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MADRAS RECORD OFFICE.

Government of Madras.

public works **DEPARTMENT.**

G.O. No.	1732	Press ~~Mis.~~
10-11-		
Dated	1-7-	1863.

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*Proceedings of the Madras Government, Public Works Department,
1st July 1863.*

No. 10. Read the following Proceedings of the Madras Government in the Military Department, dated 22nd June 1863, No. 20,20:—

Requesting that orders may be issued for the preparation of
Plans and Estimates for constructing a new building to the
great Reserve Powder Magazine, and for putting the Sea
Batteries of Fort Saint George in a proper state of
defence. (Vide Military Proceedings, 22nd June 1863,
Nos. 426 @ 428.)

No. 11. ORDER THEREON, 1st July 1863, No. 1,732.

Communicated to the Superintending Engineer 4th Division for immediate attention with reference to paragraphs 3 and 4.

(Signed) W. L. BIRDWOOD, Colonel, R. E.,
Secretary to Government.

MILITARY DEPARTMENT.
PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following papers:—

From the Quarter Master General, Fort Saint George, 1st June 1863, No. 4507; to the Secretary to Government, Military Department.

I have the honor, by order of His Excellency the Commander-in-Chief, to forward, for the consideration and order of Government, two Memoranda by His Excellency, bearing on the removal of Ordnance Establishments from Fort Saint George and its vicinity, to the Mount, and to the strengthening the Sea defences of the Fortress against a Naval attack, both of which points, are referred by Government to His Excellency in their Order, No. 1059, dated 28th March last, on a Despatch from the Right Honorable the Secretary of State.

2. Referring to the latter of the two papers, I am directed, by His Excellency to add, that no special expense need be incurred in the land defences of the Fortress, all that is required, is to mount a sufficient number of Guns, of suitable Calibre, on the existing works.

MEMORANDUM.

With a view to carrying out the instructions of the Secretary of State for India, as contained in paragraphs 15 and 13 of his Despatch of the 8th January 1863, No. 1, I propose the following arrangements:—

N. E. Orillon Demi-Bastion.—1st. The Orillon Demi-Bastion at the N. E. angle of the Fort, to have the salient cut off to such a distance as will give a face, capable of bearing three Guns, to fire in the direction of the capital of the work, another Gun to be placed on the East face of the work. One splinter proof traverse to each pair of Guns.

Armament to consist of three 110-Pdrs. (Armstrong's) and one 68-Pdr. Gun.

A Magazine can be found in the Bombproofs of the work.

North Ravelin.—2nd. Four 68-Pdr. Guns to be placed on the East-face, and flank of the North Ravelin.

A small Expense Magazine exists in the West-face of this work, now occupied by the Gas-works. This can be resumed, and a Shed built for Dr. Mayer, on the dry ditch, on the left flank, for about 20 or 30 Rupees.

S. E.—Demi-Bastion.—3.d. Rampart of the South East Demi-Bastion to be thickened by the addition of two new Casemates at the junction of the Sea-face and Demi-Bastion, and the Parapet thickened to 15 feet. To be armed with three 110-Pdrs. (Armstrong's.) Cover is available for an Expense Magazine at its junction with the Sea-face.

Traverses will be required here, or else a Parados to defilade the work.

Wallajah Bastion.—4th. Six 68-Pdr. Guns to be placed on the East face and flank of the Wallajah Bastion. Cover for an Expense Magazine is available in an old Cistern in the Bastion which has not been used for many years.

Sea Face Batteries.—5th. 16 Guns to be removed from the Sea-face Batteries, so as to leave 21, 68-Pdrs. in them; viz. 10; in the North section, and 11 in the South section.

Magazines to be constructed for these Batteries as follows, viz. for the South section, one in the terrepleine of the Flag Staff Cavalier, close to the end of the face; and another already exists in the flank of the S. E. Demi-Bastion and only requires casing, Estimates for which have already been sent in.

For the North section, one in the Flag Staff Cavalier, similar to that for the South section, and another exists in N. E. Demi-Bastion, for which Estimates have gone in.

Splinter proof Traverses to be erected, one between each pair of Guns.

All the Guns to be *en barbette*, on Traversing Platforms.

Caldwell's Magazine at the S. E. angle of the Fort should not be pulled down as was intended. It is a good Magazine, and should be retained.

Store-rooms for the Batteries should be found in adjacent Bombproofs, so that the Stores belonging to each Gun may be always available and at hand.

Shot Furnaces (permanent) will be required in some places.

Clive's Battery.—6th. The Parapet at south end of Clive's Battery to be thrown back at right angles to the Beach, cutting off the S. E. angle from the 2nd Gun from the right. No. 1 Gun will fire right along the Beach. Six Guns to be mounted altogether in Clive's Battery, all to be on traversing Platforms, *en barbette*. It is proposed that 2, should be 32-Pdrs. and four, 68-Pdrs.

A Shot Furnace should be built for this Battery; and splinter proof traverses between every pair of Guns.

Abercrombie's Battery.—7th. Six Guns should be mounted in Abercrombie's Battery, or at least, places prepared for six. The Parapet is thin and weak, but being so low, only about 5 feet in relief, it would be so difficult to hit, and so easy to thicken temporarily, that it is doubtful if it is necessary to do so now.

8th. A Plan shewing the proposed changes in the Fort is herewith sent; also an Estimate of the probable cost of them.

MADRAS, }
27th May 1863. } (Signed) J. HOPE GRANT,
Lieutenant General.

Estimate of the probable expense of the alterations to the Fort, ordered by His Excellency Sir Hope Grant, G. C. B., Commander-in-Chief, Madras.

No. 1.		RS.	A.	P.	RS.	A.	P.
<i>Orillon Demi-Bastion.</i>							
	For curving the salient of the Orillon Demi-Bastion, making new Parapet and re-forming Terrepleine of the work for three Armstrong Guns.....	1,150	0	0			
	Three Traverses at 30 Rupees each.....	90	0	0			
	Sundries.....	60	0	0	1,300	0	0
<i>North Ravelin.</i>							
" 2.	For constructing new Terrepleine and Platform for four 68-Pdr. Guns at 90 Rupees a Gun.....	360	0	0			
	Two Traverses at 30 Rupees each.....	60	0	0			
	Sundries.....	30	0	0	450	0	0
<i>South East Demi-Bastion.</i>							
" 3.	Extending the Casemates at the junction of the Sea-face and Demi-Bastion....	2,000	0	0			
	Laying three Platforms for Armstrong Guns and thickening the Parapet of the Sea-face for 100 feet.....	850	0	0			
	Three Traverses at 30 Rupees each.....	90	0	0			
	Sundries.....	60	0	0	3,000	0	0
<i>Wallajah Bastion.</i>							
" 4.	For re-forming Terrepleine for six 68-Pdr. Guns at 90 Rupees a Gun.....	540	0	0			
	Sundries.....	60	0	0	600	0	0
<i>Sea-Face.</i>							
" 5.	For removing 17 Guns, Pivots, and granite Platforms, at 10 Rupees.....	170	0	0			
	For constructing ten Traverses at 30 Rupees each.....	300	0	0			
<i>Shot Furnaces.</i>							
	Two Shot Furnaces at Rupees 1,200.....	2,400	0	0			
	Two small Expense Magazines, excavated and built in the terrepleine, at 500 Rupees each.....	1,000	0	0			
	Sundries.....	30	0	0	3,900	0	0
<i>Clive's Battery.</i>							
" 6.	Throwing back Parapet at South end, laying new Platform and re-making Parapet.....	130	0	0			
	Two Splinter proof Traverses at 30 Rupees.....	60	0	0			
	Sundries.....	10	0	0			
	One Shot Furnace.....	1,200	0	0	1,400	0	0
<i>Abercrombie's Battery.</i>							
" 7.	Laying six Platforms and Pivots for six 68-Pdr. Guns at 30 Rupees each.....	180	0	0	180	0	0
Total Rupees.....					10,830	0	0

May 1863.

(Signed) H. W. WOOD, Lieut., R. E.

MEMORANDUM.

Referring to the Military Despatch, No. 1 of the 8th of January last, referred to the Commander-in-Chief in Proceedings of Government, No. 1059 of 28th March, it appears, that one of the main points to be considered, is "the propriety of removing the Arsenal and Ordnance

"Manufacturing Establishments of Madras to a more secure position beyond the reach of bombardment from the Seaward."

2. The following are the Manufacturing Establishments above alluded to, viz. :—

Gun Carriage Factory.

Gun Powder Factory.

Bullet Factory.

3. Practically, these Establishments are all secure from bombardment from the Seaward.

4. The Gun Carriage Factory is situated in the suburb of Vepery, West of Fort Saint George, 2,500 yards from the seashore, and covered by the Fort.

5. The Gun Powder Factory is situated in an open plain to the West of Black Town, 3,500 yards from the sea, between which and it, intervenes some rising ground, so that it would be impossible for a Ship to touch it.

6. The Bullet Factory is situated on the old Ramparts on the North of Black Town, near the Railway Terminus, and is 1,050 yards from the seashore, and from Clive's Battery which thus covers it. If this Battery be armed, as is recommended, no Vessel would venture to approach near enough to bring the Bullet Factory within Artillery range, besides which, it is so small and unobscure an object amongst the rest of the Town Buildings, that it could hardly be made the object of a special attack.

7. If the question then simply embraced the determination of a site whereon to erect Ordnance Factories, it would certainly be advisable to have them all concentrated, at the Mount, where there is sufficient open ground; but if the only object of removing these Establishments to the Mount, is to secure them against a Naval attack, such removal is quite unnecessary.

8. It seems, however, as if this question of security from bombardment, had got mixed up with the general one, of concentrating these Establishments within a fortified Post, with a view to a possible insurrection. This gives it a totally different aspect; but if these Establishments are to be removed on these grounds, where are we to stop? The Bank of Madras lies in the very heart of Black Town; the Mint is close to the Bullet Factory, and also in Black Town; the Railway Terminus is on the North of the Town, and just outside it; the Custom House is on the Beach, and the Christian population is too large to be all admitted into the Fort.

9. All these must be protected, in the event of an insurrectionary rising; and they cannot all be moved to protected positions. Clive's Battery denominates the Town on its northern extremity by turning its Guns inwards, and Fort Saint George, from its N. W. face, brings under fire, all the Town in its entire length and depth, intervening between it and Clive's Battery.

10. The public knowledge of this power will at all times tend to repress any attempt to create local disturbance.

11. To remove these Establishments for so remote and improbable a contingency, would be to incur a vast expense to the State, by the abandonment of new costly Buildings, some recently constructed, others now in course of erection—amongst the latter, may be mentioned, the new Granulating Mills for the Powder Factory.

12. The Gun Carriage Factory being situated in a populous suburb, is more liable to fire, than if isolated, but it is surrounded by a good high wall, is clear on two sides, and is not more easily accessible to an incendiary, than it would be at the Mount, whilst it has an abundant supply of water within its precincts.

13. With regard to the Arsenal, which is in Fort Saint George, and consequently open to bombardment from the Seaward, it may be observed, that there is no great amount of combustible Stores in it, whilst in its present position, it is quite safe from any insurrectionary movement.

14. There is but little Ammunition kept in the Fort beyond what is required for the Fort itself, and this is, in a small Magazine wholly separate and some distance from the Arsenal Buildings. The Infantry and Artillery Reserves generally, are kept in the Magazines at the Stations where the Troops are quartered.

15. The great reserve of Gun Powder is kept in the Magazine North of the Powder Factory, in an open plain 3,500 yards from the seashore, and therefore secure from the fire of shipping.

16. This Magazine is however not only in a very unprotected position inland, but it is an old, and, for a Gun Powder Magazine, an objectionable Building, situated in low marshy ground, and if any new Buildings were erected on the same site, a thorough system of drainage would have to be carried out. During the Monsoon this ground is very damp, and on its lowest parts has water lying on it.

17. I think therefore, that this Magazine ought to be removed to some fitter place, where it could be under the protection of European Soldiers—and for this, the Mount is most suitable. The Inspector General of Ordnance says, "this Magazine ought certainly to be removed to 'the Mount;' it is a source of anxiety in its present position."

18. The only small Arm Reserve kept in the Fort is about eight lacs of Ball Ammunition to supply any Regiment suddenly ordered on Foreign Service. This might also, when necessary, be removed to the Magazine at 'the Mount.'

19. The Cap Factory is already at 'the Mount,' where also are kept Fuzes and other Laboratory Stores and combustibles.

20. What is really required, is to put the sea Batteries of Fort Saint George in a proper state of defence, with suitable Expense Magazines, Shell Rooms, and Store Rooms.

21. The existing Magazines to be strengthened, if necessary. The Fort will then be quite secure against any desultory Naval attack, though of course it could not withstand the assault of a regular Flotilla of Mortar Boats.

22. I need hardly say, that it is not adapted to withstand any well-organized regular attack, whether by land or sea; but it is equally certain, that it could easily defeat any attack that is likely to be made on it.

23. In a separate Memorandum, suggestions have been made, with this purpose, to meet the instructions given on this head, in Sir C. Wood's Despatch, above referred to. The proposed improvements can be carried out for a very moderate sum. Looking then to the completion of the sea defences, there seems to be no sufficient reason to move any other Ordnance Establishment to 'the Mount' excepting only the great Reserve Magazine, above spoken of.

24. A Sketch shewing the position of the abovementioned places with regard to the sea-shore, is herewith forwarded.

MADRAS,
30th May 1863.

(Signed) J. HOPE GRANT, Lieut.-General.

ORDER, No. 2020, 22nd June 1863.

Resolved, that the foregoing papers, be forwarded to the Right Honorable the Secretary of State for India.

2. The Governor in Council concurs with the Commander-in-Chief, as to the impolicy of removing the Arsenal and Ordnance Manufacturing Establishments from the sites they at present occupy at Madras, to the Mount, or elsewhere.

3. The propriety, however, of removing the great Reserve Powder Magazine, North of the Gun Powder Manufactory, referred to in paragraphs 15 to 17 of His Excellency's Memorandum, dated 30th May, is admitted. A site for the new Building will be fixed upon, by the Inspector General of Ordnance, in communication with the Commander-in-Chief; and the Public Works Department will be requested to issue instructions for the necessary Plans and Estimates being prepared and submitted to Government. Meanwhile, due measures will be taken by the Inspector General for protecting the present Building, as efficiently as practicable.

4. The arrangements proposed in His Excellency's Memorandum of 29th May, for putting the Sea Batteries of Fort Saint George in a proper state of defence, are approved. A regular Estimate for the work to be executed, will be prepared and submitted without delay, in the usual form through the Public Works Department, for sanction, the work being meanwhile proceeded with, from Funds at disposal of that Department. The Inspector General of Ordnance will take the necessary steps for mounting the Batteries, in the manner pointed out in the Memorandum referred to.

(True Extract.)

W. Marshall

Secretary to Government.

To the Quarter Master General.

" Inspector General of Ordnance.

" Public Works Department.

" Adjutant General.

" Barrack Master, Fort Saint George.

" Brigade Major, do.

" Controller of Military Finance, for information.

Exd. R. Stephenson.

MILITARY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following :—

Military Despatch from the Right Honorable the Secretary of State for India, India Office, London, 8th January 1863, No. 1.

Paragraph 1. I have received and considered in Council your Military letter, No. 85, dated the 25th March 1862, forwarding certain papers connected with the subject of the repair of the defences of Fort Saint George, and the proposed removal of the Grand Arsenal and Principal Ordnance Factories, to Saint Thomas' Mount.

2. The main points to be considered in connection with this subject are :—

I. The propriety of removing the Arsenal and Ordnance Manufacturing Establishments from Madras to a more secure position, beyond the reach of bombardment from the seaward.

II. The question of maintaining thereafter the present Fort of Madras.

3. With respect to the first of these questions, I observed, in my Despatch, No. 189, of the 8th December 1860, paragraph 15, that, under the circumstances of the case, I thought an inland position would be more appropriate for your principal Arsenal, and I requested, therefore, that this object might be kept in view.

4. From the papers now forwarded, I learn that your President considers that the whole of the Stores in Fort Saint George, not required for the Garrison, should be removed as soon as possible. He prefers, for the establishment of a Depot, a spot near the junction of the north-western branch with the main line of Railway, to the neighbourhood of Saint Thomas' Mount, the former being about forty, the latter eight or ten miles, from Fort Saint George.

5. His Excellency the Commander-in-Chief concurs in these views generally. The other Members of Government object to the site thus proposed by the President, and prefer the vicinity of the Mount.

6. With regard to the present Fort of Madras, it is estimated by your President that the present Fort could not be placed in a proper state of repair at a less expenditure than ten or twelve lacs of Rupees. He considers, however, that it would not be wise to dismantle the Fort, even if it could be shewn to be of trifling Military importance, but is of opinion that it might eventually be found desirable to reduce its area to that required for the defence of the anchorage and a citadel.

7. His Excellency the Commander-in-Chief concurs in the above views, and as regards the propriety of maintaining Fort Saint George to serve as a citadel.

8. Mr. Maltby is of the same opinion.

9. Mr. Morehead considers the Fort of Madras to be utterly worthless as a place of defence.

10. I have given the whole subject the full and careful consideration which its importance demands.

11. Much weight is to be attached to the existence at the seat of Government, in each Presidency, of a Fort of sufficient strength to give confidence to the loyal portion of the community, and to afford security against an insurrectionary attack, even though it may not be calculated to stand a regular siege.

12. In a Fort of this description, the Government Treasure, which would be the first object of plunder in the event of an insurrectionary rising, might be placed in security; and a refuge would also be afforded on such occasions to women and children.

13. Were it not that Fort Saint George, being on the Coast, is liable to bombardment from the sea, it would also be the fittest place for the Grand Arsenal; and, even as it is, there might be no objection to retain within it, and in the existing Buildings which have been provided for that purpose, such part of the Arsenal Stores as would be least liable to damage by bombardment.

14. For such purposes, it would not be necessary to do more than keep the Fort in decent repair.

15. In the several Estimates that have been prepared for the repair of Fort Saint George a large portion of the amount required is for out-works. The retention of these is not necessary for the abovementioned purposes, and, unless their demolition and removal would cost more than their repair and maintenance, they might with advantage be removed.

16. It is understood that the measures lately adopted, with regard to the sea-face, have rendered that line of rampart capable of bearing the heaviest Ordnance; but should this not be the case, it might in part be further strengthened, so as to render it a formidable Battery against hostile ships approaching the Town of Madras in that direction.

17. With regard to the removal to a place of security of the manufacturing Establishments and more combustible portion of the Ordnance Stores, I am of opinion that the neighbourhood of Saint Thomas' Mount would be the most convenient locality for that purpose.

18. A defensive work should be constructed on the spot, and Barracks for two Companies of European Soldiers, who would be detached from the Regiment at Fort Saint George.

19. Quarters should also be provided for a party of Artillery, which should form a portion of the ordinary Garrison.

20. The Gun Powder Manufactory should be placed in such a position as to be protected by this work, but not near enough to create any risk of injury to life or property at the Depot in the event of explosion.

21. Before proceeding, however, to carry into effect any of the measures here contemplated, it will be necessary that you submit to the Government of India an Estimate of the probable cost, in order that the propriety of entering these works into the Budget, at an early date, may be fully considered and decided upon.

22. A copy of this Despatch will be forwarded to the Government of India.

ORDER, No. 1059, 28th March 1863.

Referred to His Excellency the Commander-in-Chief, who is requested to favor Government with his views on the subject of paragraphs 15 and 16 of the foregoing Despatch; also on the general question of the proposed removal of the Arsenal and Ordnance Manufacturing Establishments from Madras to a more secure position, beyond the reach of bombardment from the seaward.

(True Extract.)

Marchant
Secretary to Government.

To the Quarter Master General.
Adjutant General.

Public Works Department

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