

Local & Munl. (1896) Department.

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[Despatch Abstract.]

*Inspection Notes Recording, with remarks,
Sanitary Commissioner's — on the Kumba
Kanam Municipality.*

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

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Government { 1896 } of Madras. LOCAL AND MUNICIPAL.

A.S.
For approval.

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G.O., No. 1633 M., 23rd September 1896.

SEPTEMBER.

Inspection Notes.

Recording, with remarks, Sanitary Commissioner's — on the Kumbakonam Municipality.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper:—

From M.R.Ry. T. S. SIVASAMY ODAYAR, Avargal, Chairman, Municipal Council, Kumbakonam, to the Chief Secretary to Government (through the Sub-Collector and the Collector of Tanjore), dated Kumbakonam, 3rd July 1896, No. 200.

I have the honour to forward herewith the inspection notes of the Sanitary Commissioner, dated 21st April 1896, with the Chairman's remarks and with a copy of the resolution of the council thereon.

ENCLOSURES.

INSPECTION NOTES of the Sanitary Commissioner for Madras.

TANJORE DISTRICT.

KUMBAKONAM MUNICIPALITY.

Inspected 7th to 10th December 1895.

Population per census of 1891

Inspection Notes.

Roads.—The chief roads are of laterite, but a considerable number of important thoroughfares are mere sandy tracks. The laterite is imported by rail from Tanjore. The municipality should consult an Engineer as to the possibility of making the part of their roads subjected to most traffic of brick, after the manner pursued in America. The life of these roads of course differs within certain bounds, but a fair average may be said to be about 8½ years. An estimate should be framed taking into consideration the total cost of making and maintaining laterite roads during the same period. It would doubtless not pay to pave the full breadth; but it is well worth consideration whether the middle portion might not be thus treated with ultimate economy. As stated in my last report stone tramways offer an alternative. It seems most desirable, in view of the large sums expended on roads, that these questions should be carefully sifted.

2. Dwellings.—These are chiefly built in squares. In no case should this form be permitted by the municipal council in dealing with new dwellings or additions to existing dwellings, under section 180.

Hindu dwellings are built according to certain religious principles which cannot be overriden. The council will see that proper ventilation, latrine and other accommodation are provided as under section 180 of Act IV of 1884.

It is desirable that more durable material than that now used should be got for the roads. An experiment will however be made with better metal at a higher cost at least for the main roads. The council is fully alive to the advantages of the suggestions made by the Sanitary Commissioner in regard to the roads generally; but financial considerations prevent their being undertaken at present.

Chairman's Remarks.

Inspection Notes.

Chairman's Remarks.

3. **Water-supply.**—The following is a description of the chief sources of water-supply of this town:—

(a) **Peri Kōlam.**—This receives the drainage of neighbouring houses. The washing of clothing proceeds here. It has a dust-bin placed on the side of it. Water is removed thence for "domestic purposes."

(b) **Tikal Kōlam.**—This is used for drinking purposes. It receives drainage from houses direct. On the steps forming the ghāt, human faecal matter and rubbish were found.

(c) **Mahamakha Tank.**—This is supplied by a channel. Along its edges even up to the tank there were deposits of town rubbish. In the early morning, its vicinity is used as a latrine. The feeding channel passes at the backs of houses; within every backyard of these were to be found deposits of rubbish and faecal matter. Progress along the bank became ultimately impossible owing to the collections of filth. It is the custom of the higher castes living in this neighbourhood thus to get rid of the inconvenience of having a low-caste man coming into their backyards by launching their filth into the channel-bed or its immediate edge. The tank supplied by this channel is esteemed holy. Washing of clothing is allowed to proceed within the tank.

(d) **The Arasilār River.**—Here bathing, washing and the taking of drinking-water proceed without the slightest regard to sanitary requirements. Close to the ghāt was found the old easement place of the neighbourhood in the same condition as when last inspected. There was, however, found a watchman who, on being examined as to the duties expected of him, could give but a very imperfect account. As, however, the appointment of a watchman is a new departure that had been put in force only two days before my arrival to inspect the town, it can be understood that he was not very familiar with the duties supposed to be required of him. I advised a very simple and cheap form of filter to be used for the water to be placed on the bank. This seemed to me reasonable enough; but the municipality having declared the people will not use it, I no longer press the point beyond stating I should have been better convinced of the fact if the experiment had been tried.

(e) In the **Pariehs'** quarter, there is a channel used as a drinking-water source which necessarily is much contaminated by receipt of drainage from the surroundings.

(f) **Vanadorai New Road Well.**—This is a new structure made by the municipality. It presumably cost less than Rs. 200, as no plan or estimate was, to my knowledge, placed before the Sanitary Board. Its structure is not such as the Sanitary Board would have passed, the steining being of pervious brick. No platform has been provided, whilst the place

The council never intended that the people should use the water of the tanks or canals referred to in the notes for drinking purposes. The greater facility afforded by these sources is an inducement to use them. The ignorance of ages cannot be cured even in a generation. Offer good water in a well in preference to polluted water in a stream, the people are sure to use the latter and avoid the former. In order to prevent people from using the water of polluted sources, the only means is to close all such sources, which in the present state of the finances of this council is not easy of accomplishment. The municipality might fix certain points in the river from which alone water for drinking purposes might be taken. In practice, the ignorant inhabitants who go to rivers for bathing would readily fill their pots in the very spots where large numbers bathe and wash their clothes rather than walk a length, however small, for getting a purer supply.

Inspection Notes.

selected for sinking was within a paddy field. The level of the paddy-field water and that of the well was the same at date of inspection.

(g) *Kongyan Tank*.—The tank has houses upon its banks. There are frequent deposits of faecal matter all over the banks. When examining the tank, a man was caught in the act of making his ablutions, for performing which he had good cause. This tank is used for drinking and "domestic purposes." In a case brought before the Bench Magistrates, a man was charged with throwing rubbish on the channel bank. The case had however to be transferred, as the Bench Magistrate could not see that harm could result from deposit of town rubbish in this manner.

(h) *Pottamarai Tank*.—This is another sacred tank. Faecal matter is found on the banks up to the temple door. Within the tank is a considerable amount of leaf plates, said to have reached there as a result of transfer from dust-bins by the wind, but in such amount as to make one more inclined to believe that they have been deliberately thrown in there, as an easier way of getting rid of rubbish than proceeding to the dust-bin of the locality. The stench from this tank is most abominable. It is used for washing of clothing and for bathing of pilgrims. The condition of this tank shows that it has been much neglected by the municipality; but I understand its rights of control are limited.

(i) *The Papa Tank*, which was made by a Pariah lately, seems to me the only tank with any approach to cleanliness in the whole town. But even here I found that the owner had not fulfilled his promises formerly made to me as to preventing the washing of clothing side by side with use of the water for drinking and other domestic purposes.

(j) *The Tirunavasaram Well* still possesses the broad parapet I called attention to in my last inspection notes. Persons stand upon it and thus secure defilement of the water.

(k) *Iyee Kōlam*.—This was one of the chief sources of drinking-water supply. Its feeding channel is open to contamination. In the last epidemic of cholera on one day twenty persons drinking water from this source were attacked with cholera. It was then shut up on the advice of the local medical officer, Civil Apothecary Wright. Within three days no further attacks took place.

(l) It will be seen from the above description that the public water supplies of this town are in an inexpressibly filthy and insanitary condition, and that unless an inhabitant chose to send to some point above the town, it would be impossible for him to obtain even water from the river in a condition otherwise than contaminated by bathing and washing of clothing. I again invite the municipality to fix certain spots for drinking purposes and others lower down the river for washing.

Chairman's Remarks.

Inspection Notes.

4. *Sewerage*.—(a) A proposal is now before the Sanitary Board for disposal of the sewage from street drains. The disposal of sewage from Solayappa Mudali street on the neighbouring gardens would offer still less difficulty, and would cost the municipality practically nothing beyond the purchase of the land under the Land Acquisition Act, provided the owners will, as at present, persist in refusing to utilize it. This is a matter that should receive attention. The sewage from Ramaswami street could also be discharged upon poramboke land.

(b) In Silk-weavers' street considerable difficulty is evidently experienced by householders as to disposal of sewage. In the case of one house-holder, the municipality will not permit of the sewage passing on to the street, whilst there is not room for disposal within the premises. Under these circumstances, the use of impervious cesspools according to the standard plan of the Sanitary Board, and the insisting by the municipality that regular cleansing is effected, would be the only, although unsatisfactory, alternative. But I consider, if the sewage is correctly filtered within the house before discharge, that the municipality might well allow the effluent to pass upon the road for disposal by soakage. This would be better than allowing this crude sewage to pass as at present within the soil of the very limited premises.

(c) In contrast with the difficulties experienced with this man, I found that the "late Tahsildar" is allowed to continue the practice of having a cesspool away from his house on the opposite side of the road. Overflow therefrom is a nuisance. I advised in my last notes that either this cesspool should be abolished or it should be correctly built. The latter object can be fulfilled under section 214 by the municipality, and I see no good ground why this should be allowed to drift as suggested by the municipal council in their reply to my last notes, paragraph 2 (4), that "the Tahsildar's house would cease to be a nuisance when the sewage scheme is completed," the chances of this being completed within the days of the present generation being very small.

(d) The drainage scheme, which was completed at a cost of Rs. 1,12,489, has been found to afford some measure of relief during rainfall and probably the sub-soil water is reduced in level within a certain distance from drains. The drains being simply unlined trenches, it follows that much silting occurs. Apparently, the municipality means to meet this contingency by spending lump sums from time to time. It seems to me, however, that it would be impossible to keep the trenches in order unless a staff be constantly employed. A gang of coolies should be placed permanently at the disposal of the overseer in charge, and he should be held responsible for the correct grading of the trenches and the turfing of their sides, without constant attention to which they will rapidly become more irregular

Chairman's Remarks.

The plans and estimates in connection with the sewage of Solayappa Mudali street have received the sanction of Government, and the work will be put in hand at an early date. I think that the use of the domestic filter would be a cheaper method. The number of houses for which the scheme is now sanctioned is only forty-three. At this rate a considerable sum will have to be spent for a complete scheme for the town. This must launch the municipality into utter bankruptcy.

The Vizagapatam filter will be tried wherever necessary.

Vide remarks against (b).

Arrangements will be made for clearing the silt as proposed by the Sanitary Commissioner. The other suggestions of the Sanitary Commissioner will receive the careful attention of the council.

Inspection Notes.

than they are at present. There are several localities which could receive some benefit from the drainage system if it were extended. In certain parts, the channel is silted to the extent of one foot. The Ellaguti area is flooded with surface water, and, although within a short distance of the channel, it is so much silted at this point as to be of no use. Such areas should receive first attention.

5. *Conservancy—(a) Night-soil Conservancy.* There are twenty-four latrines in the municipality, but from what I saw during my inspection the normal way of disposal of the latrine question is for each person to attend to the calls of nature by simply squatting outside his own door. I saw respectable, high-caste natives stand perfectly unconcerned at their front doors with filth of this nature within their visual and nasal range. I am disposed to believe that much of this foul habit is due to the want of correct provision of latrines by the municipality. Not less than thirty extra latrines over and above those now in existence should be erected. A latrine near the Pottamarai tank would be very desirable.

(b) To attend to the twenty-four latrines there are twenty-five toties; besides these twenty-five are detailed to collect faecal matter from the streets—a very necessary measure in so filthy a town. In addition to these, four toties are employed upon the bank of the river Arasilár. Even this staff would appear not to give their whole time to the municipality, as numbers receive only Rs. 3 per mensem pay, and consequently depart by 8 A.M. to get work from private individuals.

(c) Seventeen carts of a united capacity of 238 cubic feet are employed by the municipal council to remove in two trips 564 cubic feet of solid excreta, omitting from all calculation urine and extraneous matter. It is therefore evident that not less than three additional carts of 14 cubic feet each are requisite.

(d) Nine mounted buckets plus five unmounted conservancy buckets I found in the municipal stores unemployed. These certainly ought to be put to account. They would be most useful in private scavenging.

(e) *Private Scavenging.*—Only 626 out of a total of 7,946 occupied houses are attended to under the private scavenging system. Disposal in backyards and on banks of channels is the method pursued in many houses, that should have before now embraced the private scavenging system.

(f) The menial staff consists of seventeen female plus thirteen male toties to attend to 626 houses, or at the rate of 21 houses to be attended to by each toty. If correctly supervised, each toty could attend double the number.

Chairman's Remarks.

It is not possible to have all the thirty additional latrines built at once. Year after year some additions will be made which eventually may reach the number regarded adequate by the Sanitary Commissioner. During the current year at least three latrines will be constructed.

Two toties are employed on the bank of the Arasilár and two on the northern bank of the Cauvery. The latrine toties are at present paid Rs. 6 and Rs. 5 according to the size of the latrines. The river bank toties receive each Rs. 4 and the street toties Rs. 3 each. The street toties being meant only to remove the faecal matter placed in the streets during the night, it does not appear necessary to pay them more than what they get at present. I should, however, think that the existence of street toties only facilitates the commission of nuisance in the streets.

Eighteen carts are now employed. Gradually it is possible to increase the carts. To do it all at once will create financial difficulties.

The mounted buckets will be used as pointed out.

The number of houses served by the private scavenging agency was 846 on the 31st March 1896, and every endeavour will be made to increase the number. It is not possible to secure the services of toties who would clean more than twenty houses for Rs. 3.

The number of toties now employed under the private scavenging agency is as follows:—
10 toties on Rs. 4 each per mensem.
21 " " 3½ " "
4 " " 3 " "

A private scavenging maistry has also been appointed to supervise the work of the toties.

Inspection Notes.

Chairman's Remarks.

(g) In certain towns in the north of the Presidency, families own private latrines apart from their houses. It is usual for many of these to be grouped together. It would be an excellent system to arrange for the erection of private latrines in groups in this manner, and charge a sum above actual cost of scavenging that would by instalments meet the total cost.

(h) The extension of the private scavenging system is a matter that should receive the earnest attention of the municipal council, and I would invite attention to G.O., No. 749 M., dated 13th June 1894.

(i) *Rubbish Collections.*—There are 253 movable and 170 masonry-built dust-bins. The latter should be replaced from year to year by the corrugated-iron dust-bins now generally used in municipalities. If the municipal council think they can successfully organize the collection of rubbish by requiring each householder to have a "separate receptacle" kept at his door at a certain hour in the morning, it would, I think, suit caste prejudices well, instead of requiring that the householder should send his rubbish to the nearest dust-bins. In using public dust-bins, the majority of caste women consider it an act of merit to stand as far off as possible when shooting their rubbish, thus frequently missing their mark.

(j) The animals employed to draw the night-soil and rubbish carts are of the most miserable and puny description. The drivers are in many cases mere boys.

(k) *Night-soil and Rubbish Depot.*—This was maintained in a discreditable manner. Rubbish was found thrown helter-skelter on the ground, whilst faecal matter was chucked into natural holes in the soil. The chief sanitary inspector is a trained man, and I have no doubt, if the municipality supplied him with a correct portion of land and labour, he would be able to show how a night-soil and rubbish depot can be kept in good order.

(l) The Oodayarpollum road leading to the night-soil depot, which is said to belong to the district board, was found in very bad condition.

6. *Markets—(a) Meat Market.*—The arrangements are evil. The pyals are mere pervious brick structures; no drains are provided; the butchers use old ropes to suspend their meat from; the enclosure is of sandy soil. The pyals should be cement plastered as well as the walls, which latter should subsequently be painted with silicate white paint. The dirty old boards on which meat is exposed should be abolished, and polished Cuddapah or Shahabad slabs should replace them at municipal expense. In Madras, such slabs cost As. 11 per square foot. Glazed tiles bedded in cement would also suit.

(b) As regards the pyals for the Fish Market the remarks made as to the meat market apply

The council does not consider the suggestion feasible at present.

Vide remarks against (e).

The masonry dust-bins will be replaced by corrugated-iron bins. The "separate receptacle" system will be enforced in all possible cases.

Better bulls are now employed than those formerly in use.

The council has sanctioned the appointment of two toties to be employed on "trenching" alone. Endeavours will be made to acquire land for the purpose. The difficulty is in securing the required area of dry land in the neighbourhood of the town.

The improvement of the markets on the lines suggested by the Sanitary Commissioner will receive the attention of the council.

Inspection Notes.

here also. The water-supply of this market is gained from an open well with a pervious lining within eight yards of a public "open space" latrine. This well should be shut, its position being dangerous.

(c) In godowns Nos. 10 and 11 of the market, I found skins stored. No license was held by the owner. The storing of skins in this locality is a most dangerous proceeding and is, with reference to transmission of anthrax, dangerous, and should be at once put a stop to.

(d) *Vegetable Market.*—The whole space is below the level of the surrounding ground. It consists of plain pyals with thatched roofing. As soon as funds are available, a new vegetable market should be formed.

(e) The making of markets is usually a safe investment for municipalities irrespective of the sanitary benefits derivable, and I see no reason to think Kumbakonam would prove an exception in this respect.

(f) The rubbish from this market is thrown immediately outside the market on the banks of the river near the drinking-water ghât. A more unsuitable way of disposing of it could hardly have been thought of.

7. *Offensive Trades.*—I have already noticed the neglect to license and secure correct places for the storage of skins. Similarly, under section 188 (ii), which provides that "cattle-sheds" shall be licensed, the municipality should devote more attention to the sanitary conditions under which cows are kept. Thus, at Yeddi street, though land is available and is suitably situated for disposing of sewage upon it, the removal of sewage is carried out very imperfectly. The municipality should consult the Sanitary Board on the question of removal of the sewage for disposal on the adjoining land or by filtration. This having been accomplished, each cattle-shed should be carefully prepared with impervious flooring; correct drains and sources of water-supply and correct means of ventilation for the animals should be provided before licenses are granted. Only by attention to such details can the health of the animals be maintained in a manner compatible with the yielding of milk safe for public consumption.

8. *Graveyards.*—(a) *Periabandi Graveyard and Cremation-ground.*—The ground here is much over-stocked with graves. This graveyard is above the ghâts used for drinking-water. It is therefore most desirable that it should be closed absolutely for burial. Cremation also should not be practised unless the supervision and apparatus used is of a very special character. I understand that at Howrah a crematorium is employed by natives that fulfils requirements. The bathing of persons and their clothing in the river after attendance upon funerals direct in the river at this point should be certainly put a stop to.

Chairman's Remarks.

Care will be taken to avoid throwing the rubbish of the vegetable market into the river.

The rules in regard to cattle-sheds will be enforced rigorously.

The council has simply to repeat its remarks on the inspection notes of previous years in regard to the removal of the cremation-ground on the northern bank of the Cauvery. Endeavours may be made to remove the burial-ground attached to this to a distant place, if there is no opposition to the same.

Inspection Notes.

(b) *Alaidi Cremation-ground* is badly situated with respect to the river. It should be further removed from the bank.

(c) *The Arsilâr burning ground* is practically in the bed of the river. A new position should be chosen.

9. *Vaccination.*—(a) Civil Apothecary Wright has for some years past displayed considerable attention to the direction of vaccination. The following is the result of compulsory vaccination in regard to children under one year of age:—

Total births during the preceding six months, i.e., from January to June 1895.	Number vaccinated successfully.	Number vaccinated unsuccessfully for the first time.	Number vaccinated a second time because first operation proved unsuccessful.		Postponed on medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccine operations to total births per cent.
			Successful.	Unsuccessful.					
872	373	8	3	..	..	232	171	32	43.11

(b) There seems to be a considerable number of children below ten years of age to be still reached by compulsory vaccination, and I advise a census be taken from house to house with the object of ascertaining the facts accordingly.

(c) The work, under G.O., No. 1502 M., dated 19th October 1894, is delegated entirely to vaccinators. In my opinion, in so important a matter as the working of the compulsory clauses the Municipal Chairman should retain the whole working in his hands, merely relying upon the vaccinating staff for performing the necessary operations and ascertaining and registering the results.

10. *Registration.*—The following table shows the results obtained by registration of vital statistics during the last three years:—

Years.	Ratio of births per mille of estimated population.	Ratio of deaths per mille of estimated population.	Percentage of deaths from						Ratio of deaths of infants under one year of age per mille to registered births in the preceding year.
			Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Injuries.	All other causes.	
1893	31.9	35.4	19.8	1.3	14.5	11.6	0.7	52.1	231.9
1894	28.3	36.3	17.3	0.5	18.9	10.0	0.5	52.8	275.4
1895	31.8	30.0	3.2	0.7	21.9	11.4	0.7	62.1	310.0

The great mortality from bowel complaints is obviously due to the foul and damp soil of this town plus the use of water contaminated in every conceivable manner. The following

Inspection Notes.

here also. The water-supply of this market is gained from an open well with a pervious lining within eight yards of a public "open space" latrine. This well should be shut, its position being dangerous.

(c) In godowns Nos. 10 and 11 of the market, I found skins stored. No license was held by the owner. The storing of skins in this locality is a most dangerous proceeding and is, with reference to transmission of anthrax, dangerous, and should be at once put a stop to.

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Chairman's Remarks.

(b) *Alaidi Cremation-ground* is badly situated with respect to the river. It should be further removed from the bank.

(c) *The Arsildr burning ground* is practically in the bed of the river. A new position should be chosen.

9. *Vaccination*.—(a) Civil Apothecary Wright has for some years past displayed considerable attention to the direction of vaccination. The following is the result of compulsory vaccination in regard to children under one year of age:—

Total births during the preceding six months, i.e., from January to June 1895.	Number vaccinated successfully.	Number vaccinated unsuccessfully for the first time.	Number vaccinated a second time because first operation proved unsuccessful.	Postponed on medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccine operations to total births per cent.
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(c) The work, under G.O., No. 1502 M., dated 19th October 1894, is delegated entirely to vaccinators. In my opinion, in so important a matter as the working of the compulsory clauses the Municipal Chairman should retain the whole working in his hands, merely relying upon the vaccinating staff for performing the necessary operations and ascertaining and registering the results.

10. *Registration*.—The following table shows the results obtained by registration of vital statistics during the last three years:—

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The great mortality from bowel complaints is obviously due to the foul and damp soil of this town plus the use of water contaminated in every conceivable manner. The following

Inspection Notes.

shows the extent to which the preventable disease of cholera has demanded its victims in this municipality:—

Years.	Number of deaths.	Rate per mille of population.
1886		
1887	90	1.7
1888	346	6.9
1889	120	2.3
1890	129	2.5
1891	188	3.8
1892	146	2.7
1893	389	7.2
1894	251	6.5
1895	55	1.0

Chairman's Remarks.

In regard to water-supply the opinion of the council, as expressed in the resolution of the 10th December 1895, was that an investigation should be made in respect of a suitable water-supply for this town. This resolution has subsequently been cancelled. I have, however, forwarded both the resolutions to Government for its decision—vide my letter, No. 169, dated 16th June 1896.

11. Sanitary Administration.—(a) It is obvious, from the above description, the municipal arrangements for conservancy and water-supply are so defective as to suggest that the inhabitants of this town, which contains so large a proportion of educated men, have failed signally to grasp the fact that common cleanliness must be the foundation of social advance of a community. It is in a town thus deficient in sanitary efforts as to water-supply and conservancy that probably 800,000 to 1,000,000 persons may assemble next February for the Mahamagam festival. This festival occurs but once in twelve years, and, as the date is auspicious, a larger assembly than usual must be expected, especially as railway communication is now good. At a special meeting of the council before I left the town after my inspection, I pleaded the necessity for a water-supply scheme being undertaken without delay. I specially pointed out how desirable it would be that some attempt should be made to undertake the scheme, so that, in so far as the laying of pipes or the making of head works was concerned, some advance should be made. I, however, found a strong party in the council who regard a scheme by which the open tanks of the town shall be kept full as that which offers the best solution of the question for a permanent supply. This, I need not say, is absolutely opposed to all sanitary dictates, and that it is hopeless to expect any efficient sanitary results for expenditure made unless the water brought to the town be protected from pollution. In the end, however, a resolution was passed to the effect that Government would be requested to direct that investigation of a water scheme be undertaken. I could not, therefore, persuade the council to advise that efforts be made to ascertain how far any permanent scheme could by partial completion aid in securing a safe supply during the Mahamagam. My object in pressing this point was with a view to economy. However, as matters stand, I trust the council will see that its duty towards its townspeople and the huge concourse that may assemble dictates that some arrangement be arrived at that will secure a fairly pure water-supply during that important period.

Inspection Notes.

Chairman's Remarks.

(b) In the absence, therefore, of willingness on the part of the municipality to undertake any part of a permanent scheme, some temporary measures are certainly required urgently. For example, the use of the Pottamarai and Mahamakha tanks being part of the religious observance, they must be supplied with a certain amount of water. At the last Mahamagam festival the water having been pumped out to within three feet for the sake of safety, the number of bathers was so great that, after wetting skins and clothes, nothing but the muddy bottom in which the people wallowed remained. It should therefore be possible to have a temporary line of pipes from the Cauvery to these tanks for their supply and re-filling as necessary with clear water during use. Secondly, this line of pipes might be extended to certain parts of the town, discharging into cisterns from which the people could be supplied by taps. In other parts of the town the free use of Norton's tube wells and the closure of other sources of supply would seem essential. It ought to be possible, as a temporary expedient, to secure the water required from rough infiltration beds within the sub-stream of the Cauvery. These are matters that will require careful working out by an Engineer, and it would be advisable that, if the council agree with this general idea, they should request Government to depute an officer to make the necessary plans and estimates without delay. When the prime want of a protected water-supply is secured, I shall be in a position to enter into other questions concerning preparations for the forthcoming festival in consultation with the council.

(c) In the meantime, it is essential that efforts should be made to place the conservancy of the town in respect to requirements of the normal population in correct condition. The following is a list of the latrines, menial staff and plant I consider requisite:—

	No.
Public latrines	56
Toties	113
Sweepers	56
Night-soil carts of 14 cubic feet capacity	20

(d) As an expeditious, cleanly and economical method of transporting night-soil from the town, in that cartage will be saved, I would advise the adoption of Shone's ejectors to the extent of four serving a main which should extend to the night-soil depot. Although largely used as a method of lifting sewage, the mode has been proved of much utility employed solely for night-soil. Cesspools and drains from houses in the neighbourhood could be discharged into the ejectors.

(e) In regard to sanitary inspectors, there can now be no reason why untrained men should be entertained, there being numbers available provided with sanitary inspectors' certificates. Of eight inspectors employed at date of my inspection, all except one were untrained men. Certain of these were obviously useless as sanitary inspectors, and one

The Pottamarai tank has been cleansed thoroughly. The Mahamakha tank will likewise be cleansed ere long. The Sanitary Board has sanctioned the proposals of the council to put these two tanks in order. But no provision has yet been made for the inlets and the outlets which are both absolutely necessary.

The number of various classes of toties now employed is as follows and is considered sufficient:—

	No.
(1) Latrine toties	19
(2) River-bank toties	4
(3) Street toties	25
(4) Private scavenging toties	35

There were only thirty-two sweepers for the thirty-two rubbish carts employed by the council. The number has since been increased to forty. The council does not consider it necessary to appoint more at present for permanent employment. The Sanitary Commissioner will be requested to give the council more information on this point (Shone's ejectors).

Inspection Notes.

was of such exceedingly high caste that when I entered a Pariah village he deserted me, and when I entered a lane highly polluted with human excreta special inducements had to be offered him to undertake the task of seeing this filth with his own eyes. Paying men as sanitary inspectors possessed of this degree of nicety is a mere waste of money and their entertainment may account to a considerable extent for the neglected state of conservancy.

FORT ST. GEORGE,
21st April 1896.

Chairman's Remarks.

In regard to these officers my predecessor has explained at length the reason for their retention at present in the budget report for 1896-97. There are two trained sanitary inspectors on Rs. 35 and Rs. 25, respectively. The Sanitary Commissioner's recommendations will be acted on as opportunities occur.

(Signed) W. G. KING, Surgn.-Lt.-Col.,
Sanitary Commissioner.

PROCEEDINGS of the special meeting of the Municipal Council, Kumbakonam, held on the 30th June 1896.

7. Resolved that the inspection notes of the Sanitary Commissioner with the remarks of the Chairman be forwarded to Government.

Endt. on Cur. No. 3265.

Forwarded.

(Signed) T. N. SIVAGNANAM PILLAI,
Deputy Collector in charge.

7th July 1896.

Endt. No. 1249-Eng.

Forwarded.

2. Paragraph 5 (l) will be attended to in the District Board's office.

19th July 1896.

(Signed) G. STOKES,
Collector.

ORDER—No. 1633 M., dated 23rd September 1896.

Recorded with the following remarks:—

(1) The Municipal Council should take steps to secure greater cleanliness in the neighbourhood of the sources of water-supply referred to in paragraph 3 of the inspection notes, and to remove the defects noticed in them by the Sanitary Commissioner.

(2) The Sanitary Commissioner's attention will be drawn to the Chairman's remarks on paragraph 11 (d) of the inspection notes.

(True Extract).

Under Secy., P.W.D.,
for Ag. Chief Secretary.

To the Chairman, Municipal Council, Kumbakonam.

" Collector of Tanjore.
" Sanitary Commissioner.
" Sanitary Engineer.

Editors' Table.

Ed. C. M. Thambuswamy.

[L. & M.]
500—15 5-96.

Local & Munl. (1896) Department.

CURRENT No. 2172M

Order No 1633 Mms of 23.9.96.

Recorded with the following re-

marks:—

(1) The municipal council should

take steps to secure greater cleanliness

in the neighbourhood of the sources of

water supply referred to in para. 3 of the

Inspection Notes, and to remove the de-

fects noticed in them by the Sanitary

Commissioner.

(2) The Sanitary Commissioner's

attention will be drawn to the Chairman's remarks on para.

11(d) of the Inspection notes.

V.A.
18/9/96
W.S.
21-9-96

Note: The return from city of papers put up in the Kumbakonam District for 1895-96 has to be awaited.

The Chairman, M.C., Kumbakonam.
Collector of Tanjore.
Sanitary Commissioner.
Inquirer 3 Sep 20/10/96

Editors' Table.

From The Chairman, M.C.,
Kumbakonam.

No. 200

Dated 3.7.96

Received 27.7.96.

Registered

Enclosures two

Spare copies

SUBJECT.

Submitting the Sanitary Com-
-missioner's Inspection notes
with the Chairman's remarks
and the Council's resolution.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

Kumbakonam
Inspection Note

C.No. 2172m
23 Sept

No. 1635 M., August 1896.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper:—

From M.R.Ry. T. S. SINASAMY ODAYAR, Avargal Rao Bahadur, Chairman, Municipal Council, Kumbakonam, to the Chief Secretary to Government (through the Sub-Collector and the Collector of Tanjore), dated Kumbakonam, 3rd July 1896, No. 200.

I have the honour to forward herewith the inspection notes of the Sanitary Commissioner, dated 21st April 1896, with the Chairman's remarks and with a copy of the resolution of the council thereon.

ENCLOSURES.

INSPECTION NOTES of the Sanitary Commissioner for Madras.

TANJORE DISTRICT.

KUMBAKONAM MUNICIPALITY.

Inspected 7th to 10th December, 1895.

Population per census of 1891 54,307.

Inspection Notes.

Chairman's Remarks.

Roads.—The chief roads are of laterite, but a considerable number of important thoroughfares are mere sandy tracks. The laterite is imported by rail from Tanjore. The municipality should consult an Engineer as to the possibility of making the part of their roads subjected to most traffic of brick, after the manner pursued in America. The life of these roads of course differs within certain bounds, but a fair average may be said to be about 8½ years. An estimate should be framed taking into consideration the total cost of making and maintaining laterite roads during the same period. It would doubtless not pay to pave the full breadth; but it is well worth consideration whether the middle portion might not be thus treated with ultimate economy. As stated in my last report stone tramways offer an alternative. It seems most desirable, in view of the large sums expended on roads, that these questions should be carefully sifted.

It is desirable that more durable material than that now used should be got for the roads. An experiment will however be made with better metal at a higher cost at least for the main roads. The council is fully alive to the advantages of the suggestions made by the Sanitary Commissioner in regard to the roads generally; but financial considerations prevent their being undertaken at present.

2. Dwellings.—These are chiefly built in squares. In no case should this form be permitted by the municipal council in dealing with new dwellings or additions to existing dwellings, under section 180.

Hindu dwellings are built according to certain religious principles which cannot be overridden. The council will see that proper ventilation, latrine and other accommodation are provided as under section 180 of Act IV of 1884.

framed taking into consideration the total cost of making and maintaining laterite roads during the same period. It would doubtless not pay to have the full breadth, but it is well worth consideration whether the middle portion might not be thus treated with ultimate economy.

As stated in my ^{last} report stone tramways offer an alternative. It seems most desirable, in view of the large sums expended on roads, that these questions should be carefully sifted.

2. Dwellings. These are Hindu dwellings and built chiefly built in squares. Coming to certain religious forms in no case should a house which cannot be altered in this form be permitted to stand. The Council will be guided by the Municipal - That proper ventilation, light and other accommodations in dealing with new dwellings or additions to the town are provided according to section 180 of Act III of 1884.

to existing dwellings, under section 180.

3. Water supply. The

The Council desires to send following is a description of the chief sources of water supply of this town:-

(a) Peria Kolam. This receives the drainage of neighbouring houses. The washing of clothes proceeds even in a generation. Offered here. It has a dust-bin placed on the side of it. Water is removed thence for "domestic purposes".

(b) Tikal Kolam. This is used for drinking purposes. It receives drainage from houses direct. On the steps forming the ghats, human fecal matter and rubbish were found.

(c) Inahamari tank. This is supplied by a channel. Along its edges even up to the tank there were deposits of town rubbish. The signposts for bathing were placed in the tank. The signposts for bathing were placed in the tank. The signposts for bathing were placed in the tank.

for rubbish. In the early
morning, its vicinity is
used as a latrine. The
bathing channel passes
at the backs of houses;
within every backyard.
Of these were to be found
deposits of rubbish and
fecal matter. Progress
along the bank became
ultimately impossible,
owing to the collection
of filth. It is the custom
of the higher castes living
in this neighbourhood
thus to get rid of the
inconvenience of having
a low caste man coming
into their backyards, by
launching their filth
into the channel bed or
its immediate edge.
The tank supplied by
this channel is esteemed
holly. Washing of clothing
is allowed to proceed
within the tank.

(b) The Arsidas river. Here
bathing, washing and
the

the taking of drinking
water proceed without
the slightest regard
to sanitary require-
ments. Close to the
ghat was found, the
old cessment place of
the neighbourhood in
the same condition as
when last inspected.
There was however found
a watchman who, on
being examined as to
the duties expected of
him, could give but
a very imperfect account.
As, however, the appoint-
ment of a watchman
is a new departure
that had been put in
force only two days
before my arrival to
inspect the town, it
can be understood
that the watchman
was not very familiar
with the duties supposed
to be required of him.
I advised a very simple
and cheap form of
filter,

made as to the meat market apply here also.

The water supply of this market is gained from an open well with a pervious lining, within 8 yards of a public "open space" latrine.

This well should be shut, its position being dangerous.

(c) In godowns Nos 10 and 11 of the market, I found skins stored.

No license was held by the owner. The storing of skins in this locality is a most dangerous proceeding and is, with reference to transmission of anthrax, dangerous, and should be at once put a stop to.

(d) Vegetable market -

The whole space is below the level of the surrounding ground. It consists of plain pyals with thatched roofing. As soon as funds

funds are available a new vegetable market should be formed.

(e) The making of markets is usually a safe investment for municipalities irrespective of the sanitary benefits derivable, and I see no reason to think Kumtakhum would prove an exception in this respect.

(f) The rubbish from this market is thrown immediately outside the market on the banks of the river near the drinking water ghāt. A more unsuitable way of disposing of it, could hardly have been thought of.

7. Offensive trades. I have already noticed the neglect to license and secure correct places for the storage of skins. Similarly, under Section 188(ii) which provides that "cattle-sheds"

Case will be taken to avoid throwing the rubbish of the vegetable market into the river.

The rules in regard to Cattle Sheds will be enforced rigorously.

Inspection Notes.

selected for sinking was within a paddy field. The level of the paddy-field water and that of the well was the same at date of inspection.

(g) *Kongyan Tank*.—The tank has houses upon its banks. There are frequent deposits of faecal matter all over the banks. When examining the tank, a man was caught in the act of making his ablutions, for performing which he had good cause. This tank is used for drinking and "domestic purposes." In a case brought before the Bench Magistrates, a man was charged with throwing rubbish on the channel bank. The case had however to be transferred, as the Bench Magistrate could not see that harm could result from deposit of town rubbish in this manner.

(h) *Pottamarai Tank*.—This is another sacred tank. Faecal matter is found on the banks up to the temple door. Within the tank is a considerable amount of leaf plates, said to have reached there as a result of transfer from dust-bins by the wind, but in such amount as to make one more inclined to believe that they have been deliberately thrown in there, as an easier way of getting rid of rubbish than proceeding to the dust-bin of the locality. The stench from this tank is most abominable. It is used for washing of clothing and for bathing of pilgrims. The condition of this tank shows that it has been much neglected by the municipality; but I understand its rights of control are limited.

(i) *The Papa Tank*, which was made by a Pariah lately, seems to me the only tank with any approach to cleanliness in the whole town. But even here I found that the owner had not fulfilled his promises formerly made to me as to preventing the washing of clothing side by side with use of the water for drinking and other domestic purposes.

(j) *The Tirunavasaram Well* still possesses the broad parapet I called attention to in my last inspection notes. Persons stand upon it and thus secure defilement of the water.

(k) *Iyee Kulam*.—This was one of the chief sources of drinking-water supply. Its feeding channel is open to contamination. In the last epidemic of cholera on one day twenty persons drinking water from this source were attacked with cholera. It was then shut up on the advice of the local medical officer, Civil Apothecary Wright. Within three days no further attacks took place.

(l) It will be seen from the above description that the public water supplies of this town are in an inexpressibly filthy and insanitary condition, and that unless an inhabitant chose to send to some point above the town, it would be impossible for him to obtain even water from the river in a condition otherwise than contaminated by bathing and washing of clothing. I again invite the municipality to fix certain spots for drinking purposes and others lower down the river for washing.

Chairman's Remarks.

Inspection Notes.

4. *Sewerage*.—(a) A proposal is now before the Sanitary Board for disposal of the sewage from street drains. The disposal of sewage from Solayappa Mudali street on the neighbouring gardens would offer still less difficulty, and would cost the municipality practically nothing beyond the purchase of the land under the Land Acquisition Act, provided the owners will, as at present, persist in refusing to utilize it. This is a matter that should receive attention. The sewage from Ramaswami street could also be discharged upon poramboke land.

(b) In Silk-weavers' street considerable difficulty is evidently experienced by house-holders as to disposal of sewage. In the case of one house-holder, the municipality will not permit of the sewage passing on to the street, whilst there is not room for disposal within the premises. Under these circumstances, the use of impervious cesspools according to the standard plan of the Sanitary Board, and the insisting by the municipality that regular cleansing is effected, would be the only, although unsatisfactory, alternative. But I consider, if the sewage is correctly filtered within the house before discharge, that the municipality might well allow the effluent to pass upon the road for disposal by soakage. This would be better than allowing this crude sewage to pass as at present within the soil of the very limited premises.

(c) In contrast with the difficulties experienced with this man, I found that the "late Tahsildar" is allowed to continue the practice of having a cesspool away from his house on the opposite side of the road. Overflow therefrom is a nuisance. I advised in my last notes that either this cesspool should be abolished or it should be correctly built. The latter object can be fulfilled under section 214 by the municipality, and I see no good ground why this should be allowed to drift as suggested by the municipal council in their reply to my last notes, paragraph 2 (4), that "the Tahsildar's house would cease to be a nuisance when the sewage scheme is completed," the chances of this being completed within the days of the present generation being very small.

(d) The drainage scheme, which was completed at a cost of Rs. 1,12,489, has been found to afford some measure of relief during rainfall and probably the sub-soil water is reduced in level within a certain distance from drains. The drains being simply unlined trenches, it follows that much silting occurs. Apparently, the municipality means to meet this contingency by spending lump sums from time to time. It seems to me, however, that it would be impossible to keep the trenches in order unless a staff be constantly employed. A gang of coolies should be placed permanently at the disposal of the overseer in charge, and he should be held responsible for the correct grading of the trenches and the turfing of their sides, without constant attention to which they will rapidly become more irregular

Chairman's Remarks.

The plans and estimates in connection with the sewage of Solayappa Mudali street have received the sanction of Government, and the work will be put in hand at an early date. I think that the use of the domestic filter would be a cheaper method. The number of houses for which the scheme is now sanctioned is only forty-three. At this rate a considerable sum will have to be spent for a complete scheme for the town. This must launch the municipality into utter bankruptcy.

The Vizagapatam filter will be tried wherever necessary.

Vide remarks against (b).

Arrangements will be made for clearing the silt as proposed by the Sanitary Commissioner. The other suggestions of the Sanitary Commissioner will receive the careful attention of the council.

Inspection Notes.

here also. The water-supply of this market is gained from an open well with a pervious lining within eight yards of a public "open space" latrine. This well should be shut, its position being dangerous.

(c) In godowns Nos. 10 and 11 of the market, I found skins stored. No license was held by the owner. The storing of skins in this locality is a most dangerous proceeding and is, with reference to transmission of anthrax, dangerous, and should be at once put a stop to.

(d) *Vegetable Market.*—The whole space is below the level of the surrounding ground. It consists of plain pyals with thatched roofing. As soon as funds are available, a new vegetable market should be formed.

(e) The making of markets is usually a safe investment for municipalities irrespective of the sanitary benefits derivable, and I see no reason to think Kumbakonam would prove an exception in this respect.

(f) The rubbish from this market is thrown immediately outside the market on the banks of the river near the drinking-water ghât. A more unsuitable way of disposing of it could hardly have been thought of.

7. *Offensive Trades.*—I have already noticed the neglect to license and secure correct places for the storage of skins. Similarly, under section 188 (ii), which provides that "cattle-sheds" shall be licensed, the municipality should devote more attention to the sanitary conditions under which cows are kept. Thus, at Yeddi street, though land is available and is suitably situated for disposing of sewage upon it, the removal of sewage is carried out very imperfectly. The municipality should consult the Sanitary Board on the question of removal of the sewage for disposal on the adjoining land or by filtration. This having been accomplished, each cattle-shed should be carefully prepared with impervious flooring; correct drains and sources of water-supply and correct means of ventilation for the animals should be provided before licenses are granted. Only by attention to such details can the health of the animals be maintained in a manner compatible with the yielding of milk safe for public consumption.

8. *Graveyards.*—(a) *Permabandi Graveyard and Cremation-ground.*—The ground here is much over-stocked with graves. This graveyard is above the ghâts used for drinking-water. It is therefore most desirable that it should be closed absolutely for burial. Cremation also should not be practised unless the supervision and apparatus used is of a very special character. I understand that at Howrah a crematorium is employed by natives that fulfils requirements. The bathing of persons and their clothing in the river after attendance upon funerals direct in the river at this point should be certainly put a stop to.

Chairman's Remarks.

Care will be taken to avoid throwing the rubbish of the vegetable market into the river.

The rules in regard to cattle-sheds will be enforced rigorously.

The council has simply to repeat its remarks on the inspection notes of previous years in regard to the removal of the cremation-ground on the northern bank of the Cauvery. Endeavours may be made to remove the burial-ground attached to this to a distant place, if there is no opposition to the same.

Inspection Notes.

(b) *Alaidi Cremation-ground* is badly situated with respect to the river. It should be further removed from the bank.

(c) *The Arsilâr burning ground* is practically in the bed of the river. A new position should be chosen.

9. *Vaccination.*—(a) Civil Apothecary Wright has for some years past displayed considerable attention to the direction of vaccination. The following is the result of compulsory vaccination in regard to children under one year of age:—

Total births during the preceding six months, i.e., from January to June 1896.	Number vaccinated successfully.	Number vaccinated unsuccessfully for the first time.	Number vaccinated a second time because first operation proved unsuccessful.		Postponed on medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccine operations to total births per cent.
			Successful.	Unsuccessful.					
872	373	8	3	..	..	232	171	32	43.11

(b) There seems to be a considerable number of children below ten years of age to be still reached by compulsory vaccination, and I advise a census be taken from house to house with the object of ascertaining the facts accordingly.

(c) The work, under G.O., No. 1502 M., dated 19th October 1894, is delegated entirely to vaccinators. In my opinion, in so important a matter as the working of the compulsory clauses the Municipal Chairman should retain the whole working in his hands, merely relying upon the vaccinating staff for performing the necessary operations and ascertaining and registering the results.

10. *Registration.*—The following table shows the results obtained by registration of vital statistics during the last three years:—

statistics during the last three years.										
Years.		Ratio of births per mille of estimated population.	Ratio of deaths per mille of estimated population.	Percentage of deaths from						Ratio of deaths of infants under one year of age per mille to registered births in the preceding yr.
				Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Injuries.	All other causes.	
1893	..	31.9	35.4	19.8	1.3	14.5	11.6	0.7	52.1	231.9
1894	..	28.3	36.3	17.3	0.5	18.9	10.0	0.5	52.8	275.4
1895	..	31.8	30.0	3.2	0.7	21.9	11.4	0.7	62.1	310.0

The great mortality from bowel complaints is obviously due to the foul and damp soil of this town plus the use of water contaminated in every conceivable manner. The following