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# MADRAS RECORD OFFICE.

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## Government of Madras.

Public works **DEPARTMENT.**

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| G.O. No. 92 | Press / Mis. |
| 1879 | |
| Dated 8 1 | 1870. |

***Not to be folded or roughly handled***

No 178 Read the following letter from the Superintending Engineer, 5th Division, to the Chief Engineer for Irrigation and Joint Secretary to Government, Public Works Department, dated Cuddalore, 27th November 1869, No. 152.—

1 Report
1 Survey
2 Cross Sections
1 Section of Gorge.
1 Sketch
} Per Bangby.

I HAVE the honour to forward a survey of the proposed Kistnagherry Reservoir, accompanied by a report from Mr. Wilson, who has been employed on the work since November 1868

2. The report is brief, and the survey not quite complete, while the detailed plans and estimates of embankment, sluices, channels, etc., have not been commenced. My object in forwarding the papers in their present shape is, to ascertain the wishes of Government regarding the further investigation of the project. Mr Wilson is at present in charge of the Range, acting for Mr. Paynter who will return from leave on the 7th December 1869.

3. My own opinion of the project, before I ever saw the site of the intended reservoir, was that there was no chance of its being carried out. I am still of that opinion. The project is perfectly feasible, but the cost is prohibitory, without reference to the possible returns, which, however, for the present, are a matter of guess-work, and not of calculation.

4. The site is not favourable for the construction of an earthen embankment, and the cost of a masonry dam has been greatly under-estimated by Mr. Wilson. The length would be 2,900 feet, and with an average height of 110 feet, and thickness of fifty feet, the contents would be 590,740 cubic yards. At 4 rupees the cubic yard, the cost would be twenty-four lacs of rupees, without allowing anything for waste-weir and sluices. The channels, from the nature of the country, would be expensive works, and there would be in addition the compensation to be paid for thirty square-miles of land submerged, and the cost of diverting the road from Kistnagherry to Royacottah.

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No. 179. ORDER THEREON, 8th January 1870, No 92.

ESTABLISHMENT, No. 16.

THE Government regret to find that after Mr. Wilson's employment for nearly a year in investigating the site for a reservoir on the Pennair near Kistnagherry, no reliable information has been obtained, and even the survey has not been completed It appears to be highly probable that the Superintending Engineer's opinion that a reservoir could not be constructed at this site at a cost moderate in proportion to its capacity is correct. As the data for forming a conclusive opinion are, however, wanting, and as it would manifestly be useless to continue to employ Mr Wilson upon the investigations, the papers will be returned to the Superintending Engineer, in order that they may be completed whenever an officer, or an intelligent subordinate can be spared for the purpose.

2. Mr. Wilson should be employed on general duties in the Salem District. He should not be placed in charge of a Range but under an Executive Engineer

Town. These Hills will bound the

*Proceedings of the Madras Government, Public Works Department,*
*8th January* 1870.

who should be instructed to employ him on such work as will ensure his time being fully and usefully occupied, the Government further direct that Mr Wilson be informed that, should he not evince greater diligence than he has shown during the past year, it will be necessary to remove him altogether from the department.

(True Extract.)

Colonel, R E,
*Secretary to Government*

To the Superintending Engineer, 5th Division

Fxd F R Bantleman.

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# Report on the Proposed Reservoir near Kistnagherry.

This project was I believe, first brought to the notice of Government, by Mr H.S. Thomas Sub Collector, in his letter to the Collector of Salem, No 356 dated 25th of November 1864.

Mr Thomas in that letter, was under the impression, that by throwing up a Bund of a hundred feet high, a hundred square miles of superficial area of water would be collected, such however is very far from being the case, as will be seen from the following report.

Object. It is proposed to throw a dam of masonry across the Pennar river, at a point, about five miles to the S 31° W of Kistnagiri where the river passes through a "gorge" in a chain of hills which commence about two miles from the above mentioned Town. These Hills will bound the

Reservoir on the East and South sides; on the North it is confined by a dividing ridge, the lowest point of which, is more than 70 feet above the crest of the Calingulah.

## Capacity of the Tank.

The water spread will be 193,012 acres, and the average depth will be about 37·53 ft. as will be seen by the cross section forwarded with this. This will give the Capacity as 1298509977 cubic yards, and will, assuming ~~that 2½ Cubic~~ Yards per hour, per acre, for three months is sufficient for rice irrigation, be a quantity enough to supply 240464 acres.

## Site of the Annicut

The site marked on the plan, has been chosen on account of the rocky foundation in the river, and the rocky flooring that could be obtained for the waste water to fall on, the latter being a most important object, as there is no saddle in the Hills, low enough for this purpose; nor is there any place in the contour line, where the surplus water can be carried off.

## Distribution Channels.

I propose, that one on each side of the river, be taken from the Annicut, and gradually contoured on to the high lands below; this will be very easily accomplished, in many places a single embankment forming a considerable sized tank, and in its course ensuring the full supply to several now in existence. The survey of these channels, has not been completed, but sufficient has been done, to enable me to come to the conclusion, that there is an ample quantity of dry & waste lands, to be turned into Wet, so as to use the whole of the waters Calculated.

## Source of Supply.

After careful calculations and enquiries, I am of opinion, that there is more than three times the quantity of water flowing down the Pennar, than is required to fill the tanks, and a sufficient quantity of water would therefore be thrown over the Annicut, to supply private channels, and similar works, lower down the river.

## Cost of Construction.

The "Dam," if built of solid masonry, having the whole of the front wall in cut stone, and cement, together with sluices, and a Calingulah of six hundred feet in length, would be certainly not more than Rs. 10,00,000; an unlimited supply of materials being on the spot. Its total length would be about 2,900 ft. and the greatest depth of the water being 100 feet- N. B. The estimated cost provides, for a road way being made in lieu of the one to Royacottah, part of which will be submerged.

## Compensation.

On this subject I feel very diffident in giving an opinion, as from my conversations with the Sub Collector, and the Tahsildar, I have found that they differ very greatly in their estimates- But as a great portion (at least one third) of the land submerged, is dense or "rocky jungle", and a still larger portion, "Dry Cultivation," and the villages, or hamlets, with one or two exceptions very small, I think, that 30 lacs of Rupees will be more than sufficient to cover all claims for compensation-

## Probable increase of Revenue

Assuming "5 Rupees" per acre, as being the increase of revenue "a sufficiently low estimate", there will be a return of more than 12 Lacs; a sum sufficient in my opinion to warrant the construction of the works.

In conclusion, I would remark that I have not taken into account the sums, that would be realized by the sale of the "waste lands" below the tanks, which would be very considerable, and would I think cover the cost of constructing the distribution Channels.

The plans of the works, as far as they have been finished are forwarded together with a tracing of the Tank copied from the Ordance Map.

Kistnagiri
1st October 1869.

(Sd.) J. L. Wilson
Assistant Engineer

(True Copy.)

Ed Ford Col. R.E.
Superintg Engineer
5th Div.

9th December 1869.

3 Mg

P. W. Dept.

No 152. Superintg. Engrs office, 5th Divn.
Cuddalore, 27th November 69

From.

The Superintg. Engineer,
5th Division.

To,

The Chief Engineer for Irrigation
and Joint Secretary to Govt.
Public Works Dept.

Sir,

I have the honor to forward a Survey of the proposed Kistnagherry reservoir, accompanied by a report from Mr. Wilson, who has been employed on the work since November 1868.

2. The report is brief and the survey not quite complete, while the detailed plans and estimates of embankment, sluices, channels &c, have not been commenced. My object in forwarding the papers, in their present shape, is to ascertain the views of Government regarding the further investigation of the project. Mr. Wilson is at present in charge of the range, acting for Mr. Forster who will return from leave on the 9th December 1869.

3. My

Enclosures &c
1 Report
1 Survey
2 Cross sections
1 Section of Gorge
1 Sketch
* per Bangky

(Sd.) J. L. Wilson
Assistant Engineer

Kistnagherry
1st October 1869.

P.W. Dept.

No. 92.

3. My own opinion of the project, before I ever saw the site of the intended reservoir was, that there was no chance of its being carried out. I am still of that opinion. The project is perfectly feasible, but the cost is prohibitory, without reference to the possible returns, which however, for the present, are a matter of guess work and not of calculation.

4. The site is not favorable for the construction of an earthen embankment, and the cost of a masonry dam has been greatly underestimated by Mr. Wilson. The length would be 2,900 feet, and with an average height of 110 feet and thickness of 50 feet, the contents would be 590,740 cubic yards. At four rupees the cubic yard, the cost would be twenty four lacs of rupees, without allowing anything for waste weir and sluices. The channels, from the nature of the country, would be expensive works and there would be in addition the compensation to be paid for thirty square miles of land submerged, and the cost of diverting the road from Kittinagherry to Royacottah.

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

Ed Mad Colonel R.E.
Superintg. Engineer

P. W. Dept.

No. 92.

Proceedings of the Madras Govt.

Under date the 8 Jany 1870

Read the following

From the Capt. Supt. & Dir. (M.E. No. 162 of 27 June 69)

The Government regret to find that after Mr. Wilson's employment for nearly a year in investigating the site for a reservoir on the Pennar near Kistnagherry, no reliable information has been obtained, and even the Survey has not been completed. It appears to be highly probable that the Superintending Engineer's opinion that a reservoir could not

No. 198

Public Works Dept.

From C. Pollock Esqr. Secy. to Govt.

To The Superintending Engineer for Irrigation in Southern Division.

Dated Fort St. George 15th January 1870.

Ordered, &c.

Read a letter from Messrs. Binny & Co. dated 30th December 1869 with enclosures, on the subject of the Pennar Reservoir.

Ordered, that Messrs. Binny & Co. be informed that the Government have decided to postpone the construction of the Kistnagherry Reservoir until after the completion of the Survey now in progress.

not be constructed at this site at a cost moderate in proportion to its capacity is correct. As the data for forming a conclusive opinion are however wanting, and as it would manifestly be useless to continue to employ Mr Wilson upon the investigations, the papers will be returned to the Superintending Engineer, in order that they may be completed whenever an officer, or an intelligent subordinate, can be spared for the purpose.

2 Mr Wilson should be employed on general duties in the Salem District. He should not be placed in charge of

of a Range, but under an Executive Engineer who should be instructed to employ him on such work as will ensure his time being fully and usefully occupied, the Govt further direct that Mr Wilson be informed that should he not evince greater diligence than he has shewn during the past year, it will be necessary to remove him altogether from the Department.

I should like to talk this over in Council. If some short letter could be drawn for to-morrow's meeting.

A.J.

To the Secretary to Govt

Madras 10/1/70

Cue 5052.

Govt. of {1869} Madras.

PUBLIC WORKS

To
The Superintending Engr.
5th Division

Dated

Read

G.O. 8 Jan 1870 No 92

Nos 178-179

Krishnagherry reservoir Papers
ordered on the Collr's Report the Supdg
Engr's & the 5th Dy Commissioner
to take Measures & survey & take
Levels of Krishnagherry reservoir
in the Salem Dt, together with
a report thereon from the Supdg
Engr's below -

e.g. dir 1869 R. 11 paper