M.R.O. 1—77,006—8-6-37.

பொ. ப. புது எண். 24

———————— துறை.

குறிப்பிட்டவர் பொறுப்பிலிருக்கும் பதிவுக் கட்டினின்றும் எடுக்கப்பட்ட தாள்.

அச்சு / பல்வகை / வாலாயம் எண் ————————, தேதி ———————————— 198 .

எடுத்த தேதி.	எதன் பொருட்டு:			தாள் எடுக்கும் எழுத்தர் அல்லது சிற்றெழுத்தர் சுருக்கொப்பம்.	திருப்பிக் கொடுத்த தேதி.	சிற்றெழுத்தரின் சுருக்கொப்பம்.
	துறை.	நடப்பு எண்	ஆண்டு			

M.R.O. 1—77,006—8-6-37.

(1) Number of pages 2 + 1

(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2783 Press Mis.

538-539

Dated 26-9- 1864.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 26th September 1864.

No. 538. Read the following letter from Lieutenant-Colonel J. C. ANDERSON, R. E., Superintending Engineer, 2nd Division, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Masulipatam, 4th August 1864, No. 49 :—

SIR,

1 Plan of the proposed termination of the Masulipatam Canal.
1 Survey of the river and port of Masulipatam.
By banghy

1. Referring to G. O. No. 3,790, dated 21st December 1863, in which my attention is called to a project sanctioned in E. M. C. No. 253, dated 20th February 1856, for certain improvements to the tidal creek at Masulipatam, I have the honor to report that the condition of the locality has changed materially since the project in question was drawn up. It was at that time* intended that the Masulipatam Canal should terminate at the basin near the Petta, and that from thence to the tidal creek near the Fort, the old Petta canal should be made use of.

* G. O. No. 2,109, dated 12th November 1856.

2. The chief object of the proposed channel near Gilculdindi was to shorten the course from the bar to the Fort and Petta basin.

3. The Government in their Order No. 712, dated 4th April 1860, authorized certain deviations from the original design of the canal. Instead of dropping into tidal water at the basin, it was carried on to the Fort ditch, occupied a portion of it, and was dropped into the tidal creek a short distance beyond it. Captain Beatty, the Executive Officer at Masulipatam, who prepared the estimate for the amended line, proposed to continue the canal in nearly a straight line† from the Fort ditch to the mouth of the tidal creek, and had this been done, there would evidently have been no objection as far as facilities of navigation are concerned, of carrying out the proposed cut at Gilculdindi, as the new line of canal would have been exclusively adopted by all the boats passing to or from the sea.

† Shown in accompanying plan (in separate case).

4. I had however considerable misgivings as to the successful working of the line proposed by Captain Beatty, and to the position he selected for the tidal lock, which was about half way between the Fort and the mouth of the creek. My objection was partly grounded on the shifting nature of the mouth of the creek, and the possibility of its moving southward as it has moved northward, which would have had the effect of isolating the lock; and partly to the difficulty of excavating the channel in the first instance, and to the danger it would be subjected to of being seriously injured by the severe storms which occur occasionally during the north-east monsoon, and to which the channel would have been completely exposed.

5. I therefore decided on building the tidal lock close to the Fort ditch, and on tailing the canal into the tidal creek to the west of the village of Gilculdindi. This arrangement admitted of the canal being opened out to tidal water much sooner than would otherwise have been the case, while it could in no way interfere with any other arrangements that might be thought necessary at any future time.

6. The circuitous route that boats have to traverse between Gilculdindi and the bar is doubtless a serious inconvenience, and the Master Attendant is very anxious to have it removed. It has struck me that the second objection abovementioned to Captain Beatty's line, might be obviated by curving it so that it should enter the tidal creek at right angles to the direction of the latter, and be thus protected against the set of the tide; and I would recommend it in preference to the proposed cut from Gilculdindi, as it would leave the tidal creek in its natural state.

7. In the latter project an embankment across the creek was provided for, its object being to create a scour along the proposed cut, but it would be very difficult to construct this work in such a way as to secure it from being turned or breached, and, moreover, I consider that its effect must be injurious, as I think will be clear from the following considerations.

8. There is little or no inland drainage to aid the ebb tide in keeping the tidal channel clear. It has been acknowledged that its capacity has greatly deteriorated since the end of last century, and that the causes of this, are partly from the curtailment of the tidal inundation occasioned by banking off the swamps near the Fort, and partly by the diversion of the inland drainage which formerly entered the creek. This was all explained in my report dated 9th November 1863, No. 12. As these causes continue to operate, there would be reason to apprehend the eventual destruction of the creek altogether, were it not that when a high fresh occurs in the Kistna, a large body of water is carried over the low country towards Masulipatam and finds a vent to the sea through the tidal creek. The effect of this is apparent not only in the periodical deepening of the portion of the creek adjacent to the mouth, but also in the gradual progression of the mouth in a northerly direction. Captain Beatty has remarked on the plan he prepared for the terminus of the canal, that the portion of the creek near the mouth, that is the portion which runs nearly parallel to the sea, was deepened by the high freshes of 1859, and the soundings which have been made show that this portion becomes *suddenly* deeper than the arm of the creek which bends round to Gilculdindi, and there is no other way of accounting for this, otherwise than by the supposition that it is caused by the sweep of the floods from the Kistna; and I may add in confirmation of this view, that for the last four days, while the Kistna has been in fresh (about 15′ over the Anicut at Bazoarah), the whole of the country to the west of the canal near Masulipatam has been under water; that its level has continued for upwards of 48 hours at the height of 2′ 4″ above ordinary high water, at the tidal lock, and in the tidal creek, the action of the ordinary tide having been for that time entirely interrupted. The effect of such a body of water cannot fail to have a beneficial effect on the creek, and were a bund to be thrown across the latter, there would either be great difficulty in securing it, or if it stood, there would be reason to apprehend the formation of a new outlet to the south and consequent destruction of the present mouth. In short the mouth of the creek is kept open mainly by an occasional scour from the Kistna floods, and the effect of a bund across the channel through which they pass to the sea, could not fail to be injurious.

9. In the report reviewed in G. O. No. 3,790, dated 21st December last, it was proposed to gather the drainage of the tract of country between the Kistna and the Masulipatam Canal into one channel, and to conduct it to the tidal creek. As was then explained, a portion of this formerly passed into the creek, but from neglect and other causes, the drainage channel in its approach to the creek had become silted, and the supply turned in another direction. I would respectfully beg for a re-consideration of this project, and I would also solicit instructions as to the course to be pursued in regard to the improvement of the navigable channel from the tidal lock to the sea: whether, after the above explanation, the cut from Gilculdindi and bund across the tidal creek should be carried out, or the line of canal continued from the lock to the mouth of the creek, as proposed above in paragraph 6. It was intended that the latter should have been executed from the sanctioned estimate for the canal, but it has proved barely sufficient to complete the channel to its present limit, and a separate estimate for the cut to the creek will therefore have to be submitted, should the Government approve of the work.

No. 539. ORDER THEREON, 26th September 1864, No. 2,783.

In G. O. 21st December 1863, No. 3,790.

1. In the foregoing letter, the Superintending Engineer, 2nd Division, submits the report called for by Government upon the relative advantages of two projects for improving the navigation of the tidal creek which connects Masulipatam with the sea. Of the two projects in question, one was sanctioned by Government on the 20th February 1856, but has never been carried out; while the second was submitted by Colonel Anderson upon the 9th November 1863.

2. The Government observe that the two projects are quite distinct. The object of the original scheme was to shorten, straighten, and narrow the passage to the sea, so as to increase the power of the ebb and flow of the tide to scour out a channel, and to keep it clear. Colonel

Proceedings of the Madras Government, Public Works Department, 26th September 1864.

Anderson's scheme provides for diverting a larger quantity of surface drainage and flood water into the creek, and thereby augmenting their power to clear out periodically and deepen the present tortuous and disproportionately capacious channel.

3. Upon a careful review of the two schemes, and looking to the uncertainty of such works as have been proposed for the improvement of the harbour, and to the greater importance of other undertakings in the Kistna District, the Government are of opinion that both projects may advantageously be postponed.

(True Extract.)

(Signed) J. H. M. SHAW STEWART, Major, R. E.,
Deputy Secretary to Government.

To the Superintending Engineer, 2nd Division.

Exd. S. T. Augustin.

5

Supt Engr Office 2nd Dn
Masulipatam
4th August 1864.

No 349.

From Lieut Col J. C. Anderson R.E.
Supt Engineer 2nd Dn

To The Secretary to Government
of P.S.

Plan of the proposed termination of the Masulipatam Canal.
Survey of the Outer Port of Masulipatam.

Sir

Referring to G.O. No 3790 dated 21st December 1863 in which my attention is called to a project sanctioned in G.M.C. No 253 dated 20th February 1856 for certain improvements to the Tidal Creek at Masulipatam, I have the honor to report that the condition of the locality has changed materially since the project in question was drawn up. It was at that time intended that the Masulipatam Canal should terminate at the Basin near the Petta, and that from thence to the Tidal Creek near the Fort, the old Petta Canal should be made use of.

× G.O. No 2109 dated 12th November 1856.

2. The chief object of the proposed Channel near Gilcauldie was to shorten the course from the Bar to the Fort and Petta Basins.

3

3

The Government in their order No 712 dated 4th April 1860 authorized certain deviations from the original design of the Canal. Instead of dropping into Tidal water at the Basin, it was carried on to the Fort ditch, occupied a portion of it, and was dropped into the Tidal Creek a short distance beyond it. Captain Beatty, the Executive Officer at Masulipatam, who prepared the Estimate for the amended line proposed to continue the Canal in nearly a straight line × from the Fort ditch to the mouth of the Tidal Creek, and had this been done, there would evidently have been no objection as far as facilities of Navigation are concerned, of carrying out the proposed Act at Gilenldindi, as the new line of Canal would have been exclusively adopted by all the boats passing to or from the Sea.

× shews in accompg plan (in separate case)

4 I had however considerable misgivings as to the successful working of the line proposed by Capt. Beatty, and to the position he selected for the Tidal Creek, which was about half way between the Fort and the mouth of the Creek. My objection was

partly grounded on the shifting nature of the mouth of the Creek and the possibility of its moving southward, as it has moved Northwards: which would have had the effect of isolating the Lock; and partly to the difficulty of excavating the Channel in the first instance, and to the danger it would be subjected to of being seriously injured by the severe storms which occur occasionally during the N. E. Monsoon, and to which the Channel would have been completely exposed.

5 I therefore decided on building the Tidal Lock close to the Fort ditch, and on taking the Canal into the Tidal Creek to the west of the Village of Gilenldindi. This arrangement admitted of the Canal being opened out to tidal water much sooner than would otherwise have been the case, while it could in no way interfere with any other arrangements that might be thought necessary at any future time.

6 The Circuitous route that boats have to traverse between Gilenldindi and the Bar is doubtless a serious inconvenience, and the Master Attendant

to very considerable to have it removed.
It has struck me that the second objection above mentioned to Captain Beatty's line, might be obviated by giving it so that it should enter the Tidal Creek at right angles to the direction of the latter, and be thus protected against the set of the tide; and I would recommend it in preference to the proposed cut from Gilmandie, as it would leave the Tidal Creek in its natural state.

7 In the latter project an Embankment across the Creek was provided for; its object being to create a scour along the proposed cut; but it would be very difficult to construct this work in such a way as to secure it from being turned or breached, and moreover I consider that its effect must be injurious ~~by stopping the capacity of the receptacle for the Tidal Inundation~~: as I think will be clear from the following Considerations.

8 There is little or no inland drainage to aid the ebb tide in keeping the tidal Channel clear. It has been

acknowledged that its capacity has greatly deteriorated since the end of last Century, and that the causes of this, are partly from the curtailment of the Tidal inundation occasioned by banking off the swamps near the Fort, and partly by the diversion of the inland drainage which formerly entered the Creek. This was all explained in my report dated 9th Novr 1863 No 12. As these causes continue to operate, there would be reason to apprehend the eventual destruction of the Creek altogether, were it not that when a high freshet occurs in the Kistna, a large body of water is carried over the low Country towards Masulipatam and finds a vent to the Sea through the Tidal Creek. The effect of this is apparent not only in the periodical deepening of the portion of the Creek adjacent to the mouth, but also in the gradual progression of the mouth in a Northerly direction.

Captain Beatty has remarked on the plan he prepared for the termination of the Canal, that the portion of the Creek near the mouth, that is the portion

which runs nearly parallel to the
Sea was deepened by the high freshes
of 1859 and the soundings which have
been made show that this portion
become suddenly deeper than the rest
of the Creek which leads round to
Pilcadinde and there is no other way
of accounting for this, otherwise
than by the supposition that it is
caused by the scour of the floods
from the Kistna. and I may add
in confirmation of this views, that for
the last 4 days while the Kistna has
been in freshet / about 15' over the Anicut
at Bezwarah / the whole of the Country
to the west of the Canal near Madali-
palam has been under water, that
its level has continued for upwards
of 48 hours at the height of 2' 4"
above ordinary N. water at the Tidal
Lock, and in the Tidal Creek, the action
of the ordinary tides having been for
that time entirely intercepted. The
effect of such a body of water
cannot fail to have a beneficial
effect on the Creek, and were a bund
to be thrown across the latter, there would
either be great difficulty in securing

it, or if it existed, there would be
reason to apprehend the formation
of a new outlet to the South and Con-
sequent obstruction of the present
Mouth. In short the mouth of the
Creek is kept open mainly by an
occasional scour from the Kistna
floods, and the effect of a bund across
the Channel through which they pass
to the Sea, could not fail to be
injurious.

In the report reviewed in G.O.
No 3790 dated 21st December last, it was
proposed to gather the drainage of the
tract of Country between the Kistna
and the Masulipatam Canal into one
Channel, and to connect it to the Tidal
Creek. It was then explained a portion
of this formerly passed into the
Creek, but from neglect and other causes,
the drainage Channel in its approach
to the Creek had become silted,
and the supply turned in another
direction. I would respectfully
beg for a reconsideration of this
project and I would also solicit
instructions as to the course to be
pursued in regard to the improvement
of the

of the Rainy Pebble Channel from the Tidal Creek to the Sea; whether after the above explanation, the Cut from Gilculdinie and Bundaroo to the Tidal Creek should be carried out or the line of Canal continued from the Creek to the Mouth of the Creek as proposed above in para 6.

It was intended that the latter should have been executed from the sanctioned Estimate for the Canal, but it has proved barely sufficient to complete the Channel to the present limit: and a separate Estimate for the Cut to the Creek will therefore have to be submitted should the Government approve of the work.

I have the honor to be,

Sir,

Your Most Obedt Servt

L. Wilder Lieut RE

Supg Engineer 2d Division

Rec'd February/56 at 86-87
" 12 Nov" —/— 1-2.
" 4 April /60 — 74-75
" 22d Dec" /63 — 549-550.

71/55

No 538.

Public Works Department
No 2783
Proceedings of the Madras Government
Under date the 26th Septr/64.

Read the following letter.

From the Supg Engr 2d Dn 2d Dn

Furnishing further information regarding certain improvements to the Tidal Creek at Maculipatam

Dated 4th August 1864

No 49.

I quite concur in the opinion that both Plans had better be postponed - I must remark however that the Govt should not be called upon to express a provisional opinion in such a matter - the opinion should be that if the proposed advances and should be submitted as such adopted or not by the Govt as it may seem fit: I think the arguments used in support of the plans for a Tidal Creek are fallacious, when it is remembered that the rise of Tide does not exceed 2 or 4 feet

in J. C. : 21st Decr/63
No. 3790

but I do not wish to discuss either proposition - we have enough on our hands without meddling with such projects

Mr

Chief Engineer
Govt

Public Works Department
No 2783
Proceedings of the Madras Government
Under date the 26th Septr/64.

Read the following letter.

From the Supg Engr 2d Dn 2d Dn

Furnishing further information regarding certain improvements to the Tidal Creek at Maculipatam

Dated 4th August 1864

No 49.

In the foregoing letter, the Superintending Engineer, 2nd Division, submits the report called for by Government upon the relative advantages of two projects for improving the navigation of the tidal creek which connects

One

Recd 4 Septr 1864 at 12 Hrs

No 2783 - 26th Septr/64 -

Public Works Department
Proceedings of the Madras Government
Under date the 26th Septr/64.

Read the following letter.

From the Supg Engr 2d Dn 2d Dn

Furnishing further information regarding certain improvements to the Tidal Creek at Maculipatam

Dated 4th August 1864

No 49.

In the foregoing letter, the Superintending Engineer, 2nd Division, submits the report called for by Government upon the relative advantages of two projects for improving the navigation of the tidal creek which connects

One

Manelipatam with the
Sea. Of the two projects
in question, one was
sanctioned by Govt.
on the 20th February 1856,
but has never been carried
out; while the second
was submitted by
Colonel Anderson upon
the 9th Nov/63.

2d. The Govt. observe
that the two projects
are quite distinct - The
object of the original
scheme was to shorten,
straighten, and narrow

to the Sea, 17
the passage so as to
increase the power of
the ebb and flow of the tide
to scour out a channel,
and to keep it clear.
Colonel Anderson's
scheme provides for
diverting a larger quan-
tity of surface drain-
age and flood water
into the creek, and
thereby augmenting
their power to clear out
periodically and deepen
the present tortuous
and disproportionately
capacious channel -

The

3. The Govt are of opinion that the effect of an occasional scouring force is certain to be very temporary, and that the only permanent agent for procuring a proper depth in the Channel of a tidal creek, like that of Masulipatam, is the ebb and flow of the tide out of and into the river and the interior basins with which it may be

connected. The action of this ebb and flow current is directly as the capacity of the inland basin, and inversely as the area of the river mouth; and although the swamp and backwaters at Masulipatam have undoubtedly greatly silted up, they still retain considerable capacity during spring tides.

4 For these reasons the Govt are inclined to think that the improvement of the navigation

would be more certainly effected by the original scheme, which was sanctioned in 1856, and the object of which was to direct the flow and reflow of the tides through a short, narrow channel, where the current would have some power, and would probably, with the assistance of the tail waters of the Canal and occasional floods, maintain a clear passage and perhaps act on the bar

5 Colonel Anderson also proposes the formation of a direct cut, to connect the terminal basin of the Canal with the sea, but the Government question the possibility of keeping such a cut clear, for want of a tidal scour, and they consider that it would not improve the harbour for the reception of the large craft which now frequent the port.

6. Upon reviewing the subject, and looking to the uncertainty of

of such works as have
been proposed for
the improvement of the
harbour, and to the
greater importance of
other undertakings in
the Western District,
the Government are
of opinion that both
projects may advantageously
be postponed.

M.

To The Supt Engineer
2nd Division

Desp. 27th September

44 152
02

Dy 5 W 1864 Depte
Pro: of Govt for Strs

No 2783

Pro: of the Collr of
Dy 26 Septr /64

Pro 5301 /64

The two projects
for improving the navigation of the tidal creek which connects Masulipatam with the Sea, Kistna District ordered to be postponed

No 538. 539.

No 95 Sept 1864 Dd 12th