

(1) Number of pages _____

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MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

G.O. No.

194 (W)

Press

Mis.

Dated

4-6-1877.

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

4th June 1877, No. 194 W.

Buildings and Roads.

Civil Works.

Read the following paper :—

No. 35. From Major ROSS THOMPSON, R.E., District Engineer, Presidency, to the Chief Engineer, Public Works Department, Buildings and Roads, dated 21st May 1877, No. 978.

I HAVE the honor to submit herewith a report, No. 281, of 19th May 1877, from the Executive Engineer, Adyar Junction Canal, regarding some damage done to the work during the late storm. I inspected the opened portions of the canal with Captain Clarke on Saturday, 19th instant, and I have come to the conclusion that the banks, to secure stability under heavy rain storms, should, considering the nature of the soil, be not less than 4 to 1, instead of 2 to 1.

2. I have also come to the conclusion that, instead of having large syphons to carry both sewage and storm water under the canal, smaller iron pipe syphons should be used of just sufficient capacity to carry the sewage and the first foul flow of storm water, all surface drainage from storms being allowed to flow freely into the canal through properly-constructed openings when it exceeds in amount what the sewage syphons are capable of carrying off.

3. I think the crossing of the Barber's bridge nullah should also be arranged on this principle with properly-constructed in and out falls.

4. There would thus be no danger of the canal becoming fouled by sewage to any appreciable extent, and such costly and precarious structures as large syphons are would be avoided.

5. I presume that it is not intended to have the ends of the canal closed by lock gates, and that water will consequently be permitted to flow as freely out of the canal as into it.

From Captain S. C. CLARKE, R.E., Executive Engineer, Junction Canal Works, to Major ROSS THOMPSON, R.E., District Engineer, Presidency, dated 19th May 1877, No. 281.

I HAVE the honor to bring to your notice that on my inspection of the canal works at the Adyar end yesterday afternoon I found that the canal had been filled up to a depth of 13 feet by the inflow of the surface drainage and that the river had carried away a portion of the southern embankment; fortunately the opening that had been made in the spoil banks at the first syphon site acted as a regulating weir and allowed the surplus water to make its way to the east, or otherwise the spoil banks to a great extent would have been topped and probably entirely destroyed. A considerable amount of damage has been necessarily caused by the heavy beating rain to the high spoil banks, and there is but little doubt that their slope at 2 to 1 is not sufficiently great to prevent subsidence under such a test as they have just been subjected to; doubtless such a storm as has passed over Madras within the last 48 hours has not occurred for sometime past, but nevertheless there is no reason for assuming that such may not recur again at any period of the year.

2. The stream inundated the brickfield, and I regret to have to report that about 50,000 nuburnt bricks have been destroyed. The steam pump has also been dislodged from its position, and has sunk down into the bed of the canal; but as soon as tackle can be got together efforts will be made to raise the engine up.

No. 36.

ORDER THEREON, 4th June 1877, No. 194 W.

In this letter the District Engineer reports that some damage has been done to the Junction Canal Works by the storm of the 16th to 18th of May. He suggests that to secure stability the banks should have a slope of 4 to 1, instead of 2 to 1, and that the syphons should be made only large enough to carry sewage and foul water across the canal, leaving storm water to flow into the canal.

2. The Governor in Council does not consider it advisable to incur heavy expenditure for additional land to allow of the canal slopes being altered from 2 to 1, to 4 to 1, to reduce the risk of damage in such exceptional circumstances as in the late storm.

3. Besides as a matter of fact the banks have not sustained any serious damage, and a much less quantity of rain would have temporarily destroyed the smoothness of the slopes. It will be cheaper hereafter to remove some of the surplus spoil so as to flatten the slopes and take it to the nullahs or the Adyar in boats than to buy and keep costly land.

4. The suggestion to separate sewage from storm water and to provide for carrying the former only across the canal is approved, but no plans for masonry works on calculations of the quantities of water to be dealt with have yet been submitted for the sanction of Government. These should be designed on the moderate scale originally intended, so as to avoid unnecessary outlay.

5. The Government notice one very important omission in the District Engineer's report. He makes no allusion to the fact that the Mylapore tank received no supply of water during the late rain, and that the water from the long tank to the gardens and fields east of the canal has been entirely cut off. The District Engineer will explain why no precaution was taken to maintain the channel leading to the Mylapore tank either by leaving a portion of the canal uncut or by putting up a temporary aqueduct. No time should now be lost in the erection of the necessary works, so that the cultivation of the gardens may not be interfered with, and full advantage taken of the next flow of water in the channel leading to the Mylapore tank.

(True Extract.)

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

To the District Engineer, Presidency.

Exd. T. D. Ryan.
Spare Copies

*Letter from the District Engineer
Presidency No 978 dated 21 May.*

In this letter the District

Engineer reports that

some damage has

been done to the

junction canal. He

by the storm of the

16th to 18th of May.

He suggests that to

secure stability the

banks should have

a slope of four to

one instead of

two to one and

that the syphons

should be made

only large enough

to carry sewage

and foul water across

the Canal leaving

storm water to flow

into the Canal.

The Government Council

has not considered it

advisable to incur

heavy expenditure

for additional land

to follow of the Canal

Hopkins having otherwise

preferred to

to cut the distance

the risk of damage

in such an event

as can be seen in the late

Plan. Besides as

a matter of fact

the banks have not

prevented any

serious damage and a much

less quantity of sand

would have been required

to destroy the smoothness

of the Napier.

The suggestion to separate

sewage from storm water

is and to provide

works for carrying the

former only across the

Canal is approved

but no estimate

and the Government

has no plan for

measuring the

calculations of the

will be cheaper

than to remove

run of the surplus

spoil now to flatten

the Napier and take

if better available a

advantage in boats than

to buy or lease

land

quantity of water which
the salt water has
not been submitted
in the matter of
government. There
should be designed
the moderate rules
originally intended
to be to avoid some

very outlay.
The Government
are very important
in the district
The makes no allusion
the fact that the
remains no supply of water
the late rain and that the
water the gardens and fields
of the Canal has been
off. The Government
will explain why no
taken to maintain the

Mylapore tank with long
canals a portion of the Canal
canals or by putting up a
temporary, appendant. No
there should now be look in
providing for the passage the
creation of the necessary works so
that the cultivation of the
gardens may not be interfered
with and full advantage taken
of the great flow of water in
the channel leading to the
Mylapore tank.

GR 7

The object of the present
 volume is to give a
 complete and accurate
 description of the
 various species of
 the genus *Canis*,
 and to show the
 relations of the
 different species to
 each other, and to
 the genus *Canis*.

He part as the Junction Canal Works
in letter from the District Engineer
Presidency, No. 978 dated the
21st May

The District Engineer reports that considerable damage has been done to the Canal ~~works~~ banks by the heavy rains of the 16th to 18th. He recommends that the banks should have a slope of four to one, and that the siphons and aqueducts should be made only large enough for the passage of sewage. The Chief Engineer is of opinion that there will be some difficulty in giving the banks slopes of four to one instead of two to one, as that involves taking up more land which will have to be paid for. And even with the increased slope, the banks would sustain damage in such

an exceptional fall of rain as that
of the 17th. The suggestion to
separate the sewage from the storm
water, and provide for the sewage
of the former only except the lease
is good, and may be adopted in
the preparation of the plans, which
shall be submitted with as little
delay as possible. Already a
very large expenditure has been
incurred without any plan a
scheme having been sanctioned.
It is understood that a portion
of the last contract for the
sewers have been made large
though far above the ordinary
flow of water.

E A Mnd Colonel
Chief Engineer
1871

Recor.

No 281.

From, The Executive Engineer,
Suction Canal Works,
to, The District Engineer,
Presidency.

Sir,
I have the honor to bring to your
notice that on my inspection of the canal
works at the ... yesterday
afternoon I found that the canal had
been filled up to a depth of 4 1/2 ft by the
inflow of the surface drainage, and
that the River had carried away a
portion of the ... embankment;
fortunately the opening that had
been made in the spoil banks at the
1st Syphon site, acted as a regulating
weir and allowed the surplus water
to make its way to the East, or otherwise
the spoil banks to a great extent would
have been topped & probably entirely
destroyed. A considerable amount of
damage has been necessarily caused
by the heavy beating rain to the high
spoil banks, and there is but little
doubt that their slope at 2 to 1, is not
sufficiently great to prevent subsidence.

The stream inundated the
Brick Field and I regret to have to
report that about 50,000 unburnt
Bricks have been destroyed. The
Steam Pump has also been dislodged
from its position, and has sunk down
into the bed of the canal, but as
soon as tackle can be got together
efforts will be made to raise the
engine up.

Yours most aff. servt.

Chas. R. L.

Wm. L. Garrison

H. Office
19 May 1920

Letter from the [illegible]
 No 278 dated the 21st Nov
 1897

Ref. 1877

E. A. Ford

I cannot find place of the
admirable & interesting
specimens of the land
flora of the Coast Bank
which being attached from
the 1st to the 10th of the month
of the month in fact
in exceptional circumstances
the late from the living
specimens during the last
50 years and the
landward the proposed
to the Coast Bank

ing -

• With the reduction of the
heights to water level for
storage. & first run of
storm water. leaving the
great volume of water in
the canal. is advisable.

At Porters bridge
understand it to have
been decided that no
siphon drain is needed.

Siphon & structure. 60
feet high prepared. There
is much time. the
work being to some extent
harmless. 100.

It cannot be expected
that such an unusual
low fall as has just
occurred would pass without
some damage to new works
I would not think of taking
up extra material for
for spoil banks.

The whole energy of the
system should be directed
to getting the waterway

done through. & the
completion of the temporary
siphon drains & bridges on
the moderate scale originally
intended - But whether
possible it has been rather
doubtful. Need siphon or
all. The suggestion as to the
other turn on the siphon
size is needed. No calculation
of which has been made. &
months from the commencement
been submitted to Dept.

It was originally considered
that a flood gate at
Porters end might be
needed. But was considered
might be left undisturbed and
canal was thought to
The fall is considered
that no precaution was
taken to maintain the
channel leading to the siphon
bank & by the means
means. with the allusion
of the siphon & the

change the spring
Season. But before
the [can't use cut the tree]
Just & that seasons
in summer has been
sustained & in winter
the [can't use] explain
this should be given -

When the waterway is
open through it will be
cheap to remove
the surplus ^{so as to} ~~the surplus~~ ^{the surplus} ~~the surplus~~
take it to the mill
on [can't use] in [can't use] - then
they keep cattle and
[can't use] 15

5092

P.W.D.
22 JUN 77
Mr. 5002
The Engrs
J. C. Woots

Woods 19 {
Ow. 21 { Trans 77.

Omochroni Canals
J. W. M. Reports
damage caused
by heavy full of rain

No 978.

From,

The District Engineer,
Presidency.

To,

The Chief Engineer, S.E.
Buildings and Roads Bk.

Sir,

I have the honor to submit herewith a
report No 281 of May 19th 1877 from the
Executive Engineer A. J. Canal regarding
some damage done to the work during the
late storm. I inspected the opened por-
tions of the Canal with Captain Clarke
on Saturday 19th instant, and I have
come to the conclusion that the banks,
to secure stability under heavy rain storms,
should, considering the nature of the soil,
be not less than four to one - instead of
two to one.

2. I have also come to the conclusion
that, instead of having large syphons to
carry both sewage and storm water
under the Canal - smaller iron pipe
syphons should be used of just suffi-

Encls.
1.

4 (10 10 10 10 10) 10 10 10 10 10

P.W.D.

22/11/77

Buildings & Roads.

From
The District Engineer,
Presidency

No. 978.

Date & 21 May 1877.

No. of Enclosures, 1.

Junction Canal -
Marras -

Submits report
regarding some damage
done to the —

16 June 77. S.D. 20. 30

Proceedings of the Madras Government

Under date 16 June 1877

Read the following

Letter from the District Engineer }
Presidency } (H. S. No 978 dated 21 May 1877)

In this letter the District Engineer reports that some drainage has been done to the Junction Canal Works by the storm of the 16th to 18th of May. He suggests that to secure stability the banks should have a slope of four to one, instead of two to one, and that the syphons should be made only large enough to carry sewage and foul water across the canal, leaving storm water to flow into the canal.

The Governor in Council does not consider it advisable to incur heavy expenditure for additional land.

land to allow of the canal slopes being altered from two to one, to four to one, to reduce the risk of damage in such exceptional circumstances as in the late storm.

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of water to be dealt with have yet been submitted for the sanction of Government. These should be designed on the moderate scale originally intended, so as to avoid unnecessary outlay.

The Government notice one very important omission in the District Engineer's report. He makes no allusion to the fact that the Mylapore tank received no supply of water during the late rain, and that the water from the long tank to the gardens and fields East of the canal has been entirely cut off. The District Engineer will explain why no precaution was taken to maintain the channel leading to the Mylapore tank either by leaving a portion of the Canal uncut or by putting up a temporary

temporary aqueduct.
No time should now be lost
in the erection of the necessary
works, so that the cultivation
of the gardens may not be
interfered with, and full
advantage taken of the
next flow of water in the
channel leading to the
Mylapore tank.

ENT

10/7/77

ms Copy Despd 4-6-77 ✓
S^d Opics Despd - 22. 6-77

V.I. Presidency

Building & Road
Culverts
No 509

U.S. DEPT. OF AGRICULTURE

FOREST SERVICE

The U.S. Forestry Agency

Date

Place

Subject

1946

35-36

Enoch Canal

Works. Papering orders

letter from the

for repairing damage

caused to the - by

the recent storm.

But in the

returned to the
10/10