

(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.	2468	Press
B.P. No.		Mis.
Dated	31 - 8 - 1874	195

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
31st August 1874.*

No. 740. Read the following endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 31st July 1874:—

From J. H. LATHAM, Esq., Chief Engineer and Manager of the Madras Irrigation and Canal Company, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Kurnool, 24th July 1874, No. 87.

I HAVE the honor to forward the Chief Engineer's and Divisional Reports •
• By book post. for the month of June 1874.

MADRAS IRRIGATION AND CANAL COMPANY.

Chief Engineer's Report for June 1874 to accompany the Divisional Reports.

1. During June, which has been constantly wet, an interval of a week without rain being rare, the average rainfall of 3.40 inches (since 1862) has been exceeded by two inches. No wetter June has been recorded at Kurnool.

2. The canal repairs are reported complete, but their progress was so much interrupted by the rain as to occupy more of the Engineer's time than such small works would usually do.

3. The settlement has been completed for two and a half taluqs, and the revenue seems so far fully to bear out my estimate in my report for March last.

4. During the filling of the canal the bad banks at Yedroor (6th mile), Zoharapur (19th mile), and Kaderbagh (24th mile), each gave about as much trouble as usual; leaks occurring in each of them, but not in any portions formerly repaired.

KURNOOL,
14th July 1874.

(Signed) J. H. LATHAM,
Chief Engineer.

UPPER SECTIONS.

Monthly Report for June 1874.

THE silt was excavated in the 6th mile by the 8th, and the full width of canal cleared of rushes in the 1st section.

2. Water was let into the canal on the 9th, but not beyond Kurnool as the 20th mile repairs were not sufficiently advanced. It passed Kurnool on the 20th, but before that date the rains had filled the large tanks from Mallyala to Jupaud and raised the water to more than 2 feet on the gauge at Jupaud bridge, after which it gradually subsided.

3. On the 22nd of the month a leak occurred in the 19th mile near the deep sluice. It increased so rapidly at night that by the morning a large quantity of water was rushing through the bank. A ring dam of stone was thrown in front, the force of the water stopped and a puddle trench dug and filled. There was considerable difficulty in stopping the leak; but after four days the water was entirely stopped. There was little delay in sending down water.

4. On the same date a leak occurred at Kaderbagh aqueduct high banks. It was about 270 feet from the down stream wing on the upper bank. The work was taken in hand and finished in two days. It will require repairs next season.

5. On the 30th a leak occurred in the 6th mile tank and one in the 4th mile; both were soon stopped with but little delay to the progress of water.

6. The rain has been moderate for June; 4½ inches is the total fall for the month.

IRRIGATION.

1. It is too early to give any detailed estimate beyond what has already been given, signs of increased wet cultivation have appeared. I anticipate a very considerable increase in second class crops, such as chillies, onions, etc.

2. As is usual, we have had some applications to take our water into quite new villages, most of them are inaccessible.

3. The stretch of land from Mochmurry to Lockinsula, in the valleys of the Kistna and Bowanassy, seems to be the most favorable for irrigation, the ryots are making up to a juster appreciation of the value of the water, and it is said this year they intend to irrigate much more land.

*Proceedings of the Madras Government, Public Works Department,
31st August 1874.*

4. The improved system of channels has done much good; the new channels are much approved of, as they answer their purpose better in every way; and the fields are scarcely ever swamped by them.
5. As there is now no Assistant Conservancy Engineer, nor any substitute in the first half of the canal, the whole of the work falls upon me. It is therefore necessary to trust more to my staff (all natives) than I have been accustomed hitherto. It will take some time to get the canal into such regular working order that one Engineer can satisfactorily control such a range; year by year it should become easier, but this is only the fourth season and new rules are to be promulgated.
6. The Chief Engineer has kindly given me considerable personal assistance on emergent occasions.
7. The health of the staff has been fair, though it is an unhealthy month. Two out of my five Overseers have had fever for a few days. I cannot forbear mentioning here that a little quinine judiciously given out would be very profitable to the Company.

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

Register of Rainfall during the month of June 1874, registered at 6 A.M. daily.

Day of Week.	Day of Month.	Rainfall at Soonkasala.		Rainfall at Kurnool.		Rainfall at Jupaud.		Rainfall at Velapanoor.	
		INCH.	DECL.	INCH.	DECL.	INCH.	DECL.	INCH.	DECL.
Monday	1st	...	...	...	...	...	...	...	...
Tuesday	2nd	...	60	...	...	...	...	...	...
Wednesday	3rd	...	15	...	...	...	...	...	...
Thursday	4th	...	...	...	07	...	40	1	15
Friday	5th	...	...	...	24	...	...	...	...
Saturday	6th	...	...	...	44	...	90	1	60
Sunday	7th	...	...	...	...	...	...	...	...
Monday	8th	1	60	...	31	...	40	...	55
Tuesday	9th	...	...	...	...	...	...	...	60
Wednesday	10th	...	...	...	...	...	...	...	...
Thursday	11th	...	...	...	...	...	...	...	...
Friday	12th	...	...	...	...	...	...	...	...
Saturday	13th	...	...	...	...	...	...	...	...
Sunday	14th	...	20	...	25	...	...	...	...
Monday	15th	...	50	...	74	...	...	...	...
Tuesday	16th	...	15	1	53	1	30	...	85
Wednesday	17th	...	...	...	63	2	60	...	10
Thursday	18th	...	...	...	...	...	...	...	...
Friday	19th	...	...	...	...	...	...	...	...
Saturday	20th	...	...	...	...	...	...	...	...
Sunday	21st	...	...	...	...	...	...	...	...
Monday	22nd	...	...	...	...	...	...	...	...
Tuesday	23rd	...	10	...	...	...	...	...	...
Wednesday	24th	...	10	...	26	...	...	...	...
Thursday	25th	...	50	...	19	...	...	...	...
Friday	26th	...	10	...	49	1	01	...	20
Saturday	27th	...	...	...	30	...	...	...	50
Sunday	28th	...	...	...	...	...	...	...	25
Monday	29th	...	...	...	02	...	...	...	...
Tuesday	30th	...	...	...	...	...	...	...	...
Total...		5	00	5	47	6	61	5	80

KURNOOL,
9th July 1874.

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

*Proceedings of the Madras Government, Public Works Department,
31st August 1874.*

LOWER SECTIONS.

Report for the Month of June 1874.

The Main Canal repairs have, during this month, been even more hindered by rain than they were during May. The rivers Caulee and Koond have frequently been in flood, and storms have fallen so heavily that the canal from Jutoor head sluices to below Ayaloor has never been free from water, making the construction of dams and frequent bailing necessary for the completion of the masonry works. In spite of these difficulties however, Mr. Dumphy has been able to get nearly all his repairs in the 7th section done by the end of the month, but some of them, as Culverts Nos. 17, 21 and 22, and the new sluice for Nundial tank, still have to be protected from the water in the canal that the chunam may have time to set properly.

2. The 8th section repairs are chiefly required at the locks, such as repairs to flooring of vents, cills, etc., but they are not serious, and are nearly all completed. The main canal banks in the 96th, 102nd, and 103rd miles have had to be repaired, having been injured partly by the rains, but chiefly by the cattle which are continually driven across them, by the ryots, in spite of these having been frequently warned and their cattle sent to the pound, and I am sorry to add that in these trespasses the village authorities support them; in fact, some of the most frequent offenders are Reddies and Curnums, and even the Acting Tahsildar of Nundial seems to do all he can to prevent their being punished as trespassers.

3. In the lower part of the 8th section two of the deep cuttings, those below Locks Nos. 13 and 15, have much silt deposited in them from the deep gullies cut in their slopes by the heavy rains. I am having this silt taken out and well rammed into the gullies and the holes in the tow-path filled up; as these were too heavy jobs for the bankers to complete before the water comes down, I have let them to a contractor. Lock No. 14 has received much injury from the water flowing through its vents; the floorings of all the valve chambers have been more or less torn up, and the flooring below the upper cill also. I am having all these injuries repaired, and propose this season to stop all water from passing through this lock, by throwing a dam across just between the new irrigation sluice for Gotaloor and the lock, below which we have no irrigation in the 8th section. The culvert in the western approach of Oopaloor bridge is nearly done, as is also the new sluice in the eastern bank of the 144th mile to supply Gotaloor and other villages below.

4. In the 9th section the chief work required has been excavating the heavy silt banks just below Rajoly head sluices, and from the 145th to the end of the 147th mile all more or less overgrown with rushes; these banks towards the close of the season of 1872-73 greatly impeded the progress of the water from Rajoly head sluices, so that I was obliged to supplement the supply from the Koond with water passed through the chain of locks in the 8th section; but having now cleared away those obstructions, I hope to get all the water for the 9th section irrigation from the Koond, and only to pass down the 8th section such water as will be needed for the irrigation under it; this will greatly lessen the deposits of silt and I hope prevent any further injury to the masonry of those locks (which have no calingulabs attached to them by which water can be passed round without passing through the valve chambers or falling over the drops).

5. All the masonry and earthwork repairs needed in the 9th section are nearly completed, except those which can be done after water is admitted, such as bridge parapets and metalling to roadways.

10TH SECTION.

The channel 12 feet wide has been excavated down to bed level through the silt deposited from the Pennair head sluices to the middle of the 184th mile, a total distance of 2 1/2 miles; the amount excavated has been 13,910 cubic yards, and a channel sufficient to pass all the water needed for the irrigation of this section is now secured, but three times the above amount must be removed before this portion of the canal can be made fit for navigation.

The repairs to masonry works in this section of the main canal are very slight and will soon be completed.

DISTRIBUTION CHANNELS.

Much work has been done towards repairing and improving these channels; several have been deepened so as to allow of their carrying more water; many road bridges have been built or improved, and calingulabs added to prevent breaches; two and a quarter miles of Cheypaud channel, which was continually giving trouble by breaching, has been abandoned, and a new line on a higher

*Proceedings of the Madras Government, Public Works Department,
31st August 1874.*

level is being constructed and every precaution is being taken to provide for a large extension of irrigation without doing any damage to the dry lands through which our channels pass or interfering with local traffic.

I have lately prepared and sent in for sanction plans and estimates for three new irrigation channels, which, if sanctioned in time for me to construct them this season, will, I believe, add from 500 to 600 acres of wet cultivation and ultimately three times that amount.

The fall of rain during June was unusually heavy at this station, 8.38 inches fell, and among the eastern range of hills it must have been much more heavy. The Cauvery and Koond rivers have been flooded continually; the latter on the 13th instant rose to 10 feet above the under sluice cill and flowed 4 feet deep over the aricut. The Pennair also has frequently risen to 10 feet above head sluice cill, showing how early and heavily the monsoon must have commenced over the Western Ghats.

The health of the staff at Ayaloor has been very bad all through the month, and Mr. Dumphy himself has suffered much from fever, but I and the rest of the employés have escaped; very likely the flood which in May covered the Ayaloor compound may have caused it to be so unhealthy this month.

The table of rainfall attached shows the amounts registered at five stations.
Dhoor,
2nd July 1874.

(Signed) A. J. DODSON,
Conservancy Engineer.

Table of Rainfall during June 1874.

Month and date.	Jutoor.	Ayaloor.	Chintacoonta.	Dhoor.	Bakrapooram.
1st June 1874		0.85	0.73	.....	0.16
2nd "		0.13	.....	.....	.....
3rd "		0.5	0.69	0.84	.....
4th "		0.20	0.95	0.04	0.02
5th "		0.13	.....	0.05	.....
6th "			0.35	0.16	.....
7th "		0.28	.....	1.86	0.30
8th "			0.29	0.32	0.02
9th "	0.14	0.10	.....	0.13	.....
10th "					
11th "		0.47	.....	0.10	1.00
12th "		0.27	.....	3.58	0.56
13th "		0.25	0.63	0.06	0.12
14th "				0.48	.....
15th "					
16th "				0.03	.....
17th "				0.02	.....
18th "				0.04	.....
19th "	1.47	.....	.....	.....	.....
20th "		0.25	0.28	.....	.....
21st "					
22nd "					
23rd "	0.09	.....	.....	0.04	.....
24th "	1.49	1.10	0.12	.....	.....
25th "		0.14	0.13	0.26	.....
26th "				0.02	.....
27th "					
28th "			0.27	.....	.....
29th "		0.80	0.41	.....	.....
30th "		0.53	0.07	0.35	0.50
Total...	4.24	5.30	4.97	8.38	2.68

(Signed) A. J. DODSON,
Conservancy Engineer.

*Proceedings of the Madras Government, Public Works Department,
31st August 1874.*

SUBMITTED for the information of Government.

Several leaks in the banks of the 1st and 2nd sections of the Main Canal occurred, it will be seen, on passing water down at the commencement of the current season, and in July a breach occurred in the 21st mile 54th chain which has already been reported.*

* Dated 27th July 1874.

2. Probably the injuries done by the cattle to the canal banks, as noticed in the report on the lower sections, will be obviated in the future if ramps* be

* Slope of 1 in 6.

provided at the points where minor village paths cross the canal when the latter empty. If this accommodation be provided, cattle found crossing the canal anywhere may properly be sent to the pound. The Collector should be requested to assist in preventing a practice which is very injurious to irrigation works especially in wet weather.

3. The masonry of the locks should not be liable to injury from passing a large water through them. If better work be not substituted, the locks will be likely to prove very troublesome when the canal comes to be used for navigation.

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

741. ORDER THEREON, 31st August 1874, No. 2,465.

IRRIGATION, No. 65.

THE remarks of the Chief Engineer for Irrigation in paragraphs 2 and 3 of the foregoing endorsement will be communicated to the Chief Engineer and Manager, Madras Irrigation and Canal Company.

2. The Government would desire to be informed whether many of the locks of the Company's canal would be liable to injury were water passed through them in the manner which has resulted in injury to the masonry in the case of Lock No. 14 in the 8th section. If so, it appears to be desirable that the substitution of much better description of masonry should be provided for at an early date, as otherwise the locks will not be capable of being worked when navigation may be required.

(True Extract.)

Lieut.-Colonel, R.E.,
Joint Secretary to Government.

the Chief Engineer and Manager of the Madras Irrigation and Canal Company.
Chief Engineer for Irrigation.

L. S. T. Austin.
re Copies

Submitted for the information
of Government
Several leaks in the banks of
the 1st & 2nd sections of the main
Canal occurred, it will be seen,
on passing water down at the
commencement of the current
season, and in July a breach
occurred in the 2nd mile ^{54 chain} which

¹⁶ dated ²⁷ July 1874 has already been reported

2. Probably the injuries done
by the cattle to the Canal banks,
as noticed in the report on
the Lower sections, will be ob-
served in the future if ramps
be provided at the points
where minor village paths
cross the Canal when the latter
is empty. If this accommo-
dation be provided, cattle
found crossing the Canal
elsewhere may properly be sent
to

P. W. 1874 Sept:
No. 5047

From

The Chief Engo:
for Irrigation

Dated 31 July 1874
Recd: 11 August 1874
E. 2.

Submitting the
Report of the Chief
Engineer & Manager
Madras Irrigation &
Canal Company, on
the Company's works
for June 1874-

Qb. No: 2465. 27.8.74.

No 740

P. 10 edmt 1/11

Public Works Department
Proceedings of the Madras Government
Read the following
From The Chief Engo & Manager
Madras New H. Co. (H. Co. 2465 dated
"Chief Engo for New (H. Co. 2465 dated 31 July 1874
2465 dated 31 July 1874)

MS. 1874

The remarks
of the Chief Engineer
for Irrigation in
paras 2 & 3 of
the foregoing en-
dorsement will be
communicated to
the Chief Engineer &
Manager Madras
Irrigation Canal
Company.

Same in closed rank with
the Chief Engineer - condition B
the work - vents in at all
general work.

The Chief Engineer
in H. Co.
Chief Engo for New
H. Co. 2465 dated 31 July 1874

My. 31/8/74

Chief

2. The Government would
 desire to be informed whether
 means of the locks on the
 Company's canal would be
 liable to injury from water
 being allowed to run in the
 manner which has resulted
 in injury to the masonry in
 the case of dock No 14 in the
 8th Section. If so, it appears
 to be desirable that the
 substitution of a much
 better description of masonry
 should be provided for at
 an early date, as otherwise
 the locks will not be capable
 of being worked when
 navigation may be started.

by 6/8/74

740-741

see plan
 P 10. 6/8/74
 by 6/8/74 Rtd 8/8/74

5047

Govt. of Madras.
 PUBLIC WORKS.

The Supt. Manager
 of the M. D. C. Co.

31 Aug 24 65

No. 740-741

Madras Irrigation and
 Canal Company -

Passing orders on the
 endorsement ~~of~~ by the
 Chief Engr for Engrs
 submitting the report of
 the Chief Engr Manager
 on the Company's Works
 for June 1874 -