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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 484 Press / Mis. -

307-308.

Dated 19-3- 1862.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 19th March 1862.

No. 307. Read the following Proceedings of the Madras Government in the Military Department, dated 7th February 1862, No. 482 :—

Communicating letter from the Quarter Master General of the Army, complaining of the nuisance arising from the Drainage at the north-east angle of Fort Saint George. (Vide Military Proceedings, 7th February 1862, Nos. 153-154.)

No. 308. ORDER THEREON, 19th March 1862, No. 484.

The Government concur in the opinion of the Deputy Chief Engineer as expressed in his letter of the 23rd January 1862, No. 9,723, paragraph 2, that the only effectual mode of diminishing the nuisance complained of is to provide a copious supply of water for flushing the drains once at least every twenty-four hours. Instead of using Picottahs however, the Government resolve to try the effect of one of Messrs. Peill's Wind Engines, the drawing and description of which have lately been sent out. The Deputy Chief Engineer will therefore be called upon to furnish without delay estimates of the probable expense of erecting at the north-east angle of the Fort a 2 H.P. Engine, the cost of which, exclusive of freight, is given by the Inventor at £233, and of conveying the water from thence to the main drains. The expense attendant on working the machine should also be included in the estimate. The whole amount when ascertained will be made available from the Reserve Fund of 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

MILITARY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following papers :—

From the Quarter Master General of the Army, Fort Saint George, 3rd February 1862, *No.* 363; *to the Secretary to Government, Military Department.*

I have the honor, by order of His Excellency the Commander-in-Chief, to forward for the early consideration and orders of Government, correspondence on the subject of the evil effects upon the health and comfort of the Troops in Fort Saint George, arising from the present drainage of Black Town falling into the Sea so near to the Fort, as it now does.

2. Nothing can be added to the Report forwarded by the Surgeon of the Regiment. But from the communication from the Acting Deputy Chief Engineer, it would appear that some temporary alleviation can only be afforded at an outlay of between 6 and 700 Rupees for the erection &c., of Pecottahs, and of a monthly charge of Rupees 274 for working them.

3. This nuisance has long been endured, but the time has arrived when something must, in the Commander-in-Chief's opinion, be done to protect the Troops and Residents in the Fort, from it. To wait for any alteration in the course of the drain would be to prolong endurance indefinitely; and His Excellency therefore considers that some temporary means of alleviating it is imperatively called for.

From the Acting Deputy Chief Engineer Central Circle, Chepauk, 23rd January 1862, *No.* 9723; *to the Quarter Master General of the Army, Fort Saint George.*

I have the honor to acknowledge the receipt of your letter, No. 151, of the 16th instant, which has been transferred to me by the Chief Engineer and Secretary to Government in the Public Works Department, and having perused the correspondence regarding the nuisance to the Garrison caused by the Black Town Sewer which discharges into the sea at the N. E. corner of the Fort, and carefully considered by what means the evil could be abated or got rid of, I beg to acquaint you for the information of the Commander-in-Chief, that a copious supply of water for flushing the drain, and which could be made available for that purpose at such time in each twenty-four hours as the wind is blowing off the land and the tide was low enough for the sewage to flow out, would certainly abate the nuisance; but even then there will at times be an unpleasant effluvia experienced, though in a much diminished degree, as long as the drain remains in its present position. The change of direction of the drain in order that it may discharge considerably to the North of its present mouth, and the permanent arrangements to be made for its daily cleansing, are points which it would be desirable to provide for simultaneously with the provision of fresh water for Black Town which has been lately under the consideration of Government, as an abandant supply of fresh water for domestic purposes at once creates a sufficiency of waste water for cleansing the Sewers: as regards the direction which the main Sewer from Black Town should take for discharging into the sea, there is no good reason for the present objectionable course having been taken in preference to the more direct one at right angles to the general line of the main streets in the Town: most probably it followed what had been the direction of an open drain that in earlier times would have existed, but apart from other considerations, a change to a more direct line would be desirable as the sewage would pass out more rapidly and effectually.

2. As a temporary means of immediately abating the nuisance as much as possible, one plan only suggests itself; and that is to fill the head of the main Sewer to a certain extent daily by water when the wind is blowing off the land. On the mouth of the Sewer being opened, the diluted sewage would run out rapidly into the sea and be less offensive. I would propose using water from the Fort ditch to be raised by twelve Pecottahs and poured in at the ventilating Shaft at the N. E. corner of the Fort, and it might be performed at a cost of Rupees 274 a month for the twelve Pecottahs and wear and tear of buckets, &c., the amount for putting up twelve Pecottahs and connecting pipe would be between six and seven hundred Rupees.

3. The twelve Pecottahs will raise 28,800 cubic feet in a day of eight hours. The greater part I would propose should be poured into the Sewer before the shutters are opened to mix with the sewage: and the quantity raised in the last two hours would run out afterwards to clean the head of the Sewer, less than this would not be of use, and considering the injurious effect of the nuisance to valuable lives, a palliation of it would be cheaply purchased at the

expenditure. It would at all events be worth trying for a time until the prevailing winds set in steadily from the South, when it will probably be found that the inhabitants of the Fort are not inconvenienced by the stench.

4. It is customary now to open the shutters of the Sewer only at night, I am of opinion that there is fully six hours out of every twenty-four, when the tide is low enough for the sewage to run out, and if at any portion of such periods the wind is blowing off the land, I can see no objection to allowing the sewage to run out in the day time any more than at night.

From the Officer Commanding Centre Division, Fort Saint George, 10th January 1862, *No.* 6; *to the Quarter Master General of the Army, Fort Saint George.*

I have the honor to submit for the consideration of His Excellency the Commander-in-Chief, the accompanying letters as per margin, from the Officer Commanding and Surgeon of Her Majesty's 43rd Light Infantry, regarding the stench from the drain which empties itself into the Sea at the N. E. angle of the Fort.

Letter No. 8, *6th January* 1862, *from Officer Commanding 43rd Light Infantry.*
Letter No. 7, *4th January* 1862, *from Surgeon 43rd Light Infantry.*

From the Officer Commanding Her Majesty's 43rd Light Infantry, Fort Saint George, 6th January 1862, *No.* 8; *to the Brigade Major Centre Division, Fort Saint George.*

I have herewith the honor to forward to you an urgent letter addressed to me by Surgeon Barclay M. D., of the Regiment under my Command, on the subject of the disgusting nuisance arising from opening the Sluice of the Black Town drain.

2. On Dr. Barclay's opinion and apprehensions as to the effects on the health of the Garrison being strictly professional, it is not for me to remark, but as an Officer of the Garrison, I have felt in full the inconveniences he so strongly describes; the stench from the Sluice is pungent, sickening and disgusting beyond the power of words to describe—There is no escape from it, and glass doors and windows, of which luxuries, some of the Residents of the Garrison enjoy the advantage, may palliate, but cannot exclude the polluted air; for the Soldiers of the Regiment under my Command and those who reside in Quarters which have only Jalousies, there is no escape, they must seek refuge in a purer air or endure the nuisance with mouth and nostrils closed as well as they can.

3. As a person in average robust health, I can answer for it that the nauseating effects are all that Dr. Barclay describes, and only yesterday it was as much as I could do to attend the morning Parade of my Regiment, ordered out for Brigade Exercise; I have often intended representing the matter before, but have been deterred by the assurance on all hands that the nuisance was irremediable—after receiving however such a representation from the Surgeon of my Regiment as that now enclosed, it becomes my duty to forward the same to the Major General Commanding the Division and Garrison, and I beg you will oblige me by laying this communication and its enclosure before him at your earliest opportunity.

From Surgeon W. Barclay, M. D., *Her Majesty's 43rd Light Infantry, Madras, 4th January* 1862, *No.* 7; *to the Officer Commanding H. M.'s 43rd Light Infantry, Fort Saint George.*

I have the honor to bring to your notice that there have been two admissions into the Regimental Hospital lately, from typhoid fever, and that one of the cases admitted has proved fatal.

The ordinary cause of this disease, which, though rare in Southern India, is common in Europe, has been ascertained to be the respiration of air contaminated by the exhalations from Sewers, or the drinking of water rendered impure by the percolation of their fluid contents.

2. There is no reason to suppose that the water supplied to the Fort is contaminated by any such impurity. On the contrary, its quality is excellent; and to its excellence, I believe, is to be attributed a good deal of the immunity from serious sickness enjoyed by the Garrison.

The cause of the disease in the cases which have evinced in the 43rd Light Infantry, must, therefore, be looked for in the impurity of the air, and I do not think there can be any reasonable doubt that the source of that impurity is the *Black Town Sewer*, which discharges its contents into the Sea at the N. E. angle of the Fort.

3. The nuisance from the drains of the Fort itself is trifling and wholly unworthy of mention, compared with that from this source.

4. The Sewer in question, as you are aware, carries off a considerable part of the sewage of *Black Town*, one of the filthiest quarters of an exceedingly filthy City, and after crossing the Esplanade between that quarter and the northern side of the Fort, discharges its contents into the sea several hundred yards from the former, but within a very few yards of the wall of the latter.

5. The time of opening the Sluice at the mouth of the Sewer has to be regulated by the state of the tide, and it consequently happens occasionally, at every season, that it is opened while the sea-breeze is blowing,—the result being that the disgusting effluvia which accompany the discharge of the sewage are wafted into the Fort in such intensity that the most closely shut up rooms are pervaded by them to such an extent as utterly to prevent sleep by the inmates, and to bring in violent fits of coughing and sometimes of vomiting.

6. During the N. E. monsoon, the opening of the Sewer, is of course, at all times directly to windward of the Fort; and it is worthy of remark that it is since the commencement of that season (in other respects the healthiest of the year) that both the cases of typhoid fever in the 43rd Light Infantry have occurred. No one who has not experienced it can form any idea of the abominable nature of the nuisance from this Sewer. I have never met with a stench so oppressive and sickening from any other drain in any other part of the world.

7. It is not easy to understand how an arrangement so obviously opposed to the Sanitary interests of the inhabitants of the Fort as the diversion of the Black Town drain, some hundreds of yards from its proper course, to the immediate neighbourhood of the works could ever have been sanctioned by those responsible for the care of those interests. I have heard that the Municipal authorities were threatened with legal proceedings by the Merchants near whose place of business the proper line for the Sewer would have brought it to the sea-shore, if any nuisance should result from its being opened there, and that for that reason it was directed towards the Fort! However that may have been, the nuisance to the Garrison of the Fort has been gradually increasing in intensity from year to year, from the extension of the system of drainage, and it is now one which urgently calls for a remedy. The sickness and mortality resulting from it may not have been very great (although it is impossible to say how much of the Zymotic disease from which the Garrison suffers is due to it) but it is surely a grievous hardship that even one Soldier should lose his life in order that the motley civil population of Black Town may be relieved from the inconveniences and risk involved by the discharge of their own sewage in their own neighbourhood; and I have, therefore, the honor to recommend that application should be made to the proper authority that the Municipal Commissioners be required to restore the Sewer to its proper course, and to turn it into the sea at a distance of not less than six hundred yards from the walls of the Fort.

I quite concur in the opinion of Doctor Barclay, as to the intense stench that occasionally arises from the Town reported on.

9th January 1862. (Signed) W. A. McCLEVERTY,
Major General.

ORDER, No. 482, *7th February* 1862.

Communicated to the Public Works Department, with a view to such orders being passed as may be considered requisite for remedying the nuisance arising from the drainage at the North East angle of Fort Saint George.

(True Extract.)

Secretary to Government.

To the Quarter Master General, with enclosures.
„ Public Works Department. With 20 spare Copies
„ Brigade Major Fort Saint George.

Exd. T. Stubbs.

Public Works 1862 Sept.
Letters Received

No 409.

Rec: of the Madras Govt.
in the Military Depart.

Dated 7th February 1862
Rec'd 13th " "
No 482.

Communicating letter
from the Quarter Master
General of the Army
Commanding upon
the Allowance arising from
the Distance between
Fort St. George
& Fort St. Petros
No 484 - 19 March

No 2097.

C8 Number 0213

Public Works Dept.

Proceedings of the Madras Govt. 12th Feb. 1862

Under date the 19th March 1862

Proceedings of the Madras Govt. in the Military Dept. Read the following.

Communicating letter from the Quarter Master General of the army complaining of the Nuisance arising from the Drainage at the North East angle of Fort St. George —

Steve Inter 17th Feb. 1862 No. 482.

No. 9723

The Govt. concur in the opinion of the Officiating Chief Engr. as expressed in his letter of the 23d Jan. 1862 Para 2 - that the only effectual mode of diminishing the nuisance complained of is to provide a copious supply of water for flushing the Drains × Instead of using Peerkies however, the Govt. resolve to try the effects of the Steam Fire Engines, the drawings and description of which have lately been sent out by the Secretary of State for India with a view to their adaptation to the purposes of Municipal duties at Madras. Estimate of the probable expense at 2 M. E. daily the Govt. of erecting, and 2 M. E. Engine, the cost of which, exclusive of freight, is given by the Inventor at £ 233 - 0 - 0 ×

The expense attendant on working the Machine should also be included

× once at least every twenty four hours

× and of conveying the water from thence to the main Drains

C8 Fund A/c 13th

Copy to Jy.

Commencing from the Quarter Master General's Letter dated 17th Feb. 1862 No. 482 to the Govt. Public Works Dept. No. 1181-19

Under existing circumstances I do not see any thing to likely to be of service; as the Plan prepared by the Acting Dep. Chief Engineer in his letter dated 23rd Jan. 1862 - I beg to return herewith the Official Correspondence. The whole of which I have read over with care - Believe me to be

My dear Sir,
Your's faithfully,
John Bradfield.

in the Estimate. and the
when ascertained
available amount to be
made available from the
Reserve Fund of 62/63.

E.T.P.T.

13 Copies
of
To The Rt Hon Chief Engr of Circle Right? 20

(8)

Nuisance arising from the Drainage at the North East Point of Fort St. George.

Public Works 1862 Dept
Pro: of Govt: for March

No. 484.

Pro: of the Madras Govt:
Dt. 19th March 1862

Requiring Dy. Chief Engr: C. C. to furnish estimates for erecting at the North east angle of the Fort a 2 H.P. engine for the purpose of conveying water from thence to the main drains.

V. P. 307 & 308.