

(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. 2826 (9) Press
B.P. No. — Mis. —

Dated 30-9-1875

Not to be folded or roughly handled

Read the following papers:—

No. 1,046.

No. 682.

Note by the Chief Engineer for Irrigation.

GODAVERY EASTERN DELTA—VILLAGE DRAINAGE.

RAMACHENDRAPUR SUB-SECTION.—The cost of draining the twelve villages of this sub-section is estimated at Rs. 2,645. The villages are reported to be high, and such sanitary improvements as they require in the way of drainage are not due to the presence of delta irrigation works. Lieutenant Langley points out that draining these villages will be beneficial because they stand comparatively high, and improved sanitary condition of the ground on which the village houses stand will not be rendered useless by the damp surroundings of the villages, which can be removed, so far as removal in a delta is practicable, only by the general system of land drainage which is being carried out. Lieutenant Langley, therefore, recommends the draining of the higher villages of the delta first, and the postponement of that of the low-lying villages until the main and branch drains have been sufficiently advanced to render further measures in the same direction operative. The undersigned has already expressed the opinion that it is the general drainage of the country included in the delta which must be looked to as the means of introducing a better sanitary condition, and it has been noticed also that this work is for the most part necessary, not for the conveyance away of surplus irrigation water, but for giving a free outfall to rainfall drainage.

2. Major Beatty points out that the healthiness of villages would be much promoted by prohibiting wet cultivation within a moderate distance of the ground set apart for dwellings, and his remarks on this point appear worthy of consideration.

3. Agricultural funds do not seem to be applicable to meet any part of the cost of the village drainage of this sub-section.

OOTACAMUND,
9th September 1875.

(Signed) **JOHN MULLINS**, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 682-A. From Major J. BEATTY, R.E., District Engineer, Godavery, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Dowlaishweram, 8th May 1875, No. 475.

I HAVE the honor to submit, herewith, the plans, estimates, and reports on the Ramachendrapur sub-section of the village drainages.

Enclosures 50, as per List attached.

2. This group of twelve villages was selected by the Collector. It is situated* in the Eastern Delta, about 15 miles from Dowlaishweram, south of the Cocanada canal and with the Mundapett canal running through it. The surveys were prepared

* *Vide sketch Map.*

under the direction of Lieutenant Langley, R.E., who has furnished the estimates and reports.

3. The system of drainage proposed is the same as provided in the estimates of the Biccavole and Ralli sub-sections, and Lieutenant Langley's general report on the sub-section attached to this letter explains what has been done, so that it is unnecessary for me to repeat it here.

4. I do not consider that defects in the drainage of any of these village sites are in any respect due to the system of irrigation under the anicut, and I am therefore unable to recommend that any portion of the work should be carried out from Imperial Funds.

5. What was wanted in this part of the delta, as I believe will be found to be the case very generally, was the improvement of the main and branch drains; and, secondly, that the ryots should not be allowed to carry irrigation up to the very walls of their houses, as they now too frequently do.

6. The Biccavole, Tooliabaga, and Takee drains have this season been greatly improved, and the branch drains will in due course be attended to. The Revenue Authorities should, I think, take steps to put a stop to irrigation close up to the villages, by imposing a sufficiently high assessment on such land. I would propose reserving a clear space of 50 to 100 yards all round the village, on which irrigation should not be allowed to encroach, and the land be used for grazing or dry crops only.

7. The general abstract attached to Lieutenant Langley's report will show at a glance for the case of each village, the expenditure proposed, and other particulars.

Report on the Ramachendrapur Sub-section of the Eastern Delta Godavery Drainage Scheme.

PRELIMINARY REMARKS.—This sub-section consists of twelve villages chosen by the Collector, W. Foster, Esq. It contains Ramachendrapur and eleven other villages in its neighbourhood. A list of the villages giving the amount of the estimate for each, and various other particulars with regard to them, is given at the end of this report. The villages have been numbered in the list for convenience of reference.

2. ON THE PROPOSED METHOD OF DRAINAGE.—It is proposed to drain the streets of these villages in exactly the same manner as in the Biccavole sub-section, *viz.*, by cross-sectioning them. The method of doing this, which it was proposed to follow in the case of the Biccavole Sub-section, having been fully described in the report on that sub-section, it is unnecessary to describe it again. This sub-section is much easier to drain than the Biccavole sub-section, as the villages stand higher and there are several convenient drains. It will be seen from the table given at the end of the report that eight villages, *viz.*, Nos. 1, 2, 3, 5, 7, 8, 9 and 10, will be drained into existing drainage channels; one village, *viz.*, No. 4, partly into a canal and partly into an irrigation channel; one village, *viz.*, No. 6, into the village tanks; one, No. 11, into a canal; and one, No. 12, into a road-side drain which discharges itself into the Tooliabaga drain. Only two masonry works appeared necessary, one in the village of Ramachendrapur, to carry the drainage of the portion of the village which lies north of the main road, under that road, and the other in the village of Vella,

to carry a portion of the village drainage through the canal bank into the Coringa canal. These masonry works have been designed. In the case of catch-water drains where one runs into another at an angle more obtuse than 60°, the drain running into the other has in most cases in the plan been drawn curved. This should have been done in all cases. In carrying out the work these drains would of course be curved at the point of junction. In one or two cases the drainage of the whole, or of a portion, of a village, has been carried along a poonta to an existing drain. When the drain passing along the poonta has been represented in plan by a single blue line, it shows that the poonta has been treated as a street, and cross-sectioned in the same way as the village streets. It is considered that the amount of water which would at any time be running along the poonta would not be sufficient to impede locomotion, and the plan has the counter-balancing advantage that the poonta would for at least a portion of its course be properly drained. This would be of some importance to the villagers, as the poontas have no drainage at all, and are generally exceedingly swampy. When the drain along a poonta is represented on plan by two parallel blue lines, it must be understood that the drain is intended to be taken along the side of the poonta. The catch-water drains going round a village are always represented in plan by two parallel blue lines. These drains are drawn to scale as regards their length, but not as regards their breadth. Their depth is found by the levels on the plan, and their breadth is given in the estimate. They vary in depth from 1 foot to 2½ feet, and in section from 7 to 12 square feet. There is no difficulty in draining any of the villages in this sub-section.

3. ON THE WANTS OF THE VILLAGES AS REGARDS DRAINAGE.—The villages in this sub-section are not nearly so much in want of drainage as those of the Biccavole sub-section. I think Matsavaram, No. 5, is most in want of drainage. I have not had the chance of inspecting any of these villages during the monsoon, but I can see that most of them would be much improved by drainage. No. 12 does not want any drainage at all. Nos. 6, 7, and 8 are not much in need of drainage. The rest should be drained. There is this difference between the drainage requirements of this sub-section and of the Biccavole sub-section, that in the former *village* drainage is more required and is more likely to produce good results, and in the latter the *country* must be better drained before village drainage can be expected to be productive of much benefit. In the Biccavole sub-section the country is so low and swampy, that the villages have in almost every case been built on the highest ground that could be found. Consequently the streets in the heart of the village can easily be drained towards the outside, but this is only a partial relief, and the village site will remain damp until the country is properly drained. In the Ramachendrapur sub-section the general level of the village site is in most cases very little above that of the surrounding country, but then the surrounding country is high, and drains itself. Consequently all that is required is a proper system of village drainage which will drain the streets and lead off the water to the nearest drain, and the fall in every case is sufficient to make this an easy matter. In the next sub-section under notice—the Mundapett sub-section, all the surveying and levelling in which has been carried out under my superintendence—the country being nearer the head of the delta is still higher, there is little wet cultivation, the villages are scarcely raised at all above the level of the surrounding country, and only village drainage is required. Therefore, if the village drainage scheme means simply the drainage of villages and not of large tracts of country in addition, I would recommend that in carrying out the work a beginning be made at the head of the delta, where it will be sufficient only to drain the villages. Gradually, as the drainage of the delta is improved, the scheme might be extended to villages in the lower part of the delta. That the villagers will derive much benefit from a village drainage scheme, properly applied and strictly maintained is unquestionable, but as I mentioned in the report on the Biccavole sub-section, I do not anticipate from the carrying out of this scheme any great diminution in the amount of fever now present in the delta.

DOWLAISHWERAM,
25th March 1875.

(Signed) L. LANGLEY, Lieutenant, R.E.,
Assistant Engineer, Godavery.

Proceedings of the Madras Government, Public Works Department,
30th September 1875.

General Abstract of Drainage Work proposed in Ramachendrapur Sub-section.

Names of Villages.	Report of Village Munsifs on fever and necessity of drainage.	Where drained into.	ESTIMATES.		Total.	Remarks.
			Masonry	Earth-work.		
1. Palugurta ...	No answer received ...	Kulér drain ...	Rs.	Rs.	Rs.	} Zemindary village.
2. Someswaram ...	Fever, drainage required ...	Nadurbada drain ...	...	120	120	
3. Chellur ...	No answer received ...	Branch of Kulér drain ...	...	180	180	
4. Vella ...	Fever, drainage required ...	Coringa canal and irrigation channel ...	170	100	270	
5. Masavaram ...	Do. do. ...	Kulér drain ...	...	350	350	
6. Tadepalli ...	No fever, drainage not required.	Village tanks ...	...	20	20	
7. Yerupalli ...	No fever, no drainage required.	Drainage channel falling into Coringa canal ...	...	240	240	
8. Vutrumilli ...	A little fever, no drainage required.	Do. ...	...	70	70	
9. Mutemilli ...	A little fever, no drainage required.	Chellur drain ...	...	280	280	
10. Ramachendrapur ...	No answer received ...	Do. ...	160	440	600	
11. Pasalapudi ...	A little fever, drainage required.	Mandipet canal ...	...	160	160	
12. Ambikapalli ...	No fever, drainage not required.	Ramachendrapur road side channel.	...	15	15	
Total ...			...	...	2,645	

DOWLAISHWERAM,
25th March 1875.

(Signed) L. LANGLEY, Lieutenant, R.E.,
Assistant Engineer in charge, Drainage Scheme.

No. 683.

ORDER THEREON, 30th September 1875, No. 2,826.

IRRIGATION, No. 61.

Account.

ORDERS on these estimates will be deferred until it is decided from what funds drainage works which cannot be carried out from Agricultural Funds are to be executed.

(True Extract.)

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

To the District Engineer, Godavery.
" Chief Engineer for Irrigation.

Exd. S. T. Austin.
Spare Copies

No. 1046

Note by the Chief Engineer for Irrigation
Godavery Eastern Delta

Village Drainage

Ramachendrapur sub-section

The cost of draining the 12 villages of this sub-section is estimated at Rupees 2645. The villages are reported to be high and such sanitary improvements as they require in the way of drainage are not due to the presence of Delta irrigation works. Lieutenant Langley points out that draining these villages will be beneficial because they stand comparatively high and improved sanitary condition of the ground on which the village houses stand will not be rendered useless by the damp surroundings of the villages, which cannot be removed so far as removal in a Delta is practicable only by the general system of land drainage which is being

being carried out. Lieutenant Langley
therefore recommends the draining
of the higher villages of the Delta first,
and the postponement of that of the
low lying villages until the main and
branch drains have been sufficiently
advanced to render further measures
in the same direction operative. The
undersigned has already expressed the
opinion that it is the general drainage
of the country included in the Delta
which must be looked to as the means
of introducing a better sanitary con-
-dition, and it has been noticed also
that this work is for the most part
necessary not for the conveyance away
of surplus irrigation ^{water} but for giving a
free out-fall to rainfall drainage.

2. Major Beatty points out that the
healthiness of villages would be much
promoted by prohibiting wet culti-
-vation within a moderate distance
of the ground set apart for dwellings

7H 2
and his remarks on this point appear
worthy of consideration.

3. Agricultural funds do not seem
to be applicable to meet any part of
the cost of the village drainage of this
sub-section.

Wm. Langley, Lieut. Col. R.E.
Relief Engineer for Irrigation

Catmon, 7
9th September
1895

20. The Secy. to Government
B.H.C.

P. W. 1895 Sept.
No. 6329

From

The Chief Engr.
for Irrigation.

Dated 9 Sept.
Recd 4 Oct. 1895.
E. 4 No. 1046.

Note on Drainage Es-
timates of the Rama-
Chandrapur Sub Section,
Eastern Delta, Goda-
very Dr.

No. 2826. 30-9-75.

No 682

No. 2826 P. W. 1895
Pro. of the Madras Government
Under date the 30 Sept 75
Read the following:-
From the Chief Engr. for Irrig. (H. E. D. 1046) 9 Sept 75

Orders on these
estimates will be de-
ferred until it is de-
cided from what funds
drainage works which
cannot be carried out
from Agricultural Funds
are to be executed.

by 14/9
[Signature]

M
29/9

SC 1072- 31/5
18-10-75
D. S. Goddard
Ch. Engr. for Irrig. with 95 Enclosures

6329

Govt. of 1875 Madras

PUBLIC WORKS.

Mr. Mgr.

Godavery.

Date

Issued

Recd.

Each.

a. o. 30 Sept. No. 267

No. 182-183

Drainage of the Rama-
Chendrapur Sub section,
Eastern Delta, Godavery
Str.:- Intimating that
orders on the estimates
for the _____ will be
deferred until it is decided
from what funds drainage
work which cannot be de-
ferred out from the estimates
to be executed.

00/11/75