MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT

G.O. No. Trans Misc.

Dated

Not to be folded or roughly handled

PUBLIC WORKS DEPARTMENT.
FORT ST. GEORGE,
14th September 1857.

No. 1744.

From

H. FORBES, ESQ.,

Acting Secretary to the Government of Fort Saint George.

To

COLONEL W. E. BAKER,

Secretary to the Government of India, D. P. W.

SIR,

With reference to my letters of the 29th May and 27th August last, Nos. 1022 and 1647, I am directed by the Right Honorable the Governor in Council to forward, for submission to the Government of India, the accompanying copy of a letter from the Chief Engineer, with enclosures as noted in the margin, relative to the survey of the Canal and drainage works at the Sinteral barrier on the Godavery.

12th August 1857, No. 2860.
Enclosures.
Letter from Lieutenant Haig dated 21st March 1857, No. 16.
Memo. by Colonel A. Cotton, dated 1st Aug. 1857, No 456.
Report from Lieut. Haig, dated 27th April 1857, marked A.
1 Estimate.
3 Plans.
1 Sketch.
1 Section of the Godavery.

2. The Government of India are aware from the letter of this Government, dated 8th December 1856, No. 2276, para. 6, that Lieutenant Haig was directed to undertake the survey, in consequence of his report on the navigation of the Godavery being deficient in information regarding the plans proposed for turning the Sinteral Barrier; and from para. 56 of Extract from the Minutes of Consultation of the 19th May last No. 961, reviewing that report, they will observe that this Government deferred formally communicating their views on the proposed improvements, until the receipt of the present information.

3. The operations reported on in the Chief Engineer's letter, now transmitted, have resulted in the submission of an estimate for a Canal of navigation and irrigation between Doomgoodiem and Davarapilly, amounting with the subsidiary works, but without locks which have been already estimated for, to Rupees 2,95,600. This estimate is in substitution of one* for the same object submitted by Lieutenant Haig in his general report, in connection with the proposed anicut at the Sinteral Barrier, and is Rupees 9,400 below the original estimate, though providing for a Canal six miles longer than that first proposed.

* Included in Rupees 8,45,000; vide para. 25 Chief Engineer's report dated 7th July 1856.

4. Lieutenant Haig's report having already been laid before the Government of India, with my letter of the 29th May last, together with the review† of it by this Government, it only remains for the Governor in Council to solicit the attention of the Government of India to the general scheme approved by this Government. It will be seen that as regards the monsoon navigation, the Governor in Council fully concurs in the views expressed by Lieutenant Haig, Colonel Faber the Chief Engineer, and Lieutenant Colonel F. Cotton, as to the practicability of opening out the navigation of the river for 8 or 9 months in the year. The difference between the present and former estimate for the works at the Sinteral Barrier being comparatively small, the cost of the entire project may still be computed at 29¼ lacs of Rupees, for which 473 miles of the Godavery and Wurdah could be opened, the average expenditure being Rupees 6,180 per mile; an amount which, as Lieutenant Colonel F. Cotton observed, "does not exceed or indeed

† Extract Minutes Consultation 19th May 1857, No. 961.

equal that which would be expended on a good common road of the same length." The Government of India will observe from the views recorded in paras. 56 to 59 of Extract from the Minutes of Consultation of the 19th May last, that the Governor in Council is entirely in favor of the scheme, and desires to give it his full support; but he is of opinion that, as an Officer is about to proceed to Europe and America, with the view of inspecting the principal lines of river navigation, and of obtaining information on various points connected with the subject of rivers generally, it would not be advisable to undertake any of the greater works comprized in Lieutenant Haig's reports, until he is able to bring the result of western experience and skill, in this Department of Engineering, to bear upon them. In the mean time, they would strongly recommend the scheme to the favorable consideration of the Government of India, in the hope that it may be early submitted to the notice of the Honorable Court, in order that a general expression of approval may be obtained so that on the return of the Officer who may be deputed to Europe and America, the Government of India may be free to sanction the project and no time may be lost in commencing operations on the river.

5. In his letter of the 12th August, the Chief Engineer has recommended that the estimate of Rupees 2,95,600 for the Canal between Doomgoodiem and Davarapilly should be entered in the Budget of 1858-59; but it will be seen that, for the reason stated in an Extract from the Minutes of Consultation of this date, this Government have not considered it expedient to comply with his recommendation.

6. I am desired to take this opportunity to solicit the attention of the Government of India to my letter of the 8th December 1856, No. 2276, in which a recommendation was conveyed for sanction to the immediate execution of works at the three barriers of Sinteral, Enchampilly, and Dewalamurry, at an expenditure of 35,600 Rupees, and for the maintenance of establishments at an annual cost of 5,760 Rupees, in view to the navigation being kept up for 9 months in the year, from the Coast to the Ronzaie falls on the Wurdah, 20 miles from Hingenghaut and 70 from Nagpore.

I have the honor to be,

Sir,

Your most obedient Servant,

(Signed) H. FORBES,

Acting Secretary to Government.

37

Central Office of Public Works

Fort St. George 12th August 1857

No. 2860

From The Chief Engineer

To The Secretary to Government

Public Works Department

Public Revenue

Canals of Navigation and Irrigation.

Ex. Financial Cons. 27th Aug. 1857. No. 2272. 8th Dec. 1856. Ex. Financial Cons. 2d Sept. No. 2945 18th May 1857.

1. I have the honor with reference to the Orders of Government noted on the Margin to forward an Estimate prepared by Lieut. Haig, District Engineer Eastern Godavery, for a Canal of Navigation and Irrigation between Doomgoodiem and Davarapilly on the Connections with the Anicut at the Entrab Barrier.—

2. The Estimate amounts to Rupees 2,95,600 (Two Lacs, Ninety five thousand, and Six hundred), comprising the Items shown on the Abstract, and the details of the works are given in the accompanying Report marked A.

3. Lieut. Haig observes in his letter, No. 16, dated 21st March last, that after a very careful examination of the Country between Doomgoodiem and Davarapilly he has decided on carrying the Canal parallel, and near to the river bank, both as being the most favorable line, the line of the 6 Miles longer than the one originally selected, and as passing Rudrachellum, the principal town in that part of the Country, and one of importance as a Commercial point of view. He has entered fully into the reasons for

for the trade between the interior and the Coast.—

4. The Estimate as originally received from Lieutt. Hay, being unaccompanied by either plans or Sections, and being altogether incomplete in detail, it was out of my power to submit it for the consideration of Government. Lieutt. Hay was therefore called upon to supply the omissions, his attention at the same time being directed to the points on which information was required.—

5. The Estimate it is observed, provides for embanking the Doomgoodiem Lunka Channel, both at its head and connexion with the Anicut and entrance lock, and at its embouchure, the necessity for the head Sluices being thus explained.—

6. The proposed levels of the crowns of the Anicut at Doomgoodiem, is to be 171 feet above the Sea, that of the flood seas and river bank at the junction of the Lebbery 18 Miles lower down, is 138 feet. The surface slope of the lower part of the Lebbery, when in flood, is supposed to be a little more than that of the Godavery, and is assumed at 1½ feet per Mile.—

7. The difference of level between the crown of the Anicut and the point of junction before noticed being 33 feet, a Contour line from the former would cut the Lebbery at a distance of 22 Miles above its Mouth, thus showing that a large extent of Country on the North bank of the Godavery may be brought under the influence of the Anicut irrigation.—

8. Lieutt. Hay proposes to give to the Canal a slope of 3 inches per Mile, which will bring the water out on the surface of the land at 8 Miles below the Anicut. The sole of the canal is to be 15 Yards broad, and the discharge with an average Current of ¾ Mile per hour, is calculated at 50,000 Cubic Yards per hour, sufficient for the irrigation of 100 Sq.re Miles, which is about the area it is supposed may be watered west of the Lebbery.—

9. The main irrigation Channels will probably be taken off from near Dadderacholliam, and the provision of a Head Sluice, and Calingulahs to regulate the admission and delivery of the water down to that point, is essential.—

10. Although the Country to be benefitted by these works belongs alone to the Zemindar of Dadderacholliam, I do not agree with Lieutt. Hay in considering, that the cost of Constructing them should be borne by the Zemindar. It is far better and more for mine that Government should keep these works entirely in their own hands, remunerating themselves for the outlay, as in the Godavery and Kistnah Delta, by the levy of a water Tax.—

11. Lieutt. Hay's original Estimate for the Canal to Doomgoodiem, without locks was Rupees 30,000, or Rupees 9,100. only in excess of the one now submitted.—

12. In concluding his letter, Lieutt. Hay observes, that the whole project connected with the Central Barrier meets with the full approval of Colonel Cotton.—

13. The revised Estimate for the Project was finally received in the Central Office, from Lieutenant Hay

Esq.

on the 1st instant, and having been approved by Colonel Cotton, is now submitted with my full support and recommendation for its entry in the Budget of 1858/59. The only Charge and that most slight, for it allows for forming the Spoil banks properly, in excess of the Rates usual in the Rajahmundry District being that for earth work.—

Vide Memo: 450 dated 10th Aug.t 1857

The Executive Engr. Report, respecting the measures he would recommend to be furnished during his absence from India, forms the subject of a Separate Letter.—

I have the honor to be,

Sir,

Your Most Obedient Servant.

W.d Fraser Colonel

Chief Engineer

M.f

W.ks Engr. N.C.

To

The Secretary to Government

Public Works Department

List of Enclosures

1 Letter from Lt. Haig 2nd Engr Upper Gody. Dated 21 March 1857 No 16
1 Return by Col.l Cotton No 1956 Dated 1st Augt 1857
1 Report from Lt. Haig Dated 27 April 1857 marked A
1 Estimate
3 Plans
1 Sketch
1 Section of the Inner Embankment

Public Works Dept

No 1743.

Extract from the Minutes of Consultations

Under date the 11th August 1857.

Read the following

-ing letter from the

Chief Engineer.

Here enter 12 August 1857
No 2860

Ex Minutes Cons. 8 Dec. 1856
No 2272.
Do — Do — 19 May 1857
No 1145

In this reference
to the orders noted in
the margin, the Chief
Engineer forwards a
letter from Lieutenant
Hoig, District Engi-
-neer upon Godaveyy
submitting an Estimate
for a Canal of navi-
-gation and irrigation

Coteeru

Public Works Dept
No 1743
Dated 11th August 1857
Rec'd 13th August 1857
Chief Engineer

Public Works Dept
No 1743
Dated 11th August 1857
Rec'd 13th August 1857
Chief Engineer

Public Works Dept
No 1743
Dated 11th August 1857
Rec'd 13th August 1857
Chief Engineer

Fernando under date 22nd Ultimo
Govt. Consultation No 1145 dated 19th February 1857
Extract of Letter No 2272 dated 8th December 1856
Public Works Department, I have the honor to submit
Canals of Navigation & Irrigation &
accompanied with Memorandum
Central Division Godaveyy
Executive Engineer
Rajahmundry 1st July 1857

Rec'd 13th July

between Doompoodiem
and Dawarapilly, —
amounting with the
subsiding works, but
without locks which
have been already
estimated for, to Rs
295,600, as revised by
the Chief Engineer.

The present
Estimate is in sub-
-stitution of one for
the same object, sub-
-mitted by Lieutenant
Haig with his report
of the 3rd May 1856, in
connection with the
proposed Anicut at
the Sinteral barrier,
and is Rupees 9,400
below the original
Estimate, though provid-
for

for a Canal six miles
longer than that first
proposed. Lieutenant
Haig has carefully
examined the Country
lying between Doom-
-poodiem and Dawa-
-rapilly, and proposes
to carry the Canal
on a line parallel
and near to the
river bank, as being
a more eligible line,
and as passing Ba-
-drachellum, the
principal town in
that part of the
Country. The Canal
is to have a slope
of 3 inches per
mile, which will
bring the water
out

out on the surface of
the Canal 8 miles below
the Aniente. The width
of the Canal at the
bottom is to be 15 yards,
and it is calculated that
that, with an increased
current of about 3/4
miles per hour, the
discharge will be
50,000 Cubic yards per
hour, or quantity sufficient to irrigate
100 square miles,
which is about the
supposed extent of
land that may be
watered each week of the
Abbey. Colonel A.
Cotton, who has seen
almost the whole
line of the proposed
Canal

2, dated 6th Aug 1857

Canal, and to examine
the Entrenab Carriers
expressed his entire
concurrence in Lieut
Haig's views.

Lieutenant Haig
is of opinion that the
greater part of the cost
of the proposed works
should be borne by
the Zemindar of
Pondicherry, and
Country will
be irrigated by them
which it would be
useful the Zemindar
should to keep the
whole of the works
of the Carrier, estimated at 8½ Lacs,
for the sake of the
irrigation. Colonel
Faber

Faber does not think that the cost should be borne by the Peninsula, and is of opinion that the Government should retain the works entirely in their own hands, remunerating them for the outlay as in the case of the Salaries and Establishment Doctor, by the levy of a shilling per ton. He accordingly recommends that the proposed Estimate carefully examined, should be entered in the Budget of 1808/09.

4. As the Peninsula Peninsulary is in the Territory of

the Kingdom of the Netherlands, and does not belong to the British Government, it is not clear to the Right Honorable the Governor in Council how the duties can be levied, as proposed by Colonel Faber. This appears to the recommendation for the Estimate in the next Budget, the Government of the Hon. Court Cape Town should communicate to Europe and America, and to obtain information regarding the

the course pursued in those Countries in the treatment of stallions reviews, to enable him to carry out his scheme for improving the Navigation of the Godaveryi, it is not likely that the ~~Honourable Court~~ will intermediately sanction a project involving so large an expenditure as three lacs of Rupees and they therefore consider it inexpedient to enter the Estimate in the Budget. A Copy of Colonel Taberé letter, and of its enclosures, with the above resolution, will

will however be brought to the notice of the Government of India in connection with Lieutenant Taylor's report on the Navigation of the Godaveryi.

By providing the entry of the Estimate now submitted in the Budget for 1858/9, the Government would not be understood or in any way committed to- concert in the speech scheme of opening the navigation of the Godaveryi, or as de- -pending from the views expressed in para 56 of the Extract Minutes Consultation of the 19th

of May Court but they
consider that a recommendation to embark
in the projects will have
greatly increased force
when supported by the
experience which may
be gained ~~by the~~ ~~Secretaries~~
~~Navy~~ proposed tour
of our Officers
through Europe and
America, and that
the Honorable Court might
reasonably decline to
sanction so large an
outlay, when still uncertain whether the
plans proposed were
the best that could be
adopted.

J. Ogden to the Chief Engr
and 3 Navy Offrs

6 ... Court Order

Copy-in-cr of Letter L. E.
of 3rd Nov. 1857. No. 18.

Public Works 1857 Sept.
Rec'd Com: 15th Sept.

No 1743.

Extract Minute of Govt:
Dated 14th September, 1857.

From Govt of Bombay
Nov 1857 - Com: 8 Dec
78-79-

Observing on an Estimate for a Canal of Navigation & Irrigation between Doongoorpur & Dawarapilly, Bhopur Godavery Dist & to employ Rs. 29,500 that the Hon: Court be annually declared to sanction the Charge as an outlay, when all uncertain subjects the plans proposed were the least that could be adopted. —

No 52+53

From Govt of Bombay
No 1744 of 14th Sept 1857.

Recd Oct 15

No. 1744

To,

Colonel W. E. Baker

Secretary to the Government of India D. P. W.

Sir,

With reference to my letters of the 29th ulto and 27th inst. Regd last, Nos 1022 and 1047, I am directed by the Right Honble the Governor in Council to forward, for submission to the Government of India, the accompanying copy of a letter from the Chief Engineer, with the enclosures as noted in the margin, relative to the Survey of the Canal and drainage works at the Sirsteral Barrier on the Godavery.

2 The Government of India are aware from the letter of this Government, dated 8th December 1856, No 2276, para 6,

Read

12th Aug 1857 No 2860.

Enclosures.

1 Letter from Lieutenant Haig dated 25th July 1857 No 16.
1 Memo: by Colonel Cotton, dated 1st Augt 1857, No 1456
Report from Lieutenant Haig, dated 27th April 1857 marked A
1 Estimate.
3 Plans.
1 Sketch.
1 Section of the Godavery.

First Lieutenant Hogg was directed to undertake the Survey, in consequence of his Report on the Irrigation of the Godavery being deficient in information regarding the plans proposed for turning the Central barrier; and from para 56 of Extract from the Minutes of Consultation of the 19th May last. No 961, perusal of that Report, they will observe that this Government declared formally communicating their views on the proposed improvement, & invited the receipt of the required information.

The observations pertaining on the Chief Engineer's letter, now transmitted, have reference to the Submission of new Estimate for a Canal of Irrigation between Dowleswaram & Bommuru only, amounting to Rupees 8,45,000.

* Included in Rupees 8,45,000. Vide para 25 Chief Engineer's Report dated 7th July 1858.

* Public Dp. 19th May 1857 No 961.

not authorize works which have already estimated for to the amount 2,95,000. This Estimate is in substitution of one for the Annicut objected & submitted by Lieutenant Haig in his General Report, in connection with the proposed Anicut, at the Central barrier, and with Rupees 9,500 below the original Estimate, thereby providing for a Canal six miles longer than that first proposed.

Lieutenant Hogg's Report having already been before the Government of India, with my letter of the 29th January last, together with the Reports & Estimates by the Government, it only remains for the Government in Council to solicit the attention of the Government of India to the general scheme approved by this Government. It will be seen that Mr Hogg regards the

monsoon navigation, the
Governor in Council fully
concurs in the views expressed
by Lieutenant Colonel
Fraser the Chief Engineer, and
Lieutenant
Colonel F. Cotton, as to the
impracticability of opening and
the navigation of the river
for 8 or 9 months in the
year. The difference between
the present and former Estimate
=mate for the works at the
Sirhind branch being consi=
=derably small, the cost
of the entire project may
still be computed at 29/4 lacs
of Rupees, for which the 4/3rd
miles of the Godowery
and Ellendach could be opened,
the average expenditure being
Rupees 6/80 per mile, can
account which, as Lieutenant
Col. Cotton observed, does not
exceed or indeed equal that
which would be expended
upon any common road of

the same length. The Government
of India will observe from the
views recorded in paras 8 to 39
of Extract from the Consultation of the 19th May last,
that the Governor in Council
is entirely in favor of the scheme
and desires to give it his full
support, but he is of opinion
that as Lieutenant Colonel is
about to proceed to Europe and
America, with the view of in=
=specting the principal lines
of irrigation, navigation, and of
obtaining information on
connected points connected with
the subject of irrigation generally,
it would not be advisable
to undertake any of the greater
works comprised in our report,
until he is able to bring the
result of modern experience and
skill to bear upon them. In the
meantime, they would strongly
recommend the adoption of the

favorable consideration of the Go-
=vernment of India, in the hope that
it may be early submitted to the notice
of the Honorable Court, in order that
a general expression of approval
may be obtained so that on the return
of Lieutenant Hogg from Europe
and decision of the Government of
India may be given sanction in
the project and no time may
be lost in commencing operations
on the river.

In this letter of the
12th August, the Chief Engineer
has recommended that the Estimate
of Rupees 2,95,000 for the Canal between
Doorgoorieem and Damrapilly
should be entered in the Budget of
1858/59; but it will be seen that for
the reasons stated in an Extract
from the Minutes of Consultation
dated of this date, the Govern-
=ment have not considered
=ed it expedient

to

Sanction to
commencement of operations
=tions to be given by the Govern-
=ment of India at present, but
that the Chief Engineer should
be directed to submit a Report
=ort and Estimate for the Work
=k in time to reach England
by the Overland Mail of the
month of November next, and
=ext, and the Court will then
be prepared to give a decision
=ion upon the subject.

The Estimate of Rupees 2,95,000
=00 for the Canal between Doorgoorieem
and Damrapilly, should be
=ed to the Budget of 1858/59,
=59, and the Court will be
prepared to give a decision
=ion upon the Report and Estimate
=te which may be submitted
=ted by the Chief Engineer
=er in time to reach England
by the Overland Mail of the
month of November next.

Fort St. George
11th September 1857

Despatch of Letter to Govt
of 3d Nov. 1857 No 18.
29-11-1857

Public Works 1857 Dept.
Do. to Govt. 15th Sept.

No 1744.

To
The Secretary to the
Govt of India. D. P. W.
Dt 14th Sept. 57.

E. In C. 7 Dec. 1857 No 2276.
from Govt of India 10 to 30 57
Com. 8 Dec. 57 - 70 - 79 -

Forwarding the copy
of a letter with enclosures
from the Chief Engr. relative
to the Survey of the Canal &
Drainage works at Sukkur
Barrier on the Goderam