

(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. 2747 (9) Press
B.P. No. Mis.

Dated 21-9-18 75.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
21st September 1875.*

Read the following:—

No. 1,049.

No. 513.

Note by the Chief Engineer for Irrigation.

IN Proceedings of Madras Government of the 23rd January last, No. 198, the approximate estimates for the embankments shown by the flood of October 1874 to be necessary for the protection of the whole country lying to the eastward of the Nursimmakondah hill and to the south of the Pennair were considered. Those estimates amounted to Rupees 80,000 and received provisional approval; but, owing to funds not being available, and to the necessity for employing all procurable labor on the ancient works, it was not thought advisable to undertake any of this protective work immediately.

2. The Superintending Engineer has now forwarded for sanction carefully prepared estimates, amounting to Rupees 1,10,400, for the embankments required. There is nothing remarkable about the intended arrangements. Flood level at various points has been ascertained, the differences in surface slope in various miles are probably fully accounted for by the conformation of the river, and by the great variations in the width between the banks. The embankment is to be $4\frac{1}{2}$ feet above this maximum flood level of, at any rate, the last 30 or 40 years. The top width of the bank is to be 6 feet generally, with slopes on either side of 2 to 1, while at places where the circumstances are peculiar, a wider bank with a puddle core, or a wall, will be substituted.

3. The circumstances would have been the better understood had the left or north bank of the river from opposite Nursimmakondah to the sea been shown on the survey, as then the propriety of the proposed alignment of the south embankments would have been more easily seen, but this alignment where no flood bank before existed appears to have been carefully selected, and though some portions of the old flood banks were not well laid out, it does not seem to be necessary to alter them.

4. The country to be protected has an area of about 150 square miles and is for the most part cultivated. It has within its boundaries the chief town of the district, numerous villages, and the whole of the irrigated lands under the Pennair ament. The inundations by the late floods were very extensive, and it would have been well had the Superintending Engineer obtained some definite information from the Collector as to the extent of damage done by them, on the south side of the river, in support of the large outlay now proposed. My visit to Nellore in February and March last, however, convinced me that the imperfect embankments which had been in existence for several years had exercised a marked influence in preventing the damage from flood waters on the south side approximating

Vide paragraph 42 of notes in Proceedings, Madras Government, 9th June 1875, No. 1,612. even to that which occurred to the north of the river, and therefore the sanction of the present estimates is recommended provisionally, and the Superintending Engineer should lose no time in obtaining and transmitting the information called for in the Government Order just referred to.

5. The planting of prickly-pea, as proposed at the latter part of paragraph 2 of the Superintending Engineer's letter, is objectionable. Such vegetation is already a sufficient nuisance in many parts of the district, and it is particularly desirable to

Proceedings of the Madras Government, Public Works Department,
21st September 1875.

keep all land washed by the river free from it. There are many other kinds of vegetation, such as grasses, screw pine, palmyras, korakapilly, neernochoy, casuarina, &c., which will stop drift sand.

6. A report is required of the amount which will have to be provided for the emergent work referred to in the concluding paragraph of the Superintending Engineer's letter.

OOTACAMUND, (Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
14th September 1875. Chief Engineer for Irrigation.

AGRICULTURAL—ORDINARY—ORIGINAL WORKS—MISCELLANEOUS.

ABSTRACT ESTIMATE, No. 4 of 1875-76.

Nellore District.

WORK.—Constructing a flood bank south of Pennair, east of Nursimmakondah.

Contents.	Description of Charges.	Rate.	Per	Amount.	Total.
		RS. A. P.		RS. A. P.	RS. A. P.
4,744½	Cubic yards of earthwork.	0 1 0	C. yd.	296 8 4	
11,027½	Do. of do. ...	0 1 1	"	746 10 3	
9,801½	Do. of do. ...	0 1 2	"	714 10 11	
34,796½	Do. of do. ...	0 1 3	"	2,718 7 10	
25,428	Do. of do. ...	0 1 4	"	2,118 13 0	
30,846½	Do. of do. ...	0 1 6	"	2,891 13 0	
65,106½	Do. of do. ...	0 1 7	"	6,442 13 6	
52,631	Do. of do. ...	0 1 8	"	5,482 6 4	
47,123	Do. of do. ...	0 1 9	"	5,154 1 3	
10,569½	Do. of do. ...	0 1 10	"	1,211 1 5	
12,307	Do. of do. for	0 2 10	"	1,410 2 10	
	breach near Mudiverty- palem.				
2,373	Cubic yards of puddle wall.	0 11 9	"	1,742 10 9	
19,067	Do. of earthwork ...	0 1 6	"	1,787 8 6	
560	Do. of sand banking.	0 0 10	"	29 2 8	
10,893	Do. of sand banking ...	0 1 0	"	680 13 0	
7,345	Do. of do. ...	0 1 1	"	497 5 1	
6,226½	Do. of do. ...	0 1 4	"	518 13 9	
64,040½	Do. of do. ...	0 1 5	"	5,666 11 6	
15,754	Do. of do. ...	0 1 6	"	1,476 15 0	
41,327½	Do. of do. ...	0 1 7	"	4,089 10 10	
232,658	Square yards of turfing ...	0 0 4	Sq. yd.	4,847 8 0	
73,126	Do. of Rabbit work ...	0 0 4	"	1,523 7 7	
1,481½	Cubic yards of rubble re- vetment.	2 8 0	C. yd.	3,703 12 0	
903	Do. of gravel for the breached portion of road and over ramps.	0 8 0	"	454 0 0	
	Superintendence and sun- dries.	5 0 0	Cent.	2,794 0 2	
					59,000 0 0
14	Ramps ...	...	Each.	150 0 0	2,100 0 0
	Planting nanel ...	...	"	...	2,000 0 0
	Compensation for land ...	...	"	...	4,500 0 0
	Grand Total ...	...	...	...	67,600 0 0

Proceedings of the Madras Government, Public Works Department,
21st September 1875.

AGRICULTURAL—ORDINARY—ORIGINAL WORKS—MISCELLANEOUS.

ABSTRACT ESTIMATE, No. 5 of 1875-76.

Nellore District.

WORKS.—Raising and improving the river embankment on the right bank of the Pennair from Nursimmakondah to the Nellore Anicut.

Contents.	Description of Charges.	Rate.	Per	Amount.	Total.
		RS. A. P.		RS. A. P.	RS. A. P.
295	Cubic yards of earthwork.	0 1 0	C. yd.	18 7 0	
3,210	Do. of do. ...	0 1 1	"	217 5 6	
2,018	Do. of do. ...	0 1 3	"	157 10 6	
1,198	Do. of do. ...	0 1 4	"	99 6 8	
241	Do. of do. ...	0 1 7	"	23 13 7	
1,807	Do. of do. ...	0 1 8	"	183 3 8	
21,130	Do. of do. ...	0 1 9	"	2,311 1 3	
34,049	Do. of do. ...	0 1 10	"	3,901 7 2	
39,469	Do. of do. ...	0 1 11	"	4,727 12 10	
23,523	Do. of do. ...	0 2 0	"	2,940 6 0	
3,669	Do. of do. ...	0 2 1	"	477 11 3	
12,219	Do. of do. ...	0 2 2	"	1,654 10 6	
3,375	Do. of do. ...	0 4 6	"	949 3 6	
136,426	Square yards of turfing ...	0 0 4	Sq. yd.	2,842 3 4	
4,803	Cubic yards of rubble pitching ...	1 6 0	C. yd.	6,604 2 0	
1,601	Do. of gravel backing ...	1 0 0	"	1,601 0 0	
324½	Do. of laterite stone in chunam ...	5 0 0	"	1,622 8 0	
47	Squares of pointing ...	2 0 0	Sqrs.	94 0 0	
167	Cubic yards of puddle wall ...	0 8 0	C. yd.	83 8 0	
	Superintendence and sun- dries ...	5 0 0	Cent.	1,505 7 3	
					32,020 0 0
8	Ramps ...	...	...	...	1,760 0 0
3	Outfall sluices ...	...	...	...	750 0 0
12	Lengthening and improving the existing irrigation and outfall sluices in the line of the embankment.	...	...	...	1,370 0 0
	Compensation for land ...	...	...	...	5,400 0 0
	Planting nanel ...	...	...	...	1,500 0 0
	Grand Total...	...	...	...	42,800 0 0

No. 514. ORDER THEREON, 21st September 1875, No. 2,741.

IRRIGATION, No. 47.

Account.

THE estimates, amounting to Rupees 1,10,400, for raising and extending the flood banks on the right or south side of the Pennair from Nursimmakondah to

the sea, a distance of 24.11 miles are sanctioned for entry in the Budget under Agricultural, Miscellaneous, but the provision of funds will depend upon the receipt of full information of the kind referred to in paragraph 3 of G. O., No. 1,612, of the 9th June last, and on the decision which may then be arrived at. It must be noticed that with that order before him, the Superintending Engineer should have had no difficulty in

Proceedings of the Madras Government, Public Works Department,
21st September 1875.

understanding what information, as to the effects of the inadequacy of the old flood banks during the recent flood, would be necessary in support of proposals to incur large expenditure. However strong the prima facie grounds may be for the construction of particular works, it is absolutely necessary that whenever the amount involved is considerable great pains should be taken to collect all the evidence available, so that the real importance of the project may be clearly understood, and that its relative importance compared with other schemes may be determined.

2. The report referred to in the concluding paragraph of the foregoing note should be made as soon as possible.

(True Extract.)

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

To the Officiating Superintending Engineer, Nellore.

- „ Chief Engineer for Irrigation.
- „ Controller of Public Works Accounts.
- „ Revenue Department.
- „ Collector of Nellore.

Exd. E. C. Shunker.

Spare Copies

Encl. 8.

No. 1049

Note by the Chief Engineer for Irrigation.

In Pro: Madras Govt of the 23rd Janu-
-ary last No. 178 the approximate esti-
-mates for the embankments shown
by the flood of October 1874. Were neces-
-sary for the protection of the whole
country lying to the eastward of the
Tussimma Kondra hill and to the south
of the Pennair - These estimates amounted
to Rupees 20,000 and received provisional
approval, but owing to funds not
being available, and to the necessity
for employing all procurable labor
on the aicut works, it was not
thought advisable to undertake any
of this protective work immediately.
2. The Super Engineer has now forwarded
for sanction carefully prepared esti-
-mates amounting to Rupees 11,00,000
for the embankments required. There is
nothing remarkable about the in-
-cluded arrangements. Flood level at

various points has been ascertained the differences in surface slopes in various miles are probably fully accounted for by the conformation of the river, and by the great variations in the width between the banks. The embankment is to be $6\frac{1}{2}$ feet above the maximum flood level of, at any rate, the last 30 or 40 years. The top width of the bank is to be 6 feet generally, with slopes on either side of 2 to 1, while at places where the circumstances are peculiar, a wider bank with a puddle core, or a wall, will be substituted.

3. The circumstances would have been the better understood had the left or north bank of the river from opposite Duraimma Rindas to the sea been shown on the survey, as then the propriety of the proposed alignment of the south embankments would have been more easily seen, but this alignment where no flood bank before existed appears

70.
to have been carefully selected and though some portions of the old flood bank were not well laid out, it does not seem to be necessary to alter them.

4. The country to be protected has an area of about 150 square miles and is for the most part cultivated. It has within its boundaries the chief town of the District, numerous villages, and the whole of the irrigated lands under the Pannair aicut. The inundations by the late floods were very extensive, and it would have been well had the Super Engineer obtained some definite information from the collector as to the extent of damage done by them, on the south side of the river, in support of the large outlay now proposed. My visit to Bellary in February and March last however convinced me that the imperfect embankments which had been in existence for several years had exercised a marked influence

in preventing the damage from flood
waters on the south side approximating
even to that which occurred to the north
of the river, and therefore the sanction ^{vide para 42 of notes}
of the present estimates is recommended ^{in P.M. 4. 7th}
provisionally, and the Super Engineer ^{June 1875}
should lose no time in obtaining and ^{Ex. 1613.}
transmitting the information called
for in the S.O. just referred to.

5. The planting of prickly pear as
proposed at the latter part of para 9
of the Super Engineer's letter is objectionable.
Such vegetation is already a sufficient
nuisance in many parts of the District,
and it is particularly desirable to
keep all land washed by the river
free from it. There are many other
kinds of vegetation such as grasses,
screw pine, palm grass, Korat Puffly,
Starnochy, Casuarina &c. which
will stop drift sand.

6. A report is required of the
amount which will have to be

Report 2591 W
provided for the emergent work re-
ferred to in the concluding para
of the Super Engineer's letter.

John Mullins Esq. M.P.
Chief Engineer for Irrigation

Dalacarrund 23
16th Sept 1875 3

The Secretary Government
P.H.O.

90.7 June 195 No 50-51
23 411-412

P. W. 1895 Dept.
No: 6108

From

The Chief Engr.
for Irrigation.

Dated 14th Sept 1895.
Recd. 20th

E. S. 1049.

Notes on Estimates
for embanking the
right bank of the Pennair
from the head in the
clash Hill to the southern
mouth of that river.

S. B. 2741. 21-9-75.

4-573

No 2741 S. B. 2741

Pro. of the Madras Government

Under date the 21st Sept 1895.

Read the following:-

From Mr. J. C. Engr for Irrigation (N. E. S. 1049) 14th Sept 1895.

The estimates amounting
to Rupees 1,10,400 for
raising and extending
the flood banks on the
right or south side of the
Pennair from Nussim
-mankonda to the sea
a distance of 34.11 miles
are sanctioned for entry
in the Budget under
Agricultural Miscellan-
-neous, but the provis-
-ion of funds will
depend upon the receipt
of full information of
the

Md
20/9

the kind referred to in para-
3 of L. O. No. 1612 of the 9th
June last, and on the de-
cision which may then
be arrived at. It must
be noticed that with that
order before him the
Superintendents should have
had no difficulty in under-
standing what informa-
tion, as to the effects of the
inadequacy of the old
flood banks during the
recent flood, would be
necessary in support of
proposals to incur large
expenditure. However-
strong the prima facie
grounds may be for the
construction of particular
works, it is absolutely
necessary that whenever
the amount involved is

132
considerable great pains
should be taken to col-
lect all the evidence
available, so that the
real importance of the
project may be clearly
understood, and that its re-
lative importance com-
pared with other schemes
may be determined.

2- The report referred
to in the concluding
paras: of the foregoing
L.O. should be made
as soon as possible.

Col. J. H. Helleore
Rev. Dept.
off. S. E. Helleore
Chas. for Engr
into L. brackets

Free 17

5- note Original. Helleore

sc drop - 9-10-75

61003

CHIEF OF BUREAU
PUBLIC WORKS

Superior
Kellie

Date

Time

Place

21 May 1944

523-514

full information of the
kind referred to in
3 of L. O. No. 1312 of the
June last, & on the day
which may then be
arrived at.

Hand letter on the right
side of the German
from Munich
the law - Estimate of
Rs. 110,400 for raising
extending the
sanctioned for entrance
the Budget under the
provision of funds to be
upon the receipt of