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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

Cons. 1257

G.O. No. 2226 Press Mis.

12-13

Dated — 12 — 1857

Not to be folded or roughly handled

Read again letter from the Chief Engineer, dated 12th August and recorded in Diary to Consultation 15th September 1857, No. 1743.

No. 112. Read the following letter from Colonel A. T. COTTON, Commandant of Engineers; to H. FORBES, Esq., Acting Secretary to Government, dated 26th September 1857, No. 496.

SIR,

I have the honor to acknowledge the receipt of a copy of the Government order on the subject of the estimate for an annicut and Canal at the lower barrier on the Godavery. I beg to return my thanks for this communication, and in reply respectfully to offer my views upon this matter.

2. I cannot but regret extremely that any thing should occur to delay this measure, the importance of which I think cannot easily be estimated.

3. Looking upon the rivers of India generally as undoubtably the very first things to be attended to, not only as the natural great high-ways of the country for commercial purposes, but also for the security of India as respects Military matters, I cannot but lament any measure which will tend to delay their improvement.

4. I think it will not be disputed that had we made use of those invaluable means, the whole character of the events proceeding from the revolt of the Bengal Army would have been essentially altered. An effective state of the rivers and an effective steam Flotilla on them, would have given us an incalculable advantage in all the late occurrences, and it appears to me that one of the very first lessons they teach us, is not to lose a moment in bringing the rivers into use. Indeed my opinion is that the whole system of the Military occupation of the country should be based upon those great and indistructible natural highways.

5. Were the Godavery now available throughout the year for Steam navigation and were there a Flotilla upon it, with Military stations at the most important points it is evident that nothing could be easier than to over-awe the whole of its basin and beyond it.

6. And with respect to commercial matters, the proceedings of the Cotton supply association, shew how sensible the people in England who are any way interested in the Cotton trade are beginning to be of the necessity of improving the access to Berar by the Godavery.

7. I would also beg further to remark that the Honorable Court in their late orders about Licutenant Haigs visit to Europe dated 18th February 1857 say, we trust that the scheme for those works (the projected Godavery works) will be sufficiently matured to be entered in the Budget for 1857-58, which seems to me to amount to an order that those estimates should be sent in, and at the earliest date and I can only conclude that the Court were prepared immediately to sanction them, even before the late events had shewn the Military importance of the Godavery.

8. As an Engineer, I feel fully assured that these works must be executed ultimately and I cannot see any object in delaying them, while the information is being collected in Europe, as nothing that can be learnt about the modes of making the most of the river in its present state, can at all affect the question of its improvement by such work as those. Whatever improvement is made in boats, in the supply of water in the river, in clearing other parts of it &c., annicuts and Canals past the Barriers are essential.

9. Under these circumstances I would respectfully suggest that there could not be any mistake in placing the estimates before the Honorable Court that they may decide upon their rejection or adoption, as the Government do not in those orders express any objection to them.

10. By the non transmission of the estimates the works are stopped, as the Court cannot of course order their execution till the estimates are transmitted to them.

11. I beg also to take this opportunity of observing how utterly insignificant the cost has been of providing a temporary passage of the lower barrier by the Locks just constructed. One was unfortunately not quite completed before the work was stopped by the fresh but the other

was and Lieutenant Haig passed through it in his boat. They were not injured by the first fresh that passed over them, but I have not heard whether they have continued unhurt. But even should they be partially injured, it would cost but little either time or money to repair them when the freshes are over. Thus for the most insignificant sum of 8,000 Rupees a means of passing this barrier has been provided giving a connected water communication almost throughout the year to the second barrier, a distance of 220 miles from the sea or at the rate of 40 Rupees a mile for this part of the operations. I beg to call especial attention to this as a specimen of the way in which obstacle vanish before hearty and earnest attention to such cases an indolent indifferent Officer might have talked for years about this apparently troublesome obstacle and have *imagined* that many lacs could not have overcome it and it *has* been talked of as an *insuperable* obstacle to the use of the river. Compare this 8,000 Rupees, with the 80 lacs that are now being spent in overcoming one of the obstacles on a Railway, viz. the Bhore Ghaut.

12. And I am certain that if the improvement of the river is but followed up expedients will be found at a similar cost for removing all remaining hindrances. But whatever is done in this way, I would not delay for a single day the more completed works such as the annicut and Canal under consideration.

No. 113. ORDER THEREON, No. 2226; dated 1st December 1857.

Para. 1. In his letter of the 12th August 1857, No. 2860, the Chief Engineer laid before Government an estimate prepared by Lieutenant Haig and revised by himself, for a Canal of Navigation and Irrigation between Doomgoodiem and Davarapully, amounting, with the subsidiary works, but without Locks, which had been already estimated for, to Rupees 2,95,600, and recommended that the work should be entered in the Budget of 1858-59. The Government declined to accede to this recommendation, on the ground that, "as the Honorable Court of Directors had given leave to an Officer to proceed to Europe and America avowedly to obtain information regarding the course pursued in those countries in the treatment of shallow rivers, to enable him to carry out his scheme for improving the Navigation of the Godavery, it was not likely that they would intermediately sanction a project involving so large an expenditure as three lacs of Rupees."

2. It is in reference to this Resolution that Colonel A. T. Cotton addresses the Government; he regrets that any thing should occur to delay the execution of so important a measure; he looks upon the rivers of India as the first things that should have been attended to, not only as the natural great highways for Commercial purposes, but also for the security of India as respects Military matters; and says that were the Godavery now available throughout the year for Steam Navigation, and were there a flotilla upon it, with Military Stations at the most important points, nothing could be easier than to overawe the whole of its Basin. He sees "no advantage in delaying these works while information is being collected in Europe, as nothing that can be learnt about the modes of making the most of the river in its present state, can at all affect the question of its improvement by such works as these;" and he accordingly suggests that the estimates may be placed before the Honorable Court, to enable them to decide on their adoption or rejection.

3. In respect to the monsoon Navigation, this Government have, in their correspondence with the Government of India, given the whole scheme, involving an expenditure of 2¾ lacs of Rupees, their full support, but stated that, as an Officer was about to proceed to Europe and America for the purpose of obtaining information on various points connected with the subject, it would not be advisable to undertake at present any of the greater works comprized in Lieutenant Haig's Reports. They however strongly recommended the scheme to the favorable consideration of the Government of India, in the hope that it might be early submitted to the notice of the Honorable Court in order that a general expression of approval might be obtained, so that, on the return of the Officer who might be deputed to Europe and America, the Government of India might be free to sanction the project, and no time might be lost in commencing operations on the river.

To Govt. of India, 29th May 1857, No. 1022.
To Govt. of India, 27th Aug. 1857, No. 1647.
To Govt of India, 14th Sept. 1857, No. 1744.

4. The scheme thus recommended to the Government of India, comprized the following items:—

Works at the Sinteral Barrier	8,45,000
Do. at Enchampilly...	3,38,000
Do. at Dewalmurry...	11,34,000
Do. at Roonzaie and other places	6,08,000
Total Rupees.....	29,25,000

The first of the items referred to above, viz. the works at the Sinteral Barrier included:—

An Annicut and wing walls	2,69,000
Canal	1,90,000
Drainage works	95,000
Small Calingulah	20,000
Locks, Calingulahs, &c.	2,71,000
Total Rupees.....	8,45,000

The Canal and drainage works having been roughly estimated in Lieutenant Haig's earlier report of the 3rd May 1856, without a survey having been made, that Officer was, at his own suggestion, directed to return to Dowlaishweram, and make a complete survey of the proposed Canal from Doomgoodiem to Davarapilly, as well as prepare a more detailed estimate for that part of the project, and the drainage works connected with it. The result is given in Lieutenant Haig's letter of the 21st March 1857, No. 16, in which he submits the estimate of Rupees 2,96,117 reduced by the Chief Engineer to Rupees 2,95,600, the same that the latter Officer has recommended for insertion in the Budget. Lieutenant Haig compares this estimate with his previous one in the following terms:—

My original estimate of the cost of the Canal to Davarapilly was without Locks.

Earth work 19 miles at 10,000	1,90,000
Drainage works at 5,000	95,000
Calingulahs	20,000
Total Rupees.....	3,05,000

That now submitted is:—

Earth work in 23 miles of Canal	1,93,751
Drainage works	77,048
Calingulahs...	4,478
Embankments about annicut	2,525
Head Sluice and embankment	18,315
Total Rupees.....	2,96,117

5. It is thus clear that the revised estimate is only a part of the larger one of 8,45,000 Rupees for the works at the Sinteral Barrier, including the construction of an Annicut and Locks &c., The Chief Engineer refers to the annicut when he says that it is to be 171 feet above the sea, and indeed implies that the annicut is a necessary part of the work.

Paras. 5 and 6.

6. In their letter to the Government of India dated 18th February 1857 the Honorable Court of Directors, in alluding to Lieutenant Haig's proposed visit to Europe and America, and the probable period of his return to this Presidency, observe as follows—"we trust that the scheme for these works (the Godavery) will be sufficiently matured to be entered in the Budget of 1857-58; yet, it is certain that another year is the shortest interval, that, in the event of their being sanctioned, can elapse before they are commenced. Adverting to this expression of the Honorable Court's views, and to the importance of opening up of the river so fully stated by Colonel Cotton, the Government are now of opinion that the project should find a place in the

Budget of the ensuing year.

	Rs.
* Channel from Doomgoodiem to Davarapilly.....	2,95,600
Annicut and wing walls....	2,69,000
Locks.....	2,16,000
Sundries & Superintendence.	55,000
Total....	8,35,600

This Government have already, in their final letter on this subject dated 14th September last, No. 1744 para. 4, strongly recommended the whole scheme to the Government of India. The passage of the Sinteral Barrier will open the Navigation of the river as high up as the second or Enchampilly Barrier, which is just below Mahadeopore, whence cotton can be easily transmitted to the coast, and it only remains for the Government to order, in conformity with the wishes of the Honorable Court, that this estimate* of Rupees 8,35,600 be entered in the Government office in the Budget of 1858 59, the remainder of the whole project being for the present reserved.

(Signed) H. FORBES,
Acting Secretary to Government.

For Orders.

Public Works Department 1930

From Colonel A. T. Cotton Commandant of Engineers 1/26th September 1857.

I see no objection to allowing the Estimates [illegible] provided in the budget it will be for the higher authorities to decide whether they should be adopted - and if [illegible]

cured - moreover the Staff of
probably heard any observations
which might be desirable.

There is not much chance
of sanction being obtained before
the Autumn.

It

I would strongly urge that Colonel
Patton's suggestions should be submitted at
once and sanction solicited for the immedi-
ate prosecution of the works. It is impossible
I think to overestimate the advantages, either
as a Military or Commercial Rail, pending

the Railway navigable to the Kennedy
Point to Raghore and Mooreabad
the Bombay frontier - and I believe there
are no difficulties that cannot be readily
overcome, and at no great distance, by
Engineering skill and practical
knowledge of the subject. Should that
the Alpha cost of conveying Military Stores
and Troops by Steam to Raghore & that
recently, would in a way shorten considerably
the battery of making the Railway
navigable as proposed by Colonel Patton
and afford the relief to the agricultural
population arising from substituting water
for land transport for the conveyance
of Govt. Stores, and for Troops marching
would be the unspeakable advantage

the leasing of Alluvion to the Ryots would also be very great - in itself, apart from other considerations - an important object.

L.G.

P.W.D.

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No. 2226.

Extract from the Minutes of Consultation

Under date the 1st ~~November~~ Dec. 1857.

Read again letter from the Chief Engineer dated 12th August and recorded in Cons. Dy 6. 15th September 1857 No. 1743.

Read also the following letter from Colonel A.T. Cotton Commandant of Engineers.

(Here enter 26th Sept. 1857 No. 496.)

A.

L.G.

W.M.

P. In his letter of the 12th August 1857 No. 2860, the Chief Engineer laid before Government an Estimate prepared by Lieutenant Haig, and revised by himself, for a Canal of Navigation and Irrigation between Doomgoodium and Devarapully; amounting, with

flotilla upon it, with military stations at the most important points, nothing could be easier than to overawe the whole of its basin." The Govt "no advantage in delaying these works while information is being collected in Europe, as nothing that can be learnt about the modes of making the most of the river in its present state, can at all affect the question of its improvement by such works as these," and he accordingly suggests that the Estimates

Estimates may be proceed before the Honorable Court, to enable them to decide on their adoption or rejection.

3 In respect to the Monsoon Navigation, their Government have, in their Correspondence with the Government of India given the whole Scheme, involving an expenditure of 29¼ lacs of Rupees, their full support, but stated that, as an Officer was about to proceed to Europe and America for the purpose of

To Govt of India 29th May 1857 No 1022
To — do — 29th May 1857 — 1617.
To — do — 11th Sept 1857 — 1711.

of obtaining informa-
tion on various points
connected with the
subject, it would not
be advisable to under-
take, at present any of the en-
greater works contem-
plated in Lieutenant
Haig's reports. They en-
however strongly en-
recommended the
scheme to the favorable
consideration of the
Government of India, in
the hope that it en-
might be early sub-
mitted to the notice
of the Honorable Court, in order that

a

a general expression of approval
might be obtained, so that, on the
return of the officer who might
be deputed to Europe and
America, the Government of
India might be free to
sanction the project, and
no time might be lost in
commencing operations
on the river.—

4. The scheme thus re-
commended to the Government
of India comprized the
following items.—

Works at the Central barrier 845,000
" at Buckampilly — 338,000
" at Dewalmurry — 1134,000
" at Poongnie & other places. 608,000

Rupees 2925,000

The first of the items referred
to above, Viz. the works at
the Central barrier in-
cluded—

An Aqueduct & wing walls Rs 269,000
Canal — 190,000
Drainage works — 95,000
Small Calingulah — 20,000
Locks, Calingulahs &c — 271,000

Rupees 845,000

The Canal and drainage works having been roughly estimated in Lieutt Haig's earlier report of the 3d May 1856, without a survey having been made, that Officer was, at his own suggestion, directed to return to Dowleishwaram, and make a complete survey of the proposed Canal from Doomgoodiem to Devarapilly, as well as prepare a more detailed estimate for that part of the project, & the drainage works connected with it. The result is given in Lieutt Haig's letter of the 21st March 1857 p. 16, in which he submits the Estimate of Rupees 296,117 reduced by the

the Chief Engineer to Rupees 295,600, the same that the latter Officer has recommended for insertion in the Budget. Lieutt Haig Compares this Estimate with his previous one in the following terms.—

"My original Estimate of the cost of the Canal to Devarapilly was without locks.—

Earth work 19 miles at 10,000	190,000
Drainage works at 5,000	95,000
Calingulahs	20,000
Rupees	305,000

That now submitted is

Earth work in 25 miles of Canal	193,751
Drainage works	77,048
Calingulahs	4,478
Embankments about Dumont	2,525
Scarcity Slues & Embankment	18,315
Rupees	296,117

5. It is thus clear that the revised estimate is only a part of the larger one of 8,45,000 Rupees for the works at the Sinteral Barrier, including the construction of an Anicut and Locks &c. The Chief Engineer refers to the Anicut when he says that it is to be 171 — feet above the Sea, and indeed implies that the Anicut is a necessary part of the work. —

P 5–6

In

6 In their letter to the Govt of India dated 18th February 1857 the Honorable Court of Directors, in alluding to Lt Haig's proposed visit to Europe and America, and the probable period of his returning to this Presidency, observe as follows- "we trust that the returns for these works (the Godavery) will be sufficiently matured to be entered in the Budget of 1857/58; yet it is certain that neither year is the shortest interval, that, in the event of their being sanctioned, can elapse before they are commenced according to their express- -ion of the Honorable Court's opinion, and to the unpostponed opening

up

ups of the river as fully
stated by Colonel Colvin, & all
the Govt are more of opin-
-ion that the project
should be laid as plans in
the Budget of the ensuing
year. The Govt have
already, in their final
letter on this subject -
dated 16 September last
-ly, stated strongly
recommended the whole
scheme to the Court of Directors —
the passage of the Tide
Head barrier into open
the navigation of the
river at high water the
receipt on Exchequer
barrier, which is just
below Allahabad proved,
which will be annually
daily transmitted to the
Court, and it only remains

for

for the Govt to order, in
conformity with the —
wishes of the Court, that this estim-
-ate of Rupees 835,600
in the Govt Office
be included in the budget
of 1858/9, the remainder
of the whole project
being for the present
waived.

Channel from Dampeer to
Pannapolly — 295,500
Annual and Ringwalls — 269,000
Locks — 215,000
Sundries and Superintendence 35,000
1,35,500

for Chief Engr. Rupees 835,600

Public Works 1859. Deptt.
Cons. 1st December.

No 2226.

To
Colonel Munro &c &c &c

Chief Engr.

From the Chief Secy. to Govt. Bombay
& Dependencies.

Nos 112 & 113.

Drawing that the Estimate of Rupees 8,35,600.
be sanctioned by the Honble Court, has been laid
before the Government of India in
the Budget of 1858/59 and that
the remainder of the estimated
sum is to be expended for the purpose