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MADRAS RECORD OFFICE.

Government of Madras.

public works DEPARTMENT.

G.O. No. 1414.

Press
Min.

73-74.

Dated 3-6-1863.

Not to be folded or roughly handled

12

*Proceedings of the Madras Government, Public Works Department,
3rd June 1863.*

No. 73. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, R. E.,
Deputy Chief Engineer, Southern Circle, to Colonel W. I. BIRDWOOD, R. E.,
Secretary to Government, Department Public Works, dated Mangalore, 12th February
1863, No. 174:—

SIR,

1. I have the honor to report that in pursuance of verbal orders received from yourself,
I have, in company with Lieutenant-Colonel Walker, the District
Vide G. O. No. 360, dated 12th February 1863. Engineer of South Canara, inspected the estuary or backwater
formed at this Port by the confluence of the rivers "Goorpoor"
and "Nitravady," and gone into the question of the improvements likely to be effected by the
measures which that Officer proposes to adopt.

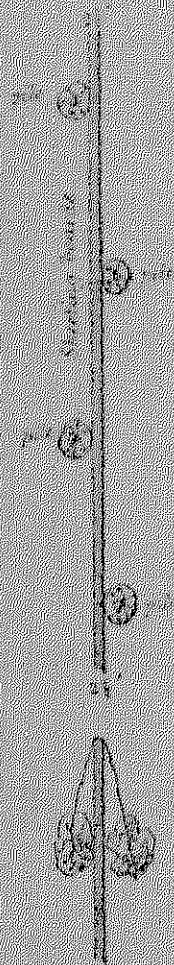
2. As the consideration of Government has been already fully given to this subject, and as
their opinion appears to have been pronounced decidedly in favor of closing the present mouth
of the "Goorpoor" river, thereby determining its stream to the southward to assist in counter-
acting the tendency now so fatally apparent in the navigable harbour channel to shift further
and further northward, it seems altogether unnecessary for me to take up the time of Govern-
ment by recapitulating the features of Colonel Walker's scheme. I will merely remark in
passing, that I entirely concur in all that has been advanced in its favor.

3. The only point upon which it appears to me my opinion is desired, is as to the mode to
be adopted for carrying out the measure approved by Government, viz., the effectual closing of
the existing embouchure of the Goorpoor river by a dam.

4. Regarding the dimensions to be assigned to this work I observe that the former District
Engineer Captain F. Moberly and the present Officer Lieutenant-Colonel Walker, are at marked
variance; the one considering less than 100 yards an ample length, while the other
recommends the body of the work to be 300 yards long, between wings, aggregating 250 yards
in length. Moreover, Colonel Walker objects to Captain Moberly's plan that if the dam, which
must of course be of stone, is commenced from the flanks inwards across the creek, after the
manner of groynes, the scour due to a tideway of 4½ feet rise and fall, will, when restricted,
undermine the extremities and overthrow the work almost as fast as it is constructed.

5. Colonel Walker proposes therefore to build his wing revetments, or flank defences
this season on dry land, leaving the tideway free: to construct in the meanwhile a raft
300 yards long, partly of boats and partly of bamboos and light wood, load it with a sufficient
quantity of stone right across, and then to sink it by signal, so that the dam may be partially,
formed, from wing to wing, simultaneously.

6. I confess I have doubts as to the results of this scheme, which even if successful,
must involve the necessity of dimensions more ample than the occasion would otherwise
call for.



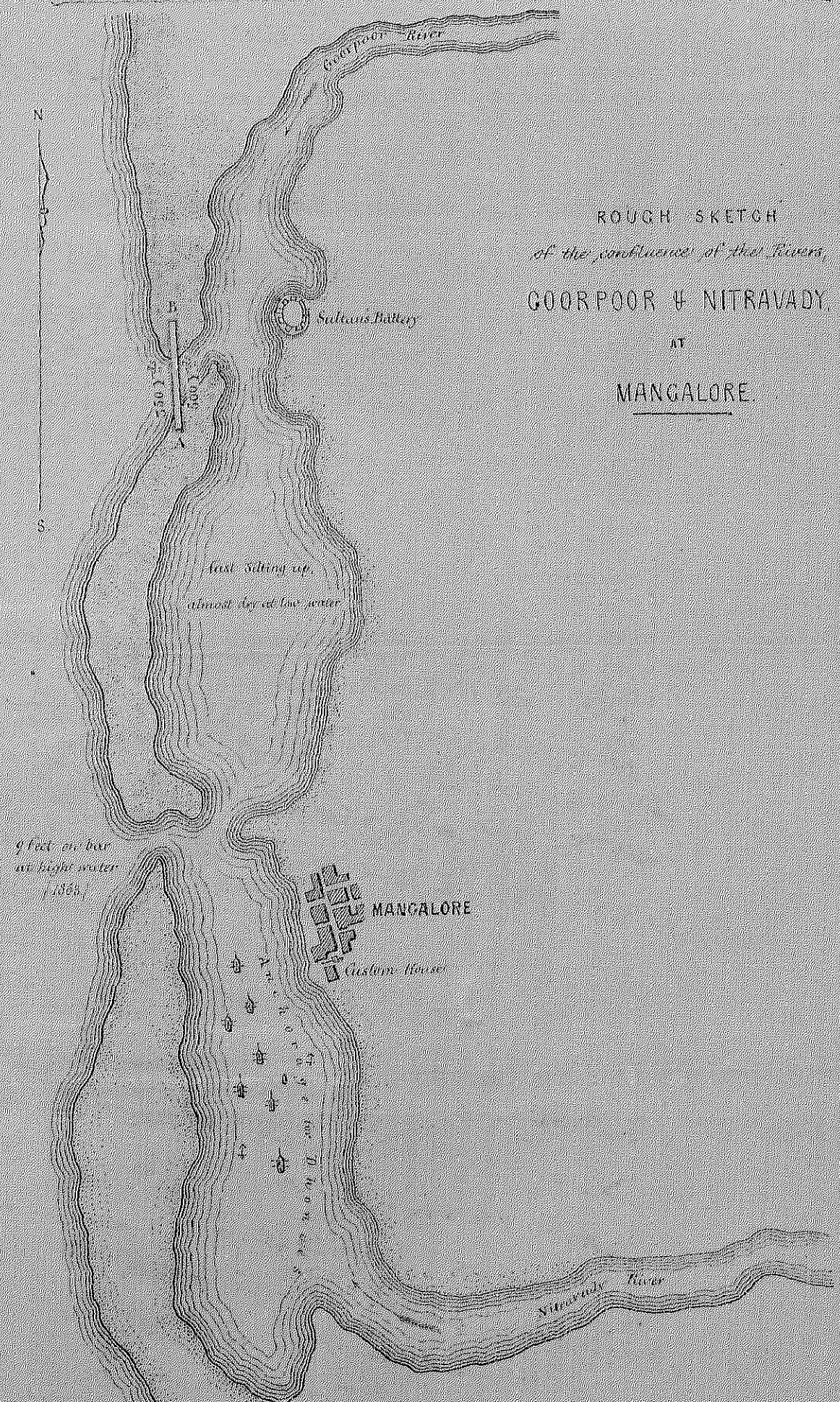
7. My own opinion is that the entire dam could be constructed with far greater economy and efficiency by means of screw piles and sheeting planks, to be fixed in the manner illustrated in my letter of the 24th December 1862, upon the subject of the Vypers Point defences at Cochin, disposed of in G. O. No. 257, under date 29th January 1863. The piles could be screwed in in a very brief space of time, and without reference to state of tide, and the flanks being protected by a little low revetment, or even mudbank work, stayed by coconut piles or planks, the sheeting boards might be dropped simultaneously into their place at low water and could be held down by pins, or by weights simply slung across the top row. The dam thus formed, if of moderate length (and I think 350 yards would be ample) could soon be strengthened on either face by a sand slope if a strong body of Coolies, aided perhaps by paid working parties from the Native Regiment quartered at Mangalore, were concentrated on the spot; and if this were subsequently extended, and if the sand bank thus formed were planted with marine aquatic herbs and shrubs, I think the piles might, after one season, be unscrewed and employed for bridge or other useful work elsewhere. Erool wood logs, shod with 30 inch cast iron screw feet, ought to answer perfectly well as piles, since there will be no great strain exerted on them at any time. This is indeed the opinion

of Colonel Walker, who I am happy to say enters cordially into my view of this part of the question; and I beg leave to suggest that he be requested to prepare an estimate of the probable cost of the work which I have ventured to suggest if Government approve of it.

8. The following is a rough calculation of cost: but as I have no correct data as regards wood work, it can only be taken as approximate:—

120 Erool wood piles, 9 or 10 inches in diameter, average length 16 feet, screwed in 3 yards apart, total, say 2,000 feet at 1 Rupee per foot run	2,000
130 Iron screw feet, 30 inches diameter, cast with extra deep sockets, including screw bolts and nuts	1,300
Screwing down 120 piles, including stages for capsterns and shifting dirt	600
Sheeting planks, of Bentank, 2½ inches thick, 350 running yards, by 3 yards average height 1,050 square yards at 1 Rupee per square yard	1,050
Sand slopes on either side, say 500 running yards including wings, with average section of 40 yards; 20,000 cubic yards at 9 Pice per cubic yard (wheelbarrows and double plank ways being employed) say	950
Sundries, including coconut piles, jungle planks and modussil work to protect extremities of dam and planting	750
Total	6,650
Amount of estimate for rough stone data	19,150
Difference	12,500

ROUGH SKETCH
of the confluence of the Rivers,
GOORPOOR & NITRAVADY,
AT
MANGALORE.



Signed J. Buchanan, Lieut Colonel, R.E.
Dep't Chief Engineer, South Coast.

*Proceedings of the Madras Government, Public Works Department,
3rd June 1863.*

No. 74.

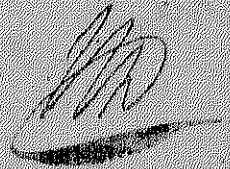
ORDER THEREON, 3rd June 1863, No. 1,414.

It appears to Government that the late Colonel Ouchterlony has altogether mistaken their view, which, as stated in the Order of the 12th February 1863, No. 366, was to the effect that the north opening ought to be made the principal one.

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

[illegible]

4
It appears that Mr. Duckertovis has
altogether mistaken the view of the
Govt. which ~~was~~ ^{was} in the order of 12
Feb 1861 was to the effect that the
first specimen ought to be made the
principal one.


It would appear - but Mr. Duckertovis
- long seems to concern with Mr. Wil-
- kin that the north or poor poor mouth
should be closed. and this was the
case of Jan 7 Cotton - Mr. Pease, & Hugh
Bridgely. See reports 4 April & 29 Sept
1860 - The poor poor mouth seems a
long way from the town of Mansfield
and the backwater between the town &
mouth is said to be fast sitting up.