[L. & M.
1004-10-8-96.]

Local & Munl. (1896) Department.

PRINTED.

G.O., No. 795-M

DATED 9th May 1896

[Despatch Abstract.]

Inspection Notes.

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

BACK PAPERS.

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

FURTHER PAPERS.

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

INDEXED.

PRESS.

LOCAL AND MUNICIPAL DEPARTMENT.

G.O., DATED 7/95 m

No. 9-5-96

First copy sent to Press. 9/5/96

Returned for signature. 2/6/96

Despatched in print. 3/6/96

[Despatch Abstract.]

Inspection notes

Recording visits

remarks Sanitary

Comrs

on the Palamcottah

municipality.

BACK PAPER, No

READ AGAIN ORDER OF GOVERNMENT, DATED
18 , No.

FURTHER PAPER, No.

12

G.O.

G.O.

ENCLOSURES

CURRENT No. 1026m — 1896/11 —

STATEMENT WITH DITTO.

ORDER, &c., OF GOVERNMENT—A.

PAPERS KEPT OUT OF FILE FOR DESPATCH IN ORIGINAL
(not paged).

NUMBER OF COPIES REQUIRED.
- Order complete. 80
- Letter only.
- Order complete with Letter.

N.B.—

A = Print in full.
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Govt. of {1896} Madras.

LOCAL AND MUNICIPAL.

08

Issued

Recd. *Encl.*

G.O., No. 795 M., 9th May 1896.

MAY.

Inspection Notes.

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

Order—No. 795 M., dated 9th May 1896.

Recorded.

2. With reference to the Chairman's remarks on paragraph 4 of the inspection notes, it is observed that although the municipal council is bound, in the interests of public health and convenience, to see that all private cess-pools in the town are kept in a satisfactory state, it is not equitable that the expenditure on this account should be defrayed from the taxes raised from the general body of tax-payers. The council should, therefore, endeavour to organize a service, similar to that for private scavenging, on a self-supporting basis.

3. The suggestion of the Sanitary Commissioner in paragraph 16 (*c*) of the inspection notes, in which the Government concurs, will be commended to the municipal council for careful consideration.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Chairman, Municipal Council, Palamcottah (with plans and estimates).
" Collector of Tinnevelly.
" Sanitary Commissioner.
" Sanitary Engineer.
Editors' Table.

Exd. A. J. Peters.

Inspection Notes.	Chairman's Remarks.
suitable plans for infectious-disease sheds, which can be placed at the disposal of the municipality on request. (*b*) In regard to the cholera epidemic which existed on my arrival, I consider the municipality was undesirably supine in action, and I advise it in future to follow, as far as practicable in view of the funds at its disposal, the rules laid down in G.O., No. 1028 M., dated 26th June 1895. It is essential that it should be remembered that *prompt* action as to the segregation of choleraic poison should ensure suppression and the saving of human life. (*c*) My enquiry at the special meeting showed that the councillors do not undertake ward duty. I particularly advise the councillors to come to some agreement on this point. It is most desirable that each member should regard himself as personally responsible for successful administration, and should aid in bringing defects to the notice of the Chairman and securing their removal by personal influence and example. For instance, in the matter of private scavening, which is a point of so much importance in this town, each councillor might greatly advance administration by inspecting from house to house in his division and exerting his influence to secure and maintain a complete reform as to household rubbish and night-soil conservancy.	The council has adopted, and will adopt, the suggestions contained in this paragraph as far as funds will permit.

Camp, Bellary,
13*th February* 1896.

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

Extract from the Proceedings of the Municipal Council of Palamcottah, dated 19th March 1896.

* * * * *

Read—Inspection notes of the Sanitary Commissioner, Madras, and the remarks of the council thereon.

Resolution.—Confirmed.

Forwarded.

Tinnevelly,
26*th March* 1896.

(Signed) A. W. B. HIGGENS,
Collector.

Inspection Notes.

Chairman's Remarks.

14. *Registration.*—The following are the results of registration :—

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.	Ratio per mille of deaths of infants between one and five years of age to population of that age.
			Cholera.	Small-pox.	Fevers.	Dysentery and diarrhœa.	Injuries.	All other causes.		
1893	35·5	28·0	13·1	3·0	11·3	8·3	0·6	63·7	210·3	185·7
1894	29·7	27·3	12·3	3·3	13·3	8·3	0·6	62·2	165·7	184·9
1895	32·1	21·8	3·8	1·3	18·3	5·3	0·6	70·2	196·8	103·7

There were only thirty prosecutions for failure to register. It is essential, after once more giving the inhabitants warning and placing notice boards in conspicuous parts of the town, that prosecution for failure to register should be *uniformly pursued.*

Stringent measures are being taken by the council to remedy this defect.

15. *Graveyards—Christian Graveyard.*—This is far too close to habitations. The municipality have, however, I believe, taken action on the matter. A new spot should be acquired as early as possible.

A new site has been acquired and a compound wall has been put up. The old burial-ground will be closed as soon as possible.

16. *Sanitary Administration.*—(*a*) The cholera shed, which is a miserable structure, ill-ventilated and in bad repair, is in a most undesirable site. It is within 45 yards of a much frequented public road and 65 yards of a latrine in constant use by the public. The road immediately adjoins a large parcherry. The people of this parcherry have repeatedly complained of the position of the shed. The only plea that can be given in regard to the position is that it is convenient for the medical staff. It is theoretically quite possible to arrange a cholera ward within the distance stated of habitations, but I have no reason to think, from an inspection of the conditions here, that theoretical requirements are even aimed at. The shed attached to the latrine itself is a standing danger, in that any matter deposited can be washed into the adjoining drain, close to which is a sweetmeat shop. Hence flies might well carry cholera *bacilli* to food eaten by the parcherry people. To my mind the request that this shed should be abolished is reasonable and the municipality would do well to remove this cause of discontent, irrespective of the fact that the shed cannot be said to afford accommodation of the nature required. The Sanitary Board have now

A more suitable site will be acquired and the Sanitary Board will then be addressed about the standard plan.

Inspection Notes.

Chairman's Remarks.

means of a pump filling an elevated cistern, whence the water should be taken by the butchers from pipes and taps.

Steps have been taken to close the market.

10. *Markets*—(*a*) *The Fish Market* is absolutely unfitted for its purpose.

(*b*) *General Market.*—The brick pavement is in very bad order and requires repair throughout. The arrangements for butchers demand early revision. Boxes on which the meat is put should be got rid of in favour of small Cuddapah or other smooth stone slabs that can be kept thoroughly clean. Ropes should be replaced by steel hooks and small iron bars. The market well requires thorough cleansing. It should be subsequently covered and supplied with a pump.

The brick pavement in the butchers' stalls will be replaced by stone slabs at an early date. The flooring of the rest of the market will be attended to next official year. The water of the wells in the market is unfit for drinking purposes and therefore the erection of a pump is not necessary. The wells will, however, be cleansed periodically.

11. *Offensive Trades.*—(*a*) Certain bakeries for which licenses have been allowed by the municipality are unfit for the purpose. Such places should not be licensed until it can be shown that scrupulous cleanliness as to preparation of bread is observed and that arrangements as to light, conservancy and water-supply are correct.

All applications for licenses for bakeries will in future be referred to the District Medical and Sanitary Officer for opinion as to the suitability of the buildings proposed to be used as such bakeries.

(*b*) Cattle were found stalled close to houses, without any attempt at correct preparation of the surface. The municipality should remember that not only are licenses required for ten head of cattle but for "cattle yards" (see section 188).

The council will take early steps to remedy this defect.

12. Bandies are found at every nook and corner, notwithstanding the bye-law prohibiting this. The municipality would find it profitable, irrespective of the public convenience thereby secured, to open a bandy-stand of their own.

The bye-law will be more strictly enforced in future and a municipal cart-stand provided.

13. *Vaccination.*—The following is the result of compulsory vaccination during the preceding six months :—

No remarks.

Total births during preceding six months, *i.e.*, from 1st January to 30th June 1895.	Number vaccinated successfully.	Number vaccinated unsuccessfully for the first time.	Number vaccinated a second time because first operation proved unsuccessful.		Postponed under medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccinations to total births per cent.	Prosecution for failure to accept vaccination during the year up to 30th June 1895.		
			Successful.	Unsuccessful.						Number of suits filed.	Number of cases disposed of by Magistrate.	Number of convictions.
313	156	2	2	1	26	66	55	1	49·84	38	31	1

Examination of children upon the roads showed that (as far as this test would go) very few children remain unprotected.

Inspection Notes.

in first sorting the contents of carts. A very good pattern is that patented by Burn and Co., Calcutta, and known as the "Roberts' natural draught incinerator." I advise the municipality to open communication with that firm on the subject, when they will doubtless supply all information required. There certainly should be no delay in removing the existing incinerator. As to the theory that only incombustible parts of rubbish are placed in the gravel pits—such, for example, as potsherds—I found on inspection that this was very far from the case, and that, as I suspected, a considerable amount of untreated rubbish is dumped on this spot. Only seven carts are employed for the gathering of rubbish. At least nine are requisite, even taking into consideration the proximity of the present rubbish incinerator. When an incinerator is erected on the new site further from the town, which will entail more work from the carts, it will be necessary to increase this number by seven. It is also impossible that seven sweepers can effect the work required of them. The men should be increased to sixteen if storage on backyards is to be prevented, as it certainly should be.

6. *Night-soil removal.*—(*a*) The number of public latrines provided is insufficient, but as the municipality reports that 2,513 private latrines are attended to under the private scavenging system, it would not be necessary that the total number should exceed fourteen. The type of corrugated iron latrine which has been supplied by a private firm is not sanitarily good, the wooden seats being particularly objectionable. I would advise the municipality to adopt either Donaldson's patent latrines or those advised by the Sanitary Board.

(*b*) The masonry latrines at Ellundakolam should have a flooring of concrete plastered with Portland cement.

7. *Private Scavenging.*—The retention of night-soil within private premises for agricultural purposes is a peculiarity of this town and other parts of the district. To so great an extent was removal of excreta from private houses not fulfilled that Government found it necessary to make a special communication on the subject to the municipal council (G.O., No. 749 M., dated 13th June 1894). The advice thus given has been duly acted upon, and, knowing the strong movement which was against them in this subject, I think considerable credit is due to the

Chairman's Remarks.

The council has already made provision in the budget for 1896–97 for the purchase of two iron latrines.

The council will provide the existing iron latrines with stone slabs as soon as possible, and as to the purchase of new iron latrines the suggestions of the Sanitary Commissioner will be attended to.

The suggestions will be attended to.

Recorded.

Inspection Notes.

Chairman and the few councillors who gave him their support in this matter. The abolition of the storage principle has been brought about, not only by prohibition, but also by filling in the old pits formerly employed. The municipal council should, however, remember that it is very "easy for water to run in former stream beds" and that hence much watchfulness should be exercised by house-to-house visitation to ensure that the old habit is not gradually resumed. It is also possible that in certain instances the complete fulfilment of their order has not been accomplished. For example, in the case of a respectable family, I found the old custom persisted in. There being in this town a decided tendency for each house to have its private latrine, the municipality should do their best to encourage the system and thus relieve themselves of the worry and expense incident to the public latrine method as far as possible. In doing so, they should hold in mind section 207, which gives full power to insist on latrines being altered after such pattern as the municipality may determine upon. It would be advisable that these be arranged on the double-pail method.

8. The night-soil depôt is improperly, although neatly, kept. The huge pits arranged at present cannot permit of correct change in the deposited material being quickly accomplished. To secure this, trenches laid out as required with perfect regularity as to size should be employed. A good method is to have the trenches 18″ deep by 18″ broad, with 36″ intervals between neighbouring trenches —each trench being 36″ long. Between each series of trenches should be formed a road of sufficient breadth to allow the night-soil cart to pass. Each trench, as soon as filled, should be labelled showing the date of filling. In filling, the layers should be 4″ of night-soil at the bottom followed by 4″ of earth; upon this a further layer of 6″ of night-soil followed by 6″ of earth. Under this arrangement, if the staff fulfil their duty, the night-soil depôt ought to be perfectly odourless.

9. *Slaughter-house.*—The stone floor requires re-arranging so as to make it regular. The joints should then be cement-pointed. There is no water on the spot. A well should be sunk, and the slaughter-house should be supplied by

Chairman's Remarks.

This recommendation has been already carried out with regard to the pits dug subsequent to the visit of the Sanitary Commissioner.

The repair of the flooring has already been put in hand. The other suggestions will be carried out as soon as funds will permit.

Inspection Notes.	Chairman's Remarks.
rest under that of the Public Works Department, little sanitary result can be obtained for this expenditure. At time of my visit, in the part controlled by the Public Works Department persons were washing their clothing. By re-arranging the inlet and the outlet, it ought to be possible to prevent the water-sheet being continuous. If, on this being accomplished, platforms were erected as above advised for the Ramaswami tank, fair protection would be acquired.	
(*g*) *Prandakulam Well.*—This should be lined with cement plaster down to the lowest water-level; a platform basement and drain should also be supplied.	This will be carried out at once.
(*h*) *Vanam Kanari* (in the old Military Lines).—The parapet wall is so broken as to allow drippings from the platform to flow back freely.	This will be carried out at once.
(*i*) *The old Regimental Hospital Well.*—This is much used for cooking and kitchen purposes by Europeans. It would be advisable, in view of the possibility of contamination, to have this covered and add a pump to it.	The council will endeavour to carry this out as soon as funds will permit.
(*j*) *East Toll-gate Well.*—This is largely used. It is not provided with a platform or drain. This should be arranged and the existing beam which is placed across the well should be removed, as its presence aids the opportunities of contamination by persons standing upon it.	The suggestions will be carried out.
(*k*) *Sarah Tucker's Well.*—This is the favourite source of water-supply of Europeans and educated natives; yet its surroundings, notwithstanding the receipt some time back of a favourable verdict from the Chemical Examiner, are at present such as to prove that the source is open to dangerous contamination. Practically, what is supplied to this well for a considerable part of the year is the filtrate from paddy fields which surround it and which are manured by night-soil freely. Moreover, as it is very largely used, the water must be open to contamination from ropes and chatties. Sarah Tucker's Institution, which derives its water from this source, has time after time suffered from cholera, and one could hardly expect any other result. If my opinion as to the dangerous character of this well be correct, it follows that Palamcottah does not possess a single water-source from which those who may desire to obtain pure	An extract will be sent to the Lady Superintendent of the Sarah Tucker's Institution and the Chairman will be requested to obtain statistics of cholera attacks in the above institution for the past ten years. He will also forward a small quantity of the water to the Chemical Examiner for analysis.

Inspection Notes.	Chairman's Remarks.
water could do so. Under these circumstances, I would strongly advise the municipality to sink a well in an uncontaminated area. I think that a site on the old parade ground not far removed from Sarah Tucker's Institution, which I pointed out to the sanitary inspector and described at the meeting to the councillors before my departure after my inspection, would be suitable. Mr. Chester, Local Fund Engineer, kindly prepared a plan and estimate for me for this well, which I forward herewith. The figure—namely, Rs. 347-8-0—is sufficiently modest not to frighten the councillors, even having regard to the slender funds available.	The council considers that the digging of a new well on the site proposed by the Sanitary Commissioner will not prove as useful as he considers. The site being so far removed from the heart of the town, persons drawing water (chiefly women) will not resort to the well; but the council is of opinion that the existing wells in front and to the east of the Post office, the water of which is largely used by the public, should be improved and secured from contamination.
4. *Sewage.*—Practically, the only method of sewage disposal is by soakage within the town site. I advise the adoption of the Vizianagram sewage-filter for households as per plan and description attached. This will serve better than present arrangements, pending the making of a correct sewerage system, which will doubtless be a matter of many years hence. Three carts are at present employed at the cost of the municipality for the removal of sewage from private cesspools, and it is intended to employ a greater number. This expenditure should not in my opinion be met from municipal funds, but should be arranged for by the inhabitants concerned direct, or in communication with the municipality, after the manner of contract in the case of private scavenging. The transport of sewage water is far too expensive a matter for a municipality to undertake on behalf of a few of the inhabitants at the cost of the majority.	Those people who can afford to do so will be requested to try the filter suggested by the Sanitary Commissioner. The council is unanimously of opinion that the levy of fees for cleaning cesspools will be a great hardship on the public, especially in face of the fact that the bulk of the inhabitants of the town is too poor to bear any further taxation.
5. *Rubbish removal.*—There is a beehive pattern of incinerator, which is said to consume fourteen loads of rubbish daily. I, however, suspect that such cart loads must vary greatly in bulk, whilst in wet weather action is impossible. In working, deposit is first arranged for near the incinerator, and all incombustible parts are excluded for removal to certain gravel pits. This must entail much waste of labour. The municipal council, having been advised by the Deputy Sanitary Commissioner as to the erroneous position of this rubbish collecting and sorting depôt near the slaughter-house, are about to erect a new incinerator. I would therefore advise this opportunity be taken of purchasing one of a form that will no longer require the expenditure of labour	The incinerator will be removed as soon as possible to a better site and an estimate will be called for from Messrs. Burn & Co. The council has already made provision in the budget for 1896–97 for two additional rubbish carts.

Inspection Notes.

iron pipes without any supplementary system of distribution, and, secondly, for improving the existing wells along the sides of the channel, so as to form reservoirs for filtered water, and for the preparation of small filter-beds with wells attached as a new work. The latter arrangement certainly would not be costly and would have the merit of securing a considerable grade of protection against water-borne diseases, although it cannot be said to be complete. It would at least secure the existence of a water of considerably higher sanitary value than the horrible mixture now employed. In the meantime, the appointment of at least two watchmen for this channel is essential. The municipality should further, under section 154, reserve it throughout its length for drinking purposes and require the aid of the police in enforcing their order. The plea would, of course, arise that persons are placed to inconvenience in not being able to enter the channel bodily for the purpose of bathing or washing clothing. But this difficulty can be met by appointing certain spots provided with dhoby stones and with surfaces sloping from the channel, where both bathing and washing can proceed without defiling the water.

(*d*) During the hot season the channel falls, and then the inhabitants resort to the Ramaswami tank, which is used as a storage reservoir. But this is not reserved until actually used for this purpose, with the result that during all but, say, three months in the year, it is subject to defilement. This should be regarded in its true light of a storage reservoir, and should be conserved carefully *throughout the year*. To enable persons to draw water without entering it and thus defiling it with their feet and hands, platforms should be built on one or other of the systems shown in the accompanying diagrams.

(*e*) *Bishop Sergeant's well* is much used by Christians. It would be advisable to close this at the top and supply the well with a pump and cistern. The municipality should offer the proprietors this advice.

(*f*) *Moulikolam.*—This is another storage tank designed to aid in tiding over the hot season. Watchmen are retained here by the municipality, but as only one portion of the continuous sheet of water is under the control of the council, and the

Chairman's Remarks.

The council is of opinion that the reserving of the Ramaswamikovil tank is not necessary in face of the fact that the water of the tank is never used for drinking purposes.

The suggestion of the Sanitary Commissioner will be communicated to the Mission authorities.

A general scheme for the improvement of the Moulikolam reservoir including the suggestions contained in this paragraph was submitted to Government on 6th October 1893, but the Government condemned the scheme and rejected it on the report of the Sanitary Engineer.

Inspection Notes.

2. *Dwellings.*—These are much crowded and perflation is interrupted by reason of the houses being built in squares. In sanctioning new buildings under section 180, the council should take care that open spaces are provided in the surroundings of each house.

3. *Water-supply.*—(*a*) This has long been acknowledged a weak point in the sanitation of this town. The following statistics during the last 15 (fifteen) years, the percentage of total deaths due to cholera and bowel affections, and the total mortality sufficiently testify to this fact:—

—	Cholera.		Dysentery and diarrhœa.		Total.	
	Deaths.	Percentage.	Deaths.	Percentage.	Mortality.	Rate per mille of population.
1880	..	..	84	14·9	562	31·3
1881	128	19·2	84	12·6	667	37·2
1882	20	4·5	58	13·0	448	24·9
1883	180	27·6	65	9·8	651	36·2
1884	161	30·1	38	7·1	534	29·7
1885	20	4·8	48	11·5	418	23·2
1886	..	..	46	11·0	416	23·1
1887	71	13·4	49	9·2	531	29·5
1888	179	29·6	53	8·8	604	33·6
1889	70	16·0	30	6·9	436	24·2
1890	100	18·3	48	8·8	546	30·4
1891	83	16·6	40	8·0	501	27·8
1892	140	26·5	37	7·0	528	28·2
1893	69	13·0	44	8·3	529	28·3
1894	64	12·4	43	8·5	518	27·7

(*b*) The chief source of supply is the Palayam channel. The sides of this channel afford a considerable portion of the community with conveniently-situated space for defœcation, and the water itself serves for ablution after defœcation, for the washing of clothing and bathing. It receives also the surface water from the neighbourhood of uncleanly dwellings.

(*c*) It is true a public water-supply is contemplated; but it is not likely that Palamcottah can hope to precede other towns of greater population, and, if possible, quite as badly off. Supposing this delay implied even two years, in consideration of the immediate relation between the mortality shown above and the demonstrably foul condition of the existing supply, it would seem but reasonable that some palliative measures should be at once put in force. Thus, I think, the municipality might well cause two estimates to be prepared—one showing what it would cost to bring the water by as short a route as possible from the supply tank to the town by means of stoneware or rivetted

Chairman's Remarks.

The suggestion will be attended to.

Paragraph 3 (*a*) *to* (*c*).—The council considers that there will be considerable difficulties of a social and religious nature in carrying out the suggestions of the Sanitary Commissioner. But at the same time it is prepared to give the matter of filter-beds a fair trial.

No. 795 M., 9TH MAY 1896.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper:—

From M.R.Ry. T. RAGHAVAYYA Avargal, Revenue Officer in charge, Palamcottah Municipality, to the Chief Secretary to Government (through the Collector of Tinnevelly), dated Palamcottah, 21st March 1896, No. 117.

I have the honour to forward, herewith, the inspection notes of the Sanitary Commissioner, Madras, with the remarks of the council duly passed at the meeting held on the 19th instant.

ENCLOSURES.

INSPECTION NOTES of the Sanitary Commissioner, Madras.

TINNEVELLY DISTRICT.

PALAMCOTTAH MUNICIPALITY.

Inspected 24th to 26th October 1895.

Population as per census of 1891 .. .. 18,686.

Inspection Notes.	Chairman's Remarks.
Roads.— (*a*) These, on the date of my inspection, had been much damaged by heavy rain. That they had been so damaged, however, was greatly due to the want of correctly-formed side-channels in certain cases and to the irregular formation of road culverts and of stones serving for approaches to houses. Much waste of money would be saved eventually were the municipal council to systematically survey their roads with reference to these points.	The council will pay attention to the suggestions of the Sanitary Commissioner contained in this paragraph.
(*b*) Between Palamcottah and Tinnevelly, the Local Fund Board owns between two and three miles of roads subjected to much traffic. I consider it would result in *economy and efficiency* were the Local Fund Board, the Palamcottah Municipality and the Tinnevelly Municipality to unite in purchasing and supporting a light steam-roller that would serve the whole of this united area.	The council will endeavour to arrange with the Tinnevelly Municipality and District Board for the purchase of a steam-roller.

Sanitary Commissioner

Inspection notes — Palamcottah Municipality :-

Commended to the municipal Council for careful consideration.

2.5.96

715/96

1026 m

C.S.
P.S.

To
The Chairman, M. C. Palamcottah. (2 with Plans & Estimates)
" Collector of Tinnevelly (5)
" Sanitary Commissioner (4)
" Sanitary Engineer (3)
Editors' Table. D.No. 3/6/96

[6]
700—6-4-96.

LOCAL AND MUNICIPAL DEPARTMENT.

Papers to be read in Proceedings:—

Again G.O., dated 189 , No.

Current No. 1026 M of 1896, dated 21st March from the Chairman, M.C. Palamcottah.
Current No. of 189 , dated from the

Order. No. 795 M & 9.5.96

Recorded.

2. With reference to the Chairman's remarks on para. 4 of the Inspection notes, it is observed that although the municipal council is bound, in the interests of public health and convenience, to see that all private cess-pools in the town are kept in a satisfactory state, it is not equitable that the expenditure on this account should be defrayed from the taxes raised from the general body of taxpayers. The Council should, therefore endeavour to organize a Service, similar to that of private Scavenging, on a self-supporting basis.

3. The suggestion of the Sanitary Commissioner in para. 16 (c) of the Inspection notes, in which the Govt concurs, will be

Commended

C:1026 M

Palamcottah Inspection notes

10

Inspection Notes.	Chairman's Remarks.
(*b*) In regard to the cholera epidemic which existed on my arrival, I consider the municipality was undesirably supine in action, and I advise it in future to follow, as far as practicable in view of the funds at its disposal, the rules laid down in G.O., No. 1028 M., dated 26th June 1895. It is essential that it should be remembered that *prompt* action as to the segregation of choleraic poison should ensure suppression and the saving of human life.	The council has adopted, and will adopt, the suggestions contained in this paragraph as far as funds will permit.
(*c*) My enquiry at the special meeting showed that the councillors do not undertake ward duty. I particularly advise the councillors to come to some agreement on this point. It is most desirable that each member should regard himself as personally responsible for successful administration, and should aid in bringing defects to the notice of the Chairman and securing their removal by personal influence and example. For instance, in the matter of private scavening, which is a point of so much importance in this town, each councillor might greatly advance administration by inspecting from house to house in his division and exerting his influence to secure and maintain a complete reform as to household rubbish and night-soil conservancy.	

CAMP, BELLARY,
13*th February* 1896.

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

EXTRACT from the Proceedings of the Municipal Council of Palamcottah, dated 19th March 1896.

* * * * *

Read—Inspection notes of the Sanitary Commissioner, Madras, and the remarks of the council thereon.

Resolution.—Confirmed.

Forwarded.

TINNEVELLY,
26*th March* 1896.

(Signed) A. W. B. HIGGENS,
Collector.

Inspection Notes.

Chairman's Remarks.

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.	Ratio per mille of deaths of infants between one and five years of age to population of that age.
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1893	35·5	28·0	13·1	3·0	11·3	8·3	0·6	63·7	210·3	185·7
1894	29·7	27·3	12·3	3·3	13·3	8·3	0·6	62·2	165·7	184·9
1895	32·1	21·8	3·8	1·3	18·3	5·3	0·6	70·2	196·8	103·7

There were only thirty prosecutions for failure to register. It is essential, after once more giving the inhabitants warning and placing notice boards in conspicuous parts of the town, that prosecution for failure to register should be *uniformly pursued.*

Stringent measures are being taken by the council to remedy this defect.

15. *Graveyards—Christian Graveyard.*—This is far too close to habitations. The municipality have, however, I believe, taken action on the matter. A new spot should be acquired as early as possible.

A new site has been acquired and a compound wall has been put up. The old burial-ground will be closed as soon as possible.

16. *Sanitary Administration.*—(*a*) The cholera shed, which is a miserable structure, ill-ventilated and in bad repair, is in a most undesirable site. It is within 45 yards of a much frequented public road and 65 yards of a latrine in constant use by the public. The road immediately adjoins a large parcherry. The people of this parcherry have repeatedly complained of the position of the shed. The only plea that can be given in regard to the position is that it is convenient for the medical staff. It is theoretically quite possible to arrange a cholera ward within the distance stated of habitations, but I have no reason to think, from an inspection of the conditions here, that theoretical requirements are even aimed at. The shed attached to the latrine itself is a standing danger, in that any matter deposited can be washed into the adjoining drain, close to which is a sweetmeat shop. Hence flies might well carry cholera *bacilli* to food eaten by the parcherry people. To my mind the request that this shed should be abolished is reasonable and the municipality would do well to remove this cause of discontent, irrespective of the fact that the shed cannot be said to afford accommodation of the nature required. The Sanitary Board have now suitable plans for infectious-disease sheds, which can be placed at the disposal of the municipality on request.

A more suitable site will be acquired and the Sanitary Board will then be addressed about the standard plan.

Inspection Notes.	Chairman Remarks.
10. *Markets*—(*a*) *The Fish Market*—is absolutely unfitted for its purpose.	Steps have been taken to close the market.
(*b*) *General Market.*—The brick pavement is in very bad order, and requires repair throughout. The arrangements for butchers demand early revision. Boxes on which the meat is put should be got rid of in favour of small Cuddapah or other smooth stone slabs that can be kept thoroughly clean. Ropes should be replaced by steel hooks and small iron bars. The market well requires thorough cleansing. It should be subsequently covered and supplied with a pump.	The brick pavement in the butchers' stalls will be replaced by stone slabs at an early date. The flooring of the rest of the market will be attended to next official year. The water of the wells in the market is unfit for drinking purposes and therefore the erection of a pump is not necessary. The wells will, however, be cleansed periodically.
11. *Offensive Trades.*—(*a*) Certain bakeries for which licenses have been allowed by the municipality are unfit for the purpose. Such places should not be licensed until it can be shown that scrupulous cleanliness as to preparation of bread is observed and that arrangements as to light, conservancy and water-supply are correct.	All applications for licenses for bakeries will in future be referred to the District Medical and Sanitary Officer for opinion as to the suitability of the buildings proposed to be used as such bakeries.
(*b*) Cattle were found stalled close to houses, without any attempt at correct preparation of the surface. The municipality should remember that not only are licenses required for ten head of cattle but for "cattle yards" (see section 188).	The council will take early steps to remedy this defect.
12. Bandies are found at every nook and corner, notwithstanding the bye-law prohibiting this. The municipality would find it profitable, irrespective of the public convenience thereby secured, to open a bandy-stand of their own.	The bye-law will be more strictly enforced in future and a municipal cart-stand provided.
13. *Vaccination.*—The following is the result of compulsory vaccination during the preceding six months :—	No remarks.

Total births during preceding six months, *i.e.*, from 1st January to 30th June 1895.	Number vaccinated successfully.	Number vaccinated unsuccessfully for the first time.	Number vaccinated a second time because first operation proved unsuccessful.		Postponed under medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccinations to total births per cent.	Prosecution for failure to accept vaccination during the year up to 30th June 1895.		
			Successful.	Unsuccessful.						Number of suits filed.	Number of cases disposed of by Magistrate.	Number of convictions.
313	156	2	2	1	26	66	55	1	49·84	38	31	1

Examination of children upon the roads showed that (as far as this test would go) very few children remain unprotected.

14. *Registration.*—The following are the results of registration :—

Inspection Notes.

Chairman and the few councillors who gave him their support in this matter. The abolition of the storage principle has been brought about, not only by prohibition, but also by filling in the old pits formerly employed. The municipal council should, however, remember that it is very "easy for water to run in former stream beds" and that hence much watchfulness should be exercised by house-to-house visitation to ensure that the old habit is not gradually resumed. It is also possible that in certain instances the complete fulfilment of their order has not been accomplished. For example, in the case of a respectable family, I found the old custom persisted in. There being in this town a decided tendency for each house to have its private latrine, the municipality should do their best to encourage the system and thus relieve themselves of the worry and expense incident to the public latrine method as far as possible. In doing so, they should hold in mind section 207, which gives full power to insist on latrines being altered after such pattern as the municipality may determine upon. It would be advisable that these be arranged on the double-pail method.

Chairman's Remarks.

8. The night-soil depôt is improperly, although neatly, kept. The huge pits arranged at present cannot permit of correct change in the deposited material being quickly accomplished. To secure this, trenches laid out as required with perfect regularity as to size should be employed. A good method is to have the trenches 18″ deep by 18″ broad, with 36″ intervals between neighbouring trenches —each trench being 36″ long. Between each series of trenches should be formed a road of sufficient breadth to allow the night-soil cart to pass. Each trench, as soon as filled, should be labelled showing the date of filling. In filling, the layers should be 4″ of night-soil at the bottom followed by 4″ of earth; upon this a further layer of 6″ of night-soil followed by 6″ of earth. Under this arrangement, if the staff fulfil their duty, the night-soil depôt ought to be perfectly odourless.

This recommendation has been already carried out with regard to the pits dug subsequent to the visit of the Sanitary Commissioner.

9. *Slaughter-house.*—The stone floor requires re-arranging so as to make it regular. The joints should then be cement-pointed. There is no water on the spot. A well should be sunk, and the slaughter-house should be supplied by means of a pump filling an elevated cistern, whence the water should be taken by the butchers from pipes and taps.

The repair of the flooring has already been put in hand. The other suggestions will be carried out as soon as funds will permit.

6

Inspection Notes.

in first sorting the contents of carts. A very good pattern is that patented by Burn and Co., Calcutta, and known as the "Roberts' natural draught incinerator." I advise the municipality to open communication with that firm on the subject, when they will doubtless supply all information required. There certainly should be no delay in removing the existing incinerator. As to the theory that only incombustible parts of rubbish are placed in the gravel pits—such, for example, as potsherds—I found on inspection that this was very far from the case, and that, as I suspected, a considerable amount of untreated rubbish is dumped on this spot. Only seven carts are employed for the gathering of rubbish. At least nine are requisite, even taking into consideration the proximity of the present rubbish incinerator. When an incinerator is erected on the new site further from the town, which will entail more work from the carts, it will be necessary to increase this number by seven. It is also impossible that seven sweepers can effect the work required of them. The men should be increased to sixteen if storage on backyards is to be prevented, as it certainly should be.

6. *Night-soil removal.*—(*a*) The number of public latrines provided is insufficient, but as the municipality reports that 2,513 private latrines are attended to under the private scavenging system, it would not be necessary that the total number should exceed fourteen. The type of corrugated iron latrine which has been supplied by a private firm is not sanitarily good, the wooden seats being particularly objectionable. I would advise the municipality to adopt either Donaldson's patent latrines or those advised by the Sanitary Board.

(*b*) The masonry latrines at Ellundakolam should have a flooring of concrete plastered with Portland cement.

7. *Private Scavenging.*—The retention of night-soil within private premises for agricultural purposes is a peculiarity of this town and other parts of the district. To so great an extent was removal of excreta from private houses not fulfilled that Government found it necessary to make a special communication on the subject to the municipal council (G.O., No. 749 M., dated 13th June 1894). The advice thus given has been duly acted upon, and, knowing the strong movement which was against them in this subject, I think considerable credit is due to the

Chairman's Remarks.

The council has already made provision in the budget for 1896–97 for the purchase of two iron latrines.

The council will provide the existing iron latrines with stone slabs as soon as possible, and as to the purchase of new iron latrines the suggestions of the Sanitary Commissioner will be attended to.

The suggestion will be attended to.

Recorded.

Inspection Notes.

stances, I would strongly advise the municipality to sink a well in an uncontaminated area. I think that a site on the old parade ground not far removed from Sarah Tucker's Institution, which I pointed out to the sanitary inspector and described at the meeting to the councillors before my departure after my inspection, would be suitable. Mr. Chester, Local Fund Engineer, kindly prepared a plan and estimate for me for this well, which I forward herewith. The figure—namely, Rs. 347-8-0—is sufficiently modest not to frighten the councillors, even having regard to the slender funds available.

4. *Sewage.*—Practically, the only method of sewage disposal is by soakage within the town site. I advise the adoption of the Vizianagram sewage-filter for households as per plan and description attached. This will serve better than present arrangements, pending the making of a correct sewerage system, which will doubtless be a matter of many years hence. Three carts are at present employed at the cost of the municipality for the removal of sewage from private cesspools, and it is intended to employ a greater number. This expenditure should not in my opinion be met from municipal funds, but should be arranged for by the inhabitants concerned direct, or in communication with the municipality, after the manner of contract in the case of private scavenging. The transport of sewage water is far too expensive a matter for a municipality to undertake on behalf of a few of the inhabitants at the cost of the majority.

5. *Rubbish removal.*—There is a beehive pattern of incinerator, which is said to consume fourteen loads of rubbish daily. I, however, suspect that such cart loads must vary greatly in bulk, whilst in wet weather action is impossible. In working, deposit is first arranged for near the incinerator, and all incombustible parts are excluded for removal to certain gravel pits. This must entail much waste of labour. The municipal council, having been advised by the Deputy Sanitary Commissioner as to the erroneous position of this rubbish collecting and sorting depôt near the slaughter-house, are about to erect a new incinerator. I would therefore advise this opportunity be taken of purchasing one of a form that will no longer require the expenditure of labour

Chairman's Remarks.

The council considers that the digging of a new well on the site proposed by the Sanitary Commissioner will not prove as useful as he considers. The site being so far removed from the heart of the town, persons drawing water (chiefly women) will not resort to the well; but the council is of opinion that the existing wells in front and to the east of the Post office, the water of which is largely used by the public, should be improved and secured from contamination.

Those people who can afford to do so will be requested to try the filter suggested by the Sanitary Commissioner.

The council is unanimously of opinion that the levy of fees for cleaning cesspools will be a great hardship on the public, especially in face of the fact that the bulk of the inhabitants of the town is too poor to bear any further taxation.

The incinerator will be removed as soon as possible to a better site and an estimate will be called for from Messrs. Burn & Co.

The council has already made provision in the budget for 1896-97 for two additional rubbish carts.

Inspection Notes.

ment, little sanitary result can be obtained for this expenditure. At time of my visit, in the part controlled by the Public Works Department persons were washing their clothing. By re-arranging the inlet and the outlet, it ought to be possible to prevent the water-sheet being continuous. If, on this being accomplished, platforms were erected as above advised for the Ramaswami tank, fair protection would be acquired.

(*g*) *Prandakolam Well.*—This should be lined with cement plaster down to the lowest water-level; a platform basement and drain should also be supplied.

(*h*) *Vanam Kanari* (in the old Military Lines).—The parapet wall is so broken as to allow drippings from the platform to flow back freely.

(*i*) *The old Regimental Hospital Well.*—This is much used for cooking and kitchen purposes by Europeans. It would be advisable, in view of the possibility of contamination, to have this covered and add a pump to it.

(*j*) *East Toll-gate Well.*—This is largely used. It is not provided with a platform or drain. This should be arranged and the existing beam which is placed across the well should be removed, as its presence aids the opportunities of contamination by persons standingupon it.

(*k*) *Sarah Tucker's Well.*—This is the favourite source of water-supply of Europeans and educated natives; yet its surroundings, notwithstanding the receipt some time back of a favourable verdict from the Chemical Examiner, are at present such as to prove that the source is open to dangerous contamination. Practically, what is supplied to this well for a considerable part of the year is the filtrate from paddy fields which surround it and which are manured by night-soil freely. Moreover, as it is very largely used, the water must be open to contamination from ropes and chatties. Sarah Tucker's Institution, which derives its water from this source, has time after time suffered from cholera, and one could hardly expect any other result. If my opinion as to the dangerous character of this well be correct, it follows that Palamcottah does not possess a single water-source from which those who may desire to obtain pure water could do so. Under these circum-

Chairman's Remarks.

This will be carried out at once.

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The council will endeavour to carry this out as soon as funds will permit.

The suggestions will be carried out.

An extract will be sent to the Lady Superintendent of the Sarah Tucker's Institution and the Chairman will be requested to obtain statistics of cholera attacks in the above institution for the past ten years. He will also forward a small quantity of the water to the Chemical Examiner for analysis.

Inspection Notes.

iron pipes without any supplementary system of distribution, and, secondly, for improving the existing wells along the sides of the channel, so as to form reservoirs for filtered water, and for the preparation of small filter-beds with wells attached as a new work. The latter arrangement certainly would not be costly and would have the merit of securing a considerable grade of protection against water-borne diseases, although it cannot be said to be complete. It would at least secure the existence of a water of considerably higher sanitary value than the horrible mixture now employed. In the meantime, the appointment of at least two watchmen for this channel is essential. The municipality should further, under section 154, reserve it throughout its length for drinking purposes and require the aid of the police in enforcing their order. The plea would, of course, arise that persons are placed to inconvenience in not being able to enter the channel bodily for the purpose of bathing or washing clothing. But this difficulty can be met by appointing certain spots provided with dhoby stones and with surfaces sloping from the channel, where both bathing and washing can proceed without defiling the water.

(*d*) During the hot season the channel falls, and then the inhabitants resort to the Ramaswami tank, which is used as a storage reservoir. But this is not reserved until actually used for this purpose, with the result that during all but, say, three months in the year, it is subject to defilement. This should be regarded in its true light of a storage reservoir, and should be conserved carefully *throughout the year*. To enable persons to draw water without entering it and thus defiling it with their feet and hands, platforms should be built on one or other of the systems shown in the accompanying diagrams.

(*e*) *Bishop Sergeant's well* is much used by Christians. It would be advisable to close this at the top and supply the well with a pump and cistern. The municipality should offer the proprietors this advice.

(*f*) *Moulikolam.*—This is another storage tank designed to aid in tiding over the hot season. Watchmen are retained here by the municipality, but as only one portion of the continuous sheet of water is under the control of the council, and the rest under that of the Public Works Depart-

Chairman's Remarks.

The council is of opinion that the reserving of the Ramaswamikovil tank is not necessary in face of the fact that the water of the tank is never used for drinking purposes.

The suggestion of the Sanitary Commissioner will be communicated to the Mission authorities.

A general scheme for the improvement of the Moulikolam reservoir including the suggestions contained in this paragraph was submitted to Government on 6th October 1893, but the Government condemned the scheme and rejected it on the report of the Sanitary Engineer.

Inspection Notes.

2. *Dwellings.*—These are much crowded and perflation is interrupted by reason of the houses being built in squares. In sanctioning new buildings under section 180, the council should take care that open spaces are provided in the surroundings of each house.

Chairman's Remarks.

The suggestion will be attended to.

3. *Water-supply.*—(*a*) This has long been acknowledged a weak point in the sanitation of this town. The following statistics during the last 15 (fifteen) years, the percentage of total deaths due to cholera and bowel affections, and the total mortality sufficiently testify to this fact:—

Paragraph 3 (*a*) *to* (*c*).—The council considers that there will be considerable difficulties of a social and religious nature in carrying out the suggestions of the Sanitary Commissioner. But at the same time it is prepared to give the matter of filter-beds a fair trial.

	Cholera.		Dysentery and diarrhœa.		Total.	
	Deaths.	Percentage.	Deaths.	Percentage.	Mortality.	Rate per mille of population.
1880	..	..	84	14·9	562	31·3
1881	128	19·2	84	12·6	667	37·2
1882	20	4·5	58	13·0	448	24·9
1883	180	27·6	65	9·8	651	36·2
1884	161	30·1	38	7·1	534	29·7
1885	20	4·8	48	11·5	418	23·2
1886	..	..	46	11·0	416	23·1
1887	71	13·4	49	9·2	531	29·5
1888	179	29·6	53	8·8	604	33·6
1889	70	16·0	30	6·9	436	24·2
1890	100	18·3	48	8·8	546	30·4
1891	83	16·6	40	8·0	501	27·8
1892	140	26·5	37	7·0	528	28·2
1893	69	13·0	44	8·3	529	28·3
1894	64	12·4	43	8·5	518	27·7

(*b*) The chief source of supply is the Palkum channel. The sides of this channel afford a considerable portion of the community with conveniently situated space for defœcation, and the water itself serves for ablution after defœcation, for the washing of clothing and bathing. It receives also the surface water from the neighbourhood of uncleanly dwellings.

(*c*) It is true a public water-supply is contemplated; but it is not likely that Palamcottah can hope to precede other towns of greater population, and, if possible, quite as badly off. Supposing this delay implied even two years, in consideration of the immediate relation between the mortality shown above and the demonstrably foul condition of the existing supply, it would seem but reasonable that some palliative measures should be at once put in force. Thus, I think, the municipality might well cause two estimates to be prepared—one showing what it would cost to bring the water by as short a route as possible from the supply tank to the town by means of stoneware or rivetted

No. M., April 1896.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—the following paper:—

From M.R.Ry. T. RAGHAVAYYA Avargal, Revenue Officer in charge, Palamcottah Municipality, to the Chief Secretary to Government (through the Collector of Tinnevelly), dated Palamcottah, 21st March 1896, No. 117.

I have the honour to forward, herewith, the inspection notes of the Sanitary Commissioner, Madras, with the remarks of the council duly passed at the meeting held on the 19th instant.

Enclosures.

Inspection Notes of the Sanitary Commissioner, Madras.

TINNEVELLY DISTRICT.

Palamcottah Municipality.

Inspected 24th to 26th October 1895.

Population as per census of 1891 .. .. 18,686.

Inspection Notes.	Chairman's Remarks.
Roads.— (*a*) These, on the date of my inspection, had been much damaged by heavy rain. That they had been so damaged, however, was greatly due to the want of correctly-formed side-channels in certain cases and to the irregular formation of road culverts and of stones serving for approaches to houses. Much waste of money would be saved eventually were the municipal council to systematically survey their roads with reference to these points.	The council will pay attention to the suggestions of the Sanitary Commissioner contained in this paragraph.
(*b*) Between Palamcottah and Tinnevelly, the Local Fund Board owns between two and three miles of roads subjected to much traffic. I consider it would result in *economy and efficiency* were the Local Fund Board, the Palamcottah Municipality and the Tinnevelly Municipality to unite in purchasing and supporting a light steam-roller that would serve the whole of this united area.	The council will endeavour to arrange with the Tinnevelly Municipality and District Board for the purchase of a steam-roller.

Govt. of {1896} Madras.

LOCAL AND MUNICIPAL.

Issued

Read. *Encl.*

G.O., No. 795 M., 9th May 1896.

MAY.

Inspection Notes.

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

Order—No. 795 M., dated 9th May 1896.

Recorded.

2. With reference to the Chairman's remarks on paragraph 4 of the inspection notes, it is observed that although the municipal council is bound, in the interests of public health and convenience, to see that all private cess-pools in the town are kept in a satisfactory state, it is not equitable that the expenditure on this account should be defrayed from the taxes raised from the general body of tax-payers. The council should, therefore, endeavour to organize a service, similar to that for private scavenging, on a self-supporting basis.

3. The suggestion of the Sanitary Commissioner in paragraph 16 (*c*) of the inspection notes, in which the Government concurs, will be commended to the municipal council for careful consideration.

(True Extract.)

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

To the Chairman, Municipal Council, Palamcottah (with plans and estimates).
„ Collector of Tinnevelly.
„ Sanitary Commissioner.
„ Sanitary Engineer.
Editors' Table.

Exd. A. J. Peters.

Inspection Notes.

suitable plans for infectious-disease sheds, which can be placed at the disposal of the municipality on request.

(*b*) In regard to the cholera epidemic which existed on my arrival, I consider the municipality was undesirably supine in action, and I advise it in future to follow, as far as practicable in view of the funds at its disposal, the rules laid down in G.O., No. 1028 M., dated 26th June 1895. It is essential that it should be remembered that *prompt* action as to the segregation of choleraic poison should ensure suppression and the saving of human life.

(*c*) My enquiry at the special meeting showed that the councillors do not undertake ward duty. I particularly advise the councillors to come to some agreement on this point. It is most desirable that each member should regard himself as personally responsible for successful administration, and should aid in bringing defects to the notice of the Chairman and securing their removal by personal influence and example. For instance, in the matter of private scavening, which is a point of so much importance in this town, each councillor might greatly advance administration by inspecting from house to house in his division and exerting his influence to secure and maintain a complete reform as to household rubbish and night-soil conservancy.

Chairman's Remarks.

The council has adopted, and will adopt, the suggestions contained in this paragraph as far as funds will permit.

Camp, Bellary,
13*th February* 1896.

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

Extract from the Proceedings of the Municipal Council of Palamcottah, dated 19th March 1896.

* * * * *

Read—Inspection notes of the Sanitary Commissioner, Madras, and the remarks of the council thereon.

Resolution.—Confirmed.

Forwarded.

Tinnevelly,
26*th March* 1896.

(Signed) A. W. B. HIGGENS,
Collector.

Inspection Notes. Chairman's Remarks.

14. *Registration.*—The following are the results of registration:—

Years.	Ratio of births per mille of estimated population.	Ratio of deaths per mille of estimated population.	Percentage of deaths from Cholera.	Small-pox.	Fevers.	Dysentery and diarrhœa.	Injuries.	All other causes.	Ratio of deaths of infants under one year of age per mille to registered births in the preceding year.	Ratio per mille of deaths of Britishs between one and five years of age to population of that age.
1893	35·5	28·0	13·1	3·0	11·3	8·3	0·6	63·7	210·3	185·7
1894	29·7	27·3	12·3	3·3	13·3	8·3	0·6	62·2	165·7	184·9
1895	32·1	21·8	3·8	1·3	18·3	5·3	0·6	70·2	196·8	103·7

There were only thirty prosecutions for failure to register. It is essential, after once more giving the inhabitants warning and placing notice boards in conspicuous parts of the town, that prosecution for failure to register should be *uniformly pursued.*

Stringent measures are being taken by the council to remedy this defect.

15. *Graveyards—Christian Graveyard.*—This is far too close to habitations. The municipality have, however, I believe, taken action on the matter. A new spot should be acquired as early as possible.

A new site has been acquired and a compound wall has been put up. The old burial-ground will be closed as soon as possible.

16. *Sanitary Administration.*—(*a*) The cholera shed, which is a miserable structure, ill-ventilated and in bad repair, is in a most undesirable site. It is within 45 yards of a much frequented public road and 65 yards of a latrine in constant use by the public. The road immediately adjoins a large parcherry. The people of this parcherry have repeatedly complained of the position of the shed. The only plea that can be given in regard to the position is that it is convenient for the medical staff. It is theoretically quite possible to arrange a cholera ward within the distance stated of habitations, but I have no reason to think, from an inspection of the conditions here, that theoretical requirements are even aimed at. The shed attached to the latrine itself is a standing danger, in that any matter deposited can be washed into the adjoining drain, close to which is a sweetmeat shop. Hence flies might well carry cholera *bacilli* to food eaten by the parcherry people. To my mind the request that this shed should be abolished is reasonable and the municipality would do well to remove this cause of discontent, irrespective of the fact that the shed cannot be said to afford accommodation of the nature required. The Sanitary Board have now

A more suitable site will be acquired and the Sanitary Board will then be addressed about the standard plan.

Inspection Notes. Chairman's Remarks.

means of a pump filling an elevated cistern, whence the water should be taken by the butchers from pipes and taps.

10. *Markets*—(*a*) *The Fish Market* is absolutely unfitted for its purpose.

Steps have been taken to close the market.

(*b*) *General Market.*—The brick pavement is in very bad order and requires repair throughout. The arrangements for butchers demand early revision. Boxes on which the meat is put should be got rid of in favour of small Cuddapah or other smooth stone slabs that can be kept thoroughly clean. Ropes should be replaced by steel hooks and small iron bars. The market well requires thorough cleansing. It should be subsequently covered and supplied with a pump.

The brick pavement in the butchers' stalls will be replaced by stone slabs at an early date. The flooring of the rest of the market will be attended to next official year. The water of the wells in the market is unfit for drinking purposes and therefore the erection of a pump is not necessary. The wells will, however, be cleansed periodically.

11. *Offensive Trades.*—(*a*) Certain bakeries for which licenses have been allowed by the municipality are unfit for the purpose. Such places should not be licensed until it can be shown that scrupulous cleanliness as to preparation of bread is observed and that arrangements as to light, conservancy and water-supply are correct.

All applications for licenses for bakeries will in future be referred to the District Medical and Sanitary Officer for opinion as to the suitability of the buildings proposed to be used as such bakeries.

(*b*) Cattle were found stalled close to houses, without any attempt at correct preparation of the surface. The municipality should remember that not only are licenses required for ten head of cattle but for "cattle yards" (see section 188).

The council will take early steps to remedy this defect.

12. Bandies are found at every nook and corner, notwithstanding the bye-law prohibiting this. The municipality would find it profitable, irrespective of the public convenience thereby secured, to open a bandy-stand of their own.

The bye-law will be more strictly enforced in future and a municipal cart-stand provided.

13. *Vaccination.*—The following is the result of compulsory vaccination during the preceding six months:—

No remarks.

Total births during preceding six months, *i.e.*, from 1st January to 30th June 1895.	Number vaccinated successfully.	Number vaccinated unsuccessfully for the first time.	Number vaccinated a second time because first operation proved unsuccessful. Successful.	Unsuccessful.	Postponed under medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccinations to total births per cent.	Prosecution for failure to accept vaccination during the year up to 30th June 1895. Number of suits filed.	Number of cases disposed of by Magistrate.	Number of convictions.
313	156	2	2	1	26	66	55	1	49·84	38	31	1

Examination of children upon the roads showed that (as far as this test would go) very few children remain unprotected.

Inspection Notes.

Chairman and the few councillors who gave him their support in this matter. The abolition of the storage principle has been brought about, not only by prohibition, but also by filling in the old pits formerly employed. The municipal council should, however, remember that it is very "easy for water to run in former stream beds" and that hence much watchfulness should be exercised by house-to-house visitation to ensure that the old habit is not gradually resumed. It is also possible that in certain instances the complete fulfilment of their order has not been accomplished. For example, in the case of a respectable family, I found the old custom persisted in. There being in this town a decided tendency for each house to have its private latrine, the municipality should do their best to encourage the system and thus relieve themselves of the worry and expense incident to the public latrine method as far as possible. In doing so, they should hold in mind section 207, which gives full power to insist on latrines being altered after such pattern as the municipality may determine upon. It would be advisable that these be arranged on the double-pail method.

8. The night-soil depôt is improperly, although neatly, kept. The huge pits arranged at present cannot permit of correct change in the deposited material being quickly accomplished. To secure this, trenches laid out as required with perfect regularity as to size should be employed. A good method is to have the trenches 18″ deep by 18″ broad, with 36″ intervals between neighbouring trenches —each trench being 36″ long. Between each series of trenches should be formed a road of sufficient breadth to allow the night-soil cart to pass. Each trench, as soon as filled, should be labelled showing the date of filling. In filling, the layers should be 4″ of night-soil at the bottom followed by 4″ of earth; upon this a further layer of 6″ of night-soil followed by 6″ of earth. Under this arrangement, if the staff fulfil their duty, the night-soil depôt ought to be perfectly odourless.

9. *Slaughter-house.*—The stone floor requires re-arranging so as to make it regular. The joints should then be cement-pointed. There is no water on the spot. A well should be sunk, and the slaughter-house should be supplied by

Chairman's Remarks.

This recommendation has been already carried out with regard to the pits dug subsequent to the visit of the Sanitary Commissioner.

The repair of the flooring has already been put in hand. The other suggestions will be carried out as soon as funds will permit.

Inspection Notes.

in first sorting the contents of carts. A very good pattern is that patented by Burn and Co., Calcutta, and known as the "Roberts' natural draught incinerator." I advise the municipality to open communication with that firm on the subject, when they will doubtless supply all information required. There certainly should be no delay in removing the existing incinerator. As to the theory that only incombustible parts of rubbish are placed in the gravel pits—such, for example, as potsherds—I found on inspection that this was very far from the case, and that, as I suspected, a considerable amount of untreated rubbish is dumped on this spot. Only seven carts are employed for the gathering of rubbish. At least nine are requisite, even taking into consideration the proximity of the present rubbish incinerator. When an incinerator is erected on the new site further from the town, which will entail more work from the carts, it will be necessary to increase this number by seven. It is also impossible that seven sweepers can effect the work required of them. The men should be increased to sixteen if storage on backyards is to be prevented, as it certainly should be.

6. *Night-soil removal.*—(*a*) The number of public latrines provided is insufficient, but as the municipality reports that 2,513 private latrines are attended to under the private scavenging system, it would not be necessary that the total number should exceed fourteen. The type of corrugated iron latrine which has been supplied by a private firm is not sanitarily good, the wooden seats being particularly objectionable. I would advise the municipality to adopt either Donaldson's patent latrines or those advised by the Sanitary Board.

(*b*) The masonry latrines at Ellundakolam should have a flooring of concrete plastered with Portland cement.

7. *Private Scavenging.*—The retention of night-soil within private premises for agricultural purposes is a peculiarity of this town and other parts of the district. To so great an extent was removal of excreta from private houses not fulfilled that Government found it necessary to make a special communication on the subject to the municipal council (G.O., No. 749 M., dated 13th June 1894). The advice thus given has been duly acted upon, and, knowing the strong movement which was against them in this subject, I think considerable credit is due to the

Chairman's Remarks.

The council has already made provision in the budget for 1896–97 for the purchase of two iron latrines.

The council will provide the existing iron latrines with stone slabs as soon as possible, and as to the purchase of new iron latrines the suggestions of the Sanitary Commissioner will be attended to.

The suggestions will be attended to.

Recorded.

Inspection Notes.

water could do so. Under these circumstances, I would strongly advise the municipality to sink a well in an uncontaminated area. I think that a site on the old parade ground not far removed from Sarah Tucker's Institution, which I pointed out to the sanitary inspector and described at the meeting to the councillors before my departure after my inspection, would be suitable. Mr. Chester, Local Fund Engineer, kindly prepared a plan and estimate for me for this well, which I forward herewith. The figure—namely, Rs. 347-8-0—is sufficiently modest not to frighten the councillors, even having regard to the slender funds available.

4. *Sewage.*—Practically, the only method of sewage disposal is by soakage within the town site. I advise the adoption of the Vizianagram sewage-filter for households as per plan and description attached. This will serve better than present arrangements, pending the making of a correct sewerage system, which will doubtless be a matter of many years hence. Three carts are at present employed at the cost of the municipality for the removal of sewage from private cesspools, and it is intended to employ a greater number. This expenditure should not in my opinion be met from municipal funds, but should be arranged for by the inhabitants concerned direct, or in communication with the municipality, after the manner of contract in the case of private scavenging. The transport of sewage water is far too expensive a matter for a municipality to undertake on behalf of a few of the inhabitants at the cost of the majority.

5. *Rubbish removal.*—There is a beehive pattern of incinerator, which is said to consume fourteen loads of rubbish daily. I, however, suspect that such cart loads must vary greatly in bulk, whilst in wet weather action is impossible. In working, deposit is first arranged for near the incinerator, and all incombustible parts are excluded for removal to certain gravel pits. This must entail much waste of labour. The municipal council, having been advised by the Deputy Sanitary Commissioner as to the erroneous position of this rubbish collecting and sorting depôt near the slaughter-house, are about to erect a new incinerator. I would therefore advise this opportunity be taken of purchasing one of a form that will no longer require the expenditure of labour

Chairman's Remarks.

The council considers that the digging of a new well on the site proposed by the Sanitary Commissioner will not prove as useful as he considers. The site being so far removed from the heart of the town, persons drawing water (chiefly women) will not resort to the well; but the council is of opinion that the existing wells in front and to the east of the Post office, the water of which is largely used by the public, should be improved and secured from contamination.

Those people who can afford to do so will be requested to try the filter suggested by the Sanitary Commissioner.

The council is unanimously of opinion that the levy of fees for cleaning cesspools will be a great hardship on the public, especially in face of the fact that the bulk of the inhabitants of the town is too poor to bear any further taxation.

The incinerator will be removed as soon as possible to a better site and an estimate will be called for from Messrs. Burn & Co.

The council has already made provision in the budget for 1896-97 for two additional rubbish carts.

Inspection Notes.

rest under that of the Public Works Department, little sanitary result can be obtained for this expenditure. At time of my visit, in the part controlled by the Public Works Department persons were washing their clothing. By re-arranging the inlet and the outlet, it ought to be possible to prevent the water-sheet being continuous. If, on this being accomplished, platforms were erected as above advised for the Ramaswami tank, fair protection would be acquired.

(*g*) *Prandakulam Well.*—This should be lined with cement plaster down to the lowest water-level; a platform basement and drain should also be supplied.

(*h*) *Vanam Kanari* (in the old Military Lines).—The parapet wall is so broken as to allow drippings from the platform to flow back freely.

(*i*) *The old Regimental Hospital Well.*—This is much used for cooking and kitchen purposes by Europeans. It would be advisable, in view of the possibility of contamination, to have this covered and add a pump to it.

(*j*) *East Toll-gate Well.*—This is largely used. It is not provided with a platform or drain. This should be arranged and the existing beam which is placed across the well should be removed, as its presence aids the opportunities of contamination by persons standing upon it.

(*k*) *Sarah Tucker's Well.*—This is the favourite source of water-supply of Europeans and educated natives; yet its surroundings, notwithstanding the receipt some time back of a favourable verdict from the Chemical Examiner, are at present such as to prove that the source is open to dangerous contamination. Practically, what is supplied to this well for a considerable part of the year is the filtrate from paddy fields which surround it and which are manured by night-soil freely. Moreover, as it is very largely used, the water must be open to contamination from ropes and chatties. Sarah Tucker's Institution, which derives its water from this source, has time after time suffered from cholera, and one could hardly expect any other result. If my opinion as to the dangerous character of this well be correct, it follows that Palamcottah does not possess a single water-source from which those who may desire to obtain pure

Chairman's Remarks.

This will be carried out at once.

This will be carried out at once.

The council will endeavour to carry this out as soon as funds will permit.

The suggestions will be carried out.

An extract will be sent to the Lady Superintendent of the Sarah Tucker's Institution and the Chairman will be requested to obtain statistics of cholera attacks in the above institution for the past ten years. He will also forward a small quantity of the water to the Chemical Examiner for analysis.

Inspection Notes.

iron pipes without any supplementary system of distribution, and, secondly, for improving the existing wells along the sides of the channel, so as to form reservoirs for filtered water, and for the preparation of small filter-beds with wells attached as a new work. The latter arrangement certainly would not be costly and would have the merit of securing a considerable grade of protection against water-borne diseases, although it cannot be said to be complete. It would at least secure the existence of a water of considerably higher sanitary value than the horrible mixture now employed. In the meantime, the appointment of at least two watchmen for this channel is essential. The municipality should further, under section 154, reserve it throughout its length for drinking purposes and require the aid of the police in enforcing their order. The plea would, of course, arise that persons are placed to inconvenience in not being able to enter the channel bodily for the purpose of bathing or washing clothing. But this difficulty can be met by appointing certain spots provided with dhoby stones and with surfaces sloping from the channel, where both bathing and washing can proceed without defiling the water.

(*d*) During the hot season the channel falls, and then the inhabitants resort to the Ramaswami tank, which is used as a storage reservoir. But this is not reserved until actually used for this purpose, with the result that during all but, say, three months in the year, it is subject to defilement. This should be regarded in its true light of a storage reservoir, and should be conserved carefully *throughout the year*. To enable persons to draw water without entering it and thus defiling it with their feet and hands, platforms should be built on one or other of the systems shown in the accompanying diagrams.

(*e*) *Bishop Sergeant's well* is much used by Christians. It would be advisable to close this at the top and supply the well with a pump and cistern. The municipality should offer the proprietors this advice.

(*f*) *Moulikolam.*—This is another storage tank designed to aid in tiding over the hot season. Watchmen are retained here by the municipality, but as only one portion of the continuous sheet of water is under the control of the council, and the

Chairman's Remarks.

The council is of opinion that the reserving of the Ramaswamikovil tank is not necessary in face of the fact that the water of the tank is never used for drinking purposes.

The suggestion of the Sanitary Commissioner will be communicated to the Mission authorities.

A general scheme for the improvement of the Moulikolam reservoir including the suggestions contained in this paragraph was submitted to Government on 6th October 1893, but the Government condemned the scheme and rejected it on the report of the Sanitary Engineer.

Inspection Notes.

2. *Dwellings.*—These are much crowded and perflation is interrupted by reason of the houses being built in squares. In sanctioning new buildings under section 180, the council should take care that open spaces are provided in the surroundings of each house.

3. *Water-supply.*—(*a*) This has long been acknowledged a weak point in the sanitation of this town. The following statistics during the last 15 (fifteen) years, the percentage of total deaths due to cholera and bowel affections, and the total mortality sufficiently testify to this fact:—

—	Cholera.		Dysentery and diarrhœa.		Total.	
	Deaths.	Percentage.	Deaths.	Percentage.	Mortality.	Rate per mille of population.
1880	..	..	84	14·9	562	31·3
1881	128	19·2	84	12·6	667	37·2
1882	20	4·5	58	13·0	448	24·9
1883	180	27·6	65	9·8	651	36·2
1884	161	30·1	38	7·1	534	29·7
1885	20	4·8	48	11·5	418	23·2
1886	..	..	46	11·0	416	23·1
1887	71	13·4	49	9·2	531	29·5
1888	179	29·6	53	8·8	604	33·6
1889	70	16·0	30	6·9	436	24·2
1890	100	18·3	48	8·8	546	30·4
1891	83	16·6	40	8·0	501	27·8
1892	140	26·5	37	7·0	528	28·2
1893	69	13·0	44	8·3	529	28·3
1894	64	12·4	43	8·5	518	27·7

(*b*) The chief source of supply is the Palayam channel. The sides of this channel afford a considerable portion of the community with conveniently-situated space for defœcation, and the water itself serves for ablution after defœcation, for the washing of clothing and bathing. It receives also the surface water from the neighbourhood of uncleanly dwellings.

(*c*) It is true a public water-supply is contemplated; but it is not likely that Palamcottah can hope to precede other towns of greater population, and, if possible, quite as badly off. Supposing this delay implied even two years, in consideration of the immediate relation between the mortality shown above and the demonstrably foul condition of the existing supply, it would seem but reasonable that some palliative measures should be at once put in force. Thus, I think, the municipality might well cause two estimates to be prepared—one showing what it would cost to bring the water by as short a route as possible from the supply tank to the town by means of stoneware or rivetted

Chairman's Remarks.

The suggestion will be attended to.

Paragraph 3 (*a*) *to* (*c*).—The council considers that there will be considerable difficulties of a social and religious nature in carrying out the suggestions of the Sanitary Commissioner. But at the same time it is prepared to give the matter of filter-beds a fair trial.

No. 795 M., 9th May 1896.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—the following paper:—

From M.R.Ry. T. RAGHAVAYYA Avargal, Revenue Officer in charge, Palamcottah Municipality, to the Chief Secretary to Government (through the Collector of Tinnevelly), dated Palamcottah, 21st March 1896, No. 117.

I have the honour to forward, herewith, the inspection notes of the Sanitary Commissioner, Madras, with the remarks of the council duly passed at the meeting held on the 19th instant.

Enclosures.

Inspection Notes of the Sanitary Commissioner, Madras.

TINNEVELLY DISTRICT.

Palamcottah Municipality.

Inspected 24th to 26th October 1895.

Population as per census of 1891 .. .. 18,686.

Inspection Notes.	Chairman's Remarks.
Roads.— (*a*) These, on the date of my inspection, had been much damaged by heavy rain. That they had been so damaged, however, was greatly due to the want of correctly-formed side-channels in certain cases and to the irregular formation of road culverts and of stones serving for approaches to houses. Much waste of money would be saved eventually were the municipal council to systematically survey their roads with reference to these points.	The council will pay attention to the suggestions of the Sanitary Commissioner contained in this paragraph.
(*b*) Between Palamcottah and Tinnevelly, the Local Fund Board owns between two and three miles of roads subjected to much traffic. I consider it would result in *economy and efficiency* were the Local Fund Board, the Palamcottah Municipality and the Tinnevelly Municipality to unite in purchasing and supporting a light steam-roller that would serve the whole of this united area.	The council will endeavour to arrange with the Tinnevelly Municipality and District Board for the purchase of a steam-roller.

Current No. 530 of 1896

1896

Office of the Municipal Council

Local & Municipal Dept.

CURRENT No. 1078/96

23 MAR 96

COLLECTOR & DISTRICT MAGISTRATE'S OFFICE

T. Raghavayyavargal

Revenue Officer

in Charge

Palamcottah Municipality

To

The Chief Secretary

to Government

Madras

through the Collector of

Tinnevelly

Dated 21st

Received } March 1896

& to Mr

Enclosures two only

Reference

Remarks on the inspection notes of the Sanitary Commissioner Madras with the Remarks of the Council duly passed at the Meeting held on the 19th Instant.

18½

Inwards

UNDER SECRETARY

28 MAR 96

PUBLIC WORKS DEPT.

Inwards Secretariat

26-3-96

Ag 24/96

No 117

Palamcottah Municipality
21st March 1896

From

M. Raghavayya avargal
Revenue Officer in charge
Palamcottah Municipality

To

The Chief Secretary
to Government
Madras.
through the Collector of Tinnevelly

Sir

I have the honor to forward herewith, the inspection of the Sanitary Commissioner Madras with the Remarks of the Council duly passed at the meeting held on the 19th Instant.

I have the honor to be
Sir
Your most obedt. Servt.

Illegible
Revenue Officer
in charge
21.3.96.

Enclosure II
of letter from the
Revenue Officer in
charge of the Palamcottah
Municipality No 117
21-3-96

2/
1896 met Feb

Extract from the Proceedings
of the Municipal Council
of Palamcottah dated 19th March
1896.

Present

Balu. S. Shreeniwasa Row Garu
Chairman
M. R. Ry. D. Arumugam Pillai
Avargal
" S. R. Krishnaswamy Iyengar
Avargal
" John S. Devasahayam Pandian
Avargal
" S. Krishnama Raju Avargal

Inspection notes of the Sanitary Commissioner, Madras and the Remarks of the Council thereon.

Confirmed.

True extract

Zachariah
Revenue Officer
in charge
21.3.96.

Enclosure I
of letter from the
Revenue Officer in charge
of the Palamcottah
Municipality No 117
21-3-96

DISTRICT MAGISTRATE
23 MAR. 96

True extract

maintain a complete re-
form as to household
putbick and night soil
conservancy.

Camp Bellary
~~Fort St George~~
13 ~~January~~ February 1896

Surgeon Lt Col
Sanitary Commissioner.

Mechanical
Overseer of Lascars
Chaupe
21-3-96

special meeting showed
that the Councillors do
not undertake ward
duty. I particularly
advise the Councillors
to come to some agree-
ment on this point. It
is most desirable that
each member should
regard himself as
personally responsible
for successful adminis-
tration, and should
aid in bringing defects
to the notice of the Chair-
man and securing
their removal by personal
influence and example.
For instance, in the matter
of private scavengering
which is a point of so
much importance in
this town, each Councillor
might greatly advance
administration by
inspecting from house
to house in his division,
and exerting his in-
fluence to secure and
maintain

Sanitary Board have
now suitable places for
infectious diseases
sheds, which can be
placed at the disposal
of the Municipality on
request.

(b) In regard to the
cholera epidemic which
existed on my arrival,
I consider the Munici-
cipality was undesirably
supine in action, and
I advise it in future
to follow, as far as
practicable in view of
the funds at its dis-
posal, the rules laid
down in G.O. dated 26th
June 1895 No 1028 M. It
is essential that it
should be remembered
that prompt action as
to the segregation of
cholera ic person should
ensure suppression and
the saving of human
life.

(c) My enquiry at the
special

The Council has
adopted and will
adopt the suggestions
contained in this
para as far as
funds will permit

had latrines, but I have
no reason to think from
an inspection of the
conditions here that
theoretical requirements
are even aimed at. The
shed attached to the
latrine itself is a
standing danger, in
that any matter de-
posited can be washed
into the adjoining drain
close to which is a
sweetmeat shop. Hence
flies might well carry
cholera bacilli to food
eaten by the purchasers
people. To my mind
the request that this
shed should be abolished
is reasonable, and the
Municipality would do
well to remove this
cause of discontent,
irrespective of the fact
that the shed cannot
be said to afford ac-
commodation of the
nature required. The

Sanitary

Years	Rate % births per mille % estimated popn. Latin.	Rate % deaths per mille % estimated popn. Latin.	Percentage % deaths from: Cholera	Enteric	Diarrhœa & dysentery	Enteric & Diarrhœa & dysentery	Injuries	All other causes	Rate % deaths % children under 1 year % births registered in the preceding year	Rate % deaths % children under 5 years % births registered in the preceding year
1893	35.8	28.0	13.1	3.0	11.3	8.3	0.6	63.7	210.3	185.7
1894	29.7	27.3	12.3	3.3	13.3	8.3	0.6	62.2	165.7	184.9
1895	32.1	21.8	3.8	1.3	18.3	5.8	0.6	70.2	196.8	103.7

There were only 30 prosecutions for failure to register. It is essential that after one more giving the inhabitants warning and placing notice boards in conspicuous parts of the town, that prosecution for failure to register should be uniformly pursued.

16. Graveyards. Christian graveyard. This is too close to habitations. The Municipality have, however, I believe taken

Stringent measures are being taken by the Council to Remedy this defect

A new site has been acquired and a Compound wall has been put up. The old burial-ground

will be closed as soon as possible

taken action in the matter. A new site should be acquired as early as possible.

17. Sanitary Administration

(a) The cholera shed which is a miserable structure, ill ventilated, and in bad repair, is in a most undesirable site. It is within 45 yards of a much frequented footpath road, and 65 yards of a latrine in constant use by the public. The road immediately adjoins a large parochial. The people of this parochial have repeatedly complained of the position of the shed. The only plea that can be given in regard to the position is that it is convenient for the medical staff. It is theoretically quite possible to arrange a cholera ward within the distance stated of habitations

A more suitable site will be acquired and the Sanitary Board will then be addressed about the standard plan.

convenience thereby secures to open a bandy stand of their own.

4. Vaccination. The following is the result of compulsory vaccination during the preceding 6 months.

Total births during preceding 6 months i.e. from 1st January to 30th June 1895	Number vaccinated successfully.	Number vaccinated unsuccessfully for 1st time.	Unsuccessful.	Unsuccessful.	Partly successful at the end of 6 months	Died	Left the town	Postponed under Medical Certificate at the end of 6 months	Re vaccinated a 2nd time because 1st operation proved unsuccessful.	Prosecution for failure to accept Vacc^{n} during the year up to 30th June 1895
313	156	2	1	1	26	66	55	1	4984	38	31	1

No Remarks

Examination of children upon the roads showed that (as far as this test would go) very few children remain unprotected

15. Registration. The following are the results of registration:—

licenses have been allowed by the Municipality, are unfit for the purpose. Such places should not be licensed, until it can be shown that scrupulous cleanliness as to preparation of bread is observed, and that arrangements as to light, conservancy, and water supply are correct.

16. Cattle were found stalled close to houses, without any attempt at correct preparation of the surface. The Municipality should remember that not only are licenses required for 10 head of cattle but for "cattle yards" (See section 188).

13. Bandies are found at every nook and corner, notwithstanding the bye-law prohibiting this. The Municipality would find it profitable in respect of the public

to the District Medical and Sanitary Officer for opinion as to the suitability of the buildings proposed to be used as such bakeries.

The Council will take early steps to Remedy this defect

The bye-law will be more strictly enforced in future and a Municipal Cart stand provided

Steps have been taken to close the Markets.

The brick pavement in the butchers' stalls will be replaced by stone slabs as an early date. The flooring of the rooms of the Markets will be attended to next official year. The water of the wells in the Markets is unfit for drinking purposes and therefore the erection of a pump is not necessary. The wells will however be cleansed periodically

All applications for licences for bakeries will in future be refused

the powder should be taken by the butchers from pipes and taps.

10. Markets (a) The fish market is absolutely unfitted for its purpose.

(b) General Market. The brick pavement is in very bad order, and requires repair throughout. The arrangements for butchers demand early revision. Boxes in which the meat is put should be got rid of, in favour of small Cuddapah, or other smooth stone slabs, that can be kept thoroughly clean. Ropes should be replaced by steel hooks and small iron bars. The market will require thorough cleansing. It should be subsequently covered and supplied with a pump.

12. Offensive trades (a) Certain bakeries for which licenses

breadth to allow the night soil cart to pass. Each trench, as soon as filled, should be labelled showing the date of filling. In filling the layers should be 4" of night soil at the bottom followed by 4" of earth, upon this a further layer of 6" of night soil followed by 6" of earth. Under this arrangement, if the staff fulfil their duty the night soil depôt ought to be perfectly odourless.

g. Slaughter houses. The stone floor requires re-arranging so as to make it regular. The joints should then be cement pointed. There is no water on the spot. A well should be sunk, and the slaughter house should be supplied by means of a pump filling an elevated cistern, whence the

The Repair of the flooring has already been put in hand.

The other suggestions will be carried out as soon as funds will permit.

being altered after such pattern as the municipality may determine upon. It would be advisable that these be arranged on the double trail method.

8. The night soil depot is improperly although neatly kept. The huge pits arranged at present cannot permit of correct change in the deposited material being quickly accomplished. To secure this, trenches laid out as required with perfect regularity as to size should be employed. A good method is to have the trenches 18" deep by 18" broad, with 36" intervals between neighbouring trenches - each trench being 36" long. Between each series of trenches should be formed a road of sufficient breadth

This Recommendation has been already carried out with regard to the pits dug subsequent to the visit of the Sanitary Commissioner

be exercised by house to house visitation, to ensure that the old habit is not gradually resumed. It is also possible that in certain instances the complete fulfilment of their order has not been accomplished. For example, in the case of a respectable family, I found the old custom persisted in. There being in this town a decided tendency for each house to have its private latrine, the Municipality should do their best to encourage the system, and thus relieve themselves of the worry and expense incident to the public latrine method as far as possible. In doing so, they should hold in mind Section 207 which gives full power to visit on latrines being

to make a special com-
-munication on the sub-
-ject to the Municipal
Council (Ex. Nr. 749 in
dated 13th June 1894). The
advice thus given has
been duly acted upon,
and knowing the strong
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against them in this
subject, I think con-
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to the Chairman and
the few Councillors who
gave him their support
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The Municipal Council
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private firm is not
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wooden seats being
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-able. I would advise
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adopt either Donaldson's
patent latrines, or those
advised by the Sanitary
Board.
(b) The masonry latrines
at Ellundakolam should
have a flooring of concrete
plastered with Portland
cement.
7. Private Scavengering
The retention of night
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for agricultural purposes
is a peculiarity of this
town and other parts
of the district. To so
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private houses not ful-
-filled that Government
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to

The suggestions
of the Sanitary Com-
-missioner will be
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The suggestions will
be attended to.

Recorded

proximity of the present rubbish incinerator.
When an incinerator is erected on the new site further from the town which will entail more work from the carts, it will be necessary to increase this number by 7. It is also impossible that 7 sweepers can effect the work required of them. The men should be increased to 16 if storage on backyards is to be prevented, as it certainly should be.

6. Night soil removal.
The number of public latrines provided is insufficient, but as the Municipality reports that 2513 private latrines are attended to under the private scavenguring system, it would not be necessary that the total number should exceed 14. The type of corrugated iron

The Council has already made provision in the budget for 1896-97 for the purchase of two iron latrines.

The Council will provide the existing iron latrines with stone slabs as soon as possible and as to the purchase of new iron latrines,

Calcutta and Bombay the "Roberts national — draught incinerator."
I advise the Municipality to open communication with that Firm on the subject, when they will doubtless supply all information required.
There certainly should be no delay in removing the existing incinerator.
As to the theory that only incombustible parts of rubbish are placed in the gravel pits, such for example as potsherds, I found on inspection that this was very far from the case, and that, as I suspected, a considerable amount of unburnt rubbish is dumped on this spot.
Only 4 carts are employed for the gathering of rubbish. At least 9 are requisite, even taking into consideration the proximity

in the budget for 1896-97 for two additional Rubbish Carts.

whilst in wet weather action is impossible. In working, deposit is first arranged for near the incinerator, and all incombustible parts are excluded for removal to certain gravel pits. This must entail much waste of labour. The Municipal Council having been advised by the Deputy Sanitary Commissioner as to the erroneous position of this rubbish collecting and sorting depôt near the Slaughter houses, are about to erect a new incinerator. I would therefore advise this opportunity be taken of purchasing one of a form that will no longer require the expenditure of labour in first sorting the contents of carts. A very good pattern is that patented by Burn & Co. Calcutta

centres, and it is intended to employ a greater number. This expenditure should not in my opinion be met from Municipal Funds; but should be arranged for by the inhabitants concerned direct, or in communication with the Municipality, after the manner of contract in the case of private scavengering. The transport of sewage water is far too expensive a matter for a Municipality to undertake, on behalf of a few of the inhabitants at the cost of the majority.

5. Rubbish Removal. There is a beehive pattern of incinerator, which is said to consume 14 loads of rubbish daily. I however suspect that such cartloads must vary greatly in bulk, whilst

The incinerator will be removed as soon as possible to a better site and an estimate will be called for from Messrs Burn & Co. The Council has already made provision

not to frighten the Councillors even leaving regard to the slender funds available.
In addition to the expenditure thus estimated for, it would be necessary to estimate for a pump, at a cost of Rs

4. Sewage. Practically, the only method of sewage disposal is by soakage within the town site. I advise the adoption of the Vizianagram sewage filter for households, as per plan and description attached. This will serve better than present arrangements pending the making of a correct sewerage system, which will doubtless be a matter of many years hence. Three carts are at present employed at the cost of the Municipality for the removal of sewage from private cesspools

those people who can afford to do so will be requested to try the filters suggested by the Sanitary Commissioner.

The Council is unanimously of opinion that the levy of fees for cleaning cesspools will be a great hardship on the public especially in face of the fact that the bulk of the inhabitants of the town is too poor to bear any further taxation

does not possess a single water source from which those who may desire to obtain more water could do so. Under these circumstances, I would strongly advise the Municipality to sink a well in an uncontaminated area. I think that a site on the old parade ground not far removed from Sarah Tuckers Institution and which I pointed out to the Sanitary Inspector and which I described at the meeting to the Councillors before my departure after my inspection, would be suitable. Mr Chester, L.S. Engineer kindly prepared a plan and estimate for me for this well, which I forward herewith. The figure, namely, Rs 347-8- is sufficiently modest not

The Council considers that the digging of a new well on the site proposed by the Sanitary Commissioner will not prove as useful as he considers. The site being so far removed from the heart of the town, persons drawing water (chiefly women) will not resort to the well; but the Council is of opinion that the existing wells in front and to the east of the Post office, the water of which is largely used by the public should be improved and secured from Contamin

past 10 years. We will also forward a small quantity of the water to the Chemical Examiner for analysis

of a favourable district from the Chemical Examination are at present such as to prove that the tunnel is open to dangerous contamination. Practically what is supplied to this well for a considerable part of the year is the filtrate from paddy fields which surround it, and which are manured by night soil freely. However, as it is very largely used, the water must be open to contamination from ropes and chatties. Sarah Tucker's Institution which derives its water from this source, has time after time suffered from cholera, and one could hardly expect any other result. If my opinion as to the dangerous character of this well be correct, it follows that Palamcottah does

(i) The old Regimental Hospital well. This is much used for cooking and kitchen purposes by Europeans. It would be advisable, in view of the possibility of contamination, to have this covered and add a pump to it.

The Council will endeavour to carry this out as soon as funds will permit

(j) East toll gate well. This is largely used. It is not provided with a platform or drain. This should be arranged, and the existing beam which is placed across the well should be removed, as its presence aids the opportunities of contamination by persons standing upon it.

The suggestions will be carried out

(k) Sarah Tucker's well. This is the favourite source of water supply of Europeans and educated natives; yet, its surroundings notwithstanding the receipt some time back

An extract will be sent to the Lady Superintendent of the Sarah Tucker's Institution and the Chairman will be requested to obtain statistics of cholera attacks in the above institution for the

7

for this expenditure. At time of my visit, in the part controlled by the D.P.W, persons were washing their clothing. By re-arranging the inlet and the outlet it ought to be possible to prevent the water sheet being continuous. If this being accomplished, platforms were erected as above advised for the Ramaswamis tank, fair protection would be acquired.

(g) Pranadakolam well. This should be lined with cement plaster down to the lowest water level; a platform basement and drain should also be supplied

This will be carried out at once.

(h) Vanam Kavari (in the old Military Lines). The parapet wall is so broken as to allow drippings from the platform to flow back freely.

This will be carried out at once.

it with their feet and hands, platforms should be built on one or other of the systems shown in the accompanying diagrams.

(e) Bishop Sergeant's well is much need by Christians. It would be advisable to close this at the top, and supply the well with a pump and cistern. The Municipality should offer the proprietors this advice.

The suggestions of the Sanitary Commissioner will be Communicated to the Mission authorities.

(f) Moulikolam. This is another storage tank designed to aid in tiding over the hot season. Watchmen are retained here by the Municipality, but as only one portion of the continuous sheet of water is under the control of the Council, and the rest under that of the D.P.W, little sanitary result can be obtained for

A general scheme for the improvement of the Mulikolam Reservoir including the suggestions contained in this para was submitted to Government on 6-10-93, but the Government condemned the scheme and Rejected it on the Report of the Sanitary Engineer.

(i)

But this difficulty can be met by appointing certain ghats provided with flights of steps and with surfaces sloping from the channel, where both bathing and washing can proceed without defiling the water.

(b) During the hot season, the channel falls and then the inhabitants resort to the Ramaswamy tank which is used as a storage reservoir. But this is not reserved until actually used for this purpose, with the result that during all but, say, 3 months in the year, it is subject to defilement. This should be regarded in its true light of a storage reservoir, and should be conserved carefully throughout the year. To enable persons to draw water without entering it and thus defiling it,

The Council is of opinion that the Reserving of the Ramaswamy Tank is not necessary in face of the fact that the water of the tank is never used for drinking purposes.

a considerable grade of protection against water-borne diseases, although it cannot be said to be complete. It would at least secure the existence of a water of considerably higher sanitary value than the horrible mixture now employed. In the meantime, the appointment of at least two watchmen for this channel is essential. The Municipality should further under Section 154 reserve it throughout its length for drinking purposes, and require the aid of the Police in enforcing their order. The plea would of course arise that persons are placed to inconvenience in not being able to enter the channel bodily for the purpose of bathing or washing clothing.

But

suggestions of the Sanitary Commissioner. But at the same time it is prepared to give the matter of

last 15 fifteen years, the per centage of total deaths due to cholera and bowel affections, and the total mortality sufficiently testify to this fact:—

	Cholera		Dysentery and diarrhoea		Total	
	deaths	Percentages	deaths	Percentages	mortality	Rate per mille of population
1880	.	.	84	14·9	562	31·3
1881	128	19·2	84	12·6	667	37·2
1882	20	4·5	58	13·0	448	24·9
1883	180	27·6	65	9·8	651	36·2
1884	161	30·1	38	7·1	534	29·7
1885	20	4·8	48	11·5	418	23·2
1886	.	.	46	11·0	416	23·1
1887	71	13·4	49	9·2	531	29·5
1888	179	29·6	53	8·8	604	33·6
1889	70	16·0	30	6·9	436	24·2
1890	100	18·3	48	8·8	546	30·4
1891	83	16·6	40	8·0	501	27·8
1892	140	26·5	37	7·0	528	28·2
1893	69	13·0	44	8·3	529	28·3
1894	64	12·4	43	8·5	518	27·7

Sitter heds a fair trial.

(b) The chief source of supply is the Pallimm channel. The results of the

subjected to much traffic. I considers it would result in economy and efficiency were the L.T. Board, the Palamcottah Municipality and the Tinnevelly Municipality to unite in purchasing and supporting a light steam roller that would serve the whole of this united area.

of a steam roller.

2. Dwellings. There are much crowded and perflation is interrupted by reason of the houses being built in squares. In sanctioning new buildings under Section 180, the Council should take care that open spaces are provided in the surroundings of each house.

The suggestion will be attended to.

3. Water supply. (a) This has long been acknowledged a weak point in the sanitation of this town. The following statistics during the last

Para 3 (a) to (c)
The Council considers that there will be considerable difficulties of a social and religious nature in carrying past the

Inspection Notes of the Sanitary Commissioner, Madras.

Trinevelly District

Palamcottah Municipality

Inspected 24 & 26 October 1875.

Population as per censons of 1871 — 15,666

Roads (a) These in the date of my inspection, had been much damaged by heavy rain. That they had been so damaged, haveing was greatly due to the want of correctly formed side channels in certain cases, and to the irregular formation of road culverts, and of stones serving for approaches to houses. Much waste of money would be saved eventually were the Municipal Council to systematically survey their roads with reference to these points.

(b) Between Palamcottah and Trinevelly the Local Fund Board owns between 2 and 3 miles of road subjected

The Council will pay attention to the suggestions of the Sanitary Commissioner contained in this para

The Council will endeavour to arrange with the Trinevelly Municipality and District Board for the purchase

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