(1) Number of pages 6

(2) Date of repair 12.12.1980

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No. / B.P. No:	2741	Press. / Mis.
Dated	15.5.1877	197 .

Not to be folded or roughly handled

Archives I—10,006—19-4-79.

Read the following papers:—

No. 316. From Major-General W. A. CROMMELIN, R.E., Officiating Secretary to the Government of India, Public Works Department, (Civil Works—Irrigation,) to Major-General G. W. WALKER, R.E., Secretary to the Government of Madras, Public Works Department, dated Simla, 2nd November 1876, No. 470 I.

I AM directed to acknowledge receipt of your letter, No. 1,620, of the 27th June, and enclosures regarding the Perryaur Project in the Madura District; and to reply that even if full and reliable data for this project were now available, the Government of India is not at present in a position to undertake it.

2. The interval that must elapse before the investigation by the Revenue Officers of the question of probable returns can be completed, and before the project can be finally dealt with by the Government of India; might, if His Grace the Governor in Council thinks it advisable, be taken advantage of to depute an officer to Europe and America to inquire into facts in reference to dams constructed or projected in other countries under exceptional conditions; to visit the works or confer with practical Engineers acquainted with such works, and to report to the Government of India fully the result of his inquiries and observations; and I am to suggest that Captain Pennycuick, who appears to have given this project intelligent attention, might be selected for this duty and deputed at once to England.

3. With reference to paragraph 3 of your letter, I am to point out that before a final decision can be come to as to the design for the dam, it will be necessary to ascertain not only what is "believed" to be, but what actually is, the nature and condition of the underlying rock at the site.

No. 317. MEMORANDUM by Captain [illegible], R.E., Executive Engineer, Madura Division, dated 1st December 1876.

THE existence of sound rock at a moderate depth below the surface of the ground at No. 4 site was, it is believed, conclusively proved.

2. Natural rock undoubtedly exists in the bed of the Perryaur river at the bund site, and it also appears in the bed of the stream below the escape saddle. Pits were intended to determine whether

3. The first trial pits that was sunk was at the north end of the bund where was sound rock in the little hill on which the [illegible] rests. This small hill is connected with the high hills to the north of the saddle in which it is proposed to cut the escape. To this end pits were sunk a considerable distance up the main hill across the escape saddle and on to the top of the small detached hill. In all of these good rock was found.

4. It may here be observed that, with one exception, sound rock was never considered to have been reached, unless the pits had been sunk through some feet of water before reaching the rock. Of the whole number of pits sunk only a very small number were considered to have got down to rock. Numbers of pits were stopped by large boulders; in others, although sound rock appeared to have been reached, its level did not agree with that of the rock in the adjacent pits, and it was therefore rejected; in others the rock at the bottom of the pit was not sound, although it was too hard to sink further through.

5. The exception noted in paragraph 3 was in the case of the pits on the top of the small detached hill. Hard rock was apparently reached, and its level agreed with that of the rock found in the pits on both the saddle and on the river side of the hill, but there was no water overlying it. Eventually Mr. Smith, the Executive Engineer in charge, gave orders that a very large pit should be sunk on the summit of the hill; its bottom dimensions were, it is believed, 20 feet × 10 feet, and as the whole surface of the rock thus exposed appeared to be sound when struck with a heavy crowbar it was taken to be true rock.

6. Trial pits were sunk down the whole length, and on both sides of the little stream running from the escape saddle, and rock was found to exist the whole way below the escape into the deep bed of the Perryaur river, and also at the sides of the valley.

7. On each side of, and parallel to, the bed of the Perryaur a very large number of pits were sunk in long parallel lines, in order that a regular contoured survey of the surface of the rock might be made. From this survey the tunnel proposed for the escape of the river water during the construction of the bund was laid out.

8. At the time that these pits were sunk, it was supposed that the tunnel would be designed on the north side of the river; and consequently many more pits were sunk on the north than on the south side. When it was eventually decided to have the tunnel on the south bank, it was too late in the season to sink more pits. The existence of rock at, or very near, the level given on the south bank is, it is believed, proved beyond a doubt.

9. In the event of the work ever being carried out, as it is absolutely necessary that there should be a certain thickness of solid rock above the escape tunnel to withstand the great internal pressure, it would appear to be only a safe precaution before commencing the boring of the tunnel to have the upper surface of the rock immediately above the tunnel exposed throughout its entire length. It is possible that there might be, were this precaution not adopted, might only be discovered by pits, whose existence the tunnel during the construction of the bund—an event which could be but to be most disastrous.

[illegible] is believed [illegible]

it is [illegible] ts of this memorandum are correct, although writer [illegible] be desired. It is nearly five years since the of a sing[illegible] to, and at the present time he is not in possession [illegible] rring to the work.

KOTAPATAM,
27th November 1876.

(Signed) C. C. RAWSON, Lieut., R.E.,
Asst. Engineer in charge
2nd Division, East Coast Canal.

No. 318.

ORDER THEREON, 13th December 1876, No. 3,398.

IRRIGATION, No. 28-A.

LIEUTENANT RAWSON'S memorandum having furnished all the information regarding the rock at the proposed site for the dam across the Perryaur which can be obtained without a special investigation;

and a further examination of value being impracticable without arrangements for clearing jungle and conducting boring operations, which would necessarily be costly, His Grace the Governor in Council resolves to transmit a copy of these Proceedings to the Secretary of State with a request that Captain Pennycuick, who is now in England on furlough, may be deputed to make the inquiries suggested by the Government of India. A complete file of the printed papers appertaining to the Perryaur Project will be transmitted for Captain Pennycuick's use, together with such a selection from the drawings as will enable him to make his report complete.

2. A copy of these Proceedings will be forwarded for the information of the Government of India.

(True Extract.)

(Signed) G. W. WALKER, Major-General, R.E.,
Secretary to Government.

To Captain Pennycuick, R.E., with papers.
To the Chief Engineer for Irrigation.
,, District Engineer, Madura.
To Lieutenant Rawson, R.E., through the District Engineer, Nellore.

Exd. E. C. Shunker

Spare Copies

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

1st May 1877, No. 8 I.

Irrigation.

No. 15. Read the following despatch from the Most Honorable the Secretary of State for India :—

INDIA OFFICE, LONDON,
29th March 1877.

Public Works,
No. 4.

MY LORD DUKE,—I have received your Grace's letter No. 1 of 23rd January last, and also one from the Government of India recommending, with reference to the Perryaur Project, the deputation to the Continent of Europe and to America of Captain Pennycuick "to inquire into facts" respecting "dams constructed or projected under exceptional conditions."

2. It is admitted that "full and reliable data for the project" are not as yet available, and that, even if they were, your Government is not at present in a position to undertake it. The circumstance, indeed, of its cost being estimated at little less than four hundred thousand pounds (£ 400,000), is sufficient of itself to render the prospect of its being sanctioned a very remote one. I consider therefore that the proposed deputation of Captain Pennycuick would be premature, and no communication therefore has been made to him from this office on the subject.

I have &c.,
SALISBURY.

His Excellency the Most Noble,
The Governor in Council, Fort St. George.

No. 16. ORDER THEREON, 1st May 1877, No. 8 I.
ORDERED to be recorded.
(True Extract.)

Lieut.-Col., R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" District Engineer, Madura.
" Revenue Department, with copy of G.O. No. 3,398, 13th December 1876.

Exd. E. C. Shunker.
Spare Copies

Revenue Department
No 2476

IRRIGATION.

Govt. of {1877} Madras.

PUBLIC WORKS.

To

THE CHIEF ENGINEER FOR IRRIGATION,

&c., &c., &c.

Dated May 1st.

Issued

Rect. 12 May 1877 Encl.

G. O., 1st May 1877, No. 8 I.

MAY.

Nos. 15-16.

No 2741.

Communicated to Revenue

15 May 77

Periyaur Project, Madura District—Despatch from the Secretary of State considering it premature to depute Captain Pennycuick to the Continents of Europe and America to inquire into facts respecting dams constructed or projected under exceptional circumstances, as the prospect of the — being sanctioned is so very remote, recorded.