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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

REV DEPARTMENT

G.O. No. / ~~B.P. No.~~	2729	Press / Mis.
Dated	18.11.1876	196

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B.R. 9

2729
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Cumbum—Sanitary.

No. 102. *Read the following Progress Report of Sanitary Work at Cumbum for the Week ending Saturday the 26th August* 1876, *by H. R. FARMER, Esq., Acting Head Assistant Collector, Kurnool District:—*

Vide G.O., No. 1134, dated 21st June 1876.

Sunday the 20th August 1876.—The marginally noted numbers of laborers were engaged on the works set opposite them. In the morning I went to see the work of deepening the breach in the anicut going on; work is impeded by the water. I set the wudders and coolies to work under proper supervision. The coolies are deepening the water-way on the lower side of the cut. I then rode over to inspect the end of the Nakkalagandi Channel. The 160 yards (chiefly rock) were excavated to a depth of eighteen inches and breadth of one yard by eighty-five wudders in four days for Rupees 17-8-0. I then rode along the Pedda Cumbum Channel, where three of the branch channels to feed the Katva Kalva take off. Water was running freely down these channels. I sent for the Nirkatties and Taluq Head Gumasta, and pointed out how some water might be saved. The Cumbum Reddy was with me, and I went afterwards to inspect the work he had been getting done to the Pedda Cumbum and Marlapati (Dasabandham) Channels, while I was engaged in superintending the breaching of the Seekrail Anicut. Work has been going on satisfactorily.

Vondu Túnni Channel	157
Jambu Channel	90
Near the breach in the Seekrail Anicut...	34
Marlapati Channel	106
Bhairavuni Channel...	278
Total ...	665

Gáingela Channel.

I pointed out what still remained to be done to prevent water running to waste into the Gundlakamma. The marginally noted branch channel was reported by the Head Gumasta to be completed. It was too hot to remain out longer, when I came in at 11 A.M. I hear from the Reddy that he has succeeded in stopping the leak in the Pedda Cumbum Channel, with reference to which the marginally noted correspondence with the Special Assistant Engineer took place. The object aimed at, namely, to save loss of water, has been gained I believe. The work is, of course, rough, and not the style of work which the Engineer Department would like to turn out. However, I hope on inspection to find that it answers our

Letter to Assistant Engineer, No. 285, of 9th August 1876.
Letter from Assistant Engineer, No. 14, of 10th August 1876.
Letter to Assistant Engineer, No. 289, of 11th August 1876.
Letter from Assistant Engineer, No. 15, of 12th August 1876.

purpose for the time). The following are the communications (with reference to special work) to or from this office received or despatched to-day :—

From	To	No.	Date.	Subject.
1	2	3	4	5
Chief Secretary to Government.	Head Assistant Collector, Cumbum.	1236	15th August 1876.	Post copy of service message, desiring the Head Assistant Collector to remain at Cumbum instead of going to Kurnool to attend a Local Fund Meeting.
Collector of Kurnool.	Do.	G.C., No. 1343.	28th July 1876, (Financial Dept.)	Passing orders on a reference from the Collector on certain points respecting the cost of improving Cumbum, &c.
Do.	Do.	G.C., No. 1385.	25th July 1876, (P.W. Dept.)	Approving, with remarks, the arrangements of the District Engineer for the emergent repairs to the Cumbum tank channels.

It will be seen from the above that the Government Orders, which it was mentioned in my letter, No. 293, dated 14th August 1876, to the Collector, had not arrived, were received to-day. The post copy of the telegram received on the 17th instant also arrived to-day, showing that three days are gained by sending a telegram from Ootacamund to Cumbum.

In the evening I went again to see how the excavation of the subsided bank of the cut in the anicut was going on. A fair amount of work has been done, but the flow of water makes progress tedious. I then went to see the work of stopping the breaches in the Marlapati Channel which had been going on during the day. Turf for replacing and facing the crumbling banks has to be carried a long way.

Vondu Túnni Channel	60
Jambu Channel	231
Near the breach in the Anicut	49
Marlapati Channel	98
Bhairavuni Channel	100
Total ...	538

The work had gone on satisfactorily, and the coolies were kept at work until dark.

2. *Monday the 21st August* 1876.—The marginally noted numbers of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence with reference to sanitary work at Cumbum which passed through the office to-day :—

From	To	No.	Date.	Subject.
1	2	3	4	5
Collector of Kurnool.	Head Assistant Collector, Cumbum.	G.C. No. 1[illegible]7.	3rd July 1876.	Directing the Board of Revenue to report, in communication with the Director of Revenue Settlement, whether the new Settlement rates can be introduced as proposed in G.O., No. 1051, of 9th June 1876, from the commencement of this Fasli, in advance of its introduction into the whole taluq.

Proceedings of the Madras Government, Financial Department,
12th October 1876. *No.* 1837.

In the morning I rode first to see the work of deepening and removing the fallen-in sides of the breach in the anicut. The wudders engaged by the day set to work at the proper time. The other wudders who have yet some work to do in order to finish what was given them on contract came late. I offered them Rupees 10 to take out a portion of the fallen-in sides. They declined my offer, and I refused to raise the sum; so they were idle when I left them at 8 A.M. to go and see the work which had been done to the Pedda Cumbum Channel during the last ten days, and to the head of the Chinna Cumbum Channel by the Engineer Department, with reference to the marginally noted correspondence.

Letter No. 262 of 31st July 1876, from the Head Assistant Collector to the Special Assistant Engineer.
Special Assistant Engineer's letter, No. 16, dated 14th August 1876.

I found that the leak in the Pedda Cumbum Channel, with regard to which I had written letter No. 285, dated 9th August 1876, (copy submitted with the report for the week ending 12th August 1876) had been almost stopped by the Cumbum Reddy. There is a little water coming through still, but not enough to make any appreciable difference to the ryots whose lands depend for irrigation on the channel. The Reddy had the hole temporarily stopped with pieces of turf well trampled. It cost Rupees 26-14-3, and was done in five days. It was not found necessary to shut off the sluice at all. I remember that this leak, which is close to the masonry work cistern under the sluice in the tank bund which supplies the Pedda Cumbum Channel, was repaired by the Engineer Department in 1873-74. I learn from the Range Office that the cost of this repair was Rupees 262-2-1. I think the repairs done by the Reddy will be almost as lasting, but at all events it would have been quite out of the question to shut off the supply of water for a fortnight, which Mr. Johnston considered the least time within which he could get through the work. After inspecting this leak, I walked along the lower part of the tank bund to the upper part of the Chinna Cumbum Channel, where Mr. Johnston is having the work of closing leaks carried out as requested in my letter, No. 262, dated 31st July 1876. A longitudinal cut in the channel bank has been made for about 200 or 300 yards. This leaves a thin shell on the channel side which is supposed to keep the water out of the cut. I learned from a maistry that this cut is to be made for a distance of more than half a mile (885 yards). The part, which I wrote to Mr. Johnston about as leaking, only extended for a distance of 195 yards. Of these 195 yards, the Dasabandhamdar says he is only obliged to repair 135 yards. The Tahsildar reports that there are no records to show that the Dasabandhamdar is wrong in his assertion, but thinks that the grant of the Dasabandham must have been for the repair of the whole 195 yards. A very short supply of water, apparently insufficient for cultivation purposes, is running in the channel. A larger supply might impede work. A contractor to whom I had begun to give a few Municipal contracts has, I believe, been given the work. Probably Mr. Johnston will teach him how to look after work and get it done. I had a Taluq Gumasta with me, and gave him some points upon which I asked him to get the Tahsildar to report. If cultivation is stopped by want of water, shut off for repairs which are not emergent, Government may lose a good deal of money and the symptoms of famine may be aggravated. I shall address Mr. Johnston

after receiving the Tahsildar's arzi. After seeing this work, I walked along the Pedda Cumbum Channel from the tank bund to the town. The Cumbum Reddy has been getting the repairs to this channel done. I find all the leaks, with one or two exceptions, have been practically stopped. There is a little oozing under the banks in one or two places. To these places I directed the Reddy's attention, and told him to get the work put in hand as soon as possible. He is now engaged in stopping the leaks to the Marlapati Channel. This channel (Dasabandham) is perhaps more leaky than any other. It will be remembered that it has been carried into the Katva Kalva near the head, and that consequently all the lands near the head of the Katva Kalva are now dependent on the Marlapati Channel. I expect that the repairs to this channel will be complete in a day or two. After office, I went to see the work which had been going on at the breach in the anicut. A good deal of the fallen-in sides has been removed. More has to be removed, and when this is done, the bottom of the breach can be deepened and revetted with stones to prevent the current from undermining the banks again. Stones are close at hand. The water-way below the cut has been cleared and somewhat deepened by coolies; but it, like the cut itself, is not deep enough yet to effect the thorough drainage of the swamp.

3. *Tuesday the* 22*nd August* 1876.—The marginally noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence which passed through the office to-day, with reference to sanitary works at Cumbum:—

Near the breach in the Anicut	72
Marlapati Channel	111
Jambu Channel	64
Nakkalagandi Channel	6
Total ...	253

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector, Cumbum.	Cumbum Tahsildar.	358	22nd Aug. 1876.	Sending to him some ryots holding lands under the Katva Kalva who have been caught while helping to silt up that channel by allowing the excess water taken by them to flow into it over its steep banks, and directing him to warn them that a repetition of the offence will lead to their being severely dealt with.
Cumbum Tahsildar.	Head Assistant Collector, Cumbum.	314	21st Aug. 1876.	Submitting a Nomination Roll for nine Nirkatties to be appointed on the Katva Kalva.

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector, Cumbum.	Cumbum Tahsildar.	359	22nd Aug. 1876.	Returning the above roll for revision, and directing the Tahsildar to reconsider and report whether it would not be practicable to appoint a larger number for the villages lower down the channels, as it is there that channels require to be carefully looked after, and water distributed more economically.
Cumbum Tahsildar.	Head Assistant Collector, Cumbum.	316	21st Aug. 1876.	Furnishing information as to the portion of the Chinna Cumbum Channel that must be repaired by the Dasabandhamdars, and stating that only 195 yards of it require to be emergently repaired, and suggesting that the Department of Public Works may be moved to stop executing repairs to the remaining portion of the channel.
Head Assistant Collector, Cumbum.	Cumbum Tahsildar.	362	22nd Aug. 1876.	Giving the measurements of the breach made by the wudders in the anicut, and issuing instructions as to the payment of money for the work done there.

In the morning, after setting the wudders to work at the anicut, I rode through the town and across the fields to the lower part of the Katva Kalva, where it receives its last supply from a cross channel. The names of these cross channels are given in the margin, in the order of their distance from the head of the channel; the first-mentioned channel is the most distant from the head and is the one I visited first. It will be remembered that one of the difficulties which Major Hasted felt in bringing water from the level on which the present Pedda Cumbum Channel is, to the Katva Kalva, was the greatness of the fall. Only in the case of two channels, the Uyala Channel and the Gatsu Kalva, did I find that the abruptness of the fall had led to the channel being cut away, and consequently the Katva Channel having silt deposited in its bed. I think I could obviate this in future by having stones thrown into the cross channels where the fall is too abrupt. If I had had time and money to run the beds of the channels at a uniform gradient, I doubt whether any silt would have been deposited in the Katva Channel. At all events, I fancy the ordinary establishment of Nirkatties could easily have removed,

1. Vadasi Channel.
2. Chintamani Bandam Channel.
3. Uyala Channel.
4. Gadidela Bandam Channel.
5. Mogulla Channel.
6. Marlapati or Gatsu Channel.

(*Vide* sketch enclosed.)

without the aid of paid labor, any silt which found its way in after the channels had been properly cut. What I had chiefly to notice was the reckless way in which ryots on the high bank (west side next the tank) of the Katva Channel took more water than they wanted from the channels higher up, and allowed it to flow over their fields down the steep banks of the Katva Channel. This led to the channel bank being cut away, and would soon lead to the channel being silted up nearly as badly as it was before we took it in hand. I called the ryots answerable for this mischief, and brought them with me to the office, and then drafted Takid No. 358 noted above, and sent them with this to the Tahsildar. I must endeavour to instil a greater sense of the danger of the situation into the taluq and village establishments. If water is allowed to run to waste, and people are afterwards said to have starved for want of the crops which might have been raised by the aid of this water, a very grave responsibility will rest on all of us. A good deal of land is waste still, but after the Nirkatties, to be appointed to-day, are fairly set to work under proper superintendence and on adequate pay (Rupees 5), I am hopeful of being able to keep most of the land depending on the Katva Kalva under cultivation. The water distributors should have huts to live in along the channels which they are to guard, and two or three Overseers on Rupees 8 or 10 a month should go round day by day and check the work of the water distributors. The saving to Government by increased cultivation will more than pay for this increased expenditure. I beg to refer on this point to my diary of the 5th August 1876, and to request that orders may be passed sanctioning, at all events, for the villages depending on the Katva Channel, a couple of Water Overseers on Rupees 10 each a-month, and Rupees 5 a-month pay for Nirkatties to have huts built near the channel and live in them. Ryots will take water in excess of what they have a right to, and will dam up the channels, and let water flow down and eat away the banks of channels, so as to silt them up, unless the Nirkatties are on watch night and day.

On opening Arzi, No. 314, dated 21st instant, from the Tahsildar, in which he enclosed a nomination list for Nirkatties for four of the villages affected by having the supply cut off by the breaching of the Seekrail Anicut, I found that the Tahsildar had not given for each proposed Nirkatty the particular part of the channel to be placed under his care, nor the length of this part of channel and the number of sluices in it. I therefore returned* the statement for correction; and, as the Tahsildar had recommended fewer Nirkatties than appeared requisite to me in the villages likely to require most help in procuring water, I asked him, for grounds given in my order, to reconsider his proposed distribution of Nirkatties with reference to the exceptional difficulties in the way of procuring water in certain villages. The English drafts of this takid and of the one (No. 358, dated to-day) with reference to the danger of the silting up of the Katva Kalva again, are submitted herewith. They will, I believe, show our position with reference to the breaching of the anicut, and the action taken to meet the difficulty. After receiving this Takid (No. 358), the Tahsildar came up to speak to me with reference to it. This was the first time I had seen him since his return from the leave lately granted (*vide* diary of the 9th of August 1876). I believe I impressed on him

* Takid No. 359 of 22nd August.

sufficiently the importance of both himself and his subordinates personally interesting themselves in the work of making the most of the water available, so that not an acre may lie waste which it would be possible to cultivate. One of the men to whom the Special Committee granted a silver bangle for his exertions in getting the channel repairs carried out promptly, is making himself very useful in economising and making the most of the water available for irrigation. I should be glad to have sanction to disburse pay to him as a Water Overseer at the rate of Rupees 10 per month from the 15th instant. His services will be valuable at this crisis; I know of no other man possessed of his energy and knowledge of the work whose services are available. I met Mr. Johnston in the town this morning. He was on his way to the work at the head of the Chinna Cumbum Channel, and I was on my way to the Katva Channel. I mentioned to him that his subordinates seemed to be doing much more work than I wrote about in my letter, No. 262, dated 31st July 1876, as emergent. If these repairs imply a stoppage of the full supply of water, I asked that the work not absolutely necessary to be done at once might be put off, so as not to interfere with cultivation prospects. After I get an arzi from the Tahsildar, in reply to the reference on this subject mentioned in my diary of the 21st instant, I shall, if necessary, write to Mr. Johnston on the subject. In the evening I went, after office, to see how the work had been going on at the breach in the anicut. I found that the wudders and coolies had done a fair day's work, and that the fallen-in side will be removed and rough stone revetment put in at the bottom of the cut in a few days. The breadth will then be about fifteen yards at the top and six yards (exclusive of breadth of revetment) at the bottom.

4. *Wednesday the 23rd August* 1876.—This is a gazetted holiday. The marginally noted number of laborers were engaged on the works set opposite them. In the morning I went again to the anicut and set the wudders and coolies to work at the work mentioned in yesterday's diary. I remained with the laborers from 6-30 to 11-5 A.M. Both yesterday and to-day the sun has been rather trying; and probably an active Native subordinate on Rupees 50 with a little instruction might be able to do a good deal of the work which entails exposure for a long time to the sun. While I was at the work, the Range Officer, Mr. Hicken, came up. I asked him for some information as to the cost of repairs executed a year or two ago to the breach in the Pedda Cumbum Channel, with reference to which I addressed the marginally noted letters to Mr. Johnston. I also asked him for a rough sketch of the irrigation channels under Cumbum tank, so that I may be able to illustrate this week's report by it. By the aid of this sketch I hope to be able to show clearly how our arrangements to bring a new supply of water in the Katva Channel have been made; what branch channels have already been cleared, and what remain to be cleared. In the evening I went first to see what had been done to the anicut. I found that more of the fallen-in sides had been taken out, and a slope given to part of the sides. A greater slope is required;

Near the breach in the S. Anicut ...	78
Tota Channel	88
Total ...	166

Letters No. 285 of 9th August and No. 289 of 11th August.

and then the bottom of the cut must be deepened. A good day's work was done, considering the number of men employed. I then rode to the branch channels of the Pedda Cumbum Channel between the tank and the town. A good deal of useful work had been done to the branch channel called the Tota Kalva. Its banks have been strengthened and some leaks closed; much water, which would otherwise run to waste into the Gundlakamma, is now saved and made available for the villages depending on the Katva Kalva. One of the Reddys, who is dissatisfied with the anicut having been breached, is inclined, I am afraid, to be obstructive, and let his land lie waste when he might cultivate it. His conduct has been brought unfavorably to my notice before. I sent for him, and have had him spoken to seriously. I shall award suitable punishment if I find other means of making him amenable fail. I am anxious, however, to get on with as little punishment as possible.

Near the breach in the S. Anicut	108
Nakkalagandi	18
Tota Channel	12
Total ...	133

5. *Thursday the 24th August* 1876.—The marginally noted number of coolies were engaged on the works set opposite them. The subjoined statement shows the correspondence connected with sanitary matters which passed through the office to-day.

From	To	No.	Date.	Subject.
1	2	3	4	5
Assistant Engineer Special duty, Cumbum.	Head Assistant Collector, Cumbum.	[illegible]	22nd Aug. 1876.	Sending a Maistry, Chengalrayudu, with reference to H. A. C. letter, No. 306, of 18th August 1876.
Head Assistant Collector, Cumbum.	Assistant Engineer, Special duty, Cumbum.	313	Do. do.	Sending back the Maistry, stating that he meant to ask for permanent maistries of experience already doing duty under the Special Assistant Engineer, and that Chengalrayudu is not of that stamp.
Do.	Do.	314	Do. do.	Communicating copy of Tahsildar's Arzi No. 316, and suggesting that repairs to that portion of the Chinna Cumbum Channel bank which the Tahsildar opines is not in need of emergent repairs, be put off to be done in the usual way.

In the morning I went to set the laborers to work at the anicut; the sloping of the sides will, I hope, be finished to-day; then deepening and revetting the bottom will be all remaining to be done. After setting the men to work, I rode towards the work going on to the Nakkalagandi Channel. On my way I met Mr. Johnston who has received instructions, he tells me, to measure up the work, the completion of which is reported in my diary of the 26th July 1876. He asked me to give him an idea of what it had cost; but I said his estimate of the cost would be more valuable if arrived at independently. I hope to hear what his

estimate is in a few days. I have been very sorry to be obliged to send away people who have come in, in hopes of getting work, from villages thirty miles off. I feel this more especially as, on going to the Subsidiary Jail (which can only hold, properly speaking, six prisoners) I found thirty-four prisoners, twenty-six of whom are accused of stealing grain. They say they have been driven to this by the prevailing scarcity. One prisoner died the other day from cholera. The Jail was similarly overcrowded then. I found that some work of closing breaches in the Nakkalagandi Channel had been stopped as turf could not be cut until moistened. I set some wudders to work in widening the end of this channel; but, as work was begun late, I ordered quarter of their cooly to be deducted. In the evening, after office, I went to see how the work of sloping the sides of the anicut had been going on. I think more might have been done considering the number of laborers, and I shall try to get this finished off at once. If the sides had not been sloped off and the cut deepened, the job would have been but a slovenly one. I staid with the laborers until it was too dark to work.

Near the breach in the Anicut	110
Tota Channel	25
Nakkalagandi Channel	110
Total ...	245

6. *Friday the 25th August* 1876. The marginally noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence connected with sanitary work which passed through the office to-day:—

From	To	No.	Date.	Subject.
1	2	3	4	5
Assistant Engineer Special duty, Cumbum.	Head Assistant Collector.	19	24th August 1876.	Stating, with reference to his letter, No. 16, of 14th instant, that Field 5 alone of Porumamillapalli will be sufficient for digging earth.
Do.	Do.	20	Do. do.	Forwarding a receipt book for signature and return to the Cumbum Range office direct.
Do.	Do.	,,	25th do.	Copy of his report for week ending 19th August 1876.
Acting Collector, Kurnool.	Do.	G.O. 1370.	1st August 1876, (Financial Dept.)	Issuing instructions for completing swamp drainage, and for piercing the masonry anicut by blasting, and sanctioning an additional temporary clerk for the Head Assistant Collector's office.
Cumbum Tahsildar.	Do.	324	24th August 1876.	Submitting amended nomination lists of Nirkatties.

In the morning I went first at 6-15 A.M. to the anicut and set the laborers to work there. The sloping of the sides is nearly finished. I then rode over

first to the end of the Nakkalagandi Channel, north-east of the town. This is being widened and deepened by wudders. I propose to put a dam across the Pedda Cumbum Channel between its junction with this channel (the Nakkalagandi) and the place where the branch channels which now supply the Katva Kalva take off. This will be only practicable if I can get a full supply down the Nakkalagandi Channel, so as to irrigate by itself what is now irrigated by the Pedda Cumbum and Nakkalagandi Channels when joined. Besides deepening the lower part or end of the Nakkalagandi Channel, I am, in pursuance of this plan, having the leaks and breaches in the bank higher up, stopped and filled. After seeing the wudders at work at the lower end, and trying to make them exert themselves, I went off to the upper part of the channel, and saw the leaks and breaches being closed by the Reddy. This work is going on satisfactorily, and I expect it to be completed to-morrow. I observed that weeds had again commenced to grow somewhat luxuriantly in the Nakkalagandi Channel. Mr. Johnston, in his weekly report for the week ending the 19th August, (Copy received to-day) has noticed the regrowth of weeds in the channels. I have ordered each water-distributor or channel-man to be provided with tools to enable him to do something towards clearing out the weeds and silt. After seeing the work of closing the leaks, &c., in progress, I returned to the Seekrail Anicut. I find that, without continual visits work does not go on well. I got home again at 11 A.M. Cutting the anicut upon which so much cultivation used to depend, has alarmed some of the people extremely. No doubt some water is running through the breach now which would, under ordinary circumstances, have found its way down the Katva Channel, and been used for irrigation. By closing all breaches in the channels between the tank and the anicut I am reducing as much as possible the flow of water into the Gundlakamma through the breach. This is water which finds its way through leaks or water is taken in excess by ryots and allowed to run over their fields into the river bed. When orders are received to breach the anicut, the situation was not a very easy one to deal with; but I believe we have succeeded in impressing most of the officials here with a sense of the importance of unremitting exertions. The ryots are taking heart again, and, if we get rain soon so as to give the tank a fresh supply, I expect every thing will turn out well. Some little opposition to the new scheme of supplying water is still made in hopes that we may be thus induced to apply for orders to dam up the Gundlakamma again, and give the Katva Kalva its usual supply from the head.

I went again to the anicut at 2-30 P.M., as all the office clerks were busy copying and preparing work. Both sides of the breach have been straightened and sloped to the present water level. It remains to sink the cut below the present water level so as to drain the swamp more completely. Then a rough stone revetment will be put up at the bottom of the breach to prevent the sides from being cut away underneath and falling in again. On my way up to the work, I met a lot of water-distributors nominated by the Tahsildar, and sent them to the office with orders to procure certain information. As soon as this information was procured, I returned to office, and by 8-15 P.M. I had selected and fixed the limits of work for thirteen water-distributors (Nirkatties) to work on the Katva Kalva and its new source of supply. I intend to appoint fourteen or

G.O., No. 453, dated 31st March 1876, (Revenue Department).

fourteen Nirkatties, out of the thirty-four sanctioned in the marginally noted Order of Government for the Katva Kalva. I hope Government, in view of the exceptional difficulties in distributing water and the exceptional care required in economising it, rendered necessary by breaching the anicut, will allow the entertainment of the full strength of the water-distributing agency, or forty-eight Nirkatties, as recommended by the District Engineer and myself (*vide* the G.O., quoted above). The Collector did not say he considered forty-eight too many, but implied that he was not satisfied that so many were required. I can say now, from having gone over the channels oftener than perhaps any other European has done, that thirty-four Nirkatties will be quite insufficient, unless the work is to be neglected as hitherto. I beg, with reference to this subject, to enclose copies of my letters, Nos. 485 and 486, dated the 10th December 1874, to the Collector.

It will be seen that before the channels were allowed to get out of repair, the marginally noted establishment, continued in 1859 without sufficient grounds, was entertained. In anticipation of the orders of Government, I appointed a man by name Ramakam Chinnabbi, already mentioned by me as exceptionally well fitted for the work, to superintend the Nirkatties who will have to look after the Katva Kalva water-supply.

23 Nirkatties,
4 Watchmen,
14 Kattubadies,
12 Peons,
1 Daffadar, } Supervisors,
and 1 Peshkar to superintend.

Total 55 persons.

If Government are not disposed to exceed the provision already made for Nirkatties, I would propose that Rupees 12, out of the Rupees 42 now remaining monthly unexpended, but provided for Nirkatties under Cumbum tank, be paid to this man whom I have directed to superintend the Nirkatties. The remaining Rupees 30 might be spent in extra Nirkatties and one or two more Water Overseers. Perhaps, under ordinary circumstances, Rupees 10 would be sufficient pay for a Water Overseer; but, considering the exceptional difficulties which now exist and the special qualifications required, I think we may certainly give Rupees 12; and that Rupees 15 (the pay of the Cumbum Nuisance Overseer) would certainly not be too much. All the heads of villages concerned are anxious to have the man mentioned placed in charge of the Nirkatties. He is said to have distinguished himself on a former occasion when special arrangements had to be made to procure water. I have directed him to work as a volunteer until I receive orders on the subject of his appointment.

7. *Saturday the 26th August* 1876.—The marginally noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence with regard to sanitary work at Cumbum which passed through the office to-day:—

Nakkalagandi	66
Near the breach in the Anicut	60
Total ...	126

From	To	No.	Date.	Subject.
1	2	3	4	5
Assistant Engineer Special duty, Cumbum.	Head Assistant Collector.	22	25th August.	Explaining why he was unable to send a permanent Maistry.
Head Assistant Collector.	Special Assistant Engineer.	320	26th do.	Stating, in reply to the above, that he will get on with Condiah (Maistry) alone for the present.
Special Assistant Engineer.	Head Assistant Collector.	21	25th do.	Forwarding cheques, Nos. 51 and 52, for Rs. 1,000 each.
Head Assistant Collector.	Cumbum Tahsildar.	339	26th do.	Sending the above cheques with instructions to cash them and keep the money as usual with an account for expenditure.
Do.	Cumbum Range Officer.		Do. do.	Returning the Receipt Book received from the Special Assistant Engineer, duly signed.

In the morning I went first to s… the breach in the anicut. The black mud is being taken from botto… e sides, and when the depth has been made uniformly six and-a-half … revetment will be put in. The coolies were engaged in taking out … er obstructions washed down from the swamp. I next rode over … the N… agandi Channel. The wudders are deepening and widening the lo… r end of it, and the breaches and leaks are being stopped in the banks at the u… er end, so that a full supply may be carried down in future. Two culverts in th… own will probably have to be taken up and the water-way enlarged. After seeing this work in progress, I rode back to the anicut. The excavation along one side was nearly complete and will be soon ready to receive the stones. I got home at 11-30 A.M. The two cheques which Mr. Johnston sent me to-day for Rupees 1,000 each make, with what he has sent before, Rupees 7,200 altogether. Of this, Rupees 5,000 were sanctioned for part of the Pedda Cumbum Channel, the Na… alagandi Channel and the Katva Kalva. The remaining sum was, I infer, san… ioned for the Chinna Cumbum Channel. I believe the Committee wished m… o clear the Gundlakamma and Marlapati Channels from the money saved from the above allotment of Rupees 5,000. Besides this total sum of Rupees 7,200, of which about Rupees 2,522-7-4 have been spent up to date, I have drawn, on the strength of the Collector's letter, No. 625, of 4th July 1876, Rupees 500 for breaching the anicut and making the causeway. I expect to have to draw some more for this work. There is still a great clamour for employment. Some food-grains have risen 50 per cent. as compared with this time last year. The absence of rain stops work, and thus cuts off the means of subsistence of the large number of people who live by their daily earnings. Matters are very much worse now than they were when Government, in the marginally noted order, stated, with reference to one of the Taluqs (Markapur) of this division, that, "if it should

No. 1146, dated 22nd October 1873, (Revenue Department).

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appear that food is not procurable except … famine rates, Mr. Hope should at once act upon the authority given in G.O., … o. 1042, dated 26th September 1873, to open relief houses for those unable … labor." I shall appoint Nirkatties for the Pedda Cumbum Channel and hope to submit a statement showing their distribution with this report.

Mr. Johnston's letter, No. 22 (copy submitted herewith), will show that satisfactory maistries are not available at Cumbum now. During office hours I settled the distribution of Nirkatties along the Pedda Cumbum and Nakkalagandi Channels. I have allowed fifteen Nirkatties for the Katva Kalva, and the five channels which now supply it from the Pedda Cumbum Channel. Of these fifteen, eight are for the Katva Kalva proper, which is six and-a-half or seven miles long, and seven are for the branch channels, which are about the same length in the aggregate. The Nakkalagandi Channel and the Pedda Cumbum Channel which are, taken together, about seven miles long, have seven Nirkatties. I gave personal directions to the Nirkatties as to what they are to do to ensure the most being made of the water available. Each Nirkatty is now provided with a mamati to clear his channel, and to open and close the earth sluices or cuts at the side, &c. He has also a sickle to … t the weeds, rushes, &c., which are again beginning to grow in the channe… As it will be impossible to have the channels properly looked after, unless … e Nirkatties have huts built on the ranges of channel entrusted to them, I … ve ordered twelve huts, at a cost of Rupees 5 each, to be built for twelve out … he twenty-two ranges along the Pedda Cumbum and Katva Channels. In former … ays this plan was, I learn, adopted. These twelve huts are for the twelve range… in which constant supervision is most indispensable. I ought to have written to the Collector before now, with regard to the inadequacy of the water-distributin… establishment now sanctioned. My clerks, though at work late and early on Sundays and holidays as well as ordinary working days, are quite unable to copy more letters; but, when I have not to be out so much, I dare say I shall be able to write and copy myself, if necessary. The Tahsildar came to me about 5 P.M. with his Head Gumasta. They had both been, during the day, to Ravipad and the other villages dependent on the Katva Kalva. The Tahsildar gave an intelligent and hopeful account of cultivation prospects with reference to my Takid No. 356, dated 19th instant. Some land in which rice would have otherwise been sown will have to be sown with raggy, a crop which does not require so much water. I shall recommend a corresponding reduction of the charge for water. Some land on a very high level … can only be sown with dry crops. With reference to the Revenue Board's orders on this subject, I have told the people that, when the Revenue authorities admit their … bility to give water, they (the Ryots) will be charged dry assessment only, in ca… they grow dry crops. I do not expect this concession will have to be made with … gard to much land. I have ordered all the ranges of the Nirkatties to be mar… l at each end with stones or posts. When this has been done, I shall go and i… ect the ranges, with a view to final revision after the expiration of a month.

In the evening I went to see the work … revetting the breach in the anicut going on. One side will, I expect, be fin… ed to-morrow. The revetment is a yard broad and one and-a-half yards high.

The wudders, who should have be[illegible]st work on the other side, were absent on account of a marriage. The breach [illegible]l have been excavated (to a uniform depth of six and-a-half yards) and revetted by Wednesday next, or perhaps Tuesday, if the wudders return to work on Sunday. The width, as before stated, varies from six to fifteen yards. When this is completed, the floods following ordinary rains will not undermine the sides, and thus, to a great extent, render what we have done of no avail. There were nine deaths registered this week and nine in the corresponding week of last year—(*vide* copy of statement enclosed).

No. 103. *Read also the following Report on the progress of Sanitary work at Cumbum for the Week ending Saturday the 2nd September* 1876, *by H. R. FARMER, Esq., Acting Head Assistant Collector, Kurnool District*:—

Vide G.O., No. 1134, of 21st June 1876.

Sunday the 27th August 1876.—[illegible]e marginally noted number of laborers were engaged to-day on the works set opposite them. The subjoined statement shows the correspondence on sanitary matters which passed through the office to-day:—

Near the cut in the Sa[illegible]rail Anicut ...	72
Pedda Cumbum Channel	84
Nakkalagandi Channel	9
Total ...	[illegible]

From	To	No.	Date.	Subject.
1	2	3	4	5
Divisional Officer, Cumbum.	Head Assistant Collector.	42[illegible]	26th Aug. 1876.	Requesting that certain tools lent to Revenue Department be returned.

In the morning I went first to the anicut. Only part of the second gang of wudders was at work. The other gang will finish the stone revetment at their side to-day. The few men of the other gang (absent yesterday) were engaged in sinking the foundation for their side of the revetment. The absent members of the gang promised to come and finish their side of the revetment to-morrow. Then the part excavated from the foundations will have to be removed, and the waterway between the revetments deepened, and the work will be finished. After seeing this work, I rode over to the Nak[illegible]alagandi Channel. The wudders engaged on this work have not given me satis[illegible]ction. I had warned them before that I could not give them the ordinary full wages (4 Annas a-day), and this morning I repeated my determination, and to[illegible] them if they had not finished the job by night, they would be losers on accou[illegible] of their idleness. After seeing this work I walked up the Nakkalagandi Chann[illegible] along its course through the town. The Nirkatty of the range accompanied m[illegible] I found that private persons have almost choked up the channel altogether. [illegible]ey have closed it in, in some places with flags and earth; and narrowed it to [illegible]out a foot in width where it should be at least six feet wide. The consequen[illegible] that the houses higher up are flooded when a full supply of water is sent down th[illegible] channel. But the people have done worse than this. They have made latrines [illegible]ver the channel which they have covered in. I find that, with one Nuisance [illegible]Overseer and the ordinary establishment,

nuisances cannot be effectually stopped. If land is not to be left waste for want of water, and if famine symptoms are not thus to be aggravated, the unlawful obstructions and nuisances on this channel must be removed. I gave orders for this to be done; and hope, with regard to the obstructions, that if my procedure be thought summary, the circumstances of the case may be held to justify it. There is no time to be lost, and persons who unlawfully block up a channel used for drinking water, and then make a latrine over the channel, do not deserve to be dealt with, with exaggerated consideration. The Nuisance Overseer will, of course, be called to account. After seeing the work at the anicut again, I got home at 10-30 A.M. During the day I was engaged in trying to get last week's Progress Report faircopied. The Head Cleri[illegible] can do more than his share of work, but one of the other clerks got fever, and as the Range Officer wrote to say it was "utterly impracticable" to let me have the sketch of the ch[illegible]ls to enclose with the report, I had to put off despatching the report until Monday.

A large crocodile, ten feet long, was cau[illegible]t in the upper part of what used to be the swamp, and brought up for inspectio[illegible] I was with the wudders at the anicut during the afternoon and evening. [illegible]e stone revetment to one side was finished before dark.

2. *Monday the 28th August* 1876.—The [illegible]arginally noted number of laborers wer[illegible] engaged on the works set opposite ther[illegible] The subjoined statement shows the [illegible]rrespondence connected with sanitary work which passed through the offic[illegible] to-day:—

Near the cut in the Anicut	43
Nakkalagandi Channel	37
Total ...	80

From	To	No.		Date.	Subject.
1	2	3		4	5
Head Assistant Collector.	Divisional Officer, Cumbum.	326	28th	ug. 1876.	Requesting to submit a statement in a given form, to facilitate the collection of tools required to be returned.
Cumbum Tahsildar	Head Assistant Collector.	326	27th	do. ,,	Requesting to sanction Rs. 300 more for the work at the anicut, on the strength of Collector's letter, No. 625, of 4th July 1876.
Head Assistant Collector.	Cumbum Tahsildar	370	28th	lo. ,,	Giving sanction accordingly.
Collector, Kurnool	Head Assistant Collector.	853	24th	lo. ,,	Stating that he proposes to close all the burial and burning grounds within the limits of Cumbum, and that he has addressed the Government as to the course to be adopted to enforce the terms of the notice.
Cumbum Tahsildar	Head Assistant Collector.	327	27th	lo. ,,	Submitting a compensation statement for the land required by the Special Assistant Engineer to excavate earth.

In the morning I went first to set the wudders to work at the remaining side of the revetment. As it had rained in the night, they all seemed very lazy, and required a great deal of wakening. I got them to work at 6-30 A.M. Then, after seeing the body of a man said to have been murdered by his brother in the night, I went to see what the Overseer had done to the sketch to be enclosed in last week's report. No wonder it was utterly impracticable to finish the sketch yesterday. I found afterwards, on going to the Range Office, that it was only just begun at 12 o'clock to-day. I wonder the people don't see that when Government are anxious to have work pushed on, a little extra trouble might be taken; and that making insuperable difficulties when none exist, is not wise. After seeing the Overseer, I rode over to the Nakkalagandi Channel. The leaks have been almost all closed. A larger supply of water is now going down the channel than has gone down for years. I saw the wudders at work widening the channel near the place where I mentioned in yesterday's diary that nuisances are committed. After pointing out to the Reddy, Sirkatty, and Head Gumasta what remained to be done along the Nakkalagandi Channel, I went along the Pedda Cumbum Channel. This is now nearly complete. The leaks in the banks have been stopped; and we have a swift deep stream, unimpeded by weeds and firmly embanked. Its state now is a pleasant contrast to what it was a month ago. I see that the new scheme of supplying the Katva Kalva is likely to answer well; there has been no disappointment in any respect. I expect to get the new system to work without a hitch and to the satisfaction of all in ten days at the furthest. I arranged to give the wudders who had deepened the end (ninety and-a-half yards) of the Nakkalagandi Channel Rupees 11-5-3. This work was done by seventy-six men. They got 2 Annas a cubic yard for the rock and gravel excavated. If they had been paid by the day they would have got 2 Rupees more. I reached home again at 11-30 A.M.

In the evening I went again to the anicut. The wudders (one gang only to-day) had done a really good day's work. It is only now and then that they can be got to do this. The other gang of wudders received the balance (Rupees 70) due to them on account of the work taken by contract. On these occasions, the day is usually devoted to the consumption of hog's flesh, roasted whole, and without disembowelment, and many flagons of arrack. I was engaged in office again until dinner time, expediting the despatch of the last week's Progress Report. The Tahsildar reported in the arzi noted above that he had not enough money left (out of the Rupees 300 drawn for cutting the anicut and making the causeway) to pay the wudders, and asked for sanction to draw Rupees 300 more. Orders were given to draw the money. I do not think it will all be expended.

3. *Tuesday the* 29*th August* 1876.—The marginally noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence with reference to the special work at Cumbum which passed through the office to-day:—

Near the cut in the Anicut	103
Nakkalagandi Channel	45
Total ...	148

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector.	Special Assistant Engineer, Cumbum.	325	29th August 1876.	Requesting to send a plan and rough estimate for further draining the swamp in the Gundlakamma.

In the morning I went first to the anicut. The revetment of the second side is being finished, and the water-way between the two revetments deepened. It will all be finished to-day I think. If the drainage of the swamp is to be really completed as directed by Government, a cutting about 200 yards in length, three yards in breadth, and varying from three yards in depth at the end of the present cutting next the swamp, to zero at the bed of the Gundlakamma, will have to be made. With reference to the marginally noted G. O., No. 1449, dated 11th August 1876, (Financial Department); Proceedings of the Board of Revenue, No. 2083 of 16th August 1876. orders respecting a financial crisis, I do not consider it right to put this work in hand, without submitting a sketch of levels, &c., and a rough estimate of cost, for the orders of Government. Although there is now a running stream where the swamp used to be, this stream is running over slush three yards deep, and the slush at the sides will be kept damp and reeking until the proposed cutting is made, and the water thus let down to the level of its original bed. With reference this subject, letter No. 325, noted above, was addressed to the Special Assistant Engineer, and I hope he will be able to supply a sketch and estimates for submission with this week's report. The work of breaching the anicut, removing the fallen-in s, forming the road and revetting the sides of the breach has already taken more time and money than I expected. I regret I did not get an estimate of the probable cost from the Engineer Department. However, as no pains have been spared supervise the laborers employed, I hope money has not been needlessly expended. It is a relief to know that the work is over for the present. After seeing the work being brought towards a conclusion in the morning, I rode over to the Nalagandi Channel which is being widened in its course through the town. I succeeded, I think, in quieting the people who are inclined to object to its being touched, as they considered the channel almost as their own special property. This is not to be wondered at when the way in which they have been allowed to enclose it and cover it in, is remembered. This work too will, I hope, be finished this evening.

The Mogulla Channel (one of the new feeders of the Katva Kalva) requires to be widened still more and deepened. This is rendered necessary by the additional head of water which is now brought down the Nalagandi and Pedda Cumbum Channels on account of the breaches and leaks being closed. When the Mogulla Channel is enlarged, I shall be able to put across the Pedda Cumbum Channel just before it is joined by the Nakkalagandi Channel. There will then be water-way to take all the water of the Pedda Cumbum Channel, not used higher

1. Marlapati or Gatsu Channel.
2. Mogulla Channel.
3. Paridevi or Gadidela Bandam Channel.
4. Uyala Channel.
5. Chintamani Bandam Channel.

up for irrigation, into the Katva Kalva by the marginally noted five channels. (*Vide* sketch which accompanied last week's report). I found that some skin merchants washed their skins in that part of the Nakkalagandi Channel where it is concealed from view by houses and walls. I had these merchants sent for to the Taluq Cutcherry, and warned of the penalties they incurred. I do not anticipate a recurrence of their offending; but if they repeat the nuisance, they will be criminally dealt with. I had to send away without work some poor people who had come in eight miles in the hope of getting work. In the evening I went again to see the work at the anicut. During the time I had been absent. I found the wudders had not worked well; and some of them were absent when I arrived. I told them I would only give them half wages, or else they must come to-morrow and finish the work before I could recognize their claim to full wages for to-day. I then went off along the Katva Kalva, and inspected the first two feeders from the Pedda Cumbum Channel. These are called the Marlapati or Gatsu Channel and the Mogulla Channel (*vide* sketch sent with last report). A full supply was being carried along both channels. To secure a (Marlapati) joins the Katva Channel I had a branch excavated from the Marlapati Channel at Government expense, and allowed the ryots interested to excavate two others. Every thing is going well near the head of the channel. On going down further, I find that some fields at a point between the two channels mentioned above, have not been irrigated. This may be partly the fault of the ryots, some of whom seemed to me to prefer talking and complaining to trying to help themselves. They seem, however, to have some cause of complaint, and I have ordered a branch channel, called the Battuwani Bandam Channel to be cleared from where it leaves the Mogulla Channel to a point in the Katva Kalva just opposite the fields left waste, as it is alleged from want of water. This will, I hope, remove all cause of complaint.

4. *Wednesday the 30th August* 1876.—The marginally noted numbers of coolies were engaged on the works set

Pedda Cumbam Channel...	55
Battuwani Channel...	8
Total	63

opposite them. In the morning I went first to the anicut and saw the wudders (who have to finish the job before they get their full wages for yesterday) at work. The work was nearly done. I then went down along the Katva Channel from the head, along with the man whom I have appointed (pending the orders of Government) as a volunteer Water Overseer and the Taluq Head Gumasta. I took them right along the Battuwani Channel which requires to be cleared for the reasons mentioned in yesterday's diary. We followed this up until it joins the Mogulla Channel, and then followed this channel up to where it leaves the Pedda Cumbum Channel. Here I found the Nirkatty of this channel beat present at his post, and set him to work to cut some weeds from the bank with his sickle. I shall soon get the water-distributing establishment into working order, I hope. I then went across to the Nakkalagandi Channel, the widening of which through the town was completed yesterday. A few walls wrongly allowed to be constructed over the channel remain to be pulled down. I spoke to the owners about this. I have no doubt the whole way along the channel will be opened in a day or two.

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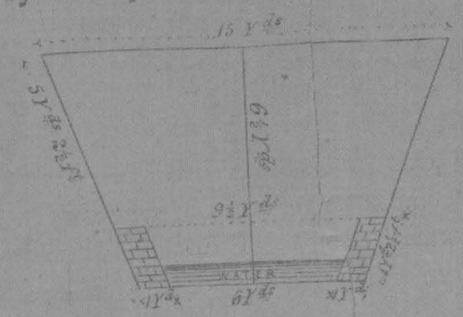
The volunteer Water Overseer reports that there is not a complaint now about scarcity of water lower down the Katva Kalva in the marginally noted villages which were expected to be left waste without water when the anicut was breached. His statement may be a little exaggerated; but no complaints have been made to me lately, and the people of these villages are so fully occupied now in cultivating their wet lands that they don't seem to care much for coming out as coolies. I shall visit these villages again, soon. The arrangements made to replace the regular supply of the Katva Kalva have been attended with more success than I could have hoped for, considering the lateness of the time when clearing of the channels was entrusted to me. I went to see the anicut again at 10 A.M., and, on getting home soon after, found that Mr. Johnston had come to my bungalow, and with reference to my letter, No. 325 of yesterday, said he should be able to let me have the plans and a rough estimate of the additional cutting necessary to drain the swamp completely. One gang of wudders came at about 11 A.M., and reported that they had finished their part of the breach. I shall go and see the work of this and the other gang before I allow their cooly to be paid. To show how far the cultivation of wet land was affected by breaching the Seekrail Anicut, I called for a comparative statement (to be founded as the monthly cultivation accounts), showing the amount of wet land cultivated up to and inclusive of August in 1875 and also in 1876. This statement just received shows the five marginally noted villages which are dependent for the supply of water on the Katva Channel, as well as the other ten villages irrigated by Cumbum Tank, up to the 22nd of August when the cultivation accounts are closed: 339·04 acres of land, assessed at Rupees 2,456-11-7, had been cultivated in these five villages in 1875, and 581·05 acres, assessed at Rupees 4,654,-2-2, in 1876. In the remaining ten villages there was a decrease of 370·84 acres in the area cultivated. In the evening I went to see the breach in the anicut. The work is now, I am glad to say, finished. I think there is no danger of the sides being undermined and falling in, unless there are exceptionally heavy floods. The present width of the cutting is shown by the subjoined rough cross section.

Ravipad.	Avurangabada.
Nadimpally.	Lanjacotta.

1. Chintalapalem.
2. Ravipad,
3. Nadimpally.
4. Avurangabada.
5. Lanjacotta.



The cost of this cutting, the revetment, and the temporary road, 366 yards 2 feet long, with the road dam (where stone had to be thrown in four or five feet deep after mud had been taken out) was Rupees 539-14-2. A good deal of hard and soft rock had to be cut through or broken up. A great quantity of slush held together for the most part by the roots of aquatic plants is being washed down the cutting and helps to silt up the water-way, which is obstructed to some extent by the causeway forty yards below the cut. A moderate flood would be very useful as it would sweep more of this noxious stuff away. After seeing the breach completed, I went to the other side of Cumbum to inspect some work of strengthening the embankments of the Nakkalagandi Channel which I had ordered the Cumbum Reddy to get done. The work had been done satisfactorily. I then went to the Taluq Cutcherry to see how the Tahsildar was getting on with regard to the orders about Nirkatties conveyed in Takid No. 371, dated 28th instant. I also took the opportunity of giving the Tahsildar some instructions and hints as to defects in channel conservancy which I had noticed. I saw the laborers paid. Those who worked at the anicut part of to-day got nothing for this work for the reasons given in yesterday's diary.

5. *Thursday the* 31*st August* 1876.—The marginally noted number of laborers were engaged on the works set opposite to them. The subjoined statement shows the correspondence connected with special work at Cumbum which passed through the office to-day:—

Battuwani and Mogulla Channels	46
Nakkalagandi Channel	7
Total ...	53

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector.	Special Assistant Engineer.	331	31st August 1876.	Bringing to notice the fact that some sluices on the Katva Kalva require to be lowered, and requesting to send one of his subordinates to him to-morrow, unless the Assistant Engineer himself happens to be in the neighbourhood.

After seeing that a considerable amount of vegetation and slush had been washed down and deposited in the breach at the anicut during the night, I went to see the laborers set to work at the Battuwani Channel, a branch of the Mogulla Channel which brings water from the Pedda Cumbum Channel to the Katva Channel. The coolies came rather late as they had a long distance to come. The Battuwani Kalva is 1,642 yards long and requires to be made one and-a-half foot deep and one yard wide. It will, I hope, be finished in a day or two. The only part of the Katva Channel from which complaints for want of water now come is the part opposite the place where this Battuwani Channel will fall into the Katva Channel. This is just where the boundary of the village (Chintalapalem)

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nearest the head of the channel, joins the 2nd village (Ravipad). I went over the fields, suffering from want of water, and ascertained the cause of the difficulty. At this part of the Katva Kalva there is sufficient water (brought in higher up by the Marlapati Channel) for the land which should be irrigated by the channel here. The sluices are masonry sluices, and the floors of the sluices have been constructed to suit irrigational requirements when the channel is supplied from the head. In other words, if the water in the channel were high, it would run through the sluices to the fields; but as the smallest supply is now near the head of the channel, it is found that it barely reaches the level of the floors of the sluices, and consequently there is no free flow of water on to the lands requiring it. The difficulty might be met in three ways:—

(1.) By increasing the head of water and thus raising its level above the floors of the sluices.

(2.) By lowering the floors of the sluices.

(3.) By allowing the ryots to put temporary dams across the channel just below the sluice, which dams would raise the water to the floor of the sluice, and should be removed, directly the lands depending on the sluice had been flooded. Until removed, the supply of ryots lower down would be cut off.

With regard to increasing the head of water, I am having the Battuwani Channel cleared for the purpose. Unfortunately, however, some of the sluices are higher up (or nearer the head of) the Katva Kalva, than the point where the Battuwani Channel joins it. There is no means of further increasing the head of water here. We have therefore to consider the 2nd and 3rd remedies. Both of these remedies are open to objection; the first, because the sluice may be injured by having its floor meddled with; and the 2nd, because nothing tends more inevitably both to cause the main channel to be silted up and to give cause of complaint to ryots lower down that an unfair share of water has been taken, than the erection of these temporary dams. Major Hasted condemned them in the most unqualified terms. I am, therefore, in favor of the 2nd remedy, and, with a view to carrying it out, shall send an extract from this report to Mr. Johnston with a request that he will send one of his subordinates to help me, unless he happens to be in the neighbourhood himself.

After seeing this, and observing the necessity for a more effectual supervision of the Nirkatties, I went off to the Pedda Cumbum and Nakkalagandi Channels. As I expected, the work of closing the breaches has been, to a great extent, completed. Some more remains to be done, and I gave the necessary instructions about this. I can now ride along the raised bank of the Pedda Cumbum Channel. A month ago, this was a crumbling bank in some places, and a quagmire in others, along which it was difficult to walk. The Pedda Cumbum Channel and the Nakkalagandi Channel are both swiftly running streams, carrying, I should say, more than double the volume of water which they carried before they were cleared, and the banks repaired and strengthened. I got home by 11 A.M.

In the evening I went to see what the coolies had been doing to the Battuwani Channel (branch of the Mogulla Cannel). I found the channel almost finished, and when I reached the sluice where the Mogulla Channel branches off from the Pedda Cumbum Channel, I had a opening made to admit an extra

supply of water down the channel. I then rode to the Taluq Cutcherry. I found the Tahsildar had just written a circular Takid to the heads of villages under Cumbum Tank about the management of Nirkatties and the distribution of water. This Takid was read to me, and I had one or two slight additions made to it. I also gave orders to have each of the fifteen channel beats placed under the supervision of one of the taluq officials who should go and inspect it, without giving previous notice, about once a week. I gave a form in which this inspection report was to be made. It will do the taluq officials a great deal of good to have a little field work. Many of them degenerate into animated copying machines.

On reaching home at 8 o'clock, I found a demi-official letter from Mr. Johnston, enclosing the plan and estimate for the cutting to complete the swamp drainage. From the plan and estimate enclosed it will be seen that the estimated cost of the cutting (with stone revetment) is Rupees 317, and that of the culvert Rupees 175. (Total Rupees 492) Mr. Johnston, in his demi-official letter, remarks, with regard to the rates, that he does not know much about Cumbum rates, but thinks those allowed "are, rather high for the culvert than otherwise." The cutting is eight and-a-half feet deep; where it will receive the water from the swamp, it is to be 200 yards long, 6 feet broad at the bottom. I beg to solicit orders as to whether the work should be put in hand. Mr. Johnston was good enough to draw this plan and make the estimate himself. I learn from him that both the men whom I mentioned in my diary of the 5th of August have been dismissed. The Accountant, Arumai Moodelly, gazetted to Cumbum at page 1042 of the *Fort St. George Gazette* dated the 25th July 1876 (*vide* diary of the 29th of July 1876,) has managed to get out of coming here, Mr. Johnston says.

6. *Friday the* 1*st September* —The marginally noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence with reference to the special work at Cumbum which passed through the office to-day:—

Chinna Cumbum Channel	28
Battuwani Channel	19
Total	47

From	To		Date.	Subject.
1	2		4	5
Cumbum Tahsildar.	Head Assistant Collector.		31st Aug. 1876	Recommeding P. Ramudu for the post of Nirkatty vacant on the Marlapati Channel.
Do.	Do.	3	1st Sept. ,,	Submitting a revised Nomination Roll of Nirkatties for the Chinna Cumbum Channel.
Head Assistant Collector.	Cumbum Tahsildar.	3	Do. do.	Issuing additional instructions with regard to the prevention of the flow of surplus water into the Katva Kalva over its banks.
Do.	Do.	3	Do. do.	Sanctioning a compensation of Rs. 16 for the 16 cents of land of Porumamillapalli required by the Special Assistant Engineer for excavating earth.

In the morning I went first to see the water falling into the Katva Channel by the cross channel (Battuwani Channel) opened yesterday. I found a large supply falling into the Katva Channel, and I believe the water for fields below this point will be sufficient. On my way to this point I observed that some people had stopped, by wicker-work frames, the water of the Marlapati Channel, so as to prevent its finding its way into the Katva Kalva. As this water was for land newly taken up since the channel has been repaired and previously waste for many years, I gave orders to the Sheristadar that the water should not be intercepted, if, by so doing, the people who previously held lands under the Katva Channel have their supply made insufficient. Soon after passing the Mogulla Channel, Mr. Johnston came along the channel, and I turned back with him, and inspected the sluices with reference to which the extract from yesterday's diary was sent to Mr. Johnston with my letter No. 331. We arranged that where the present extra supply was found insufficient, the floors of the sluices should be lowered, or palmyra sluices put in under the adjoining bank, under the superintendence of a Maistry, whom Mr. Johnston promised to send to-morrow. Mr. Johnston's co-operation in matters of this sort is extremely valuable, and I am very thankful for it. We then walked all along the Katva Channel, and observed some cases in which my orders forbidding the flow of surplus water down the banks of the Katva Channel have been disregarded. This shows the necessity for the extra supervision ordered yesterday when I went to the Taluq Cutcherry. The volunteer Water Overseer, who was present with the Nirkatties and some of the village officers, explained that, if a branch of the Chintamani Bandam Channel were opened, he could obviate the flow of water over the fields down the banks of the channels. With reference to the matters requiring attention, I wrote Takid No. 379 (English draft enclosed) to the Tahsildar.

Takid No. 358, of 22nd August 187[illegible]

Takid No. 381 was also issued to the Tahsildar, directing him (for form's sake) to make over to Mr. Johnston the piece of land (16 cents of an acre in extent) required by that officer for excavating turf for stopping the leaks in the Chinna Cumbum Channel. Mr. Johnston told me, when I saw him on the 30th August, that he had already taken the turf, as the work he had done would have been rendered useless, if he had waited until the formal sanction of Government could have been obtained as required by the marginally noted order.

G.O., No. 2622, dated 12th October 1868, (Revenue Department.)

In the evening I was kept in office late, in order to sign and hand over to the Taluq Head Gumasta, Takid No. 379, dated to-day. After the orders contained in this takid have been attended to, the arrangements for irrigating the lands dependent on the Katva Channel will be, I believe, complete. The volunteer Water Overseer was present, and I gave him directions to have the laborers for the work to be commenced in the morning, ready. The Maistry sent back to Mr. Johnston when the breaching of the anicut was finished, was sent back by Mr. Johnston as requested, to advise with the Tahsildar about procuring a supply of water for the land, which it is found difficult to irrigate with only the present small supply of water near the head of the channel.

Old Chintanitni Bandam	73	7. *Saturday the 2nd September* 1876.—The marginally noted number of laborers were engaged on the works set opposite them.
Tota Channel	44	
Total ...	117	

The subjoined statement shows the correspondence with reference to special work at Cumbum which passed through the office to-day.

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector.	Special Assistant Engineer.	337	2nd Sept. 1876.	Enclosing an extract from his to-day's diary, and requesting to take steps to complete emergent repairs to the Chinna Cumbum Channel as early as possible.
Do.	Cumbum Tahsildar.	384	Do. do.	Appointing P. Ramudu recommended to the post of Nirkaktty, vacant on the Marlapati Channel.

A fact which seemed to me rather paradoxical has attracted my attention lately. As mentioned in previous reports, much of the wet land in the villages towards the ends of the Katva Channel and Chinna Cumbum Channel has been waste, because water was unavailable on account of the channels being choked up and the banks leaking.

Villages.	Waste in Fasli 1285.		Taken up in Fasli 1286.	
	Extent.	Assessment.	Extent.	Assessment.
	A. C.	Rs. A. P.	A. C.	Rs. A. P.
1. Durga under Chinna Cumbum Channel.	68 58	802 13 6	0 89	7 6 2
2. Lanjacotta under Katva Kalva.	131 10	1,312 7 10	58 22	595 3 2

In the margin the waste is shown for the two villages most affected under (1) the Katva Kalva, and (2). the Chinna Cumbum Channel. The amount of land taken up for cultivation this year and which had previously been waste is also shown. The land, thus newly taken up, has been taken up solely on account of improved facilities for irrigation brought about by repairs to the channel.

Now it seemed to me to require explanation why land under the Katva Kalva, the regular supply of which has been completely cut off, was sought for and taken up for cultivation, while land under the Chinna Cumbum Channel which has been

1876) remains waste as no one is willing to take it up. I was also at a loss to account for the quantity of water in the Gundlakamma after all that had been done to stop leaks along the Pedda Cumbum, Nakkalagandi, and Marlapati Channels. I went up to see how the work to the Chinna Cumbum Channel had been going on. The bank seems to be formed of reddish earth mixed with gravel and stones and consequently porous. Water first percolates through this; and then small leaks being neglected, one or two good sized apertures where a great quantity of water escaped, were formed. Mr. Johnston had a trench, about five feet deep apparently and nearly a yard broad, dug lengthwise along this bank. This has been filled up for about 130 or 140 yards to within a foot of the top with moist black earth, upon some of which grass was growing. This, when well stamped down, will, it is believed, be impervious to water. About fifty or sixty yards of this trench are still unfilled; and the place where the greatest quantity of water escapes, instead of having been closed, has had the passage for the water opened. The consequence is that a greater quantity of water appears to be running to waste now, than was running to waste when I wrote to Mr. Johnston about the emergency of the repairs twenty-four days ago in my letter, No. 285 dated 9th August 1876. There was no one at work. I inquired from a wudder the reason of this. He said that the contractor had not paid them properly, so they had left off work. I inquired about contractors in my letter No. 240, of the 25th of June, because I knew the way in which laborers had been disappointed and disgusted by the treatment received from some of these men. Labor was perhaps never more easy to get than now, and on no work could labor be more profitably employed than in closing this breach. When we can get labor so easily, and when the laborer is so well worthy of his hire, it is a great pity to see the means of preventing famine allowed to run waste, while hungry laborers are clamouring for work. The present contractor is a well-meaning though a grasping man with but little experience. He is an old sepoy who would do better if he knew how. I should be glad to see him encouraged if this could be done without disadvantage to Government interests and to cultivation prospects at this somewhat critical season.

I mentioned to Mr. Johnston's Overseer whom I met on his way to some other work that I could get five-sixths of the water now running to waste into the Gundlakamma stopped in one day, and that I could have got all the leaks when I wrote about them on the 9th of August practically stopped (so as to save five-sixths of what was running to waste) within five or six days. To do this, I should have probably had to encamp on the spot. The Overseer said he had only been in charge of the work for a few days. I learn from Mr. Johnston yesterday that he had not been to the work lately, and did not know exactly how far it had advanced.

The Contractor whom I sent for said he had offered the wudders payment by measurement, but had not been to the work at the Chinna Cumbum Channel to-day, as he had other work. I am afraid it is too late now to utilize the water for a rice crop. I regret I did not ask Mr. Johnston when I wrote first within what time he thought the work could be finished. Perhaps he expected to have Contractors or Overseers who would make, point, considering the interests at

stake, of seeing that no time was lost. I shall send an extract from to-day's diary to Mr. Johnston, and request to know when the flow of water through the breach in the bank can be stopped. I was anxious to remove from the minds of the ryots the impression that they could not depend on the Department of Public Works pushing through work emergently to save cultivation, and I have no doubt Mr. Johnston will show them that work can be pushed through when there is a real necessity for it.

After seeing this work I rode to the Katva Kalva, where the Tahsildar had gone with a maistry and the necessary laborers for the work ordered to save cultivation in my Takid No. 379, of yesterday. When I left him the conclusion we had arrived at was that a temporary dam to raise the water over the present floors of the sluices was the only expedient likely to be effectual. If the floors of the sluices are lowered, the water will be lowered below the level of the fields to be irrigated. I expect everything will be finished by this evening.

In the evening, after sending an extract from to-day's diary to Mr. Johnston with letter No. 337, and settling the ranges of channel under the Chinna Cumbum Channel for Nirkatties, I went again to inspect the upper part of the Katva Channel, where a scarcity of water is felt. It would appear that the Tahsildar formed the opinion that the only way to secure irrigation for the land in question is by permanently raising the level of the water near the head of the channel. This can only be effected by one or two temporary dams. As the interests of those lower down the channel are concerned, I had directed the Tahsildar, before deciding on this course, to give the ryots lower down the channel a hearing. He sent for these ryots to the Taluq Cutcherry, and action is meanwhile suspended. I shall see that no avoidable delay occurs. The Nirkatty system has so much fallen into disuse that I find it as difficult to get the men properly to work as if the system were quite new. The work of organization is going on surely, if perhaps a little slowly. Rules showing the different duties of Nirkatties are being drawn up. The Collector is reported to be expected in the part of the Markapur Taluq where famine is most felt. I hope he will be able to come to Cumbum.

It will be observed from the enclosed copy of weekly report of births and deaths that the number of deaths in the week ending 1st August 1876 is eleven against ten in the corresponding week of 1875. The number of deaths in August 1876 is forty-one, and exceeds that of August 1875 by four. The general belief seems to be that fever is decreasing and that new cases are rare.

Of the amount of Rupees 7,200 placed at my disposal by the Department of Public Works for repairs to the channels, &c., Rupees 2,647-3-1 have been expended up to date, and the balance in hand is Rupees 4,552-12-11; and of the Rupees 800 drawn for work at the cut in the Seekrail Anicut, under the strength of the Collector's letter, No. 625, of 4th July 1876, Rupees 539-14-2 have been spent, leaving a balance of Rupees 260-1-10. This can again be placed to the credit of Government if it is not decided to complete the swamp drainage according to the plan and estimate herewith submited.

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No. 104. *Read also the following Report on the Progress of Sanitary Work at Cumbum for the Week ending Saturday, the 9th September* 1876, *by H. R. FARMER, Esq., Acting Head Assistant Collector of Kurnool.*

Vide G.O., No. 1134, dated 21st June 1876.

Sunday, the 3rd September 1876.—The marginally-noted number of laborers were engaged in the works set opposite them. The subjoined statement shows the correspondence with reference to special work at Cumbum which passed through the office to-day:—

Tota Channel	49
Nakkalagandi Channel	4
Total ...	53

From	To	No.	Date.	Subject.
1	2	3	4	5
Cumbum Tahsildar.	Head Assistant Collector.	343	3rd Sept. 1876.	Requesting permission to raise two temporary dams across the Katva Channel.

In the morning I went to the part of the Katva Channel where the two last feeders (the Chintamani Bandam and Vadasi Channel) from the Pedda Cumbum Channel fall into it. In my Takid, No. 379, sent on Friday, I had ordered certain work to be done to both these channels. New mouths were to be opened to both channels, in the former case, to prevent the water from flowing over the fields and eroding the banks of the Katva Channel, and, in the latter, to avoid the great declivity in the present course and thus prevent the sides of channel being cut away and deposited in the form of silt in the Katva Channel. On going to the former channel I found the work had been satisfactorily finished, and, after settling the site of the hut of the Nirkatty who looks after this channel, I went across to the Vadasi Channel. The work of excavating the new bed was nearly finished. The Taluq Head Gumastah told me he had agreed to give the wudders 1 Rupee for every twelve cubic yards excavated. This is more than double what I consider the work worth. I spoke to Mr. Johnston, who agreed with me. To-morrow he is going to look after the water which is escaping from the Chinna Cumbum Channel (*vide* diary of the 2nd instant). I sent for the Tahsildar on my way back and spoke to him as to the exorbitant rate allowed for the Vadasi Channel, and told him that the work when complete would be worth about 2 Rupees. I also instructed the Tahsildar to insert two rules in the draft rules ordered to be submitted prescribing the duties of Nirkatties; one rule is to show the frequency of flooding allowed for each kind of crop, as, for instance, rice once in two days, sugar-cane once in eight days, and so on. The second rule is warning Nirkatties to report encroachments of adjacent land-holders inside the stones demarcating channels. I had noticed cases of such encroachment this morning. I further ordered the Tahsildar to appoint an intelligent peon to the special work of watch-

ing the Gundlakamma and reporting how water now running to waste might be saved. After giving the Tahsildar and the water-distributing establishment some further general instructions, I got home at about 10 A.M.

In paragraph 10 of my letter, No. 78, embodied in Government Proceedings, No. 1051, dated 9th June 1876, Financial Department, it is mentioned that the Revenue Board's orders were awaited on the subject of stopping or diminishing cultivation in the bed of Cumbum Tank. These orders (No. 2049, dated the 12th August 1876) were received to-day. With regard to this cultivation, the present Surgeon-General in his marginally-noted letter said that, in his opinion, "the safest policy would be to act upon the generally accepted sanitary principle that living vegetation purifies, and rotting vegetation taints, potable water." The way in which it was proposed to prevent cultivation was by imposing wet rates on these lands, which are now classed as dry and charged accordingly. The Board's orders are that the rule, stating that cultivation in tank-beds is to be discouraged by charging wet rates, is to be upheld. An exception may, however, be made in the case of cultivation, such as that carried on in the bed of Cumbum Tank. When the tank-bed is large, where the cultivation is distant from the bund, and where the cultivated part in the bed is only occasionally submerged, the Settlement Officer and the Collector may permit the cultivation. Some of the cultivation in Cumbum Tank-bed will come under the terms of the exception. It remains to be seen whether, upon a consideration of the case, the Collector and Settlement Officer will impose wet rates on the land cultivated in the bed of Cumbum Tank, so as to preclude the possibility of the drinking-water used by the people of Cumbum being tainted in this way, or whether, in the exercise of the discretion vested in them by the Board, they may permit the continuance of cultivation, on payment of dry rates in the tank-bed, considering the hardship to the cultivators (if wet rates are imposed) not to be counterbalanced by the possible benefit to people of Cumbum. The other references to the subject of the contamination of the tank water (pronounced by the Acting Chemical Examiner to be "unfit for use") will be found in paragraph 11 (*i*) of the Municipal Administration Report for 1874-75 (G.O., No. 610, dated 1st April 1876, Financial Department). From this it will be seen that the opinion of the Native Commissioners goes to confirm the conclusion arrived at by the Chemical Examiner. The Sanitary Commissioner, in paragraph 14 of his Inspection Notes on Cumbum (*vide* paragraph 548 of Sanitary Commissioner's Proceedings for November and December 1875) disposes of the question by stating that it "need not be discussed at present." I brought the matter, as it then stood, to the notice of the Collector for the information of the Special Committee, in the statement which accompanied my letter, No. 253, dated 26th July 1876 (copy submitted with report for week ending the 29th July 1876). I have heard nothing further on the subject since, or with regard to the suggestion that the water might be analyzed by a competent man on the spot. In the evening I merely went to see how far the slush and vegetable matter had been washed down the breach in the anicut. A great quantity had been deposited, and a great quantity was being washed down.

No. 1-A, dated 18th February 1876.

2. *Monday, the 4th September* 1876.—The marginally-noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence with reference to special work at Cumbum which passed through the office to-day:—

Nakkalagandi Channel	5
Tota Channel	76
Total ...	81

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector.	Collector	340	4th Oct. 1876 ...	Requesting instructions on certain points in connexion with undertaking certain sanitary works at Cumbum.
Cumbum Tahsildar.	Head Assistant Collector.	346	Do. do. ...	Submitting, for approval, rules prescribing the duties of Nirkatties.
Head Assistant Collector.	Cumbum Tahsildar.	392	Do. do. ...	Sanctioning the erection of two temporary dams across the Katva Channel.
Do. ...	Do. ...	393	Do. do. ...	Appointing Nirkatties for the Chinna Cumbum Channel.

In the morning I rode up to the tank bund and to the head of the Chinna Cumbum Channel. The breach with reference to which I wrote letter No. 337 to Mr. Johnston on Saturday had been effectually closed. I am very glad of this, and only wish it had been done sooner. On my way back I met Mr. Johnston and mentioned to him one or two points with regard to the work which I thought deserving of his attention. I took the channelmen (Nirkatties) of each channel range with me as I passed the range and showed them how to work. If their pay is increased to Rupees 5 (so as to make the posts worth trying to keep), I shall be able to get a lot of valuable work out of these men. I saw the wudders being taken by the Cumbum Reddy to repair the banks of one of the most important branch channels (the Tota Kalva) of the Pedda Cumbum Channel. On my way from the tank bund I spoke to the Talyari in special charge of one of the burying-grounds. He seems to be paying attention to his work, and to be getting bodies properly buried. I also found a Talyari, posted to prevent nuisances on the banks of the Marlapati Channel, on the alert. From this time I shall be able, I hope, to devote some time to the subjects of burial-grounds, water supply, drainage, cess pools, manure heaps, house-sites, washermen, disposal of rubbish, new latrines, ventilation, &c. With the current work of the office to keep out of arrears, it has been found impossible to devote anything like sufficient time or attention to these important subjects. When orders are received on the Special Committee's report, I hope to be able to spend all the time which I can spare from office in attending to the orders of Government as regards any special work which may be ordered, and with regard to which my services may be required. Mr. Johnston is hoping to receive orders soon as to the scheme which it is decided to adopt. As

I shall now, I hope, have time to attend to the miscellaneous sanitary works already mentioned in to-day's diary, I wrote letter No. 340 to the Collector (who is now in the division, I believe), asking for specific instructions as to what he wishes done and as to how far I am authorized to draw money from the Taluq Cutcherry. Compensation for sites for burial-grounds and manure heaps is the next subject to which attention ought to be turned. My clerks are unable to attend to all the work entailed in seeking compensation statements, &c.

After signing the takid (No. 392) to the Tahsildar about getting the temporary dams put up in the Katva Channel, I went to see what quantity of decayed vegetable matter was being washed down through the breach in the anicut by the Gundlakamma. The water is still as black and as much charged with decayed particles of roots of aquatic plants as ever. Probably it will continue so for some time. The higher part of the black mud in the old swamp is beginning to assume a somewhat firm consistency. That which is nearer the water is quite soft still. After looking at the black weeds and dirt being washed down over the place which it was proposed in last week's report to cut through, I returned to office to sign the order (No. 393) to the Tahsildar about the disposal of channel men (Nirkatties) along the Chinna Cumbum Channel. This takid is about the last I shall have to write in order to get the new system of distributing water fairly into working order. Until specific orders are received from the Collector in answer to my letter No. 340, written to-day (copy submitted herewith), or until Government direct the drainage of the swamp to be completed as proposed in last week's report, there will not be much to do except to see the branch channels cleared and expedite the completion of the compensation statement for lands to be taken up for burial-grounds, &c. I told the Head Clerk to write a yadast on the latter subject to the Tahsildar reminding him of my last takid on the subject. With regard to clearing the branch channels, I shall give the subject attention to-morrow or as soon as possible. The taluq treasuries and the Sub-Registrars' offices have to be examined before the end of the month. I do not think I shall be likely to be able to find a better time than the present for doing this. After orders are received on the subjects which have now been referred for the orders of superior authorities, it may be necessary for me to devote my whole spare time to sanitary work.

3. *Tuesday, the 5th September* 1876.—The marginally-noted number of laborers were engaged on the works set opposite them.

Tota Channel	93
Vadasi Channel	25
Total ...	118

Board's S. O. No. 283-1 (V of 1871).
G.O., No. 1623, dated 15th October 1866.

I was engaged from 6-30 A.M. to 2 P.M. in counting the money and stamps in the Cumbum Taluq Treasury and making the examination of the Sub-Registrar's office, for the half-year ending the 30th instant, in accordance with the marginally-noted Orders. I heard demi-officially from the Collector, who is in the Markapur Taluq, and does not seem to think the symptoms of famine so alarming as represented by the Tahsildar. If we have rain soon, there will be nothing worse than a difficulty in procuring sufficient food amongst those who live by their daily

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earnings. If rain does not come, relief works will fully meet the case. Grain is available, but the money to buy it with is wanting. In the evening I went to look at the work which had been done to the Tota Kalva, one of the largest branch channels of the Pedda Cumbum Channel. The bank of this channel on the side next the Gundlakamma was in a state of ruin. A very large quantity of water was thus allowed to run to waste. The ryots are now beginning to realize the great hardship and injustice to the people cultivating under the Katva Kalva, which result from allowing water to run to waste into the Gundlakamma. The work is being pushed on as quickly as it is reasonable to expect at this busy time of the year.

4. *Wednesday, the 6th September* 1876.—The marginally-noted number of coolies were engaged on the work set opposite them. The subjoined statement shows the correspondence with regard to special work which passed through the office to-day :—

Tota Channel	28

From	To	No.	Date.	Subject.
1	2	3	4	5
Special Assistant Engineer.	Head Assistant Collector.	...	5th Sept. 1876 ...	Copy of his report for the week ending 2nd September 1876.
Head Assistant Collector.	Cumbum Tahsildar.	395	6th do. ...	Issuing instructions as to the flow of water down the Chintamani Bandam and Vadasi Channels, and directing him to see and report the cause of complaints of Lanjacotta ryots that they have not sufficient water.

In the morning I went to inspect the work of putting up temporary dams near the head of the Katva Kalva to raise the water over the floors. The work will be finished by evening, I hope. The people of the villages* here are, like the people of Cumbum, great sufferers from fever and enlarged spleen. They are unable, or unwilling, to help themselves in an emergency like the people of Ravipad and other villages lower down. I propose to start for Markapur to examine the treasury this evening, and to be back again at Cumbum (unless the Collector orders me elsewhere) on Friday morning. One day will be sufficient to complete the work with reference to which I am going to Markapur. The work of the branch channels can be carried on in my absence by the Tahsildar and his subordinates. The system of distributing water is now fairly started. No more favorable time than the present is likely to be found before the end of the month for examining the Markapur Treasury.

* 1. Kazaratgudem.
2. Kagitalagudem.
3. Chintalapalem.

In the evening, after issuing Takid No. 395 noted above to the Tahsildar about regulating the supply of water and preventing persons near the head of the

Pedda Cumbum Channel from taking more than their fair share of water, I set out at 4-30 P.M. for Markapur. In passing the Taluq Cutcherry I sent for the Tahsildar and gave him instructions for his guidance with regard to the special work during the day (Thursday) when I shall be absent from Cumbum. While stopping at the Taluq Cutcherry a copy of Mr. Johnston's weekly report for the week ending the 2nd September was handed to me. From this report it will be seen that even for the small work which Mr. Johnston has, up to this time, taken in hand, the men, in the way of contractors and subordinates at his disposal, are hardly equal to the work. When the plans and estimates for the large works are sanctioned, I hope arrangements will be made to have reliable contractors and smart subordinates on the spot. Two or three of the new arrivals are, I believe, smart men. Depending on any one who can be picked up at Cumbum, is indeed depending on a broken reed. With regard to the ryots having stopped the water as mentioned by Mr. Johnston, I would observe that, when the Chinna Cumbum Channel was being cleared under my orders from the 29th of July to the 4th of August 1876, the water was necessarily shut off. This I thought Mr. Johnston knew; and also that my letter, No. 285, dated 9th August 1876 (submitted with report for week ending 12th August 1876) left no room to doubt the necessity of economizing water, even if the ryots wished to commit the suicidal act of letting it run to waste. A little inquiry would, I think, show that Mr. Johnston was misinformed by one of his subordinates as far as the running to waste of water after the 4th of August is concerned. In Arzi No. 316 from the Cumbum Tahsildar sent to Mr. Johnston with my letter, No. 314, dated 24th August 1876, it is mentioned, in answer to my inquiry as to the backwardness of cultivation under the Chinna Cumbum Channel, that "some ryots wish to apply for lands after seeing whether water can flow to certain fields within the limits of Durga, and others to apply for lands next year, as it is now too late to prepare them for sowing, while there are some who wish to take up land for second crop cultivation this year." I asked Mr. Johnston the other day if he had completed the estimate showing the value of the work the completion of which was reported in my report for the week ending 29th July 1876. The survey and measurements have, I understand, been completed; but it will take some time "to take out the quantities." This means, I believe, to find the total number of cubic yards excavated of mud, clay, gravel, stone, &c., separately, and calculate, at a fixed rate for each kind of material, the total cost of mud, clay, &c., excavated. These totals added together will give the total cost.

5. *Thursday, the 7th September* 1876.—I was absent at Markapur (seventeen miles from Cumbum) during the day. After finishing the examination of the treasury and Sub-Registrar's office at 11-15 A.M. I went over to the Collector's tent. The Collector had arrived at about 9 A.M. I reported what I had done at Cumbum to the Collector, and he is coming to Cumbum on Saturday, and intends to leave again on Monday. I wish he could stay longer. I gather from the Collector that the symptoms he observes are premonitory of scarcity and eventually famine, if we have no rain. When the Collector has seen Cumbum I shall ask for orders as to whether I should go out and report with reference to the difficulty of procuring the means of subsistence which is said to exist, and to be

the cause of the exceptionally great number of thefts of grain, sheep, &c., now being reported by the Police. While I was with the Collector, my letter, No. 340, dated 4th September, requesting orders about latrines and other special sanitary works, was handed to him. Orders will, no doubt, be passed soon. If I am not ordered to take this work in hand at once I think the interests of the division require that I should be out to see for myself what there may be in the reports of impending famine.

6. *Friday, the 8th September* 1876.—The subjoined statement shows the correspondence on sanitary matters which passed through the office to-day:—

From	To	No.	Date.	Subject.
1	2	3	4	5.
Cumbum Tahsildar.	Head Assistant Collector.	349	8th Sept. 1876 ...	Requesting sanction for Rupees 30 for six sheds on the Chinna Cumbum Channel at Rupees 5 for each.
Do. ...	Do. ...	350	do. ...	Submitting a list of the beats of Nirkatties.
				Suggesting what concessions will have to be made for ryots under the Katva Kalva who raise garden or dry crops on their lands for want of water.
Collector, Kurnool.	Do. ...	...	do. ...	Communicating copy of G.O., No. 1570, of 31st August 1876.
Head Assistant Collector.	Surgeon A. N. R. Harrison.	345	8 do. ...	Forwarding an extract from the said Government Order and requesting to prepare, ere leaving Cumbum, a report similar to the one made by Dr. Anderson in 1873 on fever at Kurnool.
Do. ...	Collector, Kurnool.	348	do. ...	Submitting copy of an English draft takid to Cumbum Tahsildar, and requesting to obtain sanction of authorities to grant the concessions therein mentioned.

On returning through Cumbum I sent for the Tahsildar who, I found, was at work (7-30 A.M.) in office. He reports that some people are wrongfully taking more than their share of water. I hope impressed the Tahsildar with the conviction that I was determined to stop this and to hold him responsible for using all the means at his disposal to prevent waste of water. I am in hopes of hearing soon that Government have been pleased to sanction the strengthening of our water-distributing agency, as requested in my diary for Friday, the 25th of August 1876. The want of additional hands and efficient supervision is sadly felt

now. On reaching home at 8 A.M. I found a copy of the Government Order on my report for the week ending the 5th August 1876. I need not say how much I value the kind encouragement of Government. I shall communicate the substance of the Order to my subordinates concerned; and no pains shall be spared, when work is entrusted to us, to give effect as promptly and effectually as possible to every wish of the Government. In paragraph 2 of the Government Order it is stated that orders have been passed on the subject of the heavy assessment of the land. This is probably mentioned with reference to my diary of Thursday, the 3rd of August, in which I allude to having recommended to the Collector that the assessment on certain lands in Chinna Cumbum and six other villages should be reduced. No order with regard to the reduction of assessment in these seven villages has yet been communicated to me. It has, therefore, occurred to me as possible that Government may refer to the seven villages the reduction of the assessment of which was ordered in G.O., No. 1051, dated 9th June 1876. These seven villages are not the ones alluded to in my diary of the 3rd August, as will be seen from the copy (herewith submitted) of my letter, No. 249, dated 22nd July 1876, to the Collector on the subject. The villages the assessment of which was ordered to be reduced by Government in Order No. 1051 are the ones nearest to the tank. The supply of water to them is, therefore, pretty certain. The villages to which I recommended in my letter, No. 249, that the indulgence should be extended are the ones most distant from the tank, and in which Government have suffered the loss of many thousands of Rupees on account of water not being available. These villages would appear, on this ground, to deserve the indulgence more than the villages to which the indulgence has already been granted. These latter villages merely happened to be selected because it is in them only that the ryots living in Cumbum hold lands, and the report upon which the Government Order was pased was with special reference to Cumbum. I hope, therefore, that, if it be considered that the more remote villages have as strong a claim to the indulgence as the ones nearer the tank, the Director of Revenue Settlement may be allowed to introduce settlement rates in these seven villages (making fourteen in all) from and inclusive of the present fasli (1286). I may possibly be mistaken in supposing that Government Orders have not been passed with regard to the more remote seven villages. I have received no orders on this subject; but I was furnished, on application to the Collector, with a copy of G.O., No. 1547, dated 3rd July 1876, Financial Department, with regard to the seven villages nearer Cumbum. Although the Government Order received to-day is upon the report for the week ending the 5th August, I have not received as yet any Government Orders on the two preceding weekly reports (for the weeks ending 22nd and 29th July 1876). The orders alluded to* about the Dasabandam Channels are, I presume, those contained in paragraph 6 of the Government Order of 1st April 1876, No. 910, Financial Department. These orders are being acted upon; but the proposals in my diary of the 3rd August are made with a view to prevent the state of things (a temporary remedy for which has been ordered in G.O. No. 610) coming into existence. It seems extremely doubtful whether it will be possible to recover the cost of repairs from the Dasabandars, who are, or pretend to be, men of no substance. Mr. Johnston has received some tools, and expects some more competent subordinates, I believe. With reference to the orders of Government in which the services of Dr. Rogers-Harrison are again placed at the disposal of the Surgeon-General, I beg to point out that cholera is, I regret to say, again present in Cumbum, though only a few deaths have been reported. On the necessity for the services of an extra Dresser I beg to refer to the marginally-noted correspondence. The bad time for fever (October to May) is just approaching. I am sending Dr. Rogers-Harrison an extract from my diary of the 5th August together with a copy of G.O., No. 494, dated 14th May 1873 (Public Department), with a request that, with reference to paragraph 4 of G.O., No. 1570, dated 31st August 1876, he will, before leaving Cumbum, prepare a report such as that indicated by Government. Orders to this effect may probably be conveyed subsequently to Dr. Harrison departmentally. During the day the volunteer Water Overseer came and reported that water had been let down to the villages at the end of the Katva Kalva as directed in my Takid No. 395, but that there was too large a consumption of water in Cumbum and the villages higher up to admit of a sufficient supply being received by the villages lower down. I gave him instructions as to closing sluices higher up, and told him that, if it was found that the ryots at the head of the channel persisted in taking more than their fair share of water, we could give the water on alternate days only to the villages higher up.

Paragraph 28 of Collector's letter embodied in G.O., No. 1051, dated 9th June 1876 (Financial Department).

Paragraph 16 of Municipal Administration Report for 1874-75 printed with G.O., No. 610, of the 1st April 1876.

* In G.O., No. 1570, dated 31st August 1876.

During office I read Arzi Nos. 349 and 351 from the Cumbum Tahsildar on the subject of huts for Nikatties and system of regulating the distribution of water under the Pedda Cumbum and Katva Channels. I approved of the Tahsildar's proposal, but, as I have adopted them, I shall hold him strictly responsible for any avoidable waste of water which may occur. The Tahsildar recommends the charge of the highest garden rate of the village for lands which can, on account of deficiency of water, be cultivated with garden crops only. I wrote letter No. 348 to the Collector recommending that the concession be granted for reasons given in the English draft (copy herewith enclosed) of my order to the Tahsildar in answer to his Arzi No. 351. In the evening I went along the Katva Channel to see how far the temporary dams had been effectual in raising the water to the proper level for irrigating the fields. A good many of the fields have been irrigated. I think garden crops may be cultivated in most of them. I have got most of the village servants, at last, to reside in the villages where they hold appointments. Many of them deserve dismissal for persistent and wilful disobedience to the orders of the Collector directing that village servants should reside in the villages to which they stand appointed.

7. *Saturday, the 9th September* 1876.—The subjoined statement shows the correspondence with reference to the special work at Cumbum which passed through the office to-day:—

From	To	No.	Date.	Subject.
1	2	3.	4	5
Head Assistant Collector.	Cumbum Tahsildar.	399	9th Sept. 1876 ...	Sanctioning Rupees 30 for six huts on the Chinna Cumbum Channel.
Cumbum Tahsildar.	Head Assistant Collector.	358	8th Sept. 1876 ...	Proposing certain repairs to the Vuyyala Channel and suggesting that the 1st-Class Revenue Inspector of Markapur be transferred to Cumbum Firka as a temporary measure.
Do. ...	Do. ...	360	Do. do. ...	Requesting sanction for repairing certain minor channels.
Do. ...	Do. ...	364	Do. do. ...	Recommending two persons for two vacant Nirkattyships.
Head Assistant Collector.	Collector, Kurnool.	365	Do. do. ...	Requesting to look into the deficiency of water-supervising establishment while at Cumbum, and soliciting instructions as to whether he should go out into the division to see how far the report of scarcity of food is true.
Surgeon A. N. R. Harrison.	Head Assistant Collector.	40	9th do. ...	Stating, in reply to letter No. 345, that he will record some remarks bearing on the medical treatment of the various diseases, &c.

As I felt the want of a little rest, and expected the Collector this morning, I did not visit any work. The Collector arrived at about 8 o'clock, and before he leaves I hope to have the advantage of learning his wishes on the various subjects connected with the special work here. I brought to the Collector's notice the Cumbum Tahsildar's Arzis Nos. 349 and 358, dated 8th instant. The Collector was pleased to approve of the construction of six huts for Nirkatties along the Chinna Cumbum Channel at an aggregate cost of Rupees 30. He was also pleased to approve of the temporary exchange between the 1st-Class Revenue Inspectors of Cumbum and Markapur. The man to be transferred from Markapur will be better able to look after water distribution than any one available here now. The Collector further approved of the clearing of the remaining branch channels. The orders issued to the Tahsildar on the subject are enclosed. In the evening the Collector has signified his intention of inspecting the cut made in the Seekrail Anicut.

During the day orders (No. 399) were issued sanctioning Rupees 30 for huts along the Chinna Cumbum Channel. Letter No. 40 was received from Dr. Rogers-Harrison in reply to my letter, No. 345, suggesting, with reference to G.O., No. 1570, dated 31st August 1876, that he should prepare a report about the

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treatment of Cumbum fever on the model of Dr. Anderson's report for Kurnool, embodied in G.O., No. 494, dated 14th Mar 1873 (Public Department). It does not appear that Dr. Harrison considers any more than the routine entries in the hospital records called for. His reply is enclosed herewith. In the evening the Collector came over to office, and we went together first to see the place where the swamp formerly was and where the anicut had been breached. After seeing this and the new road we went down along the Katva Kalva from the head, and the Collector saw the new arrangement at work for supplying water to the lands under this part of the channel. I was pleased to find that not a single complaint was made to us. This was the first time I have been along this part of the channel without having complaints made. This is pretty fair evidence that our arrangements in putting up temporary dams have answered the purpose aimed at. The subject of the want of an increased water-distributing establishment as well as recommending a concession to ryots under the Katva Kalva who have to grow garden crops instead of rice crop was brought to the notice of the Collector in the letter noted in the statement above. I also asked for orders as to my going out in the division to report about the difficulty in obtaining means of subsistence said to be experienced by the laboring classes. But for the sanitary work at Cumbum, I should, of course, have done this before. I have not yet heard from Mr. Johnston in reply to my letter, No. 250, dated 22nd July, with regard to introducing a supply of spring water into Cumbum from the neighboring villages. I shall write again about this.

Thirteen deaths* were registered this week against seven in the corresponding week of last year (*vide* statement appended).

* Including two deaths from cholera.

The total amount received by me for expenditure is, as reported in last week's report, Rupees 8,000 (Rupees 7,200 + Rupees 800). Of this sum we have expended up to date Rupees 3,237-14-3, and a balance of Rupees 4,762-1-9 remains in hand. The matter requiring most earnest attention now is the saving of water from running to waste into the Gundlakamma. The provisions of Section 430, Indian Penal Code, will, if necessary, be put into force against those who wilfully waste water. I shall see about this to-morrow morning.

No. 105. *Read also the following Report on the Progress of Sanitary Work at Cumbum for the Week ending 16th September* 1876, *by H. R. FARMER, Esq., Acting Head Assistant Collector, Kurnool District.*

G.O., No. 11, dated 21st June 1876.

Sunday, 10*th September* 1876.—The marginally-noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence on sanitary matters which passed through the office to-day :—

Vuyyala Channel	16
Nakkalagandi Channel	7
Total ...	23

From	To	No	Date.	Subject.
1	2	3	4	5
Collector, Karnool	Head Assistant Collector.	..	10th Sept. 1876.	Giving permission, in anticipation of Government sanction, to appoint three Water Overseers and eight extra Nirkatties till further orders.
Cumbum Tahsildar	Do. ...	35	10th do. ...	Reporting, with reference to a petition presented by certain ryots of Durga, what work is needed to be done to the Chinna Cumbum Channel.
Cumbum Range Officer.	Do. ...	51	9th do. ...	Furnishing, in the prescribed form, the information required about tools lent by him to the Revenue Department.

In the morning I went out along the bank of the Gundlakamma between Seekrail Anicut and the tank. Though I had already, as reported in my diary of the 3rd September, given instruction that a peon should be specially deputed to watch against unnecessary waste of water, I found that the work had been neglected. I sent for the Tahsildar, and I think I made him understand my views about his responsibility. I should have dealt severely with him but for the fact that he has worked hard. With his present enfeebled establishment we must expect that the only way to get work done is to go and see it done. I inspected one of the grave-yards—the one which I showed Dr. Ross, and upon the state of which that officer commented unfavorably. It is in a decent state now, and the Talyari specially appointed to look after it was at his post. The Collector has spoken to me about the remission recommended by me of the difference between the wet and the old garden rates, when garden crops only can be grown, owing to deficiency of water under the Katva Channel. The more urgent question is that affecting the strengthening of our water-distributing establishment (*vide* diary for Friday, the 25th of August 1876). Upon this subject I had addressed letter No. 347 to the Collector on Saturday; and, with reference thereto, the Collector, in a letter dated to-day, was pleased to permit, in anticipation of sanction, the entertainment of three Water Overseers on a salary of Rupees 12 each and eight extra Nirkatties. The Collector also recorded his opinion on the margin of the letter that all the Nirkatties should get Rupees 5 a month each instead of Rupees 3, their present pay. Major Hasted was, I believe, of the same opinion. In fact, after seeing the amount of work these men have to do, the importance of the work, and the unremitting attention it requires—implying residence in a hut on the bank of the channel,—there can hardly be any doubt that a Nirkatty should get at least the same pay which a Road Talyari gets, that is to say, Rupees 5 a month (*vide* G.O., No. 707, dated 9th July 1873, Revenue Department).

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Three or four men have given up posts of Nirkatties within the last few days. Some others are only kept at work by the expectation of increased pay, and because any other work which would enable them to procure the means of subsistence is difficult to get. I hope to get orders soon sanctioning Rupees 5 pay each for the Nirkatties now engaged under Cumbum Tank. With regard to my letter, No. 340, dated 4th September, requesting specific orders about putting miscellaneous sanitary works in hand, I was personally directed by the Collector, with reference to paragraph 3 of G.O., No. 1343, dated 28th July 1876 (Financial Department), to submit approximate estimates of the cost of these miscellaneous sanitary works. This I shall do to-morrow, and submit the estimates after consulting Mr. Johnston, if I find it necessary. As regards paying compensation for land required for sites of burial and burning-grounds and for manure heaps, the Collector ordered me to await the result of reference to Government as to the propriety of proceeding under Section 518, Criminal Procedure Code, against persons who bury in places where burial has been prohibited by Government. As regards my going out into the division with reference to anticipated famine, or staying at Cumbum on the special work, the Collector was pleased to say that I could decide this myself on consideration of the relative magnitudes of the interests involved. If I had a good practical subordinate of active habits who could, in my absence, be depended on to carry out my instructions at Cumbum, I should not hesitate to go out into the villages where want is said to be most felt. I have thus been able to derive great advantage from the Collector's visit. The two points upon which I await orders are (1), as regards expenditure on famine relief works out in the division (if the necessity for them appears to me to exist), and (2), as regards increased pay to Nirkatties.

2. *Monday, the 11th September* 1876.—The subjoined statement shows the correspondence with regard to special work which passed through the office to-day:—

From	To	No.	Date.	Subject.
1	2	3	4	5
Cumbum Tahsildar	Head Assistant Collector.	366	11th Sept. 1876.	Reporting where in the Marlapati Channel water is running to waste and requesting sanction to execute the requisite repairs to stop such waste.
Head Assistant Collector.	Cumbum Tahsildar.	404	Do. do. ...	Directing to pay to the family of the deceased Talyari of Govindapuram the sum of Rs. 24 sanctioned by Government.
Do. ...	Do. ...	406	Do. do. ...	Sanctioning the repairs to the Chinna Cumbum Channel proposed in Tahsildar's Arzi No. 365.

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector.	Cumbum Tahsildar.	407	11th Sept. 1876.	Directing, in reply to Arzi No. 366, to see that no water runs to waste, and sanctioning certain repairs proposed to put a stop to such waste.
Do. ...	Do. ...	408	Do. do. ...	Directing to return to the Range Officer, Cumbum, the tools lent by him.
Do. ...	Do. ...	411	Do. do. ...	Intimating the permission granted by the Collector to entertain Water Overseers and extra Nirkatties, and directing the Tahsildar to recommend fit men for the posts.
Do. ...	Collector	352	Do. do. ...	Submitting approximate estimates for miscellaneous sanitary works at Cumbum, as directed.
Do. ...	Do. ...	353	Do. do. ...	Requesting that the Collector of Kistna be requested, by telegram, to send P. Acharyulu, Second Clerk, General Deputy Collector's office at Vinukonda, to take up the Special Clerk's post at Cumbum.
Collector, Kurnool	Head Assistan Collector.	G.O., No. 1620.	5th Sept. do. ...	Communicating copies of orders passed by Government on the Head Assistant Collector's reports for the weeks ending 12th and 19th August 1876.
Do. ...	Do. ...	G.O., No. 1621.	Do. do. ...	

The Collector left Cumbum for Nandial at 5-15 A.M. In the morning I went out to inquire as to what had been done to stop the waste of water which I pointed out to the Tahsildar yesterday morning. Something has been done, and one man is reported to deserve prosecution under Section 430, Indian Penal Code. He is an influential and rich man who must have known well the consequences of allowing water for irrigation to run to waste. I told the Tahsildar to have him prosecuted. I saw a good deal of water escaping from the sides of the Marlapati Channel through holes made in the mud banks by crabs. I gave orders for these and other leaks to be closed, and told the Reddy and Tahsildar I should come in a day or two and see how far their efforts to obviate waste of water had been successful. I then went to inspect the Pedda Cumbum Channel and Nakkalagandi Channel. I gave such orders as seemed called for about strengthening the banks and other matters affecting conservancy and distribution of water. On returning home I found manuscript copies of the marginally-noted Orders of Government on my reports for the weeks ending the 12th

No. 1620} dated 5th September 1876 (Financial Department).
,, 1621}

The kind appreciation of our services by Government will stimulate us to further exertion, and the knowledge that our actions have been favorably regarded by Government will afford us a moral support, otherwise unattainable, in any future undertakings which may be ordered. We are all, therefore, deeply grateful for the notice which Government have been pleased to take of our endeavours to do our duty. As regards the orders contained in paragraph 1 of G.O. No. 1620, and also paragraph 2 of G.O. No. 1621, letter No. 353 (copy enclosed) was sent to-day to the Collector. My experience of subordinates of active habits and moderate attainments has been but limited since I came to Cumbum. The only Head Clerks who have been under me have both died; the 3rd Clerk, who was a pretty good man, is also dead. I know of no one in the district who for Rupees 50 would be willing to come here and take up the special work. I therefore suggested that, if the Collector did not know a better arrangement, the Collector of Kistna should be asked to send the 2nd Clerk in the Vinukonda Deputy Collector's office. I have reason to believe he would be likely to suit. With reference to paragraph 6 of G.O. No. 1621, I shall, after seeing Mr. Johnston to-morrow, have measures taken to continue the swamp draining in accordance with the plans and estimates submitted with my report for the week ending 2nd September 1876. During the day the orders noted in the statement given above were issued to the Cumbum Tahsildar. These orders will, I hope, secure an effectual system being adopted to make the most of the water available, by saving it from running to waste, and by preventing any one from taking more than a fair share. At about 6 o'clock I walked down the Katva Channel from the head to where the fourth cross channel, that is, the Vuyyala Channel, falls into the Katva Channel. I am glad to say there is very little, if any, reason to complain of scarcity of water along this channel now. If we have rain to refill the tank, I expect good crops in all the five villages depending for water on the Katva Channel. I returned to office about 7-30 P.M. and signed the letter to the Collector about a special extra Clerk. I also signed the letter giving approximate estimate for the works required at Cumbum (paragraph 3, G.O., No. 1343, dated 28th July 1876, Financial Department). When I returned home at 8 o'clock I received Mr. Johnston's report for the week ending the 9th September 1876, and also received a letter from Mr. Johnston saying he would come over in the morning to see about commencing the work in hand for the further drainage of the Gundlakamma in accordance with the plan and estimates submitted with my report for the week ending 2nd September 1876. I had written to Mr. Johnston demi-officially about this, with reference to paragraph 6 of G.O., No. 1621, dated 5th September 1876. On receiving Mr. Johnston's reply I sent an order to the Tahsildar to be present in the morning with pegs, rope, &c., to mark out the work.

3. *Tuesday, the 12th September* 1876.—The marginally-noted number of

Marlapaty Channel 36

laborers were engaged on the work set opposite them. The subjoined statement shows the correspondence on sanitary matters which passed through the office to-day:—

From	To	No.	Date.	Subject.
1	2	3	4	5
Assistant Engineer.	Head Assistant Collector.	...	9th Sept. 1876....	Communicating copies of his report for weeks ending 26th August and 9th September 1876.
Head Assistant Collector.	Cumbum Tahsildar.	413	12th Do. ...	Directing to report once in every four days about village servants who still persist in disobeying Collector's order to the effect that they should live in villages to which they stand appointed.

Mr. Johnston and the Tahsilda came up in the morning, and we went to see the place where the further deepening of the bed of the Gundlakamma below the breach is to be carried out. Mr. Johnston put in some pegs to mark out the work. He is going to undertake it; but, as his Overseer has work for the rest of the week, Mr. Johnston does not seem to know exactly how long the work will take. I understood him to say about seven days after it is once fairly started. I asked Mr. Johnston if he had yet completed the estimates of the cost of the work done by me to the channels. He says he has completed them, and that they come to about Rupees 1,800. The sum entered in my diary of the 5th August is Rupees 1,894-2-4. When Mr. Johnston asked me, on the 24th August 1876, when he was measuring the Marlapati Channel, what sum I had actually expended, it was clear from what he said that he was unable to form any estimate upon which he would engage to do the work, and that he wished to know what it had actually cost to guide him in framing his estimates. Of course, all our subordinates knew what the work cost. Mr. Johnston says he found twenty-two miles of channel cleared, and allowed about Rupees 90 a mile. I would only wish to observe that Mr. Johnston says that he could not engage to do the work for the money he has estimated it to have cost me to do it. It is possible that, if the actual cost had been unknown, the estimate might have approached near to the District Engineer's estimate of Rupees 5,000, which was allowed for part of three of the channels out of the five which it is now said it may have cost Rupees 1,800 to clear. There is only one other point I would wish to draw attention to, and that is this. The District Engineer estimated that clearing the Kitva Channel, the Nakkalagandi Channel, and the Pedda Cumbum Channel to the place where it joins the Nakkalagandi Channel (that is, about half of it) would cost Rupees 5,000 (*vide* Proceedings of the Special Committee embodied in G.O., No. 1370, dated 1st August 1876). It was then promised that estimates would be ready for this work in a few days, but I never received any estimates. Now, this work was done (together with the second half of the Pedda Cumbum Channel) for Rupees 1,123-13-4 (*vide* my letter, No. 255, of the 26th July, copy submitted with report for week ending 29th July 1876). While the work was in progress it was seen by Major Hasted and

the District Engineer and Mr. Johnston. Anything which they suggested was done; and, for the proof of how the work was done, it is only necessary to state that, though the usual supply of one of these channels is now entirely cut off, the work of clearing the channels has so much improved them that one channel is now irrigating more land than both channels could irrigate before. In fact, if the channels had been cleared deeper, there would have been difficulty in raising the water to the height of the fields to be irrigated. As, however, Mr. Johnston's estimate does not seem to imply that there is not enough work to show for the money, perhaps it is superfluous to say any more on the subject.

The District Engineer, on the evening of the 12th of July, saw the work which I got done on the 11th and 12th for Rupees 44-6-0, and estimated its cost as Rupees 200. In Mr. Johnston's report for the week ending 9th September he mentions that an estimate has been submitted for clearing the Chinna Cumbum Channel of jungle. About half of this channel was cleared of jungle by the Revenue Department. In the other part the ryots requested that the trees on the bank of the channel might be allowed to remain as the roots strengthened the banks which are liable to be washed away in the rains by streams which run down from the hills here. I learn from Mr. Johnson that the Overseer says that there are nearly three miles of channel which he proposes to clear of trees. This is near the narrow end. The estimate is Rupees 600, and this is the sum allowed both for clearing gravel, silt, and stones from the whole length of channel as well as clearing trees from the half of the channel where it is broadest. I have asked Mr. Johnston to come with me and see the channel. Probably he will find the Overseer requires a little more looking after. Mr. Johnston has not seen this part of the channel yet.

The following is the approximate estimate of the cost of works which have been spoken of with reference to the unhealthy state of Cumbum :—

		Rs.
1.	New Irrigation Scheme (Mr. Johnston's estimate)...	1,00,000
2.	New bridge over Gundlakamma (Mr. Johnston's estimate) ...	30,000
3.	Temporary offices (Mr. Johnston's estimate)	50,000
4.	Surface drainage (Mr. Johnston's estimate)	26,000
5.	Water supply (Range Officer's estimate)	20,000
6.	Hospital (G.O., No. 1387, dated 4th August 1876, Financial Department)	11,531
7.	Ventilation, rough estimate by Collector and Head Assistant Collector	5,000
8.	Already spent by Head Assistant Collector and Engineer's Department, say	5,000
9.	Latrines	3,696
10.	Compensation for sites for manure heaps...	3,000
11.	Do. for new burial-ground sites	1,200
12.	Clearing house sites	1,000
13.	Filling in cesspools	600
14.	Levelling ways to and enclosing burial-grouds, manure heap sites, &c.	1,000
15.	Further lowering the bed of Gundlakamma	1,000
16.	Compensation for latrine sites	400
17.	Miscellaneous (slaughter-house, rubbish dpôts, &c.)	573
	Total...	2,60,000

A memorandum showing how the estimates hve been arrived at will be found amongst the enclosures. Mr. Johnston's rough estimate, which shows how

Rupees 26,000 for surface drainage is arrived at, is enclosed. If one-fourth or even one-eighth of this sum were sanctioned, I believe as much could be done for that sum in the way of surface drainage as is necessary. Mr. Johnston's proposal involves the expenditure of more than Rupees 3 per head of the population. Government have already been very liberal as regards Cumbum; but I think, even in view of the great sickness, that the expenditure on surface drainage of a quarter of a lakh of Rupees in a town with about 8000 inhabitants seems extravagant. Rough side channels without masonry work would, I think, do well enough. Mr. Johnston has not allowed for culverts. It will be observed from Mr. Johnston's diary for the week ending the 26th August (copy received to-day) that he is in favor of Major Hasted's original and complete scheme. This I am very glad of. The subject is referred to in my diary of the 5th August 1876. Mr. Johnston, in this last-mentioned diary, notices encroachments on channel banks by ryots. I have reported in my diary of the 3rd September the steps taken in the matter. In the evening I went to see how the work of stopping some leaks in the Marlapati Channel had been going on. I found that a good deal had been done; a trench about fifty yards long had been excavated along the bank and was being filled in with puddle. I then went along the Gundlakamma to see how far water had been prevented from running to waste. Some water is running to waste still; but a very considerable improvement is observable since I brought this matter to the Tahsildar's notice on Sunday. After this I went to the Taluq Cutcherry to inquire about work. All the office people, except the Tahsildar, were present. He was absent on account of a religious ceremony.

4. *Wednesday, the* 13*th September* 1876.—The marginally-noted number of coolies were engaged on the work set opposite them. The subjoined statement shows the correspondence with regard to the special work which passed through the office to-day:—

Marlapati Channel 30

From	To	No.	Date.	Subject.
1	2	3	4	5
Cumbum Tahsildar.	Head Assistant Collector.	370	13th Sept. 1876...	Reporting that the tools taken have already been returned to the Range Officer.
Do. ...	Do. ...	371	Do. do. ...	Submitting a compensation statement for land required for latrines, &c.
Head Assistant Collector.	Cumbum Tahsildar.	414	Do. do. ...	Appointing the persons recommended to the Nirkatty posts vacant.
Do. ...	Special Assistant Engineer.	358	Do. do. ...	Requesting to inform if wishes to undertake certain works specified at same rates upon which based his estimate of cost of the repairs executed to the channels by the Revenue Department.

In the morning I went along the Chinna Cumbum Channel from the tank bund to the end. This was chiefly with reference to a conversation I had with Mr. Johnston on Tuesday, from which I learnt that he had not been along this channel yet, but that his Overseer estimated the work (done by the Revenue Department) of clearing the whole length of the channel and removing brushwood and trees from about half the length of the channel to have cost the Revenue Department Rupees 600, and that this same Overseer proposed to charge Rs. 600 for clearing the trees and brushwood only along three miles of channel. I had intentionally refrained, for reasons given to Mr. Johnston in letter, No. 358, written to-day, from clearing the trees from this part of the channel. I think it would be a good plan if, before putting work in hand, Mr. Johnston were to let me know of the proposal and see the plans and estimates. This would enable me to report more satisfactorily about the progress of work at Cumbum. At present I only glean casually from Mr. Johnston's weekly reports what works have been going on.

Again, it would be well to have the opinion of the Revenue Department before attempting to cut off the supply of water for irrigation at this critical season, as proposed by Mr. Johnston in his letter No. 14, dated 10th August 1876. After the receipt of Mr. Johnston's reply to my letter No. 358 it will be possible to judge whether Mr. Johnston's estimates for work done by the Revenue Department are merely intended, as he proposes, approximate to the ascertained cost which was, of course, well known, or whether the estimate represents the cost for which Mr. Johnston is prepared to execute the same quantity of work. It will be noticed from my letter, No. 358, dated 1st September (copy submitted herewith), that the work commenced by Mr. Johnston along the Chinna Cumbum Channel has been at a stand-still for some time and that this has caused water to run to waste which might have been made available for land in want of it. This I have brought to Mr. Johnston's notice, and am glad to know he intends to encamp near the channel. It is personal supervision of this sort which alone can save money and time. I passed some draft rules for prescribing the duties of water distributers (Nirkatties) while at office. Of these rules, which may, in future, be added to, I append a copy. In the evening went half way down along the Katva Kalva. The new system of supply and distribution of water is working better than I could have hoped. The complaints I heard were chiefly from professional malcontents whom nothing would appease.

5. *Thursday, the* 14*th September* 1876.—The marginally-noted number of labourers were engaged on the work set opposite them. The subjoined statement shows the correspondence with reference to special work at Cumbum which passed through the office to-day:—

Marlapati Channel 58

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector	Assistant Engineer	355	14th Sept. 1876..	Requesting to be informed in what time the swamp drainage work sanctioned by Government could be done.
Do. ...	Do. ...	356	Do. do. ...	Requesting to be informed when he will be able to reply as to the practicability of bringing spring water into Cumbum.
Chief Secretary to Government.	Head Assistant Collector.	...	12th do. ...	Telegram directing to complete swamp drainage at the estimated cost.

In the morning, after inspecting the Marlapati Channel, which is now a swift stream nearly overflowing its banks, I was met by a lot of ryots who said they had been fined for taking more water than they wanted and letting it fall into the Gundlakamma. They said they wanted to be excused; but I pointed out the injustice and hardship they were causing to ryots lower down, who might lose their crops through the wastefulness for which they (the persons complaining) had been punished. I then met a lot of wudders on their way to the work of lowering the Gundlakamma to the sound bed, as directed in paragraph 6 of G.O., No. 1621, of the 5th September 1876. After this the Tahsildar came up, and I also received a telegram, dated the 12th instant, from Government directing me, with reference to my diary of the 31st August, to complete swamp drainage at estimated cost. After speaking to the Tahsildar about the prospects of the season and the special work, I went to where I expected to find the wudders engaged on the work ordered by Government. I found them leisurely returning with the maistry, who seemed to think it was rather a good joke that the wudders refused to work unless they got Rupees a cubic yard for excavation. This is really absurd. Probably Mr. Johnston will come and take steps himself to have the work put in hand when he receives my letter, No. 355, just written, and communicating to him the telegram from Government. It is no use losing time talking to wudders. They soon come to their senses when they see that business is meant.

I stayed in office late (until o'clock) to sign the fair copy of letter No. 358 to Mr. Johnston. If Mr. Johnston is ready to undertake the small amount of work which remains, I propose to go out into the division about the reported scarcity. I feel some doubt how Mr. Johnston may receive letters from me, asking him to do work, or impliedly objecting to work, which appears to me to be prejudicial to the cultivation prospects, or to work, which Mr. Johnston proposes, as in the case of the cutting down of trees along the lower part of the Chinna Cumbum Channel, to get done before he has seen the place. The orders with reference to our respective duties may be gathered to some extent from G.O., No. 1134, dated 21st June 1876. I am to join Mr. Johnston at Cumbum and give all the assistance in my power for the speedy prosecution of the work."

Now, if it was understood that I as Division Officer should stand to Mr. Johnston as the Head Revenue Officer of the district does to the District Engineer, we should both know how much was expected of each of us and how far our respective responsibility extended. I should then, acting locally for the Collector and subject to his revision, have a voice in minor matters and an opportunity of laying my views before the Collector or other officials who have to sign or countersign estimates, &c., at the same time as Mr. Johnston made his proposals.

As it is, I hear of nothing except casually, and am afraid Mr. Johnston may think my interference officious inasmuch as I have no explicit official instructions as to whether I am to be informed of intended work, so as to have a voice in matters in which a Revenue Officer's opinion may be considered useful. The only Public Works Code which I have been able to procure from the Collector seems to be one published in 1861. It was only in the course of a casual conversation with Mr. Johnston that I happened to learn from him that he proposed, on the representation of his Overseer, to clear three miles of the Chinna Cumbum Channel of trees. I had at first thought it better to allow the trees to remain along this part of the channel; but, on subsequent representation being made, I authorized the Tahsildar in takid No. 406 to remove these trees for about a mile on the lower part of the channel. Now, if I had had an opportunity of learning of what Mr. Johnston proposed to do, we should not both be taking steps to get the same work done at the same time. If there is no objection, I should be very glad to be supplied with a copy of the last edition of the Public Works Code, and to be told in what position I stand as regards Mr. Johnston and the special work on which he is engaged.

6. *Friday, the 15th September* 1876.—The marginally-noted number of laborers were engaged on the work set opposite them. The subjoined statement shows the correspondence with reference to special work at Cumbum which passed through the office to-day.

Marlapati Channel	6

From	To	No.	Date.	Subject.
1	2	3	4	5
Head Assistant Collector.	Cumbum Tahsildar.	419	15th Sept. 1876.	Directing to place one Nirkatty under each Water Overseer, and to hold in deposit Rupees 2 or 3 monthly from the pay of each Water Overseer for the purpose indicated in the Order.
Do. do.	Do. do.	421	Do. do.	Communicating to the Tahsildar the substance of G.O., No. 1570, of 31st August 1876.
Assistant Engineer.	Head Assistant Collector.	23	Do. do.	Stating that he cannot fix any time within which the swamp drainage work sanctioned by Government can be done.

As the subject of economy of water seems to be the most important one now, I went along the Marlapati Channel to see how the work of stopping the leaks had been going on. I am glad to say the work seems satisfactory; one part of the bank which was very leaky has been removed and replaced by puddle and turf. I find that no one has yet begun the work of completing the swamp drainage which Mr. Johnston pegged out on Tuesday. After signing takid No. 419 (entered in the statement given above), one of the Police Orderlies told me he had just heard a report that there was a fire in Cumbum. I got down to the town in about ten minutes, that is to say, at 4-40 P.M.; I found that about seventy-seven houses had been burned, and 223 people left houseless, and that two persons were said to be under the smoking ruins of one large house. The fire had begun at about 2-30 P.M., and had ceased before I was told of it. No official had sent me any intimation of the fact; neither the Tahsildar, Inspector of Police, nor Sheristadar were present, and people seemed not to be thinking of taking out the people who were under the ruins. I got hold of the Reddy, and set a lot of men to pour water on the ashes and burning wood in the house where the people were said to have been buried. Then I got some wudders to put on thick sandals and dig amongst the debris. When one man found it too hot, he was replaced by another man. The Tahsildar and Inspector of Police came at 5-30 P.M.; the Sheristadar just before 6 P.M. They said they had only left the fire just before I came. They could give no excuse for not having sent me word as soon as the fire broke out, nor for all leaving the place at the same time. The fact was no doubt that they were bewildered and unequal to the emergency. The Tahsildar, Inspector, and Sheristadar stood at a respectful distance off when it was expected that the corpses would be discovered. At about 6-15 P.M. we came upon the skull of a little girl. She was a child of about eleven years of age. We got out the trunk, and then found the body of her husband in a sitting posture in the corner of the house. Both probably died from suffication. The state the corpses were in would have made identification quite impossible. The sight was such as one would not wish to see again. There was one leg hanging on to the man's trunk, but merely the bare trunk of the girl in a state which was about as revolting as it could be. It is believed that Rupees 1,613 worth of property, including Rupees 363 worth of grain, was lost by the fire. The cries of the people, left at this time of scarcity without anything but the clothes on their back, were heart-rending. The two people (Mussulmen) who died lost their lives by attempting to save some property. It will be seen from G.O., No. 1076, dated 7th July 1875, that I was able to save some property in a fire last year. I had the same two peons who were rewarded in that Government Order with me to-day, and, though one of them is now but a weak man on account of fever, I believe I might have been able to do a good deal if the Tahsildar had only sent me word in time. Perhaps I should not have been able to do very much, for, even as it was, after being in the confined space for about an hour or two where the bodies were being dug out by eight or nine men in an atmosphere close and fetid at the best of times, it produced a feeling of faintness. Probably the climate is the cause of others being so unequal to occasions of this kind at Cumbum. If I had been able to do anything at all towards arresting the fire, the lives of the two persons who died would probably have been saved, for their

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house was the last which caught fire, and I should have had the roofs of the houses to the windward of this house pulled down before the fire reached it. The crowd was as helpless and disorganized as usual; there was only one man who worked well from the beginning in the cinders and smouldering debris of the house where the dead bodies were. His name is Bora Gundaiya. I have given him Rupees 5. I had framed rules with a view of reducing, as far as possible, the great losses which these fires cause. The statistics of fires given in the yearly administration reports of the Police show the great prevalence of fire. This is the third or fourth fire in the village of Cumbum itself since I have been here. I was present at one other, and saw Head Constable Ibrahim Saib, who was active in doing what he could to-day, doing his best at that fire too. It is an accident that the rules mentioned above were not published. They lay down the precautionary measures to be taken in providing buckets, long crooked sticks, ladders, &c., to put out fire, and also give the method in which persons are to set to work. They were at first incorporated in Part I of the compendium of village orders published in the *Kurnool District Gazette* (2nd June 1876). In the first draft of this Part I I had inserted the rules about accidental fires. As, however, accidental fires generally destroy property and not life, the Collector and I thought these rules would find a more appropriate place in another part of the compendium. When the special work at Cumbum is over, I should be very glad to have an opportunity of completing this compendium before going on furlough. The materials are all collected and merely require digestion, arrangement, and printing.

As the Revenue Board, in the marginally-noted Proceedings, have prescribed the adoption of the compendium in other districts, perhaps it might be thought desirable that it should not be left unfinished or its completion indefinitely postponed. At any rate the rules about accidental fires might be published without waiting for their appearance in their proper place in the compendium. This I ought to have suggested before this to the Collector. After reaching home at 7-30, I got Mr. Johnston's letter No. 23 about completing the drainage of the swamp. A copy is enclosed. Mr. Johnston is unable to give an approximate idea of when he expects to finish the work.

Miscellaneous No. 6692, dated 8th July 1876.

7. *Saturday, the 16th September* 1876.—The subjoined statement shows the correspondence with regard to special work which passed through the office to-day:—

From	To	No.	Date.	Subject.
1	2	3	4	5
District Engineer.	Head Assistant Collector.	114	13th Sept. 1876.	Placing at his disposal the services of Extra Overseer Mr. Peters.
Do. do.	Do. do.	115	Do. do.	Requesting to be informed if he will undertake the work of clearing the Chinna Cumbum Channel of jungle as per an enclosed estimate.

Work have been stopped pending a reply to the reference made to Mr. Johnston in letter, No. 358, of 13th instant, as to whether he could do the remaining work at the rates allowed by him in estimating the worth of the work done by the Revenue Department. I have asked for an answer as soon as possible. With reference to an allusion made in this letter, No. 358, to the proposal of the Engineer Department to clear three miles of channel for Rupees 600, it would appear from a letter (No. 115) received from the District Engineer to-day, that he received the estimate (Rupees 630 for clearing 2⅞ miles) on the 13th, and seems to think the work had better be done by the Revenue Department, for he asks if I am prepared to undertake it. After receiving a reply to my reference to Mr. Johnston on the subject, I shall answer the District Engineer. If economy and expedition are not secured by the work being taken up by the Revenue Department, I would not advocate its being transferred to us, for it is well known how unequal to the ordinary work of the taluq and division our weak establishments are.

I went with Mr. Johnston in the morning to the place where the work ordered by Government in their telegram of the 12th instant is to be carried on. Mr. Johnston made some arrangements about diverting the water to admit of work. Some coolies were also at work in trying whether the channel might be taken a more circuitous way to avoid rock. When I mentioned to Mr. Johnston that estimates provided for a straight course and for taking out the rock in the straight course, and that a straight course was, *ceteris paribus*, more desirable, he agreed with me. The regular work is, Mr. Johnston says, to be begun to-morrow; the coolies to-day were apparently trying to find an easier course for cutting. Mr. Johnston mentioned "a few weeks" to his Overseer as the time within which the work might be done. The cutting ought only to take a week he said. I should have gone into the town again this morning about the fire, but find feverish symptoms intensified probably by the atmosphere breathed last night in the house where the bodies were. I shall see what, if any, action in the way of relief ought to be recommended to Government with as little delay as possible. I received letter No. 114 from the District Engineer stating that, with reference to G.O., No. 42, dated 8th September, Public Works Department, he had placed the services of Extra Overseer Mr. Peters at my disposal. I hope to get an answer soon from Mr. Johnston as to the rates at which he can get work done, but I dare say there may be some difficulty in getting a direct answer to the question asked in my letter, No. 358, namely, whether Mr. Johnston is prepared to get work done for what he estimates the work done by the Revenue Department ought to have cost. Then even, if he were to say he could do this, he would probably, judging from the marginally-noted letters, not be prepared to fix any time within which the work would be completed. Perhaps the shortest way will be to write again if I do not get an answer in a day or two, and say that, in the absence of an answer to the query, I shall act on the assumption made when I first offered to take up the work, that I could get work done requiring professional skill done for about one quarter or one-third of what persons could under ordinary circumstances cost the Public Works Department.

No. 8 of 21st July 1876.
No. 23 of 15th September 1876.

Of course it is quite possible for the Public Works Department to get work done at the same rates if (1) by consulting the interest and convenience of the ryots, they secure their hearty co-operation to push work through, (2) if they are able personally to supervise work for five or six hours a-day, (3) if they pick out good workmen and send away the bad ones after personal observation, (4) if contractors are dispensed with, (5) if nothing be entrusted to a subordinate which that subordinate is unequal to, (6) if payments under reliable supervision are made (for work actually done) as often as the laborers wish, (7) if the subordinates make themselves acquainted with the local labor market, and so as to know where other men can be got from if men seem to try to be unreasonable.

In the evening I went first to see Mr. Johnston's work at the cutting near the anicut. About one quaater of the 200 yards to be excavated has been made ready for work to-morrow by diverting the Gundlamma. This is towards the lower end. About forty people were at work. The Overseer left the work at about mid-day, but a Maistry was with the laborers. I then went down to the town. There was a good deal of weeping to be heard amongst those who have lost every thing by the fire. A post-mortem examination was held on a body rather decomposed yesterday. The Vettians, whom I had to send for at 9 P.M., refused to bury the body unless they had a mascalchi, a rupee, and Government tools furnished. When the inams of these people were enfranchised, I think we could have hardly foreseen how the ends of justice may be defeated and the public health injured by persons refusing to carry in a body for post-mortem examination, and then declining to bury it except on their own terms. This is not the first instance of delay being made by bearers responsible to no one and dead bodies being left unattended to.

During the week thirteen persons died as compared with six persons in the corresponding week of last year. Out of these thirteen deaths six deaths (column 7 of enclosed statement) may be referred to the insanitary condition of the town. Out of the sum of Rupees 8,000 at my disposal Rupees 3,305-6-9 have been spent, leaving a balance of Rupees 4,694-9-3.

No. 106. *Read also the following report on the Progress of Sanitary Work at Cumbum for the Week ending Saturday, the 23rd September* 1876, *by H. R. FARMER, Esq., Acting Head Assistant Collector of Kurnool*:—

[G.O., No. 1134, dated 21st June 1876.]

Sunday, the 17th September 1876.—The marginally-noted number of laborers were engaged on the work set opposite them. The subjoined statement shows the correspondence with reference to the special work at Cumbum which passed through the office to-day:—

Pedda Cumbum Channel	37

From	To	No.	Date	Subject.
Chief Secretary to Government.	Head Assistant Collector, Cumbum.	1423	12th Sept. 1876.	Last copy of service message about the completion of swamp drainage.

In the morning and evening I went to see how the work under Mr. Johnston for the completion of the swamp drainage was going on. I found seven men at work in the morning, and, when I went at 5-15 in the evening, I found that Rupees 2-4-0 worth of work according to the maistry's estimate had been done during the day by twenty-one persons (men and women) who had been at work for different periods during the day, but had left off work then. The maistry's pay is Rupees 25, and the Overseer's Rupees 80. These, therefore, get daily Rupees 3-8-0 between them, and of course an arrangement by which two men receive Rupees 3-8-0 a-day for supervising persons who, working by task, only earn Rupees 2-4-0 is one which is not likely to be adopted permanently as an advantageous one. Mr. Johnston will, no doubt, put on extra laborers; for at the present rate it would take 218 days to spend the Rupees 492 which the work is estimated to cost. The charge for supervision seems high, and increases in proportion to the length of time occupied on the work. I noticed that the men at work included the slowest and most idle of the men I had had working under me. Two of these men I had absolutely refused to employ after seeing the way in which they idled and kept others idle. I hope they have profited by the experience gained by being thrown out of work. I learn from Mr. Johnston that, though in forwarding the estimate for Rupees 492 he mentioned that he considered the rates "ample," he has nevertheless been obliged to raise the rate for removing stone from Annas 4 a cubic yard to Annas 5-4, or more than thirty per cent. I have no doubt Mr. Johnston will see the advisability of putting on sixty or eighty good workmen, and then no doubt he will be able to form an idea of the time within which he will be able to finish the work. If the work is to take a month, not less than seventy or eighty laborers will be required daily.

2. *Monday, the 18th September* 1876.—The marginally-noted number of laborers were engaged on the work set opposite them.

Mariapiti Channel	40

The subjoined statement shows the correspondence on sanitary matters which passed through the office to-day:—

From	To	Number.	Date.	Subject.
1	2	3	4	5
Assistant Engineer.	Head Assistant Collector.	25	16th Sept. 1876.	Replying that he cannot commence the work of clearing jungle from the banks of the Chinna Cumbum Channel until his estimate is sanctioned by the District Engineer.
Head Assistant Collector.	Assistant Engineer.	362	18th do.	Stating, in reply to the above, that, unless the Special Assistant Engineer is ready to take up the work, he shall begin it himself.

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In the morning I went first to see how the irrigation under the Katva Kalva was getting on near the head. The new system is working satisfactorily. I then went to the cutting near the anicut. Seven wudders were at work at 8 A.M. More will no doubt come during the day. I hope some good workmen may be induced to come. The maistry came at 8 o'clock and said he had sent some wudders for tools. A little foresight would have saved this necessity. At 9-30 A.M. the Tahsildar came. He had been to inspect the middle part of the Katva Channel. If we have rain, there is nothing to fear. The Tahsildar met Mr. Johnston walking up along this channel to the Seekrail Anicut where the work is going on. The day was too hot to be out long. Some of the sufferers from the fire at Cumbum apparently require some small temporary relief. I saw them this morning, and ordered them to come to office in the afternoon. If I do not hear from Mr. Johnston to-morrow in reply to my letter No. 362 sent to-day, I shall undertake the further clearing of the brushwood from the Chinna Cambum Channel, and the other works mentioned in paragraph 9 of my letter No. 358 (copy submitted with last week's report). The reasons for giving Mr. Johnston the option of taking up the work are given in my letter No. 362, copy of which is herewith enclosed. In the evening I went to see the work at the cutting. The Maistry and Overseer estimated that about the same amount of work as yesterday (*i.e.*, Rupees 2-4-0 worth) had been done during the day. The wudders had left off work at 5-30 P.M., when I got to the place. The Overseer told me Mr. Johnston had told him to get 50 wudders. After this I went to inspect the Marlapati Channel. Some further leaks have to be stopped. I hope my letter No. 362 will be responded to by Mr. Johnston with an offer to do the proposed work within ten days for the money which the Revenue Department propose to allow. If Mr. Johnston goes and encamps near the work, I have no doubt he will be able to get it done for less than the estimate when the points noticed in my diary of the 16th instant, are attended to. In the other works which the Revenue Department estimated for beforehand, the works were done for considerably less than the estimates. The estimated and actual costs are given below:—

Works.	Estimated Cost.	Actual Cost.	Percentage of Saving.
	Rs. A. P.	Rs. A. P.	
Main Channels (*vide* memorandum printed with G.O., No. 1885, dated 25th July 1876), Public Works Department	2,610 5 0	1,534 11 10	
Branch Channels (*vide* Tahsildar's Arzi, No. 360, of 8th September 1876)	460 0 0	309 12 0	
Total ...	3,070 5 0	1,844 7 10	40

With an efficient establishment it would no doubt be possible for the Engineer Department to effect a similar saving of forty per cent. in the estimate for Rupees 727. Under existing circumstances it is unreasonable to expect Mr. Johnston, who is new to the place and has an establishment new to him and each other, to get work done as fast and cheap as the Revenue Department can.

Marlapati Channel	62
Vura Channel	71
Total ...	133

3. *Tuesday, the 19th September* 1876.—The marginally-noted number of laborers were engaged on the works set opposite them.

In the night a man was carried in from the hills badly stabbed. He is said to have killed the man who stabbed him. His recovery is doubtful. He has not been able to speak since he came in. The Police Inspector, I am glad to say, happened to be in the neighborhood, for I had sent him out to inquire about the death of a man whose spleen was said by the Surgeon to have been ruptured. He had had a quarrel with a relation.

If the extra Deputy Collector in the district were available for the routine work of this division, I should not feel that justice was not being done to the charge while special work is being pushed on. I believe the Nandial Deputy Collector is very anxious to continue his special and general work at the same time, whereas Deputy Collector Venkatachellam Pillay has been sent to relieve him of his general duties. If the services of Venkatachellam Pillay (who had charge of the division in my absence) were available here for magisterial work and such Revenue work as I could not manage, perhaps this might be found a suitable arrangement. I can get through all the work myself, but delay occurs, and, with reference to this delay and possible failure of justice in some cases, I merely throw out the suggestion of extra help without any wish to press it. In fact it would probably be better to let things go on as they are than give the charge of the division to a Deputy Collector. The Deputy Collector might have magisterial charge and such revenue work as I found myself unable to take up or obliged indefinitely to postpone.

After seeing the wounded man—one of a wild hill tribe who can hardly be considered subject to our law, as the Police cannot arrest them,—at the hospital, I went to see the Nakkalagandi Channel. Aquatic plants were beginning to choke this channel again. The ryots interested were induced to clear it without hire. Two or three hundred of them were at work to-day and yesterday. This work has considerably increased the flow of water. The water is being carefully economized now, but the people whom I had prosecuted under Section 430, Indian Penal Code, for wasting water, as well as the village servants whom I punished for persistently ignoring the orders directing them to live in their villages, are very much disgusted. These long-standing abuses ought to have been noticed by the Tahsildar. But I am afraid that subordinate officials are often afraid of the scurrilous pseudonymous petitions which generally are written when any action of this kind is taken. I saw the coolies at work stopping leaks in the Marlapati channel by digging a trench and filling it with puddle. I then went up to the cutting at the Seekrail Anicut. Nine men were at work at 8-45 A.M., when I reached there. Another man and five or six women came before 9 o'clock, when I left. I should like to see the work going on quicker. I met Mr. Johnston in the town on his way to the tank. In the evening I went at 5 o'clock to see the cutting at the Anicut. All the wudders had left off work and gone to drink arrack. The maistry told me that sixteen men and fifteen women had been at

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work. This is against expeditious completion. I then went to see how the work of closing the leaks had been going on along the Marlapati channel. I found that a good deal of work had been done, but hardly enough for the number of laborers employed. I took steps to prevent the recurrence of this by ordering one quarter of the hire of each man to be stopped. A peon in charge of some laborers was also fined.

4. *Wednesday, the 20th September* 1876.—The marginally noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence on sanitary matters which passed through the office to day:-

Vura Channel	114
Papayyapalli Channel	38
Total ...	152

From	To	No.	Date.	Subject.
1	2	3	4	5
Assistant Engr.	Head Assistant Collector.	26	19th September 1876.	Stating, in reply to Head Assistant Collector's No. 362, that the Revenue Department may carry out the work therein alluded to.
Head Assistant Collector.	Assistant Engineer	363	20th do. ...	Stating, with reference to the above, that he will undertake the work on the receipt of some information asked for, and requesting the Assistant Engineer to give him the benefit of his help by coming with him along the channel.
Do. do. ...	District Engineer	364	Do. do. ...	Enclosing copy of his letter to Assistant Engineer, No. 363, and stating that the work of clearing jungle will be undertaken by the Revenue Department.
Do. do. ...	Cumbum Tahsildar.	425	Do. do. ...	Giving permission to commence at once the works alluded to in takids Nos. 406 and 412.

The long-wished for rain came down last night in torrents. I went in the morning to see the water rushing through the cutting in the anicut. Any quantity of rotting vegetation is being washed down. Mr. Johnston's work is, of course, stopped. The stone revetment which I had put up at the bottom of the cutting has answered its purpose and prevented the banks from being undermined and washed away. I received letter, No. 26, dated 19th instant, from Mr. Johnston. As I anticipated, he appears to be displeased at what I said about rates allowed by him for work done. Both of us may probably be mistaken to a certain extent, but a little friendly emulation cannot but be attended with good results, and so I have written to Mr. Johnston letter No. 363, which I hope will show him how

very far I am from wishing to do or say anything which would interfere with our harmonious working. Mr. Johnston speaks of my proposal that he should do certain works at rates mentioned as a challenge. I should have been glad if he felt at liberty to accept it without further correspondence. As it is, I shall put the work in hand, and get it finished with the least possible delay.

After writing the letters noted in the statement above, I went out to see how the Gundlakamma was running. I found a large quantity of vegetable matter being washed down, although the water had subsided about four feet. During the day I sent for the Tahsildar and gave him personal instructions about putting in hand the clearing of the remaining branch channels of the Chinna Cumbum Channel to-morrow, and also as regards the breaches which invariably are made by floods in the south bank of the Pedda Cumbum Channel. The most that can be done to this channel is to patch it up temporarily. To make it strong enough to withstand floods would probably cost nearly as much as to make a new channel in the way suggested at first by Major Hasted. After seeing the Gundlakamma, I went back to office, signed the fair copies of the letters to the District and Assistant Engineers, and saw them despatched.

5. *Thursday, the 21st September* 1876.—The marginally-noted number of laborers were engaged on the works set opposite them. In the morning I went first towards Mr. Johnston's tents and temporary sheds. As I found he was going to the calingula, and as I wished to go to the work at the Chinna Cumbum Channel, we arranged to go together to the Chinna Cumbum Channel to-morrow. I then rode to the bund, and, then dismounting, walked along the Chinna Cumbum Channel. The work of stopping the leaks* along the 195 yards of channel next the bund is nearly complete I am glad to say. I don't know whether Mr. Johnston really expected from the first that this work would take fifty-two days to complete. If this had been known beforehand, probably other arrangements might have been made. The excavations which had been made some time ago by some of Mr. Johnston's subordinates behind the masonry revetment of the sluices noted in the margin, and which had been left unfilled so that the water ran to waste, had been filled up as suggested in my letter No. 358. Some mistake had apparently been made, for the same broken stones and clay which had been excavated had been put back again, and the leaks which it was intended to stop were not improved. This I pointed out to a Maistry there, who said a mistake had been made, and he was going to rectify it. On my way back I found some coolies (paid by the

Pedda Cumbum Channel	... ...	67
Vura Channel	... ...	68
Mitta do.	... ...	24
Bandam do.	... ...	43
Proddupodupu Channel	... ...	45
Nallapampu do.	... ...	33
Motlapully do.	... ...	27
Mulla Madi do.	... ...	30
Garigela do.	... ...	29
Marrimani do.	... ...	30
Chinna Uddi do.	... ...	32
Pedda Uddi do.	... ...	40
Neredi Mani do.	... ...	23
Konda do.	... ...	38
Papayapalli do.	... ...	99
	Total ...	619

Byravani Madva.
Medi Mani Madva.

*Letter, No. 262, dated 31st July 1876, to Assistant Engineer.

day) again removing the stones and clay which they were about to replace by puddle. I also noticed that a trench about eighty yards long which had been dug in the bank where there were no leaks had been refilled with the stones taken out of it before. This was probably with reference to my letters Nos. 314 and 358. With a view to saving of time and money, I think some one ought to be made responsible when unnecessary or useless work is undertaken. This I shall mention to Mr. Johnston to-morrow, and thus save the necessity of writing. If steps were taken to prevent work of this sort, I cannot see what difficulty there need be about fixing approximately a time within which an ordinary piece of work should be done if weather proved no obstacle. In emergency works it is specially useful to have an idea beforehand of the time the work will take. I went down the channel as far as Chinna Cumbum, and found the coolies working away under the Reddies, Curnams, Tahsildar, and Peons. I hope to do the work in a few days, and, to prevent delay and mistakes, have ordered my camp to be sent out to the spot to night.

If 90 Rupees per mile have been allowed by Mr. Johnston for the work done by the Revenue Department along the channels, probably Rupees 30 represents the value of work done in removing trees, brushwood, rushes, weeds, &c. This leaves Rupees 60 per mile for excavation. As each cubic yard of excavation has been allowed for at the rate of 2 Annas, it follows that 480 cubic yards (8 × 60) are allowed for along each mile of channel, that is to say, one cubic yard of excavation for every $3\frac{3}{4}$ running yards of channel. I should like to test these quantities in Mr. Johnston's presence, and have therefore asked for a copy of his estimates. After giving orders to insure the speedy execution of the work, and directing the Tahsildar to have men ready to cut down trees and brushwood at the head of the channel when Mr. Johnston comes with me to-morrow morning, I returned home at 11 o'clock. I have tried to make the temporary maistries or gaugers get as much work out of their gangs as possible by telling them that proved ability in managing men under them will be considered a good qualification for the post of Water Overseer lately sanctioned by the Collector.

In the evening I went down along the Katva Channel for about a mile and a half to see some breaches said to have been caused by the rain on the night of 19th instant. I found that five or six breaches, varying in breadth from about two feet to two yards, had been made in the first mile and a half of the channel. Makers would, of course, have been much worse if the channel had been carrying its usual supply from the head. Colonel Mullins has noticed the cause of these breaches in paragraph 5 of his memorandum embodied in G.O., No. 1094, dated 1st May 1876, Public Works Department. Provision for the disposal of upland drainage is what is required. Each flood contributes a large portion of silt which is washed in from the high land to the west of the channels, and cuts the opposite (south) banks of the channel in its downward course to the Gundlakamma. These breaches must be seen to at once. I am afraid the ryots are partly to blame for them, for, when a sluice does not suit them, they seem to have cut private sluices, some of which have been left open, and some covered in with a hollow palmyra, to afford passage for water underneath. Of course such cases ought to be

Somaepett Valley Channel	49
Pedda Cumbum Channel	63
Chinna Cumbum do.	214
Pallarivani do.	30
Garigela. do.	77
Marrimani do.	30
Motupalli do.	71
Pedda Uddi do.	7
Neredi Mani do.	64
Yerra do.	56
Kanda do.	48
Papayapalli do.	114
Total ...	803

prosecuted when the channel is put in efficient order. Perhaps, however, if the channel were in proper order, no attempt would be made to meddle in this pernicious way with the bank.

6. *Friday, the 22nd September* 1876.—The marginally-noted number of laborers were engaged on the works set opposite them.

The subjoined statement shows the correspondence on sanitary matters which passed through the office to-day:—

From	To	No.	Date.	Subject.
1	2	3	4	5
Cumbum Tahsildar.	Head Assistant Collector.	386	21st Sept. 1876.	Requesting permission to close certain breaches in the banks of the Katva Channel caused by the rain that fell on the night of the 19th.
Head Assistant Collector.	Cumbum Tahsildar.	428	22nd do.	Sending copy of an approved list prescribing the duties of Nirkatties with instructions.
Collector, Kurnool.	Head Assistant Collector.	...	.....	Communicating copy of G.O., No. 1576, dated 1st September 1876, sanctioning Rupees 50 + 15 Rupees Purse allowance to the Special Clerk sanctioned.

My camp had gone out last night to the most convenient and central place for supervising work along the Chinna Cumbum Channel. In the morning I went to the head of the Chinna Cumbum Channel, where I had previously arranged to meet Mr. Johnston. I found the Tahsildar, Overseer, and coolies ready for the work of clearing the brushwood from the banks to facilitate levelling. I could get no definite information from the Overseer as to what he wanted to be cleared. I had, however, taken the precaution to bring with me Colonel Mullins' memorandum noticed in yesterday's diary. Paragraph 4 of this memorandum gives a very good idea of what is wanted, and I found it most useful. Mr. Goodchap and Major Hasted were, I think, of opinion that cross sections at every 100 yards instead of at each 100 feet, as laid down at first by Colonel Mullins, would be sufficient. I, therefore, began to have openings at every 100 yards made on the outside of the banks of the channel. These openings are to be twenty yards wide at the top of the bank and ten yards wide at the bottom, where the wet land under the channel is reached. Less work is required on the high (west) bank of the channel. Mr. Johnston came soon. He did not know whether the original orders that the cross sections should be at every 100 feet were or were not in force, and he could

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not say whether openings at every 100 feet for cross sections would be sufficient. We arranged to make the openings at every 100 yards first, and then, if they have to be made at closer distances, this can be done afterwards. Of course, if the places where openings had to be made down to the cultivation had been pegged out beforehand, much time would have been saved in setting the laborers to work. Mr. Johnston's estimate is "for clearing 2⅞ miles of jungle on the bank of the Chinna Cumbum Channel, three yards on each side, at a cost of Rupees 630." Now, more than three yards on each side of the waterway had been already cleared along much of the channel included in the 2⅞ miles. What the Overseer appears to have intended to have done was to clear only along the outside slope of the channel bank. The Overseer, however, as stated before, was unable to say what it was necessary to clear, and I notice that in the form of abstract estimate there is a space left in which "the necessity and object of the work" has to be entered. This space is not filled up, but I understand from Mr. Johnston that the clearing was in order to facilitate taking levels. I hope we shall be able to effect a considerable saving out of the estimate of Rupees 630, for money is not plentiful, and apparently we want, for really necessary work, all that can be spared. There is already a clear view for the longitudinal sections which Colonel Mullins wishes to be taken on the ground-surface. Apparently all that is required is to know where cross sections have to be made and regulate accordingly our openings from the waterway to the cultivation. I pointed out to Mr. Johnston the earth excavated along the channel where an average amount seemed to have been taken out. The channel was three yards wide, and mud about six inches deep had been taken out. This would give one cubic yard for two running yards as compared with one cubic yard for 3½ running yards, which would seem to be the quantity allowed for by the Overseer in valuing the work done. I hope to see these estimates soon. Mr. Johnston came half-way along the channel to where my tents were pitched, and returned to his camp about six miles off at 10-30 A.M. In the evening I walked up from my tent to the head of the channel. The Maistry seems to have got it into his head that nothing was to be done except on the first 4,000 yards of the channel. Consequently the coolies, after finishing what they were set to do, occupied themselves for the second half of the day just as they pleased. The Tahsildar trusted that the Maistry had told him right, and did not refer to me as he ought to have done. Both regretted their mistake, and promised to do all in their power to repair it by working very hard to-morrow. With the exception of this mistake, there was no fault to be found. I hope to finish the work estimated to cost Rupees 727 and to require ten days for completion for less money and in less time than anticipated. Personal supervision is a great thing. I set the Maistry to work in marking out cross-section stations for the coolies to set at work upon and clear first thing in the morning.

7. *Saturday, the 23rd September* 1876.—The marginally-noted number of laborers were engaged on the works set opposite them. The subjoined statement shows the correspondence on sanitary matters which passed through the office to-day:—

Chinna Cumbum Channel	346
Garigela Channel	56
Yerra Channel	15
Total ...	417

From	To	No.	Date.	Subject.
1	2	3	4	5
Collector of Kurnool.	Head Assistant Collector.	...	...	Communicating copy of Board's Proceedings, No. 2260, of 2nd September 1876, calling for a report on the subject of future irrigation under Cumbum Tank.
Assistant Engineer.	Do. ...	27	22nd Sept. 1876.	Stating that he has directed his Overseer to ascertain whether it is practicable to lead spring water from Chinna Cumbum into Cumbum.
Head Assistant Collector.	District Engineer.	367	23rd do. ...	Requesting some information as to how cross sections will have to be taken.
Do. do. ...	Assistant Engineer.	368	Do. do. ...	Enclosing copy of his letter to District Engineeg, No. 367, and requesting to be furnished with copies of certain estimates.
Do. do. ...	Cumbum Tahsildar.	421	Do. do. ...	Sanctioning Rupees 45 for repairing the breaches reported in Tahsildar's Arzi No. 386.

In the morning I rode up to the point to which clearing the cross-section stations had been brought down to last night. The Maistry had marked out the stations for a good distance further before he went home, and I met the Tahsildar and some of his subordinates with coolies, a few of whom were left at each place where clearing was required. I then rode down to near the end of the channel and showed the Tahsildar what was wanted as far as I knew. I was not quite certain from what Mr. Johnston said what was really necessary, so that levelling might be proceeded with. I, therefore, directed that, besides clearing the places for cross sections at every 100 yards, a line where the longitudinal levels are to be run was to be cleared all the way along the channel. While seeing this work carried out, I received Board's Proceedings, No. 2260, dated 2nd September 1876,

G.O., No. 1150, dated 23rd August 1876, Revenue Department.

from which it appears that Government have, in the marginally-noted Order, rescinded a former Order which allowed dams to be put up in these channels. I have not seen the Government Order. After returning home I addressed the two letters noted above to the District Engineer and Assistant Engineer respectively. At about 2 P.M. I received word from the Tahsildar that all the cross-section stations had been cleared. I also saw when out that most of the branch channels had been cleared. I sent the Maistry to inspect the work and report what remained to be done to the Tahsildar. In the morning I went to the house of the Taliari to whose widow

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Paragraph 4 of G.O., No. 1620, dated 5th September 1876.

Government sanctioned the disbursement of Rupees 24; this has been a great boon to her. Grain and a buffalo with a calf have been purchased. When a little consideration of this sort is shown, it is thought a very great deal of by the people.

I did not go out in the evening to inspect works, but heard from the Maistry that most of the work had been done. I sent word to the Tahsildar to see everything finished to-morrow. All will be finished I think to-morrow except the culverts for which stones have had to be quarried, and will have to be carted some distance. I asked Mr. Johnston, in the

No. 362, dated 18th September 1876.

marginally-noted letter, if he was prepared to take up the work. I offered to give the money (Rupees 727) at his disposal, and fixed a time (ten days) within which I thought the work might be done.

I was careful to allow what I believed to be a good margin both as regards time and money. Mr. Johnston, in his letter No. 26, spoke of my proposition as a challenge and implied that he thought the rates were low, but he thought he could nearly get the work done for the sum mentioned. From the accounts of the cost of the greater part of the work now finished, think it probable that I shall be able, as I anticipated, to get the work done in half the time mentioned, and save more than a third of the estimated cost. As already mentioned, Mr. Johnston had to raise by more than 30 per cent. the rates allowed in his estimate for stone excavation at the cutting near the Seekrail Anicut. Some more accurate information about rates and quantities would be useful. Vital statistics continue, it will be seen from the weekly statement, to be the reverse of encouraging. I think, however, it would be unreasonable to expect to have the results of cutting the anicut evidenced in a lessened death-rate so soon as this. Mr. Johnston told me on Thursday that General Walker had asked him what establishment he required. I suggested that he should specify the works which he might have to undertake, and then arrange his proposals for an establishment with reference to the time given for completion of works by his superiors. The works he proposes to undertake are—

	Rs.
1. Irrigation scheme (including bridge)	1,30,000
2. Water-supply (Mr. Johnston's estimate)	1,00,000
3. Surface-drainage	26,000
4. Temporary offices	50,000
5. Latrines	4,000
6. Hospital	11,000
Total ...	3,21,000

Probably the irrigation scheme will, from what Major Hasted said, take two years. Several Maistries, Overseers, and others will be required for the other works mentioned above if they are to be finished before the end of these two years. The Extra Overseer whose services have been placed at my disposal twelve days

ago by the District Engineer has not written, nor reported himself for orders yet. When he and the extra clerk sanctioned in the marginally-noted Order of Government arrive, I shall have to turn my attention to the undermentioned works which are those remaining in my list submitted to the Collector,* after the six works which Mr. Johnston proposes to undertake have been removed from the list.

G.O., No. 1370, dated 1st August 1876.

* Letter, No. 352, dated 11th September 1876.

	Rs.
1. Burial and burning grounds	1,200
2. Cess-pools	600
3. House-sites	1,000
4. Manure heaps	3,000
5. Enclosing and making [illegible] burial-grounds, manure heaps, &c.	1,000
6. Ventilation	5,000
7. Further deepening the bed of be Gundlakamma by raking	400
Miscellaneous, i.e., slaughter-houses, rubbish depôts, &c	500
Total ...	12,700

As I am in camp at some distanc off and engaged in other work, I have not been able since Thursday to see the work Mr. Johnston is doing towards making the cut near the Seekrail Anicut. I learn, however, that the work discontinued on Wednesday on account of r[illegible] was recommenced on Saturday. On that day sixty-two coolies were engaged [illegible] putting up another dam, and on Sunday some wudders were again engaged in [illegible]king the cut.

During the week six perso[illegible]ied as compared with six persons in the corresponding week of last year. A these six deaths may be referred to the insanitary condition of the town.

Out of the sum of Rupee 8,000 at my disposal, Rupees 3,580-15-9 have been spent, leaving a balance of Rupees 4,419-0-3.

No. 107. ORDER THEREON, 12th October 1876, No. 1837.

22nd August.—The proposal for the employment of two Water Overseers on Rupees 10 each, monthly, and the pay of Rupees 5 each for the Nirkatties for the villages depending on the Kava Channel are sanctioned temporarily. All proposals regarding the village water distribution establishment must eventually be brought together and submitted to Government in the Revenue Department, through the Board of Revenue, forregular sanction. There are ample funds for what may be needed. The above sanction will, it is presumed, provide for the case of the Special Committee's prize ma[illegible] referred to under the same date.

24th August.—The Acting Head Assistant should do all in his power to prevent the crowding of the Subsidiary Jail. He should point out to the Sub-Magistrates that by Act VI of 1864 theft can be punished by whipping in lieu of imprisonment.

25th August.—The full establishment of [illegible]-eight Nirkatties can be entertained for the Kalva Kalva and included in the [illegible]ral scheme. The village service fund in Kurnool is ample for all possible requi[illegible]nts of the kind. The employment of Polliam Chinabbi as Superintendent is sanctioned.

26th August.—The arrangements made by the Acting Head Assistant for the provision of huts for the Nirkatties are approved and confirmed.

31st August.—Instructions to carry the drainage of the swamp down to the solid rock were communicated by telegram.

The Government desire to receive explanation of the failure of the Accountant, Appadurai Mudeli, to take up his appointmen[illegible]

8th September.—The introduction of the [illegible]ed rates of assessment by the Settlement Department in anticipation [illegible]neral resettlement of the taluq should be extended to all the villages un[illegible]mbum Tank.

The Surgeon-General will post an additional "Dresser" for duty at Cumbum when Dr. Rogers Harrison is withdrawn.

9th September.—The Government expect to receive soon from Dr. Rogers Harrison a full and detailed report on the sanitary condition of Cumbum.

10th September.—Sanction has already been given for the rate of pay (Rupees 5) for Nirkatties desired.

12th September.—The Government attach little importance to the estimate of the proper cost of work already executed, and are fully satisfied that it has been very reasonable and that the work is fully worth it.

The works which "*have been spoken of*" in connection with the unhealthy condition of Cumbum, of which the approximately estimated cost is noted, will, of course, come to be submitted in due course with regular estimates, and call for little remark here. The estimate, however, of Rupees 3,000 for surface-drainage is far beyond anything which the Government contemplate for the purpose, and they would prefer to place the work in the Head Assistant's hands for execution when levels have been run, a moderate lump sum being placed at his disposal for the purpose.

15th September.—The Government regret to learn the loss of life caused by the fire in Cumbum. They sanction thereward of Rupees (5) five paid by Mr. Farmer to Boora Gundaiya for his exertion on the occasion, and desire that the approval of Government be expressed to Head Constable Ibrahim Sahib, whose conduct attracted commendation.

The Government trust that Mr. Farmer may be able to finish the compendium of village orders, to which he alludes a including directions to be observed on occasions of fires.

16th September.—The difficulty experienced in the matter of the Vettiyan's services for the burials after post-mortem examinations should be brought to the notice of the Collector.

19th September.—The Government observe that the services of Deputy Collector Venkatachellum Pillay are not now required to relieve the Nundial Officer of his general duties, and trust that he may have been made use of to assist

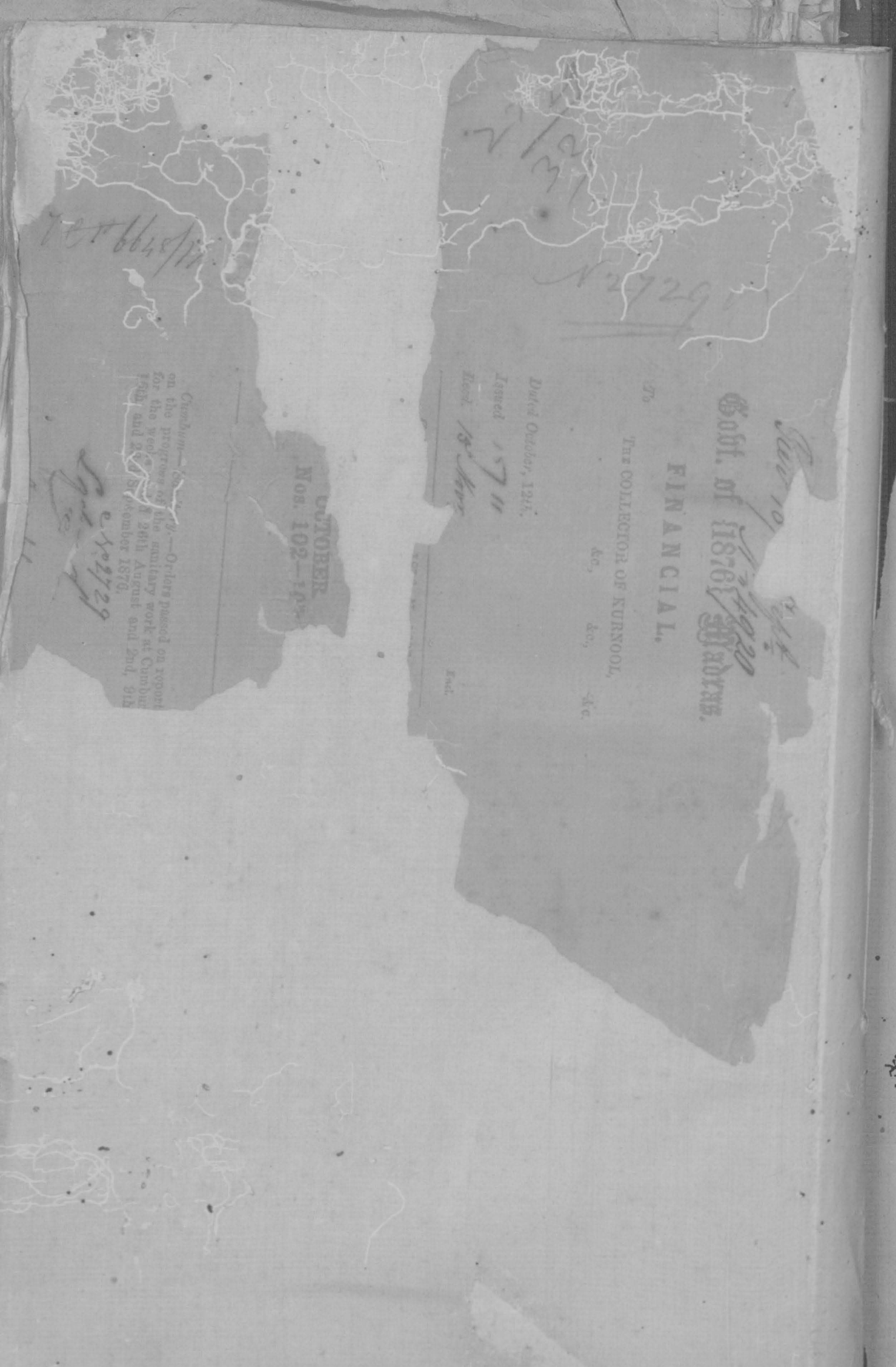
Mr. Farmer. They hope that ome fall of rain he reports may have relieved apprehensions to some exten it is evident that a tour of inspection where-distress is feared and crime is asing would be very useful.

True Extract.)

Chief Secretary.

To the Collector of Kurnool, with two sketches returned.
,, Public Works Department.
,, Revenue Department.
,, Board of Revenue.
,, Accountant-General.
,, Surgeon-General, Indian MedicalDepartment.
,, Sanitary Commissioner.

,, T. O'Connor (1—25).
,, A. S. Rodgers (26—46)
,, J. W. Fischer (47—65).



Govt. of H.E.H. the Nizam's Dominions

FINANCIAL.

To

The COLLECTOR of KURNOOL

&c, &c, &c,

Dated October, 1911.

Issued 1911

Head [illegible]

Cumbum—Cholera.—Orders passed on the progress of the sanitary work at Cumbum for the week ending 26th August and 2nd September 1876.

OCTOBER
Nos. 102–10[illegible]

MADRAS RECORD OFFICE