. D., mentions that 106 persons had died since three months.

Visited the tents pitched for the sick. In my No. 1370, I desired Surgeon Major Johnston to pitch them at the north end of the Artillery practice ground, which is about 1000 yards from the Artillery and from the race ground barracks; but, they have been pitched nearly 2000 yards distant, which is far too remote for their medical attendants and their friends; seven people, horse-keepers and grass-cutters are there, all severely ill, three Fever, three Dysentery, and one Pneumonia; Apothecary White present. I sanctioned two coolies, one puckally, and one cook for them.

Inequalities in the huts of the A Battery 23rd Brigade Royal Artillery, grass-cutters and horse-keepers, west of church yard, need to be filled up to prevent water lodging. In 354 of 12th August, just sent to me by Quarter Master General, the Officer Commanding Royal Artillery thus writes: "it is a well known fact that Tanneries are considered at Home the opposite of being unhealthy, and are allowed in towns. To close the Tannery now would cause large loss and

"demand large sum for compensation ; but, I have to report for the information of the Major General, that I am purchasing no more hides, consequently in another 12 months or so, there will be no hides in the Pit, and the Tannery will be closed." I am of opinion its operations should at once cease.

With Report from the Acting Controller of Military Accounts, 4th Sept. 1865, A.

ORDER, No. 3378, 11th September 1865.

In consideration of the circumstances represented in the report submitted with the foregoing Memorandum from the Quarter Master General, and on the recommendation of His Excellency the Commander-in-Chief, the Governor in Council authorises the re-construction of the lines of the Native Followers of the Horse Artillery at Bangalore, and the grant of compensation, not exceeding in the aggregate, Rupees 739, to unauthorised Followers, whose huts in those lines are to be removed and a site provided for them elsewhere. The charges incurred under this Order will be met from the Budget provision of Rupees 40,000 for the purchase of huts.

2. The correspondence will be communicated to the Public Works Department, in view to the issue of the necessary orders for the immediate removal of the cess-pools and drains referred to in paragraphs 6 and 7 of Major General Haines' letter.

3. The Government request that the Commander-in-Chief will be good enough to cause orders to be issued to Divisional and Garrison Authorities, to be more careful in future to prevent the intrusion of unauthorised squatters within Military limits.

(True Extract.)

Marshall

Secretary to Government.

To the Quarter Master General, with 8 enclosures.

.. Controller of Military Accounts.

.. Military Accountant.

.. Examiner Pay Department.

.. Public Works Department.

.. Adjutant General.

.. President Sanitary Commission,

.. Principal Inspector General Medical Department, } for information.

With 20 spare copies.

"demand large sum for compensation; but, I have to report for the information of the Major
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 Pro: of Gov't for September
 No 3493

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Of 11 2 Sept/85
 Rec: 10

No 3375

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2730 16th Sept 1865

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Comm: 2 8/10/85 13 of the 5th Div

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