

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

Issued

Recd.

JUNE.
Nos. 47—49.

Agram Entrenchment, Bangalore.—Annual report on the — for 1887-88 with remarks thereon by His Excellency the Commander-in-Chief, recorded, and the non-receipt of the machine guns sanctioned for the entrenchment ordered to be brought to the notice of the Government of India.

GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

Defences—Fortified Posts.

Read the following paper :—

No. 47. From Colonel M. PROTHEROE, C.B., C.S.I., Officiating Quarter Master General, Madras Army, to Brigadier-General A. KENNEY-HERBERT, Secretary to Government, Military Department; dated Ootacamund, 21st May 1888, No. 1648-B.

I have the honor, by order, to forward, for the information of Government, the annual report on the Agram Entrenchment, Bangalore, for the year 1887-88, and in doing so I am to bring to the notice of Government that the four machine guns sanctioned * for this work have not been received as yet.

* Proceedings of Government, No. 5368, dated 2nd September 1886.

2. The General Officer Commanding the Bangalore Division has been informed, with reference to the suggestions in the report regarding the storage of made-up cartridges and shell filled within the entrenchment, that it is undesirable to provide for this until the guard room referred to in para. 12 of the report has been built. Funds for this work have been provided in the current year's budget.

Proceedings of Government, No. 1381, dated 27th February 1888.

3. The exposed condition of the interior of this work to fire from the commanding ground on the north, north-east and south-west referred to by the Officer Commanding, Royal Artillery, Bangalore Division, in his observation, has already come under the notice of the Commander-in-Chief, and, under His Excellency's orders, consideration is being given to the matter.

From Major-General HUGH ROWLANDS, V.C., C.B., General Officer, Commanding the Bangalore Division, to the Quarter Master General, Madras Army; dated Bangalore, 14th March 1888, No. 104-01.

I have the honor to submit a report on the Agram Entrenchment, together with plan † and section of the fortified post † and report in tabular form of details of armament, capacity and identification of the magazines, &c., having

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inspected the Agram Entrenchment on 2nd March 1888, in accordance with instructions conveyed in S.G.O. No. 81, dated 6th September 1883, pages 187 to 189.

2. The Agram Entrenchment consists of a piece of land 37½ 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 depôt. 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 rubble stone walls, loop-holed for musketry, about 8½ feet high.

4. 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 feet 9 inches at former date and 23½ feet on 1st January 1888, the least depth at any one time being 16 feet 3 inches 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.

5. 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.

6. The European female hospital is also similarly supplied by 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 :—

	Men.
North wing, S.S. hospital	74
South do. do. do.	74
Dispensary do. do.	38
European Female do.	61
Infectious	24
Contagious	14
Medical subordinate quarters	15
Total ...	300

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

8. 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 recently built 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. 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.

9. The parapet 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 should be gradually turfed from year to year, a certain stated length as of 400 yards of the worst portions being done the year before last at the most suitable season.

10. 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. About 1½ acres of hard ground in the north-west corner of the entrenchment has been dug up, manured and dibbled with hurriali during the last season, and about 9 cwt. of hay has been obtained.

11. The mud walls forming the covered passage between the female and south station hospital have been removed and rebuilt with plain rubble stone in clay with loop holes for musketry (*vide* G.O. No. 4288, dated 18th July 1887).

12. A plan and estimate for Rs. 5,380 for constructing a guard room for European troops and fire engine shed for the Ordnance depôt, as approved in G.O. No. 4288, dated 18th July 1887, was submitted for sanction and allotment of funds on 17th January 1888.

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

14. The four machine guns sanctioned by Proceedings of Government, No. 5368, dated 2nd September 1886 have not yet been received.

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

300 Rounds per howitzer = 1,800,
250 Mortar = 500,

is in store and serviceable. No cartridges are made up nor shells filled, some five rounds per gun could with advantage be kept ready for use.

16. Platforms of concrete or stone are necessary for each bastion for working the guns and for facilitating their being run up and back for ordinary cleaning purposes. The Executive Engineer will be requested to submit estimates for the same.

17. There are no sand bags in store. I consider that an ample supply should always be kept in store in the entrenchment.

I consider the interior of the entrenchment is greatly exposed to fire from commanding ground on the north and north-east and south-east.

(Signed) T. VAN STRAUBENZEE, Col., on the Staff,
26th March 1888. Bangalore Division.

No. 48. ORDER THEREON, 2nd June 1888, No. 3671.

Recorded.

2. The non-receipt of the machine guns will be brought to the notice of the Government of India.

No. 49. To the Secretary to the Government of India, Military Department;
dated 2nd June 1888, No. 3672.

(True Extract.)

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

To the Quarter Master General.
„ Public Works Department.

Ed. E. C. Shunker.

P.W. Department
Proceedings of the Madras
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MILITARY DEPARTMENT, 2ND JUNE 1888, No. 3671.

Gobt. of (1888) Madras.
MILITARY.

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

Dated June, 2nd.

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GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

Defences—Fortified Posts.

Read the following paper :—

No. 47. From Colonel M. PROTHEROE, C.B., C.S.I., Officiating Quarter Master General, Madras Army, to Brigadier-General A. KENNEY-HERBERT, Secretary to Government, Military Department; dated Ootacamund, 21st May 1888, No. 1648-B.

I have the honor, by order, to forward, for the information of Government, the annual report on the Agram Entrenchment, Bangalore, for the year 1887-88, and in doing so I am to bring to the notice of Government that the four machine guns sanctioned * for this work have not been received as yet.

2. The General Officer Commanding the Bangalore Division has been informed, with reference to the suggestions in the report regarding the storage of made-up cartridges and shell filled within the entrenchment, that it is undesirable to provide for this until the guard room referred to in para. 12 of the report has been built. Funds for this work have been provided in the current year's budget.

3. The exposed condition of the interior of this work to fire from the commanding ground on the north, north-east and south-west referred to by the Officer Commanding, Royal Artillery, Bangalore Division, in his observation, has already come under the notice of the Commander-in-Chief, and, under His Excellency's orders, consideration is being given to the matter.

From Major-General HUGH ROWLANDS, V.C., C.B., General Officer Commanding the Bangalore Division, to the Quarter Master General, Madras Army; dated Bangalore, 14th March 1888, No. 104-01.

I have the honor to submit a report on the Agram Entrenchment, together with plan † and section of the fortified post † and report in tabular form of details of armament, capacity and identification of the magazines, &c., having

inspected the Agram Entrenchment on 2nd March 1888, in accordance with instructions conveyed in S.G.O. No. 81, dated 6th September 1883, pages 187 to 189.

2. The Agram Entrenchment consists of a piece of land 37½ 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,

Order No. 1846 W. of 20th June 1888
Communicated to the
Superintending Engineer &c.
The work mentioned in para
2 of the Quarter Master
General's letter, for which
funds have been provided
in the current year's Military
works budget, should be
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col J. H.

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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 rubble stone walls, loop-holed for musketry, about 8½ feet high.

4. 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 feet 9 inches at former date and 23½ feet on 1st January 1888, the least depth at any one time being 16 feet 3 inches 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.

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8. 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 recently built 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. 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.

9. The parapet 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 should be gradually turfed from year to year, a certain stated length as of 400 yards of the worst portions being done the year before last at the most suitable season.

10. 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. About 1½ acres of hard ground in the north-west corner of the entrenchment has been dug up, manured and dibbled with hurriali during the last season, and about 9 cwt. of hay has been obtained.

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„ Public Works Department.

Ed. H. C. Shunker.

Gobt. of (1888) Madras.
MILITARY.

Order thereon No 1846 W of 20 June 1888

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(True Extract.)

A. H. H. H. H.

Brigdr.-Genl.,

Secretary to Government.

To the Quarter Master General.
Public Works Department.

S. B. sent to Master's Office.

Ed. F. C. Shunker.