(1) பக்கங்களின் எண்ணிக்கை 38

(2) புதுக்கித் திருப்பிய நாள் ஆகஸ்ட் 1989

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

# தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

பொதுப்பணித் துறை

அரசாணை எண். 1193 W

மு. கோப்புத் தாள் எண்.

அச்சகம்
பலவகை

நாள் : 22-4-1890

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

ஆவண கா-1—18,006—15-6-87.

1/1193

1st July 1889, No. 812 M., Local and Municipal.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

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Read—the following paper :—

From Surgeon-Major J. A. LAING, Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Ootacamund, 20th April 1889, No. O-4.

In forwarding the enclosed papers and maps regarding the Kandal drainage scheme, I have the honor to state that I have gone over the scheme with Mr. Nery, the Engineer who prepared it, and am of opinion that from a sanitary point of view, it will answer the purpose for which it is intended. No use is to be made of the sewage, and as this is, I think, an unnecessary waste of very valuable manure material, I would recommend that arrangements be made to utilize the sewage for irrigating and manuring purposes.

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Enclosures.

From L. R. BURROWS, Esq., Chairman, Municipal Council, Ootacamund, to the Chief Secretary to Government (through the Sanitary Commissioner for Madras and Collector of Nilgiris), dated Ootacamund, 6th December 1888, No. 925.

I have the honor to forward, for the information of Government, the marginally-noted plans, estimates and specification relating to the drainage of the village of Kandal, in the Ootacamund Municipality.

No. 1. Compiled abstract of Ootacamund Kandal Drainage Scheme—Rs. 40,500.
" 2. Detailed estimate for Section I and II, Main Sewer.
" 3. Report on Ootacamund Kandal Drainage Scheme.
" 4. Plan.
" 5. Copy of Resolution of the Ootacamund Municipal Council.

2. The estimated cost of the work is Rs. 40,500.

3. This village is a large and growing one, and is in great need of a system of drainage.

4. The papers referred to furnish every detail and information on the subject,

5. The funds of the Ootacamund Municipal Council will not permit of so large a work being undertaken, and in forwarding a resolution of Council thereon, I have the honor to solicit that Government will undertake the work, or make a special grant of Rs. 40,500 to the Municipal Council for this purpose.

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From L. R. BURROWS, Esq., Collector of Nilgiris, to the Chief Secretary to Government (through the Sanitary Commissioner for Madras), dated Ootacamund, 15th February 1889, No. 308-Genl.

I have the honor to submit, for the favorable consideration and orders of Government, a letter from the Chairman of the Municipal Council, Ootacamund, No. 925, dated 6th December 1888, with estimates, plans and specifications for the drainage of the Kandal town, within the Municipality.

2. In paragraph 23 of G.O., dated 1st February 1882, No. 286 W., Public Works Department, the drainage of Kandal was considered to be urgent and important, and in paragraph 25, a grant from the Provincial and Imperial funds was promised towards the above and other works.

Order—dated 1st July 1889, No. 812 M., Local and Municipal.

The plans and estimates for the drainage of Kandal submitted with the letter read above will be forwarded to the Public Works Department for scrutiny.

2. The Council's request for a grant from Provincial funds to carry out the scheme is inadmissible. The Government has already spent upwards of fo[illegible] on improvements, chiefly in regard to drainage and water-supply to the t[illegible] Ootacamund, and the Council must carry out the present project and the water-supply scheme for the south side of the town from their own re[illegible] The Government will, however, be prepared to make them a loan of the ne[illegible] funds, on their showing how they propose to raise the money required to repay it in 30 years with interest at 4½ per cent. The most obvious means of increasing their revenue are the imposition of a water-tax and the increase of the tax on buildings and lands as recommended by the committee whose report is recorded in G.O., dated 16th June 1882, No. 4854, Financial. As the Municipal Act at present stands, the highest rate at which the latter tax can be levied is 7½ per cent., but the Government will be prepared to legislate in order to increase this maximum.

3. The water-supply to the north side of the town is now complete, and its future maintenance must devolve on the Council. The Public Works Department will report what the approximate cost of such maintenance will amount to.

(True Extract.) [illegible]

*Chief Secretary.*

To the Chairman, Municipal Council, Ootac[illegible]
thro[illegible]
Public Works Department, w[illegible]
Financial Department.
Sanitary Comm[illegible]

Exd. A. Raitt.

Govt. of {1889} Madras.

LOCAL AND MUNICIPAL.

Issued

Recd. 10.7.89 Encl. 1/2

G.O., 1st July 1889, No. 812 M.

JULY.

Drainage Scheme.

Ordering, with remarks, that the plans and estimates for the drainage of Kandal be forwarded to the Public Works Department for scrutiny.

Note by E. B.

The general scheme for the drainage of the village of Kandal is fairly satisfactory.

The estimate works out to 100 rupees an acre and to 15 rupees per head of population. The respective areas of the two main Sub Divisions are about equal, but the area in Sub D. No 2 requiring dwellings is about one half the area so occupied in Sub D. No 1.

The cost per acre of draining Sub D. No 1 and then the area are compared works out in the proportion of 1.4 : 1. If the cost of the main sewer and the greater expense of the dwelling houses in Sub D. No 2 be further taken in account, the cost of draining the Sub D. would work out to nearly 1.6 : 1.

No ground levels are shown on the Survey plans, but if these allow, a great saving could be effected by carrying the drainage of that portion of Sub D. No 2 lying west of No 8 [illegible] this longing out of the scheme it is proposed

by a sewer down by the Jewish
of No. 8 Lane into the Main
Road, and discharging the
which empties down the
line of natural drainage
that meets the Kandal
Oya Stream opposite the
point. If the Shibbers
are emptied at the point
of stream above the
outlet of the main sewer
this arrangement could
be unobjectionable on
sanitary grounds, as the
area below this point is
at present uninhabited.
By this means about
2/5 ths of the length, of
and one half of the cost of
the main sewer would be
saved -

The form of the open drain
which is semi-circular is ob-
jectionable. The oval form
proposed by Thompson Hagie
C.E. King in his scheme for
the drainage of the town of
Kandal is far preferable,
as it ensures an equable
velocity for varied quantities
of drainage when flowing down
the drains -

In connection with this sub-
ject of town drainage, I would
suggest that the scheme and report
for the drainage of Kandal
should be printed, & circulated to
all municipalities for info- & Cmde
M. S. 8th August.

Public Works Department.

4/1193

Current No. 6519

Letter No. 612 M.

Dated 1st July 1919

From the Chief Municipal Engr.

NOTE OF REMARKS.

The estimate under
review amounting to
Rs 40,500 provides for the
Kandal Drainage Scheme
as proposed.

The estimate is divided
as follows -

Section I — Rs 15,000
— Do — II — " 12,500
Main Sewer " 13,000

Total Rs 40,500

The town of Kandal
is stated to be divided
within the municipal
limits of the Municipality
it contains 530 houses
and 2650 inhabitants.
This appears to be in
no way fully considered
and made use of
proper drainage -

In order to explain
this bringing out of the
scheme as proposed

to divide the town into two main sections, each section into two divisions and each division into two communicating districts so that each sub division will embrace the drainage area of each district people of towns and villages will be discharging at one point into the roadside open sewers or into the sub soil pipe sewer according to circumstances -

The proposed arrangements as detailed, with plans of the project being carried out by sub divisions if required -

The general design of the scheme is stated to be the analogous with that of the main Bray Drainage Scheme only that the details of construction vary -

The impact mains are to be uniform and will be of the best wrought steel Northern Britt ends. Channels, and sub soil main sewers are to be of vitrified sub pipes of the same nature as the open drains -

The values required for purposes being fixed to the town ends of pipes



(1) On account of the being non-absorbent and offering the least possible amount of friction -

(2) On account of the being imperishable & indestructible under ordinary chemical actions or outward forces except under very extraordinary circumstances -

(3) On account of the being comparatively inexpensive -

(4) On account of affording greater facilities in laying -

The fall of the main sewer (pipe) from A to D. is shown on the Long: Section to be 1/1 in 100 for a distance of (440+220+310) = 970 ft and from D to G the fall is given as 0·60 in 100 for a distance of (570+860+1146) = 2576 feet -

The aggregate length of main pipe is therefore 3546 ft and the total fall is about 26 feet or an average of 7·4 in 1000

The diameter of the main sewer pipes, and the velocity & discharge

through them are given as follows:-

440' of 5" pipe { v = 3·76 ft per sec: D = 0·76 cft per sec: = 4·62 gallons

530' of 7" do { v = 4·09 ft per sec: D = 1·08 cft per sec: = 6·80 gallons

570' of 8" do { v = 3·33 ft per sec: D = 1·16 cft per sec: = 7·24 gallons

860' of 9" do { v = 3·58 ft per sec: D = 1·55 cft per sec: = 9·77 gallons

1146' of 10" do { v = 3·76 ft per sec: D = 2·05 cft per sec: = 12·80 gallons

The results have been obtained by Unwin's formula

$$v = 140\sqrt{rs} - 11\sqrt[3]{rs}$$

given on page 183 of Mahomed's pocket book, & the fall of inclination has been taken as 1/10 for the 1st half for the times 970 and as 6/10 for the 2nd half for a distance of 2,575 feet. The velocity and discharge have been taken from the tables given on pages 185 & 186 under the inclination most nearly about -

Catch drains are provided to cut off storm water from the Quarry pipes.

Tab.

6/1193

The diameters of the pipes to be used were 3", 4", 6", 8" & 10" & 12" pipe as shown on drawing Sheet No 3 but it is not known to how it is to be used, the same drawing shows 7" pipes of carpet drains, it may be well to reduce the sizes of the pipes and drains to a few sizes that could be easily supplied -

The mains cannot be checked -

The plans and details have not been sanctioned by the Municipality of the Municipality have by the Engineer and Circle -

The Local Municipal Deputy has forwarded the plans direct to the Deputy for Scrutiny

E.M.J.
5/8/89

1195

The cost therefore of draining Sub Division No 1&2 when these areas are compared works out in the proportion of 1.4 : 1. If the cost of extra length of the main sewer ~~carried~~ found necessary from by the greater spread of the dwelling houses in Sub Division No 2 be further taken on account, the comparative cost of draining the Sub Divisions paid work out to nearly 1.6 : 1.

No ground levels are shewn on the survey plan, but if these were after added, a great saving could be effected by carrying the drainage of that portion of Sub Division No 2 lying west of No 8 lane by a sewer down to the junction of No 8 lane with the main road, and discharging the whole system down the line of natural drainage that meets the Kandal main stream opposite this point. If the flushes are confined to the portion of stream above this outlet of the main sewer the arrangement would be unobjectionable on sanitary grounds, as the area below this point is but sparsely inhabited.

By this means about 2/5 ths of the length, and

prin late
to all Municipalities
for information and
guidance.—

Rueston
16.8.95

[illegible]

[illegible] Surge [illegible]

drain [illegible] of
Mundel preferable,
as it ensures an equable
velocity for [illegible] ed
quantities of water flowing
down the drains.

In connection with
this subject of [illegible] ew
drainage, [illegible] d
suggest that the scheme
report for the drainage
of Mundel should be

10/1193

PUBLIC WORKS DEPARTMENT.

# PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the Letter

from the L & M Deptt. No. 812 dy 1st July 1859

by the Chief Engineer
Buildings & the Branches } No. — dy 16th August 1859.

Noted by the Chief Engineer Buildings and Roads Branches will be communicated to the Local & Municipal Department.

The Supg Engineer IV Circle will report on para 3 of the Proceedings in the Local and Municipal Department.

16.8.59

L & M department with note

Supdt. Engr.

Local and Municipal Department.

11/1193

CHIEF SECRETARIAT MADRAS.

# PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following paper :—

G.O. Public Works department dated 17th August 1889 No 709 D, communicating with remarks noted by the chief Engineer Buildings and Roads Branches on the Potacammund Kandal drainage scheme.

---

Order thereon d/ 12th September 1889 No 1163 M. Mu

Communicated to the Municipal Council, Potacammund.

2. The drainage scheme for Kandal prepared by the Municipal Engineer is approved, subject to the chief Engineers remarks. The chairman will report what action the council now propose to take for carrying it out.

To
The Chairman Mbcl: Potacammund
Do to the Collr of Nilgiris (with plans & estimate)
P. W. Department.
Sanitary Commr
GPS

(True extract)
Keer Bandale Capt R.E.
Under Secy. G. W. D.
For Chief Secretary

No 709 Dated 17th augt 1889

P.W. 1877.3

[6]

Govt. of (1887) Madras.
Local & Municipal Dept.

To

The P.W. Depart.

No. 2700 Way Sept 16 1889

Recorded
Recorded

W.W.S
14.9.89

Answ
25.9.89

Proceedings, dated 12th Sept 1889.
No. 1163 Municipal

Subject.

Approving the
Cotacammund Kundal
drainage Scheme

Municipal office,
Cotacammund, 26th Feby 1890.

To,

The Executive Engineer,
Nilgiris.

The undersigned has the honor to forward the following Extract from the minutes of the meeting of the Cotacammund Municipal Council held on 21st February 1890 for your information.

(Sd) C.W.T. Jennings,
Secretary, C.M.C.

Extract

× × × ×

XVIII. Read letter from the Executive Engineer, dated 17th January 1890 enclosing an estimate of Rs 784 being the cost of the upkeep of the Cotacammund Water Supply piping with all the correspondence relating thereto.

The Executive Engineer will be informed that the Council

is

is quite prepared to take over the upkeep of the South water supply system from 1st April 1890.

× × × ×.

---

No. 4233.

Forwarded to the Supg. Engineer, 4th circle, with reference to his letter No. 672 N.S. of the 19th December last.

(Sd) Ross Thompson, Col. R.E.,
Executive Engineer.

---

(True Copy).

J. McN. Campbell Major, R.E.,
Supg. Engineer, 4th Circle.

14/1193

No. 107
C.V.

Supg. Engineer's office, 4th Circle,
Coimbatore, 14th March 1890.

From,

Major D. McNeil Campbell R.E.,
Supg. Engineer, 4th Circle,

To,

The Chief Engineer,
P.W. Department.

Sir,

Adverting to para 2 of G.O. No. 709 D of 17th August 1889, I have the honor to state that the approximate cost of maintaining the completed portion of water supply scheme to the north side of the town (Ootacamund) is Rs 984 per annum and that the Municipal Council is prepared to undertake the same from 1st April 1890. Vide Extract from the minutes of the meeting held on the 21st ultimo, Copy herewith.

Enclos.

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

J. McN. Campbell Major R.E.
Supg. Engineer, 4th Circle

P.W.C No. 2681

From

The Supg. Engr
4th Circle

No. 926 W dy 21-3-90

Communicated to the Local and Municipal Dept in the reference to para 3 of Proc: in that Dept No. 812 m dated 1st July 1889.

2. The Resolution of the Municipal Council mentions the water supply of the south side of Ootacamund, which has not yet been put in hand, while the Cost of maintenance given by the Supdg. Engineer refers to the completed project on the north side.

MCR
17.3.90

Asst
17.3.90

To.

The Local & Munl Dept

No. 2700 W dy 26-9-89
" 709 D - 17-8-89
" 384 W - 11-2-89
" 405 C - 28-1-89
" 3512 W - 5-11-88
" 1545 W/A - 18-6-86

Dated 14
Recd 14 } March 1890.
Rd 15-3-90

No 107
E.W.
No. 926 W dy 21-3-90

Encls. 1.

Ootacamund Water Supply System

Informing that the Municipal Council is prepared to undertake the completed portion of — to the north side of the town at Rs 982 per annum.

Supg. Engrs office 4th Circle
Coimbatore 26th March 1890

No. 127
E.W.

16/1193

From

Major D. MacNeil Campbell R.E.
Superintending Engineer
4th Circle

To

The Chief Engineer
P.W.D.
Madras

Sir,

Adverting to para 2 of G.O. No. 926 W of 21st instant I have the honor to point out that the word "South" in the Resolution of the Ootacamund Municipal Council is certainly a clerical mistake. The previous papers refer solely to the North side water works.

2. The preparation of an estimate for water scheme on the South side of Ootacamund is not yet put in hand nor was there any reference to the Municipality on this portion of the scheme

scheme.

I have the honor to be
Sir
Your most obed.t Serv.t

J. de Rumbelli Major R.E
Superintending Engineer
4th Circle

No. 926 W dy 21-3-9
" 2700 W " 26-9-8
" 709 D " 17-8-89
" 384 W " 11-2-89
" 405 C " 28-1-89
" 3512 W " 5-11-88

17/1193

From

The Supg. Engr.
4th Circle

No 1020 W 4/510 dated 1890

Recorded

Dated 26th } March 1890
Recd 26th }

No 127
E.W.

Cotacamund Water supply system.

Pointing out that the word "Godde" in the Resolution of the Cotacamund Municipal Council is certainly a clerical mistake & the steps have been taken for the Godde side

To Mun & Loc. Depr
for information.

[ 25 ]

Local and Municipal Department.

18/1193

CHIEF SECRETARIAT. MADRAS.

# PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following paper :—

Proceedings of Government Public Works Department dated 21st March 1890 No. 926 W. regarding the upkeep of the Cotacamund water Supply.

Order thereon dated 2nd April 1890 No. 568 M. Mis

Communicated to the Municipal Council Cotacamund.

(True Extract)

Capt R. E.
Under Secretary P. W. D.
for Chief Secretary

To

The Chairman Municipal Council Cotacamund
through the Collector of Nilgiris.
Public Works Department.

P.W.C. No. 3639.

# Govt. of 1890 Madras.

Local and Municipal Department.

Rd 15-4-90

To

The Public Works Dept

Proceedings, dated 2nd April 1890.
No. 568 Mc. Mis

Subject.

Communicating to the Municipal Council extracts received G.O. P.W.D. regarding the upkeep of the Cotacamund water supply.

50 Bng 10 row 8 31.3.90
926 w 8 21.3.90
2700 w 8 26.9.89
709 8 3 17.8.89
3 Dyn 8 11.2.89
Municy 485 c 8 28.1.89
Pr. A.cc 3572 w 8 5.11.88
15 45 w 8 14.6.88
A

No 1193 dt 22nd April 90

Recorded
Recorded

Wms 16.4.90
Rec'd 19.4.90

J 3/5