

GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

18th July 1887, No. 4288.

Defences—Fortified Posts.

Read the following paper:—

No. 276. *From Brigadier-General E. FAUNCE, Quarter Master General, to Brigadier-General A. KENNEY-HERBERT, Secretary to Government, Military Department; dated Ootacamund, 2nd July 1887, No. 1633-B.*

I have the honor, by order, to forward, for the information of Government, a report on the Agram Entrenchment at Bangalore, and, in doing so, I am desired to say that the Commander-in-Chief approves the proposal made in para. 4 of the report relative to the construction of walls of rubble stone-in-clay in lieu of the mud-walls forming a covered passage between the Female and South Station Hospitals, and will cause an estimate for the work to be prepared in view to its execution next year.

2. His Excellency concurs in the opinion expressed in para. 20 of the report as to the desirability of having a European guard over the magazine in question, and proposes, with the approval of Government, to call for a plan and estimate for the work, so that it too may be executed next year.

3. The expenditure of a fixed sum of Rs. 200, proposed in the latter part of para. 4 of the report, to be utilised in maintaining the musketry parapets, ditch, &c., is, in the opinion of the Commander-in-Chief, unnecessary, as the Executive Engineer can provide such sums of money as may be necessary each year from the Repair Grant for the Division, under the sanction of the General Officer Commanding.

From Major-General HUGH ROWLANDS, V.C., C.B., Commanding Bangalore Division, to the Quarter Master General, Ootacamund; dated Bangalore, 20th May 1887, No. 54-O.I.

I have the honor to submit a report on the Agram Entrenchment, together with plan and sections and details of armament, &c., in accordance with instructions conveyed in S.G.O. No. 81, dated September 6th, 1883, pages 187 to 189, after my inspection on May 18th, 1887.

2. The Agram Entrenchment consists of a piece of land, $37\frac{1}{2}$ acres in extent, in the form of a five-sided irregular polygon, four sides (the north, east, south-east, and south) of which consist of a musketry parapet and a V shaped ditch, and the west side is defined by the two wings and central buildings of the South Station Hospital. At the south-east angle is the magazine and small-arm ammunition store, surrounded by a strong masonry wall, loop-holed for musketry, and the out-houses attached, the whole forming the so-called Ordnance Dépôt. At each of the five other angles of the work is a cavalier bastion, so built, &c., that a gun on an ordinary field carriage can fire en-barbette over the salient angle through either of two embrasures for flanking the ditches on either side of the bastion.

3. The European Female Hospital, standing on the west side of the above enclosure and but a short distance from it, has been joined to the north end of north wing of the South Station Hospital by means of two mud-walls, loop-holed for musketry, about 8 feet high.

4. The mud-walls, forming covered passage between the two hospitals, are in a very dangerous and unsightly condition, owing to the heavy rains of last year. It is therefore proposed to remove and rebuild them entirely with plain rubble stone-in-clay; walls to be 18" in thickness and 8½ feet high with slab stone coping sloping outwards and loop-holes at 4½ feet in height

from the ground and placed 5 feet from centre to centre for musketry. The Superintending Engineer, V Circle, supports the recommendations of the Executive Engineer on this alteration; the loop-holes in stone-walls being made as shown in Defence Committee's type drawing No. 82 in Executive Engineer's office. Rs. 200 per annum is proposed to be expended in maintaining the musketry parapets, ditch, &c.

5. The water-supply is by means of a circular well, 40 feet deep and 24 feet 6 inches in diameter, the depth of water in which between July 1885 and present time has ranged between 20' 9" and 26' 4" on the 15th January 1887, the least depth at any one time being 16' 3" in October 1885. The water is colorless and should be very pure, as it is difficult for any foul matter to get into it unless thrown in. The well is near the Dumloor tank.

6. Water is supplied to the hospital by means of a 3-inch cast-iron pipe from the Ulsoor Water Works, which feeds two cast-iron tanks each capable of holding 4,330 gallons of water, both erected inside the building.

7. The European Female Hospital is also similarly supplied by the same pipe, which feeds two cast-iron tanks, each capable of holding 1,400 gallons of water inside this building. The hospitals would afford barrack accommodation for the following numbers of men at 100 feet square per man:—

North wing South Station Hospital	74
South „ „ „	74
Dispensary „ „	38
European Female Hospital	61
Infectious Hospital	24
Contagious „ „	14
Medical Subordinate's quarters	15
Total	300

8. All subsidiary buildings, as cook-houses, bath-rooms, latrines, &c., as usually attached to hospitals for European patients, exist and are in good order.

9. The drainage is shown on the plan. All foul drains coming from the South Station Hospital are taken out over and beyond the ditch on the north front, and so clearly cannot influence the well; that from new latrine leads straight out into the ditch on the east front, and the surface drains of the interior of the work debouch at various points into the ditches on the north and east fronts and past the well; should the water in the well show signs of exhaustion after much use, it will be necessary to lead some of these surface drains into it.

10. Opposite the south-east angle of the work in front of the magazine and compound is a deep ravine not yet completely laid open to fire from the top of the magazine; it is customary to employ military prisoners on levelling down the near side of this ravine in the cooler months of the year, but another dam will be added to the existing one, and the head of the ravine will receive attention.

11. The parapets and bastions are all in good order; where the side slopes of the ditch show signs of erosion owing to not having been turfed, they will be gradually turfed from year to year, a certain stated length as of 400 yards of the worst portions being done last year at the most suitable season.

12. The interior of the place is kept free of all loose cattle, goats, and grass-cutters at all times, as otherwise the grass surface and the 1,200 young trees would be destroyed.

13. The armament consisting of six 8" S.B. howitzers, mounted on travelling carriages; two 8" mortars, mounted on beds, are in good order.

14. The howitzers have been placed one each in Nos. 1, 3, 4 and 5 bastions and two in No. 2 bastion. The mortars are not in position.

15. The four machine-guns, sanctioned by Proceedings of Government, No. 5368, dated September 2nd, 1886, have not yet been supplied; these have again been asked for, but they have yet arrived in the country.

16. With the exception of 10,000 rounds for machine-guns, the full complement of ammunition, viz. :—

	Rounds.
300 rounds per howitzer	1,800
250 „ „ mortar	500

is in store and serviceable; no cartridges are made up nor shells filled.

17. The Officer Commanding Royal Artillery considers expense magazines and store sheds for side arms necessary, but I do not propose that, at present, any expenditure on this head should be incurred; the shell and cartridge recesses already provided at each bastion are in good order, and will meet all requirements; whereas the gun stores find cover in the buildings lately vacated

by the Ordnance Department; the shell and cartridge recesses require to be kept locked; pad-locks and keys will be provided.

18. Ranges have been taken from the different bastions and boards will be marked accordingly.

19. A few young trees growing on the sides and near the parapet have been ordered to be removed, as the roots are likely to injure and open out the stone facing and undermine the earth-work.

20. The guard over the magazine is one furnished by a Native regiment, in consequence of there being no building suitable for an European guard; but as there are 836,720 rounds of reserve small-arm ball ammunition stored in the magazine, I consider that a sum of money should be allotted to erect a guard-room adapted for an European Infantry guard.

No. 277. ORDER THEREON, 18th July 1887, No. 4288.

The proposal in para. 2 of the Quarter Master General's letter is approved.

(True Extract.)

(Signed) A. KENNEY-HERBERT, Brigdr.-Genl.,
Secretary to Government.

To the Quarter Master General.
„ Public Works Department.

No. 2108w of 8th August/87

Govt. of 1887 Madras.
MILITARY.

Communicated to

the Supz Engineers &

Circle.

1st of 10th

W.

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

Dated July, 18th.

Issued

Recd.

Encl.

G.O., 18th July 1887, No. 4288.

No. 2108w of 8th August/87

JULY.
Nos. 276-277.

Defences—Fortified Posts.

St. V Circle

With order

Agram Entrenchment.—Erection of a guard-room for the European Infantry guard to be placed over the magazine in the —, approved.

GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

18th July 1887, No. 4288.

Defences—Fortified Posts.

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PWC No 6008

Govt. of 1887 Madras.

MILITARY.

No. 2108 w a/s. 18th August/87

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

Dated July, 18th.

Issued

Recd. 3.8.87 Encl.

G.O., 18th July 1887, No. 4288.

No. 2108 w a/s. 18th August/87

JULY.

Nos. 276-277.

Defences—Fortified Posts.

Agram Entrenchment.—Erection of a guard-room for the European Infantry guard to be placed over the magazine in the —, approved.

See V. Birch & Co.
S. E. V. C. 8/8
replies to 18th
W. Belling 29.7.87
21.8.87
16/8

with order