

*Proceedings of the Madras Government, Public Works Department,
27th October 1875.*

* Including re-constructing a sluice.	3. Ariyaperambakum Tank. Repairs	Rupees	*1,645
	Surplus weir	"	680
Ayacut area	...	Acres	439
" assessment	...	Rupees	1,376
Average revenue	...	"	712
Highest	...	"	833

* No past expenditure has been noted.

The area of the catchment basin is reported to be 4 square miles, and this coupled with the average and highest revenue shows clearly that the ayacut needs reduction to the extent of about 170 acres.

The tank has one escape 36 feet long and surplus has been discharged also at two cuts. The proper length of surplus weir being 149 feet, it is not surprising that breaches occurred in 1872 and 1874. A surplus weir 113 feet long is to be constructed, and its wings should be carried up to the full height of 5 feet above F. T. L. to correspond with the section of the bund. The re-construction of the sluice is chargeable to Revenue, and, as regards the design, it will be cheaper to lengthen the tunnel 6 feet at the tank end, and to place the face wall where F. T. L. cuts the front slope, thus reducing its height and that of the wing walls some 5 feet. There are objections to sluice tunnels being made with a diameter of only 1 foot, but a trial may be given to this design, which provides for a concrete tunnel with a view to economy. Generally $2 \times 2\frac{1}{2}$ feet should be the minimum size of tunnels where the length of these exceeds a few feet.

4. Poupadercoothum Tank. Repairs	...	Rupees	590
Ayacut area	...	Acres	192
" assessment	...	Rupees	683
Average revenue	...	"	491
Highest	...	"	591

No expenditure has been recently incurred. The catchment basin is said to be $1\frac{1}{4}$ square miles, but it appears to be improbable that about 137 acres or 110 acres per square mile can be regularly irrigated. It would be more reasonable were the catchment basin $2\frac{1}{2}$ square miles. The tank breached in 1874. It has a calingulah $36\frac{1}{4}$ feet long of which $31\frac{1}{4}$ feet are effective; the dam stones are to be removed and the crest raised to F. T. L. The inadequacy of this surplus work, though the bund appears to have been very nearly 3 feet above F. T. L. and $4\frac{1}{4}$ feet above the calingulah crest, confirms the opinion that the area of the catchment basin has been underestimated. It is proposed to render the tank safe by cutting down one end of the bund for a length of $32\frac{1}{2}$ feet to F. T. L. and planting cuscus grass. The maximum flood discharge is calculated to be 652.72 cubic feet, but it will be better to assume 1,030 cubic feet, or that due to $2\frac{1}{2}$ square miles. Then the masonry escape will get rid of 342 cubic feet, and if the rest of the discharge be passed over levelled ground it will be better to make the latter 6 inches above F. T. L., and without grass the proper length would be 110 feet, which with grass planting should be doubled or made 220 feet. As, however, 72 feet of dry stone escape at F. T. L. would suffice, if stone is to be had, and as the tank is partly revetted this seems probable, it will be better

Revenue 1875 Sept
N^o 4340

Govt. of 1875 Madras.
PUBLIC WORKS.

THE SUPERINTENDING ENGINEER.
CHINGLEPUT.
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OCTOBER

Nos. 370-371

Tanks, Chingleput District. — The estimates, amounting to Rupees 7,375, for repairing certain —, sanctioned.

N^o 2377
Comd to the
Bd of Rev.
9 Nov 75

10 To be O.D. day Rec. Dec 10 Nov