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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

DEPARTMENT

Revenue

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No. 378. Read the following endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 11th August 1876, No. 228 W.—

From W. A. GOODCHAP, Esq., District Engineer, Kurnool, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Camp at Cumbum, 30th July 1876, No. 33.

At the request of Major Hasted I have the honor to forward a certified copy of his memorandum on the improvement of the water-supply and drainage of Cumbum Town with sketch.

MEMORANDUM.

1. The following remarks which have been entered in the Reports of the Committee will illustrate the scheme proposed for the improvement of the water-supply and drainage of Cumbum Town.

The subject of improving the water-supply of the town has been considered in connection with that of the proposed improvements of the irrigation channels from the tank, for which estimates are now being prepared under the District Engineer. Drinking water is now obtained from the Nuckelagundi and Pedda Cumbum channels which run through the town, and from the Ramapand channel which runs round the lower side of it, and under no circumstances can it be expected that the water thus supplied will be fit for human consumption.

A project for providing separate drinking water channels has been under consideration, and plans and estimates, which unfortunately have not been laid before us, were prepared. It is understood, however, that no supply-channel was brought to the town on much the same line as that we have adopted. We propose to cut a channel through the high ground north of the road from near the tank (silingudu), to take the place of the present Nuckkalagundi channel, this channel will be cut at a short distance above the town, and from it will be led covered conduits down each of the two main streets of the town, supplying masonry basins, of which probably ten or twelve will be required. At convenient places tank supply can probably be cut in the rock for most parts, but will always be kept well cement, as also should the basins be. After supplying the conduits the new channel will fall into the Nuckkalagundi channel a short distance from the toll bar on the Nandyal road.

The Nuckkalagundi channel will [illegible] be filled in through and in the vicinity of the town, and the Pedda [illegible] uniform channel, which runs on level of below the Nuckkalagundi [illegible] and will be covered over with slabs set rough the town, so that the [illegible] do will not be able to make use of the the gratings will have to be [illegible] at the commencement of the covered channel will be cut [illegible] the lower part of the town, and failed direct into the Gundlakamma [illegible] the lower portion of the channel ...wn being supplied by [illegible] now feed from the Pedda Cumbum ... to the east of the town. [illegible] drains for the surface drainage of ... must then be provided [illegible] Gundlakamma. ... the improvements in the [illegible] do not otherwise affect the town ... the [illegible]

G.O. No.
P.P. No.
Pross.
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escape channel. This will probably best be placed on a ledge of rock which crosses the channel, the bed of the escape channel being about 193·33, and the bed of the Nuckkalagundi channel near the toll gate on the Markapur road being 192·09, there will be an available bed fall of nearly 1 foot per mile which will probably do. The discharge of the channel will be regulated by the amount of cultivation to be provided for under the channel and the quantity required for the supply of the town. I think that 2½ cubic yards per hour per acre will be sufficient for the cultivation, and an allowance of 25 gallons per head of population in twenty four hours. The channel will run along the south side of the escape channel, being held up by a masonry wall of sufficient height to ensure the requisite head, the tank discharged over the calingulah being maintained at the sluices; when its section must therefore be strong.

The head sluice will most conveniently be placed under the road immediately below the tope, which is near the calingulah, a small work of one vent will suffice. From the calingulah to the point where the Eddla Gumbum channel crosses the escape channel the latter must be embanked.

6. The Eddla Gumbum channel will have to be laid out to supply the full extent of old irrigation only at the rate of ½ cubic yards per hour per acre. It is believed that the existing channel is sufficiently wide, but it may be improved by cutting off some awkward curves; the fall in the upper portion of the channel where the bed is rocky is heavy, which once the channel reaches the cultivated land it will be well to give it a uniform moderate fall. Here it will be well to make arrangements for supplying the Kutwa Kulwa channel through the Gundlakamma in dry weather from the head of the Eddla Gumbum channel. There is a sort of scarp a little below the sluice which might probably be converted into a head for supply; where the channel crosses the escape channel from the calingulah a masonry aqueduct must be constructed over which the escape water can pass in floods. A section sometimes like that shown on the margin would answer the crest of the dam being at full supply level, so that at double water can be let down from the Nuckkalagundi tank to supplement the supply given to the Kutwa Kulwa from the Gundlakamma.



The escape channel must be embanked from the end of the escape head sluices till it reaches the Nuckkalagundi channel, and the water will then be perfectly under control. Where the existing channel meets and is to be continued to the Markapur channel, as through the town has to be covered or [illegible] more plainly shown in

3. The Gundlakamma drawn to face
cut at its when the Kutwa Kalva channel is
held up by the anicut to ensure a good supply
water should be allowed. It is thought that
sufficient can be kept to about the level of the
to the water removed, there will be nothing
beach. To keep the water to such level, certain doors,
powerful modern sluices with shutters worked by screw gearing on the old roussa
of Cuttack bungalow the anicut and the Kutwa Kalva bank. With the information
available I am not able to say exactly what dimensions will be necessary for these
sluices, but after the present stones are removed from the foundation I calculate
that the flood discharge water requires of between the anicut will give 3,000
cubic feet per second, of which it will be necessary to discharge about 2,000 cubic feet
per second by the sluices, the remainder being discharged over the anicut. This
could be obtained by a sluice with six openings of 6 feet span, the waterway required
being 270 square feet. The road from Cuttack towards Kanpoi would be carried
over these sluices.

10. The Kotapur Kalva channel will require a head sluice, this part to be constructed
so that the road will pass over it and also a bridge for the railway. This part will
also be furnished with shutters and worked by screw gearing. The channel can be
much improved by cutting off several bends in it, and with the improvements
described by the Chief Engineer [illegible]
[illegible] the channel [illegible]
[illegible] the Kotapur [illegible]
[illegible] the Kotapur [illegible]
[illegible] the Kotapur

2. The questions raised in paragraph 15 of the memorandum will be referred to the Revenue Department for consideration.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the Board of Revenue, Kurnool.
" " Collector of Kurnool.
" " Executive Engineer, Kurnool, 24th Easy No. 1,000.
" " Assistant Engineer on Special Duty, Gooty Section, with 3 do.
To Major Head, R.E., with three.
" the Chief Engineer for Irrigation.
" Revenue Department, &c.
" Public Department.

S. T. Addis.