

*Proceedings of the Madras Government, Public Works Department,
5th February 1872.*

No. 94. Read the following Endorsement of the Acting Chief Engineer for Irrigation, dated Fort St. George, 13th January 1872, No. 97:—

From the Agent and Manager of the Madras Irrigation and Canal Company, to the Consulting Engineer for the Madras Irrigation and Canal Company, dated Madras, 6th August 1870, No. 337.

I HAVE the honour to forward the under-mentioned drawing and estimate of the distribution works in the 2nd Section for your information and early approval, with copy of the Chief Engineer's letter No. 1,162, dated 28th July 1870.

2. I shall feel obliged if you will move the Deputy Collector to take early action in the matter of the land plans referred to in paragraph 2 of Mr. Latham's letter.

Drawing and Estimate.

- 1 Drawing of masonry works in channels.
- 1 Revised estimate.
- 1 Abstract do.
- 1 Comparative statement.
- 1 Tabular statement of channels.

From the Chief Engineer, to the Agent and Manager of the Madras Irrigation and Canal Company, dated Kurnool, 28th July 1870, No. 1,162.

I HAVE the honour to submit (by book post), for the information and approval of the Consulting Engineer, estimate of the 2nd Section Distribution. These estimates show that the amount originally sanctioned in G. O., No. 2,509, of 9th August 1866, for sluices only, namely, Rupees 6,000, will suffice also for the channels from them with an allowance of 4 Annas an acre for subsidiary channels. No more sanction is, therefore, required.

2. The plans of these channels were sent to the Deputy Collector on the 11th April last, but as yet land on plan Nos. 21, 22 and 23 only has been made over, and no plans have been returned with the Deputy Collector's certificate of their accuracy. I sent another urgent application to the Deputy Collector on the 11th instant, as Mr. Dodson is anxious to complete his channels. The plans shall be forwarded to you immediately they are returned by the Deputy Collector.

From the Agent and Manager of the Madras Irrigation and Canal Company, to the Chief Engineer for Irrigation and Joint Secretary to Government, dated Madras, 4th July 1871, No. 290.

WITH reference to your predecessor's letter No. 363, dated 10th March 1871, I have the honour to forward the land plans of 2nd Section Distribution scheme asked for in the above letter and which I received from Kurnool on the 3rd instant.

From the Under Secretary to Government for Chief Engineer for Irrigation, to the Agent and Manager of the Madras Irrigation and Canal Company, dated Fort St. George, 21st July 1871, No. 94.

WITH reference to your letter No. 290 of the 4th July 1871, forwarding the land plans of the 2nd Section Distribution Scheme, Main Canal, I have the honour to request that you will be good enough to afford me information on the points noted below.

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2. G. O. No. 1,509 of the 9th August 1866, sanctions an estimate, amounting to Rupees 6,000, for the sluices of the 2nd Section. In

See Abstract Revised Estimate.

the documents forwarded by you, the cost of sluices is combined with that of the channels connected with them. I cannot therefore compare the actual cost of the sluices with the estimated cost (Rupees 6,000) reported in 1866. I should feel obliged, therefore, by your informing what was the cost of the work in the following form :—

	RS.
(a). Irrigation Sluices	
(b). Channels (Main)	
(c). Do., Subsidiary	489
	<u>6,000</u>

3. In the memorandum of the provisional Chief Engineer attached to the Proceedings of Government of the 9th August 1866, the ground in which the channels are to be cut is described as rocky and difficult. In the present detailed estimate the channels are said to be cut in black cotton or gravelly soil. The velocity of the water in one of the channels is as high as 12,000 yards per hour, in another 9,000 yards, in many 7,000 and upwards. It is difficult to understand how soil of the kind referred to, or, indeed, anything but compact gravel or rock, could stand such velocities, and I should wish to know whether this has been fully considered.

4. The rate (4 Annas) for channel cutting, especially in black cotton soil, seems to me to be very high. Is there any special reason for such enhanced prices.

From the Acting Agent and Manager of the Madras Irrigation and Canal Company, to the Acting Chief Engineer for Irrigation and Joint Secretary to Government, dated Madras, 6th January 1872, No. 3.

ENCLOSED I have the honour to hand you copy of the Acting Chief Engineer's letter No. 1,348 21st December 1871, and of Mr. Wilks' letter therein referred to, with reference to your letter, No. 94 of 21st July 1871.

From the Acting Chief Engineer, to the Agent and Manager of the Madras Irrigation and Canal Company, dated Kurnool, 21st December 1871, No. 1,348.

With reference to your No. 583 of 26th July 1871, I have the honour to send you a copy of Mr. Wilks' explanation therein called for, and also to remark that the soil, *where found*, in this part of the canal is black cotton overlying the rock, which is generally not deeper than 1 foot below the surface, so that it is difficult to describe accurately the soil to be worked in making the irrigation channels.

From C. H. WILKS, Esq., Conservancy Engineer, to the Chief Engineer of the Madras Irrigation and Canal Company, dated Kurnool, 13th November 1871, No. 522.

REFERRING to your No. 710 of 18th October 1871, enclosing the Agent's No. 583 of 26th July 1871, I have the honour to send you the cost of the details as nearly as I can separate them.

2. With reference to paragraph 2, the channels referred to are so exceedingly small that there is no danger of any damage occurring to any of them, as they are all now running well and freely and are mostly in hard soil; there is no practical difficulty in the high velocity.

3. I may here remark that I have found much more difficulty in keeping channels with slight fall in order than those with a greater fall, and fact that there has been a tendency to over estimate the effect of the water at tolerably high velocities.

4. Unless the channels are very large I should never give less than 3 feet per mile.

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Statement showing the cost of Irrigation Sluices and Channels (Main and Subsidiary) in the 2nd Section.

Item.	Amount.
	RS. A. P.
Cost of Irrigation sluices	4,036 6 9
Cost of Channels (Main) up to 31st October 1871	Rs. 1,046 3 10
Required for completion of do.	428 5 5
	1,474 9 3
Required for subsidiary channels	489 0 0
Total...	6,000 0 0

(Signed) C. H. WILKS,
Conservancy Engineer.

In their Proceedings of the 9th August 1866, Government sanctioned an estimate, amounting to Rupees 6,000, for the construction of twenty-five irrigation sluices in the 2nd Section of the canal pending the receipt of a further estimate, accompanied by land plans, for the distribution channels leading from those sluices. In August 1870, the Agent of the Company forwarded to the Consulting Engineer, for submission to Government, a revised estimate for the 2nd Section Distribution Scheme, together with a comparative statement, table of channels, and a plan of the masonry works, but these documents were not accompanied by the land plans showing the position of the channels, and the Consulting Engineer was, therefore, unable to investigate the project. It was only on the 5th July 1871 that these plans reached this office, and a reference to the Agent was then necessary on the subjects alluded to in my

- 1 Drawing of masonry works in channels.
- 1 Revised estimate.
- 1 Abstract do.
- 1 Comparative statement.
- 1 Tabular statement of channels.
- 6 General plans of Distribution Channels.

letter of the 21st July 1871, herewith forwarded. The reply of the Agent to that communication has just been received, and I now forward the estimates and plans, as per margin, for the approval of Government.

2. The present estimate for sluices and channels both amounts to Rupees 6,000, or to the same sum as was originally sanctioned for sluices alone, and this includes a charge for subsidiary channels at the rate of 4 Annas per acre.

3. The cost of the project under the several heads is estimated as follows :—

	RS.	A.	P.
Irrigation sluices	4,036	6	9
Main channels	1,474	9	3
Subsidiary channels, 4 Annas per acre, on 1,956 acres	489	0	0
Total...	6,000	0	0

As already stated the saving on the sum originally estimated for the sluices, amounting to Rupees 1,963-9-3, will suffice to complete the Distribution Scheme, and sanction for further outlay is not required. The cost of distribution per acre commanded is Rupees 3-1-1.

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5th February 1872.*

* 4. The Chief Engineer in his letter to the Agent, No. 1,348, dated 21st December 1871, explains that the soil through which the channels run is black cotton overlying rock, which is not generally deeper than one foot below the surface. Of course this circumstance would limit the effect of the high velocities due to the very considerable fall proposed for the channels, and as in point of fact it appears that the water portion has already been excavated, it is expedient to recommend the project as now planned for approval.

(Signed) A. deC. SCOTT, Captain, R.E.,
For Acting Chief Engineer for Irrigation.

No. 95. ORDER THEREON, 5th February 1872, No. 349.

IRRIGATION, No. 8.

THE revised estimates amounting to Rupees 6,000 for distribution works in the 2nd Section of the Madras Irriga-

tion and Canal Company's Canal are sanctioned.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Chief Engineer for Irrigation.

„ Agent and Manager of the Madras Irrigation and Canal Company.

Encl. E. C. Shanker.

1297.
the Agent and Manager, Madras Irrigation and Canal Company.

7 of the 6th August 1870, forwarding Drawing and Estimate of the Distribution Works of the 2nd Section Main Canal.

dated 4th July 1871. Forwarding the Land Plans of the 2nd Section Distribution Scheme.

Agent and Manager. No. 94 dated 21st July 1871. Submitted to Government.

15.

In their proceedings of the 9th August 1866, Government sanctioned an estimate amounting to Rs. 6000 for the Construction of twenty five Irrigation Sluices in the 2nd Section of the Canal pending the receipt of a further Estimate, accompanied by land plans, for the Distribution Channels, leading from those Sluices. In August 1870, the Agent of the Company forwarded to the Consulting Engineer for submission to Government, a revised Estimate for the 2nd Section Distribution Scheme together with a Comparative Statement, table of Channels, and a plan of

the masonry works, but these documents were not accompanied by the land plans showing the position of the channels and the Consulting Engineer was therefore unable to investigate the project. It was only on the 5th July 1871 that these plans reached this Office, and a reference to the Agent was then necessary on the subjects alluded to in my letter of the 21st July 1871 herewith forwarded. The reply of the Agent is that communication has just been received and I now forward the Estimates and Plans as per inc. for the approval of Government.

1. Drawing of Masonry Works in Channels
 1. Revised Estimate
 1. Abstract - do -
 1. Comparative Statement
 1. Tabular Statement of Channels
 1. General Plan of Distribution Channels.

2. The present Estimate for Sluices and Channels both, amounts to Rs 6000 or to the same sum as was originally sanctioned for Sluices alone, and this includes a charge for Subsidiary Channels at the rate of 4 annas per acre.

3. The cost of the project under the several heads is estimated as follows.

Irrigation Sluices	4036-6-9
Main Channels	1474-9-3
Subsidiary Channels -	
4 annas per acre on	489-0-0
1956 acres	
Total Rupees	6000

As already stated the saving on the sum originally estimated for the Sluices amounting to Rs 1963.9.3 will suffice to complete the Distribution Scheme and sanction for further outlay is not required. The cost of Distribution per acre Commanded is Rs 3-1-1.

4. The Chief Engineer in his letter to the Agent N^o 1348 dated 21st December 1871. explains that the soil through which the channels run is black cotton overlying rock, which is not generally deeper than one foot below the surface. Of course this circumstance would limit the effect of the high velocities due to the very considerable fall proposed for the channels and as in point of fact it appears that

Irrigation

The

The greater portion has already been excavated -
it is expedient to recommend the project as
now planned, for approval.

Office of the Ch. Engr. for Irr. }
Fort St George 13th Jan. 1872. } for Ag. Ch. Engr. for Irr. }

Ans. Sett.
Capt. R. C.

To The Secretary to Government.
P. W. Dept.

Comptd.
W. H.

Chaght
1021 Jan 17 1872

Scheme of the 2nd
section main Canal
No 349 - 5th Feb 1872

Submits for the app.
of Government the
paper in connection
with the distribution
of the 2nd
section main Canal
No 349 - 5th Feb 1872

To the Secy to Govt.
The Ag. Ch. Engr. for Irr.
1872. 1872. 1872.
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1021 Aug 1/66 1872-1872

Public Works Department
No 349
Proceedings of the Madras Government
Read the following
From
The Ag. Chief Engineer }
for Irrigation } (H. C. No 94 of 1872/72)

The revised estimate
amounting to Rs 6,000
for distribution works
in the second section
of the Madras Irrigation
and Canal Company's
Canal are sanctioned.

A.

1872

The Chief Engr. for Irr. in writing
15 envelopes
4. Agent of Manager M. S. & Co. S
Desd 6/2/72

Apr 1940

Govt. of 1872 Madras.

PUBLIC WORKS.

17 To The Chief Engineer for Irrigation

Date

Recd.

Encl.

G. O. 5th July 1872, No. 349.

No. 96495

Distribution Works. Revised
estimates amounting to Rs. 6000
for distribution works in
the Second Section of the Madras
K. K. Canal. Sanctioned.