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# MADRAS RECORD OFFICE.

## Government of Madras.

Publicworks **DEPARTMENT.**

G.O. No. 331 Press ~~Mis~~

68-70

Dated 3 · 2 1871 .

***Not to be folded or roughly handled***

Read the following :—

No. 2.

No. *Note by the Chief Engineer for Irrigation.*

THE letter of the Superintending Engineer, dated 5th October last, was kept until I had had an opportunity of discussing the circumstances and state of the Godavery near the anicut with Major Fischer.

2. This Officer's propositions are :—

1*st*.—That contained in this letter : to place a set of under-sluices of 30 vents of 2 yards by 2 yards in the Vizeshwaram lunka, with channels to and from them, as shown in blue pencil on the tracing.

2*ndly*.—To close 5 out of 15 of the vents of the under-sluices of the Ralli branch of the anicut at the Bobberlunka.

The general object of these alterations would be the increase of the draught of the river on the right or western side, and the counteraction of the tendency of the stream to set towards the left bank. The extension of the shoal which is connected with the right bank immediately above Vadapilli is considered to be due to the greater discharging power of the two eastern portions of the anicut, namely, the Ralli and Dowlaishweram branches, and Major Fischer informs me that he remembers the time when boats could be tracked along the right bank over what is now a high sand bank.

3. I do not think that it would be advisable to permanently close any of the vents of the Ralli under-sluices ; they can be regulated by means of their shutters as occasion may require, and this is all that appears to be necessary at present. Considerable changes have taken place at and near the Bobberlunka. A good deal of the head of the western portion has been washed away, and of the more recently formed eastern sand bank the head has been cut away, and several channels formed, one of which now leads direct from the Ralli branch to the under-sluices. A general idea of these changes will be obtained from the pencil shading on the tracing, the shaded parts being now water. The entrance to the Bobberlunka lock is at present sometimes very difficult, boats cannot easily avoid being drawn into the head-sluice channel in their efforts to clear that leading to the under-sluices. It will not do to close all connection between the channel, nearly a mile long, leading to the head-sluices and the under-sluices, or this channel would have a considerable tendency to silt up, and it might, I think, be tried what can be done towards rendering the approach to the lock less dangerous by running out a revetted bank with a solid stone nose between the lock and the under-sluices, as shown in blue pencil, and removing all the nanel between this spur and the dotted blue line, and between the two dotted blue lines leading direct from the river to the under-sluices. Then boats would be tracked from the western part of the lunka until the nose of the spit had been passed, when they would have no difficulty in keeping clear to the western side of the spit. The rest of the eastern part of the lunka should then be maintained by nanel planting. These works may do away with any necessity for removing the lock to the west of the head-sluices, a course which has been suggested in order to remove the danger to the traffic.

4. With regard to the proposal to place under-sluices in the Vizeshwaram lunka, I think that it will be advisable to postpone coming to any decision at present. This year the Dowlaishweram under-sluices have been kept open throughout the freshes, the object being to cut off the southern end of the sand

bank, and so make the pasaage between it and the anicut less difficult. This is generally now the only route open to any but boats of very light draught, and at times it is very dangerous even for the small steamers which have to run closer to the anicut than is safe when there are 3 or 4 feet going over the dam. With regard to augmenting the discharge over the Vizeshweram and Muddúr branches of the anicut, this could be done by putting in the planking at the other branches some time before doing so in those, and perhaps at such times something could be effected in the way of regulating the size of the lunkas above, such as that near Vadapillay, by disturbing or digging down the sand and facilitating its removal by the current.

5. A very important work, which is engaging attention, is the opening of a channel through the sand bank opposite Dowlaishweram, in the direction shown by the dotted blue lines. If such a channel could be maintained, and, as formerly there was an opening there, this may be practicable, and if the lower part of the next lunka, coloured sienna, can be washed away, a safe and convenient channel for navigation would be obtained. I do not at all like the use of the under-sluices for creating a scour along the front of the anicut. The latest soundings showed at places very deep water at 10 yards above the dam, and between 26 and 27 feet at 20 yards, so that the bottom of this deep channel is below the foundations of the weir. I am told that a great deal of quarry rubbish and stone has been thrown in on the up-stream side of the anicut, and it may be perfectly safe, but nevertheless it will be better to keep the deep channel at a greater distance, and for this purpose I would place five groynes, as shown in pencil, with their noses 100 yards up-stream, and their tops, where they join the anicut, 6 feet below its crest.

*Vide* Memorandum appended.

6. It is not easy to ascertain exactly what has been done yearly in connection with the regulation of the river and with what results; but as such information is of the first importance in determining what shall be done in the future, it will be necessary,

1*st*.—To show on the yearly charts the contour of the sand banks, lunkas, etc., at the anicut crest level and at the low water level, the value of which latter with reference to datum should be noted. A few cross sections of the shifting banks should be plotted in situ.

2*ndly*.—The soundings of the pools for 100 yards from the anicut body wall, and for the same distance below, where the water extends so far, should be given, and levels of the sand banks otherwise up to the same limit.

3*rdly*.—All that has been done during the year should be succinctly recorded on the margin of the chart with references to letters.

7. The Superintending Engineer should have a carefully prepared chart of the river for this year made out for about one mile above and below the anicut, on a scale of 4 chains to the inch, and a second for 5 miles above and a like distance below, on a scale of 10 chains to the inch. These will then be lithographed, and they will serve both for the annual and special charts, the former of which should be reviewed each year in this office, and any instructions that may seem to be necessary given.

8. It will be my duty, in reporting on the results of my tour in the Godavery Delta, to state what establishment is requisite for its proper management, and I may

mention here that I am of opinion that an Assistant Engineer is urgently required at Dowlaishweram to carry out instructions regarding the head works; to look after the regulation of the supply to the several deltas; to make occasional inspections of the river banks and embankments up to Polavaram, about 25 miles above Dowlaishweram, which now receive less attention than they require; to assist in the management of the workshops and sign bills and current papers when the Executive Engineer is away; to look after the dredging plant, the steamers, and numerous barges, and see that they are not allowed to be worked when out of order and requiring repair; and to look after the surveying and levelling, of which there must be a good deal to do every year. There is very ample employment for a young officer, and the Executive Engineer will be the better able to attend to duties, which must be left undone if there are so many claims upon his time and attention.

(Signed) J. MULLINS, Major, R.E.,
*Chief Engineer for Irrigation.*

*2nd January* 1871.

Very Wright

[E. I. Form No. 84.] [For Registry No. ]

# MEMORANDUM.

REQUESTED for reference the under-mentioned papers :—

Original file of G.O.
No 331 of 3. Feb 1871

Dr Hawkins
Manager

OFFICE OF THE CHIEF ENGINEER
FOR IRRIGATION
8/4/1879.

To
The Registrar of the P.W.D.

Dept of Public Works
Chief Engineer
No. 1540

The
Registrar
for Circulation

No 331 of 3 Feb 71

No 2 -

Original in
this circumstances
and State of the
Government Secretariat
Office Queensland

No 331-3 -

No 69

E.18. Aug 1879. 1945

3-February 1877 No 331

8-4-77

No 331. P. W. D. Irrigation

Proceedings of the Madras Government.

Read the following

The Acting Supdg Engineer
" Dy " } (1st E. Dn 22nd & 25th Dec 76)
Chief Engr for Irrign ( " " Dn 2 & 2nd Jany 77)

In the first of the papers above recorded the Acting Supdg Engineer of the 1st Dy brings under consideration the present condition of the Godavery at the site of the Anicut. Major Fischer reports that owing to the disproportion in the discharging power of the two western & the Vejaishweram and Muddur branches as compared with that of the two eastern or the Dowlaishweram and

and Ralli branches, the
deposits alone the two
former have increased
very considerably and the
tendency of the stream
is to set towards the left
or eastern bank. To remedy
this Major Fischer proposes
to place a set of under
sluices of 30 vents in the
Vegaishweram Lanka, with
channels to and from them,
and to close 5 out of the
15 vents of the under sluices
of the Ralli branch of the
Anicut at the Bobberlunka.

Having been afforded
an opportunity of personally
discussing these proposals
with the Acting Supt Engineer
the Chief Engineer for
Irrigation

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Irrigation, in his note above
read, expresses the opinion
that it will not be exc-
-pedient to permanently
close any of the vents of the
Ralli under sluices. He
considers that they should
be regulated by means of
their shutters as occasion
may require, but looking
to the changes which have
taken place near the
Bobberlunka and to the
difficulty now experienced
in entering the Lock at
that Lanka, Major
Mullens suggests the
running out of a revetted
bank with a solid stone
race between the Lock and
under sluices, and the
removal

removal of the Canal indicated in the sketch map accompanying the papers.

Major Mullens is of opinion that the construction of under sluices in the Vejaishweram Bunka should be deferred for the present and that the required increased discharge over the Vejaishweram and Innuddoor branches should be obtained by putting in the planking at the other branches some time before doing so in the former.

The arrangements recommended by Major Mallins appear suitable and are approved, and the proposals for keeping the deep channel referred to in Para 6 at a proper distance from the anicut should receive the attention of the Supt Engineer.

His Excellency the Governor in Council considers it important that there should be a record of the measures which are annually carried out for the regulation of the river indicating also the results and the suggestions in Paras 6 and 7 are accordingly approved.

The Government regret that the present inadequate strength of the Engineer Establishment precludes the services of an

dian Assistant Engineer
being specially made
available for the duties
referred to in my Para 8

Further Rec. No 1077 & 18-4

21/3

To
The Supdg Engr 1st Dist
& Chief Engr for Irrign

Decpd 6/2/71

No 4853 & 764

Govt. of {1870} Madras,

PUBLIC WORKS.

To the Acting Superintending
Engr. 1st Circle Cuddapah

Dated

Recd. Encl.

G. O., 3rd July 1870. No. 331

Nos. 68-69 & 70

Godavery — Passing Orders
on the Note from the
Chief Engineer for
Irrigation reporting on
the Circumstances & state
of the Godavery Anicut.

Despatched