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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	2642	Press
B.P. No.		Mis.
Dated	28 - 8	195
		6874

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
28th August 1874.*

Read the following papers:—

No. 697. From Major J. BEATTY, R.E., District Engineer, Godavery, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Dowlaisheram, 30th June 1874, No. 995.

As directed in G. O., No. 542, of 2nd March 1874, I have the honor to furnish herewith two plans of the Gopaulpore lunkas showing the position of the objectionable lunka grass plantations of the Zemindari of that village and what it is proposed to do to remedy the evils complained of.

2. The Zemindari of Gopaulpore claims all the lunkas, sandy shoals, and river bed up to low water-mark on her side of the river, and, by promoting the growth of lunka grass upon them, she has considerably extended the boundaries of the cultivable land appertaining to her village. But this process has caused serious damage to the western bank of the river, and threatens to endanger the bank channel of the Western Delta near Mullaishweram.

3. In 1859-60, as appears by the Revenue Survey Maps, there was a deep channel of considerable size on the Gopaulpore side of the river's bed, which is now rapidly disappearing, and if steps be not taken at once to keep it free from lunka grass, it will in a few years be completely silted up.

What has hitherto been a large detached lunka will thus be joined to the eastern bank, and the increased volume of water thus forced down the western branch must find space for itself by further damage to the western berm. I have shown on the plan* the probable river boundaries of 1859-60, found by enlarging the survey of that period.

* See Plan No. 2.

4. Plan No. 1 shows the survey of that part of the river recently made by the Officer now in charge of the range, Lieutenant Dorward, R.E., and he has marked upon it in pencil a line to the west of which he proposes that all lunka grass should be rooted up. His proposal is that Government should purchase from the Zemindari the right to uproot, and stop the planting of, all lunka grass to the west of that line.

5. On the other hand, should Government decide, as I understand from the orders already passed on the subject, that a margin of land is to be acquired along the existing lunkas, together with possession of the sandy shoals in the bed now claimed by the Zemindari, plan No. 2 would show what will have to be done. My proposal, then, would be to purchase a margin of 100 feet along the eastern bank of the river and around the detached lunka, to fix this boundary by*

* Or monoliths set in a foundation of concrete. masonry pillars, and to purchase the sandy shoals over which the Zemindari now claims the right of planting lunka grass.

I roughly estimate that this would cost as follows:—		RS.
40½ Acres on the eastern bank of the river, at Rupees 300 per acre...		13,950
63½ Acres on the large detached lunka, at Rupees 300 per acre ...		19,050
440 Acres of sandy shoal, at Rupees 20 per acre ...		8,800
Erecting twenty boundary pillars, at Rupees 6 each ...		120
Total...		41,920

But a more exact estimate may be framed, in communication with the Collector, as soon as Government has decided more definitely on the measures they approve of.

7. The question of river works for correcting the alignment of the Vassista Godavery must, I think, be left until the chart of the river now under construction has been completed, but there seems no reason why the question of lunka grass planting, as it affects the Zemindari of Gopaulpore, should not be at once settled.

8. I may mention that my predecessor used his best endeavours before leaving the district to get the survey completed and submitted to Government, but he found that the lines of river embankment had not been shown on the plan, and the Surveyor had to be ordered out again.

The Surveyor immediately after fell sick; finally, when the plan reached my office, I found it necessary to send out the man once more for a little additional information.

No. 698.

Note by the Chief Engineer for Irrigation.

THERE are several points in connection with the subject of the conservancy of the deltaic rivers which it appears necessary should be authoritatively determined.

2. In the order of Government, in the Revenue Department, communicated with G. O., Public Works Department, No. 941, of the 30th March 1871, it is stated that accretions to the bank of a river are the property of the owner of the land to which they adhere, and that new insulated formations in mid-stream are in non-navigable rivers the property of the owner of the nearest bank of the stream, and in navigable rivers are the property of the Crown, to which in such cases the bed of the stream is assumed to belong. Also that accretions to old island formations follow the rule as to accretions to the river bank.

3. First, then, it would seem to be necessary to decide whether the deltaic rivers in the Godavery and in the Kistna as well are to be considered navigable. They are navigable I think both in the sense that they are capable of navigation and that they are navigated. There has probably been less traffic on them since the delta canals have afforded greater facilities for navigation by other routes, but there are still boats upon them, and Government vessels are occasionally taken up and down. Both the Godavery and the Kistna are navigated to a considerable extent above the anicuts, and there consequently it would seem that all mid-stream formations are the property of the Crown.

4. In the next place are the sand banks to be considered as the bed of the stream, or as part of the land beyond the bed of the stream with which they are connected, sometimes apparently, sometimes under water. These rivers in the hot weather are confined to narrow channels, but it seems to be contrary to common sense to suppose that these narrow channels constitute the whole bed proper of the rivers, which for many months of the year occupies the whole width from bank to bank. There is, it is true, a difficulty in defining the bed in terms of the water-spread, owing to freshes of different heights extending to greatly differing

widths, and, of course, in all delta formations the whole delta is liable in high floods to be below river level, and but for the embankments would be submerged. Nevertheless it would seem to be practicable to establish a rational boundary at the level of ordinary freshes.

5. Again, whatever rights riparian landholders may have within the actual bed of the rivers, it would appear that they cannot have any claim to plant so as to reclaim land from such river beds. If they have such a right, river conservancy would be practically impossible. If they have not the right, it is very requisite that the practice, which is far too common, should be put a stop to. When the channel of a river takes a set away from any part of its banks—a matter of frequent occurrence—planting up at such places is very effectual in reclaiming ground, and the result is the steady and often rapid aggravation of the set. Strictly protective works it may be altogether proper for a landholder to have a right to carry out, though even those ought to be liable to the sanction of some authority.

6. In the present case there is the obliteration of one channel of the river going on, and a few years more of non-interference by Government, and planting by the Zemindari will probably result in all the water going to the west of what is now an island, except perhaps in very high freshes. The atlas sheet shows a channel between the island and the left bank of the river of much larger dimensions than that indicated by the

No. 94 Latitude 16°42'
Longitude 81°51'

Revenue Survey of 1859-60, and again this shows a larger channel than the more recent survey. Now from a glance at the atlas sheet it will be seen that this channel is in the direct line of the river, and that the enlargement of the main channel on the west of the island is an evil. All this part of the river is in very bad order; within a few miles there are the Kakrapurru, the Ramchendrapuram, and the Khundavelly sets, difficult matters to deal with under any circumstances, and of course it will never do to have the work which the Government may undertake liable to be upset or washed away by the proceedings of individual landholders.

7. With regard to the District Engineer's letter, and to the information given on the two survey plans transmitted by him, it seems necessary to ask whether all planting beyond the boundary shown in the Revenue Survey of 1859-60, beyond also the proper alignment of the river bank, and therefore clearly injurious, should not be removed by the Zemindari forthwith; secondly, whether all planting within the former, but beyond the latter line, should not be removed, compensation being given.

8. I do not recommend the acquisition of the land as shown on plan No. 2 in lake, at all events until it is decided whether the Zemindari has a right to those portions which have been improperly acquired. It would not do to make irregular acts so profitable as would be the case were Government to pay for land the formation of which has been effected by means which are not only very objectionable, but which have resulted in the washing away of an equal or perhaps larger extent of land elsewhere. Moreover, to do any tangible good, the strip of land to be acquired must be that immediately beyond the proper alignment of the river, and much of that shown on the plan is clearly altogether within the river bed. However, the question as to what land should be taken up and paid for is depen-

*Proceedings of the Madras Government, Public Works Department,
23th August 1874.*

dent upon the decision which may be arrived at on the points brought to notice in this note. Nothing effectual can be done to prevent the continuance of erosion on the one side of the river, while reclamation and consequently action directly tending to augment that erosion are going on upon the other bank.

OOTACAMUND, (Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
13th July 1874. Chief Engineer for Irrigation.

No. 699. ORDER THEREON, 28th August 1874, No. 2,442.

IRRIGATION, No. 63.

His Excellency the Governor in Council deems the subject brought to notice in the foregoing papers of very great importance, not only as regards the Godavery, but in connection with the conservancy of other navigable rivers, and His Excellency resolves, therefore, to transmit a copy of these proceedings to the Government Solicitor, with a view to the opinion of the Advocate-General being obtained as to whether the Government, as the law stands at present, have a right to prevent any action, on the part of individual proprietors of lands on the banks of such rivers, for the purpose of forming accretions or rendering natural accretions permanent; such action, tending as it does to alter the natural course of the river channels, being manifestly injurious to the interests of riparian landholders generally and rendering it impracticable to carry out and maintain efficient conservancy. It is desirable also that it should be decided what is from a legal point of view the bed of a river, in cases such as those referred to in which the width occupied by the water varies greatly at different times of the year. The Godavery, the Kistna, and the principal rivers of the delta of Tanjore have well-defined banks, the whole space or width between which is in ordinary full freshes occupied by the water, but, in the dry season, a large part of this space is not covered by water, but is occupied by sand or mud banks. The Government desire to learn whether riparian proprietors have any rights in respect to such allusion, and if so, what right. It is evident that the owners of the adjacent lands with which latter such banks are, when the river is low, continuous, cannot without grave inconvenience be permitted to treat them as private property and to plant them up, or otherwise alter them, so as to diminish the capacity of the general channel or bed of the river, and oblige it to enlarge itself by the erosion of the banks elsewhere; if therefore the Government cannot interpose their authority to regulate all proceedings within the river banks, it will be necessary to obtain powers enabling them to do so.

2. A closely connected question also and one of some importance is whether Government can frame regulations requiring riparian landholders to obtain permission to carry out strictly protective works. It is considered that these, however right and proper their object may be, need to be brought under some control, otherwise they may be so executed as to occasion injurious action elsewhere.

3. The Government are under obligation to prevent destructive floods by the regulation and embanking of these rivers, and they alone can effectively

*Proceedings of the Madras Government, Public Works Department,
28th August 1874.*

provide for their proper conservancy. Much has been and is being done to this end, and the growing importance of the interests which require protection renders it desirable that adequate powers for meeting this obligation should be available, and that the legal position of the Government should be defined and clearly understood; if this position be doubtful or ambiguous, such legislation as may be necessary will have to be obtained.

(True Extract.)
(Signed) J. MULLINS, Lieut.-Colonel, R.E.,
Joint Secretary to Government.

To the District Engineer, Godavery.
.. Chief Engineer for Irrigation.
.. Government Solicitor.
.. Financial Department.
.. Revenue ..

Exd. E. C. Shunker.
Spare Copies

Govt. of 1874

PUBLIC WORKS.

To

THE DISTRICT ENGINEER, GODAVERY.

Dated August 28th.

Recd.

Encl

G. O. 28th August 1874, No. 2,462.

AUGUST

No. 697-699

Conservancy of the Deltaic Rivers of the Madras Presidency.—Passing orders on the note by the Chief Engineer for Irrigation regarding the conservancy of the rivers, and forwarding a copy of the orders to the Government Solicitor with a view to the opinion of the Advocate-General being obtained on certain points.

Note by the Chief Engineer for Irrigation

There are several points in connection with the subject of the Conservancy of the Deltaic rivers which it appears necessary should be authoritatively determined.

Defect seen in the
sheet of the
riparian
proprietors - held
by the
accretions

2. In the order of Government in the Revenue Department, communicated with G. O. P. M. D. No. 941 of the 30th March 1871 it is stated that accretions to the bank of a river are the property of the owner of the land to which they adhere, and that new incutted formations in mid stream are in non-navigable rivers the property of the owner of the nearest bank of the stream, and in navigable rivers are the property of the Crown, to which in such cases the bed of the stream is assumed to belong. Also that accretions to old island formations follow the rule as to accretions to the river banks.

3. First then it would seem to be necessary to decide whether the Deltaic rivers in the Godavery, and in the Krishna as well, are to be considered navigable. They are navigable I think both in the sense that they are capable of

of navigation, and that they are navigated. There has probably been less traffic on them since the Delta Canals have afforded greater facilities for navigation by other routes, but there are still boats upon them, and Government vessels are occasionally taken up and down. Both the Godavary and the Krishna are navigated to a considerable extent above the aricents, and these consequently it would seem that all mid stream formations are the property of the Crown.

4. In the next place are the sand banks. To be considered as the bed of the stream, or as part of the land beyond the bed of the stream with which they are connected sometimes apparently, sometimes under water. These rivers in the hot weather are confined to narrow channels but it seems to be contrary to common sense to suppose that these narrow channels constitute the whole bed proper of the rivers, which for many months of the year occupies the whole width from bank to bank. There is

is it is true a difficulty in defining the bed in terms of the water, giving to freshes of different heights extending to greatly differing widths, and of course in all Delta formations the whole Delta is liable in high floods to be below river level, and but for the embankments would be submerged. Nevertheless it would seem to be practicable to establish a rational boundary at the level of ordinary freshes.

5. Again whatever rights riparian landholders may have within the actual bed of the rivers, it would appear that they cannot have any claim to plant so as to reclaim land from such river beds. If they have such a right, river conservancy would be practically impossible. If they have not the right, it is very requisite that the practice, which is so far too common, should be put a stop to. When the channel of a river takes a set away from any part of its banks, a matter of frequent occurrence, planting up at such places is very effectual in reclaiming ground, and the

the result is the steady and often rapid aggravation of the set. Finally protective works it may be altogether proper for a landholder to have a right to carry out, though even though ought to be liable to the sanction of some authority.

Shelton has the distinction of being the only one protective or aggressive

6. In the present case there is the obliteration of one channel of the river going on, and a few years more of noninterference by Government and planting by the Zemindar will probably result in all the water going to the West of what is now an island, except perhaps in very high freshes. The Atlas sheet shows a channel between the island and the left bank of the river of much larger dimensions than that indicated by the Revenue survey of 1859-60, and again this shows a larger channel than the more recent survey. Now from a glance at the atlas sheet it will be seen that this channel is in the direct line of the river, and that the enlargement of the main channel on the

Shelton's secret plan what will be the result

8094 - lat 16° 42' N
long 81° 57' E

the West of the island is an evil. All this part of the river is in very bad order: within a few miles there are the Kakrapurru, the Ramchendrapuram and the Khunda velly sets, difficult matters to deal with under any circumstances, and of course it will never do to have the work which the Government may undertake liable to be upset or washed away by the proceedings of individual landholders.

7. With regard to the District Engineer's letter, and to the information given on the two survey plans transmitted by him it seems necessary to ask whether all planting beyond the boundary shown in the revenue survey of 1859-60, beyond also the proper alignment of the river bank, and therefore clearly injurious, should not be removed by the Zemindar forthwith; and whether all planting within the former, but beyond the latter line, should not be removed compensation being given.

8. I do not recommend the acquisition of the land as shown on Plan No. 2 in Lake, at all events until it is decided whether the Zemindar is has a right to those portions which have been improperly acquired - It would not do to make irregular acts so profitable as would be the case were Government to pay for land the formation of which has been effected by means which are not only very objectionable, but which have resulted in the washing away of an equal or perhaps larger extent of land elsewhere - Moreover to do any tangible good, the strip of land to be acquired must be that immediately beyond the proper alignment of the river and much of that shown on the plan is clearly altogether within the river bed - However the question as to what land should be taken up and paid for is dependent

pendent upon the decision which may be arrived at on the points brought to notice in this note. Nothing effectual can be done to prevent the continuance of erosion on the one side of the river, while reclamation and consequently action directly tending to augment that erosion are going on upon the other bank.

Columbus L.H. M.C.
 Potomac
 13th July 1874
 Chief Engineer for Irrigation

To The Secretary to Govt P. M. &

P. W. 1874 Depart.
P. W. 1874 Depart.
No. 5089.

From.
The Chief Engineer for
Irrigation.

Dated 13th July } 1874.
Recd 13th Aug.

No.

G.O. No. 2448-28-74.

Regarding the
Consewancy of the
Seltai River of the
Madras Presidency.

Oblegs

A. 12. 1874

2442
P. W. D.

Proceedings of the Madras Government,
Under date the 187 .

Read the following:—

From
The District Engineer
Godavery (76 C. 1995 dated
30th June 1874).
Chungar Singh 1 — 7/15 July 1874.

His Excellency the
Governor in Council deems
the subject brought to no-
tice in the foregoing papers
of very great importance,
not only as regards the Go-
davery, but in connection
with the Consewancy of other
navigable rivers, and His
Excellency resolves therefore
to transmit a copy of
these

MA
HO

these Proceedings to the
Govt. Solicitor, with a view
to the opinion of the Advo-
cate General being ob-
tained as to whether the
Govt., as the law stands
at present, have a right
to prevent any action, on
the part of individual pro-
prietors of lands on the
banks of such rivers, for
the purpose of forming
accretions or rendering ^{natural accretions} ~~natural accretions~~
permanent, such action,
tending as it does to alter
the natural course of the
river channels, being ma-
nifestly

17/10 11
manifestly injurious to
the interests of riparian
land holders generally,
and rendering it impracti-
cable to carry out and
maintain efficient conser-
vation. It is desirable also
that it should be decided
what is ^{in the view of the Govt.} to be considered
the bed of a river, in cases
such as those referred to, in
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by the water varies greatly
at different times of the
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well defined banks, the whole space or width between which is in ordinary full freshes occupied by the water, but in the dry season, a large part of this space is not covered by water, but is occupied by sand or mud banks.

It is evident that the owners of the adjacent land do with which latter such banks are, when the river is low, continuous, cannot without grave inconvenience be permitted to treat them as private property

The Govt. desire to learn whether riparian proprietors have any rights in respect to such alluvion and if so what right

property and to plant them up, or otherwise alter them, so as to diminish the capacity of the general channel or bed of the river, and oblige it to enlarge itself by the crowning of the banks elsewhere; if therefore the Govt. cannot interfere their authority to regulate all proceedings within the river banks, it will be necessary to obtain powers enabling them to do so.

2. A closely connected question also, and one of some importance, is whether Govt.

Govt. can frame regulations requiring riparian landholders to obtain permission to carry out strictly protective works. It is considered that these, however right and proper their object may be, need to be brought under some control, otherwise they may be so executed as to occasion injurious action elsewhere.

3. The Government are under obligation to prevent destructive floods by the regulation and embanking of

1st and 2nd Pans S.
at Kelowna rather than
on the A.W. p. 5 app.
I must be distinct
for action on the 11th

12
of these rivers, and they alone can effectively provide for their proper conservation. Much has been and is being done to this end, and the growing importance of the interests which require protection renders it desirable that adequate powers for meeting this obligation should be available, and that the legal position of the Government should be defined and clearly understood; if this position be doubtful or ambiguous, such legislation as

as may be necessary will
have to be obtained.

by 30/7/74

GMM

See [illegible]
[illegible]
[illegible]

Circulated for orders

by 14/7/74

GMM

To the D.E. Godavery ✓
" Chief Engrs. for Rev. ✓
" Govt. Salinjtor ✓
" Financial Dept ✓
" Revenue ✓

Sign & L. Copies despt. 3/9/74.

697-699

See 1/8/74 Rd 10/7/74

4130

5209

How much of the
land is now in
the river bed

Dec 17/1/14

The matter treated
of in this paper is very
important. It practically
relates to the conservancy
and regulation of the
River beds of our large
rivers and their smaller
channels within which
may be termed their
banks proper.

The question arises
as to the

Has the Govt. any power
to conserve the river bed
within its proper banks—
including preserving the
alignments of the main
& minor channels in the
bed

bed, improving, reforming
and otherwise training the
channels when the heart
element has been lost.

Has the Government
the power to prevent
reparian owners from
carrying out works - e.g.
planting naval groves - either
for the purpose of causing
accretion or for making
natural accretion permanent?
without sanction? Have
they a right to encourage
the silting up of minor
channels?

G. O. 830 March 1871
No. 941. Dr. W. lays down
the Law correctly as regards
accretion. I quite agree
with Col. Mullins that
the purchase of 30 or 40 yds
on both sides of a great
river would be a
Command

The intention of these papers
has been, I think, to give
a general view of the
Kabbalah.

Robinson. - I do not recommend
the acquisition of these particular

[illegible]

10

Command of the Conservancy
is out of the question. It
costs £2,000 would be required
to purchase the mudflats
river bed a section and
fawbush in the one spot
under consideration and
many such sites. Yet
the necessity of taking some
power of Conservancy is
obvious & will prove really
beneficial to the public
though not occasionally
to private interest.

I think that the
question should be referred
to the Advocate General
to ascertain the State of
the Law with a view to
considering whether
legislation might not
be resorted to, if there
are no inherent powers
of the kind.

In the case before
us an extensive accretion
has

has been going on the
West or the main
river side of a bank
belonging to the Zamindars
of Jopulpore by which
the set of the river is
thrown on the opposite
bank & threatens serious
damage. The accretion
is being extended and
rendered permanent
by planting Kank grass.
On the East side of the
same bank a minor
channel (filled only
during freshes) which
intervenes between the
bank and the bank
is being silted up rapidly
by the use of Kank and
the river in fresh being
no longer relieved by
this minor channel.
Sets with increased
force against the
West

It wd seem that the
Govt has the power to
do all that is
necessary for the
maintenance of
navigation (as
to the navigation)
but in the matter
cannot the Adm.
Genl. & other
measures accordingly.

25/7

West bank. But the
District Officers seem
to despair of preventing
these things without
purchasing the right
to stop both processes
and rooting up all
Kank.
1877

Then can be no
doubt in my mind
that the State
has by the law
now law of the
land - full power.
but he has better
an act in force
the Act: but has
the law - as it is
has been decided
by the Courts - and
stands. 20/7

5089

4130 Dr. J. J. Goetz

Govt. of 1874 Madras.

PUBLIC WORKS.

20



The Best Days

Very soon
Grocery

Dated

Nach.

Encl. 2

G. O. 25 Aug No. 2442

Nos. 697-699.

insurance of the Deltaic
Rivers of the Madras Pre.

Incency Passing orders on
the Note by the Chief Eng^r
for Insn regarding the
conservancy of the rivers &
forwarding a copy of the
orders to the Gov^t Solicitor
with a view to the opinion of
the Advocate Gen^l being
obtained on certain points.