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MADRAS RECORD OFFICE.**Government of Madras.***public works* **DEPARTMENT.**

G.O. No. 187

Press
~~Mis.~~

381-382

Dated 18 — 1 — 1864.

Not to be folded or roughly handled

(1)

*Proceedings of the Madras Government, Public Works Department,
13th January 1864.*

No. 331. Read the following letter from R. KENNEDY, Esq., Special Executive Engineer, to Colonel C. A. ORR, R. E., Secretary to Government, Public Works Department, dated Adyar, 30th November 1863, No. 168:—

SIR,

1. I have the honor to forward the Plans and Estimates called for in the Proceedings of the Madras Government and order thereon of 2nd July 1863, No. 1,742, for extending the Northern Canal from Doogarazpatam to Kistnapatam, a distance of 19 miles and 310 yards by the Plan now proposed.

2. As the line of canal between the same two points had been previously surveyed and estimated for under the orders of Captain Chambers, I expected that in carrying out the orders of Government, I would merely have to verify former surveys, and recommend their adoption. On proceeding to examine the locality however, I came to the conclusion that it would be advisable to survey carefully the waste land lying between the swamp shown in the map, along which Captain Chambers carried his line, and the sea shore, a breadth of from 2 to 4 miles. I found this to be necessary from the great difficulty which would be experienced in excavating the line in the water, from the strong objections of cultivators, and from the fact that a tract of most valuable land for cultivation would be destroyed, in addition to what would be taken up by the canal, as the latter would drain the whole of it.

3. A reference to the Plan will show that Captain Chambers' line goes through nearly all the length of the cultivated land, entering it at the 10th mile, and leaving it at the 18½ mile, a distance of 8½ miles. The breadth of the swamp is from two to five hundred yards generally, and is supplied with fine fresh water from the high sandy land on both sides, from which it emerges by hundreds of drains cut into it at short intervals.

4. I thought of endeavouring to carry the canal along the margin of it, but found this impracticable from the height of the sand, the abruptness of the slopes down to the water, and from the numerous sharp turns and irregular curves.

5. Not having found any sections of levels taken along the plain amongst the records of the various offices, I carefully surveyed the whole personally between the Rampairoo and Soornamooky rivers, and discovered the line I now submit for approval which is in my opinion preferable to the other. The sections although heavy, are certainly not sufficiently so as to be looked upon as a material obstacle. The soil is loose and sandy but well covered with jungle, and as regards considerations of future maintenance, no part of it is so objectionable as that part of Captain Chambers' line between the 9th and 10th miles, which is formed of pure drifting sand, and a canal cut through it, would be most difficult to keep open.

6. Again the line now proposed has the great advantage of being almost perfectly straight, and a mile shorter than the other, and of going through waste land almost the entire distance, only two or three hundred yards being cultivated and that Punjab land.

7. In Captain Chambers' Estimate, there is an item of Rupees 20,000 for the cultivated land required merely for the canal; but in all likelihood Government would have to pay for the whole length and breadth of the swamp, as it would be drained of its fresh water, and probably damaged by the salt water of the canal.

8. That the whole question may be fully before Government I have placed both schemes in juxtaposition on the same map. From Captain Chambers' well known judgment and experience in such matters, I am inclined to think that the plain has not been minutely examined, and that the swamp route has been chosen as the only practicable one. It is skirted on the sea side and the swamp side by high sand hills, and from a distance the plain presents no appearance of a practicable route.

9. With these remarks I proceed to explain the details of the Plans and Estimates which have been framed, and the surveys made, keeping in view the instructions of Government as regards the advisability of using the backwaters, and adopting measures to take advantage of the tides in keeping up the supply of water.

*Proceedings of the Madras Government, Public Works Department,
18th January 1864.*

10. The backwaters at Doogarazpatam are taken advantage of for several miles, up to the town from the south; but from that point the passages are so intricate, and so shallow, that for economical reasons and as being of far greater public convenience, I have considered it the best plan for the first three miles to cut the channel along the edge of the backwater and to use the excavated earth to isolate it therefrom. This in various cases has in other backwaters been found necessary, after much money has been needlessly wasted in endeavouring to navigate them.

11. As regards the storing up water by the tides, the conditions are so favourable for carrying this channel out on the same levels as the Pulicat lakes and canals, and as there is so little to be gained by adopting another course, which must be attended by additional expense and delay to some extent of the traffic, I have deemed it most beneficial to make no alteration in the bottom levels, and the canal will thus be in connection directly with the sea by the Soornamooky and Rampairoo bars, and have the advantage of an occasional scour thereby as well as of the water in the channel being kept constantly in motion by the tides.

12. As Doogarazpatam will be a centre of traffic, I have kept the channel 15 yards wide at the bottom at that place for a length of 3 miles, so as to afford ample accommodation for the boats. This additional breadth in section will also afford a sufficient quantity of excavated earth, to form a substantial bank and towing path on the seaward side. For the remainder of the distance the canal will have an equal surface breadth of 52 feet, as from the 3rd to the 9 $\frac{1}{4}$ mile, the bottom breadth will be 12 yards, and the berm slopes two to one, the soil being pretty stiff, and from the 9 $\frac{1}{4}$ mile to the 19th the bottom breadth will be 10 yards, and the berms sloped three to one, the soil being loose and sandy, and thus the surface breadth* will be equalized.

* Of water.

13. The turfing is a very heavy item, as it will have to be carried a long way; but the advantages of it are so great, and I have seen so much evil, and damage, and expense incurred by no provision being made for this item in the original Estimates that I now invariably enter it as being as indispensable as any other part of the work, and it is better to show at once the whole expenditure required to complete the work in a substantial manner than to have to bring forward a supplemental Estimate afterwards.

14. The rates allowed are I believe liberal, and will allow of the spoil being carried to a clear distance of 10 yards from the edges of the berms, which will serve two purposes, namely it will leave ample tracking room, and also enable the canal to be widened at any future time without having again to move the banks. In fixing those rates, I have allowed for the possibility of the work itself causing a rise in wages as labour is now generally in increasing demand, and large gangs of work people working in such an out-of-the-way place, will cause a rise in the cost of the necessaries of life. No handies can traverse the jungle, and the rice required will have to be transported by coolies.

15. From the enquiries I made along the line, I conclude that nearly all the land belongs to Government, and I believe the small sum allowed as compensation will be sufficient.

16. I have taken advantage of the small lagoons in the line which are of sufficient depth, and have carried it across the branches of the Soornamooky river at points where there is at all times of the year ample depth, with firm banks securing safety from damage, or change during floods.

No. 282. ORDER THEREON, 18th January 1864, No. 187.

1. In G. O. 2nd July 1863, No. 1,742, the Special Executive Engineer in charge of the Eastern Coast Canal was directed to prepare and submit Plans and Estimates for the extension of the northern section of the Canal as far as Kistnapatam. With the letter above recorded, Mr. Kennedy submits the required Plans and Estimates for this extension, namely, from Doogarazpatam, its present termination, to the Estuary of the Kundlair river south of Kistnapatam.

2. Mr. Kennedy proposes that the alignment of the Canal shall be carried direct to the northward parallel with the coast, which he considers will be better than the line to the west-

*Proceedings of the Madras Government, Public Works Department,
18th January 1864.*

ward proposed by Captain Chambers, as the latter would be about a mile longer, and would probably prove injurious to a considerable area of wet cultivation, and though entailing lighter cuttings, its cost would be enhanced by the compensation to be paid for land and damage; moreover the line proposed to be followed by Mr. Kennedy will probably be more easy of maintenance.

3. The Estimate now submitted amounting to Rupees 2,35,000 provides for a waterway 52 feet wide at the surface, with a depth of 3 feet at low tide. No masonry works of any description are proposed, but provision (to the extent of 25,000 Rupees) is made for turfing the side slopes.

4. Government being fully satisfied that the long contemplated extension of the Eastern Coast Canal to the northward will be highly beneficial and should now be carried out, and approving of the reasons adduced by Mr. Kennedy for adopting the line which he proposes, resolves to submit the Estimate for the sanction of the Government of India, and to request permission to proceed with the work from the 1st May next from the funds which will be provided for it in the Budget for 1864-65.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To R. Kennedy Esq.,
To the Superintending Engineer, 2nd Division.
„ Controller of the Public Works Accounts.
„ Accountant General.

Exd. T. Dunn.

No. 188.

No. 383.

From

COLONEL C. A. ORR, R. E.,

Secretary to the Government of Fort Saint George, P. W. D.,

To

The Secretary to the Government of India, Public Works Department.

SIR,

1. I am directed by the Honorable the Governor in Council to submit, for the consideration of the Government of India, the accompanying Estimate amounting to Rupees 2,35,000 for the extension of the East Coast Canal from Doogoorazpatam to the Estuary of the Kundlar river south of Kistnapatam (a distance of about 19½ miles) in the Nellore District.

2. So far back as 1855, the late Board of Public Works submitted an Estimate for this work,* amounting to Rupees 1,39,665, and explained that the proposed extension† of the canal was all that was required to place Madras in intimate connection with the Town of Nellore, as from that place to the Kistnapatam back-water, a distance of 17½ miles, a direct and excellent road was under construction. The Board, moreover, explained that the excavation of the additional 20 miles of canal would be of great benefit to a considerable tract of country through which no road existed, and would provide cheap transit for Indigo, Native cloths, &c., of Nellore to the Madras market on most favorable terms.

3. The advantage of opening out the northern line of communication to Doogoorazpatam under the orders of the late Honorable the Court of Directors, No. 14, dated 31st March 1852, communicated in a letter from the Government of India, dated 21st May following, having been made manifest, and the Madras Government entertaining no doubts whatever of the importance of the proposed extension from Doogoorazpatam to Kistnapatam, strongly supported the project in a letter to the Supreme Government, No. 137, dated 30th March 1855.

‡ No. 567, 1st June 1855.

4. In its Orders‡ on the Public Works Budget for 1855-56 the Government of India intimated that the project would "be recommended in the strongest manner for the sanction of the Honorable Court," and from the Despatch communicated with the letter from Colonel Baker, marginally noted, it will be observed that the Home Government readily accorded its sanction to the Estimate submitted by the late Board of Public Works, amounting, as stated above, to Rupees 1,39,665.

§ No. 77, dated 7th December 1859.

5. Subsequently§ the Madras Government addressed the Right Honorable the Secretary of State for India requesting permission for the immediate commencement of the work, and it urged that for a number of years previously all its ablest and most experienced servants, both Revenue Officers and Engineers, who were in a position to form a judgment on the question, had agreed as to the great importance of extending the Canal. The Secretary|| of State, however, refused to accord the permission solicited on the following grounds:—

First.—That a Coast Canal could not compete successfully with the sea.

Second.—That the Canal from Madras to Doogoorazpatam was in 1856 pronounced to be a failure by the Superintendent.

Third.—That the Southern Canal from the Palar to the Adyar had at the same time attracted no traffic.

Fourth.—That the Canal would be very expensive, and observed that when a canal had been cut from Nellore to Kistnapatam, there would be better means of judging of the expediency of connecting it with the salt water canal along the coast.

6. In its Despatch No. 26, dated 14th May 1860, copy of which is enclosed for the information of the Government of India, the Madras Government replied very fully to the objections raised by the Secretary of State, and strongly urged its former application for permission to commence the work immediately, representing at the same time that owing to the rise which had taken place in the rates of labor and material, since the Estimate for Rupees 1,39,665 had been prepared, an addition of 20 per cent. or nearly 30,000 Rupees would have to be made thereto. The Secretary of State was, moreover, reminded that as an important

part of the Irrigation Company's plan was to connect its works on the Toombuddra with Madras by means of an inland navigation by the Pennar and the Coast Canal, and that as Colonel Cotton had reported on the project of an anicut across the Pennar at the point where it emerges from the gorge through the hills and for a canal from that point to Kistnapatam, it would be incumbent on the Government to accord sanction to the construction of the work as a part of the Company's original scheme, and that when this was done, it would be impossible to persist in refusing the Company the 20 miles of canal from Kistnapatam to Doogoorazpatam if the Government declined to undertake its construction from State funds.

7. The Secretary of State, however, without entering into a discussion on the merits of the East Coast Canal as a whole, or upon a consideration of the grounds adduced by this Government replied (Despatch No. 52, dated 31st August 1860) that he considered it as established that neither the portions of the work which had been executed by private parties, nor those which were under the immediate care of Government, had been properly completed, and that the results had been necessarily unsatisfactory. Sir Charles Wood moreover added that from no comprehensive survey having ever been made, it was impossible for him to sanction the proposal for the extension of the canal to Kistnapatam, and he requested that with a view to the subject being brought before the Home Government in a more mature and better considered form, plans and estimates for the proposed extension of the canal might be submitted together with a map of the whole line from the Palar to Nellore with a longitudinal section of levels and transverse sections of the channels, sufficiently numerous to render the whole intelligible.

8. The Madras Government regretting that the previous exposition of its views had met with such an unfavorable reception, and judging that the opinion formed by the Secretary of State was in some respects erroneous, represented* that the canal from Madras to Doogoorazpatam could not be fairly said to be incomplete; that the Officers who had actually inspected it reported it to be in efficient condition during the driest season of the year; that it was largely used, and the amount of toll collected quite as much as could be expected, or be required from such a work, and more than sufficient for the maintenance of the canal; that the Southern Canal was certainly unfinished, but that this was because it was stopped short in consequence of the restrictive orders of the Government of India, and that it was also incomplete in the sense of not having an effective terminus, but that this too was only for want of money.

9. As regards the Plans and Estimates for the proposed extension and the map, &c., of the whole line from the Palar to Nellore, the Secretary of State was informed that the former had been actually submitted to, and sanctioned both by the Government of India and the Home authorities, and that the time, labor and expense necessary for the preparation of the latter would be merely wasted, as such documents were not at all wanted for the perfection of the canals, and the real and effectual investigation of such details by the Home Government was impracticable.

10. In a subsequent Despatch (No. 65 of 1861) the Madras Government laid before the Secretary of State, agreeably to the instructions contained in his Despatch No. 24 of 1860, two Estimates, one for Rupees 2,08,000 for the construction of a canal from Nellore to Kistnapatam, combining navigation with irrigation, and the other for Rupees 59,600 for irrigation only. Copy of the late Chief Engineer's† letter, No. 327, dated 8th May 1861, pointing out that the salt water canal from Doogoorazpatam to Kistnapatam should first be taken in hand as a continuation of the existing line, was also submitted to the Home Government, together with the Proceedings in this Department No. 1,631, dated 23rd August 1861, sanctioning the smaller of the Estimates quoted above.

11. In reply to this Despatch, the Secretary of State expressed† his approval of the course taken in authorizing the construction of a canal for irrigation only between Kistnapatam and Nellore, and observed, with reference to Colonel Horsley's remark relative to the prior execution of the canal from Doogoorazpatam to Kistnapatam, that the opinion of the Home Government upon the extension of the East Coast Canal had been sufficiently made known in the Despatches marginally noted.

12. In the beginning of the past year, the attention of the Government was again drawn to the expediency of the early extension of the Northern Canal, and as on the re-organization of the Public Works Department of this Presidency in June 1863, the charge of the inland navigation to the north and south of Madras was entrusted to Mr. Kennedy, one of the Special Executive Engineers, that Officer was directed in Proceedings No. 1,742, dated 2nd July 1863, to prepare and submit fresh Plans and Estimates in keeping with the rates now prevailing for a canal from Doogoorazpatam to Kistnapatam to meet the works of the Irrigation Company at that place.

13. With his letter marginally noted, Mr. Kennedy submits the Plans and Estimates called for, and proposes that the alignment of the canal be carried direct to the northward parallel with the coast, instead of to the westward as proposed by Captain Chambers, late Superintendent East Coast Canal, and provided for in the Estimate amounting to Rupees 1,39,665, referred to in paragraph 2.

14. Mr. Kennedy urges that the line selected by Captain Chambers would be about a mile longer than that proposed by him, and would probably prove injurious to a considerable area of wet cultivation; and that though requiring lighter cuttings, its cost would be enhanced by compensation for land and damage much beyond the amount allowed for in the Estimate.

15. Mr. Kennedy's Estimate amounts, as stated in paragraph 1, to Rupees 2,35,000, and provides for a waterway 52 feet wide at the surface, with a depth of 3 feet at low tide. No masonry works of any description are proposed, but provision to the extent of Rupees 25,000 is made for turfing the side slopes.

16. The Madras Government is fully satisfied with the plans and estimates prepared by Mr. Kennedy, and believes that the long contemplated extension of the East Coast Canal to the northward will be highly beneficial. The canal will be of great use in bringing salt from the pans about Kistnapatam, and eventually, when the canal from Kistnapatam to Nellore is also completed, from the pans beyond it, to Madras for export into the interior by rail. Even now the demand for salt, valued at about 12 lacs per annum, to be sent by rail, can scarcely be met by the pans about Ennore, and the supply to be got from them will be quite insufficient when the Bangalore branch is finished and the North-West Line advances to Bellary, as by late orders it is under any circumstances to do, and probably to Kurnool and Hyderabad. The Salt revenue of this Presidency has in a few years risen from 60 lacs in 1858-59 to 91 lacs in 1862-63, and may be very largely increased if means be provided for sending salt into the interior by the Madras Railway and its branches; but to this end a large stock will have to be kept up continually at Madras. The southern salt is not available as the Canal stops at the Adyar and probably will never get any further, and it is necessary, therefore, in order to maintain a sufficient supply of that commodity at the Presidency, that all possible facilities should be afforded for the transport of a much larger quantity from the pans to the north of Madras. Looking to the advantages which may be expected by the extension of the East Coast Canal to Kistnapatam, and seeing that all competent authorities in this Presidency *without exception* are strongly in favor of the work; that the Home Government, as well the Government of India, have already given their general approval and sanction to it, and that the interests of the Irrigation Company's works will be very greatly affected by the completion of the Coast Canal, the Governor in Council confidently hopes that the sanction of His Excellency the Governor General will be readily granted to the Estimate now submitted and for the commencement of operations from the 1st May next from the funds which will be provided for the work in the Budget for 1864-65.

I have the honor to be,
Sir,
Your most obedient servant,

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

Exd. S. T. Augustin.

N^o 168

E. C. Canal Office

Adyar 30th November 1863

From

R. Kennedy Esq^{re}

Special Executive Engineer

To

Colonel C. A. Orr R. E.

Secretary to Government P. W. D.

Sir

I have the honor to forward the Plans and Estimates called for in the Proceedings of the Madras Government and order thereon of 2^d July 1863 N^o 1742, for extending the Northern Canal from Doogorappatan to Ristnapatan, a distance of 19 miles and 310 yards by the Plan now proposed.

2. As the line of Canal between the same two points had been previously surveyed and estimated for under the orders of Capt^m Chambers, I expected that in carrying out the orders of Government, I would merely have to verify former surveys, and recommend their adoption. On proceeding to examine the locality however, I came to the conclusion that it would be advisable to survey carefully the waste land lying between the Swamp shown in the Map, along which Capt^m Chambers carried his line, and the Sea shore, a breadth of from 2 to 4 miles. I found this to be necessary from the great difficulty which would be experienced in excavating the line in the water, from the strong objections of Cultivators, and

from the fact that a tract of most valuable land for cultivation would be destroyed, in addition to what would be taken up by the Canal, as the latter would drain the whole of it.

3. A reference to the Plan will show that Capt^r Chambers's line goes through nearly all the length of the cultivated land, entering it at the 10th mile, and leaving it at the 18^½ mile, a distance of 8^½ miles. The breadth of the swamp is from two to five hundred yards generally, and is supplied with fine fresh water from the high sandy land on both sides, from which it emerges by hundreds of drains cut into it at short intervals.

4. I thought of endeavouring to carry the Canal along the margin of it, but found this impracticable from the height of the sand, the abruptness of the slopes down to the water, and from the numerous sharp turns ^{and} irregular curves.

5. Not having found any sections of levels taken along the plain amongst the records of the various officers, I carefully surveyed the whole personally, between the Rampairoo and Poonamooky rivers, and discovered the line I now submit for approval, which in my opinion is preferable to the other. The sections although heavy, are certainly not sufficiently so as to be looked upon as a material obstacle. The soil is loose and sandy but well covered with jungle and as regards considerations of future maintenance, no part of it is so objectionable as that part of Captain

Chambers's line between the 9th and 10th mile, which is formed of pure drifting sand, and a canal cut through it, would be most difficult to keep open.

6. Again the line now proposed has the great advantage of being almost perfectly straight, and a mile shorter than the other, and of going through waste land almost the entire distance, only two or three hundred yards being cultivated and that Punjab land.

7. In Captain Chambers's Estimate, there is an item of Rs 20,000 for the cultivated land required merely for the Canal, but in all likelihood Government would have to pay for the whole length and breadth of the swamp, as it would be drained of its fresh water, and probably damaged by the salt water of the Canal.

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in view the instructions of Government as regards the advisability of using the backwaters, and adopting measures to take advantage of the tides in keeping up the supply of water.

10. The backwaters at Doogoorazpatam are taken advantage of for several miles, up to the town from the South, but from that point the passages are so intricate, and so shallow, that for economical reasons, and as being of far greater public convenience, I have considered it the best plan, for the first three miles, to cut the channel along the edge of the back water and to use the excavated earth to isolate it therefrom. This in various cases has in other backwaters been found necessary, after much money has been needlessly wasted in endeavouring to navigate them.

11. As regards the storing up water by the tides, the conditions are so favourable for carrying this channel out on the same level as the Pulicat lakes and Canals, and as there is so little to be gained by adopting another course, which must be attended by additional expense, and delay to some extent of the traffic, I have deemed it most beneficial to make no alteration in the bottom level, and the Canal will thus be in connection directly with the sea by the Ponnammooky and Rampauroo bars, and have the advantage of an occasional scour thereby, as well the water in the channel being kept constantly in motion by the tides.

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* of water

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I have the honor to be

Yrs

Your Most obed^t servant

R. Kennedy
Special Commissioner

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By Captain Chamberlain, as the latter would be about a mile longer, and would probably prove injurious to a considerable area of wet cultivation, and also entailing lighter outlay, its

This line is also proposed on the whole more easily than the other - It is more direct - This is a point noted

The line proposed by Mr. Kennedy will probably be more easily maintained.

(10)

its cost would be enhanced. By the compensation to be paid for land and damage. Moreover the line proposed to be followed by Mr. Kennedy will probably be more easily maintained.

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1st May next from the
funds which will be
provided for it in the
Budget for 1864/65

Printed

W.B.
in

No 381. 382

To Mr. Kennedy Esq
To the S E 2. Div
To the Controller
To the Secy of the Admiralty

125/72

(4)

PT 18th Depart
Pres. of Govt of Ind.

N: 187-188

Pres. of the M. Govt
D/18 Jan/18

Submitting an
Estimate of Rs 235,000 for
the extension of the East
Coast Canal from
Doozragpatam to
Kistnapatam in the
Vellore District.

N: 381 382

188

Public Works Dept

The Secretary to the
Govt of India
P. W. D.

Sir. (12)

I am directed
by the Honorable the
Governor in Council
to submit for the
consideration of the
Government of India
the accompanying
Estimate amounting
to Rupees 235,000 for
the extension of the
East Coast Canal from
Doozragpatam to the
Kistnapatam (a distance of
about 19 1/4 miles) in the Vellore
District.

So far back
as 1855, the Local Board
of Public Works sub-
mitted an Estimate
and
for the
purpose
of
the
canal
in
the
Vellore
District.

In addition to the
newly in favor of this
the Estuary of the Kistna
which is very small
and that the canal
is of great use in
the salt from the
Kistnapatam
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is completed, from
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for this work amounting to Rs 139,665, and explained that the proposed extension of the Canal was all that was required to place Madras in intimate connection with the Town of Vellore, is from that place to the Ristnapatnam back water, a distance of 17 1/2 miles, a direct and excellent road was under construction. The Board moreover explained that the excavation of the additional 20 miles of Canal would be of great benefit to a considerable tract of Country thro' which no road existed, and would provide cheap transit for Indigo, native cloth &c. of Vellore to the Madras Market on most favorable terms. The

* Canal from Doogorazpatnam to the Ristnapatnam back water - 20 miles
 * 18 yards wide at the water surface and 12 at the bottom.
 about 12 lacs a year, can scarcely be met by the rain about Ennore - and the supply to be got from them will be quite insufficient when the Bangalore Canal is finished and the NW line stormy & dry - as by late rains it is under any circumstances to do - and probably to be run off to the sea. On the other hand - in a few years we shall have a canal from the Ristnapatnam to the back water - 106 3/4 - and may be very largely increased if means be provided for extending the canal.

the intention by the Madras Railway Co. to branch out to this end - a large stock will have to be kept up constantly at Ennore. The Southern Railway will not avail itself of the Canal except at a heavy & probably not very profitable rate.

3
 2 1/2 m from 5 m mile
 1 1/2 m from 5 m mile
 * No 567 - 1st June /55

3 The advantages of opening out the Northern line of communication to Doogorazpatnam under the orders of the late Honorable the Court of Directors No. 11 dated 31st March 1852 communicated in a letter from the Government of India dated 21st May following having been made manifest, and the Madras Govt entertaining no doubt, whatever of the importance of the proposed extension from Doogorazpatnam to Ristnapatnam strongly supported the project in a letter to the Supreme Govt No 137 dated 30th March 1855.
 4 In its orders on the C.W. Budget for 1855/56 the Govt of India intimated that the project

Project would be recom-
mended in the strongest
manner for the sanction
of the "Honorable Court,"
and from the Despatch
communicated with the
letter from Colonel Baker
marginally noted it will
be observed that the
Home Govt readily
recorded its ~~last~~ sanction
to the Estimate submitted
by the late Board of
P.N., amounting, as stated
above, to Rs. 1,59,665 -

5. Subsequently the
Madras Govt addressed
the Right Honorable
the Secretary of State
for India requesting
permission for the im-
mediate commencement

4763 of 8 Oct/58

+ No. 77 of 7 Dec/59

+ Despatch No. 26 of 8 Mar/59
+ Vide also Despatches from
Home Govt. Nos. 7/12 Mar/58
+ No. 6 of 13 Oct. following -

- 1st That a Coast Canal could not compete
successfully with the Sea.
- 2nd That the Canal from Madras to Sootoor
payakam was in 1856 pronounced to be
a failure by the Superintendent.
- 3rd That the Northern Canal from the Colar
to the Adyar had at the same time
attracted no traffic.
- 4th That the Canal would be very expensive
and observed that when a canal had been
cut from Nellore to Nistrapatnam there

of the work, and it
was urged that for a number
of years previously all
its ablest and most
experienced servants,
both Revenue Officers
and Engineers, who were
in a position to form
a judgment on the
question, had agreed
as to the great impor-
tance of extending
the Canal. The Secy of
State, however, refused
to accord the permission
solicited on the follow-
ing grounds,

would be better means
of judging of the expediency
of connecting it with the
salt water canal along the
coast -

In its Despatch
No 26 dated 14th May 1860,
copy of which is enclosed
for the information of the
Govt of India, the
Madras Govt replied
very fully to the objections
raised by the Secretary
of State, and strongly
urged its former application
for permission to commence
the work immediately
representing at the same
time that owing to the
rice which had taken
place in the state for
labor and material.

Since the Estimate

for

for Rs 1,39,665 had been
prepared, an addition
of 20 per cent, or nearly
30,000 Rs would have
to be made thereto.

The Secretary of
State was informed
that as an
important part of
the Irrigation Company's
plan was to connect
its work with the Poom-
bhudra with the Poom-
bhudra by means of an air-
land navigation by
the Penuar and the
Coast Canal, and
that as J. D. Cotton
had reported on the
project of an aqueduct
across the Penuar
at the point where it
emerges from the gorge
the the hills and
for

for a Canal from that point to Rostnapatam, it would be incumbent on the Government to accord sanction to the construction of the work as a part of the Company's original Scheme, and that when this was done, it would be impossible to persist in refusing the Company the 20 mile extension of Canal from Rostnapatam to Doo-gorazpatam if the Govt. declined to undertake its construction from Public Funds.

The Secretary of State however, without entering into a discussion on the merits of the East Coast Canal as a work, or upon a consideration of the grounds adduced

adduced, by the Govt. replied (Despatch No. 52 dated 31st August 1860) that he considered it as established that neither the portions of the work which had been executed by private parties, nor those which were under the immediate care of Govt. had been properly completed, and that the results had been necessarily unsatisfactory. Sir Charles Wood moreover added that from no comprehensive survey having ever been made, it was impossible for him to sanction the proposal for the extension of the Canal to Rostnapatam, and

(16)

he requested that with a
view to the subject
being brought before the
Home Govt in a more
mature and better considered
form, plans and Estimates
for the proposed extension
of the Canal might be
submitted together with a
map of the whole line
from the Palar to Vittur
with a longitudinal section
of levels and measured
sections of the channels,
sufficiently numerous
to render the whole in-
telligible.

The Madras
Govt regretting that the
previous exposition of its
views had met with such
an unfavorable reception,
and judging that the
opinion formed by the

Secretary

+ Letter No. 76 of 24th
Nov/60

(17)

Secretary of State was
in some respects erroneous,
represented that the
Canal from Madras
to Doogoorahabim
could not be fairly said
to be incomplete; that
the Officers who had
actually inspected it
reported it to be in
efficient condition during
the drier season of the
year, that it was large-
ly used, and the amount
of toll collected quite
as much as could be
expected, or be required
from such a work, and
more than sufficient
for the maintenance
of the Canal; that
the Southern Canal
was ~~not~~ ^{certainly} unfinished
but that this was be-
cause it was stopped

short in consequence
of the restrictive order
of the Government of
India, and that it was
also incomplete in the
sense of not having
an effective terminus,
but that this too was
only for want of money.

As regards the plans and Estimate for the proposed extension and the Map &c of the whole line from the Palour to Nellore, the Secretary of State was informed that the former had been actually submitted to, and sanctioned both by the Govt. of India and the Home Authorities,

and that the time, labor
and expense necessary
for the preparation
of the latter would be
merely wasted, as such
documents were not
at all wanted for the
perfection of the Canal,
and the real and effec-
tual investigation
of such details by the
Home Govt. was im-
practicable

In a subsequent
Despatch (N^o 65 of 1861)
the Madras Govt. laid
before the Secy of State,
agreeably to the instructions
contained in his Dis-
patch N^o 24 of 1860,
two Estimates, one for
N^o 2,08,000 for the
construction of a Canal
from

from Vellur to Kistnapatnam, combining navigation with irrigation, and the other for Rs. 59,400 for irrigation only. Copy of the late Chief Engineer's letter No. 327 dated 8th

* Mr. H. H. Horeley.

May 1861 pointing out that the salt water Canal from Doogoorazpatnam to Kistnapatnam should first be taken in hand as a continuation of the existing line, was also submitted to the Home Govt. together with the Proj. in this Despatch No. 1631 dated 28th

August 1861 sanctioning the smaller of the estimates quoted above -

In reply to this despatch, the Secy of State expressed

No. 49 of 9th Nov/61

(14)

Nov 24 and 52 of 1860.

expressed his approval of the course taken in authorizing the construction of a Canal for irrigation only between Kistnapatnam and Vellur, and observed with reference to Colonel Horeley's remark relating to the prior execution of the Canal from Doogoorazpatnam to Kistnapatnam, that the opinion of the Home Govt. upon the extension of the East Coast Canal had been sufficiently made known in the Despatches marginally cited -

In the beginning of the present year, the attention of the Govt. was again directed to the ~~canal~~ ^{expedient}

of the early extension
of the Northern Canal,
and as ^{for} the organiza-
tion of the P.N.C.
of this Presidency in
June 1863, the charge
of the inland navigation
to the North and South
of Acha. ^{was} ~~entrusted~~
entrusted to Mr. Kennedy,
one of the special ^{by suggestion} ~~officers~~
~~officers~~, that officer
was directed in Pro: No 1742,
dated 2nd July 1863, to
prepare and submit fresh
plans and Estimates
in keeping with the
rate now prevailing
for a Canal from
Soo-gorapatam to
Kistnapatam to meet
the ^{the} wants of irrigation
Company.

Donipenny & at the at
Alam.

With his letter
marginally noted,
Mr. Kennedy submits the
plans and Estimates
called for, and proposes
that the alignment of
the Canal be carried
west to the northward
parallel with the coast
instead of ^{to} the west
ward as proposed by
Captain Chambers, late
Superintendent of the Canal,
and provided for in
the Estimate amounting
to Rs. 139,665 reduced to
in price &.

Mr. Kennedy
urges that the line
selected by Captain
Chambers would be
about

No 168 - 20 Nov 63

about a mile longer
than that proposed by
him, and would pro-
bably prove injurious
to a considerable area
of wet cultivation, and
that the ~~cost~~^{requiring} high
cuttings, its cost would
be enhanced by the
compensation to be
paid for land and
damage much beyond the
amount allowed for in the Estimate.

Mr. Kennedy's
Estimate amounts, as
to Rs. 235,000, and for
miles for a waterway
32 feet wide at the
surface, with a depth
of 3 feet at low tide.

No masonry work
of any description
is proposed, but pro-

to

to the extent of Rs. 25,000
is made for turning the
side slopes.

The Madras Govt.
is fully satisfied
with the Plans and
Estimates prepared by
Mr. Kennedy and be-
lieves that the long con-
templated extension
of the East Coast Canal
to the Northward will be
highly beneficial.

The Canal will be of
great use in bringing
salt from the pans
about Rishra Patnam
and eventually, when the
Canal from Rishra Patnam
to Vellur is also com-
pleted, from the pans
beyond it to Madras
for export ^{into the interior} by rail.
Even now the demand
for salt, realised at about
12 lacs ^{plus} to be sent by

sail, can peacefully
met by the pans about
India, and the supply
to the govt from them
will be quite sufficient
when the Bangalore branch
is finished and the
N. W. Line advances to
Bellary, as by late orders
it is under any circumstances
to do, and probably to
Tumkur and Hyderabad.

The salt revenue of the
Presidency has in a few
years risen from 60 lacs
in 1858/59 to 9 1/2 lacs in
1862/63, and may be
very largely increased
if means be provided
for sending salt into the
interior by the Madras
Railway and its
branches; but to this
end

3
and a large stock
will have to be kept
up continually at
Madras. The Southern
salt is not available
as the Canal stops
at the Adyar and
probably will never get
any further, and it
is necessary, therefore,
in order to maintain
a sufficient supply
of that commodity at
the Presidency, that
all possible facilities
should be afforded
for the transport of
much larger quantities
from the pans to the
North of Madras.
Looking to the advan-
tages which may be
expected by the extension
of the East Coast Canal
to Kettapattam, and
see next

and seeing that all
competent authorities
in this Presidency
without exception are
strongly in favor of
the work, that the
Home Government,
as well as the Govt
of India, have already
given their general approval
and sanction to it, and
that the ^{interests} ~~affairs~~ of the
Navigation Company's Works
~~will be~~ very greatly affected by
the completion
of the Coast Canal,
the Governor in Council
confidently hopes that
the sanction of His

His Excellency the
Governor General will
be readily granted to
the Estimate now sub-
mitted and for the
commencement of the
operations from the 1st
May next from the
funds which will be
provided for the work
in the Budget for 1864/65

Chepauddy
18th Jan^y 1864

With Detailed & Abstract Estimate
and specification.
and Plan & Copies of Correspondence
Dec^r 20th 1863

Nov 1864 Dep't
Pro of Govt for Surg.

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To the Secretary to the Govt
of India F. N. D.

Dated 18 Jan'y/64

Revised

Estimate of Rs. 2,35,000
for the extension of the
East Coast Canal from
Durgam Cheruvu to
Kistna District in the
Kistna District for
consideration to
the Government of India

60 381 to 383

N. 880