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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 263 Press ~~Mis.~~

268-270.

Dated 17-3- 1862.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 17th March 1862.

No. 268. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer and Secretary Public Works Department, dated Chepauk, 18th February 1862, No. 104 :—

SIR,

1. I have the honor to submit herewith a revised estimate, amounting to Rupees 4,17,700, showing the probable cost of excavating a Grand Junction Canal from Mogultoor near the river "Oopooteroo," to Neelapilly on the Northern branch of the Godavery; and of constructing various masonry works necessary for its conservation and efficiency.

1 Letter from District Engineer Godavery, No. 306, dated 5th Nov. 1859.
1 Letter from Collector, No. 18, dated 9th November 1859.
1 Abstract estimate, Rupees 4,17,700.
1 Report.
12 Plans.

2. The ostensible object of this Canal is to establish water communication between all the navigable Channels which intersect that part of the Delta and the port of Cocanada; representing a line the value of which, it is expected, will be increased when by the completion of certain works in the Kistna Delta it brings Masulipatam on the sea board, and Bezwada in the interior, into the same system of intercommunication.

3. Government have already, in 1856,* sanctioned an expenditure of Rupees 1,22,357, on an estimate prepared at the time for a Canal projected by Lieutenant Haig, the then District Engineer, for a similar purpose; but subsequent careful investigation having satisfied the successor of that Officer, Lieutenant-Colonel Rundall, that the scheme of navigation would be rendered more complete, and also more directly renumerative to the State, by an alteration of the line, the revised estimate now submitted was framed.

* No. 2,109, 12th Nov. 1856.

4. If it meets with the approval of Government the sum for which sanction will be required is Rupees 2,97,543, as entered in the Budget for 1862-63, being in fact a Supplemental Estimate to that which was passed by Government on the 12th November 1856. (Rupees 1,22,357.)

Rupees 2,97,543.

5. Government having already long since recorded their approval of the *main features* of the project, it is unnecessary to take up their time by a recapitulation; and the only question which at present falls to be considered is as to the sufficiency of the reasons alleged for effecting the alteration by which such a considerable increase of expenditure will be entailed.

6. In a financial point of view one of these will appear amply conclusive. According to the delineation previously conceived for the line of the projected Canal, the remuneration to accrue to the State for its outlay would have been left to display itself through the numerous channels which improvement in the means of transit and inter-communication with the sea-board cannot fail to open for the development of commerce in a rich producing country like the Delta of the Godavery. Hence, it could not have been classed as a work directly remunerative in its prospects; and the entire amount must have been held to represent the cost of a work of "Communication" instead of being as now, under its altered aspect, fairly chargeable in part to irrigation.

7. Acoording to the proposal of Lieutenant-Colonel Rundall, the Canal will be made to pass along a line of such elevation on the north-western face of an island at the mouth of one of the branches of the Godavery called "Polaveram," that it will command all the cultivable portion of the tract which it comprises; and which, according to the same officer, represents an area of fully 20,000 acres, calculated to yield "a revenue of Rupees 60,000 within two years of the completion of the works."* The Collector, it will be seen, is not quite so sanguine in this respect, but that gentleman in general endorses Colonel Rundall's views of the main question.

* Enclosure.
Letter from Mr. Purvis to Central Office Public Works, No. 18, 9th November 1859.

8. In regard to the superior advantages offered by the Canal under its altered form, there can I think be no doubt. It will be more direct as a line of communication than as it was originally proposed; it avoids several unfavorable points of contact with existing drainage and irri-

gation channels, and it saves a detour of 13 miles of river navigation, which would be found to offer considerable obstruction to ordinary boat traffic when the Godavery is full and the current rapid.

9. Nevertheless I am constrained to confess I should have been glad if before submitting the project to Government in its present amplified form, I could have been placed in a position to afford certain and satisfactory explanation upon the only two points connected with the proposed undertaking which appear to suggest further inquiry.

10. The first of these is as to the extent of land likely to be cultivated under the projected Canal in the Polaveram island. The whole subject has only been brought to my notice recently amongst other arrears of business in this Office, and time does not now admit of a further reference on the subject to the District authorities, with a view to more absolute data on this head being supplied. That is to say an authentic statement, prepared in communication with the intending cultivators, could not be received in time to admit of the estimate being submitted before the ultimate date specified by Government in Order No. 2,507 of 31st December 1861, viz., the 31st March.

As however, if the revenue to accrue from the operation of the Canal be assumed at only two-thirds the amount anticipated by Lieutenant-Colonel Rundall, it would still yield 10 per cent. on the gross outlay, I do not think any apprehension on the score of adequacy of return need be entertained.

11. The second point for consideration is as to sufficiency of water obtainable for the purpose of irrigating the lands of Polaveram, and to meet waste and evaporation from the Canal. Estimating at the rate of two cubic yards per acre per hour, and assuming with Colonel Rundall the extent of land to be cultivated at 20,000 acres, an expenditure of not less than 40,000 cubic yards per hour will have to be provided for, during five months of the year, from channels whose source, the pool of the Godavery above the Anicut, has been represented by Colonel Horsley* to be already taxed to the uttermost.

* Report on the works of Irrigation of the Godavery Delta, dated 25th May 1861.

12. For the reason specified in a preceding paragraph (10) I do not refer the question to the District Engineer; nor, as Government enjoy the advantage of the professional advice of the Chief Engineer, does it perhaps matter: but it nevertheless seems to me to represent an element in the argument worthy of consideration.

13. I further think it proper to state my opinion, looking especially to the expressions of displeasure which have of late been uttered by Government upon the subject of Supplemental Estimates, that if the execution of the project under discussion should be protracted during a period of time at all considerable, the amount at which its cost is now estimated will be found insufficient.

14. The chief cause of this is to be looked for in the tendency manifested in the Delta District, as indeed in almost in all others, to a gradual and steady use in the building data; a change mainly, if not exclusively, due to the progressively enhanced value of labor. But as this must be accounted a sure indication of improvement in the condition of the working class, and of the growing prosperity of the Province, Government will not be likely to view it with disfavor.

15. I have one further observation to make in connection with the subject now before Government. I consider the project treated of important and calculated to prove advantageous to the District, and therefore to the State. Hence it is one upon which it would be politic to expend money if ample funds were available for the purpose without prejudice to the reasonable claims of other provinces. But I do not consider it sufficiently pressing or urgent in its character that such claims should be postponed to it.

16. I am very averse from a desire to convey the impression that Godavery projects have been allowed an undue preponderance in past or present Budgets; but I confess to an apprehension that there is a tendency to overlook the fact that the populations of Provinces less highly

Proceedings of the Madras Government, Public Works Department,
17th March 1862.

favored by nature than is the Delta of the Godavery, and therefore perforce contributing comparatively little to the State Exchequer, are not for that reason the less entitled to a fair proportion of such expenditure on works of improvement as the existing condition of the public finances admits of.

No. 269. ORDER THEREON, 17th March 1862, No. 463.

1. The estimates submitted with the above letter are for a Project which received the sanction of the late Honorable Court of Directors so far back as November* 1856, but which, owing to financial restrictions, has never been commenced.

* Extract Minutes of Consultation, No. 2,109, dated 12th November 1856.

2. Since that time the Project has been revised, and its character altered from a simple line of communication to one combining irrigation also, and thus causing it to be directly remunerative.

3. The Project as originally designed by Captain Haig and sanctioned, was a Canal from the River Oopooteroo, the water sink of the Godavery and Kistna Deltas, across the Delta of the former to the town of Neelapilly, situated on the small branch of the Godavery, which discharges itself into the Coringa Bay, intersecting in its route, the entire system of Canals, so as to form a general line of inter-communication. The Canal was projected to drop into the main or northern branch of the Godavery, 13 miles of the tidal portion of which were to have been navigated before the town of Neelapilly could be reached.

4. The present revised project has the same starting point, effects the same objects, but instead of dropping into the main river 13 miles above Neelapilly, will terminate exactly opposite to that place, being intermediately carried by an aqueduct across a small branch of the river, and so affording the benefit of irrigation to the island of Polaveram, which, owing to its isolation, has hitherto been excluded therefrom.

5. This island is estimated to contain 20,000 acres, and the inhabitants of its villages represented to Mr. Dykes during the time he was on special duty in the Godavery, their willingness to pay any amount of water rate, provided their fields could but be irrigated like those of their neighbours.

6. The supply of water for this island as well as of the remaining lands in this Delta will be furnished by the raising of the Anicut, and be drawn through the Sluices at the head of the main Canal.

7. The Collector, it is observed, concurs in the desirability of the work, and states that the increase in revenue will be very considerable.

8. A sum of Rupees 23,760, in addition to Rupees 20,000 marked A, has been entered in the Budget of 1862-63 for the commencement of this work by the construction of the Lock at Mogultoor, which will open continuous communication with the Salt Pans at Buntoomilli in the Kistna District.

9. The Government approve of the Project in its amended and more extended form, and therefore resolve now to forward to the Government of India the estimates amounting to Rupees 4,17,700, observing that of this sum Rupees 1,22,357 having been already passed by the late Honorable Court, the balance or Rupees 2,95,343 only requires to be sanctioned.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 17th March 1862.

Ordered that the following letter be despatched.

No. 270. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, D. P. W., Fort Saint George, to the Secretary to the Government of India, D. P. W., dated 17th March 1862, No. 464.

SIR,

*1 Letter from the Deputy Chief Engineer, Northern Circle, dated 18th February 1862, No. 104.
1 Letter from District Engineer Godavery, No. 306, dated 5th November 1859.
1 Do. from Collector, No. 18, dated 9th November 1859.
1 Abstract estimate, Rupees 4,17,700.
1 Report.
12 Plans.
Proceedings of Government, dated 17th March 1862, No. 463.

1. I am instructed to forward for the sanction of the Government of India, the accompanying plans and estimates* amounting to Rupees 4,17,700, for constructing a Junction Canal in the Godavery District from Mogultoor on the river Oopooteroo to Neelapilly, a town on the northern branch of the river Godavery.

2. This Project originally received the sanction of the late Honorable Court of Directors so far back as November 1856, but owing to financial restrictions has never been commenced.

3. Since then, it has undergone revision, and by an alteration in its alignment made the means of conveying water from the Anicut to a part of the District hitherto cut off from the benefit of irrigation, and so becoming directly remunerative.

4. The original Project provided for the Canal starting from the same point as at present, viz., the river which forms the water sink of the Godavery and Kistna Deltas, and, intersecting in its route the entire system of Canals so as to form a general line of inter-communication, had its terminus at a village on the northern branch of the Godavery situated some 13 miles above the town of Neelapilly.

5. The revised Project has its terminus exactly opposite that place, being carried by an aqueduct across a small intermediate branch of the Godavery, and so affords the means of irrigation to an island containing about 20,000 acres, the cultivators of which have represented their willingness to pay the amount of water rate levied from their neighbours, provided their fields could only be similarly benefited.

6. The Collector of the District, though unable to give the exact amount of Revenue that would be realized, states in support of the Project that it will be considerable.

7. A sum of Rupees 23,760 in addition to Rupees 20,000 marked A, has been entered in the Budget of 1862-63, for the commencement of this work, by the construction of the tidal Lock at Mogultoor, by which continuous communication will be opened with some important Salt Pans situated in the Kistna District.

8. In my letter of the 12th instant, No. 417, particulars of the remunerative character of the Godavery Project were given, and it only remains for me to repeat the wish of this Government therein expressed, that the remaining works connected therewith should be carried out to completion, and their consequent hope that the present estimates will receive early sanction.

9. I am directed to add that of the sum Rupees 4,17,700 the original estimate amounted to Rupees 1,22,357, and that therefore the additional sum required for the modified Project is Rupees 2,95,343.

No 463 P. W. D.

Proceedings of the Madras Government
Under date the 17th March 1862.

Read the following letter
from the Acting Dy Chief
Engineer Nth Circle.

Submits an Estimate amount-
ing to Rs. 4,17,700 shewing the
probable cost of excavating a
Grand Junction Canal from
Mogultoor near the river
Pohooteyr to Neelapillay on the
Northern branch of the Godavery
and by constructing various
masonry work necessary for its
conservation and efficiency.....

Dd. E. 18th February 1862 No. 104.

The Estimates submitted
with the above letter are for
a Project which received
the sanction of the late
Honorable Court of
Directors so far back
as November 1856, but
which, owing to financial
restrictions, has never
been commenced -

Since

Ex Min: of Con No 2109
dated 12th Nov 1856

Since that time the Project has been revised, and its character altered from a simple line of communication to one combining Irrigation also, and thus causing it to be directly remunerative.

The Project as originally designed by Captain Haig and sanctioned was a Canal from the River Coringa, the water sink of the Godavery and Vistna Deltas, across the Delta of the former to the town of Veelapilly, situated on the small branch of the Godavery which discharges

itself into the Coringa Bay, intersecting in its route, the entire system of Canals, so as to form a general line of inter communication - The Canal was projected to drop into the Main or Northern branch of the Godavery, 13 miles of the Tidal portion of which were to have been navigated before the Town of Veelapilly could be reached -

The present revised Project has the same starting point, effects the same objects, but instead of dropping into the Main River 13 miles above

above Nelapilly, will terminate exactly opposite to that place, being immediately carried by an Aqueduct across a small branch of the River, and so affording the benefit of Irrigation to the Island of Polaveram, which, owing to its isolation, has hitherto been excluded therefrom.

This Island is estimated to contain 20,000 Acres, and the inhabitants of its Villages represented to Mr. Dykes during the

the time he was on special duty in the Godavery, their willingness to pay any amount of water rate provided their fields could but be irrigated like those of their neighbours.

The supply of water for this Island as well as of the remaining land in this Delta will be furnished by the raising of the Annicut, and by drawing through the Sluice at the Head of the Main Canal.

The Collector, it is observed, concurs in the desirability of the work,

work, and states that the increase in Revenue will be very considerable.

A sum of Rs. 23760, in addition to Rs. 20,000 marked A, has been entered in the Budget of 1862/63 for the commencement of this work by the construction of the Lock at Mogultoor, which will open continuous communication with the Salt pans at Buntoomilli in the Kistna District.

The Government approve of the Project in its amended and more extended form, and therefore resolve now

now to forward to the Government of India the Estimates amounting to Rs. 147,700, observing that of this sum — Rs. 122,357 having been already passed by the late Honorable Court, the balance, or Rupees 25,343. only requires to be sanctioned

W. 19. 12.

13 Copies

To The Deputy Chief Engineer N. Circle
Dispd 20/1

original Encls. sent to the Govt of India.
20 Jany

Grand Junction
Canal from Mogultoor
near the River Vasisotaya
to Nilapullay on the
Vathem branch of the
Godavery -

Memorandum.

O.W.C. No. 466 of 62

There are two points in this Project over which the Deputy Chief Engineer considers some doubt rests, and regarding which he considers Government will obtain an opinion from myself.

The first is, the area of land which can be irrigated in the Polávaram Island.

The. 2nd. The sufficiency or otherwise of water available for that area -

Regarding the first the Collector does not call in question the correctness

c8 3 March 813

correctness of the Dis-
trict Engineer's Estimate,
but merely remarks that
he is not equally sanguine
as to the whole amount
of expected water rate
being levied within two
years after the water
has been supplied.—

The Revenue
Survey which has,
meanwhile, been carried
out will give the actual
area, and which in all
other cases has been
found hitherto to be
in excess of the estimated
Areas.

As to the 2nd.
Point the Deputy
Chief Engineer has
mistaken

mistaken the purport
of the Remarks made
in my Report quoted
by him.— They referred
not to the quantity of
water available in the
River, but to the
quantity conveyed by
the present capacity
of the Channel, the
whole of which quantity
was at present utilized.
The additional amount
required for the land
yet unirrigated in all
3 Dittas will be
furnished, as Govern-
ment will remember,
by the proposed raising
of the Anicut.—

Rs.

The quantity of water required to irrigate the whole millions acres in the Delta for the first crop is not $\frac{1}{20}^{th}$ of that conveyed by the River -

The Irrigation of the 2nd crop is of course limited, but the anticipated Returns from the present Project are confined to the Revenue to be derived from the 1st Crop -

(As respects the question of locality in which the available funds should be distributed, it appears to

to me that outlay is best incurred where the greatest Returns are obtainable, and that in the cases of the great Delta Works - it is better to allow them to be carried out to completion as fast as the available labor will admit of, both to secure the Returns which experience has shewn can be relied on; and also to save increase of cost which their postponement is liable to cause, as point which Colonel Buchtelomy himself has noticed -

(At the same time
there is a limit to the
labor and material pro-
curable in the Godavery
District, and the
expenditure will of
course depend upon it.

It was distinctly
ordered by Government
that in drawing up
the Budget of 1862/63,
I should be careful
to make provision
for the speedy prosecution
of those projects, such
as the Godaveri, —
Krishna and Pálár,
on which outlay had
been incurred, but
which were delayed
for

for want of sufficient
funds, and this
course was accordingly
adopted, as stated in
para 18 of my letter —,
No. 3100, dated 6th December
1861.

D. Stuart.

Memo to accompany Draft
Proc.s on the Grand Junction
Canal Project.

Public Works 1862 Deptt
Pers: of Govt. for March

No. 463.

Rec.d of the Calcutta Govt.
Dep.t of Marine 1862

From the Sec.y Ch. Engr. 8th June 1862 No. 1702

Approving of the Project
for excavating a Grand
Junction Canal from
Mogultoor near the River
Godavery to Veelapully
on the Northern branch
of the Godavery and
recommending for Sanction
of the Govt. of India.

From Govt. of India Dep.t 3 July 62
No. 2240 in Rev.

No. 2684 269.

Ch. Mar. 813