

(1) Number of pages 16(2) Date of repair 8-2-42

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.**Government of Madras.***Public Works* **DEPARTMENT.**

G.O. No.	83	Press Mis.
173-174		
Dated	9-1-	1864.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
9th January 1864.*

No. 173. Read the following Endorsement of the Superintending Engineer, 4th Division, dated Ennore, 30th November 1863, No. 3,665 :—

Read the following letter from R. KENNEDY, Esq., Executive Engineer, 2nd Class, to Lieutenant-Colonel A. J. M. BOILEAU, R. E., Superintending Engineer, 4th Division, dated Adyar, 2nd September 1863, No. 111.

SIR,

1. I have the honor to acknowledge your No. 2,005, dated 27th August 1863, enclosing five papers herewith returned, and inviting me to send in a report to Government of my present views upon the subject of a branch canal between Cochrane's Canal Basin and the beach at Clive's Battery.

1	Proc. of Govt. No.	897,	dated	6th March 1858.
1	Do.	"	"	18th May "
1	Do.	"	"	28th Sept. 1859,
1	Do.	"	"	7th Dec. "
1	Do.	"	"	5th April 1855.

2. I had occasion to survey and estimate for the proposed execution of this work under orders of the then Superintendent of the Eastern Coast Canal, and have given, then and since, a good deal of thought to the subject; the necessity for, and advantage of which, I never could satisfy myself of.

3. The Irrigation Company evidently consider it of importance in connection with their schemes, as their attention has been directed to it on former and late occasions. Of their views, however, I am ignorant, which is to be regretted as a knowledge thereof might possibly modify my present opinions.

4. Except in so far as a tidal branch canal in this locality would benefit the town of Madras, by conveying produce for consumption along its northern side, and so cheapen transport, I do not see any great advantages that would be derived from it. The Northern Canal is the highway for the transport of articles of local consumption, and not so far as I am aware, a feeder to the port, of produce for export.

5. To give an idea of what value the suppliers of articles of consumption place upon facilities for commanding the localities of consumption the new firewood depot constructed in Chintadrepettah may be instanced. This depot was constructed by Government at considerable expense for the storage of firewood in a central and thickly populated neighbourhood, and not a boat has ever discharged at the wharf, although every encouragement has been given by the Collector to those engaged in the traffic. This is not encouraging towards an expenditure upwards of 2,30,000 Rupees in another direction, for a similar purpose, namely, to command Madras by a channel to the beach; at the same time it is no argument against facilitating economy in traffic.

6. As regards the export part of the question, in connection with the Irrigation Company, it seems natural, that if the successful completion of their schemes results in creating a new export trade, the produce would never be saddled with the expense of a navigation of a hundred miles or more in length running parallel to the sea, and only a mile or two from it, while the most favorable facilities existed, for at once shipping it at the points where traffic from the interior would strike the sea shore, at bars that are always open, at the very positions that would have to be reached to enter the canal. The law of commerce that brings the ship and its freight together at the least possible cost, would carry the vessel to the north, instead of the cargo to the south.

7. The Extract Minutes of Consultation No. 943, dated 18th May 1853, gives a brief history of the scheme of this branch canal, and contains Major Lawford's opinion that the project would prove an entire failure, and Captain Collyer's "anticipation of an injurious effect on the "water of the "Seven Wells" from the contiguity of a salt water canal, a contingency "for which, Major Lawford believes, nothing in the project can afford compensation."

8. Such a result is apparently under present conditions, the most serious objection that could be brought against the project, and although Colonel A. Cotton's opinion is brought forward in opposition, I cannot see but that the objection is quite sufficient to prevent the execution of the project, so long as Madras is so dependent as at present upon the "Seven Wells" for its supply of fresh water.

9. Colonel A. Cotton says "an objection has, I understand, at some former time been made "to this canal along the north face of Black Town, viz., that it might injure the water of the "Seven Wells, but I feel satisfied that it will not have this effect. The canal will not be cut "deep enough to touch the strata, in which the good water is, and its bed will be covered with "a perfectly water-tight mud; but the proof is that the present Northern Canal, either crossing "the pure water strata, or running parallel with them, and close to them for miles does not the "least affect the well."

10. I do not agree with Colonel Cotton. If the Northern and Southern salt-water canals do not damage the fresh water in the wells near them, it is owing to the surface of the fresh water throughout Madras lying in the stratum at a higher level than the surface of the canals, and so long as these relative positions are retained the salt water cannot mix with the fresh.

*Proceedings of the Madras Government, Public Works Department,
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11. Colonel Cotton is speaking of a tidal canal and yet says that it will "not be cut deep enough to touch the strata in which the good water is." I have not measured the depth below the surface of the ground of the water in the "Seven Wells," but I have taken the relative levels of wells and canals in various other places in Madras, and invariably found the former several feet above the latter. Having carefully watched for a number of years the effect of the salt channels upon the wells near to them, I have found that the well water is not damaged in quality, but its level is lowered, and this clearly proves that the tidal channels go through the stratum containing the salt water and to some extent drain it out.

12. If the source of supply of the Seven Wells is at some distance inland, and if the connection is by the stratum dipping under the canal, it might be that the proposed branch canal would not cut into its particular stratum; but judging from the data we have, I think there can be little doubt that the Seven Wells are supplied from the sandy ridge lying between Cochrane's Canal and the sea, and that to cut a channel through it at right angles to the beach would simply cut off the supply to the "Seven Wells," and damage a great many of the wells in Black Town.

13. I am strongly of opinion that no project for the further extension of salt water canals, within the limits of the High Court, should in future be entertained; and that should it ever be decided by Government, that it will be advisable and advantageous to carry out the project now referred to, it should be incorporated in the scheme now under consideration by Mr. Fraser for supplying Madras with fresh water, and thus with the proposed Junction Canal connecting the Adyar and the Cooum, it would act as a feeder to permeate the whole water stratum beneath Madras, and permanently raise its level throughout the limits of the city by keeping the water surface in the channels slightly higher than the natural level of the water in the ground.

14. It will be for the Secretary to Government Department Public Works to decide whether this project should be shelved in the meantime, and struck from the list of unanswered references, or remitted to Mr. Fraser or some other authority for further consideration. If the supply of fresh water from the Red Hills is sufficient to keep up such a channel with its lockage and other wastage, there can be no doubt that it would be an invaluable blessing to Madras.

15. If you think this paper of any use as bearing on the subject offered for my report I beg you will forward it.

No. 142, 5th April 1855.
" 397, 6th March 1858.
" 335, 18th May
" 2,326, 28th Sept 1859.

Submitted to Government, with reference to the Orders noted in the margin, and with a request that permission may be granted for striking the subject off from the list of unanswered references.

(Signed) A. J. M. BOILEAU, Lieut.-Colonel, R. E.,
Superintending Engineer, 4th Division.

No. 174. ORDER THEREON, 9th January 1864, No. 83.

1. The project for cutting a Canal from Cochrane's Canal Basin to the Beach near Clive's Battery having been brought before Government by the late Board of Public Works on the 18th July 1853, in connection with the construction of a calingulah and lock at Shediancoopum to keep the water in the canal and the Cooum always nearly at high tide level, the Estimate was sanctioned by the Government of India on the 10th July 1854 and found a place in the Budget of 1855-56. On the 15th of March 1855, however, the Board of Public Works reported that the original Estimate was considered insufficient and the Government thereupon consented to the suspension of the work. It seems then to have been overlooked till on an application* from the Chief Engineer, nearly three years afterwards, to have the subject removed from his unanswered reference file, the Government under date the 6th March 1858, ordered that instead of being allowed to pass out of view, the project should be re-investigated by the then Superintendent of the Coast Canals and brought forward again. This caused the Chief Engineer to submit on the 13th of the same month a letter from the Superintendent Engineer of the Central Circle, with its enclosures consisting of copies of correspondence between the late Board of Public Works and Captain Chambers, regarding the difficulties and expense, as well as the uselessness of the proposed work. Supported by Colonel Lawford's unfavorable opinion and by Captain Chambers' enhanced Estimate of the cost of carrying out the work, Colonel Faber urged three grounds on which he recommended that it ought to be abandoned and the subject dropped. These were first, the expense, which instead of being as at first estimated, Rupees 85,704, was calculated by Captain Chambers at Rupees 2,32,040; secondly, the unimportance of the work, unless the main canal, of which it would be but a short branch, were used for bringing down exportable produce; and thirdly, the probability of the project proving an entire failure, as well as causing an injurious effect on the water of the Seven Wells.

* 2nd February 1858, No. 7,106.

*Proceedings of the Madras Government, Public Works Department,
9th January 1864.*

2. The Government reviewing these objections in its Order No. 942 of the 18th May 1858, saw no reason to agree with the Chief Engineer. It pointed out that the revised Estimate contained very large sums for works not before contemplated, among which were Rupees 1,15,255 for wharf walls, and Rupees 46,195 for removing the north wall of Black Town, and it resolved to refer the matter back to Colonel (now Sir Arthur,) Cotton.

3. No reply was received to that reference, nor to a subsequent Order of Government dated the 10th May 1854, No. 1,111, calling Sir A. Cotton's attention to the subject; but it appears from the allusion to the work in paragraph 16 of his Memorandum on the Northern Canal, bearing date the 30th March 1859, that his views as to the advisability of making the proposed branch from that canal to the beach along the northern face of Black Town remained unchanged.

4. The subject had, however, in the meantime been referred for the joint consideration of the District Engineer and Mr. Kennedy, and the latter Officer, who has since had the sole superintendence of the Coast Canals, having surveyed and estimated for the proposed branch, and given much thought to the subject of its formation without being able to satisfy himself of its necessity or advantages, now lays his matured views regarding it before the Superintending Engineer of the 4th Division in the report forwarded with Colonel Boileau's Endorsement No. 3,665, under date the 30th November 1863, and recorded at the head of these Proceedings.

5. The conclusion at which Mr. Kennedy has arrived is that a branch canal from the Basin to the Beach could only be of use in the event of the main canals bringing down produce intended for export, which they will not do till their connection with the interior of the country is effected by the successful completion of the Madras Irrigation and Canal Company's undertaking, and probably not then, because any produce seeking a place of export by the Company's Canal will find it more easily at Kistnapatam than at the more remote, and comparatively inconvenient port of Madras. The Northern Canal, as now existing, is simply a highway for the transport of articles of local consumption, but not of produce for export. Mr. Kennedy, moreover, believes that no great benefit would be conferred on the town of Madras itself by the branch, as experience has shown that the suppliers of articles of consumption to the local markets do not appreciate facilities that may be offered them for the conveyance of their goods to the neighbourhood of their customers, and he thinks it by no means certain that to cut a canal to contain salt water, across the sandy ridge between Cochrane's Canal and the sea would not either cut off the supply of the Seven Wells, or damage the water in them and many of the wells of Black Town.

6. The Government is very reluctant to give up a project which, appearing to promise so well, has long engaged its attention; but it cannot but admit the validity of the objections which have been raised against the construction of the proposed branch canal on the ground of its not being likely to prove of any commercial importance at all commensurate with the large sum which it is now estimated to cost, and the Governor in Council accordingly resolves to allow the matter to be dropped till the result of the Madras Irrigation and Canal Company's operations has shown whether a connection between its main canal and the beach at Madras will be necessary.

7. The subject may be removed from the Superintendent Engineer's unanswered reference file.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintendent Engineer, 4th Division.

Exd. S. T. Augustin.

Proceedings of the
3^d

submit a letter from the Kennedy
relation to certain reference regarding
Salt water Canal &
request that permission be
given for studying the subject
from the view of unimpaired
reference

No 83

Public Works, No 110
Under Government
Under date the 9th July 1864.
Read the following Resolu-
tion from the Legislative As-
sembly

No 30th Nov/63. No 3665

File

The project for cutting
a Canal from Buchanan's
Canal Basin to the
Beach near Oliver's Battery
having been brought be-
fore Government by the
Aide Board of Public
Works on the 18th July 1863
in connection with the con-
struction of a Palangah
and Lock at Shomance
span to keep the water in
the Canal and the Pool
always nearly at high
tide level, the Estimate

was sanctioned by the
Government of India
on the 10th July 1854
and found a place in
the Budget of 1855/56.
On the 15th of March
1855, however, the Board
of Public Works reported
that the original estimate
was considered insufficient
and the Government
thereupon consented
to the suspension of the work.
It seems then to have been
overlooked till on an
application from the
Chief Engineer, nearly three
years afterwards, to have
the subject removed
from his unreviewed
reference file, the Govt.,
under date the 6th March
1858, ordered that instead
of being allowed to proceed
out of view, the project

5th April 1855. No 142.

+ 2nd March 1858. No 71

should be re-investigated
by the then Superintendent
of the Coast Canal and
brought forward again.
This caused the Chief
Engineer to submit on the
5th of the same month
a letter from the Superint.
of the Central Circle, with
its enclosures consisting of
copies of correspondence
between the ^{late} Board of
Public Works and Captain
Chambers, regarding the
difficulties and expense,
as well as the uselessness
of the proposed work -
supported by Colonel
Lawford's unfavorable
opinion and by Capt.
Stam Chambers's en-
hanced estimate of the
cost of carrying out the
work, Colonel Paber
was

inged three grounds on
which he recommended
that it ought to be aban-
doned and the project
dropped. These were.

first - the expense, which
instead of being as at
first estimated, Rs. 33,700,
was calculated by Capt
Chambers at Rs. 232,000.

Secondly - the unimpor-
tance of the work, unless
the main Canal, of
which it would be but
a short branch, were
used for bringing down
exportable produce; and
thirdly the probability
of the project proving
an entire failure, as well
as causing an injurious
effect on the water of
the Seven Wells.

The

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in its order No. 942 of
18th May 1858, saw no
reason to agree with the
Chief Engineer. It pointed
out that the revised
Estimate contained very
large sums for works
not before contemplated,
among which were Rs.
115,255 for wharf walls,
and Rs. 16,195 for re-
moving the North wall
of Black Town, and
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back to Colonel / now
Sir Arthur / Cotton -
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attention to the subject;
but it appears from
the allusion to the work
in para 16 of his Memo:
on the Northern Canal,
bearing date the 30th
March 1859, that his
views as to the advisability
of making the proposed
branch from the old Canal
to the Beach along the
Northern face of Black
Tavern remained unchanged.
The subject had,
however, in the mean time
been referred for the joint
consideration of the Irish
Engineer and Mr Kennedy,
and the latter Officer,
who has since had the
sole superintendence of the
Coast Canal, having
surveyed

61
surveyed and estimated
for the proposed branch,
and given much thought
to the subject of its for-
mation without being
able to satisfy himself
of its necessity or ad-
vantages; now lays his
matured views regarding
it before the Superintend-
ent of the L^o in the report
forwarded with Colonel
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No 3665, under date the
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may be offered them
for the conveyance
of their goods to the
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a connection between
its main Canal and
the branch at Madras
will be necessary -

7 The subject may
be removed from the
Superintendent's man-
agement reference file

To the S. & 4th Divⁿ ✓

Recd. 11th January/64.

1861. Depo.

Proc. of Govt. for Survey

No 803

Proc. of the Major

D. J. G. Survey, 1861.

Authorizing to visit,
from his future visit of the
assumed (Cisterns), the
Proc. of Govt. calling for a
report on the subject of a
branch Canal between
Cochran's Canal Basin
and the beach at
Clives Battery.

No 173. 174