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MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

G.O. No. 224 (W) Press
Mis.

Dated 12-6-1877.

Not to be folded or roughly handled

10

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

12th June 1877, No. 224 W.

Buildings and Roads.
Civil Works.

Read the following papers:—

No. 94. Endorsement of the Officiating Chief Secretary to Government, dated Fort St. George, 24th April 1877, No. 911.

From L. R. BURROWS, Esq., Acting President of the Municipal Commission, Madras, to the Officiating Chief Secretary to Government, dated Madras, 19th April 1877, No. 98.

I HAVE the honor to enclose, for the consideration of His Grace the Governor in Council, a correspondence between the Executive Engineer of this Municipality and the Executive Engineer in charge of the Junction Canal on the subject of conveying the drainage of the Triplicane and Kistnampett sewers across the canal. The Municipality, with the view of obviating the nuisance formerly caused by the sewage stagnating near the South Beach Road, have opened farms at Triplicane and Kistnampett and utilise the whole of the sewage in growing grass. These farms have not only completely cured the nuisance and thus answered the purpose for which they were intended, but have proved remunerative to the Municipality in a pecuniary sense.

2. The Junction Canal crosses both of them, and takes up almost the whole of the Triplicane farm, which is of comparatively small extent. The effect will be that the Triplicane farm will be entirely ruined and must be abandoned, and the Kistnampett farm will be rendered not only incapable of taking the sewage which it now receives, but of accommodating the increased quantity which would naturally result from improved drainage and extended water-supply.

3. Captain Clark states that, as the cost of carrying the sewage of the Triplicane nullah to Kistnampett will be large, it is a question whether it is worth the expense, and he states that it is intended to carry the surface drainage underneath the canal by means of an iron syphon. As nothing is said specially regarding the disposal of the sewage, I presume that it is intended to carry the sewage also across in this manner. It is not said what is to become of it when it has been carried across the canal, but, as it cannot be utilized, it must be intended that it should drain off into the sea. The natural consequence will be that sewage will stagnate near the South Beach Road, and the old nuisance, which has only recently been entirely cured, will be reproduced in an aggravated form. The only possible means of avoiding this evil appears to be to convey the sewage by a pipe or a sewer to the Kistnampett nullah and utilize it there on sewage farming, for which purpose additional land will have to be provided.

4. I have to request that Government will be pleased to take into their serious consideration the matters noted by the Municipal Executive Engineer in paragraph 14 of his letter, and that they will pass such orders in this case that the loss and inconvenience which appear to be threatened by the execution of the Canal Works may be averted from the Municipality and the public.

Antony Smith
Secy to Govt

From J. A. JONES, Esq., Executive Engineer, Municipal Commission, Madras, to Captain W. CLARKE, R.E., Executive Engineer, Junction Canal, dated Madras, 11th April 1877, E. No. 56.

With reference to our meeting the other day and my proposals regarding the two sewage farms at Triplicane and Kistnampett, I wish to forward the following remarks for your consideration.

2. The proposed Junction Canal passes through both farms, and, if no provision be made, intercepts the supply of sewage from both farms.

3. The farm at Triplicane is the smaller of the two, and the canal is proposed to run nearly through the centres of it; this form is thus cut up in such a way that it would be better if it could be abandoned if other provision can be made for disposing of the sewage.

4. The sewage which is now led on to the Triplicane farm formerly found its way into the sea by the nullah which runs east and west through the farm, and this nullah was and is also one of the main outlets for surface drainage for the division lying west of the farm.

5. I presume it is not proposed that surface water be taken across the canal, but that the canal will intercept and receive all such drainage caused by rainfall only.

6. With such facts in view, I proposed that the sewage now passing into Triplicane farm should be led on to the Kistnampett farm, and that, as compensation for the loss of land in Kistnampett and Triplicane, we should be given that ground between Kistnampett farm and Edward Elliott's Road between the proposed Canal and the Capper Hotel ground.

7. If the sewage be not carried from Triplicane, an extra syphon or syphons, or other means of carrying the sewage across the canal, would be required.

8. At the time I saw you you were under the impression that an open channel could be cut for the sewage to flow from one farm to the other, but I fear that the depth and amount of cutting required to do this would be against its construction. The level (datum 20 feet below mean sea level) of the drain leading into Triplicane farm is 22.67, and the level of the drain leading into Kistnampett farm at the place where it crosses the road is 19.92, while the ground between rises to a height of 36.00. The cutting required at deepest point would therefore certainly exceed 16 feet.

9. The drain which carries the sewage into Triplicane farm is of the dimension and form and at a point below where it receives any sewage from any drains leading into it.



10. It has a fall of about 1 in 212; I do not suppose that it is even more than two-thirds fall at a maximum and this in wet weather (the drain will receive some surface water in wet weather).

11. When two-thirds fall, it will have a velocity of 472 feet per minute and will carry off a volume of water equal to 6,136 cubic feet per minute. This volume of water would require to be disposed of as it would be of no advantage, but rather otherwise, to convey this amount to the Kistnampett farm, and sewage so diluted, as this would be, should be let off into the canal.

12. I would propose, therefore, that a 9" or 12" pipe be laid from Triplicane farm to Kistnampett farm with a fall of say about 10 feet per mile. The distance between the two farms is 3,000 feet; this would give 5.7 feet fall, or the level of the pipe at the Kistnampett would be 17.00.

13. At Kistnampett farm two wells could be formed—one to receive the sewage on the east and the other from which to raise the sewage on the west. These two wells could be connected by a pipe as per sketch at end of this note. I recommend this instead of a syphon as I am afraid there would be a difficulty about keeping it clean.

14. There would be an extra lift of about 3 feet caused by the sewage passing under the canal, and the lifting this height of about 150,000 gallons a day (as near as I can calculate) would be entailed on the Municipality as a permanent charge by the formation of the Junction

Canal. This, expressed in money, represents not less than Rupees 2-8-0 per day, a charge which, if capitalized at 5 per cent., represents Rupees 18,000.

15. Theoretically it may be said that the sewage will find its own level again on the east side of the canal and that there will be no extra lift, but in practice it will be found necessary to keep the sewage in the well east of the canal at a lower level than the outfall of the drains into the well on the west side; otherwise there will be stagnation of sewage in the drains and pipes.

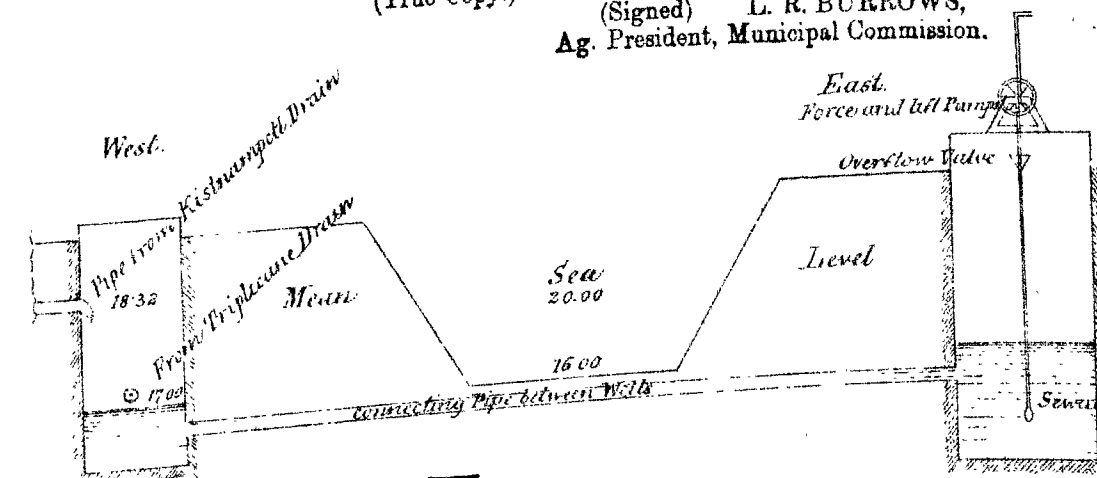
16. I, therefore, suggest that, to relieve the Municipality of this great loss and expense and inconvenience, proper and sufficient pumps should be provided over the east well sufficient to raise easily 150,000 gallons per day.

17. I trust you will be good enough to give these observations your best consideration and, if possible, bear out my suggestions, so that the Municipality may not suffer from the operations of the Junction Canal.

Note.—The drain supplying Kistnampett farm has in wet weather during the monsoon an area equal to $6 \times 7 \frac{1}{2} = 45$ square feet. I do not know what the velocity is.

(True Copy.)

(Signed) L. R. BURROWS,
Ag. President, Municipal Commission.



From Captain W. CLARK, R.E., Executive Engineer, Junction Canal Works, to the Executive Engineer, Municipal Commission, Madras, dated Madras, 18th April 1877, No. 90.

With reference to your E. No. 56 of the 11th instant, I have the honor to make the following remarks:—

It is intended to construct a syphon (iron pipe) at or near the Triplicane sewage farm channel to convey the surface drainage underneath the new canal, and, as there would appear to be a heavy flow towards the sea during the rainy season, a 36" or 48" diameter pipe will in all probability be laid down. I observe that the President, Municipal Commission, proposes abandoning the said sewage farm, which, as you remark, will be almost entirely swallowed up by the canal and its spoil banks.

I quite agree with you that under such circumstances it would be advantageous to convey the sewage by an egg-shaped sewer or iron pipe to the Kistnampett drain, but the question naturally arises who or which department is to undertake the work; the construction of a brick sewer would probably be more economical than the laying of 3,000 running feet of 9" to 12" piping and would be recommended by me; however I am of opinion that the matter should be brought to the notice of the Government through the proper channel for final decision as to whether the project is worth the probable expenditure.

It is proposed to construct a syphon similar to that shown in your rough sketch at the Kistnampett sewage farm to convey the sewage underneath the canal, and, if the Government will sanction a lift pump to raise it to the present level of the Kistnampett drain, I shall be prepared to erect it in site. Owing to recent instructions from His Grace the Governor, I have been compelled to alter the line of the canal again between Elliott's Road and the Kistnampett sewage farm, which new direction will necessitate your department relinquishing the whole plot of the farm lying between the narrow embankment on the west up to the drain on the east side and the ridge along which the sewage pottery pipes are laid. As regards the subject of the Government compensating the Municipality for the land taken up by the canal by handing over other ground lying to the southward to them, I am not permitted to express an opinion, for it is not a matter that I ought to interfere in whatever private opinion on the subject may be.

(True Copy.)

(Signed) L. R. BURROWS,
Ag. President, Municipal Commission.

*Will large amount
being returned*

TRANSFERRED to the Public Works Department for consideration and disposal.

(Signed) D. F. CARMICHAEL,
Officiating Chief Secretary.

No. 94-A. From Major ROSS THOMPSON, R.E., District Engineer, Presidency, to the Secretary to Government, Public Works Department, dated Fort St. George, 21st May 1877, No. 995.

ADVERTING to your memorandum, No. 1,089, of 27th April 1877, and its enclosures I have the honor to inform you that I can see no necessity for the abandonment of the Triplicane Sewage Farm nor for conveying the sewage from Triplicane to Kistnampett by pipes or otherwise.

2. To get rid of the sewage at both Triplicane and Kistnampett syphons will be necessary to convey it under the canal; and I can see no reason why it should not be led into wells on the east of the canal and lifted, as it now is, by picottahs to irrigate the land. It is true that the canal will take up a considerable portion of both the existing sewage farms, but this can be compensated for by raising the level of the ground at each place to the east of the canal with the spoil taken from the canal cutting instead of heaping it up in banks at each side.

3. There appears to me to be no reason why the sewage farms should not thus be considerably extended instead of diminished in area, the sewage being lifted by picottahs on the east of the canal line in the same way that it is now raised to the west of it.

4. I have in my letter, No. 978, dated 21st May 1877, stated my conviction that syphons should be constructed at the Triplicane, Kistnampett, and Barber's Bridge Creeks for the passage of sewage and the first foul rush of storm water only, the bulk of the storm water afterwards being allowed to find its way into the canal through proper masonry works and out of it again by each open end at the Adyar and Cooum rivers.

5. To prevent the overflowing of such sewage wells as may be constructed on the east of the canal for the sewage farms, the syphons leading to them may be provided with shutters on the west side of the canal, which could be closed after the first burst of rain.

6. If these suggestions were carried out, the Municipality would, I believe be gainers, instead of losers, by the construction of the canal through their Triplicane and Kistnampett sewage farms. The public generally would certainly benefit by the waste land between the sewage farms and the sea being raised in level and brought under cultivation. At present, both at Triplicane and Kistnampett it is nothing better than a great open latrine.

No. 95. ORDER THEREON, 12th June 1877, No. 224 W.

It is noted that the sewage can be lifted direct from the syphon wells when completed as at present, and, as the canal was designed and sanctioned before the existence of the sewage farm, no compensation can be claimed.

2. Several sites, now irregular unsightly swamps or wastes, exist in the vicinity of the Junction Canal and the sewage farms, which when filled in and levelled, may, with advantage, be used for extending farm operations.

3. The question of the disposal of storm water can only be decided when a full and well-considered report is submitted by the District Engineer upon the area drained, the discharge therefrom during ordinary falls of rain and heavy storms, accompanied by regular sections and levels of the Canal, Cooum, and Adyar Rivers,

with reference to high and low water in the sea, and the conditions of the bars at the time, *i.e.*, closed or open. With these remarks these papers are communicated to the President, Municipal Commission, and District Engineer for attention.

(True Extract.)

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

To the District Engineer, Presidency.
" President of the Municipal Commission.
" Financial Department.

Exd. J. W. Fischer.
Spare Copies

W. Arthur Lindsay
Chief Engineer

Read Hercules.

Order Hercules on.
~~Order Hercules on.~~

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the ~~order~~ ~~has~~ ~~been~~ ~~lifted~~
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the ~~order~~ ~~of~~ ~~the~~ ~~order~~ ~~which~~)

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MEMORANDUM.

Letter Number

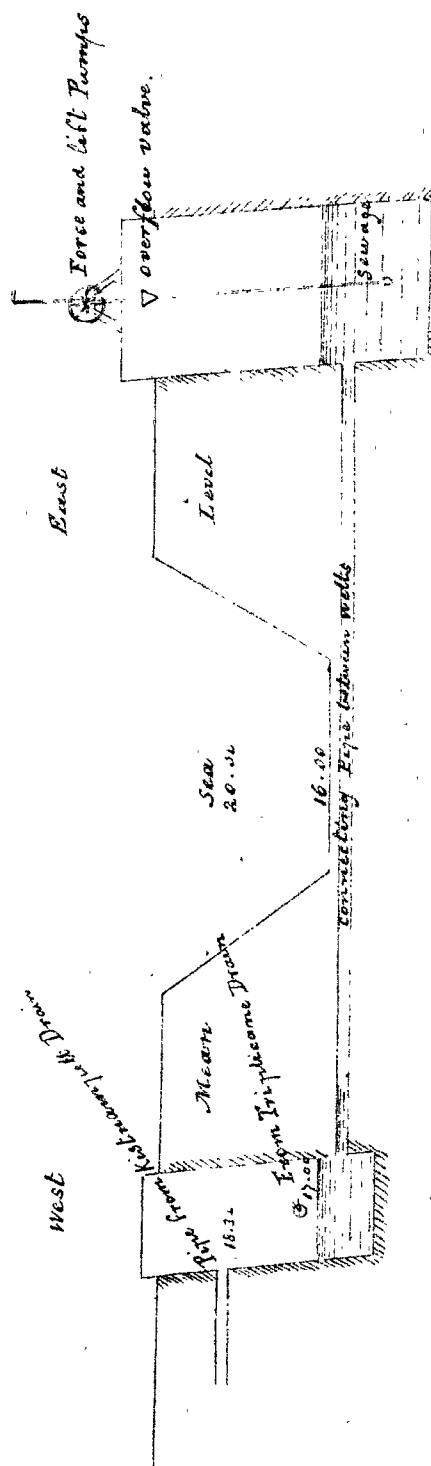
dated the

from the District Engineer of

Heavy
 falls of rain and ~~showers~~
 storms accompanied
 by regular easterlies
 and westerlies of the
 Canal Current,
 and a deep & heavy
 winter reference to
 the water in
 the Sea - and
 the condition of
 the harbor the day
 is clear or open
 with these remarks
 the paper was
 communicated to the
 U. S. M. Com. for
 their perusal for
 attention -

戊子

W. H. R.



No. 975

Madras,

The District Engineer,
Presidency.

20.

The Secretary to Govt:
Mr. D. Madras.

Sir,

Adverting to your memo: No: 1089 of April 27th 1877 and its enclosures, I have the honor to inform you that I can see no necessity for the abandonment of the Triplicane Sewage Farm, nor, for conveying the sewage from Triplicane to Kristumpett by pipes or otherwise.

2. To get rid of the sewage at both Triplicane and Kristumpett, syphons will be necessary, to convey it under the Canal; and I can see no reason why it should not be led into wells on the east of the Canal and lifted as it now is by percolations to irrigate the land. It is true that the Canal will take up a considerable portion of both the exist-

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existing sewage farms but this can be compensated for, by raising the level of the ground at each place, to the east of the Canal, with the spoil taken from the Canal cutting, instead of heaping it up in banks at each side.

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Rivers.

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7. If these suggestions were carried out, the Municipality would, I believe, be gainers instead of losers by the construction of the Canal through their Triplicane and Vistrampett sewage farms. The public generally would certainly benefit by the waste land between the sewage farms & the sea being raised in level and brought under cultivation. At present, both at Triplicane and Vistrampett, it is nothing better than a great open latrine.

I have the honor to be

Yours most obedient servant,

M. Thompson M. A. 1872

District Engineer, Pondicherry.

W. H. St. George

21 May 1877

407-1-76 h. h. 3.
" 3-8-76 " 1992
" 7-2-77 " 440
" 9-4-77 " 1217.

General.

P.W.D.

22 MAY 77

From

No. 5004

The District Engineer
Residency.

No. 995

Dated 21. May 1877.

No: of Melaneres. Nil.

Sewage tanks at
Shipcane & Strampff
Submits report

on the

9th June 1892

Per 4-6-77

PUBLIC WORKS DEPARTMENT.

Read the following.

Indorsement in the Financial Department
11th April 1897.

No 911 dated 24th April 1877.

No 911 dated 24 April 1911
Letter from the District Engineer Presidency
10/11

No 995 dated 21st May 1877

No 995 dated 21st May 1877
Memo by the Chief Engineer dated June 1877
FOR ORDERS.

Edw. and Leal M^{rs}.
Secretary to Govt
P.H.D.

knowing the 3rd Aug. 1848
letter & dinner. & the minutes
for this remarks. L.A.

[illegible]

FOR ORDERS.

N^o 224 W Public Works Department

Proceedings of the Madras Government
Under date 12th June 1877
Read the following.

Endorsement in the Fin^l } (M. E. No. 9118/24 April/77)
Department

Letter from the Dist: Eng^r } (M. E. No. 9958/21 May/77)
Presidency

replied by the Chief Engineer (M. E. No. 10000/21 June/77)

It is noted that
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and sanctioned before the
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no compensation can be
claimed.

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exist.

Presidency ✓
Eng^r ✓
Fin. Dept ✓
C. S. ✓
Dr. 23. 6. 77

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sewage farms which, when
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with advantage, be used for
extending farm operations

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and heavy storms, accompanied
by regular sections and levels
of the canal, Cooum, and Adyar
rivers with reference to high and
low water in the sea, and the
conditions of bars at the times,
i.e., closed or open. With
these

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dent, Municipal Commission,
and District Engineer for
attention.

W. S. S.

11.6.77

W. S. S.

10509/1
 buildings & floods
 Civil works.
 1870
 PUBLIC WORKS.

The W. & A. Presidency
 13

Dated
 Issued
 Recd.

12th June 1871. 224 W

Nos. 74-95

Junction Canal, ~~Indra~~
 Papers regarding the
 drainage of the Indragone
 and Kistnampe tt rivers
 across the ~~...~~ canal
 with remarks to the General
 Resident Municipal Com
 mission and Engineer for
 attention.

B. P. in Raj.