M.R.O. 1—82,690—16-10-29.

MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

G.O. No.	2444	Press ~~Mis.~~
316-17 Dated	21-9-	1868

Not to be folded or roughly handled

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Proceedings of the Madras Government, Revenue Department,
21st September 1868.

No. 316. Read the following Proceedings of the Board of Revenue :—

Submitting, for information, reports on Public Works from Collector of Cuddapah for last official year. (Here enter 28th July 1868, No. 5,453.)

No. 317. ORDER THEREON, 21st September 1868, No. 2,444.

Miscellaneous. Ordered to be recorded.

(True Extract.)

(Signed) H. SEWELL,
Acting Under Secretary to Government.

To the Board of Revenue.

Exd. S. T. Augustin.

No. 5,453.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 28th July 1868.

Read the following letter from F. B. MOLONY, Esq., Acting Collector of Cuddapah, to the Acting Secretary to the Board of Revenue, dated on circuit at Madanapally, 3rd July 1868, No. 132:—

1. I have the honour to submit the yearly report on the public works of this district for the last official year.

2. The Board are aware that I only received charge of the district from Mr. Smith in the month of February, and since then my time has been so fully occupied that I regret to say I have been able to inspect very few works personally, and as Mr. Smith left behind him no Memorandum of the state of works inspected by him, I am unable to specify the state of more than very few inspected by myself, and those visited by the Acting Sub-Collector and Acting Head Assistant, whose reports I have the honour to submit herewith.

3. My own inspection included the new line of road from Condapuram station to Gundlur, which when I saw it had only just been commenced. It has, however, been very well laid out, and with the grant of Rupees 7,000 to be spent on it will, in all probability, be a very good work, as it will certainly be a very useful one. I also visited the new line of road from Yerraguntla station to Proddatur. This is a most important project, and will be one of the most used of all the roads in this district. The estimate for it is Rupees 40,720. It has been well laid out. The chief difficulty will be in crossing the bed of the river Pennair, and I am not aware how it is proposed to accomplish this project.

4. The road from Cuddapah to the foot of Goovalcherva Ghaut requires a little gravelling in places as the metalling is now rather prominent. Generally speaking the whole of the road from Cuddapah to Royachoty is in excellent order. The break noticed by Mr. Roberts, where the road crosses the supply channel of the Hustnapoor tank, will be shortly remedied, and the whole line will then be complete.

5. All other roads that I have visited have been separately reported on by Mr. Roberts in whose remarks as regards the state of the roads I entirely concur.

6. The tanks I have visited are entirely in the Sub-division; but the following are not works on which Mr. Roberts has reported:—

Candukur large tank;
Pedda Tippasamudram large tank;
Mootialcheruvu tank;
Nallacheruvu tank;

and several smaller works in the Kadiri and Madanapally talooks.

7. The two first are in excellent order. They are splendid works and most valuable, but owing to deficiency of rain, or because the drainage area is insufficient the Pedda Tippasamudram tank is badly supplied. The same may be said of the Rungasamudram tank close at hand, also a large and very important reservoir, whilst in average seasons the Candukur tank receives a larger supply than it can contain. The calingula of this tank discharges ordinarily three or four times a year. It is now under contemplation to divert the surplus water of the Candukur tank successively into the Pedda Tippasamudram and Rungasamudram tanks. The levels have been ascertained to be favourable, or if there be a fault the fall is rather too great. The project will be an expensive one owing to the large amount of rock cutting, but when the assets come to be calculated, I feel sure the profits will justify the scheme, and beg to recommend its being pushed on as it is decidedly the most important irrigation project in the district.

8. There has been a subsidence of part of the bund of the Mootialcheruvu tank, owing I think to sufficient slope not having been given in rear of the new part of the bund when the breach was filled. This has already been repaired, and that part of the tank has probably now found its own natural slope, and may be considered secure. The stone-facing was not affected. The other tanks I have visited are generally speaking in good order.

9. Unquestionably the Department of Public Works has done good work in this district. The road-making has been perhaps the most successful, and to it may be attributed the fact that in th

last season of scarcity private enterprise has been able to supply the district with food. Had it not been for our communications, I have no hesitation in saying the district would have been afflicted with widespread famine.

10. The expenditure on the several works has been as follows:—

Class of Works.	Expenditure on.									Estimated expenditure as per Budget grants, 1867-68.	
	New Works.			Repairs.			Total.			New Works.	Repairs.
Imperial.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	RS.
Military	0	0	0	1,006	10	0	1,006	10	0		
Agricultural	21,923	13	3	32,939	8	0	54,836	5	3		
Communications ...	12,489	2	2	70,027	2	10	82,516	5	0		
Civil Buildings ...	1,651	11	9	2,884	3	9	4,535	15	6	38,648	1,08,990
Civil Officers	839	0	0	0	0	0	839	0	0		
Tools	11	13	0	70	9	6	82	6	6		
Total	36,915	8	2	1,06,928	2	1	1,43,843	10	3	38,648	1,08,990
Local Funds.											
Communications ...	34,788	0	0	3,527	0	0	38,316	0	0	55,000	6,850
Grand Total ..	71,703	8	2	1,10,455	2	1	1,82,159	10	3	93,648	1,15,840

ENCLOSURE No. 1.

From P. L. ROBERTS, Esq., Acting Sub-Collector of Cuddapah, to the Acting Collector of Cuddapah, dated Kadiri, 29th March 1868, No. 31.

I have the honour to report as follows on the roads and irrigation works of the Sub-division:—

1. ROADS.—There are about 300 miles of road, and they are for the most part in very good order.

There are five main lines of communication. First the Trunk Road No. 11, passing through Goolcheroo, Royachoty, and Peelair. It is breached where the Hasanapuram tank supply channel crosses it, and has been left unrepaired at that spot for three or four years. The rest of the road is good. For twenty miles south of Goolcheroo the avenue trees planted by the Department of Public Works are well preserved, and they have this year produced a good crop of fruit. Beyond this, and as far as Peelair, half of the trees are gone, owing to the badness of the soil and scarcity of water.

No other road has an avenue throughout its length like this one, though at Madanapalli and Kudri avenues are planted near the towns.

As far as my observation goes the Department of Public Works have been very successful in planting and keeping up road avenues.

2. To this trunk road there is a maintenance grant of 200 Rupees a mile, and to the other roads per mile 100 Rupees, and sometimes much less; but a considerable portion of this grant, one-fourth or one-sixth, is lost on some of the roads by the employment of road coolies at six Rupees a month. Each has to watch two miles of trunk road, or three miles of ordinary road.

They do very little work; only scooping out the channels when they think some official is going to pass, and then only working at the best parts of the road to show their skill in mending them. I understand they are being better looked after now, but it would be well if they could be made to plant and water avenue trees.

3. *Road from Royachoty to Kudri.*—This road is made with the exception of ten or twelve miles in Royachoty talook, three miles were made this year. In Kadiri talook the road has been completed, but it has become sandy in many parts.

The road should be completed without delay.

4. *Road from Royachoty to Madanapalli and on to Peelair.*—A good road. It requires a small bridge four miles out from Madanapalli.

This road is very carefully attended to.

5. *Road from Peelair through Voilpaud to Madanapalli and on towards Bangalore.*—It passes over some tank bunds which are rather narrow. West of Voilpaud it is in need of repair being sandy or stony. Near Madanapalli it is in good order. This road should be extended eastwards from Peelair to some important villages.

6. *Road from Madanapalli to Kudri and on to the Bellary frontier.*—This road is a very long one, but it is well kept up on a moderate grant; some bridges are required.

7. *Crossroads.*—None in Royachoty. One in Kudri from Kudri to Mutyalacheruvu now undergoing a thorough repair. It should be continued to Obaladavaracheruvu. In Voilpaud talook a crossroad is now being made from Voilpaud to Gurrumconda. That from Gurrumconda to Kalakada was in good order when I saw it last year.

In Madanapalli talook a road has been traced from Mudived to Tumbalapalli; Subbu Reddy is now constructing it.

Another road goes from Candlamadugu westwards to Candukur, and thence to the Kudri road.

More crossroads are required, and they will soon be taken in hand now that the Road Cess is levied.

8. I think it very necessary that the Department should sink wells along the roads where they are wanted. It would be an immense advantage in many ways. There are some wells near the roads in the ghauts that only require deepening to make them useful to travellers and to the Police who keep guard in the vicinity.

9. In my examination of repairs done to irrigation works, I have been struck with three defects:

1. The badness of the chunam.
3. The comparative weakness of the repairs.
3. The very extensive and deliberate lessening of the capacity of tanks.

There is a partial remedy for all these. The Engineers should, as far as possible, employ Reddies in repairing tanks, and not uninterested contractors.

10. BADNESS OF CHUNAM.—In Danaincheruvu, a fine tank in Kudri talook, there are two sluices. One of them is some five or six yards deep in mud, and is therefore of no use. The other sluice is only eight or nine feet deep in mud, and the silt is kept from pressing directly upon it by the ingenious plan of building a wall about ten feet high completely round the sluice.

This wall rises two feet above the mud, and a hole being made in the wall just above the mud, of course the water flows into the enclosed space and so into the sluice. But what has happened? The surrounding wall being made with very bad chunam, it is partly burst in by the pressure of the surrounding silt, which, of course, will have considerable weight when the tank received supply of water. The sluice is again undergoing repair. When I was at Wankamuddi tank, a large one like the former and similarly silted up, the ryots pointed me out a sluice which had given way like the one first mentioned.

At Kutagulla tank near Kudri (of course filled up with mud, I suppose nine tanks out of ten are filled up,) one sluice is quite buried; another has been raised to catch the water, but there are holes beneath the large stones with which the sluice is built. The water pours through these as well as through the sluice, weakens the bund, and makes holes in the stone-facing of the tank close by.

I believe the remedy for half these defects would be good chunam.

Now this is not a question of Engineering so much as of faithfulness and zeal in the contractors.

For the other day when I went to Obaldavaracheruvu tank, I found repairs to the amount of 60 Rupees were being made by the Reddies. They were strengthening the bund, re-setting the stone-facing, cementing the stone with chunam, and repairing the sluice. This work was done well and with their own money. They will receive the amount, however, again from the Department of Public Works. The chunam they used was strengthened they said with the juice of Naredu, Mango, and Tumma barks, with that of Karakayalu and of betel-nut and with jaggery.

I think there are also other ingredients in common use. It can hardly be expected that an ordinary contractor will take the trouble to collect all these barks, leaves, nuts, jaggery, etc., in order to strengthen the chunam. But it is of the highest importance that the chunam should be

good, should be the strongest that can be made. If there is a fault in a sluice anywhere it will generally be in the chunam.

If the work is given to the Reddies, they will make the cement as strong as they possibly can, they will do all the work quickly, seasonably, and well. Some Reddies may turn out to be cheating contractors, but there is less chance of their doing so, on the tanks in their own village than there is of a stranger unlawfully making profit out of the work. This matter is one of grave importance. A sluice in a large tank should be perfectly sound.

11. The next point for consideration is the COMPARATIVE WEAKNESS OF REPAIRS. This is no doubt in great measure due to the ordinary contract system. Bunds are run up to great heights almost perpendicularly, and the top of the bund is as narrow as possible so that a bullock cannot pass along it. Perhaps the contractor can measure these bunds in such a way as to raise a large illicit profit.

This mode of making a bund strikes me as essentially ludicrous; and it may be noticed here and there that the breach last repaired is always weaker than the older portions of the bund adjoining.

Now no bunds are stronger than those low ones over which a road travels. Though the water comes to the top of the bund there is no fear of its bursting. In former times, when bunds were formed the mud was stamped down with sheep and goats and then with cattle and so hardened well. They were also made immensely broad, so that in some tanks eight bandies might be driven abreast. Now if a bullock were to run along the top of some new repairs he might do them some perceptible damage; what additional strength can there be to a bund already thirty feet high by an additional eight feet, two feet wide at the top, and perhaps six or eight feet wide lower down. How can this mud be stamped down and hardened. The mystery is how it was put there.

The remedy for this is to employ the Reddies as contractors; why, I was told at Wankamaddi the other day, that the contractor who had repaired the tank made off before his work was finished. It may be so. He ran up a wall (it cannot be called a bund) at one corner, and the stone-backing is loosened already. It will come down with a rush one day, and the calingula is too small to be of any use whatever in a flood. The scarcity of rain for the past few years has made it of very little consequence indeed whether tanks were repaired or how they were repaired. But in a country like this, where good rains are so unfrequent, tanks should be made strong enough to hold as much as possible, for if the lucky season is gone they must wait long before they get another.

12. I now come to the third point, THE DELIBERATE LESSENING OF THE CAPACITY OF TANKS. This is a consequence of weak repairs.

In the first place in nearly every tank all standing stones on the calingulas have been removed. This prevents the ryots from easily raising the calingula. Secondly, the calingulas themselves have often been lowered, or if a tank has two or three calingulas, one or two at least will be lowered. This, of course, is the same as if all were lowered so far as the capacity of the tank is concerned.

By doing this the weak part of the bund is saved from being burst in. The proper way is to strengthen the weak part of the bund. The lowering a calingula a foot is equivalent in some places to the loss of a month's supply of water. If a tank is to have its calingulas lowered while its bed fills up, it may easily be conceived that the tank will in a short time be no tank at all. All water that comes into it either sinks in the mud, or never gets to the sluice, or flows over the lowered calingula, and so is lost. There are, doubtless, many repairs done with which no fault can be found at all; but it is altogether a vicious practice to build tanks to stand as dry monuments of cooly work instead of as useful reservoirs full of water.

This last grievance is a very sore one indeed to the ryots, and they have good cause for complaint.

13. The chief cause of these two latter defects is the immense cost, in the present system, of filling up a breach so as to make it as broad as it was before, or of widening the bund where it is weak. But if the work is done by the Reddi and the inhabitants of the village it will not cost much; they will take care to make the bund broad; they will give no false measurements.

They will take the earth from the proper quarters without tying themselves down to making pits in such and such spots and getting them measured afterwards. There will be no need of this. They will know what is the best earth to be used, and where to get it, how to stamp it down, and so forth.

14. Then, in order to make them doubly responsible for the repair, it can be ordered that when tanks require repair the ryots should have a certain sum to pay on their puttahs, and the Inamdars according to their cultivation. The sum might range from 5 Rupees for small tanks up to 100 Rupees for large ones, (not 20 Rupees for all as now, and this is never levied,) if the repair should cost more Government would pay the extra amount. All the ryots then would be really responsible for keeping a tank in order. Now they never touch a tank bund so as to repair it.

Inam Tafrik, or tax on Inams for repairs done to tanks, is, as now collected, a miserable pittance. There are so many rules excepting payment that the parties who have to pay are few, and part of these do not pay on all their lands.

It is a perfect impossibility to get the ryots who have certain tanks to join in keeping them in order. Their interests are so diverse that they cannot agree as to their shares of work. Therefore the best plan is to fix a sum on the tank, whether 20 Rupees or 100, and levy it proportionately on all. When a tank requires repair, if the repair is less than the fixed amount, only the cost of repair will be levied. I think the above plan of working would save the Engineer from much needless worry in looking after contractors. The Reddies would also be under the Collectors and so punishable departmentally and speedily without formal prosecution.

15. Another matter above alluded to is assuming great importance, that is the silting up of tanks. This is probably unavoidable. The fall of the supply streams is too great to allow of small anicuts being built to stop the silt, and the silt is also diffused through the water. A few small tanks across the supply streams of a large tank will prevent much soil being carried into it, and small tanks are sometimes built for this purpose, but when they burst the large tank fills up very speedily.

Even if a tank is close to a hill that appears to consist of nothing but rocks, it will not improbably be found to have three or four yards depth of the most fertile mud deposited in its bed. It has been recommended to keep the sluices open at the first rush of water so as to secure a scour. But often enough the water comes in very feebly, and sinks into the mud. There is no grand rush. What is wanted is to utilize this fertile soil, by either cultivating it as it stands, or allowing the ryots to take it away to their fields.

They have told me several times they would take this mud to their fields if they were allowed to do so. If they have been forbidden to do so, I am of opinion that no delay should occur in cancelling the order, or allowing them to cart off as much as ever they like. What can such a process effect but advantage to the tank and all concerned. As for its stirring up the mud and causing sluices to be blocked up, I believe it to be perfect nonsense. Sluices are not blocked up so easily. They are generally speaking more open a great deal than the parts of the bed a few yards off, for there is always a little scour near a sluice, and consequently a depression in the mud in its vicinity. I have not observed that mud has a tendency to get deeper near a sluice than anywhere else. It is the general filling up the bed and making it one level of mud that blocks up a sluice. Besides when a tank receives water all the silt turns into soft mud whether it was dug before or not, and as for digging the silt causing the water to be more muddy than before it may be so in a small degree, but the mud in deposit falls in a few days as a sediment all over the bed, and does not elevate itself immediately above the sluice in preference to any other place.

Indeed if the ryots dug in any other part except in the supply channel itself, I doubt if the water would be rendered apparently more dirty than if they had not dug at all.

16. Secondly, it is I think a mistake to suppose that the cultivation of beds causes them to fill up. Cultivation of a tank bed instead of loosening the earth rather hardens it. A rice-field when cut dries up much harder than unploughed silt. The rice-field would have its soil fastened together by the stubble of the harvested crop. The uncultivated silt would become at the first approach of water soft mud. No tanks are more filled up than those whose beds are not cultivated. If the ryots who have lands under a particular tank were alone allowed to cultivate it, they would be responsible for the damage done. The beds are at least as large as the Circar Ayacut under them, and in scores perhaps hundreds of instances are dry two years out of three. Some of them do not fill more than once in five years. If all the ryots and Inamdars having lands under certain tanks were allowed to cultivate the bed in common in dry seasons, or if they were to have proportionate amounts

of tank bed lands made over to each, two dry seasons out of three would not afflict them so severely as now, and the Government revenue would not suffer so much.

The ryots might even then cart away some of the silt to their lands under the tank, and so relieve the tank of its superabundance of good soil.

If remission were given for crops flooded and a tolerably heavy assessment from eight Annas to five Rupees levied on tank beds, ryots would take them up and Government would receive a considerable increase of revenue.

However I think that tank beds should not be given to ryots except in those cases where all the ryots concerned were willing, and then to each man in due proportion to what land he had under the tank.

17. To cart away the silt by contract would be an overwhelming expense costing thousands of Rupees for some tanks. It might cost a lac to clear out the beds of a single talook. It must be done gradually by encouraging the ryots to use the silt as manure. Poor fellows they are hard up for manure as it is, and have any amount close at hand, but for some reason or other they do not use it.

If some of this silt were put on the bunds to make them broader, they would afford good soil for trees, and eventually the bund would be strengthened. But nothing can be done with a narrow bund. It is brittle like glass. It cannot be used as a road, or an avenue, or in fact as anything at all. It is a complete mistake.

18. If tank ayacut lands and tank beds were to have an appropriate dry assessment fixed for each field, and if this sum were compared with the present revenue from tank lands, I suspect it would be shown that there was no great profit to Government. But tanks are useful to the country; they preserve water in the wells and are necessary for the health of the people. They must, therefore, be kept up at any cost; but it is not necessary for Government to lose the appropriate dry assessment of the lands inside and outside tanks.

Enclosure No. 2.

From T. V. D. HARDINGE, Esq., Acting Head Assistant Collector of Cuddapah, to the Acting Collector of Cuddapah, dated 19th May 1868. No. 19.

I have the honour to forward a report on the roads in the three talooks forming the [illegible] Assistant Collector's division.

1. That portion of Cuddapah and Sidhout road, which lies between the former place and the river Pennair, has been considerably improved during the past year. The remainder of the road, however, is in a deplorable condition. I passed along it on one occasion in a bullock bandy and suffered more discomfort from the jolting of the vehicle than it has yet been my misfortune to endure on the worst bandy-track that I have ever travelled over. I am told that the grant for keeping up the road is very small, and that consequently but slight repairs and those at long intervals of time can be executed. It appears to me to be absurd that there should be a grant of money for keeping up a road, which has clearly never been what is called "a made road" at all. I would suggest that something might be done to keep the road free from the numerous loose stones which abound all over its surface, and which render it dangerous to equestrians.

2. The road from Ontimitta to Sidhout is about seven miles in length; for nearly five miles it is in good repair, for the remaining two miles, however, it is simply a bandy-track, and a very bad one too.

3. The road from Cuddapah through Ontimitta, Rajumpett, and Pullumpett to Codur, is in a very fair state indeed. It runs by the side of the line of Railway, and I believe there is but little traffic along it, except in a few places, for instance, the two miles between Pullumpett and the Reddypalli station. This portion is in capital repair.

4. The road from Cuddapah to Badwail is in very good order indeed. I have travelled over it on three occasions at considerable intervals of time, and observed that repairs are executed on this road rapidly and efficiently.

5. From Badwail to Pormamala there is only a bandy-track at present; but a road is being constructed now, which will be a very great improvement to the talook. There are several good bandy-tracks in the talook.

6. The Pullumpett and Chitwail road is in good order. I observed on my last visit that a great deal had been done to this road since I first saw it. After reaching the top of the ghaut on your way to Chitwail, the road winds along the edge of a precipice. There is no parapet; nothing to prevent an accident happening. Something surely ought to be done in this case.

Submitted for the information of Government.
(True Copies and Extract.)

Acting Secretary.

To the Secretary to Government, Public Works Department.

Copy to the Acting Secretary to Government, Revenue Department.
to the Acting Collector of Cuddapah.

Exd. J. Wright.

Rev 1868. Department.
Pro. of Govt for September

No. 2680.

PROCEEDINGS OF THE BOARD OF REVENUE,

Dated 28th July 1868.
Dest 4th Aug
Rec'd 5th

No. 5,453.

Submitting for information reports on public works from Collector of Cuddapah for last official year. M 2444

RECORDED

A-5161317

M Office Letter Bd of Rev Dept 92