Rec. G. 1—20,000—18-10-20.

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	1452	Press Mis.
126-77		
Dated	13-9-1870	

Not to be folded or roughly handled

No. 176. Read the following Proceedings of the Board of Revenue, dated 6th August 1870, No. 5,202:—

Read the following letter from the Officiating Collector of the Kistna District, to the Acting Secretary to the Board of Revenue, dated Masulipatam, 13th April 1870, No. 1,788.

I HAVE the honour to submit my Annual Report on the salt-roads of the Kistna District.

2. The four salt-divisions of the district are—

I.—Pandraka.
II.—Mangenapudi.
III.—Nizampatam.
IV.—Chinna Ganjam.

I have personally inspected each of these during the past year.

PANDRAKA.—In Government Order, dated 14th April 1869, No. 1,012, sanction was accorded for erecting a new Salt Cutcherry on the Kotampara platform; the present Salt Cutcherry at Bantumilly being transferred to the Police for a station-house.

There were formerly two stations in this division, first, Yendapally, and, second, Chinna Pandraka. The Board, in their Proceedings, dated 7th January 1870, No. 109, sanctioned the closing of three of the platforms of the former station; and the fourth, the Gunnampara platform, has been attached to the Chinna Pandraka station, which has also four other platforms.

The salt at this station is spontaneous. By Government Order, dated 27th October 1869, No. 2,854, the Kudivaram paid to the manufacturers was raised from Rupees 3-12-0 to Rupees 5 per garce. This kotar is chiefly resorted to by Lambadies from the Hyderabad territories, who prefer this salt, the crystals being large and heavy.

Board, 29th October 1869, No. 8,092.

3. IMPERIAL ROAD No. IV.—This road is from Bantumilly to Argollu. Its length is 32 miles, and it has a maintenance grant of Rupees 1,440. The heavy rains in October injured several of the temporary bridges on this line. A masonry bridge across the Polrazkodu is urgently wanted. I received a deputation of Lambadies complaining that traffic was entirely stopped; I communicated with the Superintending Engineer, who stated that he had absolutely no funds available. As the only other resource I had to request the Executive Engineer to let the water out of the channel, which was done. I also had three temporary bridges repaired by the Tahsildar of Gudiwada and Deputy-Tahsildar of Nuzivid. These temporary measures prevented the interruption of traffic, which otherwise would have told seriously on the salt-revenue of the district. The Lambadies were unusually late in coming this year; but the falling off of the sales at this station noticed by Government has since been made good.

4. With my letter, dated 15th March 1870, No. 1,069, while submitting a plan and estimate, amounting to Rupees 8,000, for a road from Vadaly, I requested the Board's sanction for the construction of a bridge across the Polrazkodu, which was important for salt-traffic. The Superintending Engineer proposes to have one

bridge for the road from Bantumilly to Argollu and the road from Vadaly to Kykalur, and that the two roads should separate after crossing the bridge. A bridge is also required over the drainage channel in front of Penumallevarigudem near Tummidy, and another masonry bridge or other strong work to prevent a stream obstructing the road near Argollu. The Board, in their Proceedings, dated 11th April 1870, No. 2,430, declined to allow the work to be prosecuted from Local Funds. The Superintending Engineer was requested to submit the necessary estimate for the sanction of Government.

5. The Argollu road at present terminates at the Bantumilly channel. In my report last year I recommended that it should be carried up to the village, and so on to the platforms; but nothing has yet been done. I would suggest that the work be estimated for and undertaken as soon as possible. The Superintending Engineer reports "that no bridge has been sanctioned for the road from Bantumilly to Argollu over the Polrazkodu." One was sanctioned from Local Funds for the road from Vadaly to Kykalur, the direct line of which was changed (judiciously in my opinion) to obviate the necessity of two bridges over the Polrazkodu. No work has been done.

6. Salt Station Roads.—In Government Order, dated 18th January 1868, No. 143, Revenue Department, the sum of Rupees 2,630 was sanctioned for roads to the platforms.

7. As the Yendapally and Cherukumilly platforms have been abandoned, the road leading to them need not now be carried out. As Gummampara platform is only temporarily retained, I would also defer the construction of that road; but I think the road from Bantumilly to the Kotampara platform should be at once carried out. The distance is 1 mile 1,133 yards, and I would request that instructions may be issued to the Public Works Department accordingly. There are at present no roads in this station, and this want is much felt. Hereafter roads should be provided from Kotampara to Barrankulapaya, Levallapallypara, and Kotampara platforms.

8. Still-water channel to platforms.—This channel has not yet been deepened, nor has a terminal basin been constructed so as to utilize it, a project approved of by the Board and Government.

9. The mouth of the Kotteru Salt-creek near Peda Gollapallem, which supplies the swamps of this station with salt-water, still remains closed. The salt at this station is spontaneous; as the store in hand is large, there will be no necessity for collecting any this year. In their Proceedings, dated 11th October 1869, No. 7,652, the Board agreed with me that if, by opening the mouth of the creek annually, a sufficient supply of water can be obtained for manufacture, as was done successfully in November 1868 at a small cost, no expensive measures should be taken for keeping the bar open until further experience shows this to be necessary. A careful watch will be kept to determine whether this obstruction is on the increase or not.

10. Manorampuram—Road to Masulipatam.—This salt-station is situated about 4 miles to the north-east of Masulipatam, but the road lies over a sandy tract very difficult for bandies and bullocks. This road ought to be put in hand as soon as possible.

11. Road to Bantumilly.—A road also from Mangenapudi to Bantumilly (11 miles) is greatly needed. The line lies across the Jengeru swamp, which is often very difficult to be passed. The improvement by the means of communication would no doubt improve the trade of the Kotar at Mangenapudi, as the salt here is preferred for home-consumption to the spontaneous salt of Pandraka which, however, the Lambadies prefer, as being better fitted for a long journey.

12. Canal to Mangenapudi.—The Honourable T. Clarke, in his Administration Report, dated 25th May 1864, recommended the excavation of a navigable canal from the Bezwada and Masulipatam Navigation Canal at the basin up to the Mangenapudi Kotar, a distance of 3 miles. An estimate for the work, amounting to Rupees 61,720, was sanctioned by Government in Government Order, dated 23rd February 1865, No. 515, Revenue Department, and Rupees 2,630 was expended in commencing the work. A provision also to the amount of Rupees 10,000 was made by the Department Public Works in the current year's Budget, but in Government Order, dated 31st January 1870, No. 369, Government stated that they were unable to provide for it in the several Budgets, and saw no early prospect of providing the requisite funds for it.

13. Cona Canal.—Another channel was also proposed by the Honourable T. Clarke to be taken off from the Bezwada and Masulipatam Navigation Canal near Dodlepalem Lock to be carried in a south-easterly direction through the Cona swamp. This channel would prevent the spontaneous formation of salt on the swamp about half a mile in length and a quarter of a mile in breadth, where we have annually to destroy the salt, or, on account of the large quantity, have to maintain an extra Police guard with a portion of the staff of the salt establishment for watching it to detect the theft of salt. This channel might also be made the means of irrigating an extensive area both of Government and Zemindary lands. The ryots of Tummalacheruva have applied to convert several hundreds of acres of dry into wet, if this channel be dug.

14. Mount round works.—Another proposal of the Honourable T. Clarke for Mangenapudi which was approved by Government was to cut a channel from the sea and to carry it round the platforms and pans which here are very concentrated. This channel was designed with the double view of providing an ample supply of water for the pans, and also as a means of protection. In Government Order, dated 20th May 1865, No. 1,028, Revenue Department, an estimate was directed to be submitted as soon as practicable, but it has never yet been furnished by the Department Public Works. The Executive Engineer informs me that "the scheme is deferred for want of the services of a Surveyor and the Superintending Engineer's instructions in the matter."

15. Station Roads.—The station roads are—

(1.) Road round platform No. 1, measuring 734 yards by 8 yards, on which Rupees 25 were spent in 1869-70.

(2.) Road between Nos. 1 and 2 platforms, measuring 732 yards by 4 yards, on which Rupees 60-11-6 were spent.

(3.) Road between Nos. 2 and 3 platforms, measuring 336 yards by 6 yards, on which Rupees 20-11-0 were spent.

The soil being sandy and salt with no adhesive qualities, these roads are greatly cut up by the rains. The sides ought to be turfed or planted thickly with binding creepers.

16. III. NIZAMPATAM—WATER COMMUNICATION.—This is the single salt depôt where provision is made for export by sea, but no salt has been exported by sea for several years. The Nizampatam Canal affords water communication with Bezwada, and much salt is taken by this means up the River Kistna as far as Muktiyala, and so through Juggiahpetta into the Nizam's territories.

17. NEW WHARF.—The Board of Revenue in their Proceedings, dated 12th August 1869, No. 5,986, sanctioned an estimate, amounting to Rupees 1,800, for the construction of a masonry wharf at No. 1 platform at the station, directing the expenditure to be incurred out of the reserve for petty construction and repair. The Department Public Works accordingly collected materials for the work, but the Government of India having retrenched the sum of Rupees 25,000 provided as a reserve, the work could not be executed last year, but will be commenced as soon as sanction is accorded for the transfer of funds to the Department Public Works.

18. ROAD TO GUNTOOR.—In my report last year I stated that the road from Nizampatam to Guntoor was about 30 miles in length in fair order between Guntoor and Chandole, but greatly in need of repair between Chandole and Nizampatam, a distance of 10 miles, where the line lies over a heavy loose sandy tract. I also recommended that a bridge should be built on this road, across the Nizampatam Canal, Rupees 1,000 were accordingly allotted for the improvement of this road, but subsequently relinquished by the Superintending Engineer on the ground that he found that the road had never been made. There is a good deal of salt taken from Nizampatam by this road, and I think it should be determined at once whether this is to be an imperial salt-road or a local road. There is much local traffic of all sorts between Guntoor, Ponnur, and Chandole, but between Chandole and Nizampatam the line is chiefly used by traders coming for salt.

19. When I was at Nizampatam in October last, and taking occasion of my visit to measure a heap of salt, certain traders of Ponnur came and complained to me that the villagers of Chandole were levying six Pies on each salt-bandy that passed by their village. I referred the complaint to the Tahsildar who on inquiry found that the villagers had adopted this illegal course to reimburse themselves, because the Talook Overseer had closed the usual road passing *via* Chandole and used until they (the villagers) entered into agreements to be answerable for the maintenance of this road. Until this was done the ryots were not allowed to pass this way to their cultivation on the other side. It was admitted that a small sum was collected by the Department Public Works from the villagers for this crossing, and the villagers admitted having collected it again from the salt-traders coming from Guntoor and Ponnur to Nizampatam.

20. I hereupon wrote to the Superintending Engineer, stating that I did not consider that the Talook Overseer was justified in taking an agreement from the villagers of Chandole for the repairs of a public path under the threat of shutting up the road altogether. The Superintending Engineer replied that he was informed that the passage was not a public path, and that if, under special circumstances, an extra crossing place was conceded, it appeared to be but right that the persons for whose benefit it was given should bind themselves to repair the injury they cause, and that as the members of the Department Public Works were in charge of the canals, etc., he thought that they should take the agreement (letter, dated 3rd February 1870, No. 208).

21. I took occasion of my being in the Repally Talook in February to visit Chandole. I examined this road personally. I examined the Tahsildar, Revenue Inspector, the village-officers and many of the villagers who all agreed in stating that this was the line of road used by all carts coming from Guntoor and Ponnur to Nizampatam for salt, and that there was no other line available for them without going a long round. I questioned the Talook Overseer who said the bandies might go round along the canal-bank till they meet the coast-road. I went this round and found it a very long one, adding about 1½ miles to the distance. I again addressed the Superintending Engineer stating my opinion that the salt-traffic should not be put to so much inconvenience, and that if the bridge be built on the coast-road, a crossing should be made here on the usual coast-road between Guntoor and Nizampatam.

22. The Superintending Engineer, in a letter, dated 29th March 1870, No. 367, replied that the Range Officer replied that it was impossible for carts to proceed by the short cut from Chandole to Nizampatam and the passage I alluded to across the main canal, so long as the Nallavada drain was running, and that this is for several months of the year. That during the dry weather carts can cross these fields as they can nearly the whole country, but he cannot see that that will entitle them to pass the canal wherever they may please; that he believes that his department have full authority to prevent such passages being made, and he certainly sees no reason why they should not prevent them in special cases, if the villagers will not bind themselves to keep them in repair; that if they have not this discretionary power, the Department Public Works must fall back on their right to prohibit injury to the canal-bank, etc.

23. In reply to this I would submit that it was in the very midst of an unusually heavy rainy season that the salt-traders from Ponnur, who complained to me in October, had been using this road, and had been made to pay a toll for doing so, and that which the Superintending Engineer calls a passage is the regular line of road between Guntoor and Nizampatam. I think it has been sufficiently shown that the construction of this road should be undertaken as soon as possible, and I leave it to Government to decide whether the Department Public Works have the power to make the ryots of a village responsible for the up-keep of a road much used by through traffic, simply because such road passes near their village. In this case it will be seen it led to the imposition of an illegal toll by the villagers

on all bandies passing, to reimburse themselves for which the Department Public Works had made them pay.

24. Road to Voleru.—The second important road is from Nizampatam to Voleru *viâ* Repally. There are three bridges on this line urgently required, the first across the Kistna channel near Voleru, the second over a small creek between Iskapalli and Chinna Anantavaram, and the third over Nangadi Kova, about 6 miles from Nizampatam.

25. Road to Bapatla.—The present road from Nizampatam to Bapatla passes between the platforms at least the Kotar road leading to platform No. 3 is the only one available for general traffic. The Honourable T. Clarke having objected strongly to this, the Government in Government Order, dated 29th March 1865, No. 1,123, sanctioned the construction of a new line of road about half a mile lower down with a bridge large enough for carts to cross. Estimates were called for, but have not yet been furnished by the Department Public Works. The new road it is proposed should start from the street at the south of the village near the present Salt Cutcherry, and should be carried up to the point where the present Kotar road meets the road to Bapatla.

26. During the heavy rains in October, the palmyra bridge was washed away on the Kotar road leading to platform No. 3, and now the only road to Bapatla. A Sangadi ferry-boat has been employed here at Rupees 3 a-month since; but the want of a bridge is most seriously felt, and it should be commenced as soon as possible. I applied for an estimate on the 25th March 1870, No. 1,185. The road to Bapatla, not far from No. 3 platform, crosses the Mutadereyu Creek. In their Proceedings, dated 7th February 1870, No. 880, the Board of Revenue sanctioned the sale of an old boat intended for this ferry, but left unused for several years; it fetched Rupees 90 at auction. I have asked the Department Public Works to estimate for some means of crossing this creek, and understand that two new boats are suggested. The road to Bapatla should be put into order; I presume that it has never been made.

27. Station Roads.—The station roads are—

(1.) Road from platform No. 1 to salt-creek near wharf is proposed to be erected, measuring 140 yards in length by 5 yards in breadth. Only Rupees 1-13-0 were spent last year in repairs.

(2.) Road from palmyra bridge near village to platform No. 3, measuring 1,100 yards in length by 4 yards in breadth. On this road Rupees 30-0-6 were spent.

(3.) Road from palmyra bridge to salt-creek, site of proposed wharf. This is on a bank raised to protect the salt-pans from the inundation of the salt-creek, length 640 yards breadth 3¼ yards, expenditure in 1869-70 Rupees 7-10-6.

These roads are every year much cut up by the rains, and ought to have turf or binding creepers planted along the slopes.

28. New platform.—The construction of a new platform was sanctioned by Government in Government Order, dated 23rd May 1867, No. 1,163, Revenue Department. Rupees 1,025 were provided in last year's Budget, but not spent. Rupees 2,500 have been provided in the Revenue Budget of this year, but I think

Proceedings of the Madras Government, Revenue Department,
13th September 1870.

it will be most advisable to transfer the work to the Department Public Works and transfer the funds also. I request sanction for this arrangement.

29. IV. Chinna Ganjam Imperial Salt-road.—The Imperial salt-road between Inkole on the Great Northern Trunk Road and Chinna Ganjam is 10 miles in length. It has an annual maintenance grant of Rupees 800. The Superintending Engineer offers no remarks on this line of communication.

30. This road nominally to Chinna Ganjam stops short 2½ miles from the village at Kodavakanduru to avoid the difficulties of a sandy ridge which the salt-traffic is left to struggle across with great labour and difficulty. Nothing has been done yet in the way of widening or metalling the road, and it is reported that there are several breaches in the road.

31. Road from Parchuru to Nekarikallu.—The salt-traffic finds its way from Inkole to Parchuru, and from thence struggles across the country to the Palnaad. In my tour through the Palnaad I found encampments of Lambadies all along the bank of the Kistna waiting to get the salt conveyed over into the Nizam's territories. Government in Government Order, dated 6th August 1869, No. 2,277, sanctioned the construction of a Local Fund Road from Parchuru to Nekarikallu on old Trunk Road No. VII., which will be of great use to the salt-traders resorting to Chinna Ganjam.

32. New Masonry Bridge.—In Government Order, dated 28th September 1869, No. 2,680, Revenue Department, Government sanctioned the construction of a masonry bridge in lieu of a weak palmyra one over the Kondur on the road between the village and the Salt Kotar. This is greatly needed, but no funds have hitherto been available. (Government Order, dated 7th October 1870, No. 3,257, Revenue Department).

33. Station Roads.—The station roads are—

(1.) Road from the village platform No. 2 and No. 3 to No. 5, length 872 yards, breadth 5 yards, expenditure in 1869-70 Rupees 22-8-0.

(2.) Road from Ankamma Cheruvu (tank) on the south-east of the village to platform No. 4, length 172 yards, breadth 6 yards. No expenditure last year.

(3.) Road between platform Nos. 3 and 4, length 560 yards, breadth 3 yards. Newly made at a cost of Rupees 52-8-0.

(4.) Road from palmyra bridge on Road No. 1 to platform No. 1, length 800 yards, breadth 3 yards. Newly constructed at a cost of Rupees 30-12-9.

These roads ought to have the side slopes turfed or planted with binding creepers.

34. Chinna Ganjam as a port.—If the Commamoro channel be made navigable by the construction of three locks, Chinna Ganjam would have great advantage as a port for the export of cotton, grain, and seeds from Guntoor and western talooks which have all now to be conveyed to Cocanada or Masulipatam for shipment. The Superintending Engineer considers that Chinna Ganjam has advantages beyond Ipurupolem; and Nizampatam to be made hereafter the port of the district.

35. Salt sales.—The following Statement shows the quantity of salt sold at each of the four stations in the district during each of the last nine years :—

Fuslies.	Nizampatam.				Chinna Ganjam.			
	Wholesale.	Retail.	Total.		Wholesale.	Retail.	Total.	
	Mds. s.	Mds. s.	Mds. s.		Mds. s.	Mds. s.	Mds. s.	
1270	62,400 0	2,62,351 3	3,24,751 3		1,58,400 0	1,43,143 29	3,01,543 29	
1271	23,581 0	2,87,200 28	3,10,787 28		.....	.....	.....	
1272	7,37,200 0	83,511 32	2,40,711 32		56,400 0	67,914 0	1,24,314 0	
1273	2,04,610 20	74,896 20	2,79,507 0		13,800 0	78,937 20	2,16,937 20	
1274	46,860 0	1,05,222 20	1,52,022 20		58,800 0	79,959 12	1,38,759 12	
1275	1,42,800 0	53,957 0	2,02,757 0		61,200 0	76,585 20	2,21,785 20	
1276	2,46,050 20	5,724 20	2,52,475 0		36,643 20	81,095 20	1,17,789 0	
1277	1,18,099 20	14,465 0	1,32,474 20		24,000 0	83,294 0	1,07,294 0	
1278	92,400 0	21,314 0	1,13,714 0		51,600 0	1,19,460 0	2,01,060 0	

Fuslies.	Pandraka.				Mangenapudi.			
	Wholesale.	Retail.	Total.		Wholesale.	Retail.	Total.	
	Mds. s.	Mds. s.	Mds. s.		Mds. s.	Mds. s.	Mds. s.	
1270	62,400 0	2,62,351 4	3,24,751 4		.....	.....	.....	
1271	23,581 0	2,87,200 28	3,10,787 28		.....	.....	.....	
1272	7,37,200 0	83,511 32	2,40,711 32		.....	.....	4,249 0	
1273	2,04,610 20	74,896 20	2,79,507 0		.....	.....	82,420 20	
1274	46,860 0	1,05,222 20	1,52,022 20		19,200 0	27,330 0	46,530 0	
1275	1,42,800 0	53,957 0	2,02,757 0		61,200 0	60,874 20	1,22,074 20	
1276	2,46,050 20	5,724 20	2,52,475 0		36,643 20	81,095 20	1,17,789 0	
1277	1,18,099 20	14,465 0	1,32,474 20		24,000 0	83,294 0	1,07,294 0	
1278	92,400 0	21,314 0	1,13,714 0		51,600 0	1,19,460 0	2,01,060 0	

36. Wastage.—The following Statement shows the average wastage discovered in the heaps sold by retail in the several stations during the past year :—

Names of Depôts.	Fusly in which the salt is stored.	No. of heaps.	Quantity in store.	Outturn.	Wastage.	Per-centage.
			Mds.	Mds.	Mds.	Mds.
Mangenapudi	1277	111	1,30,814	1,24,920	5,928	4¾
Chinna Ganjam	1277	173	2,06,440	1,88,813	17,627	8½
Nizampatam	1276	15	18,000	16,511	1,489	8¼
	1277	83	98,100	91,530	6,570	6¾
	1278	5	6,000	5,819	181	3
	.....	103	1,22,100	1,13,860	8,240	6¾
Pandraka	1276	28	31,816	29,484	2,332	7¼
	1277	8	9,600	8,992	608	6¼
	1278	3	2,940	2,824	116	4
	.....	39	44,356	41,300	3,056	6¾
Grand Total ...	.....	426	5,03,740	4,68,893	34,851	6¾

37. I have personally measured heaps myself at each station, and have found the wastage varying from 5½ to 9½ per cent. The causes of so large a wastage the Deputy-Collector in charge of the Salt Department attributes partly to the length of time some of the heaps have been in store, *i.e.*, 3 and 4 years, partly to the salt having been stored before it was properly dried in some cases, and to the inaccuracy of the machines employed when the salt was stored. The last defect will be prevented in future by the employment of a filer and fitter who visits each station in turn, and keeps all the machines in order.

It will be seen, however, that on account of the large waste the discount of 5 per cent. to wholesale purchasers is found insufficient, and wholesale transactions have greatly decreased in Pandraka and Chinna Ganjam, and have entirely ceased at Nizampatam, whereas they have considerably increased at Mangenapudi where the average wastage was only 4¾ per cent. The falling off of the sales was so great for some months at Pandraka, that I was compelled to allow the Lambadies purchasing wholesale to have a portion of heaps of last year, if they take part in older heaps also, and this seems to revive the trade.

38. Salt in store and to be manufactured.—The following Statement shows the quantity of salt in store at each station on 1st April 1870. The dittum for the year is confirmed to 140,000 Maunds at Mangenapudi, and 100,000 Maunds at Nizampatam.

Fuslies.	Pandraka.		Mangenapudi.		Nizampatam.		Chinna Ganjam.	
	No. of heaps.	Quantity.	No. of heaps.	Quantity.	No. of heaps.	Quantity.	No. of heaps.	Quantity.
		mds.		mds.		mds.		mds.
1276	4	3,796	.....	.....	.....	.....	.....	.....
1277	53	60,367	11	13,175	2	2,400	48	53,998
1278	95	1,12,077	160	1,88,993	71	83,383	213	2,53,480
	152	1,76,240	171	2,02,168	73	85,783	261	3,07,478

39. Stoppage of works.—The deficit of last year and the stoppage of works have prevented some progress being made in the opening out and repair of salt-roads, but I trust that having now brought forward the wants of the district, they may receive the attention they demand.

In this letter the Officiating Collector submits his report on the salt-roads of the Kistna District.

2. There are four salt divisions in the district—

I.—Pandraka or Bantumilly.

II.—Mangenapudi.

III.—Nizampatam.

IV.—Chinna Ganjam.

3. The approaches and station-roads appertaining to all these divisions are in a most unsatisfactory state. Mr. Boswell gives in detail the works which have been sanctioned from time to time, and points out what is now required to render them efficient. The large sums which it would take to complete all these works render it improbable that funds will be available for this purpose for a long time. The Board therefore propose to bring prominently forward such works as seem to them to be most urgently demanded.

4. Pandraka.—The works in connection with this division named by the Collector are—

(1.) Imperial road No. 4 from Bantumilly to Argollu *viâ* Gudiwada, 32 miles.

(2.) Salt-station roads.

(3.) Still-water channel to platforms.

(4.) Opening the mouth of the salt-creek.

(5.) New Salt Cutcherry.

5. The salt produced in this division is all spontaneous, and the trade is almost exclusively carried on by the Brinjaries who employ pack-bullocks and not bandies; the first consideration therefore is to afford these Brinjaries ready access to the stores.

6. The only line of approach is by the Imperial road No. 4. This road runs for 32 miles across the delta chiefly over black soil, with here and there a strip of sand; it crosses many irrigation channels, and unless its bridges are maintained it becomes useless.

Proceedings of the Madras Government, Revenue Department, 13th September 1870.

7. The bridge chiefly wanted is that over the Polraz channel near Vadaly, but, as shown in paragraph 5 of Mr. Boswell's letter, this can be provided for out of Local Funds as part of the Local Fund Road from Vadaly to Kykalur. An estimate for the construction of this bridge should be submitted with the least possible delay. All the other works required necessarily belong to the Imperial Budget.

8. The extension of the road from the Bantumilly channel to the village of Bantumilly, the bridge near Tummidy, as well as that near Argollu, should be provided and the breaches repaired. The road is no where metalled, nor do the Board recommend that this expense should be incurred at present; but they feel strongly that unless the road is fairly maintained, the salt-revenue of that division will be seriously jeopardized. The station-roads, the still-water channel, and Cutcherry may be postponed, but the repairs to the roads should be undertaken at once. Should Imperial Funds not be at present available, a loan from the District Road Fund might be granted.

9. The Board do not recommend any expenditure to be incurred in opening the river-mouth. Experience shows that when nature fails to keep open these creeks, any moderate outlay of money and labour is generally useless: the mouth of the Kottern is not the only inlet whence salt-water flows into the Bantumilly swamps; it was closed or nearly so for years before 1864. The road from Bantumilly to Kotampara platform is not very urgent, and may be postponed.

10. II. Mangenapudi.—This station is about 5 miles north of Masulipatam. The salt here is all manufactured, and is chiefly used for the supply of Masulipatam and the adjoining district.

11. The works needed here are as stated by the Collector—

(1.) Road to Masulipatam.

(2.) Road to Bantumilly.

(3.) Canal to Masulipatam.

(4.) Moat round the works.

(5.) Station-roads, and (6) Canal to Cona.

12. A road was some time ago lined out from Masulipatam, but it was never metalled, and as it passes over a tract of almost pure sand, it is of course very heavy for bandy-traffic. A canal to connect the salt stores with the Kistna Canal at Masulipatam was also projected and commenced. The estimated cost was 61,000 Rupees, and the work had the treble object of (1) giving water-communication with the salt stores; (2) affording irrigation to a swampy tract between Masulipatam and the sea; and (3) of affording by means of its bank protection to Masulipatam against inundations from the sea. The canal, as a salt communication, would be most advantageous if it could be constructed at a moderate cost, as by its means salt would be conveyed not only to the town of Masulipatam but to every part of the district reached by the canals.

13. It is desirable that this project should be re-examined with a view to determine if it could not be constructed for a less sum than Rupees 61,000, or if it could be made remunerative as an irrigation work as well.

14. In the meantime, however, the road should certainly be made. It is not in the list of Imperial roads, and may therefore be made from Local Funds as a district road.

15. The difficulty of making and maintaining roads suited for heavy traffic on sandy ridges, such as that over which the road from Masulipatam to Mangenapudi lies is very great, owing to the scarcity and bad quality of the metal procurable. A fair cart-road may, however, be formed of an admixture of black mud, which is abundant in the swamps adjoining, with the sand with a coating of the best metal procurable.

16. The Collector will obtain and submit an estimate for such a road as soon as possible. The road should run from Masulipatam to the further end of the salt-pans.

17. The road to Bantumilly, the moat round the works, the station-roads, and the Cona Canal, all useful works in their way, are not so urgent and may be postponed. The last work was designed for the destruction of spontaneous salt which forms at times in large quantities at Cona south of Masulipatam in a spot so inaccessible that it is most expensive to collect and guard it, and its destruction is therefore preferable.

18. It, however, appears from the map that a short branch road from Mangenapudi to Pedanna, about 4 miles inland, would be of much use; it would there join the district road from Masulipatam to Gudiwada *via* Kowtarum and convey salt to the villages of the delta on that line.

19. III.—Nizampatam lies to the south of Masulipatam and of the Kistna river. Salt is kept here for export by sea; but it is not a favourite port for shipping, and no salt is now ever exported.

It is, however, the chief depôt for the supply of the Repally, a part of Bapatla and Guntoor Talooks, and being on the canal large quantities are taken by boat up to Bezwada, and thence by the Kistna as far as Muktiyala near Juggiahpetta for the supply of the Hyderabad market.

20. The works needed here as given by the Collector are—

(1.) New wharf.
(2.) Road to Guntoor.
(3.) Road to Voleru *via* Repally.
(4.) Road to Bapatla.
(5.) Station-roads.
(6.) New platforms.

21. The old wharf constructed for the sea-trade was washed away in 1864. A new one is much needed for loading canal-boats from, and should be constructed at once; it is an imperial work, and was commenced last year, but stopped. Funds should be provided as soon as possible.

22. Road to Guntoor.—There is a fairly good road from Guntoor as far as Chandole (*Vendole* in Budget of 1870-71,) there remains 10 miles to complete it up

to Nizampatam. It is not an imperial line, and should be made from the District Road Fund. The Collector should obtain and submit an estimate for putting it in good order. It runs entirely on sandy soil, and the same remarks apply as to the Masulipatam and Mangenapudi roads.

23. The remarks of the Collector, in paragraphs 19 to 23 on the action of the Department Public Works as regards the crossing of the canal on this line of road, deserve the serious attention of Government.

It appears that the Talook Overseer directed that the passage by carts of the canal on this line should be prevented, unless the villagers of Chandole agreed to pay for the repairs of the channel-bunds, and the result was that the Chandole villagers levied a cess on all bandies crossing the canal to meet the demands of the Department Public Works on themselves. The Government will not fail to observe that Colonel Moberly not only acknowledged but defended the line of conduct adopted by his subordinate. The hardships which the people of the Kistna Delta suffer from the want of proper means of crossing the canals are sufficiently great without their being aggravated by arbitrary and illegal exactions such as the above.

24. The roads to Volara via Repally and Bapatla are both useful lines both for salt and district purposes, and should be proceeded with as district roads as rapidly as convenient; they are not, however, emergent as salt-works.

25. The station-roads (or rather paths) require to be kept in order and a new one to direct the general traffic of the town outside the stores is much wanted. The new platform will concentrate the stores when made, and cause a large saving in the cost of guarding the salt; it should be proceeded with when funds are available, but it is not urgent.

26. IV. Chinna Ganjam is still further to the south, on the borders of the Nellore District. The works here reported as needing repair are—

(I.) The Imperial salt road from Inkole on Trunk Road No. VI. to Chinna Ganjam. The Collector correctly states that this road stops short by 2 miles of its destination. Between the terminus at Kodavukoduru and Chinna Ganjam intervenes a high ridge of pure sand almost impassable to laden carts. The necessity of making this piece of road has been often pointed out by former Collectors; it is needed not only as a salt-road, but also as a feeder to the port of Motupilly. As a portion of the recognized imperial line it is clearly an imperial charge, and it cannot be left unmade without serious risk to the salt collections.

(II.) Road from Parchuru to Nekarikallu. This is needed to take the salt away inland, but it has not been entered as an imperial line, and may therefore be undertaken from Local Funds.

(III.) New masonry bridge to supersede an old palmyra bridge between the pans and the town; this should be done at once.

(IV.) Station-roads are much needed in connection with the road across the sand ridge.

27. The Collector in conclusion alludes to the large per-centage of wastage in the salt at Pandraka, Chinna Ganjam, and Nizampatam, and to the fact that sales by wholesale have almost ceased in consequence.

28. It would be more convenient to make this the subject of a separate report; but it is most desirable to encourage sales by whole heaps, and the Collector should consider if it is advisable to recommend that he should have discretion to give a higher rate of discount on salt that has been long in store.

29. It will be as well briefly to re-capitulate the most urgent wants of the different salt-stations in the way of communications.

Pandraka alias Bantumilly.

1. The Imperial salt-road from Bantumilly to Argollu urgently demands repair and some additional bridges, the bridge over the Polraz channel on that line being provided from Local Funds.

Mangenapudi.

1. The road to Masulipatam from District Road Funds should be made at once.

2. The canal project should be carefully re-examined.

3. A road should be made from District Road Funds from Mangenapudi to Pedanna.

Nizampatam.

1. The road from Chandole to Nizampatam should at once be made from District Road Funds.

2. The new wharf at once constructed from Imperial Funds; and

3. A road made to conduct the local traffic outside the salt stores.

Chinna Ganjam.

1. The Imperial salt-road from Inkole should be put in good order, (it is the only line by which traffic can cross the great Romperu swamp), and it should be extended over the sand-ridge to the salt-platforms.

2. The palmyra bridge across the Kunderu should be re-placed by one of masonry.

No. 177. ORDER THEREON, 13th September 1870, No. 1,452.

Separate Revenue, No. 7.
1870.

THE Government approve of the orders passed by the Board of Revenue in the foregoing Proceedings, relative to the execution of such of the salt-roads urgently required in the Kistna District as are to be undertaken from Local Funds; and for the reasons explained in paragraph 12, they concur with the Board in thinking that the project for connecting the salt-stores with the Kistna Canal at Masulipatam should be re-examined, with a view to its being considered whether it cannot be carried out at a smaller outlay than Rupees 61,000, the amount of the original estimate, and be also rendered re-productive as an irrigation work.

2. Adverting to paragraph 23 the Government resolve to direct that Colonel Moberly be called upon, in the Public Works Department, for such further explanation as he may wish to offer with reference to the improper prohibition of the passage of carts across the Nizampatam Canal. In the meanwhile, orders will be issued in that department for the immediate removal of this prohibition.

3. With regard to the other emergent salt-works referred to by the Board, and which appertain to the Imperial Budget, the Government desire that plans and estimates thereof, together with a sketch of the country in which they are to be undertaken, be submitted to enable them to determine as to which of these works may be executed at once, and from what source the requisite funds should be provided.

4. The subject of paragraph 21 of the Board's Proceedings will be considered in the Public Works Department.

(True Extract.)

(Signed) H. E. STOKES,
Under-Secretary to Government.

Proceedings of the Madras Government, Revenue Department, 13th September 1870.

To the Board of Revenue.
,, the Public Works Department.

Rd. F. R. Bantleman.

No. 2556.

For Mr. [illegible] orders

Plans & Estimates should be called for with a sketch of the country. Govt. can then decide what works should be undertaken & from what source funds should be provided.

Col. Nedsley shd be called on for any further explanation he may desire to offer. & meanwhile the embargo

In the present state of P.W. fund it is almost hopeless to expect that any of the urgent works can be undertaken from Imperial Funds. The Bd's orders in regard to the local fund works may, it is submitted, be approved and some notice taken of the improper action of Major Nedsley's subordinate.

R.W.

Should be [illegible]

J. D. S.

For Mr. [illegible]

[illegible]

[illegible]

[illegible]

[illegible] 24 Aug/70 [illegible]

No. 1452

Revenue Depart.

Proceedings of the Madras Government.

Under date the 13 Septr 1870

Read the following Proceedings of the Board of Revenue

Submg. with remarks, report on Salt Roads in Kistna Dt, for 1869/70 } H. E. 6 Augt. 1870. No. 5,202

The Govt. approve of the orders passed by the Board of Revenue in the foregoing Proceedings, relative to the execution of such of the Salt ~~works~~ roads urgently required in the Kistna District as are to be undertaken from Local Funds; and, for the reasons explained in para 12, they concur with the Board in thinking that the project

N

J. D. S.

A. J. A.

^ I would add "owing to their subserving local interests & not being solely or mainly for improving the Salt Revenue should, &c"

I hardly think that there is any use in [illegible] this. [illegible] works very largely [illegible] salt roads on [illegible] will have to be kept up from the Local funds. It cannot be said of any salt road that it does not subserve local interests. for W. A. J. A.

for connecting the Salt
Stores with the Kistna Canal
at Masulipatam should
be re-examined, with a
view to its being considered
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the Govt desire that
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may be executed at once,
and from what source
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be provided.

4. The subject of para
21 of the Board's Proceedings
will be considered in
the P.W. Department

14 To the Bd of Rev Despt 22d
21 —— Bd Despt 8

55/4