

1911

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Mombasa Water Supply

Jan 3

of previous Paper.

Criticises Comd^r Eng^r est. of cost
strongly urges the provision of funds for the
consolidation of the supply at the earliest possible date

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W Butler

Lu also CA/300.

The C.E. (1904) approves the
proposals generally, but
he thinks that a scheme providing
for a supply of 700 000 gallons daily
should be sufficient for present purposes
as against his ~~own~~ ^{Ross} scheme for a
daily supply of 1,500 000 gallons.

According to the Committee appointed
in 1908 (see their report para 145-156 os)

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A supply of 600,000 gallons would
 suffice
 meet requirements even allowing for a
 50% increase in the population -
 So that a supply of 700,000 gallons
 they would be able to cover all
 requirements and I further that
 financial would be satisfied with such
 a supply

(2) they think that the ^{Ross} ~~lower~~ estimate
 of the cost is £85,903 for a 1,500,000 gallon
 supply is understated, and estimate
 the cost of such a supply at £109,878,
 which is an alternative estimate, they
 when the cost of a scheme to supply
 700,000 gallons only - which would be considered
 sufficient - at £91,178.

Mr. B. further thinks that the
 C.E. have increased the estimate of

The cost of supervision including
 and that £90,000 would be a
 safe estimate for a 700,000 gallon
 supply, £107,000 for all of
 1,500,000 gallons. In view of the
 under estimate now decided in the
 case of the Kenya Kikuyu railway
 I do not think that it would be
 safe to take the lower figure but
 would suggest sticking to the C.E.'s
 estimate.

I would prefer then recommending
 to the Treasury the smaller scheme
 viz for a 700,000 gallon supply, with
 £92,000 as the estimate of cost.
 The 400,000 gallons also referred to estimate
 the immediate source annual income
 from the installation of a water supply

supply of 700,000 follows a day, so as
not to spoil the symmetry of a
loan of \$250,000.

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COLONIAL OFFICE,
L O N D O N.

25th January 1911.

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Sir,

With reference to my Despatch of the 15th December, paragraph 7, wherein I suggested that the estimates and reports of the Public Works Department upon the Mombasa Water Supply should be submitted to the Consulting Engineers for the Crown Agents, I have now had an opportunity of perusing the report furnished by Messrs. Middleton Hunter & Duff, from which it will be observed that the general scheme has their approval, though they vary as to estimates. One item only calls for attention in so far as I am concerned. The consulting Engineers increase the cost of supervision by 50 per cent, basing this opinion upon West African experience. I have myself had experience of both sides of Africa, and am inclined to think that the Consulting Engineers have increased this estimate unduly. It would appear however reasonable to accept an amount of £107,000 for a supply of 1,500,000 gallons, or £90,000 for 700,000.

2. There would appear to be no necessity to press any further the actual necessity for a water supply for Mombasa. The present condition of the supply has been referred to on many occasions as dangerous and inadequate for the existing population, and wholly inadequate for the demands of manufacture and shipping. Steamers cannot be supplied, and if the Magadi Soda proposals are approved, it would be quite impossible to furnish this

Company

The Rt. Hon. Mr. Lewis Harcourt, P.C.

L O N D O N.

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Company with the water necessary for the supply of the large number of steamers they would require in their trade, or for their works and port at Bombaa.

3. In 1908, a Government committee reported upon the Water supply - more particularly with regard to the quantity required and the estimated immediate annual revenue which could be obtained. Allowing for a 50 per cent increase in the population, 600,000 gallons was said to be the total daily requirements of the town for all purposes, and that the immediate revenue expected from the installation of a water supply would be approximately £8,700 per annum. I see no reason to doubt the accuracy of these figures, which were collected with great care.

4. We have now in our possession practically full data covering a substantial proposal -

- (1) A report made by Colonel Bogle & Mr. Chadwick in 1899/1900.
- (2) A report with estimates and plans by the Public Works Dept. of November 12th & 18th 1910.
- (3) A report with estimates and plans, based on (1) & (2), by the Consulting Engineers to the Crown Agents, of January 23rd 1911.

All these reports cover practically the same ground and the same proposals, varied only as to the quantity of water required. There therefore appears to be no necessity to incur further expenditure in the consideration of a projected water supply, all material facts, estimates and plans being now available.

5. It is quite impossible, with the funds available for Public Works in the Protectorate, to furnish the sum of money required for the construction of a water supply at Mombasa. The execution of this work is, in my mind and those of my medical advisers, one of paramount importance not only to the town and port but to the country as a whole. The expenditure cannot possibly be spread over several years, as owing to the unhealthy character of the district in which the supply must be carried out, it is of importance that it should be pushed through - when once begun - with all possible speed. From every point of view I must therefore support the provision of funds for the construction of a Mombasa water supply at the earliest possible date.

I have the honour to be,

Sir,

Your most humble

obedient servant,



MOBASA WATER SUPPLY

In 1900, while the East Africa Protectorate was still administered by the Foreign Office, a report upon the water supply of Mombasa was made by Colonel Bogle and Mr. Chadwick. They reported that it would be possible to obtain a supply of 500,000 gallons per diem from a spring about 20 miles from Mombasa which formed the source of a tributary of the River Pemba, and estimated the cost of the undertaking at £95,000. If a further supply was needed, they reported that it would be possible to obtain it by pumping from the River Pemba, but for this a considerably greater outlay would be necessary.

No action appears to have been taken on this report.

So far as the Colonial Office is concerned, the question was first raised in a memorandum dated the 4th of March 1907, from Sir J. Hayes Sadler (then Governor of the East Africa Protectorate), urging the importance of the question of providing Mombasa with a water-supply.

Shortly afterwards the Officer Administering the Government reported the receipt of applications from Mr. Gibbs and Mr. Raynes for a concession to supply Mombasa with water.

Before taking any action in the matter, it was decided to wait for further reports from the Protectorate.

On the 26th of June 1908 Sir J. Hayes Sadler

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sent home reports on investigations made at the Voi River, the Tsavo River, and in the Shimba Hills, with a covering report on various sources of water supply by Mr. Watts, who had recently been appointed Commissioner of Public Works. Mr. Watts favoured a modification of Colonel Bogra's Shimba Hills scheme, which he estimated could be executed for about £60,000, and the Governor stated that he felt confident that this scheme was the only possible one. The Governor further reported that, the way having been cleared by these preliminary investigations, he had appointed a Committee of Official and Unofficial Members to enquire into the whole question of a water supply for Mombasa.

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On the 10th of March 1909 Sir J. Hayes Sadler forwarded the report of the Committee, with recommendations by the Commissioner of Works, and on the 30th of April the Officer Administering the Government sent home further reports by the Treasurer and the Manager of the Railway.

The Committee estimated the total requirements per day (allowing for a 50% increase in the population and including water for the Railway at Mombasa) at 600,000 gallons, and the probable immediate annual revenue at about £8,700. They strongly recommended that any new water supply scheme should be undertaken by the Government, and further recommended that the undertaking should include a supply for the Mombasa-Voi section of the Railway.

Mr. Watts, the Commissioner of Public Works, now strongly favoured a big scheme for obtaining water from the Tsavo, estimated to cost £400,000. The

scheme

scheme would supply the Mombasa-Voi section of the Railway with water and also included an irrigation project. If this was thought too ambitious, he recommended further investigation of the Pemba River scheme, which he thought could be executed within £97,000. The cost of the larger scheme was of course prohibitive, and it was generally recognised that it was put out of court on this account.

The Manager of the Railway entirely disagreed with Mr. Watts as to the source of supply, and favoured the Pemba River scheme, but thought that it should be supplemented by a pipe line from Voi to Mackinnon Road to supply the Voi section of the Railway with water. The cost of this addition he estimated at £25,000. Mr. Currie added that the Railway would be unable to work the soda traffic from Lake Magadi unless water was brought into Mombasa and on to the Railway in some such manner as was proposed.

Mr. Currie came to England shortly afterwards and, as a preliminary to the consideration of the question, he was asked whether, with regard to the water supply of Mombasa itself, it would be possible to separate the question of the supply for the Railway at Mombasa (not for the Voi section) from the question of the supply for the town. Mr. Currie's reply was that it was not possible to separate the two questions.

A further complication was introduced by the fact that, in view of treaties between foreign Powers and Zanzibar, the Government appeared to be precluded from levying rates in Mombasa on the subjects of Powers having such treaty rights. The Foreign Office did not think the moment opportune for approaching the Powers in question with a view to ascertaining whether they would

would be willing to waive their rights so far as to allow the Government of the East Africa Protectorate to rate their subjects in Mombasa, but it appeared that the German Treaty would expire in August, 1911, and it was hoped that after that the Government would be able to secure a freehand. (This hope does not seem likely to be realised at present. The Foreign Office are trying to negotiate a fresh treaty with Germany, but the issue cannot be predicted with certainty. In any case French rights under their treaty have also to be taken into account. But the obstacle is not insuperable. Though the Government cannot, in view of these foreign rights, "rate" the inhabitants of Mombasa, they can sell water supply to those who are willing to pay for it and refuse it to those who do not wish to pay for it.)

On the receipt of this opinion from the Foreign Office, Lord Crewe on the 17th of September 1909 addressed a despatch to the Acting Governor of the East Africa Protectorate explaining that it was necessary to postpone the settlement of the question until 1911, owing to the treaty difficulty, and suggesting that, in the meantime, further investigations should be made with regard to the Pamba River source of supply.

Nothing further was heard from the Protectorate on the matter until, on the 2nd of August 1910, a telegram was received from Sir P. Girouard, stating that he had discovered an excellent source of water supply in the Shimba Hills, with a minimum output of probably 900,000 gallons per diem. He added that a analysis of the water was very favourable. Further reference was made to this discovery in Sir P. Girouard's

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report on his visit to the Coast Provinces, in which he gave an interesting description of the finding of the spring. The spring had been discovered by an engineer some time previously in one of the investigations into the possibilities of the Pemba River as a source of supply, but the discovery does not seem to have been further investigated at the time.

On the 15th of December a letter was received from Sir P. Girouard, who was then in this country, submitting a scheme for obtaining a water supply from the spring above mentioned at an estimated cost of £86,000. The letter was accompanied by a report by Mr. Ross, the Director of Public Works, and a detailed estimate.

The letter and estimate were forwarded to the Crown Agents and they were asked to obtain the observations of the Consulting Engineers on the scheme.

The Consulting Engineers approved the proposals generally, but were of opinion:

(1) That a scheme providing for a supply of 700,000 gallons daily should be sufficient for present purposes, as against Mr. Ross' scheme for a supply of 1,500,000 gallons.

(2) That Mr. Ross' estimate of the cost viz. £85,902 for a 1,500,000 gallon supply, was too low, and they estimated the cost of such a supply at £109,815, while, as an alternative estimate, they reckoned the cost of a scheme to supply 700,000 gallons, at £91,178.

The Consulting Engineers' report was communicated to Sir P. Girouard, who thought that they had unduly over-estimated the cost of supervision, but accepted £90,000 as an estimate for a 700,000 gallon supply and £107,000 for one of 1,500,000 gallons.

All material data being now available, he pressed for the provision of the funds necessary for the construction of the work.

In view of the Consulting Engineers' opinion it was decided to press for the smaller scheme and in Colonial Office letter to the Treasury of the 10th of February applying for a loan of £250,000 the Treasury were asked to provide £90,000 for the carrying out of the scheme on these lines. The local Committee appointed in 1908, after very careful investigations and calculations, estimated the immediate revenue to be expected from a water-supply at about £8,700 per annum, and Sir P. Girouard sees no reason to doubt the accuracy of this figure. This should be adequate for working expenses and for interest and sinking fund on the capital outlay.

P.F.D.

April 4th.