G.O.Nos 1913-1914 L

17-10-1888

7-10-11.
6/4/28
1801 ✓
7/3 lord
9.12.03 ✓
4-10-06 ✓
11/2/11 ✓
25.5.15
6-4-18
28-6-18 ✓
14-9-31 B III

PRESS.

LOCAL AND MUNICIPAL DEPARTMENT,
G.O., DATED 17-10-88
No. 1913 & 1914 L.

First copy sent to Press. 17/10

Returned for signature. 29/10

Despatched in print. 5/11

[Despatch Abstract.]

Sanitation.

Ordering that the Government of India be addressed with reference to their resolution in regard to the establishment of Sanitary Boards and stating that the question of affording aid to Local Boards and Municipalities from Provincial Funds for the prosecution of permanent Sanitary improvements will be considered on receipt of the further communication referred to in the Financial Dept. Letter

stating that the Madras Govt. are opposed to the creation of a Provincial Sanitary Board and requesting the sanction of the Govt. of India for the entertainment of a special Sanitary Engineer for

VERNMENT, DATED

G

ROR IN ORIGINAL

ith Letter.

4-6-88
20-5-89

Local and Municipal Deptt

From

Surgeon Major J. A. Laing
Offg. Sanitary Commr.
Madras

To

The Chief Secretary
to Government
Local & Municipal Deptt.

Dated 4th
Despd
Recd 5th } June 1888

No: 849

Enclosures

Subject

Submits remarks on para 5 of the Government of India's rev on the Madras San Report for 1886.

4

1/ 108

No 849

Office of Sanitary Commissioner
Madras 4th June 1888

From

Surgeon Major J A Laing
Offg Sanitary Commissioner - Madras

To

The Chief Secretary to Government
Local and Municipal Department

Sir,

With reference to G. O. No 454 M(mis) dated 4 May Local and Municipal referring for my remarks para 5 of letter No 83 dated 7 March 1888 from the Government of India, I have the honor to state that after many years of close and practical acquaintance with all the Municipalities in this Presidency I am entirely in accord with His Excellency the Governor-General in Council that the time has now come for the prosecution of

Satisfactory for HE

of Sanitary measures on a more systematic plan than has hitherto been the rule.

On the 26th March 1887 (vide my letter No 320 dated 26th March /87) I addressed Government requesting that a ruling might be laid down whereby works of a Sanitary nature should be carried out with some system and method as the great want was a more systematic direction of works which will be a permanent good. I have urged upon Municipal Councils the necessity of proceeding systematically with regard to Sanitary works and not in a hap-hazard and piecemeal style as has too frequently been the case. All plans of Sanitary works estimated to cost Rs 200 and upwards are now submitted to the Sanitary Commissioner through the District Medical and

Sanitary

966 L
30-5-87

118

Sanitary Officer, (vide G.O. No 966 L. Local and Municipal dated 30th May 1887), and I am glad to say many Municipalities have decided that before incurring any further expenditure on Sanitary works (drainage and water-supply) which have not hitherto been constructed on any regular and connected system to have plans and estimates first prepared and approved and then to execute the works in portions from time to time as funds become available. To aid Municipalities in the preparation of designs for these schemes a difficulty has been experienced owing to the Public works Department being too short-handed to undertake the work in addition to its own. The Trichinopoly Municipal Council finding this difficulty advertised for a Sanitary Engineer to

draw

draw up drainage and water-supply schemes. In Madura, Salem, Negapatam and Tanjore water supply schemes are under preparation and in Negapatam and Kumbakonam drainage schemes.

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

Jas. Anderson Laing
Surgeon Major
Offg Sanitary Commissioner
for Madras

Department.

al & Municipal
CURRENT No. 1070 M

From
The Public Works
Department

No. 198 D
Dated 19 May 1888
Received 23 May 1888
Enclosures

SUBJECT.

Transferring note by the Chief Engr. P.W. Deptt: reg: preparation of plans & estimates for works in the Municipalities

To lie over pending receipt of Sanitary Commissioner's reply.

For

Read-also the follg papers:-

Public Works Department

-

Proceedings of the Local and Municipal Department No. 454 M (Mis) dated 4th May 188

-

Note by the Chief Engineer Public Works Department dated 17th May 1888:—

-

How Municipalities who are not rich enough to pay for the services of an Engineer are to have plans and estimates prepared of all the improvements necessary to provide their towns with an efficient system of drainage, water supply, & conservancy, I cannot see. The Offg. Secretary to the Government of India seems to think that the Local Engineering authorities can arrange it all, but it is certain that neither the Public Works Department nor the Local Fund Engineers can undertake the work required.

The

2. The preparation of a scheme for drainage and water supply for even the smallest of the Municipalities requires the employment of an experienced and competent Officer for several months, and the work cannot be done by a subordinate under the supervision of an officer who has an extensive charge and whose duties require him to be away for weeks at a time. Whenever it has been poſsible officers of this Department helped Municipalities to work out such schemes, but as a rule officers have not time to devote to such work, and all officers are not qualified for work of this special character.

3. The general question of sanitation is now attracting attention, and it seems desirable that some definite arrangements should be made for the purpose of dealing scientifically with it. It is not merely a question of money, because even if a Municipality can find the funds to pay for a sanitary survey and the preparation of drainage and water supply schemes, qualified Engineers are not available for the work, the open market does not at present provide such men and neither the Government nor the Local Fund Boards who have some officers qualified for the work can spare their services.

4. The Government provide a Sanitary Commiſsioner who, being a medical Officer, can only bring to notice the neceſsity for sanitation in the towns he visits and point out in what direction reform is neceſsary. He can ascertain that the water supply is bad and the drainage defective, but he cannot, beyond giving an opinion on the quality of the water supplies, judge of any scheme for water

water supply or drainage, when therefore the Sanitary Commissioner brings to notice that the circumstances of some towns are exceptionally bad, the Government are driven to find an officer to prepare a scheme for improvement which they submit to their professional advisers who with a very imperfect acquaintance with the locality, if any, decide whether it is suitable.

5. If the Government therefore, whether they come with money in their hands or not, the Municipalities must look for men, and it seems to me that the best step the Government could take would be the appointment of a sanitary engineer, who might, if desired, with the existing Sanitary Commissioner, form a "Sanitary Board" This officer would be selected for his previous study of such subjects as water supply of towns and drainage

and

and would devote his whole time to this branch of Engineering. Under his direction Surveyors might be employed by Municipalities (who would of course have to provide for their pay), who would commence the work of Sanitary Survey, and under his immediate supervision schemes of water supply and drainage could be undertaken by Municipalities who could afford to pay the staff necessary to make the surveys, plans etc: He could not of course start schemes all over the country at once, but would have to work in one town for perhaps two or three months, and then go on to another, meanwhile absenting himself only for a few days at a time to attend meetings of his Board and to give his attention to general questions. The schemes when worked out could be submitted for the approval of Government in the P.W.D. before

being

being dealt with in the Local & Municipal (Financial) Department.

6. When a Municipality could afford to pay for the services of an Engineer to prepare a scheme for water supply and drainage, and could secure the services of a competent man, he should work in communication with the Sanitary Engineer, through whom the scheme should be submitted to Government.

7. So many applications for help in preparation of such schemes are now coming in from all parts of the Presidency, that something should be done to give assistance to the Local Bodies who are shewing such signs of vitality, and as there is valid objection to Government giving grants-in-aid to Municipalities, the best means of affording help seems to be the appointment of an officer who

who could, while securing the scientific treatment of sanitary improvements generally save the Municipalities the expense which the employment of an officer of such standing and experience as is necessary to work out their schemes must entail.

No. 198 D.

Ootacamund.
19th May 1888.

Transferred to the Local and Municipal Department.

Johnstone Colonel R. E.
Secretary to Government P.W.D.

To
The Local & Municipal Dept.
E. J. A. W.

Hdl

CHIEF SECRETARIAT
10 MAY 96
GOVERNMENT OF MADRAS

+

Vide G.O. d/ 17-3-64 No 929 Mi

on the model of that formed under the orders of the G of I. for Bengal

Note

In 1859 ~~the~~ Parliament nomin
a Royal Commission to inquire
e causes of disease &c among the
European and Native troops in Ind
to suggest remedial measures - t
Commission submitted certain re
mendations based on their inqui
and urged the appointment of local
Commissioners of public health
order to ensure the gradual introduc
of sanitary improvements. A sanita
Commission was accordingly formed
in this Presidency in 1864 with an
(Hon. R. S. Ellis)
officer of the Civil Service as Presiden
and 4 members, one of whom was
Secretary, to consider in communicatio
with the departments concerned, how t
objects desired by Her Majesty's
Government on the report of the
Royal Commission can best be
carried out, and to superintend the
working of the sanitary system, whe
may be adopted. This Com

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working of the sanitary system, whe
may [illegible] adopted. H: P

Rl 32/3

so constituted as to represent
various points of view from which the
ect of sanitation should be considered—
l, Military, Medical & Engineering.
ir duties were partly consultative &
rtly administrative, and they were
 give advice and assistance in all
tters relating to the public health
uch as selection of new stations and
e sanitary improvement of existing
tations and bazaars; to examine
new places for Barracks and Hospitals;
to advise on the laying out of stations
and bazaars, the sanitary improvement of
native towns, prevention and mitigation
 epidemic diseases, and generally to
exercise a constant oversight on the
sanitary condition of the population,
European & Native; to report on the
prevalence, causes and means of
preventing sickness and disease" The
bsidiary instructions issued for the
 the Commissi be

see Instructions to Madras
San.y Comm.n on p. 4 G.O. $\frac{2 \text{ May } 64}{1469\text{-}70 \text{ Mil.y}}$

found printed in G.Os dated 2
Nos 1469 and 1470. The commissio
formed in 1864 consisted ~~of a~~ in addition to Pres
Mr R. S. Ellis C.S,
~~who was a member of the Civil Servi~~
~~the members were~~ of an officer of the R
Engineers, two Medical officers and
Military officer. The President's sa
was fixed at Rs 3000 and that of the
Secretary at 500 in addition to the p
and allowances of his rank, while
ther members, who ~~were paid Rs 300 eac~~
~~for serving~~ served on the commission without
~~addition~~ prejudice to their other duties. were
paid Rs 300 a month each

2 The following extract from the
Administration report of the Presidency
for 1864-65 shows the work of the Com-
-mission in the first year of ~~their~~ its
existence.

" 291. * * . The field
which has engaged the attention of
the Commission during the past yea
has been extensive, and the subjects whi
have come before them have been variou
The following may be enumerated as
the Chief Military points which have
engaged their attention, the subjects
being grouped together, so as to show
different details entered ~~entered~~ up
as European & N

tary works of construction, health &c:—

The health of Troops stationed on
Andaman Islands, including
estions for the prevention of disease.

A detailed report was submitted
arding the General Hospital,
adras, then in the course of construc-
ion, and now nearly completed; the
otment of the several wards & rooms,
pacity of hospital, segregation of
ck, &c, being fully considered.

The important Military Stations,
Bangalore & Wellington, were carefully
amined on the principles laid down
the Home Commission, and
detailed reports submitted, as regards
barracks, hospitals, water supply, and
drainage, and all the details of
accommodation and recreation for
Soldiers

IV. The Commission prepared a
scheme for the institution of a Public
Health Service. The proposals in-
cluded the consideration of the
duties of both Administrative and
Executive Health Officers, who would
the Commi Registrars of births & deaths
be

in all Cantonments occupied by
Native Troops. They would also
take the analysis of the water sup
of the Chief Military Stations. The
enquiry would include suggestion
the storage of water, for flushing out se
and for distribution through the va
Barracks & Hospitals occupied by Eu
Troops.

V. Draft Rules, under Section
of the new Cantonment Act have
also been considered and prepared
by the President and Mr Robins
Inspector-General of Mofussil Po
and which are now under the
consideration of the Supreme
Government.

VI. Attention was also drawn
the necessity for the selection of en-
camping grounds for Troops arriv
at, or departing from, stations, an
for camps of refuge in case of epid
disease.

VII. Rules for the marching of
Troops, European and Native, an
measures to be adopted right

brak of epidemic disease have
been considered, after careful
quiry into the apparent causes of
lera in Troops on movement, or in
ntonments.

ii. The Commission have also considered plans for various Military
ldings, including Barracks, Hospitals;
vatories, Latrines &c

X. They also reported upon various
roposed principles of construction
Barracks and Hospitals on the
lains and hill stations and —
bmitted detailed suggestions &
plans illustrative of their views

X. The conservancy of Latrines in
Barracks and Lines of European and
Native Troops and the management
f similar places in Military Hospitals & Prisons, has been carefully
perimented on; and a full report
n the comparative values of the
veral deoderants — Coal-tar,
McDougall's fluid and powder,
bicarbolic acid, Zanthorthora
[illegible] earth &
the Com[illegible] Aust[illegible] be

Australis, lime, dry earth &c —
been submitted to Government

The following also, received esp
consideration: —

XI. The control of the sale of spi
and intoxicating drinks in th
vicinity of Military Cantonmen

XII. The supply of spirits and m
liquor to Soldiers on board-ship,
canteens, and the regulation of
places.

XIII. The substitution of Rum f
Arrack and the issue of Beer, ex
to one quart, to men not using Arr
or Rum

XIV. The improvement of existing
means for cooking.

XV. The institution of recreation
rooms, workshops, gymnasia an
swimming baths.

XVI. The reconstruction & improved
conservancy of old Lavatories an
Latrines

XVII. The improvement of famil
quarters for married Soldiers

XVIII. The preparation of de[illegible]

r stabling for Cavalry Horses oughout the Presidency was dertaken and the plans are ow before Government.

X. The administration of ivil and Military Hospitals for atives, and the institution for e latter of a Corps of trained ttendants, in supersession of the present system of detaching comrades to wait on the sick in ospital, received the attention of the Commission, and a full tatement of the different views f the members of the Commission as been laid before Government.

In 1866 however the Government of India modified the onstitution of the Sanitary Commission for Bengal,+ ~~which did not work~~ as it had not been found to work together satisfactorily, ~~as~~ It was unnecessarily xpensive; the ~~several~~ members who ad other duties to perform were practically of little use; and there as frequent risk of disagreement

Ausd between

21

+ on which the Madras Commn. had been modelled

+

G. O. 10-4-66 No 1281A

~~in~~ addition to his grade pay as Med. Officer

between the Commission and Head of the Medical Department a other Heads of Departments at A Head Quarters. Under the new arrangement there was to be only one Sanitary Commissioner with a ~~& his Secr~~ but it was provided that wheneve and wherever it might ~~seemed~~ desirab to assemble Committees for the consideration of any particular sub ject, officers Civil, Military or Medical best acquainted with the subject might ~~should~~ be associated with the Sanitary Commissioner. A similar arrangement was made in this Presidency also from 1st May 1866. The then President of the Commission was allowed to draw Rs 3000 per mense as Sanitary Commissioner, but the salary of his successor was fixed at Rs 2000 ~~and there was~~ but no alteration ~~in the pay of the Secretary~~. The salary of the Secretary was increased to Rs 500. As the civil portion of the Sanitary Commissioner's duties

nerally, been mainly of a Military character,
ower gradually increased, it
s decided in 1869 that he should
nceforward be placed under
orders of the Civil Department
d that all expenses connected
th the appointment should be
ansferred to the civil budget.

G.O. of 27-1-69 No 397 M.D.

n the death of the then Secretary to
te Sanitary Commissioner in the
ame year, opportunity was taken
d, abolish the Secretaryship and the
anitary Commissioner has now to
deal singly with the health of the
Presidency at large.

G.O.'s of 3-8-69 Nos 1084 & 1085 P.D

4. The following extract from the
Sanitary Commissioner's report for
1866 contains his views regarding the
modification of the system adopted
in 1866.

"521. * * *. The experi-
-ence which I have had of both
systems induces me to think, that
it is of advantage to retain at
Presidency a consultative body,
the [illegible]

G.O. 26 Nov 1874 No 1571 Fin

G.O. 25 Mar 1875 No 661 Fin

G.O. 3 Apl 1878 No 627 Fin

5. In 1874 arrangemen
were made for the transf
of the Vaccination staff, whic
had hitherto worked under the
the Supt. Genl. of Vaccn. as
expert head of a separate dep
Dept., Local Fund Board; &
consequent on this change
the supervision of vaccination
was entrusted to the Sanitary
Commr. the former Supt. Genl.
being placed under his order
with the title of "Inspector of Vacc
In 1878 the Inspr. of Vac. was
also constituted "Deputy Sanitary
Commissioner" thus becomin
the Sanitary Commr's Assistan
in regard to sanitary matters
generally as well as in respect
vaccn. This arrangement
still continues & has worked
very satisfactorily, the Commr.
& his Deputy dividing the work
of sanitary inspection betw
them.

6 The Sany. Commr's pay
has now been fixed at Rs 12
rising to Rs 1800 by annua

crements of Rs 120 The
cessors of Mr Ellis have all been Medl. officers G.O. 22 [illegible] 2499 Fin.
of the Dr Sanr Commr, who
also a medical officer is
Rs 1050 when the appt. is held
a Surgn.-Major, Rs 850 for a
Surgns over 5 years service, &
Rs 700 for a Junior Surgeon.

By G.O. 22 Feb 1883 No 391 Pub
the Zillah or Civil Surgeon of
each District has been appd.
District Medical & Sanitary
Officer

3 Oct

Memorandum on the
History of the Sanitation
Department in the
Madras Presidency

17 Octr 1888
[illegible] 1913
& 1914

...Municip... ...to be ...istrict Municipalities to meet
contributed by the District ...the p... ...ineer & his establishment with
Chiefs proposed Sanitary Engineer & ...ent. ...works charges in 1886-87

		Net receipts for 1886-87. Rs.	Proportionate cost Rs.
1	Chica		
2	Berham		
3	Parlakimedi	20,552	271
4	Vizagapatam	25,982	343
5	Vizianagaram	58,737	775
6	Berily	51,096	674
7	Anakapally	83,046	1095
8	Cocanada.	16,715	220
9	Ellore	81,354	1073
10	Rajanel	15,767	208
11	Guntlam	9,255	122
12	Mas.	9,231	122
13	Nellore	21,640	285
	Ongottah	17,363	229
15	Cud.	20,931	276
16	Adtne	34,396	454
17	Be	10,851	143
18	A.	14,572	192
19	Ammund.	59,613	786
20	V.	16,158	219
21	N.	53,865	710
22	Stur	11,099	146
23	Gubadi	8,162	108
24	Cose	35,977	474
25	C	46,704	616
26	ary	32,564	429
27		18,185	240
	l	31,922	421
	avt.	14,765	195
		15,16,377	20,000

	...nicipalities	Cost of Public Works in 1886-87	Proportionate Cost Rs
	Kaum		
	...uyamaargudi	2,766	16
	...gapatam.	3,797	22
	...ujore tam	13,312	77
	...ichin	14,765	86
	...iangaioply.	10,465	6
	Maduraam	2,538	14
	Dindiga	32,284	18
	Periyakul	3,438	20
	Palni ulam.	823	4
	Tinnev	1,573	9
	Palame...lly.	2,961	17
	...cottah	2,147	12
	Tuticor...in	6,280	36
	Coimbatore	7,988	4
	Erode	4,804	2
3	Karur	3,151	18
4	Ootacamund	19,426	113
5	Coonoor	5,581	32
46	Salem	7,697	4
47	Tirupa...atur	625	3
48	Vaniya...mbadi	306	1
	...alore	11,529	6
49	Manga...t	14,886	8
50	Calicu...erry	4,010	2
51	Tellich...i	3,174	18
52	Cochin...t.	12,427	7
53	Palgha...anore.	1,095	
54.	Canna	342810.	20.

A

Statement showing
distribution of cost of
proposed Sanitary Engineer
Establishment among
mofussil municipalities
ccording to their total
rdinary receipts for 1886-87

Statement showing the amounts to be contributed by the District Municipalities to meet
of the proposed Sanitary Engineer & his establishment. with
ref. to their Public Works charges in 1886-87

No.	Municipalities	Cost of Public Works in 1886-87.	Proportionate cost Rs.	No.	Municipalities	Cost of Public Works in 1886-87.	Proportionate Cost Rs
1	Chicacole	1831	107	28	Mannargudi	2766	16
2	Berhampore.	4,054	237	29	Mayavaram.	3,797	22
3	Parlakimedi	1,390	81	30	Negapatam	13,312	77
4	Vizagapatam.	35,363	2062	31	Tanjore	14,765	86
5	Vizianagaram	4879	285				
6	Bimlipatam.	1,978	115	32	Trichinopoly.	10,465	61
7	Anakapalle.	1,032	60	33	Srirangam	2,538	14
8	Cocanada	10956	639	34	Madura	32,284	18
9	Ellore	5,022	293	35	Dindigul	3,438	20
10	Rajahmundry.	3,334	195	36	Periyakulam.	823	4
11	Guntur	4137	241	37	Palni	1,573	9
	Masulipatam.	10,583	617	38	Tinnevelly.	2,961	17
	Nellore	6,812	397	39	Palamcottah	2,147	12
14	Ongole	366	21	40	Tuticorin	6,280	36
	uddapah	5,832	340	41	Coimbatore	7,988	4
	Adoni	7,445	434	42	Erode.	4,804	2
17	Bellary.	5,165	301	43	Karur	3,151	18
18	Anantapur	779	46	44	Ootacamund	19,426	113
19	Kurnul.	2,587	151	45	Coonoor	5,581	32
20	Vellore	5038	294	46	Salem.	7,697	44
21	Walajapet	2220	130	47	Tirupatur	625	3
22	Tirupati	871	51	48	Vaniyambadi	306	1
23	Gudiyatam.	578	34	49	Mangalore	11,529	6
24	Conjeveram.	4,955	289	50	Calicut	14,886	86
25	Cuddalore.	6096 ~~4,663~~	356	51	Tellicherry	4,010	23
26	Chidambaram.	4,663	272	52	Cochin	3,174	18
27	Kumbakonam.	10,996	641	53	Palghat.	12,427	7
				54	Cannanore.	1095	
						342810.	20.

B.

tatement similar to A
ut substituting Public
orks Expenditure in 1886-87
for total receipts

Dear Meyer

I did not see the marginal note but see no reason to hold a different opinion. The draft can be altered as in pencil.

13 Oct

Drop the drafts

15 Oct

List

A. Municipalities which hav
water supply and drainage
chemes actually in hand i.e.
here schemes have been prepa
nd sanctioned:—

1). Ootacamund.	Water supp
2) Cuddapah	Do.
). Madura.	Do.
) Coonoor.	Drainage

B. Municipalities for which wa
supply and drainage schemes
have been prepared but not y
anctioned:—

1) Trichinopoly.	Water supply drainage schem prepared by Ma Drake-Brackm of which the wa supply scheme now being revise by Mr. Oldham
(2) Negapatam	Water supply drainage schem prepared by Mr. and recently refe to the Council fo consideration
(3). Kumbakonum.	Drainage sch prepared by Mr. -cock & referred P.W. Departme
4) Tinnevelly	Water supply prepared by Mr. and referred Council.

Fort
13-10.88

Dear Mr. Hutchins,

Do you concur in Mr. Stokes' remark on the margin of para 3 of the draft letter to India regarding the Sanitary Engineer? If so the draft will have to be slightly altered in some such way as I have now suggested in pencil.

Yours sincerely
W. S. [illegible]

---

* Note
Estimate for the extension of the supply throughout the town is under preparation.

List

A. Municipalities which hav
water supply and drainage
schemes actually in hand i.e.
where schemes have been prepa
and sanctioned:—

(1). Ootacamund.	Water Supp
(2) Cuddapah	Do.
(3). Madura	Do.
(4) Coonoor.	Drainage

B. Municipalities for which wat
supply and drainage schemes
have been prepared but not y
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(3). Kumbakonum.	Drainage sch prepared by Mr. -cock & referred P. W. Departme
(4) Tinnevelly . . .	Water supply prepared by Mr. and referred Council.

gon. . . . Water supply scheme prepared by Mr. Hughes and referred to the P.W. Department.

). Salem. . . . Water supply scheme prepared by Mr. Target and referred to the Council for consideration.

. Municipalities which have water-supply schemes under preparation:-

1). Dindigul
2). Kurnool
3). Cocanada

. Municipalities which have abandoned the water supply schemes as stly:-

Conjeeveram
Walajapet.

Municipalities which have been ld in the budgets for the current year ot to spend money on isolated works ll complete schemes have been got up:-

Vizagapatam.
Vellore
Cocanada
Ellore
Karur.

Municipalities which have applied Government for officers to prepare schemes with the reply in each se:-

Tinnevelly. . .	Drainage.	G.O.	612 M 11-6-88	Matter still under consideration
Berhampore. . .	Do.	G.O.	600 M 24-6-87.	P.W.D. cannot spare an officer
Ellore. . . .	Water supply & Drainage	G.O.	609 M 11-6-88	Do Do
udiyatam. . .	Drainage.	G.O.	735 M 2-7-88	Ex. Engr. will advise the Muni. on the lines on which a scheme shd be drawn up.
loni. . . .	Water supply.	G.O.	228 M 12-3-88.	Ex. Engr. to undertake preparation of the scheme without prejudice to his ordinary duties

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Read again G.O. d/4th May/88 No. 454 M.

Current No. 1070 M from the Public Works Department

& Current No. 1161 M

From the Sanitary Commissioner

OR ORDERS.

These papers contain the remarks of the San. Commr. & the Chief Engr. P.W.D. on the suggestion of the Govt. of India that a sanitary survey shd be made of each Mun. & the necessary plans & estimates prepared for providing each town with an efficient system of drainage water-supply & conservancy.

At present the San. Commr. & his Deputy do make a "sanitary survey" of each Mun. - that is they visit each town about once every two years & point out its sanitary defects. But it is then left to the Mun. Council to remedy them, &, as [illegible] pointed out, in most cases a complete water-supply or drainage scheme is required. This the Councils cannot put in hand without the help of an experienced

er, & the P.W. Dept is
ely able to spare them the
rvices of such an officer
Col Hasted accordingly recommends
the appt. of a Sanitary Engineer
for the Presidency & it is submitted
that the time has come for recon-
sidering this question

The proposal to appoint such an
officer has been three times nega-
tived in recent years viz in
G.O. 14 Sept 1885 No. 577 Mn
3). G.O. 3 Apl 1886 No. 391 L.T. &
G.O. 30 May 1887 No. 966 L (para 3)
but the question was only really
discussed on the occasion of the
first of these orders

The arguments against the appt. were

(1) The salary of the Engr & his
establishment wd be a heavy
charge on Munl funds

(2) The charge wd have to be distri-
buted among all municipalities
& as only a few are likely to have
works requiring the advice of such
an officer, this would not be fair

At present municipalities are
entitled to the gratuitous advice
& assistance of P.W. officers on
small matters, & where a town
requires a big scheme to be
worked out it can get the assis-
tance of a special officer on
paying for him

× Say

1 Head Clerk	on	Rs 50
1 clerk	..	30
1 draughtsman	..	50
attender & muchi	..	8
4 peons & lascars (at Rs 7)	..	28
		166

Surveyors, levellers &c would of course be provided by the particular town where he was working, as proposed by Col Hasted

* including Bezwada

× into consideration the distribution will be as shown in statement B, ranging from Rs 18 for Vaniyambadi to Rs 2062 for Vizagapatam

---

1) The cost of a Sanitary Engineer & Establishment ought not to be more than Rs 20,000 per annum

(i) Engineer's salary	Rs 1200 a month
Office establishment	× 166 ..
Travelling allowances (This is a very liberal estimate as the Engr. ~~will~~ wd often be stationary for long periods at one place)	200 ..
Total	1566 × 12
	= 18,792
add for office rent and contingencies	1,208
Total	20,000

Col Hasted appears to contemplate this charge being borne by Govt.; but supposing it to be distributed among the 55* mofussil muni-cipalities (Madras of course would continue to have its own Engineer) this wd give an average of Rs 364 per ~~[illegible]~~ annum for each town. The statement put up (marked A) shows the incidence of this charge on each of the 54 municipalities existing in 1886-87, if calculated on their total income, as is done in the case of the audit estab-lishment, it will be seen that the charge wd vary from Rs 108 in Vaniyambadi to Rs 109 in Trichinopoly. If the Public Works Expenditure only is t

ke the present system
the services of Mr. Handcock
~~his establishment~~ last year
the Kumbakonam Mun.y had
to pay Rs 650 a month for some
9 months = Rs ~~5200~~ 4050; With estab-
lishment & contingency charges his
cost came to some Rs 5000; but
as the surveyor (on Rs 60) & 5 lascars
with whom he was furnished w.d
have to be paid for by the Mun.y under
the proposed system, only take his
personal cost into account.
Assessed on their total income
the Kumbakonam Mun.y w.d
according to the figures of 1886 / have
to pay some Rs 711 a year towards
the San.y Eng.r – that is to say
for the preparation of one scheme
which may or may not be workable
they have had to expend a sum
which w.d have procured them the
constant advice of an expert for
nearly 6 years

As a matter of economy therefore,
as there is any considerable number
of towns with large sanitary schemes
in hand, the appt. of a Sanitary
Engineer w.d certainly be preferable
to borrowing a special officer from
Bombay &c.

Engineer was appd. in 1885
worked out number of these towns
of an expert since then
paying for him considerably

in 1885 some 47 Sanit.y ; now there are 55.

1070 & 1161 M

[illegible]
[illegible]

FOR ORDERS.

A.W.

The note for orders in
the Dept 85 / 517 M shows 11 towns
only in which water or other
drainage schemes had been
mooted viz

Madura Trichinopoly
Ootacamund Negapatam
Cuddapah Conjeeveram
Dindigul (?) Vellore
Tanjore Salem

The statement marked C
shows the state of things at
present

4 towns
Madura Cuddapah
Ootacamund Coonoor
Schemes are actually in hand

6 more
Tanjore Salem
Trichinopoly Tinnevelly
Negapatam Kumbakonam
Schemes have been prepared,
but not yet sanctd.

In 2 more
Kurnool & Cocanada
schemes are under prepn.

4 more
Berhampore Gudiyatam
Vellore Adoni

wish to prepare schemes &
have asked for professional
assistance for the purpose
lastly 3 more
Vizagapatam– Ellore– Kurnool
have been told in the reviews
of their last budgets to prepare
complete schemes

In all 19 towns agst 11 in 1885

And if the wishes of the Govt of
India are carried out the
~~other~~ remaining towns will, as soon as
their funds permit, have to
set about the preparation of
schemes also

Thus the argt that a Sanitary
Engr while paid for by all the
Municipalities wd benefit only
a few no longer applies

3) It is but rarely that the
P.W.D. can spare an officer
for the special duty of preparing
a drainage or water scheme
And the larger the number
of towns that require such an
officer, the greater must be the
number of refusals for sanitary
men. And as above pointed
out, when a competent man is
provided he must of necessity
be costly. When, as in some
cases, the Ex. Engr is asked
to work out a scheme in addition
to his ordinary duties, there
is naturally great delay & the
Engr is tempted to leave much
of the work to a Subordinate
Even in smaller matters
the Munic. wd gain by having
an expert to consult, as sanitation
is not necessarily the *forte* of the
local P.W. officer

Mr Webster's argument that
because the Govt of India have
ruled that Municipalities
are entitled to the gratuitous
~~advice~~ services of Govt officers where
these can be given without detri-
ment to the public service,
therefore the Madras Govt are
not competent to appoint a
special officer under sec 254
act IV of 1884 to superintend
Sanitary operations in Munl
towns seems hardly to need
refutation

If it be now considered that
the time *has* come for the
entertainment of a Sanitary
Engineer I submit that
he shd be paid by a contribution
calculated

on the total ordinary income+ of each Mun.ty & not simply on the expenditure or budget grant under Public Works & Sanitation. In the former case the contribution will be much less variable & will be in proportion to the resources of the Mun.ty. In the latter case a Mun.y which expends large sums on roads & bridges with which the Sant. Engr. has nothing to do, would be fined for its public spirit by having to pay extra towards his maintenance. Vizagapatam, for instance, wd according to expenditure on Pub. Wks in 1886-87 have had to pay Rs 2,062 because in that year it spent a lot of money on a pontoon bridge; whereas on the "total ordinary income principle" it wd have to contribute only Rs 673*. The "total expenditure" system in no way discourages liberal expenditure under Pub. Wks & Sanitation, whereas the other plan wd have this effect.

10 July

* not so much as this really, since the total income shown in Stat. includes a special contribution from the Dist. Bd. of Rs 15,000 for the pontoon bridge

+ i.e. excluding opening balances, proceeds of loans & contributions for extraordinary ~~from special~~ purposes from Govt. or the Dist. Bd.

Appointment of a Sanitary Engineer

For orders

Hon Mr Hutchins C.S.I.
Hon Mr Stokes

DEPARTMENT.

No.

From

Dated 188 .

FOR ORDERS.

On some recent paper not put up or alluded to in these notes (I think it may have been India's review of our annual review on Munls.) I expressed a strong opinion in favour of appointing a Munl. Consulting Engineer. There is ample work for him now for many years & promises to be ample in all time to come or until Munc. become rich & thriving enough to have their own Engineers. I think he sd be paid by a percentage on income except that when special work has been done for any particular Council it sd be reqd. to pay a special contribution & only the balance distribd. bet. other Councils. E.g. supposing in the first year he prepared a drainage scheme for Salem & a water supply scheme for Trichy, they sd. pay something in proportion for that year as they will have had the principal benefit.

I question whether the Engineer sd not have a much larger Estabt. & undertake a good deal of the scrutiny of L. F. Plans & Estimates. He sd certainly have at least one assistant who might be engaged temporarily if possible to do the drudgery work of each large scheme. But these details can wait or they can easily be arranged in consultation if the Genl. proposal is approved by my Hon. col also

PPH
29 July

I submit that there is ample reason for now trying the experiment suggested. So far there has been mere pottering in sanitary matters. Nothing systematic or definite has been done. Such attempts as have been made to evolve schemes for drainage or water supply have not on the whole resulted in complete satisfaction. No real advance in a matter of great importance and regarding which this Govt. has not infrequently been urged to do something can be effected until a sanitary survey such as that indicated by the Govt. of India has been completed. For this there must be a special officer. The PWD can spare no one even if they had a man who by attainments and inclination could be held qualified for the work. Local Bds. cannot lend their men and there are no other "local Engineering authorities". It is out of the question for District Municipalities, even the richest, to keep Engineers of their own. The plan suggested is therefore the only one that can be adopted. There can hardly be any question as to the fairness of making Municipalities pay in proportion to their incomes.

The only objection that occurs is that if things are to be worked exactly as

The Govt. of India suggests, municipalities which cannot afford to pay for any but comparatively petty sanitary works will have to bear a share of the cost of working out plans and Estimates and of superintendence for schemes for those that can. This however could be met by first making the sanitary survey for which all should contribute and then levying the contributions making only those municipalities which have schemes & money to carry them out pay for the Engineer.

The establishment proposed and its cost appear to be reasonable. The salary of the Engineer seems rather high but a good man and a specialist will require to be well paid.

An Asst. Engr. on Rs. 500 or 600 a month would, if municipalities could bear the extra charge, be a desirable addition as if the chief fell ill, died resigned or took leave there would be a man on the spot with some experience to take his place. He would also facilitate work as he could relieve his superior of a good deal of checking supervising and details.

25/July.

Appointment of a Sanitary Engr

FOR ORDERS.

I fully agree that something should be done in the direction proposed. Pressure is being continually put upon local bodies especially municipalities to carry out large works of sanitation, but they have no agency for preparing the comprehensive schemes called for or ~~of~~ executing them when framed. In nearly all the cases which have come before Govt. the resources of the local bodies turn out to be utterly inadequate not merely to carry out the works in any reasonable time "as funds become available" but even to provide for the service and extinction of loans to be raised for the purpose. Such is the position of Madura, Salem, Negapatam Trichinopoly, Kumbhakonam & Tanjore. In fact it is about as practical and sensible to tell a town with fifty or sixty thousand rupees of revenue to undertake a project costing four or five lakhs, as is the stock recommendation of the Sanitary Commr. that every householder should have a cement-lined cistern fitted with a zinc bucket to be emptied daily. It is no use providing for drawing up schemes of the kind or preparing plans & Estimates until something is done to improve or supplement the local resources and until this is done either by allowing the towns to levy octroi duties, or by affording them help from general revenues either in the shape of loans on terms more favourable than they can get in the open market or of direct grants, or in some other way, no substantial or real progress will be made. I think that we should ask the Govt. of India to reconsider the policy of refusing loans from State funds under the Local Authorities Loans Act, and to remove the interdict on the application of Provincial funds to local objects of the kind under discussion.

This the Engr [illegible] purpose

I do not think that the P.W.D. have done or are doing as much in the way of helping local bodies in these

R 1-8

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18 Aug.

CHIEF SECRETARY
18 AUG 88
GOVERNMENT OF MADRAS

Secretary
W.S.
18/8

Dear Price

On looking at the admor's act I find there may be some doubt as to our power to appoint an acting admor Genl. when the office is permanently vacant. If you had written word the notification "to be admor General, as a temp arrangement, without prejudice to his other duties."

I spoke to Stokes yesterday a

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s as they might or ought.
the cost of PWD Establishment
the high proportion it does to
penditure – more than 50 per
ther than local boards can
h done for under very similar
rs – I refuse to believe that
fficers are too hard worked to
ttention to the preparation of
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vernment work. There remains
s the more serious objection
by Col. Hasted that the P.W.D.
, are not qualified to do it. As
, and as is stated more forcibly
d out by Mr. Jones in his letter
edin G.O. 30 April 1886 No 391:
very special qualifications are needed,
not only knowledge of Sanitary Engi-
neering as practised in Europe but
also experience in such work in the
tropics where the habits of the people
& other conditions are entirely different.
Unless the services of a man of this
Kind can be obtained, and perma-
nency of employment as well as
sufficient pay will have to be gua-
ranteed to get one, there will be no
security that the schemes proposed
are sound or that the very exiguous
resources of the local bodies are
not misdirected or wasted.

I think it would be entirely unfair
to charge the whole cost of such an

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could relieve his superior of a
good deal of checking supervising
and details.

Ju
25/July.

This the Engr.
we propose

FOR

we walked home
the Sanitary Engineer & he
now agrees with me that the
S. E. shd. not be attached to
the P.W.D.; at all events
that we shd. not say that
he is to be so attached. I fear
if he is Govt. of I. may try
to make us take one of their
men.

Yrs sincerely

---

for drawing up schemes of the kind or
preparing plans & estimates until something
is done to improve or supplement the local resources
and until this is done either by allowing
the towns to levy octroi duties, or by affording
them help from general revenues either
in the shape of loans on terms more favourable
than they can get in the open market
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refusing loans from State funds under
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to remove the interdict on the application
of provincial funds to local objects
of the kind under discussion.

I do not think that the P.W.D. have
done or are doing as much in the
way of helping local bodies in these
matters as they might or ought.
While the cost of P.W.D. Establishment
bears the high proportion it does to
their expenditure — more than 50 per
cent higher than local boards can
get work done for under very similar
conditions — I refuse to believe that
P.W. officers are too hard worked to
give attention to the preparation of
schemes of the kind. Contrary to orders
the idea has grown up that this is
not Government work. There remains
however the more serious objection
stated by Col. Hasted that the P.W.D.
officers are not qualified to do it. As
he says, and as is stated more forcibly
pointed out by Mr. Jones in his letter
recorded in C.O. 30 April 1886 No. 391,
very special qualifications are needed,
not only knowledge of Sanitary Engineering
as practised in Europe but
also experienced in such work in the
tropics where the habits of the people
& other conditions are entirely different.
Unless the services of a man of this
kind can be obtained, and permanency
of employment as well as
sufficient pay will have to be guaranteed
to get one, there will be no
security that the schemes proposed
are sound or that the very exiguous
resources of the local bodies are
not misdirected or wasted.

I think it would be entirely unfair
to charge the whole cost of such an

officer rateably over all municipal funds as proposed in the note. Nine tenths of them would receive no benefit at all from him in most years, while others would have all his services. The amount Rs 20000 proposed to be distributed considerably exceeds the whole charge now made against municipalities for controlling and auditing establishments, and the share of it would be regarded as an unjustifiable & very heavy burden. The principle of aiding local bodies in this matter is recognized by the Govt. of India (G.O. 21 Nov 1887 No. 2264 L). and in no way could they give help more opportune or acceptable, or at less cost, than by providing the services of a specially skilled officer such as described. His services need not be furnished entirely gratuitously. A charge might be made by way of contribution either in the shape of a percentage of the estimates he frames or passes, or for his time spent in any particular place, as in Bombay.

I propose that we address the Govt. of India on the whole case, stating with details what has been done in the way of preparing schemes of drainage

and water supply for towns in this Presidency, showing how useless they are in view of the utterly inadequate resources of the towns, & pointing out how the orders in force prevent any aid being given from general revenues either imperial or provincial. Also that the agency obtainable for preparing schemes of the kind proposed is inadequate and unsuitable. Finally assuming that something will be done to ~~to~~ increase or help local resources, I would ask that an officer ~~[illegible]~~ possessing the necessary qualifications for the work should be added to the staff of the P.W.D. on adequate pay: a contribution being levied from such local bodies as may make special use of his services. We shall have to get India's sanction even for the employment of an officer to be paid for by municipalities rateably.

31 July.

Wd not sec 254 of the Municipalities Act give full power to this Govt?

Since these notes were written India's Sanitary Boards' Resolution has come in. I send it on for perusal. We might discuss on Friday what action sd be taken. I rather prefer our own scheme to a Board.

PHH
15 Aug

Agreed

HCS
16 Aug.

We both prefer a Sanitary Engr [illegible] on a Board, but attached to the P.W.D. ~~[illegible]~~ [illegible]

[illegible]

[illegible] pay 1000-50-1250

[illegible] no compen[illegible]

PHH
7 Aug

HCS
7 Aug

Sanitary Engr

79 Wc 1136 Pub Pros.
/79 Wc 822 — "
[illegible] Wc 1291 — "
/11/87 Wc 2264/65 f. Pros.
4/2/87 Wc 127.6/7 — "
31/10/78 Wc 1614 ~~Pub~~ "
24/7/79 Wc 1136 — "
11/1/88 Wc 26/27 — "
14/5/88 Wc 502 — "

CURRENT No. 2687

[9]

Public DEPA

Local & Municipal D

CURRENT No 2683 L

From

G of I.

Home Dept

No. 3/213

Dated 27/7

Received 4/8/88, 11 AUG. 88

Enclosures –

SUBJECT

Re the practical appln of Sanitary principles to towns & villages in India

2683

CHIEF SECRETARIAT GOVERNMENT OF MADRAS 4 AUG 88

↖ 3

No. 212 @ 225

Extract from the Proceedings of the Government of India in the Home Department (Sanitary),—under date Simla, the 27 July, 1888.

GOVERNMENT OF MADRAS 14 AUG 88 REVENUE DEPARTMENT

× This is printed & issued G.O. No. 2281 L

Read the undermentioned papers:

Report of the Royal Commission on the Sanitary State of the Army in India, 1863.

G.O. d/31/10/78 No. 1614 — Despatch from Her Majesty's Secretary of State for India, No. 83 (Statistics and Commerce), dated 2nd May, 1878, forwarding, with remarks, a Memorandum by the Army Sanitary Commission on the Bengal Sanitary Report for the year 1876.

Home Department Circular letter to Local Governments and Administrations, Nos. 8—227-236, dated 7th August, 1878, circulating the above Despatch and enclosed Memorandum.

G.O. d/26/5/79 No. 822 — Despatch from Her Majesty's Secretary of State for India, No. 58 (Statistics and Commerce), dated 24th April, 1879, forwarding remarks by the Army Sanitary Commission, dated 19th March, 1879, on the practical application of sanitary principles to towns and villages in India.

G.O. d/24/7/79 No. 1136 — Resolution by the Government of India in the Home, Revenue and Agricultural Departments, Nos. 9—259-70, dated 7th July, 1879, circulating, with remarks, the above Memorandum from the Army Sanitary Commission.

Despatch from Her Majesty's Secretary of State for India, No. 102, dated 15th October, 1885, forwarding, with remarks, a Memorandum by the Army Sanitary Commission on the Bombay Sanitary Report for 1883.

Read also the following correspondence:

G.O. d/4/7/87 No. 1276 L. — Report on the District Boards in the Madras Presidency for the year 1885-86, with the orders of the Madras Government thereon.

G.O. d/21/11/87 No. 2204 L. — Letter to the Government of Madras, No. 132, dated 24th September 1887.

Reports for 1886 from the Sanitary Commissioners in Madras, Bombay, Bengal, the North-Western Provinces and Oudh, the Central Provinces, Burma, and Assam, with the orders of the Local Governments thereon.

Orders of the Government of India on the Reports of the Sanitary Commissioners enumerated above.

Reports for 1885-86 on the Administration of Municipalities in Bombay, Bengal, Burma, Assam, and the Hyderabad Assigned Districts, with the reviews of each Local Government and Administration concerned.

Orders of the Government of India on the Municipal Reports enumerated above.

RESOLUTION.

The practical application of sanitary principles to towns and villages in India has since the publication in 1863 of the Report of the Royal Commission on the Sanitary State of the Army in India received the continuous attention of the Government. The Report of the Royal Commission, the reports submitted subsequently from time to time by the various Provincial Sanitary Commissioners, and the suggestive reviews of those reports which have emanated from the Army Sanitary Commission in England, have brought to notice the chief sanitary defects of urban and rural areas, and have indicated the methods by which they might be remedied. It is through no want of sympathy with the cause of sanitary improvement that the Government of India has not been able hitherto to give as full effect to these recommendations as it could have wished. The difficulties to be overcome were numerous and formidable, and lay, to begin with, as much in the ignorance of the people and in the passive resistance offered by them to all departures from the practice of ages, as in the want of funds and the absence of an executive agency to give effect to the orders of the central authority. However convinced the Government of India might be of the value of the suggestions made for its adoption, and however anxious to carry them into effect, it had to proceed with circumspection, and with a due regard to the means at its disposal as well as to the prejudices of the heterogeneous populations entrusted to its care. Under such circumstances progress has unavoidably been slow. Still considerable progress has been made. The ignorance of the people on all sanitary questions has been in some measure mitigated by the Department of Public Education, which has imported into the ordinary school curriculum instruction in the elementary principles of sanitary science. Popular prejudices have been combated by the judicious influence of the officers of Government, and by the introduction of improved sanitary methods, wherever this was practicable. Sanitary Commissioners have been appointed in all Provinces; information regarding the sanitary needs of towns, and later of rural areas, has been collected; and in many municipalities and some rural areas this information has been turned to account in the provision of a pure water-supply, of improved drainage, and of better conservancy arrangements. The Government of India readily admits that what has been done in these directions may appear small in comparison with what remains to be done. But it does not admit that, having regard to the difficulties which lay in the way, reasonable progress has not been made.

2. It has been stated that the main obstacles which have hitherto impeded sanitary improvement in India lay in the ignorance of the masses and their dislike to any change of custom, in the want of efficient executive agencies, and last, though not least, in the want of funds. Upon the first of these obstacles, the Governor-General in Council does not on the present occasion desire to dwell. It indeed still constitutes a formidable difficulty, upon which, in rural areas at all events, little sensible impression has yet been made, and its existence renders it necessary still to observe great caution in the introduction of sanitary reforms. But with the rapidly advancing tide of popular education, the perception of the beneficent intentions of the Government comes home more clearly to the people than it did; and there is less danger than there was that measures taken for the improvement of the health of the people and the prevention of disease should be misconstrued as arbitrary interference with time-honoured practices. If some years ago it was generally and correctly felt by Local Governments and Administrations that authoritatively to press the subject of sanitary improvement, especially in villages, would be of little avail, and that persuasion, not coercion, was the right plan to follow, it is no less generally felt today that a more forward, though still cautious and tentative, policy would now be opportune.

3. In considering therefore the measures most calculated to promote the cause of sanitary reform in India, attention should, in the first place, be directed to the question of executive agencies, and to the question of funds. Taking the question of executive agency first, it has to be regarded in its relation to urban and to rural areas. In relation to urban areas, the Governor-General in Council is glad to think that the question now presents far less difficulty than it did. When sanitary reform in India received its first impetus from the investigations of the Royal Commission referred to in the preamble, there was, outside the Presidency towns, practically no organization for the prosecution of sanitary work. The hardworked district officer did what he could to keep his towns clean; but sanitary science in India was then in its infancy, while the most enlightened inhabitants of Mofussil towns knew nothing about it, and never troubled themselves to learn anything. The result was manifest in the lamentable state of things depicted in the Report of the Royal Commission. Since then, however, there has been much improvement. The growth of the spirit of self-help and the perception of the advantages of sanitation in municipalities has in recent years been encouraging; and there is reason to think that the Government may with increasing confidence rely on the co-operation of municipal bodies in promoting sanitary reform. The Municipal Acts, which formerly were adapted to an early stage of civic development, have now been cast in an ampler mould. Those now in force in the various Provinces confer a larger discretion and authority to pass rules and bye-laws for sanitary purposes, and impose upon Municipal Committees the duty, as far as the funds at their disposal will permit, of providing, among other things, for the sanitation of the towns. Municipal Boards can, therefore, both entertain the requisite agency for carrying out the law, and raise the necessary funds. The areas to be dealt with are limited, and

within them the interests of the people affected are mostly identical. There is a field for concentrated effort; and the Government may, therefore, with greater confidence look to Municipal Committees for active assistance in carrying into effect the measures of sanitary improvement declared to be necessary for the towns over which they preside.

4. In rural areas the case is different. Among the village population the sense of the need for sanitary reform is but little, if at all, more developed than it was when the Royal Commission reported a quarter of a century ago. The great feature of Indian rural life is immobility of custom, upon which novel ideas make but little impression. For improving the sanitation of villages executive rules have been from time to time framed and recommended for general adoption. It does not appear however that they were anywhere productive of much good, for there was no executive agency to supervise their working or, when necessary, enforce them.

But in this important matter of executive agency a great improvement has been effected by the District and Local Boards Acts passed by the Legislative Council of the Governor-General and by the various local legislatures. In the Madras Presidency a gradation of rural Boards has been established, one of which deals with the village; another with the subdivision of a district; a third with the entire district. All these Boards have their special functions to discharge; but each has to provide within the area of its jurisdiction for the sanitation of towns and villages, and to that end is endowed with powers to entertain the necessary establishments. In Bengal and the Punjab the organization established, or to be established, is on the whole similar to that established in Madras; and though under the system introduced in Bombay, the North-Western Provinces, and Central Provinces, a larger territorial unit of self-government has been adopted, there is no reason why the executive agencies should not act effectively throughout the larger areas. The various Acts of the Legislature, which create this system of local self-government, require the Boards to undertake, among other things, local works and measures likely to promote the health of the public within the area subject to their authority, and empower them to entertain establishments for that purpose. In some instances also the laws creating these bodies confer upon them limited powers of taxation. But when this is not the case, or when it may be inexpedient to resort to taxation, or when funds may be insufficient to meet the expenditure necessary for sanitary and other improvements, it is always open to the Boards, with the sanction of the Local Government, to have recourse to loans under Act XI of 1879 (The Local Authorities Loan Act).

This legislation has therefore provided the Government of India, for the first time, with the means of creating that agency for executing sanitary reform in rural areas without which its previous exertions proved comparatively fruitless. The agency, even in the Provinces in which it has been established, is as yet in its infancy; but year by year it will grow stronger and more efficient, and the Governor-General in Council therefore desires to impress upon Local Governments that, from the beginning, the promotion of sanitation should be regarded as one of the most important duties of all District and Local Boards, and of Village Unions, where they exist.

5. In initiating and carrying approved sanitary measures into effect, it will be always essential to enlist the assistance and co-operation of the district authorities, which indeed are always available to Municipalities and Local Boards. But it must be remembered that district officers, who have generally shown themselves forward in promoting sanitary improvements and in co-operating with Local Boards in these matters, have neither the time nor the technical knowledge, nor the opportunities requisite for a comprehensive survey of the entire field of activity which is necessary for the discharge of the duties in question. Experience in India as well as in other countries has shown that, unless local executive agencies are carefully guided and controlled in sanitary matters, there is almost certain to be misdirection of energy and wasteful expenditure. As has been pertinently observed, "it is vain to hope that the numerous public bodies to which the sanitary administration of India has been committed will be found competent to discharge their important duties, so long as there is no competent authority possessing the necessary knowledge and armed with the necessary

(1) powers to assist their deliberations, guide their actions, and, when the occasion arises, correct their mistakes and remedy their inactivity." It therefore appears to the Government of India to be eminently desirable that there should be established in each Province a Sanitary Board through which the Local Government can operate, and to which, subject in all respects to the orders of the Local Government, shall be entrusted the control and supervision over sanitary works, whether undertaken in urban or rural areas. It was one of the recommendations of Lord Stanley's Commission, referred to in the preamble to this Resolution, that a Commission of Health should be appointed at the seat of each Local Government, with purely consultative functions, to advise on all questions relating to sanitation. Something more than a consultative body is, in the opinion of His Excellency in Council, now required; and the Sanitary Boards which he wishes to create should therefore from the outset receive recognition, not only as a consultative body, but also as the executive agency through which the Government acts in the Sanitary Department.

These Sanitary Boards might be composed of an officer of approved administrative experience, the Sanitary Commissioner for the Province, and an officer of the Public Works Department skilled in sanitary engineering. With these three officers might be associated one or more non-official members appointed by the Local Government. Every Commissioner of Division in Northern India and Bombay, and possibly District Collectors in Madras, might also be *ex-officio* members of the Board when dealing with questions connected with their divisions or districts. It is probable that the duties of the Board would not, at all events for some time to come, be onerous, and could well be combined with the other and ordinary duties of the members.

Finally, it is desirable that the Provincial Sanitary Boards should, subject to the orders of the various Local Governments, be in constant communication with the Sanitary Commissioner with the Government of India, whose advice upon large schemes of sanitary reform will always be useful, and who will be in a position to communicate to one Provincial Board the results of experience gained by another. The Sanitary Commissioner with the Government of India, who acts under the general instructions of the Home Department, will thus, so far as may be needed, exercise the functions of a general co-ordinating and consultative authority; and through him the Government of India will be in a position to enforce, if necessary, that general control which it is competent to exercise over all branches of the administration. It may afterwards be necessary to associate with the Sanitary Commissioner an expert in sanitary engineering science: but this is a question which need not be raised in this place.

6. In orders issued by the Home Department on Municipal and Local Board reports for 1885-86, cited in the preamble to this Resolution, the Governor-General in Council took the opportunity of laying down the general lines on which, in his opinion, future action of local bodies should be directed in promoting sanitary reform. The principle which he had in view was, that action should be preceded by an accurate ascertainment of the requirements of each locality. Accordingly it was suggested to various Local Governments that a sanitary survey of each municipality and rural area should be undertaken with as little delay as possible, and that plans and estimates should be prepared of all the improvements necessary to provide each town or village with an efficient system of water-supply, drainage, and conservancy. The most important of these requirements, and that which, in the opinion of the Government of India, may at first be dealt with most effectively, and with the greatest chance of the active assistance and sympathy of the people, is the provision of pure water. Drainage,—especially in those localities in which the construction of public works, such as railways and canal embankments, have interfered with the natural flow of water, and may have injuriously affected the people's health,—is also a matter calling for early attention. But, while thus indicating the directions in which sanitation can be best promoted, there is on the part of the Governor-General in Council no desire to limit the discretion of Local and Provincial authorities as to their choice of action. That can best be determined by a knowledge of local requirements. In the orders in question it was added that plans, when once fixed, should be executed from year to year as

funds become available, the object aimed at being persistently kept in view until it was completed. The Government of India desires in this place to call special attention to these instructions, which were de~~sir~~vised with the view of checking wasteful recurring expenditure; and to express the hope that the annual reports on the Administration of Municipalities and Local Boards in each Province will henceforward shew that progress is being made in the desired direction.

(2) Another important matter to which attention must here be called is the provision in every Province of simple rules for the regulation of village sanitation. In some Provinces such rules have been for some time in operation, though with no very beneficial result, while in others it is now in contemplation to render such rules more effectual by legislation. Wherever the existing law makes no provision, or insufficient provision, for the enforcement of necessary sanitary measures in rural areas, there should be no hesitation in taking the necessary power by legislation. And in this connection His Excellency in Council thinks it may be of advantage if the attention of all interested in sanitation is again called to the valuable remarks made in 1879 by the Army Sanitary Commission on the practical application of sanitary principles to towns and villages in India. Their remarks are, therefore, published as an appendix to this Resolution.

7. Passing from the organization of the Sanitary Department to the important question of the provision of funds, it is, in the first place, to be observed that the various Municipal Acts enable the corporate bodies created by these Acts to raise by local taxation the funds necessary for local expenditure. Similar power is conferred on Local Boards by the Madras, Bengal, and Punjab Local Boards Acts, but apparently not elsewhere. It will be for the consideration of the Governments of Bombay and the North-Western Provinces and Oudh, which possess Legislative Councils, whether legislation should be undertaken with a view to confer powers of taxation upon Local Boards in those Provinces. Meanwhile it is incumbent on the Governments of the Provinces in question to place Local Boards in possession of funds sufficient to meet the reasonable requirements of local sanitation. But though sufficient money to meet current expenditure may be provided in these ways, it will probably be necessary to raise additional funds for the execution of new or large works. It is indeed probable that local income may be increased without any hardship to the tax-payers. In certain Provinces some productive methods of municipal taxation have not yet been turned to account: but even when all current revenue is taken into account, it may, and doubtless often will, be found necessary to have recourse to loans under Act XI of 1879, or to appeals to the Provincial or Imperial Governments for grants-in-aid of local resources.

With reference to loans, the Governor-General in Council desires to say that, so long as borrowed money is not spent on the ordinary current operations of a Municipal or Local Board,—so long as it is spent on works of lasting utility, there can, as a matter of principle, be no objection to imposing on the rate-payers of future years an obligation to subscribe. The Local Authorities Loan Act, XI of 1879, affords certain facilities for borrowing by public bodies; but the rates of interest at which these bodies can raise the loans in the open market are often so high as to be practically prohibitive. The Governor General in Council has therefore taken the subject of loans to Local bodies into his careful consideration, being satisfied that no policy of sanitary reform in India can be successful unless facilities are provided for local bodies to raise funds for sanitary improvements on less onerous terms than they at present can do. The Government of India has not yet come to a final conclusion on this important subject; but it is not indisposed to think that, when expensive works of the kind in question have received the previous approval of Government, and when sufficient control over the local finances has been reserved to ensure the fulfilment of the conditions on which the raising of the loan is sanctioned, it might be expedient to authorize Local Governments, subject to certain prescribed limitations and conditions, to raise and establish a Provincial loan fund, and make its own bargains with local bodies in regard to advances necessary for sanitary improvements and other works of lasting utility. The question is one of general policy, which demands careful consideration; but the decision upon it will not now be long delayed. (3)

8. With reference to the subject of contributions from Provincial funds for sanitary works of utility, His Excellency in Council has observed with satisfaction that a willingness has already been exhibited to contribute from Provincial resources in aid of sanitary improvements, both in urban and rural areas. Where the ability of local bodies to raise loans is undeveloped and their credit not established, the Government of India approves of such contributions, and would like to see regular provision made for them in Provincial budgets, when this can be done with a just regard to other demands on Local Governments. In some cases—such, for instance, as obstructed drainage, incidentally referred to in paragraph 6 above, as resulting from great public works—contributions would be obviously appropriate. But if contributions are to take a definite place in the plan of Provincial finance, His Excellency in Council would be glad to see them systematised on the grant-in-aid principle, which has been found so effective in promoting education, care being taken to so regulate the distribution of the grants as to minimise the evils, inherent in the grant-in-aid system, of weakening local responsibility and fostering extravagance in expenditure.

Under the system indicated above, it will, it is hoped, be possible to meet from Local resources the money necessary for Local sanitary improvements. There may, however, be very exceptional cases the requirements of which cannot be met from Local or Provincial resources or by loans. In such rare cases the Government of India will not refuse to consider applications from Local Governments in the interests of sanitary improvements of more than local importance.

ORDER.—Ordered, that a copy of the above Resolution be forwarded to Local Governments and Administrations for information and guidance; that a copy be forwarded to the Department of Finance and Commerce and to the Public Works Department, for information; and that a copy be forwarded to the Sanitary Commissioner with the Government of India, for information.

Also that the Resolution be published in the *Gazette of India.*

[True Extract.]

A. P. MacDonnell

Secretary to the Government of India.

No. 3/213

To

The Government of

Madras

I.

Practical Hints for the Sanitary Improvement of the smaller Municipal Towns in India.

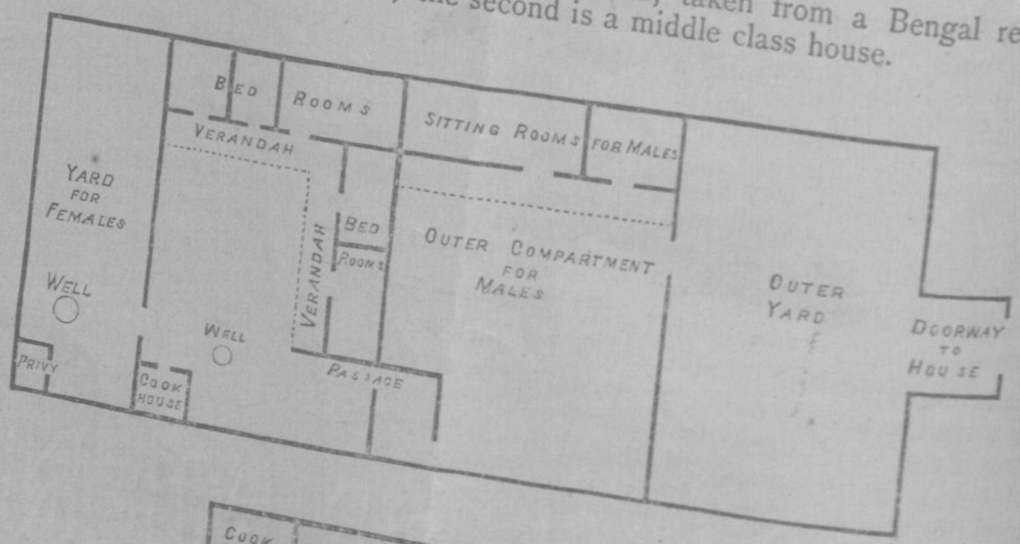
1. In the larger cities and towns in India, employing their own Engineers and Officers of Health, the foundation of sanitary improvement must be laid in works of domestic sewerage and drainage, in water-supply brought from a distance, in surface levelling, paving, and cleansing, and in surface drainage. These, together with opening up new thoroughfares, tree planting, and improved house construction, where sufficient funds are available, will improve the general health, and mitigate or prevent outbreaks of epidemic disease in all the larger groups of population. They are not only the most effectual measures which can be adopted for these objects, but for large dense populations they are in the end the cheapest.

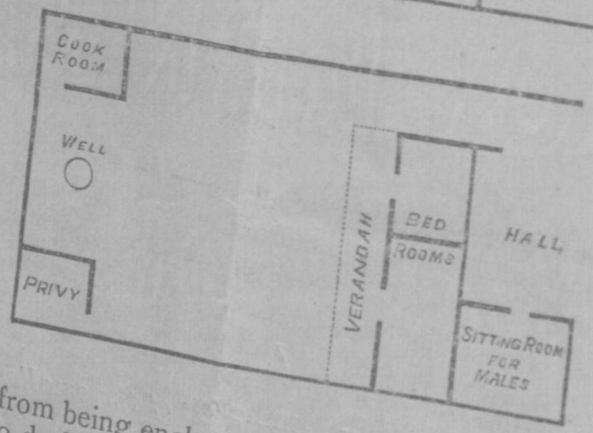
In the smaller municipalities the chief difficulty that lies in the way of adopting them is, that where there are a few thousand people, most of whom are of the poorer classes, funds are limited, and there is no local source from which the capital sums required for the execution of permanent works can be drawn, at least at present. Although public health measures to be executed mainly by hand labour may be more costly than the current outlay for permanent works, still much may be done among small populations by the proper application of limited income; and the object of the present paper is to point out, as far as it may be practicable to do so, the chief directions in which limited local expenditure may be applied to effect this object. But the nature and extent of legislative and administrative measures and authorities required to give practical effect to the principles embodied in the following paragraphs, whether for small municipal towns or villages, must be left solely to the authorities in India.

2. In all municipalities the two primary means of preventing outbursts of disease are strict attention to domestic cleanliness, and the protection of water-sources.

There is every reason for suspecting that the chief disease causes in all Indian towns are to be found within the walls which enclose the compounds and houses.

Here are sketches of two classes of houses, taken from a Bengal report. The first of well-to-do people; the second is a middle class house.



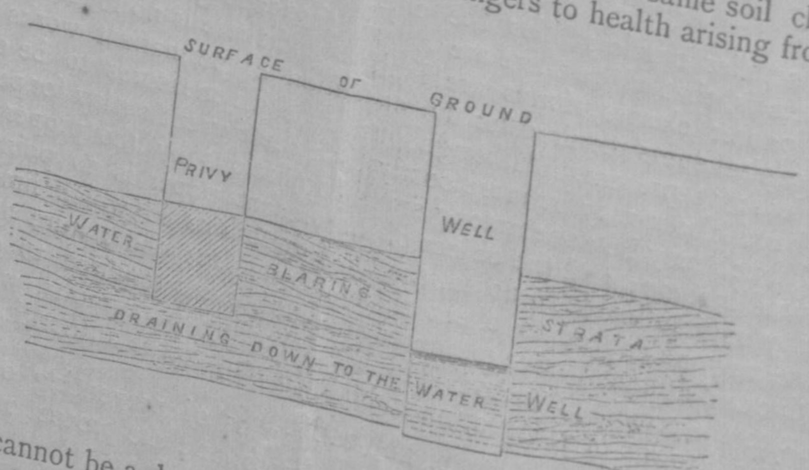


These houses, from being enclosed within walls, have no proper ventilation, and the rooms are so dark as sometimes to require a lamp day and night.

In some parts of India it is the practice to cover in the entire courtyard, so that foul exhalations are prevented from escaping into the air. In such cases ventilation of the court as well as of the houses is required. The huts of the poor have generally no enclosure walls, and have one door to the hut; they have hence more light and air.

3. The privies in all these houses are described as being "made of wells in which the dirt accumulates for years."

The plans show that the water wells are dug in the same soil close to the privies, and this rough sketch shows the dangers to health arising from such an arrangement:



There cannot be a doubt that the well water under such circumstances is liable to constant pollution by infiltration of liquid filth from the privy, and also by foul surface washings from the yard, which is often in an exceedingly filthy state from the urine and dung of animals as well as of human beings.

Where houses have been long inhabited, the whole ground within the court walls under the sleeping rooms, from which the well draws most of its water, is fouled, and the inhabitants are exposed to all the consequences of living on foul ground, breathing impure air, especially at night, and drinking unwholesome water.

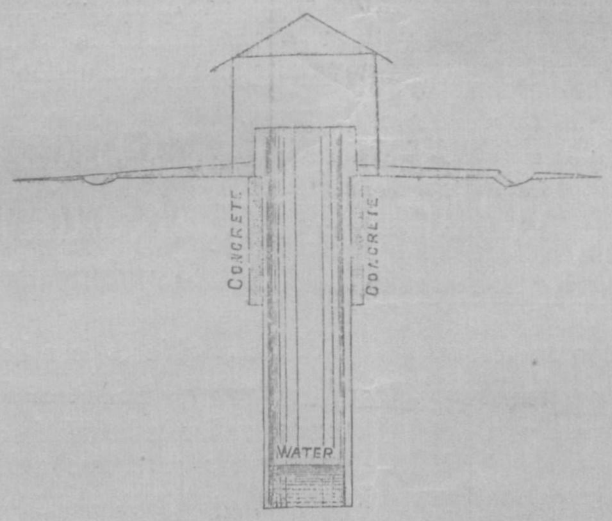
The simplest way of avoiding these dangers would be by rebuilding the houses on new ground, and adopting precautions to prevent the subsoil being polluted with filth. But as this cannot be done, the next best thing is to remedy the present evils as far as it may be practicable to do so.

4. The first step is obviously to prevent further pollution of the ground by cleansing and filling up all cesspits and filth wells. In many instances it would be advantageous to dig up and remove the surface earth of the compounds, and to replace it with fresh clean earth. Wherever means are available, the surface of the court or compound should be covered with paving, or some other hard impermeable material, such as rammed kunkur, and drained by channels to the streets outside.

Where a durable material for surface paving cannot be obtained, the most efficient substitute would probably be found in fresh clay hard rammed, so as to form a hard impervious surface, to be renewed by clean material at short intervals.

No cattle should ever be kept in small compounds. Besides the constant danger to health inseparable from this practice, it ensures rapid pollution of the subsoil, augments the difficulty of cleansing, and fouls the well water.

5. Where the cesspit has been close to the house well in the manner shewn in the plans, it would be better to fill the well up with clean earth, and dig another as far as possible from the site of the cesspit. All new wells should be cased outside with clay or cement, or with concrete, to a sufficient depth to cut off the surface and subsoil water from the well, in the manner shewn in the following section:



The well is dug and built up in the usual way, but when it comes within 8 or 10 feet of the surface, the tube must be coated outside with puddle or concrete, to cut off the upper portion of the water. The tube of the well should be carried two feet above the ground level, and covered with a roof; the ground round the well should also be coated with concrete and sloped away from the well to open channels, as shown in the plan. With these precautions, which are not difficult to take, and not costly, any well within a compound, except in very foul ground, would yield wholesome water.

6. The abolition of well or cesspit privies being absolutely necessary before the water for domestic use can be safe, the only principle that can be adopted in their stead is that of continuous daily cleansing, and removal of all house filth and refuse of food, &c. The floor of the privy should be paved or covered with concrete or asphalte, and a moveable vessel placed upon it to be

daily removed and emptied by sweepers, with or without the use of dry earth. There is absolutely no other safe plan except daily removal. If from any local cause daily removal cannot be carried out, then it may be suggested that the municipal authority should construct groups of privies with private keys for the use of families, and that all conveniences of the kind within private compounds should at the same time be abolished. The whole surface of the compound should be kept clean day by day.

7. As much of the fever from which the people suffer is due to sleeping on the ground, no greater improvement could be introduced by the municipality than inducing the people to use beds raised above the ground level.

Were these simple improvements carried out in the smaller municipal towns there would be considerable improvement in the public health, so far as the houses are concerned.

They may be summarized as follows:

(1) Abolishing all cesspits and privy wells, filling them up with clean earth, and substituting for them vessels to be emptied daily, or public privies to be provided as suggested above; all other privy arrangements to be improved in the same way, and everything removed daily.

(2) Removing all wells from the polluted ground near cesspits, and digging new wells as far as possible from them, on the principles already stated. Old wells to be filled up.

(3) Removing cattle from house compounds, improving the surface, and maintaining strict cleanliness.

(4) Raising all beds and sleeping places above the ground level.

(5) Where people resort to the fields for natural purposes, provision should be made for immediately covering the deposits with fresh earth, and certain limits should be distinctly marked by posts, within which no inhabitant should be permitted to obey the calls of nature.

8. Wherever the municipality has been able to provide pure water, brought from a distance, it would be better to close all house wells, or to discourage their use. In this way the house problem would be simplified.

9. The next most important class of sanitary improvements are those required for the surface of the town outside the houses, and have for their object surface cleanliness, surface drainage, filling up and levelling all hollows and water holes not needed for supplying water for domestic purposes, or for bathing or for watering animals, and removing animals and unwholesome trades beyond the outskirts of the population.

10. It will be seen that every one of these objects can be attained without outlay of capital. All that is required is labour and a suitable direction of it.

For instance, many municipal towns suffer in health from the presence in or near them of broken ground, holes with water in them, a larger number of tanks than is required for purposes of water-supply, using the same tank for drinking, bathing, washing, and watering animals.

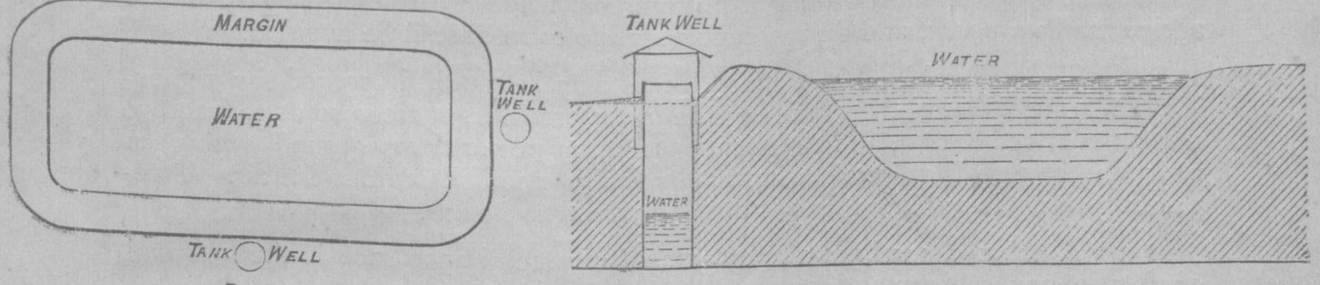
Where such disease causes are present, the following rules should be applied:

(1) All holes or inequalities should be filled up and levelled.

(2) No tank used for supplying domestic water should ever be used for bathing, or for watering animals. The number of tanks required for all the purposes of the town should be carefully decided, and then all others should be filled up, and the land, which is often of considerable value, should be turned to use.

(3) The margins of all tanks should be carefully formed and paved, or covered with grass. Suitable places should be provided for drawing water, not directly from the tank, which should be considered as only the water reservoir,

but connected with it, and made of masonry, as shown in the following sketch:



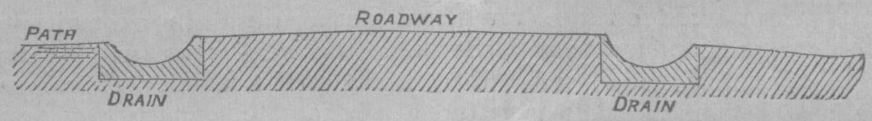
PLAN SECTION

Wells sunk in clean ground at convenient places, and protected as already described, would supply tank water naturally filtered, and probably there would be no objection to draw the water by iron buckets, chain and windlass in a mixed community.

The municipality should take steps for the protection of all tanks and public wells. This is indeed one of their most important duties. There should always be a separate water-supply provided for low-caste people.

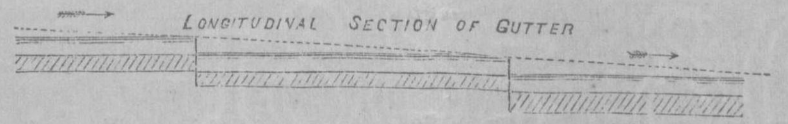
(4) At present the only kind of drainage suitable for small towns is open surface drainage carried along lanes and streets to some convenient outlet.

All covered drains should be avoided. The surfaces of lanes and streets should be graded so as to allow rainwater to pass readily to the surface drain, and the drain should have a shallow watertight section.



The material should be the best and cheapest to be obtained on the spot. Cut stone or concrete or asphalte might be used, or masonry or close fitting vitrified brick; but in any case it is absolutely necessary that the channel should itself be laid true, have a sufficient fall, and that all the joints should be watertight. Open cuts in the earth are of no use, but are on the contrary to be avoided, as leading to a damp unwholesome state of the subsoil.

(5) Where lanes or roadways have a considerable fall, the strong currents produced by tropical rains are apt to injure, or even to ruin, the side drains. This may be avoided by constructing the drains with steps, to break the current.



Surfaces of roads and lanes must, as everywhere, be made of the hardest and cheapest material available. The essential points in small town and village road formation are that the gradients should be properly laid out to drain the road to the side gutters, and that the surface should be carefully kept in repair. Little labour would be required for this purpose in comparison with the outlay necessary for reinstating the road after it has been half ruined by rain and traffic.

Shallow saucer-sectioned surface drains can be kept clean by sweeping or by throwing water into them. With due care in cleansing with fresh water there would be no risk in allowing water used by households for washing and bathing to run into the surface drains.

The surface drains should discharge their contents into open impervious shallow surface sewers, by which the water could be conveyed to a distance from the town and used at once for irrigating land, and so be finally disposed of.

All household and town impurities are best made use of by being applied to agricultural purposes, and dung-heaps near the town should be avoided.

(6) The general health of small towns may be much improved by removing all useless jungle, by lopping the lower branches of trees so as to improve the external ventilation, and by planting trees on wet or damp ground within or near the town—a measure which dries the ground and purifies the air. Tree-planting along the public roads is also beneficial to health.

(7) Another general town improvement of much importance is the removal of all ruinous dwellings and levelling their sites.

(8) Any foul unwholesome surfaces of ground within the town can readily be improved by covering the area with a few inches of clean earth, which is by far the best disinfectant to use.

11. As already stated, none of the measures proposed above need be expensive. All the materials and labour required are on the spot, and most of the work could be done by the inhabitants of houses themselves; and they ought to be required either to do what is necessary or to pay for the doing of it, on the well understood principle that an unhealthy house is not only dangerous to its own inmates, but to its neighbours, and to the town generally.

If municipalities in small towns see that these measures are carried out to the greatest practicable extent with the means at their disposal, they may confidently expect improved health and less liability to epidemic diseases.

12. But when cholera or fever, or any other epidemic, attacks a town, another duty is placed on the municipal authorities. In a small population there ought to be no difficulty in discovering the houses in which there have been cases of cholera, fever, small-pox, &c.; and whenever it comes to the knowledge of the municipal authorities that the inmates of particular houses have been attacked, immediate inquiry should be made into the sanitary state of the house. It is not safe during epidemics to stir up filth or foul ground, but there is one measure which can be taken with perfect safety—namely, to remove all animals out of the house or compound, and to cover all filth or foul ground, including cesspits, with clean earth, and in every such case the house well should be closed and water brought from outside the town. These two measures, namely, providing good water, and covering all foul matter with earth, can always be adopted with safety and advantage during epidemics; and if any other measure be considered necessary, it ought to be the removal of the people away from the affected house. When the disease has abated, the municipal authorities should proceed to improve the house and compound on the principles already mentioned.

II.

Sanitary Improvement of Villages.

13. There are four agencies by means of which village improvements can be carried out:

(1) The inhabitants,—who ought to be called on to keep their houses, cattle, privies, wells, and village streets free from nuisance.

(2) The village officers,—who might be entrusted with powers to see these things done.

(3) The zemindar or village proprietor,—who ought to be called on to keep his property in a proper condition, especially as regards village work not immediately belonging to houses and compounds, such as the conservancy of village tanks, and the adjustment of their numbers to the wants of the population, filling up all useless collections of water, and all hollows in the ground, levelling the surface, removing ruinous huts, and surface draining the village site, providing new wells, thinning jungle, &c., to improve the external ventilation. The zemindar should, in fact, see that all sanitary work is done which bears on the health of the village as a whole, as contradistinguished from the steps necessary to keep the house and its appurtenances in a healthy condition.

(4) The Government,—whose sanitary duty in regard to village populations lies in the direction of general drainage works where these are of proved necessity for the district, and irrigation where water for agricultural purposes is deficient.

Village sanitary problems are so various, and are so much influenced by causes outside the houses, that it may be useful to state, as in the preceding paragraphs, the different agencies to be called into action, as these have been indicated in the many reports on this subject which have been received from India.

14. The village officer, where he exists, may help to remove the most important domestic causes of ill-health which afflict the great mass of the people in India. He might take the following steps, and in some way authority might be given him for this purpose. He should see that all the village streets and lanes are kept clean and free of nuisance, that no filth or foul matter is thrown on the surface, and that no one is permitted to perform the offices of nature in any village street, lane, or open space.

He should set apart some area of ground to leeward of the houses to which all filth is to be taken. He should inform the inhabitants of it, and see that the ground is used for the purpose. He should set apart one or more open spaces to which people may resort for natural purposes, and every person should be required to cover up his own filth, or where it can be done a sweeper should be paid for the purpose, as has been done at Bijnor. The field used for this object should be cropped after it has been sufficiently manured, and another field set apart. All village filth and sweepings are useful for manure, and should be spread over land at the proper season.

Care should be taken that the ground set apart for these purposes is not near any well or tank, or watersource from which drinking water is drawn.

The village officer might possibly be charged with oversight of the compounds and houses, or at all events he might call the attention of the people to the necessity for rigid cleanliness, and for removing cattle outside the compounds; some provision might be made for stalling them outside the village but, at any rate, it would be far safer to have a cattle-pen on some open ground within the village than to keep cattle inside the houses. In such a case the village officer might enforce rigid cleanliness and removal of all manure outside the village. It would be advisable to follow the course which has been adopted in some parts of India—namely, to put up boundary marks round villages within which no deposit of any kind of filth should be allowed.

It follows from what has been said that the most urgent sanitary improvement for Indian villages is one that need cost nothing. It is simply cleanliness in which every inhabitant should lend his assistance; but in the case of those who would prefer to pay rather than to do their own cleansing, the expense would be very small.

15. Next in importance to cleanliness is the protection of water sources; and a very simple rule of judging of the need of this can be applied by any one. It is this, to examine the ground about the well or tank. If the ground is foul and filth-sodden, no well dug in it can yield good water, and no tank is safe unless the margins are raised to prevent surface filth being washed into the tank during the rains. If in any house or compound there is a cesspit, together with a well or tank, both should be filled up. It may be taken for granted that the cesspit has so fouled the subsoil, that no good water can be got from it; and besides this, no cesspit or dung-heap should be permitted within the boundary of any house. Unless the inhabitants resort to the fields, the whole house filth should be removed daily in a portable vessel.

The safest course to take where wells are the source of the water-supply, and where they have been dug in fouled ground, is to provide a new well; probably one for the whole village might be sufficient. It should be dug in clean

[illegible]

ground, away from all nuisance. The subsoil water should be cut off from it by casing the well outside with concrete to a depth of 8 or 10 feet from the ground level. The tube of the well should be raised two feet above the ground, and the surface should be sloped away from the well, and paved or covered with concrete, so as to carry away all waste water. Probably the best way of drawing water would be by a windlass and iron bucket and chain, and some kind of cover should be used to keep leaves out of the well. As already stated, there should be wells for low-caste people.

Where village water is obtained from tanks, it is most important to keep one tank solely for drinking and cooking water. It should be specially protected, and never used either for bathing, washing clothes, or watering animals. Tank water can always be filtered by digging a well at a short distance from the tank.

Improved water-supply for an entire village ought to be undertaken by the proprietor, because the people have not the means of doing the work.

16. It may be repeated here that the general measures required for the whole village, and which in default of other means should be done for the people by the zemindar, are village water-supply as described, surface improvements, such as levelling ground, filling up useless tanks and holes, surface drainage, removing jungle, removing ruinous huts, &c.

These improvements would cost very little in comparison to the gain in health among the people.

17. The measures in which Government might aid have been already stated, but it may be further suggested that the Vaccination Officers might be charged by Government with the duty of instructing both village officers and people in these matters. Civil Surgeons could also render efficient aid; and all should be done under the general supervision of the Sanitary Commissioner of the Government, who would also decide the precise nature of the responsibilities resting on the village proprietors.

19th March, 1879.

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13 [illegible] Local Depᵗ

62

Read again

G.O. 4 May 1888 No. 454 M

Print in full — Read Cᵉ. 1161 M from the Sanᵗʸ Commʳ.

Cᵉ. 1070 M from the P.W.D.

Print heading only — Cᵉ. 2683 L " the G of I.

Order d/17 Oct/88 No. 1913 L

The Govt. of India will be addressed

2 The attention of all Local Boards & Municipalities will be again drawn to the remarks of the Army Sanitary Commⁿ. reprinted at the ~~end~~ close of the Govt of India's Resolution which were communicated to them in G.O. 26 May 1879 No. 822 Public

HLS 100ct

3 The question of affording aid to Local Boards & Municipalities from Provˡ. funds, by loans or otherwise, for purposes of prosecution of permanent sanitary improvements will be considered in the Financial Depᵗ. on the receipt of the Govt

communication promised in para 7 of the Govt. of India's Resolution

4 Oct.

1. The Fin! Dept ~~The Pub. Dept~~ Paras 2 & 5 all Rev. & Dist Bds Chairmen of Municipalities

Desp'd 5/11 + with encls

Note It does not seem advisable to communicate the Resolution to Local Bodies until the questions of the appt of a Sanitary Engineer & the constitution of a Board are settled

Note for Despatcher
Please send with this letter, the papers referred to at the end of paras 5 & 10

10 Oct

12 Oct

14

Letter d/ 17 October 1888 No 1914 L

To The Secy to the Govt of India
Home Dept (Sanitary)

Sir,

I am directed to acknowledge receipt of your letter d/ 7th Aug 1888 No. 83 of the Govt of India Resolution d/ 27 July 1888 No $\frac{3}{212-225}$ Home Dept (Sanitary)

2 In para 5 of the Resolution last mentioned, it is proposed to constitute a Sanitary Board for each province which "should from the outset receive recognition not only as a consultative body, but also as the executive agency through which the Govt acts in the Sanitary department." It is suggested that each Board should consist of "an officer of approved administrative experience, the Sany Commr for the

"Province, & an Officer of the
"Pub. Wks Dept skilled in
"Sanitary Engineering" with
whom might be associated
one or more non-official members
appd. by the Local Govt. It is
further suggested that in
this Pres.y ~~Collrs. of~~ Districts Collrs
might be ex officio members
of the Board ~~might~~ when
dealing with questions connected
with their district.

3 In reference to these suggestions,
I am to point out that
the constitution of a "Sanitary
Board" is no new experiment,
but that it was tried in this
Pres.y as well as in other
Provinces upwards of 20 years
ago. The history of the
Sanitary Commrs. appd. for
Madras under the instructions
of the Govt. of India in 1864 &
of the manner in which it
became transformed into the
single "Commissioner" who,
aided by a Deputy, now adminis-
ters the Dept. is of course well known to the Govt. of India ~~will be found~~
~~traced in the Memorandum~~

I don't think this need be forwarded. The history is well known
HCS

~~accompanying this letter~~
It will be ~~observed~~ recollected that the
"Board" originally established
was found unnecessarily expensive,
& that those members who
had other duties to perform
were practically of little use.
H.E. the G. in C. considers
that these objections would
apply with equal force to the
scheme now proposed by
the Govt. of India. If the
"Officer of administrative expe-
"rience" & the Pub. Wks Engineer
whom it is proposed to associate
with the San.y Commr. are
to act on the Board without
prejudice to their ordinary
duties, the time they can
spare for Sanitary work
must necessarily be but small;
the great bulk of the work will
continue to be done by the
San.y Commr., while the
association with this officer
of a Board of colleagues will
materially diminish his
responsibility for the adminis-
-tration of the Dept. If on
the other hand the official
members of the Board are

all placed on special Sanitary duty, the expenses of the Dept. will be enormously increased, although the work has not hitherto been found to be beyond the unaided powers of the existing Commrs.

As regards the non-official members, those gentlemen whose services would be of real value will as a rule be busy professional or business men & wd therefore be in the same position, as far as their opportunities for taking ~~a~~ work on the Board ~~is~~ are concerned, as officials members ~~at~~ holding their appts. Under the ~~existing system~~ Collectors of District are ex officio Prests of the District Boards, & form the channel of all communications between the Govt & the Municipalities within their jurisdiction They have thus the fullest opportunity for discussing & reporting on any improvements which the San. Commr. wishes to have carried out within their ranges, & nothing would be gained their remarks

× e.g. as to condition of Govt Schools from a Sanitary point of view [illegible]

Further in Madras, the ~~District~~ Civil Surgeons district have been declared Sanitary Officers & brought into relation with the Comr

& suggestions & carry quite as much influence both with the Commrs & with Govt. as would be the case were they made ex officio members of a Sanitary Board as has been proposed. The same remark applies to the Heads of any special Depts in respect to which the San. Commr. may from time to time have to make suggestions

4 In short in this Presidency the existing system works well & smoothly, &, while affording full scope for outside criticism, does not impair the authority & responsibility of the Sanitary Commr. The Madras Govt. are therefore entirely opposed to the creation of a "Board" & trust that the G of I will not consider it necessary to direct such a measure to be carried out in this Province

5 There is however one reform which the G in C considers to be absolutely required, & that is the appt of a special San. Engineer. In para 6 of the

Resolution under refce, & in para 5 of your letter d/ 7th Mar 1888 No. 83, great stress is laid by the Govt of I on the necessity of providing each town as far as possible with an efficient system of water-supply drainage, & conservancy. To obtain good ~~Efficient~~ water-supply and drainage requires in most cases the preparation of comprehensive schemes which are quite beyond the powers of the low paid officers whom Mofussil Municipalities can alone afford to employ. As a rule the richer ~~those~~ Municipalities, when their ~~whose~~ finances permit of, have shown themselves willing & even anxious to have such schemes prepared for them.* But the Public Wks Dept, to whom they naturally look for assistance, can very rarely spare the services of men for this special duty & when an officer is so deputed his salary ~~cost~~ forms a heavy charge on the Muny. In some cases

*Note Drainage & water supply schemes are at present in progress in four towns; in six more schemes have been prepared but not yet sanctd; in two schemes are under preparation; four towns wish to prepare schemes & have asked for professional assistance for the purpose; and three more have been directed by Govt, ~~to~~ in reviewing the current year's budgets, to prepare schemes

It has been ~~is~~ arranged that the local Executive Engr. of the division shd ~~should~~ work out a water or drainage scheme for a Muny; but, as such an officer generally finds his ordinary duties fully sufficient to employ his whole time, the scheme is necessarily elaborated ~~worked out~~ very slowly & the results are often not satisfactory. It has further to be considered that such work requires special qualifications — not only a knowledge of sanitary Engineering as practised in Europe, but experience of similar ~~the same~~ work in the tropics — & that these are naturally not possessed by the majority of the members of the ordinary Pub. Wks Establishment. In this connection I am to draw attention to the initial paragraphs of a note by the Chief Engr. P.W.D herewith forwarded.

6 Under these circumstances H.E. in C. has come to the conclusion that it is necessary ~~It is proposed~~ to entertain a special Sanitary Engineer who shd be an officer with

adequate experience of Sanitary work both in Europe & the East, & whose duty it would be to act as adviser to Municipalities & Local Boards in all important matters relating to Sanitary Engineering. A Mun.y in want of a water or drainage scheme w.d apply to this officer. He w.d visit the town, work out a plan, & give the Council such general assistance as they ~~might~~ may require towards its execution. In course of time, as the wants of the principal towns were supplied, his services would be available to work out similar schemes for the improvement of local areas.

The Govt. consider that the appt. shd. be a special one, that the Officer sd be attached to the Local & Munl. Deptt. of the Chief Secy's Office & ~~be~~ unconnected with the ordinary P.W. Deptt., & that, considering the important duties & responsibilities of the post, it will not be possible to fill it efficiently on a salary of less than Rs 1000 rising to Rs 1350 by annual increments of 50 rupees. In fact the only competent man available in this Presy. is already drawing a salary of 1000 Rs.

to prepare schemes

7. It is intended that this salary & the cost of the Engineer's office shd be mainly defrayed from Provl. funds. In paras 7 & 8 of the Resolution under reference the G. of I recognise the claims of local bodies to assistance from Govt. in prosecuting important sanitary works, & I am to submit that ~~to~~ such assistance can be afforded in no better form than by the entertainment by Govt. of an officer who should render to Municipalities and Local Boards the services above described. ~~A small~~ Some portion of the Engineer's salary w.d however be defrayed from Local & Municipal funds in the shape of a small percentage contribution which would be levied, on the amount of the estimates, from local bodies for whom comprehensive schemes had been prepared.

8. I am to ask therefore that the speedy sanction of H.G. the

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H.E. in C. may be accorded at an early date of the entertainment of this Govt. of a Sanitary Engineer as above proposed.

9. ~~In regard to~~ The suggestion made in para 6 of the Resolution & in para 5 of your letter of 7th Mar 1888 No. 203 that a "sanitary survey" shd be made of each Mun.y & local area & plans & estimates prepared of the improvements necessary to provide each town or village with an efficient system of water-supply, drainage & conservancy", ~~seems to deserve that this matter has to a certain extent~~ has been already touched on in para 5 above. The appt. of a Sanitary Engineer will to a large extent meet the requirements of the Govt. of India in this direction. The Madras Govt. do not however consider that it wd be advisable at once to set on foot a systematic survey for every Mun.l town & rural tract. At present the Sanitary Commr. & his Deputy visit ~~each~~ every Mun.y

~~added to wh. there is at present the difficulty of providing competent professional advice, wh. it is now sought to remove~~

*. Note In 1886-87 there were 54 mofussil municipalities & their aggregate receipts for the year, exclusive of loans amounted to Rs 15,87,352. The Madras Mun.y is provided with a special Engineer vice Mest. who is an efficient ~~has~~ large sanitary experience & so the remarks made in this letter do not apply to it.

& the more important of the ~~[illegible]~~ Mun.l villages on the average about once in two years, and report to Govt. on their sanitary defects. In ~~most~~ the majority of cases complete water & drainage schemes are found the required, but financial difficulties stand in the way of their being carried out. The average income of a ~~Mofussil~~ District Mun.y within Presidency is some Rs 29,000* & it is clearly impossible for most towns to undertake a scheme which may cost 4 or 5 lakhs without ~~so~~ very large assistance from Govt. H.E. in C considers therefore that the Sanitary Engrs. will best be employed at first in working out schemes for those Municipalities which are able to raise the requisite funds, & that until this is done a "survey" of other towns & rural tracts wd. be a waste of time. The periodical inspection of the San. Commr. will of course continue, & ~~in course~~ as time goes on and as Govt. ~~is~~ are able to ~~provide~~ ~~a grant-in-aid~~ ~~funds~~, or the local finances

stet

become more elastic, "survey" by the Sanitary Engineers may follow

10 The remarks of the Army Sanitary Commrs. published as an appendix to the Govt. of India Resolution were commd. to all Local Boards & municipalities in this Pres. in May 1879,× & the attention of these local bodies has now again been drawn to them. ^ Some simple sanitary rules for observance ~~for~~ at fairs & festivals ~~was~~ were issued by this Govt. in February 1887 G.O. No. ~~a copy~~ 277 L, a copy of which is now forwarded for the information of the Govt. of India

11 As regards the assistance to be given to local bodies from Provl. funds, the Madras Govt. await the further communication promised in para 7 of the Resolution

4 Oct.

5 Oct.

Despd. 2/11. with 2 encls.

× G.O. 26 May 1879 No. 822 Pub.

^ They were supplemented by

Note. I regret the delay there has been in dealing with this matter. The old papers relating to the Sanitary Board had to be looked up, & my time has been occupied with Muncl. & L.F. annual reports.

The delay is much to be regretted, but the draft I think will do [illegible]

1161/1070/2686Z

PS

Reply to Govt. of India
Sanitary Resolution

17TH OCTOBER 1888, No. 1913 L., LOCAL AND MUNICIPAL.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—again the following paper:—

G.O., dated 4th May 1888, Mis. No. 454 M., Local and Municipal.

Read—the following paper:—

G.O., dated 4th April 1888, No. 354, Public.

Read—the following letter from W. M. YOUNG, Esq., Officiating Secretary to the Government of India, Home Department (Sanitary), to the Chief Secretary to the Government of Madras, dated Calcutta, the 7th March 1888, No. 23:—

I am directed to acknowledge the receipt of the Report of the Sanitary Commissioner, Madras, for the year 1886, together with a copy of the orders passed thereon by the Government of Madras forwarded with your endorsement, No. 27, dated 11th January 1888.

2. The results of the registration of vital statistics during 1886 show little progress or improvement over those of previous years. The ratios of births in most of the districts are apparently much understated, though the annual averages for the Presidency as a whole show some progress since the famine years of 1877 and 1878, the ratio for the year under review being 30·4, the highest during the period referred to. In 8 of the 22 districts, the birth-rate was lower than that for 1885; and in the rural circles, the ratio was higher than that of the towns by only a fraction. The average mortality for the Presidency (19·7) and also the ratios of deaths for individual districts during the year would seem to be greatly understated. Of the ratios shown for 20 districts, the figures in 15 instances ranged from only 15·4 to 19·9, while in the 5 districts showing the highest ratios, except Madras itself, the range was only from 22·7 to 25·6. These results are more disappointing than those of the previous year, for whereas in 1885 the minimum, maximum and mean death rates for the Presidency stood at 16·2, 36·4 and 21·8 per 1,000, respectively, the corresponding figures in 1886 were 15·4, 36·1 and 19·7. The proportions in which the chief diseases contributed to the mortality of the year, as compared with 1885, were as follows:

	1886.	1885.
Cholera	0·4	2·0
Small-pox	0·6	1·2
Fevers	7·8	7·7
Bowel-complaints	0·9	1·1
Injuries	0·4	0·4
Other causes	9·3	9·2

There was a substantial decline in the number of deaths from cholera from 58,109 in 1885 to 12,417. In 8 of the 22 districts, there was not a single death from this disease; and in 8 others, the number of deaths ranged from 1 to 35 only. In the remaining 6 districts, the mortality was higher, but it did not exceed 1,000, except in Malabar, Kistna and Godavári, in the latter of which districts it was 7,053. The three districts just named were also conspicuous in 1885 for their high mortality from cholera.

The deaths from small-pox were fewer in number than in the previous year, but still, excepting in the town of Madras and the Nílgiri hills, its victims in most of the districts were numbered by hundreds, and in some even by thousands. The period during which it prevailed with great intensity was February to April. In October and November, the deaths were comparatively few.

Deaths from fever were more numerous in 1886 than in any of the previous six years. Not a single circle in the Presidency was free from it, and above 5·8 per cent. of the villages recorded deaths. Examined by districts, it appears that fevers were very widely spread in Kurnool, Nílgiris and Malabar, where either all, or almost all, the villages returned deaths from this cause.

Bowel-complaints were less prevalent than in the preceding year; but as usual the highest proportion of mortality from them was returned by the town of Madras and the district of Chingleput.

3. The results of vaccination during 1886, as compared with several previous years, were very unsatisfactory. Although the average number of vaccinators employed rose from 721 in 1885 to 751 in 1886, the number of operations fell from 742,863 to 692,960 and the average number vaccinated by each man decreased from 1,007 to 904. Of the above total, 680,458 were primary operations with 644,801 successful cases, and 12,502 were re-vaccinations attended with success in 8,143 instances. The percentages of success in primary vaccinations and re-vaccinations were almost the same as in the preceding year, being, respectively, 94·7 and 65·1 against 94·7 and 58·3 in 1885. In dispensary operations likewise there was a great falling off in numbers. From 23,616 in 1885 they fell to 17,243 in 1886, and the total number of successful operations declined from 18,793 and 397 in primary and secondary cases, respectively, to 13,954 and 227. The proportion of population protected by vaccination during 1886 also fell to 21·1 per mille from 22·3 in 1885. The reasons assigned for this diminution of vaccination work during the year under review by the various establishments do not appear to be very satisfactory. Both the vaccinators and the supervising agency ought to have worked more energetically to secure better results. In the Presidency as a whole, excluding Madras town, only 53·7 per cent. of the operations were verified by the inspecting authorities. Animal vaccination was carried on in 9 circles besides the town of Madras, and vaccination was compulsory in the towns of Rajahmundry, Anantapur, Palamcottah, Ellore, Negapatam, Tinnevelly, Cuddapah, Nellore, Máyavaram and Adóni.

The opinion of the Madras Government that the proportion of successful cases in vaccination is a redeeming feature in this year's work (paragraph 11) is evidently founded on the table given at page 29 of the report, which excludes cantonments. When the full tables of the appendix are examined, there appears to be only a slight improvement in the work of the vaccinators and a great falling off in dispensary operations. The Governor-General in Council regrets to have to record the opinion that the vaccination work of the year must be regarded as unsatisfactory.

4. Neither in the Municipalities nor in the districts outside municipal limits were sanitary works of any importance undertaken or executed during 1886; but various improvements of a minor character were carried out, such as sinking of new tanks and wells or improving the existing ones, constructing and repairing latrines, drains, dust-bins, markets, slaughter-houses, &c., and improving town and village sites. It is unsatisfactory to observe that the amounts allotted for sanitary improvements were not fully utilised. In the Municipalities during 1885-86, of the sanctioned amount of Rs. 5,98,220, only Rs. 5,58,278 were spent, and in 1886-87, out of the sanctioned amount of Rs. 6,48,473, only Rs. 3,76,925 were expended in nine months up to end of December 1886. Again in the Local Fund Circles during 1885-86, out of Rs. 3,98,041 sanctioned for sanitary improvements, only Rs. 2,89,922 were spent, and in 1886-87, out of Rs. 3,64,601, only Rs. 1,80,434 were expended up to end of December 1886. This apparent apathy or indifference on the part of the Municipal Committees and Local Fund Boards in utilising to the fullest extent all available means for removing the insanitary condition of cities and villages is greatly to be regretted.

5. In this connection I am to invite attention to the remarks conveyed in Home Department letter, No. 123, dated the 24th September 1887, as to the importance the Government of India attaches to improvements in the sanitary surroundings of the rural population of Madras. In regard to the general question of sanitation in Municipalities, it appears to the Governor-General in Council that the time has come for the prosecution of sanitary measures on a more systematic plan than has hitherto been adopted as a rule; and I am accordingly to suggest that a sanitary survey of each Municipality should be, with as little delay as possible, undertaken by the Sanitary Commissioner and by the local Engineering authorities, and that plans and estimates may be prepared of all the improvements necessary to provide each town with an efficient system of drainage, water-supply and conservancy. The plans so fixed upon should be executed from year to year as funds become available, the object aimed at being persistently kept in view until it is attained. The Government of India will be glad to learn from each year's report the progress made in the execution of the policy thus recommended for adoption.

No. .

Copy forwarded to the Sanitary Commissioner with the Government of India for information.

(Signed) J. P. HEWETT,
Under Secretary to the Govt. of India.

Order—dated 4th April 1888, No. 354, Public.

Communicated to the Sanitary Commissioner, whose attention is drawn to the remark made at the close of the last clause of paragraph 3.

2. The suggestion made by the Government of India in paragraph 5 will be considered in the Local and Municipal Department.

(True Extract.)

H. E. STOKES,
Chief Secretary.

To the Local and Municipal Department.
„ Surgeon-General with the Government of Madras.
„ Sanitary Commissioner for Madras.

Order—dated 4th May 1888, Mis. No. 454 M., Local and Municipal.

Paragraph 5 of the letter from the Government of India will be referred to the Public Works Department and the Sanitary Commissioner for early remarks.

(True Extract.)

(Signed) H. E. STOKES,
Chief Secretary.

To the Public Works Department.
„ Sanitary Commissioner for Madras.

Read—also the following papers:—

Note by the Chief Engineer, Public Works Department.

How Municipalities who are not rich enough to pay for the services of an Engineer are to have plans and estimates prepared of all the improvements necessary to provide their towns with an efficient system of drainage, water-supply, and conservancy, I cannot see. The Officiating Secretary to the Government of India seems to think that the local Engineering authorities can arrange it all, but it is certain that neither the Public Works Department nor the Local Fund Engineers can undertake the work required.

2. The preparation of a scheme for drainage and water-supply for even the smallest of the Municipalities requires the employment of an experienced and competent officer for several months, and the work cannot be done by a subordinate under the supervision of an officer who has an extensive charge and whose duties require him to be away for weeks at a time. Whenever it has been possible, officers of this department helped Municipalities to work out such schemes, but, as a rule, officers have not time to devote to such work, and all officers are not qualified for work of this special character.

3. The general question of sanitation is now attracting attention, and it seems desirable that some definite arrangements should be made for the purpose of dealing scientifically with it. It is not merely a question of money, because even if a Municipality can find the funds to pay for a sanitary survey and the preparation of drainage and water-supply schemes, qualified Engineers are not available for the work, the open market does not at present provide such men, and neither the Government nor the Local Fund Boards who have some officers qualified for the work can spare their services.

4. The Government provide a Sanitary Commissioner, who, being a medical officer, can only bring to notice the necessity for sanitation in the towns he visits, and point out in what direction reform is necessary. He can ascertain that the water-supply is bad and the drainage defective, but he cannot, beyond giving an opinion on the quality of the water supplied, judge of any scheme for water-supply or drainage; when, therefore, the Sanitary Commissioner brings to notice that the circumstances of some towns are exceptionally bad, the Government are driven to find an officer to prepare a scheme for improvement, which they submit to their professional advisers, who, with a very imperfect acquaintance with the locality, if any, decide whether it is suitable.

5. To the Government therefore, whether they come with money in their hands or not, the Municipalities must look for men, and it seems to me that the best step the Government could take would be the appointment of a Sanitary Engineer, who might, if desired, with the existing Sanitary Commissioner form a "Sanitary Board." This officer would be selected for his previous study of such subjects as water-supply of towns and drainage, and would devote his whole time to this branch of engineering. Under his direction, surveyors might be employed by Municipalities (who would, of course, have to provide for their pay), who would commence the work of sanitary survey, and under his immediate supervision, schemes of water-supply and drainage could be undertaken by Municipalities who could afford to pay the staff necessary to make the surveys, plans, &c. He could not, of course, start schemes all over the country at once, but would have to work in one town for perhaps two or three months, and then go on to another, meanwhile absenting himself only for a few days at a time to attend meetings of his Board and to give his attention to general questions. The schemes when worked out could be submitted for the approval of Government in the Public Works Department before being dealt with in the Local and Municipal (Financial) Department.

6. When a Municipality could afford to pay for the services of an Engineer to prepare a scheme for water-supply and drainage, and could secure the services of a competent man, he should work in communication with the Sanitary Engineer, through whom the scheme should be submitted to Government.

7. So many applications for help in preparation of such schemes are now coming in from all parts of the Presidency, that something should be done to give assistance to the local bodies who are showing such signs of vitality, and as there is valid objection to Government giving grants-in-aid to Municipalities, the best means of affording help seems to be the appointment of an officer who could, while securing the scientific treatment of sanitary improvements generally, save the Municipalities the expense which the employment of an officer of such standing and experience as is necessary to work out their schemes must entail.

No. 198-D.

Transferred to the Local and Municipal Department.

OOTACAMUND,
19th May 1888.

(Signed) J. O. HASTED, Col., R.E.,
Secretary to Government, P.W.D.

To the Local and Municipal Department.

From Surgeon-Major J. A. LAING, Officiating Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Madras, 4th June 1888, No. 849.

With reference to G.O., Mis. No. 454 M., dated 4th May, Local and Municipal, referring for my remarks paragraph 5 of letter, No. 83, dated 7th March 1888, from the Government of India, I have the honor to state that after many years of close and practical acquaintance with all the Municipalities in this Presidency, I am entirely in accord with His Excellency the Governor-General in Council that the time has now come for the prosecution of sanitary measures on a more systematic plan than has hitherto been the rule.

On the 26th March 1887 (*vide* my letter, No. 320, dated 26th March 1887), I addressed Government requesting that a ruling might be laid down whereby works of a sanitary nature should be carried out with some system and method, as the great want was a more systematic direction of works, which will be a permanent good. I have urged upon Municipal Councils the necessity of proceeding systematically with regard to sanitary works, and not in a haphazard and piecemeal style, as has too frequently been the case. All plans of sanitary works estimated to cost Rs. 200 and upwards are now submitted to the Sanitary Commissioner through the District Medical and Sanitary Officer (*vide* G.O., No. 966 L., Local and Municipal, dated 30th May 1887), and I am glad to say many Municipalities have decided that, before incurring any further expenditure on sanitary works (drainage and water-supply) which have not hitherto been constructed on any regular and connected system, to have plans and estimates first prepared and approved, and then to execute the works in portions from time to time as funds become available. To aid Municipalities in the preparation of designs for these schemes a difficulty has been experienced, owing to the Public Works Department being too short-handed to undertake the work in addition to its own. The Trichinopoly Municipal Council, finding this difficulty, advertised for a Sanitary Engineer to draw up drainage and water-supply schemes. In Madura, Salem, Negapatam and Tanjore, water-supply schemes are under preparation, and in Negapatam and Kumbakónam drainage schemes.

Extract from Proceedings of the Government of India, in the Home Department (Sanitary), dated Simla, 27th July 1888, No. 3—212-225.

ORDER—dated 17th October 1888, No. 1913 L., Local and Municipal.

The Government of India will be addressed.

2. The attention of all Local Boards and Municipalities will be again drawn to the remarks of the Army Sanitary Commission reprinted at the close of the Government of India's resolution, which were communicated to them in G.O., 26th May 1879, No. 822, Public.

3. The question of affording aid to Local Boards and Municipalities from Provincial funds, by loans or otherwise, for the prosecution of permanent sanitary improvements, will be considered in the Financial Department on the receipt of the further communication promised in paragraph 7 of the Government of India's resolution.

(True Extract.)

J. F. PRICE,
Ag. Chief Secretary.

To the Financial Department, } with copy of the Government of India's resolution.
" the Public Department, }
" all Presidents of District Boards.
" all Chairmen of Municipalities.

Exd. A. Raitt.

Govt. of {1888} Madras.

LOCAL AND MUNICIPAL.

Issued

Recd. *Encl.*

G.O., 17th October 1888, No. 1913 L.

OCTOBER.

Sanitation.

Ordering that the Government of India be addressed with reference to their resolution in regard to the establishment of Sanitary Boards, and stating that the question of affording aid to Local Boards and Municipalities from Provincial Funds for the prosecution of permanent sanitary improvements will be considered on receipt of the further communication referred to in the Financial Department.