

W.C. # 1067

B. No. 411 of 6. February 83

Received

Att

5/2/83

No 5/2/83

B. No. 411 of 6. February 83

With disposal

Subd. in Receipt Rep.

COLOMBO 29th Jan 1883

To The Secretary to Government
Public Works Department
Madras.

Sir,
We have the honor to acknowledge receipt of your favor of the 20th inst. N: 229 C & beg to acquaint you that we have already addressed the Collector of Madras with regard to the land for the proposed Ship Canal.

The following telegram reached us this morning from Captain Taylor "Report cannot find greater depth twenty eight feet and half to the feet further particulars will follow." and although the result is not as favorable as we expected, a greater depth can be obtained with the aid of dynamite.

With regard to the dues to be levied, we beg to say they will be moderate, for should a high rate be imposed, Steamers will not have sufficient inducement to pass through the Canal.

We have the honor to be

Sir
Your obedient Servants
Grindrod, Jenkins & Co

9TH FEBRUARY 1883, No. 439 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 72.

READ—the following letter from J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Administrative Department, Madras, to the Secretary to Government, Public Works Department, dated 2nd February 1883, No. 1000 :—

I have the honor to report that I have completed a careful survey of the passages through the shoals between Point Calimere and Point Pedro, and find that only two can be made available, of neither of them, however, being fit for large vessels such as pass through the Suez Canal.

2. One on the west side, opposite the Island of Elewa Tevoo, has $31\frac{1}{2}$ feet L.W., and the other on the N.E., opposite Tondiman, has only $28\frac{1}{2}$ L.W. All vessels using a canal through Ramesweram will be compelled to make use of both. Now, the depth necessary to enable a ship to pass with safety from and to open sea is fixed by Sir John Coode at 40 feet, and during the heavy swells of the north-east and south-west monsoons that depth in so exposed a situation is probably not excessive, but putting it at a moderate limit of 35 feet, it is obvious that large dredging or canal works will have to be carried on, in addition to that on the south side of the Island of Ramesweram, before the canal itself can be availed of. The Company represented by Mr. Grindrod should therefore be made acquainted with these facts, as the construction of the passages, their lighting and buoing are very heavy items, and the very fact of the navigation of these dangerous shoals being undoubted, prudent Commanders will certainly not run risks, except in the finest weather, which does not prevail more than four months in every year.

3. I have drawn a broad black line on the chart now returned, showing the impassable portions of the shoals and the approximate position of the passages.

No. 73.

ORDER—dated 9th February 1883, No. 439 W., Public Works.

A copy of the Master Attendant's report will be furnished to Messrs. Grindrod, Jenkins and Co., and they will be informed that, should they still wish to proceed with the undertaking of cutting a canal through the Island of Ramesweram, the Madras Government will be prepared to support the grant of the concession applied for, on the understanding that they must make their own arrangements for obtaining the requisite land, which is private property.

2. Copies of these Proceedings will also be forwarded to the Government of India for communication to the Secretary of State in continuation of previous correspondence.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Master Attendant, Madras.

„ Superintending Engineer, Sixth Circle.
„ Marine Department.

Exd. A. F. Goodall.

Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of 1883 Madras.

PUBLIC WORKS.

Dated February, 9th.

Recd.

Encl.

G.O., 9th Feb. 1883, No. 439 W.

FEBRUARY.

Nos. 72-73.

Rameswaram Island.

*Passing orders on the Master Attendant's
report on the proposed ship canal across—.*

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 74.

LETTER—from

COLONEL R. H. SANKEY, C.B., R.E.,

Secretary to the Government of Madras,

Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

SIR,

Adverting to paragraph 4 of my letter, No. 5 W., dated 5th January 1883, I am directed to forward, for the information of the Government of India and communication to the Secretary of State, the accompanying Proceedings of the Madras Government, No. 439 W., dated 9th February 1883, with which is recorded a report by the Master Attendant, Madras, on the result of his survey of the passages through the shoals in the neighbourhood of the proposed ship channel through the Island of Ramesweram. A copy of the Master Attendant's report has, it will be observed, been furnished to Messrs. Grindrod, Jenkins and Co., the Ceylon representatives of the firm, who have applied for the concession for cutting the canal; and they have been informed that the Madras Government are prepared to support the grant of the concession asked for should they still be desirous of proceeding with the undertaking.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
9th February 1883.

Exd. A. F. Goodall.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of Madras.

PUBLIC WORKS.

Dated February, 9th.

Recd.

Encl.

9th February 1883, No. 440 W.

FEBRUARY.

No. 74.

Ramesweram Island.

REGARDING the proposed ship canal
across —.

9TH FEBRUARY 1883, No. 440 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 74.

LETTER—from

COLONEL R. H. SANKEY, C.B., R.E.,

Secretary to the Government of Madras,

Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

SIR,

Adverting to paragraph 4 of my letter, No. 5 W., dated 5th January 1883, I am directed to forward, for the information of the Government of India and communication to the Secretary of State, the accompanying Proceedings of the Madras Government, No. 439 W., dated 9th February 1883, with which is recorded a report by the Master Attendant, Madras, on the result of his survey of the passages through the shoals in the neighbourhood of the proposed ship channel through the Island of Ramesweram. A copy of the Master Attendant's report has, it will be observed, been furnished to Messrs. Grindrod, Jenkins and Co., the Ceylon representatives of the firm, who have applied for the concession for cutting the canal; and they have been informed that the Madras Government are prepared to support the grant of the concession asked for should they still be desirous of proceeding with the undertaking.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
9th February 1883.

Exd. A. F. Goodall.
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9TH FEBRUARY 1883, No. 441 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 75.

LETTER—from

COLONEL R. H. SANKEY, C.B., R.E.,

Secretary to the Government of Madras,

Public Works Department,

To

MESSRS. GRINDROD, JENKINS AND Co.

GENTLEMEN,

In continuation of my letter, No. 3430 W., dated 26th December 1882, I am now directed to forward, for your information, a copy of the report of the Master Attendant, Madras, which contains the results of his recent survey of the passages through the shoals in the neighbourhood of the proposed ship channel through the Island of Ramesweram. I am to state that, should you still be desirous of proceeding with the undertaking, the Madras Government will be prepared to recommend the grant of the concessions applied for, on the conditions specified in my letter, No. 3430 W., dated 26th December. The Government of India have been informed accordingly, and they have been requested to communicate this decision to the Secretary of State for India.

I have the honor to be,

Sir,

Your most obedient servant,

Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
9th February 1883.

Exd. A. F. Goodall.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of Madras.

PUBLIC WORKS.

Dated February, 9th.

Recd.

Encl.

9th February 1883, No. 441 W.

FEBRUARY.

No. 75.

Ramesweram Island.

REGARDING the proposed ship canal
across —.

7TH MARCH 1883, No. 742 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 47.

READ—the following despatch from the Right Honorable the Secretary of State for India, to His Excellency the Right Honorable the Governor in Council, Fort St. George, dated India Office, London, 8th February 1883, No. 6 (Public Works):—

Herewith is transmitted, for your Excellency's information, copy of a despatch, with enclosure, which I have this day addressed to the Government of India in respect to a proposal which has recently been made to Government for permission to cut a ship canal through the Island of Ramesvaram lying between the coasts of India and Ceylon.

ENCLOSURES.

From the Right Honorable the Secretary of State for India, to His Excellency the Most Honorable the Governor-General of India in Council, dated India Office, London, 8th February 1883, No. 8 (Public Works).

With reference to my predecessor's despatch of the 9th November last, No. 62, requesting to be furnished with the opinion of your Government on the merits of a scheme submitted by Messrs. Bradbridge, Jenkins and Co., for cutting a ship canal across the Island of Ramesvaram, between the coasts of India and Ceylon, I transmit herewith, for your Excellency's information, a copy of a report* thereon by Sir James Longden, the present Governor of Ceylon.

* Dated 23rd September 1882.

From Sir JAMES R. LONGDEN, Governor of Ceylon, to the Right Honorable the Secretary of State for India, dated Queen's House, Colombo, Ceylon, 23rd September 1882, Miscellaneous No. 405.

I have the honor to report, for your Lordship's information, that the question of improving the sea passage for steamers between India and Ceylon, commonly known as the Pamban Channel, has again been brought forward on behalf of a Joint Stock Company which it is proposed to form to carry out the necessary works.

2. It will be remembered that when this question occupied public attention, both in England and in the East, about ten years ago, various schemes were proposed, and were examined and reported upon by competent engineers, and especially by Mr. George Robertson, C.E., an Engineer employed by the Government of India to report on Indian Harbours.

3. Mr. Robertson's second series of reports to the Government of India (printed at Edinburgh, 1873) contains a very exhaustive survey of all the schemes that had been propounded for improving the Pamban Passage, concluding with an opinion that the most feasible and inexpensive course would be to cut a ship canal through the (Indian) Island of Ramesvaram at a cost of about 440,000L. This is substantially, I am told, the scheme that it is contemplated to carry out, and Mr. Barton Grindrod, of the firm of Grindrod, Jenkins and Co., of this city, waited on me a few days ago to ask what would be the attitude of this Government towards the scheme were a Company formed to carry it out. I informed him, in reply, that, as the matter had not been laid formally before the Government, I could not give him any positive assurance upon it, but that, in my opinion, this Government would not offer any opposition to

the scheme, provided that the present free navigation of the Pámban Channel were not interrupted or burdened with any tolls not at present levied there. At the same time I added that this Government could not be expected to contribute in any way directly or indirectly to the cost of the works. I laid some stress on this latter point, because it was a necessary part of Mr. Robertson's scheme, and will probably be of any new scheme, that lighthouses should be erected and maintained on Delft Island and on the coast of the Jaffna Peninsula for the guidance of vessels approaching the canal, and it was then suggested that the lighthouses should be provided at the cost of this Government, and that this Government should give to the undertaking a guarantee of 5,000% per annum on condition that the Serendeb should be allowed to pass through the canal toll free.

4. The benefits of the proposed canal to ships bound from the westward to Calcutta and the other ports in the Bay of Bengal are incontestable, but this Government has no special interest in the work. The Pámban Channel, though at times difficult of navigation, has afforded for many years a cheap and convenient means of circumnavigating the island. It has been and is used by the Serendeb and by the innumerable native coasting vessels which trade between the ports of India and Ceylon, and is sufficient for their purpose. In any encouragement which may be given to a Company to open a ship canal, the present free navigation of the Pámban Channel should be carefully guarded, for the small coasting trade of the natives is not profitable enough to enable them to pay canal tolls. If this point be conceded, the Government of Ceylon have not in my opinion any right to offer any opposition to the proposed works. It may indeed be questionable whether the opening of the ship canal through Rámesvaram Island would not have an unfavorable effect on the commerce of Ceylon, but such a consideration would not justify any opposition to an enterprise so useful to India. But on the other hand, it cannot be expected that the Government of Ceylon would give any pecuniary aid to an undertaking from which the island can derive no benefit.

No. 48.

ORDER—dated 7th March 1883, No. 742 W., Public Works.

Recorded with reference to the letter to the Government of India, No. 440 W., dated 9th February 1883.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Marine Department.

„ Superintending Engineer, Sixth Circle.
„ Master Attendant, Madras.

Exd. A. F. Goodall.

Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of 1883 Madras.

PUBLIC WORKS.

Dated March, 7th.

Recd.

Encl.

G.O., 7th March 1883, No. 742 W.

MARCH.
Nos. 47-48.

Ramesvaram Island

*Despatch from the Secretary of State re-
garding the proposed ship canal across—,
recorded.*

5TH JANUARY 1883, No. 4 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 4.

READ—the following docket from the Government of India, Public Works Department, (Civil Works—Communication,) dated Fort William, 16th December 1882, No. 495 C.:—

Copy of the following, with copy of its enclosure, forwarded to the Government of Madras, Public Works Department, for early report.

(By Order.)

(Signed) G. F. L. MARSHALL, Major, R.E.,
Under Secy. to the Govt. of India.

ENCLOSURES.

Despatch from the Most Honorable the Secretary of State for India, to His Excellency the Most Honorable the Governor-General of India in Council, dated India Office, London, 9th November 1882, Public Works, No. 62.

I transmit herewith for your Excellency's information copy of an application* addressed to me by a firm of merchants in this country, Messrs. Bradbridge, Jenkins and Company of 2,

* Dated 26th October 1882.

Fen Court, E.C., and of Colombo, for permission to cut a ship canal across the island of Ramesvaram between the coasts of India and Ceylon, and for the lease of such canal to them for a term of years. In return for this concession the firm offer to form a Company to carry out the work.

2. I have caused the applicants to be informed that no definite reply can be made to their application till I am in possession of the views of your Government on the proposal, and I request, therefore, that I may be furnished in due course with your opinion on the merits of the scheme.

From Messrs. BRADBRIDGE, JENKINS AND COMPANY, to the Under Secretary of State, India Office, dated 2, Fen Court, Fenchurch Street, London, 26th October 1882.

We wish to address you with reference to granting us a concession for cutting a ship canal through the island of Ramesvaram which will enable mail and other large steamers to pass from the Gulf of Manaar to Palk's Straits and *vice versa* (instead of going round the island of Ceylon), and thereby save about three days' steamings both ways in the passage of vessels bound from England or Colombo for any port in the Bay of Bengal.

We do not ask for any pecuniary assistance from the Madras or Home Governments, but simply permission to cut the canal. We with other friends will form a Company with capital sufficient to carry out the work, according to the plans proposed by Mr. J. Stoddart, Government Engineer at Colombo, and shown in the Parliamentary Papers upon the Pamban Channel, marked C 761, 1873. Mr. Stoddart's plans will be adopted with any modifications which may be shown to be of advantage.

But before taking definite steps in forming the Company it is necessary for us to have a concession granted for a long lease, and we shall therefore be glad to know that the Government are prepared to grant our request, and that an agreement may be entered into forthwith.

On September 6th our Colombo partner, Mr. Barton Grindrod, addressed a letter to Mr. Grant Duff, Governor of Madras, upon the subject, and received a reply to the effect that our proposal was read with interest and his views would be forwarded to the authorities at Home.

Mr. Grindrod has also had a long interview with Sir James Longden, Governor of Ceylon, who fully approves of the scheme and also promised to report favorably. We shall be pleased to call upon you with reference to the above proposal and to give any information in our power to facilitate the Government coming to a favorable decision.

We wish to add that shortening the voyage to Calcutta, Madras, &c., cannot but be of great service to all ship-owners, passengers and merchants.

No. 5.

ORDER—dated 5th January 1883, No. 4 W., Public Works.

Ordered that the following reply be sent.

2. The further report expected from the Master Attendant should be submitted as soon as possible.

(Here enter No. 5 W., dated 5th January 1883.)

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Master Attendant, Madras.
„ Marine Department.

Exd. S. T. Austin.
Spare Copies

23
BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1883) Madras.

PUBLIC WORKS.

Dated January, 5th.

Recd.

Encl.

G.O., 5th January 1883, No. 4 W.

JANUARY.

Nos. 4-5.

Ramesvaram Island.

Regarding the proposed ship canal across —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 185.

READ—the following letter from Messrs. GRINDROD, JENKINS and Company, to the Secretary to Government, Public Works Department, Madras, dated Colombo, 13th December 1882 :—

We have the honor to acknowledge the receipt of your letter of the 2nd instant, No. 3175 W.

2. With regard to your paragraph No. 3, we wish to explain, this, that whatever Captain Taylor's report may be, whether favorable or otherwise, we must ascertain for ourselves, by competent Engineers, whether it is practicable or not and the cost of the undertaking. We know there are difficulties in the way, as there always must be in such undertakings, but as far as we can ascertain there are none that cannot be overcome.

First—We require the concession, and having obtained that then we employ competent Engineers for making the calculations, for which we pay. If their verdict is against us then we shall only lose some £2,000 to £3,000, but it would not be politic to spend this sum unless we were assured beforehand that the concession would be given to us.

3. We have every respect for Captain Taylor's knowledge and his report will be of great value, but we must base the undertaking as a whole, and this can only be arrived at by Engineers well versed in such works.

No. 186.

ORDER—dated 26th December 1882, No. 3429 W., Public Works.

Ordered that the following reply be sent.

(Here enter No. 3430 W., dated 26th December 1882.)

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1882) Madras.

PUBLIC WORKS.

Dated December, 26th.

Recd.

Encl.

G.O., 26th Dec. 1882, No. 3429 W.

DECEMBER.

Nos. 185-186.

Ship Canal across the Island of
Ramesvaram.

Cutting a —. Proposals for —.

26TH DECEMBER 1882, No. 3430 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 187.

LETTER—from

COLONEL R. H. SANKEY, R.E., C.B.,

Secretary to the Government of Madras, Public Works Department,

To

MESSRS. GRINDROD, JENKINS AND COMPANY.

GENTLEMEN,

I am directed to acknowledge the receipt of your letter of the 13th instant, and as you now consider it needless to await the result of the investigations shortly to be undertaken by the Master Attendant, as to the practicability of the scheme for cutting a ship canal through the island of Ramesvaram, I am desired to reply as follows in regard to the terms of the concession which you ask for.

2. In the first place I am to say, in regard to the general concession for cutting the canal, that no objection will be raised by this Government; secondly, that the land being all private property you will have yourselves to arrange the terms of acquisition with the owners; thirdly, that before any definite agreement is come to it will be necessary to submit for the approval of this Government the scale of dues which it is proposed to levy on vessels making use of the proposed canal.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
26th December 1882.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1882) Madras.
PUBLIC WORKS.

Dated December, 26th.

Recd.

Encl.

G.O., 26th Dec. 1882, No. 3430 W.

DECEMBER.

No. 187.

Ship Canal across the Island of
Ramesvaram.

CUTTING a — . Proposals for — .

5TH JANUARY 1883, No. 5 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 6.

LETTER—from

COLONEL R. H. SANKEY, R.E., C.B.,

Secretary to the Government of Madras, Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

SIR,

I am directed to acknowledge receipt of your endorsement, No. 495 C., dated 16th December 1882, forwarding copy of a despatch from the Secretary of State in regard to an application which has been made by a firm of merchants in England for permission to cut a ship canal across the island of Ramesvaram.

2. In reply I am to forward, for the information of the Government of India,

No. 2883 W., dated 4th November 1882.

"	2884 W.,	"	4th	"	"
"	2982 W.,	"	13th	"	"
"	2983 W.,	"	13th	"	"
"	3210 W.,	"	6th December	"	"
"	3429 W.,	"	26th	"	"
"	3430 W.,	"	26th	"	"

\ copies of the correspondence quoted in the margin, from which it will be observed that the Ceylon representatives of the firm have addressed this Government direct in the matter, and that they have been informed that no objection will be raised by the Madras Government to the grant of a general concession, involving

no pecuniary guarantee, for cutting a canal, but that the land required to be taken up, being all private property, will have to be acquired by direct negotiation with the owners.

3. It has been further stipulated that before any definite agreement is come to, it will be necessary to submit for the approval of Government the scale of dues proposed to be levied for the use of the canal.

4. I am to add that the Master Attendant will shortly proceed to further investigate the passage, and the result of this, with the definite opinion of this Government, will be communicated to the Government of India.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
5th January 1883.

Exd. S. T. Austin.
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BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1883) Madras.

PUBLIC WORKS

Dated January, 5th.

Recd.

Encl.

5th January 1883, No. 5 W.

JANUARY.

No. 6.

Ramesvaram Island.

REGARDING the proposed ship canal
across —.

4TH NOVEMBER 1882, No. 2883 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 9.

READ—the following papers :—

From Messrs. GRINDROD, JENKINS and Company, to His Excellency the Governor of Madras, dated Colombo, 6th September 1882.

Knowing that you are favorably disposed for the development of trade, we venture to place before you the desirability of cutting a passage through the island of Ramesvaram, and trust to have your cordial support.

Mr. Grindrod had a long interview with Sir James Longden yesterday, and he was strongly in favor of it, and as far as Ceylon was concerned he would give his cordial support.

He will allude to Mr. Grindrod's interview in his despatches home, but of course refused to promise any aid in carrying out the work, and further stipulated that the present channel should be kept open for native craft. In fact he said, "I have really nothing to do with it as Ramesvaram is in the Madras Presidency."

Surveys have already been carefully made, and we propose to adopt that of the Honorable J. Stoddart, at present acting Surveyor-General of Ceylon.

Our proposition is not to call upon your Presidency for any grant of money.

We are prepared to raise a Company at home with a capital of one million sterling if necessary, but we estimate the cost at five hundred thousand pounds.

In the work we should provide for docks, of which none exist between Calcutta and Bombay.

We trust that you will lend your aid towards carrying this important work.

Transferred to the Chief Secretary to Government.

(By Order.)

CAMP, PALAMCOTTAH,
16th September 1882.

(Signed) A. AWDRY, Capt., R.E.,
Private Secretary.

No. 988.

Referred to the Public Works Department.

OOTACAMUND,
21st September 1882.

(Signed) C. G. MASTER,
Chief Secretary.

No. 900 E.

Referred to the Master Attendant, Madras, for any remarks he may wish to offer.

2. An early reply is requested.

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Ag. Secretary to Govt., P.W.D.

No. 9-A.

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Administrative Department, to the Acting Secretary to Government, Public Works Department, dated Madras, 20th October 1882, No. 9031.

I have the honor to return the letter from Messrs. Grindrod, Jenkins and Company of Colombo, relating to the canal through Ramesvaram, and respectfully to remark that the question of a canal between Ceylon and India has been so often and strongly urged upon public attention that nothing but a practical effort to solve the problem will ever be satisfactory.

2. Not being able, for reasons set forth in my letter dated 19th September 1881, No. 8157, to recommend it as a measure demanded either by imperial necessity or any requirements of this Presidency, I am very glad to see a public Company stepping forward to construct a canal upon commercial principles, which seem in the opinion of the Company to promise pecuniary success. As money is not asked for, it does not appear easy to suggest any mode in which direct support can be given to the project, except perhaps a free grant of the land upon Ramesvaram island required for the canal. The use of it when finished will no doubt depend upon the facilities it will offer. It should, however, be pointed out that the choice of a line through Ramesvaram with a water passage which must be maintained between the island and the South of India, will cut off the latter from all the advantages that might have been secured to it from Sir John Hay's project of a cut through Ramnad with harbour and docks within Southern India itself. The letter speaks of careful survey having been made, but I am not aware of any, nor have I any knowledge of the track called Honorable J. Stoddart's. But as several tracks have received much notice lately from Colonel Sankey and myself, I think it not improbable that it may be not far from the one selected by Colonel Sankey along which I have had a complete line of borings made. A copy of these borings and the various sections of the soil might be forwarded to the Company by Government, and would prove invaluable in drawing up a tolerably correct estimate of the canal itself. But the further measures of protection to the ships and to the entrance of the canal will cost much, and if a dock is added and light-houses, which will be also an imperative necessity, a million seems to me a very insufficient sum.

3. But if little more can be done at present by Government than promising a full measure of support, as Sir J. Longden has done, it will be necessary to warn them upon one point of great importance, I might say vital importance, to the success of the scheme, and that is want of proper surveys of the sea about Point Pedro, for until

* *Vide Chart.*

a clear and safe channel for vessels of large draft is discovered and marked out at A,*

the canal cannot be called practicable, and if that channel proves navigable, then a similar clear channel must be found at B, failing which the only alternative route would be along shore until the end of Point Pedro shoal is reached, a distance of 40 miles from point C on the chart herewith sent, and then a return to the northward of nearly the same distance, the two combined making up a sum greater than any advantage promised by the canal over the Dondra Head route *via* Colombo. I have made a circle over the doubtful portions. The chart is 40 years old and shoals have a general tendency to increase. Some of the British India Steam Navigation steamers do go through this water, B, safely to Tondimannar, but they are of light draft, and not the first-class vessels upon which the canal will depend for dividend. Lights in this part of the passage will also be imperative. It may be that the survey proves satisfactory, but it is my duty as marine adviser to Government to point out that grave

doubts at present exist, which should be pointed out to the Company and a solution sought for them.

4. As soon as the fine season in January or February sets in, I would recommend that I should be allowed to make arrangements for the settlement of these questions, using the tug *Undaunted* for the purpose. So long as this cloud hangs over the prospects of the canal, it would not be prudent for the Company to take any irrevocable steps in the matter.

No. 9-B.

From the same Officer, dated Madras, 20th October 1882, No. 9045.

In continuation of my letter of this day's date regarding the Pámban canal, I think it advisable to state that I do not propose making a survey of the shoals north of Point Pedro; that will be an elaborate and lengthy operation, and could be conducted while the canal was being cut. I merely wish to place beyond doubt the existence or otherwise of a 6-fathom passage in one or both of the situations I have marked out on the chart. This would not occupy much time, and would settle the question of a canal and its advantage.

No. 9-C.

From Messrs. GRINDROD, JENKINS and Company, to His Excellency the Governor of Madras, dated Colombo, 16th October 1882.

We had the honor to address you a short time since on the subject of cutting the Rámesvaram canal, and have since received an acknowledgment from your Private Secretary to our letter. We beg to thank you for the prompt reply.

On the 20th ultimo we forwarded to England full information as regards estimates for constructing, and possible returns on the expenditure.

As far as starting this very important work there should be no delay. To-day we have received a telegram from our friends advising us that we must get the concession, and that can only be obtained by your permission and authority, and we trust that no difficulty will arise with your good Government to forward a work which would in the long run prove of great advantage to the capital of Madras. The whole undertaking is far advanced as regards the work to be done. It would be placed in the hands of Mr. John Kyle, a very able Engineer, who is at present engaged in the construction of the breakwater at this port.

Rámesvaram, as you are no doubt aware, is simply a barren waste island, and if we are successful, of which there is no doubt, it will give congenial employment to a large number of natives, and permanent employment to many more.

Hoping that you will give this your serious and prompt attention,

READ—again—

G.O., dated 19th October 1882, No. 2726 W., Public Works.

No. 10.

ORDER—dated 4th November 1882, No. 2883 W., Public Works.

In their letters recorded above, Messrs. Grindrod, Jenkins and Company of Colombo propose the cutting of a ship-channel through the island of Rámesvaram, and, to enable them to do this, ask for certain concessions from the Madras Government, the exact nature of which is not clear from the correspondence. The Right Honorable the Governor in Council will however be glad to further the undertaking by such support as it may be in the power of the Local Government to afford; no money guarantee being, it is understood, desired by the projectors.

2. Messrs. Grindrod, Jenkins and Company will now be furnished with a copy of the Proceedings of Government, dated 19th October 1882, No. 2726 W., with which are printed the results of the boring operations recently undertaken by order of Government. The firm will also be furnished with copies of the papers recorded with

* No. 9031, dated 20th October 1882. these Proceedings, among which is a report * by the Master Attendant, Madras, giving practical hints as to the present condition and probable requirements of the route which would be taken by vessels in the event of the canal being constructed.

3. Captain Taylor's proposal in paragraph 4 of his letter No. 9031, and in his subsequent letter No. 9045, to take advantage of the next fine weather for investigating the existence or otherwise of a 6-fathom passage in the situations indicated on the chart, is approved. Arrangements should be made accordingly.

4. Ordered that the following letter be addressed to Messrs. Grindrod, Jenkins and Company.

(Here enter No. 2884 W., dated 4th November 1882.)

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Offg. Secy. to Govt., P.W.D.

To the Master Attendant, Madras.
„ Superintending Engineer, Sixth Circle.
„ Marine Department.

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1882) Madras.
PUBLIC WORKS.

Dated November, 4th.

Recd.

Encl.

G.O., 4th Nov. 1882, No. 2883 W.

NOVEMBER.

Nos. 9-10.

Cutting of a Ship-channel
through the Island of Rames-
varam.

*Passing orders on proposals made by
Messrs. Grindrod, Jenkins and Company
for — .*

4TH NOVEMBER 1882, No. 2884 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads,
Civil Works.

No. 11.

LETTER—from

COLONEL J. SHAW-STEWART, R.E.,

Ag. Secretary to Government, Public Works Department, Madras,

To

MESSRS. GRINDROD, JENKINS and Company,

COLOMBO.

GENTLEMEN,

I am directed to acknowledge the receipt of your communications dated 6th September and 16th October 1882, addressed to the Right Honorable the Governor, on the subject of a ship-channel through the island of Ramesvaram which you desire to construct. I am to inform you in reply that the Right Honorable the Governor in Council is prepared to support the enterprise as far as possible. I am however to ask for further and full information as to the nature and details of the "concession" sought from this Government, which does not, it is understood, include any guarantee or involve any grant of money.

I am also to forward for your information copies of the papers recorded with the Proceedings of Government, No. 2726 W., dated 19th October, and No. 2883 W., dated 4th November 1882, which may afford you useful information.

I have the honor to be,

Gentlemen,

Your most obedient servant,

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Offg. Secretary to Govt., P.W.D.

Ootacamund,
4th November 1882.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1882} Madras.
PUBLIC WORKS.

Dated November, 4th.

Recd.

Encl.

4th Nov. 1882, No. 2884 W.

NOVEMBER.

No. 11.

Cutting of a Ship-channel
through the Island of Rames-
varam.

*Requesting full information as to the nature
and details of the "concession" sought from
this Government for the —*

4TH NOVEMBER 1882, No. 2884 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

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(Signed) J. SHAW-STEWART, Colonel, R.E.,
Offg. Secretary to Govt., P.W.D.

Ootacamund,
4th November 1882.

Exd. S. T. Austin.
Spare Copies

13TH NOVEMBER 1882, No. 2982 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 81.

READ—the following papers:—

From B. GRINDROD, Esq., to His Excellency the Governor of Madras, dated Colombo, 18th October 1882.

I have the honor to address you on the subject of cutting a canal through the island of Ramesvaram, a work that, I think, would meet the approval of every one interested in the Eastern trade, especially with the large traffic of the Bay of Bengal and its numerous ports. I have been assured by a large body of steamship owners that it would be a great boon to them, and a vast saving of expenditure, as the saving of time in going round the island of Ceylon would be fully three to four days. I feel most confident that it would be the means of developing trade, and that the port of Madras would be a gainer, while the port of Colombo would not suffer.

My object, therefore, is to ask from your good Government a concession to cut this canal, terms to be arranged as to the concession.

The canal will in no way interfere with the canal now open, which would still be available for native craft.

The work will be undertaken and carried through by capital raised in England, and your Government would not be called upon for any assistance whatever.

The scheme would include dry docks, of which there are none between Calcutta and Bombay.

The necessity of dry docks becomes more apparent every day, and only lately we have had steamers in the port of Colombo disabled, and after temporary repairs have had to proceed to Bombay to make them of a more permanent character so as to enable them to proceed home.

I am prepared to raise at once the sum of £550,000 or £1,000,000 if required.

Trusting that your Government will not throw in the way any impediments to this most valuable and important undertaking, I have, &c.

Transferred to the Chief Secretary to Government.
(By Order.)

OOTACAMUND,
27th October 1882.

(Signed) A. H. L. BAGOT, Lieut.,
for Private Secretary.

No. 1252, Marine.

Transferred to the Public Works Department.

OOTACAMUND,
6th November 1882.

(Signed) C. G. MASTER,
Chief Secretary.

No. 81-A.

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Administrative Department, to the Acting Secretary to Government, Public Works Department, dated Madras, 28th October 1882, No. 9368.

I have the honor, in continuation of my letter of 20th instant, No. 9031, on the subject of the Pámban Pass, to report that Mr. Grindrod, of the Firm of Grindrod and Jenkins, who are moving in this matter, has called upon me in Madras, and I have fully discussed it with him. I found that the proposed Company have never heard of any navigation difficulties other than those of the approaches to Rámesvaram from the southward, and he was much surprised at the information given him, the importance of which he at once realized. He has left his chart with me, being obliged to return at once to Colombo. I have personally always insisted on the uncertainty of what may be called the Point Pedro passage, but I was not aware till yesterday that a report on the subject existed in the records of the Madras Government, and I think I cannot do better than recite it for the information of Government at this day.

In 1848—52, say 40 years ago, a survey was made of Palk's Bay by Mr. J. J. Franklin and Lieutenants Powell and Ethersey, and that survey, the only one existing, is plotted on the chart I submitted with my letter of 20th instant, No. 9031.

In 1854 Mr. J. J. Franklin was in the position I now virtually hold of Superintendent of Madras Marine, and Captain Biden, who has left a name well remembered for experience and judgment as a sailor, was Master Attendant.

Colonel A. Cotton having at that time formulated a scheme for a ship passage through the Pámban, these officers were severally called upon for their opinions. I will now quote extracts from their letters. Mr. Franklin, page 21, paragraph 2:—

"The improvement of the Pámban channels has been the means of promoting a very active trade between the south-eastern coast of India and the south-western coast of Ceylon, carried on by small craft adapted to the navigation of the adjoining seas; but from the *difficulty and intricacy* of the approaches as well from the *north* as from the south, I am fully of opinion that no large ships or even steamers would attempt the passage, notwithstanding that the channels themselves offered no impediment. I have heard it urged that vessels voluntarily encounter much more difficult navigation than this, and no doubt such is the case, as in the Hoogly, the Thames, and elsewhere; but it is because they have either no alternative, or that the inducements are greater."

Captain Biden, who writes more fully, says, page 10, paragraph 2:—

"In the first place I consider that the navigation of Palk's Bay, to the vicinity of the Pámban channel on the one side, and the navigation of the Gulf of Manaar towards the eastern entrance of that channel on the other side, so very intricate that those seas are neither safe nor easily navigable for large steamers; and to render those seas and the approaches to the Pámban channel so safe and easy of navigation as would ensure the perfect confidence of Commanders of Mail Steamers and sailing ships of the largest class excavating between sand banks to a very considerable extent would be indispensable, and fixed lights, buoys, and beacons in several prominent positions and dangers would be equally necessary, all which shall, in this communication, be pointed out and explained."

And he also in page 19, paragraph 26, explains that he is only treating of vessels with a maximum draft of 21 to 22 feet, whereas now we have to deal with 26 and upwards. Sir John Coode lays down an axiom that a depth of 40 feet at the entrance of the Colombo Harbour is imperative, in view of the size of steamers of the present day, and the effect upon them of the open swell, which will also obtain at Palk's Bay and Gulf of Manaar. I myself, in treating of the possible entrance to a Harbour at Cochin, mentioned 30 feet as a minimum, but I was very anxious not to throw any more discouragement than I could help upon the Cochin undertaking, and I reasoned that very large ships and vessels of war would never be likely to use the Harbour.

Now, an inspection of the chart sent with my letter shows that the ominous letter 5, 30 feet, is not exceeded in the passes, and Mr. Franklin, page 22, paragraph 3, observes that he has reason to believe that the shoals from Calymere to north coast of Ceylon are shifting. It may be that, if sand or mud alone is present, no unfavorable change may have occurred, and a passage be found, but if the formation partakes

of coral, which largely abounds in these seas, and surrounds Ramesvaram, some difficulty, perhaps insuperable, may intervene. As this projected work is throughout in the Madras Presidency, it would not be advisable for Government to promise support without a full knowledge of what points that support may embrace. I can easily, with the assistance of Mr. Baker of Pamban, who is a skilled Surveyor, ascertain the fact of a good passage, or its non-existence. I would in the *Undaunted* take the earliest opportunity offered by the weather, say 15th January, and make as speedy a report to Government as possible. I send the pamphlet containing the record of Captain Biden and Mr. Franklin for reference.

No. 82.

ORDER—dated 13th November 1882, No. 2982 W., Public Works.

Recorded in continuation of G.O., No. 2883 W., dated 4th November 1882.

2. The Master Attendant has already been authorised to take steps for the examination of the passage, the result of which will be awaited.

3. A copy of these Proceedings will be forwarded to Messrs. Grindrod, Jenkins and Company, for information, in continuation of letter, No. 2884, dated 4th November 1882, in which precise information was asked for as to the nature of the concession which the Madras Government are requested to make.

(Here enter No. 2983 W., dated 13th November 1882.)

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Master Attendant, Madras.
„ Superintending Engineer, Sixth Circle.
„ Marine Department.

Exd. C. Howarth.
Spare Copies

13TH NOVEMBER 1882, No. 2983 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 83.

LETTER—from

THE ACTING SECRETARY TO THE GOVERNMENT OF MADRAS,
Public Works Department,

To

MESSRS. GRINDROD, JENKINS AND COMPANY,
Colombo.

GENTLEMEN,

In continuation of my letter, No. 2884, dated 4th November 1882, I am now directed to forward, for your information, a copy of the Proceedings of Government, dated the 13th November 1882, No. 2982 W., with which is recorded a further communication from the Master Attendant, Madras, on the subject of the proposed ship channel through Ramesvaram.

2. You will observe that an examination of the approach to the proposed channel is about to be undertaken by Captain Taylor, the results of which will doubtless be of value.

3. Your letter of the 18th October, which has since come to hand, affords no more information than previous communications as to the nature of the concession which you desire to obtain from the Madras Government. I am accordingly to request that the information asked for in my letter, No. 2884, dated 4th November 1882, may be supplied as early as may be convenient.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
13th November 1882.

Exd. C. Howarth,
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1882} Madras.
PUBLIC WORKS.

Dated November, 13th.

Recd.

Encl.

13th Nov. 1882, No. 2983 W.

NOVEMBER.

No. 83.

Ramesvaram Island.

FORWARDING copy of Proceedings on the
subject of the proposed canal through the —
to Messrs. Grindrod, Jenkins and Company.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 41.

READ—the following papers :—

From Messrs. GRINDROD, JENKINS and Company, to the Acting Secretary to Government, Public Works Department, dated Colombo, 20th November 1882.

Ramesvaram Canal.

With reference to our letter of the 16th instant, our London friends, under date of the 27th ultimo, allude to a paragraph in the *Daily News*, stating that some Engineers on account of Lesseps were surveying the Pamban channel with a view of forming a French Company to carry out the work.

2. We need scarcely point out that a concession to a French Company would be very unwise in many respects.

3. When in Madras Mr. Grindrod mentioned this to Captain Taylor. Our partner, Mr. Jenkins, had an interview with Mr. Colvin, Chief of the Correspondence Department at the India Office, Sir Louis Mallet being away. He gave it as his opinion that the Home Government would consent, provided no pecuniary help was asked for.

4. At his request we sent in a formal application for the concession, and we beg to enclose a copy which runs very much as ours of the 16th ultimo.

5. Again, we might point out the advantage to sailing vessels calling at Galle or Colombo for orders, it would take them a very considerable time to reach any port in the Bay of Bengal, whereas, with powerful steam-tugs, we could place them in the Bay in a very short time.

ENCLOSURE.

From Messrs. BRADBIDGE, JENKINS and Company, to the Under Secretary of State, India Office, W., dated London, 26th October 1882.

We wish to address you with reference to granting us a concession for cutting a ship canal through the island of Ramesvaram, which will enable mail and other large steamers to pass from the Gulf of Manar to Palks Straits and *vice versa* (instead of going round the island of Ceylon), and thereby save about three days steamings, both ways, in the passage of vessels bound from England or Colombo for any port in the Bay of Bengal.

We do not ask for any pecuniary assistance from the Madras or Home Governments, but simply permission to cut the canal.

We, with other friends, will form a Company with capital sufficient to carry out the work, according to the plans proposed by Mr. J. Stoddart, Government Engineer at Colombo, and shown in the Parliamentary Papers upon the Pamban channel, marked C. 761, 1873. Mr. Stoddart's plans will be adopted, with any modifications which may be shown to be of advantage.

But before taking definite steps in forming the Company, it is necessary for us to have a concession granted for a long lease, and we shall therefore be glad to know that the Government are prepared to grant our request, and that an agreement may be entered into forthwith.

On September 6th, our Colombo partner, Mr. Barton Grindrod, addressed a letter to Mr. Grant Duff, Governor of Madras, upon the subject.

Mr. Grindrod has also had a long interview with Sir James Longden, Governor of Ceylon, who fully approves of the scheme, and also promised to report favorably.

We shall be pleased to call upon you with reference to the above proposal, and to give any information in our power, to facilitate the Government coming to a favorable decision.

We wish to add that shortening the voyage to Calcutta, Madras, &c., cannot but be of great service to all shipowners, passengers, and merchants.

No. 41-A.

From Messrs. GRINDROD, JENKINS and Company, to the Secretary to Government, Public Works Department, Madras, dated Colombo, 27th November 1882.

We have the honor to acknowledge your letters of the 13th November, 2982, Nos. 81 and 82 and 2983 and No. 83, the former containing Mr. Grindrod's letter to His Excellency the Governor of Madras, dated the 18th October, and a letter, No. 81-A, appended from Captain Taylor, Master Attendant of Madras, which has our particular attention. The chart of 40 years old was shown to Mr. Grindrod, but since his departure from Madras he has seen charts, dated 1878, of the Palks Straits, which look very favorable as compared with that of 1848-'52. Both Colonel A. Cotton's and Captain Biden's reports allude to the Pámban Passage, but we propose to leave that alone and take up a position entirely different. Our Master Attendant at Colombo, Captain Donnan, in the course of conversation with Mr. Grindrod, said he saw no very great difficulty in the way.

In case the concession is granted, then we place ourselves in the hands of competent Engineers, who will again make their own surveys.

We beg to thank you for copy of your order, No. 82, granting permission to Captain Taylor to take steps for the examination of the passage, and we await with interest his report.

It is our earnest wish, and to the benefit and interest of all concerned, that the work should be thoroughly well done and a credit to those who undertake it.

In our letter of the 16th November the terms of concession are not quite in order. We place them again—

- 1st. A concession to cut the canal.
- 2nd. That no pecuniary aid whatever is required from the Madras Government.
- 3rd. Remains as stated in our letter of the 16th November.
- 4th. We refer to this at the conclusion of our letter.
- 5th. } Could stand as they are.
- 6th. }
- 7th. }
- 8th. }

With regard to No. 4, we think that the Government of Madras should not claim for any title or royalty; we merely mentioned it as a point that might arise, but we are of opinion that the port of Madras would derive some benefit from the undertaking.

We should be pleased to receive from you any suggestions that you could make, and in conclusion have to thank the Madras Presidency for the promptitude and ready spirit they have evinced in taking up the object we have in view.

No. 41-B.

From BARTON GRINDROD, Esq., to the Secretary to Government, Public Works Department, Madras, dated Colombo, 27th November 1882.

I have to acknowledge the receipt of your letter of the 17th November, No. 2100 C., calling my attention to the communications of your Government of the 4th and 13th November, to which I make further allusion in a separate letter.

Mine of the 16th November, addressed to Colonel J. Shaw-Stewart, R.E., will give some of the heads of the concession required.

I am pleased to get instructions as to the address of my letters in future upon this subject, and beg you will convey to His Excellency my warmest thanks for his great courtesy in receiving my communications, for I was somewhat in doubt as to whether I was not infringing the rules of etiquette.

No. 42.

ORDER—dated 6th December 1882, No. 3210 W., Public Works.

Recorded with reference to G.O., No. 2982 W., dated 4th November 1882, paragraph 2.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1882) Madras.
PUBLIC WORKS.

Dated December, 6th.

Recd.

Encl.

G.O., 6th Dec. 1882, No. 3210 W.

DECEMBER.

Nos. 41-42.

Ramesvaram Island.

Letters from Messrs. Grindrod, Jenkins
and Company on the subject of cutting a Ship
Channel across the —, recorded.

6TH DECEMBER 1882, No. 3210 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 41.

READ—the following papers :—

From Messrs. GRINDROD, JENKINS and Company, to the Acting Secretary to
Government, Public Works Department, dated Colombo, 20th November
1882.

Ramesvaram Canal.

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of the 27th ultimo, allude to a paragraph in the *Daily News*, stating that some Engineers
on account of Lesseps were surveying the Pamban channel with a view of forming a
French Company to carry out the work.

2. We need scarcely point out that a concession to a French Company would be
very unwise in many respects.

3. When in Madras Mr. Grindrod mentioned this to Captain Taylor. Our
partner, Mr. Jenkins, had an interview with Mr. Colvin, Chief of the Correspondence
Department at the India Office, Sir Louis Mallet being away. He gave it as his opinion
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4. At his request we sent in a formal application for the concession, and we beg
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No. 41-A.

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- 3rd. Remains as stated in our letter of the 16th November.
- 4th. We refer to this at the conclusion of our letter.
- 5th. } Could stand as they are.
- 6th. }
- 7th. }
- 8th. }

With regard to No. 4, we think that the Government of Madras should not claim for any title or royalty; we merely mentioned it as a point that might arise, but we are of opinion that the port of Madras would derive some benefit from the undertaking.

We should be pleased to receive from you any suggestions that you could make, and in conclusion have to thank the Madras Presidency for the promptitude and ready spirit they have evinced in taking up the object we have in view.

No. 41-B.

From BARTON GRINDROD, Esq., to the Secretary to Government, Public Works Department, Madras, dated Colombo, 27th November 1882.

I have to acknowledge the receipt of your letter of the 17th November, No. 2100 C., calling my attention to the communications of your Government of the 4th and 13th November, to which I make further allusion in a separate letter.

14TH NOVEMBER 1883, No. 3229 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

Petition from SETU KARUPPAN, CHINNATAMBI and others, dated 3rd November 1883.

ABSTRACT.—Bring to notice that the cutting of the proposed ship-canal through Ramesvaram will divide the island into two portions, and that the influx of sea-water will cause danger to life and property, contaminate the water-supply, and ruin the pasturage, besides rendering the transit of goods and passengers across the island difficult. Suggest that the excavation be made at one end of the island, either on the east or west side.

ORDER—dated 14th November 1883, No. 3229 W., Public Works.

The petitioners will be informed that, if the proposal to cut a canal through the island of Ramesvaram is ever given effect to, the circumstances brought to notice in their petition will receive consideration.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D

To the Petitioners.

" Marine Department.
" Revenue Department.
" Superintending Engineer, Sixth Circle.

Exd. A. F. Goodall.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Gobt. of {1883} Madras.

PUBLIC WORKS.

Dated November, 14th.

Recd.

Encl.

G.O., 14th Nov. 1883, No. 3229 W.

NOVEMBER.

Ramesvaram Island

Passing orders on a petition regarding the results that will be produced if the proposed ship-canal across — be sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

6th October 1881, No. 2454 W.

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 27.

No. 263.

MEMORANDUM BY CHIEF ENGINEER.

Letter from the Master Attendant, Administrative Department, Madras, No. 6,000, dated 5th July 1881, forwarding copies of a letter and estimates for making borings across the Island of Ramesvaram received from the Port Officer at Pamban with a sketch.

FORWARDED to the Superintending Engineer, Third Circle, with reference to G.O., No. 1341 W., dated 28th May 1881, and with a request that he will make the requisite arrangements for boring the section taken by Captain Baker, and sinking test wells on the line indicated, in the month of October or such other time as may be most convenient to that officer, under whose supervision the work will be carried out.

2. The Superintending Engineer can allot such funds as may be needed from Provincial, reporting to this office the sum appropriated.

3. The requisite tools and instruments should also be supplied by the Superintending Engineer.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

To the Superintending Engineer, Third Circle with original enclosures.

No. 264.

COPY of the above forwarded to the Master Attendant, Madras, with a request that he will be so good as to state what he would propose as Captain Baker's remuneration while engaged on the work.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

10th July 1881.

To the Master Attendant, Madras.

No. 27-A. From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Chief Engineer, Public Works Department, dated Madras, 16th July 1881, No. 6,384.

WITH reference to your No. 264, dated 11th instant, I have the honor to state that Mr. Baker will return from leave early in October, when further inquiries will be made and a report submitted to you.

No. 27-B. Endorsement of the Chief Secretary to Government in the Marine Department, dated 26th September 1881, No. 1602.

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Chief Secretary to Government, Marine Department, dated Madras, 19th September 1881, No. 8157.

I HAVE the honor to forward with this letter a chart of the Island of Ceylon and the adjacent shores of Madura, Tinnevely, and Tanjore. The whole is intended to illustrate the various tracks that would be taken by steamers in the event of a canal being opened through Ramesvaram. It seems to me highly desirable that Government should be in possession of reliable evidence upon the various points of comparison offered by the present routes and the proposed alterations. I would respectfully recommend, therefore, that some copies of this letter and chart should be struck off and sent to accompany all letters passing through the hands of Government bearing upon this important subject—important, I mean, with reference to the very large sum of money involved in the construction of a canal through Pámban, and the many difficulties which will necessarily be encountered.

2. In the first place the more eastern ports, such as Brisbane and other ports of Queensland, whose new line of mail steamers might wish to call at Galle or Colombo for coal, could not use the canal without loss of time and mileage, and to this class must be added all the Straits, China, and Japan shipping, which, whether calling at Ceylon for coals or not, would lose both in time, distance, and expense by passing through the canal. We next come to Moulmein and Rangoon, the direct passages to which from the meridian of Cape Comorin, through the canal, and round the island, are nearly equal, so nearly so as to render the delay and expense of the canal an entirely extra charge, while if they coaled at Galle or Colombo, as nearly all ships do, the scale is turned very largely in favor of the outer passage.

3. It is not, therefore, until we come to Calcutta that any positive comparison can be offered, or any advantage suggested, and even then it will be at once recognized that the promised gain in distance was much exaggerated in the reports formerly written upon the subject, in which the gain is placed at 350 miles or one and a half days.

4. The chart supposes the various vessels to pass from Aden to the meridian of Cape Comorin, crossing it in the most convenient latitudes for their several objects. Thus A red dotted line is a steamer bound to Calcutta, touching at Colombo for cargo, passengers and coal, and then passing through the canal to a convenient point off Calimere A'. B red dotted line also is a similar ship passing from Colombo round the south of the island until she reaches an equally convenient point on the radius of distance from Sandheads B'.

Red dotted line A from meridian of Comorin to	135	} difference 94,
Colombo	226	
from Colombo through Canal A'.	361	
Red dotted line B to Colombo and	135	} difference 190.
round Island to B'	320	
	455	

or, say, nine hours ordinary steaming at a ton of coal an hour. The average price of coal for outward and homeward voyages combined, we may call Rs. (20) twenty a ton, saving Rs. (180) one hundred and eighty, against which stand the expense, delay, and risk of the canal, its approaches and passages.

5. In the very rare case of steamers bound to Calcutta passing Ceylon without calling at any of its ports, the difference would be—

Red line C through Canal C'	220	} difference 190.
Red line D round Island D'	410	

6. The delay caused by the passage of the canal, the moderate speed necessary to render the approach to it safe, and the risk from the shoals about Point Pedro has to be set against, say, twenty hours ordinary steaming, and expense of about (400) four hundred rupees for coal.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

6th October 1881, No. 2454 W.

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 27.

No. 263.

MEMORANDUM BY CHIEF ENGINEER.

Letter from the Master Attendant, Administrative Department, Madras, No. 6,000, dated 5th July 1881, forwarding copies of a letter and estimates for making borings across the Island of Ramesvaram received from the Port Officer at Pamban with a sketch.

FORWARDED to the Superintending Engineer, Third Circle, with reference to G.O., No. 1341 W., dated 28th May 1881, and with a request that he will make the requisite arrangements for boring the section taken by Captain Baker, and sinking test wells on the line indicated, in the month of October or such other time as may be most convenient to that officer, under whose supervision the work will be carried out.

2. The Superintending Engineer can allot such funds as may be needed from Provincial, reporting to this office the sum appropriated.

3. The requisite tools and instruments should also be supplied by the Superintending Engineer.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

To the Superintending Engineer, Third Circle with original enclosures.

No. 264.

COPY of the above forwarded to the Master Attendant, Madras, with a request that he will be so good as to state what he would propose as Captain Baker's remuneration while engaged on the work.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

10th July 1881.

To the Master Attendant, Madras.

No. 27-A. From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Chief Engineer, Public Works Department, dated Madras, 16th July 1881, No. 6,384.

WITH reference to your No. 264, dated 11th instant, I have the honor to state that Mr. Baker will return from leave early in October, when further inquiries will be made and a report submitted to you.

7. The case of Madras comes next, and the canal certainly shows on it to greater advantage—

Blue dotted line.	{ E to Colombo	... 135	
	{ E Colombo through Canal to E	... 226	
			361
Blue dotted line.	{ F to Colombo	... 135	
	{ F Colombo round Island F	... 393	
			528

} difference 167,

or sixteen hours steaming, or Rs. (320) three hundred and twenty for coal.

8. It seems hardly possible that the passage of the canal can be made without considerable delay, often involving a whole night, and great expense, so that even in this case it does not offer much mercantile advantage, if any.

9. In the very unusual case of a vessel requiring to reach Madras by a direct passage, without calling at any Ceylon port, the comparison would be—

Blue line G through Canal to G'	... 226	
Blue line H round Island H'	... 490	

} difference 264,

little more than one day at ordinary steaming, and not taking in account the delays or risks of the canal.

10. It will thus be seen that the advantages of the canal do not press much upon the consideration of either the Imperial or Local Governments, and the selection of Colombo as a site for a harbour and calling place for all classes of ships has altered the conditions under which Colonel Sir Authur Cotton and other writers presented the subject to former Governments. The choice of a cut through Ramesvaram, which seems now decided by a consensus of opinion, deprives Madras of one of its chief reasons for direct interference, as it does not offer or render convenient the construction of a harbour for Southern India, such as was proposed by the Lorne Harbour and the canal through the Ramnad Peninsula. The rapid growth of the coral, which is a principal feature at what would be the mouth of the Lorne Harbour, is a most serious obstacle, as it also forms a difficulty in keeping the present pass open. The navigation of a canal will always be difficult in the strength of the monsoon or, say, six months in every year. The current would have to be shut out by locks, for no ship could run through a canal with a gale of wind and current behind her, the wind will be trial enough, and the large tract of shoal water will require many lighthouses. I cannot believe it will ever be a popular passage. It will certainly have the effect of destroying the large native trade that now uses the Pamban Pass, and that is a serious consideration. The rates and dues charged upon the few steamers that would use it would have to be very heavy, if any re-imbursement of the outlay is intended.

TRANSFERRED to the Public Works Department.

(Signed) R. DAVIDSON,
Chief Secretary.

No. 28.

ORDER THEREON, 6th October 1881, No. 2454 W.

*THE Honorable the Governor in Council considers that it will be useful to have the purely nautical points connected with the proposed ship canal for Pamban discussed at an early date by the best available experts, but the subject can be best considered when the Government are in possession of the survey and trial borings to be undertaken by Captain Baker in accordance with G.O., No. 1341 W., dated 23rd May 1881, and a rough estimate of the probable cost.

2. Captain Baker will be requested by the Master Attendant to give such information as he may be able to gather from the present clearances of the existing pass channel, both as to the rate of growth of the coral, quantity to be removed annually, and the probable cost of such removal for the proposed canal.

3. When complete information has thus been collected and considered the whole question can be laid before the Government of India for final decision.

4. The chart submitted by the Master Attendant will be lithographed.

(True Extract.)

(Signed) R. H. SANKEY, Col., R.E.,
Secretary. to Government.

To the Marine Department.

„ Master Attendant.

„ Superintending Engineer, Third Circle.

BUILDINGS AND ROADS.
CIVIL WORKS.

Gobt. of 1881 Madras.
PUBLIC WORKS.

To

THE MARINE DEPARTMENT,

&c., &c., &c.

2923W

Dated October, 6th.

Issued

Recd.

Encl.

G. O., 6th October 1881, No. 2454 W.

OCTOBER.

Nos. 27-28.

Proposed Ship Canal for Pamban.—Orders
on the subject of the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 118.

READ—the following papers :—

From T. E. MARSHALL, Esq., Acting Master Attendant, Administrative Department, Madras, to the Secretary to Government, Public Works Department, dated Madras, 31st July 1882, No. 6355.

With reference to G.O., Public Works Department, No. 2454, dated October 6th, 1881, I have the honor to forward the accompanying report from the Port Officer, Pámban, on the boring operations carried out by him, and to state that the plans connected therewith are sent separately by Railway parcel. A case of specimens of soil is to be despatched by rail.

ENCLOSURE.

Pámban Proposed Canal Boring and Levelling Operations.

The first object being to establish a bench mark, a line of levels was run from Captain Baird's, R.E., bench mark situated on the western side of the Cable House (Pámban) 7.5 feet above mean sea level to a bench mark cut on the south-west edge of the south-east port limit beacon which was found to be 17.485 feet above mean sea level, and to which all levels in the plan are referred.

Boring No. 1—Was sunk on the south side of the island 600 feet from high water mark, and was commenced on the 16th January 1882; two kinds of strata were found, the top of dark fine grey sand, the lower of a darker colored sand containing small particles of shells and of an adhesive nature as it contained much clay.

Boring No. 2—Situated 2,100 feet due north of No. 1 was found to be composed of five (5) different strata, a stratum consisting of a very coarse and friable conglomerate of sandstone called by the natives *ooppum par* (oopum par) was found in this boring.

Boring No. 3—Was sunk in a cocoanut tope 2.570 feet due north of No. 2; the top stratum consisted of an alluvial soil mixed with fine sand, and the other six strata were different kinds of mud, sand and clay.

Boring No. 4—Distant 1,200 feet due north of No. 3 was the first boring in which stone or rock was come upon 4 feet below the upper surface. It did not extend to any great depth, but was of rather a hard nature; *ooppum par* was also found in this boring; about 33 feet below the surface a dark colored thin stratum of rock was encountered; the spear pointed jumper brought to bear on it pounded it up into a dark paste, and strange to say this paste when dry weighs very little, although the rock was hard enough to turn the edge of the chisel jumper first used on it; between this boring and boring No. 5, a distance of 1,230 feet, stone is found just below the surface in curious layers to a depth of 5 feet; these slabs as they may be termed average 3 to 4 inches in thickness and are 4 to 5 feet long; the natives use them for terracing the roofs of their houses and call them masai or palakai kul; the rounded edges and white appearance of this stone would lead one to believe it to be old stone thrown down at some previous period, and that time had covered it with sand, the friction of which combined with wind had rounded the edges; the grain was very fine with dark specks but brittle.

Boring No. 5—Situated on the south edge of the village of Thangachimudam had a top stratum of sand with sandstone of a hard nature; underneath the other strata were red clay and sandy soils.

Boring No. 6—Just north of the village had a stratum of sandstone of a hard nature with sandy soils underneath.

Boring No. 7—Situated due north 1,100 feet from No. 6 consisted of a top stratum of very coarse friable sandstone slabs with sandy soils under.

Boring No. 8—Just at the water's edge 1.35 above mean sea level had a top stratum of decayed coral mixed with mud and sand, and at a depth of 8 feet hard coral rock was come upon 3½ feet thick.

APPROACHES.

The southern entrance of the proposed canal has a sandy bottom with a depth of 22 feet within 1,000 feet of the shore.

Off the northern entrance is a coral reef 500 feet wide which nearly dries at low water, outside of which the bottom is sandy, but interspersed for a short distance with boulders and coral formation and quickly deepens into 18 and 20 feet of water.

REMARKS.

From the result of the borings and from other personal observations I am of opinion that a wavey stratum of rock or stone runs through the island in an almost easterly direction from the great dam of the Pámban Channel; and this opinion is strengthened by the fact that in or near Pámban itself the stone or rock is near the surface dipping to 11 or 12 feet at the village of Ukkulmudum, rising again at Thangachimudum to within 3 or 4 feet of the surface, appearing above the surface a little to the east of the village, and again sinking to rise near Thanikodi, and form the basis on which the sand heaps between the island of Rámesvaram and Tallamaar (Ceylon) rest; the boring show that this stratum is about 3,000 feet in width, but as at the spot selected for the operations the stone comes within 3 or 4 feet of the surface, the excavation of it is not a very difficult matter; the longitude of the proposed line of canal is 79° 14' 40" east, and is through the narrowest part of the island in a due north and south direction, being 11,350 feet from high water mark one side to high water mark the other.

Regarding the growth of coral and amount likely to require removal annually, I am of opinion, judging from my experience of the north reef channel (Pámban) and the various boat channels around and adjacent to the outlying islands, that after a first and thorough removal of it the growth is so slow as not to require attention again for some few years, and in illustration of this I may state that during the building of the large beacon on the shingle islets it was necessary to make a boat channel to the northward of the reef to admit of loaded boats getting to the spot to unload; this was in 1878; the same channel was used this year to take some sized boats loaded with stone to effect the repairs needed in the base of the beacon; coral can be removed at a depth of 12 to 14 feet at Re. 1 per cubic yard. I do not anticipate that it will prove any great obstacle to the successful working of the canal, should it ever be opened.

I can form no estimate of its growth, but from the beforementioned fact I should imagine it must be slow. I have noticed that coral which is uncovered at low water soon decays away and is washed up on the sea shore in small pieces, but if it is covered with sand, and that be removed, the coral is found fresh and alive, although the spot is uncovered at high water.

In the plan herewith forwarded, I have endeavoured to show the nature of the country through which the proposed canal is to pass; also the height of the country above mean sea level is delineated in the level plan, and the approaches can be seen by a glance at the chart which accompanies this report.

Samples of the different strata sunk through are sent in a case, the soil itself is packed in bags, on which are marked the numbers of the borings referred to; also the depths at which the different strata were found; samples of the stone found in borings Nos. 4, 5, and 6 are also forwarded.

(Signed) T. H. BAKER,

Ag. Port Officer, Cocanada,
Late in charge of the Boring and Levelling Operations
across the Island of Rámesvaram.

No. 118-A.

From the Master Attendant, Madras, dated 3rd August 1882, No. 6604.

No. 118-B.

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, Madras, to the Chief Engineer, Public Works Department, dated Madras, 28th August 1882, No. 7548.

With reference to your letter No. 580 E., dated 14th August 1882, I have the honor to forward copy of the report received from Mr. Baker, furnishing the information called for in connection with his boring operations across the island of Rámesvaram.

ENCLOSURE.

From T. H. BAKER, Esq., Acting Port Officer, Cocanada, to the Master Attendant, Administrative Department, Madras, dated Cocanada, 24th August 1882, No. 1222.

With reference to your memorandum, No. 7235, dated 19th August 1882, received this morning by dawk, and not per steamer *Satara*, as marked on the cover, enclosing a letter from Colonel Sankey, respecting the borings across the island of Ramesvaram, I have the honor to inform you as follows:—

1. The many stratum of rock mentioned by me in my report is the thin layer of rock shown in the sections, and no rock was encountered below it with the exception of No. 4 boring, where, at a depth of 33 feet below the ground surface, a very dark hard stratum, about 6 inches in thickness, was come upon; all the other rock or stone found was on a level with or above mean sea level, and was of no great thickness.

2. The sandstone found in No. 7 boring was totally unlike that in Nos. 4, 5, and 6. To make myself as easily understood as possible, I may say that it was like cakes of very coarse sand and small stones mixed, a conglomerate strong enough if lifted by both ends to hold together, but if lifted by one end only it crumbles off and breaks away by its own weight; the sand augur went through it as easily as if it were only sand.

3. In the detailed survey plan I have drawn a blue line, which I consider includes the space within which the many stratum referred to in the report lies, that is Nos. 4, 5, and 6 borings about 3,000 feet in width; after coming upon rock I made the borings closer together than in the sandy places, to make sure if possible of not missing the commencement and ending of the rocky stratum, which through my observations of the various wells sunk in the vicinity I knew existed.

4. I beg to state that, in my opinion, the rocky stratum at or near the village Thangachimudum is nearer the surface and thinner than at any other part of the island.

5. To the south of the island 30 feet of water is found at a distance of from 10,000 to 11,000 feet from the shore, and the bottom consists of coarse sand and small shells and stones.

To the north the 30-foot line is distant about 6,000 feet from the shore, and the bottom is hard, fine sand, and in places decayed coral in small pieces.

Trusting I have fully treated in the matters required, I have, &c.

No. 119.

ORDER—dated 19th October 1882, No. 2726 W., Public Works.

Recorded.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Offg. Secretary to Govt., P.W.D.

To the Superintending Engineer, Sixth Circle.
,, Marine Department.

Exd. C. Howarth.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of 1882 Madras.

PUBLIC WORKS.

Dated October, 19th.

Recd.

Encl.

G.O., 1th Oct. 1882, No. 2726 W.

OCTOBER.

Nos. 118-119.

Pamban Pass.

*Reports on the boring operations in the —,
recorded.*