

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	2717	(2)	Press
B.P. No.			Mis.
Dated	20-9-	1875	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
20th September 1875.*

No. 468.

Read the following :—

No. 1,047.

Note by the Chief Engineer for Irrigation.

No. 929, 6th August.

THE following estimates have been submitted by the Superintending Engineer, Bellary :—

	RS.
Repairing the Pamady Channel from the Pennair	950
Constructing a head-sluiice to do.	1,260

Considerable care is evidenced in the preparation of these estimates, which are intended, first to prevent the entrance of floods into the channel from the river, and *secondly* to provide for the outlet of excessive land drainage from the channel. The report on the so-called repair estimate shows that the work therein included, with the exception of Rupees 45 for earth-works, is of the nature of improvements, the items called aprons being really small outlet weirs, and this being the case both estimates appear to be chargeable to Capital.

2. The head-sluiice design is good, but it is more expensive than appears to be necessary—

First,—The foundations are 8 feet in depth, the soil being sandy, but were the upper retaining wall and foundations of front wings made 6 feet deep, the rear retaining wall and returns as shown 8 feet, and were the rest of the work founded on a bed of concrete 18 inches deep extending across from 1 foot beyond the outside faces of the abutments, this with the 2 feet flooring superimposed would make an equally stable work at a considerable saving of cost.

Secondly,—The beam stones are expensive, the rate being Rupees $1\frac{1}{2}$ a cubic foot, and archwork may, with advantage, be substituted for them.

Thirdly,—The needle shutters require $11\frac{3}{4}$ cubic feet of teakwood, while a gate shutter and lifting spear would take about half this quantity, and if the shutter slide on angle irons it could be easily worked. If needle shutters be preferred they should be supported by a 3-inch round bar instead of a beam stone.

Fourthly,—The height of the vent need not exceed the full depth of water to be admitted to the channel, viz., $3\frac{1}{2}$ feet. Altogether it is thought that Rupees 1,000 at most will suffice for this sluiice if the above alterations be made.

It is noted on the section that extreme flood level is only $1\frac{3}{4}$ feet above ordinary flood level. The difference appears to be small, and care should be taken that there is no mistake on this important point.

3. With regard to the channel estimate the form of outlet proposed appears to be appropriate, but nothing has been said as to the area of country drained, the water from which is to be disposed of at the several escapes ; at the ends of all these outlets there must be wing revetments affording a margin above M. W. L., so that breaches may not continue to occur. It is not clear whether the effect of the head-sluiice in diminishing the quantity of water to be carried by or discharged from the channel has been taken into account.

Proceedings of the Madras Government, Public Works Department,
20th September 1875.

4. The revenue particulars of the channel are—

Ayacut area	{	Government	...	...	...	...	Acres	100
		Inam	...	...	...	...	"	73
Do. assessment	{	Government	...	...	...	...	Rupees	681
		Inam	...	...	...	...	"	460
Average revenue	...	...	...	...	...	...	"	784
Highest do.	...	...	...	...	...	...	"	1,053

Rupees 400 were expended in 1871-72 on repairs.

OOTACAMUND, (Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
11th September 1875. Chief Engineer for Irrigation.

No. 469. ORDER THEREON, 20th September 1875, No. 2,717.

IRRIGATION, No. 43-C.

Account.

THE following estimates are sanctioned:—

Bellary District.

Capital. Revenue.

RS. RS.

Pamady Channel ... 2,165 45

And the Capital expenditure will be met from the Minor New Works grant at the disposal of Government.

2. Care should be taken with reference to the remarks in the foregoing note that the design of the head-sluice is modified, as far as may be practicable, with a view to economy, especially in the matter of foundations; also that the level of maximum floods is correctly ascertained and a sufficient margin there above allowed.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the District Engineer, Bellary.
" Controller of Public Works Accounts.
" Chief Engineer for Irrigation.

Col. J. B. Mullins
Rev. Dept.

Exd. E. C. Shunker.

Spare Copies

No. 1047.
Note by the Chief Engineer for Irrigation.
The following estimates have been submitted by the Super Engineer, Bellary.
Enc. 8
No. 929-6.
Aug

Repairing the Pamady channel
from the Pennair - Rupees 950
Constructing a head sluice to do - " 1,260

Considerable care is evidenced in the preparation of these estimates, which are intended first to prevent the entrance of floods into the channel from the river and secondly to provide for the outlet of excessive land drainage from the channel. The report on the so called repair estimate shows that the work therein included with the exception of Rupees 45 for earth works is of the nature of improvements, the items called aprons being really small outlet weirs and this being the case both estimates appear to be chargeable to Capital.

2. The head sluice design is good but

it is more expensive than appears to be necessary.
1st the foundations are 8 feet in depth the soil being sandy, but were the upper retaining wall and foundations of front wings made 6 feet deep, the rear retaining wall and returns as shown 8 feet, and were the rest of the works founded on a bed of concrete 18 inches deep extending across from 1 foot beyond the outside faces of the abutments this with the two feet flooring superimposed would make an equally stable work at a considerable saving of cost.

2^{ndly} the beam stones are expensive the rate being $1\frac{1}{2}$ Rupees a cubic foot, and archwork may with advantage be substituted for them.

3^{rdly} the needle shutters require $11\frac{3}{4}$ cubic feet of teakwood, while a gate shutter and lifting spear would take about half this quantity, and if the shutter slides on rollers it could be easily worked. If needle shutters be preferred they should be supported by a 3 inch round bar.

instead of a beam stone.

4^{thly} the height of the vent need not exceed the full depth of water be admitted to the channel viz $3\frac{1}{2}$ feet.

Altogether it is thought that 1,000 Rupees at most will suffice for this sluice if the above alterations be made.

It is noted on the section that extreme flood level is only $1\frac{3}{4}$ feet above ordinary flood level. The difference appears to be small and care should be taken that there is no mistake on this important point.

5^{thly} With regard to the channel estimates the form of outlet proposed appears to be appropriate, but nothing has been said as to the area of country drained ^{the water from which} to be disposed of at the several escapes. at the ends of all these outlets there must be wing rivetments affording a margin above M.W.L. so that breaches may not continue to occur. It is not clear whether the effect of the head sluice in

it diminishing the quantity of water to be
carried by or discharged from the channel
has been taken into account.

The Revenue particulars of the
channel are

Adjacent area	Govt	100 acres
	Swam	73 "
" Assessment	Govt	681 Rupees
	Swam	460 "
Average revenue		784 "
Highest do		1053 "

Rupees 400 were expended in 1871-72
on repairs.

William Lewis Rendell Esq.
Chief Engineer for Irrigation

Cotacamund
11th Sept 75

To The Secretary to Government
S.H.B.

N^o 468

No 2717

S.H.B.

P. W. 1875 Deph
No: 6080

From

The Chief Engineer
for Irrigation.

11th Sept 75
D. 22nd 31075

E 8 No: 1047

Note on Ests. for
repairing and
constructing a head sluice
to the Pansady channel
near Bellary Dt.

No. 2717. 20-9-75.

No 2717 L. O. M. Arrears
Pro: of the Madras Government
Under date the 20th Sept 1875
Read the following:-

From
The Ch. Eng. for I/H.E. 220497 11th Sept 1975.

The following estimates
are sanctioned.

Bellary District.

Capital. Revenue

Rupees . Rupees

Panady channel - 3/165 - 45

and the capital expendi-
-ture will be met from
the Minor New Works
grant at the disposal
of Government.

2. Case should be taken with reference to the remarks in the foregoing note that the design of the head since

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[Signature]

Sc Dispa. 6-10-75

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2 Chhristianity with

N^o 468/69

2060

of 1875
PUBLIC WORKS.

Mr. H. H. Bellamy

Dated

Issued

Recd.

Encl.

C. O. 20 Sept No. 2717

Vol. 466-469

Panama Channel, Bellamy
The estimate amounting
to the 2200 for repairing and
constructing a head sluice
to the — sanctioned with
remarks.