Scott. I (i)·I—10,006—7-10-70.

(1) Number of pages 70

(2) Date of repair 6. 4. 1972

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No. / ~~B.P. No.~~ 714 Press / ~~Mis.~~

Dated 16. 2. 1877 ~~197~~ .

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department,
16*th February* 1877.

Read the following papers :—

No. 553. Proceedings of the Court of Wards, dated 10th February 1877.

Read again Proceedings of the Court of Wards, dated 25th October 1876, No. 2,657.

Read also the following papers:—

From J. LEE-WARNER, Esq., Special Assistant Collector, Ramnad, to W. McQUHAE, Esq., Collector of Madura, dated Camoody, 13th January 1877, No. 13.

WITH reference to the Acting Collector's endorsement, Miscellaneous No. 160, to Proceedings of the Court of Wards, No. 2,657, dated 25th October 1876, I have the honor to forward the Assistant Engineer's report. Mr. Arbuthnott has no fault to find with the plans and estimates if he can be sure that the discharge of the river at flood has been properly calculated. He differs materially, however, with the Overseers on this important point, basing his calculations upon observations of the wetted section of the river after a flood and the natural fall of the bed, as he was too late on the scene to observe any flood passing down last season. The Court of Wards are well aware that this has been an unusually dry season, and that, if we are to wait for the next floods to give Mr. Arbuthnott opportunities for collecting his own data, we are losing the invaluable opportunity of procuring labor which the present distress offers. But Mr. Arbuthnott sees no objection to designing and digging out his own channel of an inferior capacity to the Overseer's subject to further enlargement as new calculations are taken from experience. There will be no waste of money or labor in this scheme as the depth of the channels must remain the same. Until the main channel is completely excavated according to a revised estimate, which I propose putting under preparation at once, I should not meddle with the subsidiary channels at all.

2. The Court of Wards have not over-estimated the importance of this great work from the remunerative aspect, and I have now to deal only with the consideration how and what funds are to be provided. According to our latest Overseer's reports, we have nearly 5,000 able-bodied persons working on tank-repair in the three distressed taluqs, so that by the end of March, or sooner, if these numbers increase, we may expect to see all the estimates now sanctioned worked through, and so much labor begging for employment through the hot months until July, when the ordinary rains commence and ryots are wanted at home to prepare the fields for cultivation; so it is a question of more funds for State relief works through April, May, June, or more funds for execution of tank and other profitable work within the estate. Every one is agreed on which class of work the zemindari labor ought to find employment in case of such a distress as the present; and therefore, convinced as I am of the soundness of this project and anxious to avail myself of the large amount of able-bodied labor now organized, I have no hesitation in putting forward the proposal that the Government advance the sum necessary under the Lands Improvement Act. As the revised estimate will not be commenced until the answer of the Court of Wards is received upon this and Mr. Arbuthnott's letter, I earnestly solicit that the Overseer's estimate, Rs. 85,500, for the main channel alone may be accepted as the basis of

a liberal grant of funds on that account. Of course, if this important work is sanctioned, the Government must find some other agency for the superintendence of the Camoody and Viruduputty State relief road than Mr. Arbuthnott's. There is no question that, if this or any other project in which the estate interest is so deeply involved can be set afoot, Mr. Arbuthnott, who draws his salary from the estate, ought to be working there.

ENCLOSURE No. 1

From J. ARBUTHNOTT, Esq., Assistant Engineer, Ramnad, to J. LEE-WARNER, Esq., Special Assistant Collector, Ramnad, dated Camoody, 29th December 1876, No. A.

WITH reference to your No. 8, dated 4th instant, I have the honor to report that I have gone over and examined the plans and estimates of the Regunatha Cauvery project, and, with the exception of the water register, have found them to be correct. My reasons for rejecting the latter are—

1st.—That trustworthy observations of the rate at which the water was flowing in flood were not taken, the Overseer, having no watch, counted imaginary seconds.

2ndly.—The section of the flood-stream was taken at a place where the river, overflowing its banks, spread out over a wide area, consequently the whole section could not have been moving at anything like the rate of the main channel if it was moving at all.

2. With a view to seeing if it was possible to ascertain roughly the amount of water passing down the Regunatha Cauvery in an ordinary flood, I took sections both above and below the surplus calingulahs wherever I could get a tolerably straight reach and even section. I was able to do this tolerably accurately, as the flood-marks of October 3rd were fairly distinct. This flood on 3rd October 1876 was an ordinary one; in such a flood 2 feet escapes over the surplus calingulahs; in a most extraordinary fresh the river rises 4 feet on the crest of the calingulahs; but this does not happen once in ten years, so I do not think it should be taken into account. The following are the results of my investigations :—

Above the Calingulahs.

Sections taken above ¾ of a-mile above—

Mean wetted section	square feet	766·5
Do. perimeter	lineal feet	103·0
Fall of bed per mile	feet	3·54

Discharge = 4,706 cubic feet per second, or 15,059,200 cubic yards per day.

Below the Calingulahs.

Sections taken ½ mile below—

Mean wetted section	cubic feet	729·5
Do. perimeter	lineal feet	191·0
Fall of bed per mile	feet	2·0

Discharge = 2,109 cubic feet per second, or 6,748,800 cubic yards per day.

Discharge of Regunatha Cauvery.

Theoretic maximum discharge of the Regunatha Cauvery in ordinary floods—

Above the surplus calingulahs with two feet going over crests.

Fall of bed per mile	feet	3·54
Mean wetted section	square feet	766·50
Do. perimeter	lineal feet	103·00

Discharge = area × mean velocity

$= a \times M.V.$

Mean velocity $= c\sqrt{R.I.}$

When R is the hydraulic mean depth $= \dfrac{\text{Area of water section}}{\text{Wetted perimeter.}}$

When I is the inclination of the bed in unity $= \dfrac{\text{Fall in feet per mile}}{5,280}$

and c is a coefficient varying according to the nature of the bed and the value of *R*.

$R = \frac{A}{W.P.} = \frac{766·5}{103} = 7·43$

By Bayne's Tables $c = 87·0$

log. 3·54 = 0·5490033

$I = \frac{3·54}{5280} = 0·0067$ colog. 5,280 = 4·2773661

= 4·8263694 log. of 0·00067

$MV = c\sqrt{R.I.} = 87\sqrt{7·43 \times 0·00067}$

$MV = 6·14$ log. 87 = 1·9395193

½ log. 7·43 = 0·4354944

½ log 0·00067 = 2·4131847

0·7881984 log. of 6·14

$D = a \times MV = 766·5 \times 6·14$

$D = 4706$ cubic feet per second.

Below the surplus calingulahs with two feet going over crest.

Fall of bed per mile	feet	2
Mean wetted section	square feet	729
Mean wetted perimeter	lineal feet	191·00 line

$D = a \times MV.$

$MV = c\sqrt{R.I.}$

$R = \frac{729·5}{191} = 3·82$

By Bayne's Tables $c = 76$

$I = \frac{2}{5280}$ log. 2 = 0·3010300

colog. 5280 = 4·2773661

$I = 0·00038$ 4·5783961 log. of 0·00038

$MV = c\sqrt{R.I.} = 76\sqrt{3·82 \times 0·00038}$

log. 76 = 1·8808136

½ log. 3·82 = 0·2910317

½ log. 0·00038 = 2·2891981

0·4610434 log. of 2·891

$MV = 2·891$

$D = a \times MV = 729·50 \times 2·891$

$D = 2,109$ cubic feet per second.

Discharge through the calingulahs is the difference of these, and amounts to 2,597 cubic feet per second, or rather more than the discharge of the river below the calingulahs.

In the foregoing the mean velocity is calculated from the fall per mile, and is therefore theoretic. The actual mean velocity would most probably be less, certainly not more.

I would, therefore, recommend that the main and subsidiary channels should not be commenced till after the next monsoon, during which I hope to have many opportunities for gauging the discharge of the river. There is no reason why all the tanks estimated for should not be begun at once, as there is plenty of water [illegible] the river to fill them; but these are not sufficient data to go on at present in designing the [illegible]els. It will be seen from the calculations that not more than 4,706 cubic feet per second can [illegible]ken as the maximum discharge of ordinary floods, and [illegible] can only be sent down the channel by closing both calingulahs. If, then, it is found necessary to begin the work so as to employ the people, the channel can be designed to carry that quantity; if it may be necessary hereafter to increase the capacity of the channel, it can easily be done; but if made too large at first money will be uselessly expended. Longitudinal sections are now being taken of the subsidiary channels; these for the most part have never been properly lined out. The water has been allowed to flow wherever it could find a way; the channels are very tortuous. The velocity of the water is hereby much checked, and rapid erosion of the banks and the consequent silting up occurs. It may, therefore, be found necessary, if the cost be not too great, to line out entirely new channels; but for the present old channels cleared out and straightened will do.

The masonry works, with the exception of the two calingulahs at Camoody (which are very substantially built and faced with cut-stones) are in ruins. New works have, therefore, been provided for in the estimates. The plans may have to be altered in detail, but the money will be sufficient.

No. 9.

SUBMITTED to the Court of Wards with reference to their Proceedings, dated 25th October 1876, No. 2,657. I approve of Mr. Lee-Warner's proposals, and recommend that the digging of the channel, as suggested by him, may be ordered to be commenced at once. I think that a separate estimate of the work that can be done as a famine relief work should be prepared; that the estate should pay the value of work actually done according to this estimate; and that the extra cost, if any, caused by the employment of women, children, and half-starved men should be debited to Famine Relief. I can scarcely select any roads for construction in this part of the country, where distress will increase daily till next cultivating season. The soil is chiefly black cotton, over which we have hitherto failed in our attempts to make roads at the rate of even a mile a year and at a cost of nearly Rs. 6,000 a-mile as may be seen between Permagudy and Ramnad. If this channel belonged to Government, we would concentrate in it all our famine relief expenditure for the district through which it runs, and any arrangement with the estate must be better than throwing away money on roads, which, owing to the difficulties of soil, will not be completed or maintained hereafter out of Local Funds.

2. It is very important that the Department of Public Works Subordinates should be strengthened in order that I may not have to ask Mr. Arbuthnott for any assistance, but the weakness of the department is great. The estimate for the Camoody and Viruduputty Road is needed emergently, and I cannot get it though the book survey was finished two months ago.

(Signed) W. McQUHAE,
Collector.

MADURA,
23rd January 1877.

No. 354. From W. McQUHAE, Esq., Collector of Madura, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Madura, 6th February 1877, No. 71.

I HAVE the honor to request the Boa[illegible]ructions regarding the road from Camoody to Viruduputty sanctioned as [illegible]e relief work in Proceedings, Miscellaneous No. 37, dated 3rd ultimo.

2. It is now found that the compensation for the land along the wh[illegible]e of 30 miles will not be less than Rupees 20,000 and consequently Mr. Turner has not commenced work. The question is whether this compensation can be paid in the first instance at least out of famine relief funds, and, if not, what is to be done for famine relief work in Ramnad. The people are leaving the country in streams both to the northward and to Ceylon, but they cannot go on much longer, and we must provide work without delay for a large number who cannot find employment by migrating elsewhere. I recommended the Ragunatha Cauvery scheme, and, if that be sanctioned, we may abandon this road from Camoody to Viruduputty for the present; but, if not, I can suggest no substitute but this road.

3. The number that left the ports in the district for Ceylon in 1875 and 1876 with the number that returned are as follow:—

	Number that left the Ports for Ceylon	Number that returned from Ceylon.
1875	62,629	56,718½
1876	107,253	30,772

The numbers that passed northwards into Tanjore can only be estimated, but are very great. This depopulation of the country has made it an easy matter hitherto to meet the famine, but it cannot last. There must be a limit to the number that can find employment in Ceylon and Tanjore.

From J. LEE-WARNER, Esq., Special Assistant Collector, Ramnad, to W. McQUHAE, Esq., Collector of Madura, dated 2nd February 1877, No. 32.

I HAVE the honor to inform you that I have this day written to Mr. Arbuthnott to proceed to the lower end of the Regunatha Cauvery Channel and commence laying out work on the modified section proposed in my letter, No. 13, dated 13th January 1877. For extra establishment I have assigned to him the two maistries sent down by the Public Works Department for employment on State relief work and two of Mr. Gompertz' measurers. I want Mr. Arbuthnott to have three miles of levellings on three lines ready by the 15th, so that I can place one thousand persons at each end. The Central Range Overseer reports that most of his large tank repairs will be completed about the 25th, and the laborers will then be searching for employment elsewhere. I have suggested to Mr. Arbuthnott that they can then be brought on to the channel work in gangs, and the work can proceed in charge of the Overseer. The whole revised estimate cannot be ready with plans and sections before the end of March. I hope, therefore, that, if you have any objection to my employing labor in this way before the sanction of the Court of Wards is received, you will at once let me know.

No. 15.

SUBMITTED to the Court of Wards with reference to my endorsement, dated 23rd January 1877, No. 9, on Mr. Lee-Warner's letter, No. 13, of the 13th idem and with the request that sanction to commence the Ragunatha Cauvery may be granted as soon as possible and communicated by telegram. The commencement of the road from Camoody to Viruduputty having been postponed, there is now no famine relief work open in Ramnad except the road between Camoody and Sayelgudy, which will soon be finished.

(Signed) W. McQUHAE,
Collector.

MADURA,
7th February 1877.

[illegible]bmitted for the early orders [illegible]f Government in continuation of the Court's Pr[illegible]edings, dated 10th instant.

2. In the first of the foregoing letters the Collector of Madura suggests that the Ragunatha Cauvery scheme be undertaken as a relief work in the Ramnad Estate in lieu of the road from Camcudy towards Viruduputty, for which Rs. 15,000 was recently sanctioned by telegram, it having now been ascertained that the [illegible] compensation for the land required for the whole line of road will amount [illegible]s a sum than Rs. 20,000.

Item No. 12 in the list embodied in Collector's letter, dated 7th November 1876, recorded in G.O., dated 18th November 1876, No. [illegible]

In the second letter Mr. McQuhae requests that the Court's sanction for the commencement of the execution of the Ragunatha Cauvery project may be granted as soon as possible and communicated by telegram. It appears that the tank repairs, which have hitherto afforded employment to laborers in the Ramnad Estate, will be completed on the 25th instant, and that work must be found without delay.

3. The Court of Wards have already strongly supported the proposal that the scheme alluded to should be undertaken as a relief work, the excess over the value of the work done being borne by the State, and they request the early orders of Government on the recommendation. The Collector should furnish the estimate of the work suited for execution as a relief work with the least possible delay. It is clear that the road must be abandoned, payment of so large a sum from relief funds in compensation for land taken up being out of the question.

(True Copies and Extract.)

(Signed) C. A. GALTON,
Acting Sub-Secretary.

With the foregoing letter the Collector submits further information regarding the Regunatha Cauvery Project after investigation by Mr. Arbuthnott, the Assistant Engineer in charge of the estate; the latter has found the plans and estimates correct, with the exception of the water register, which he considers not to be based on sufficiently trustworthy data. The maximum discharge of ordinary floods is now estimated at not more than 4,706 cubic feet per second, instead of nearly 15,000. It is stated, however, that there is no reason why all the tanks estimated for should not be begun at once, as there is plenty of water to fill them, and the main channel could also be constructed of an inferior capacity to that originally planned, subject to enlargement when the dimensions required have been more accurately ascertained. It is not proposed to touch the subsidiary channels at present.

2. Mr. Lee-Warner urges most strongly the advisability of commencing the main channel at once, for which the Overseer's estimate is Rupees 85,500, pending the preparation of a revised estimate for the whole scheme. Work must shortly be found for a large body of laborers at present employed on tank repairs, and if the estate does not provide it, State relief-[illegible]ll be a necessity. Mr. McQuhae points out that the construction of roads [illegible]art of the country is out of the question, and considers the excavation of [illegible]natha Cauvery Channel admirably suited for a relief-work. He sugges[illegible]eparate estimate of the work that

is suited for execution as a relief-work [illegible] prepared, the estate being called upon to pay only the value of the w[illegible] the extra cost arising from the employment of inferior labor being [illegible] to the State. This proposition meets with the Court's cordial approva[illegible]ey most strongly recommend it to the favorable consideration of Govern[illegible]. They fear that unless this plan be adopted the work cannot be undertake[illegible]sent, as the estate has not the ready money at its disposal, nor could a loan [illegible]ined under the Land Improvement Act under recent orders, even if t[illegible]ation regarding the project were sufficient to admit of an application [illegible]made in conformity with the rules, which at present is not the case. The [illegible]will eventually prove remunerative to the estate, whilst the State will be [illegible]ed as regards a considerable portion of the expenditure incurred in relie[illegible] distressed population of this part of the country. It appears that the ta[illegible]irs will provide occupation till the middle or end of March; meanwhile [illegible]evised estimate could be prepared by Mr. Arbuthnott and the work marked out.

3. As regards sanction for the execution of the whole project, the Court must await the revised estimate, but in the meantime it appears advisable that so costly and important an undertaking should not be commenced until the highest professional opinion as to its feasibility and the correctness of the calculations on which the estimates are based has been obtained; the Court request, therefore, that all the papers may be referred to the Chief Engineer for Irrigation for an expression of his opinion. The details of the projects are set forth in the papers embodied in G.O., dated 17th November 1876, No. 1,705.

(True Extract.)

(Signed) C. A. GALTON,
Acting Sub-Secretary.

No. 555. Order thereon, [illegible]th February 1877, No. 714.

Irrigation.

The Government sanc[illegible]n the immediate commencement of the scheme fo[illegible] the restoration of the Raghanatha Caveri Main Channel from its upper end, as a relief-work, at the cost of the Ramnad Estate.

2. The excavation will, in the first [illegible]nstance, be only sufficient to admit of the maximum discharge estimated by Mr. Assistant Engineer Arbuthnott in his letter of the 29th December 18[illegible]6, N[illegible] 4.

3. The papers will be referr[illegible] Chief Engineer for Irrigation for report on the whole project.

(T[illegible]xtract.)

(Signed) J. H. GARSTIN,
Additional Secretary to Government.

To the Court of Wards.
,, the Public Works Department.
,, the Chief Engineer for Irrigation.
,, the Financial Department.

Exd. J. W. Ficher

Govt. of {1877} Madras.

REVENUE.

To

The COURT of WAR,

&c., &c., &c.

[illegible] February 18[illegible]

Nos. 55[illegible]—555.

FAMINE RELIEF, No. 843.

Raghanatha Caveri Main Channel.—Sanctioning the immediate commencement of the scheme for the restoration of the — from its upper end, as a relief-work, at the cost of the Ramnad Estate; directing that the excavation, in the first instance, be only sufficient to admit of the maximum discharge estimated by Mr. Arbuthnott; and referring the papers to the Chief Engineer for Irrigation for report on the whole project.

No 4

714/15

From

J. Arbuthnott Esquire
Assistant Engineer,
Ramnad

To

J. Lee Warner Esquire
Special Assistant Collector
Ramnad

Sir

With reference to your number 8, dated 4 Instant, I have the honor to report that I have gone over and examined the plans and estimates of the Regoonada Cauvery Project, and with the exception of the water register, have found them to be correct. My reasons for rejecting the latter are:—

1st That trustworthy observations

of the rate at which the water was flowing in flood were not taken, the Overseer having no watch counted imaginary seconds.

2ndly The section of the flood stream was taken at a place where the river overflowing its banks spread out over a wide area. Consequently the whole section could not have been moving at any thing like the rate of the main channel, if it was moving at all.

With a view to seeing if it was possible to ascertain roughly the amount of water passing down the Ragoonada Cauvery in an

ordinary

ordinary flood I took sections both above and below the surplus Calingulahs wherever I could get a tolerably straight reach, and even section. I was able to do this tolerably accurately as the flood-marks of October 3rd were fairly distinct. This flood on 3rd October 1876 was an ordinary one; in such a flood two feet escapes over the surplus Calingulahs: in a most extraordinary fresh the river rises 4 feet on the crest of the Calingulahs, but this does not happen once in 10 years, so I do not think it should be taken into account. The following are the results of my investigations:

above the Calingulahs

Sections taken about 3/4 of a mile above
Mean wetted section 766.5 sq ft
Mean " perimeter 103.0 lin ft
Fall of Bed per mile 3.54 feet

Discharge = 4706 c ft per second
or 15,059200 C yds per day

Below the Calingulahs

Sections taken 1/2 mile below
Mean wetted section —— 729.5 sq ft
Mean " Perimeter —— 191.0 lin ft
Fall of Bed per mile 2.0 feet

Discharge = 2109 C ft per second
or 6,748800 C yds per day

Discharge of Regunada Cavery

Theoretic maximum discharge of the Regunada Cavery in ordinary floods.

114/7

floods

Above the surplus Calingulahs with two feet going over crests.

Fall of Bed per mile —— 3.54 ft
Mean wetted section —— 766.50 sq ft
Mean " Perimeter —— 103.00 lin ft

Discharge = area × mean velocity
= a × m.v.

Mean velocity = $c\sqrt{R.I}$

when R is the hydraulic mean depth = $\frac{\text{area of water section}}{\text{wetted Perimeter}}$

" I is the inclination of the bed in unity = $\frac{\text{Fall in ft per mile}}{5280}$

and c is a coefficient varying according to the nature of the bed and the value of R.

$$R = \frac{A}{W.P} = \frac{766.5}{103} = 7.43$$

By Bazins Tables C = 87.0

log 3.54 = 0.5490033

I

$I = \frac{3.54}{5280} = 0.00067$. Colog 5280 = $\underline{4.2773661}$

$= 4.8263694$ log of 0.00067

$M.V = c\sqrt{R.I} = 87\sqrt{7.43 \times 0.00067}$

$M.V = 6.14$ log 87 = 1.9395193

1/2 log 7.43 = 0.4354944

1/2 log 0.00067 = $\underline{2.4131847}$

0.7881984 log of 6.14

$Q = a \times MV = 766.5 \times 6.14$

$Q = 4706$ cft per second

Below the surplus Calingulahs with two feet going over crest.

Fall of bed per mile — 2.00 ft

Mean wetted section — 729.50 sq ft

Mean wetted perimeter — 191.00 lin ft

$Q = a \times MV$

$MV = c\sqrt{RI}$

$R = \frac{729.5}{191} = 3.82$

By Bazin's tables $C = 76$

$I = \frac{2}{5280}$ log 2 = 0.3010300

Colog 5280 = $\underline{4.2773661}$

$I = 0.00038$ 4.5783961 log of 0.00038.

MV

$MV = c\sqrt{RI} = 76\sqrt{3.82 \times 0.00038}$

log 76 = 1.8808136

1/2 log 3.82 = 0.2910317

1/2 log 0.00038 = $\underline{2.2891981}$

0.4610434 log of 2.891

$MV = 2.891$

$Q = a \times MV = 729.50 \times 2.891$

$Q = 2109$ cft per second

Discharge through the Calingulahs is the difference of these, and amounts to 2597 cft per second or rather more than the discharge of the River below the Calingulahs.

In the foregoing the mean velocity is calculated from the fall per mile, and is therefore theoretic, the actual mean velocity would most probably be less, certainly not more

I would therefore recommend the

the

that the main and subsidiary channels should not be commenced till after the next monsoon during which I hope to have many opportunities for gauging the discharge of the River. There is no reason why all the Tanks estimated for should not be begun at once as there is plenty of water in the river to fill them, but there are not sufficient data to go on, at present, in designing the channels. It will be seen from the calculations that not more than 4706 cft per second can be taken as the maximum discharge of ordinary floods

floods

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The masonry works with the exception of the two Calingulahs at Kaundy (which are very substantially built and faced with cut stones) are in ruins. New works have therefore been provided for

whole project the Court may must await the revised estimate, but in the meantime it appears advisable that so costly and important an undertaking should not be commenced until the highest professional opinion as to its feasibility and the correctness of the calculations on which the estimates are based has been obtained; the Court request, therefore, that all the papers may be referred to the Chief Engineer for Irrigation for an expression of his opinion.

The details of the proposals are set forth in the papers embodied in G. O. dated 17th November 1876 No. 1705.

(True Extract)

C. A. Galton
Ag Sub Secretary

To
The Additional Secretary to Government R. D.
with copy of Collr's letter & its enclosure

20 Jany

714/10

for in the estimates, the Plans may have to be altered in detail but the money will be sufficient

Assistant Engineers Office
(Camp) Naundy 29th Decr 76 } I have &
(Sd) J. Arbuthnott
Asst Engineer

(True copy)

(Sd) T. Rama Row
Dy Collector for Collector

(True copy)

C. A. Galton
Ag Sub Secretary

24 Jany

Enclosure in Proceedings
of the Court of Wards
to the Actg Secy to Govr.
Rev. Dept.
dated 10th February 1877

Copy of letter from the
Asst Engineer Ramnad
to the Special Asst
Collector Ramnad

F $\frac{2}{425}$/77

Special Asst. Collr. office
Camp Kamudy
13th January 1877.

714/11

No. 13.

Read again Procgs. of the Court of Wards, 25th Octob. 1876, No. 2657,
Read also letter

From

J. Lee Warner Esquire
Special Assistant Collector
Ramnad.

To

W. McQuhae Esquire
Collector of Madura.

Sir,

With reference to the Acting Collector's endorsement, Mis No. 160, to Proceedings of the Court of Wards, No. 2657, dated 25th Octr. 1876, I have the honor to forward the Assistant Engineer's report. Mr. Arbuthnott has no fault to find with the plans and estimates, if he can be sure that the discharge of the river at flood has been properly calculated. He differs materially however with the Overseers on this important point, basing his calculations upon observations of the wetted section of the river after a flood, and the natural fall of the bed: as he was too late on the scene to observe any flood passing down last season. The Court of Wards are well aware, that this has been an unusually dry season, and that if we are to wait for the next floods to give Mr. Arbuthnott opportunities for collecting his own data, we are losing the invaluable opportunity of procuring labor which the present distress offers. But Mr. Arbuthnott sees no objection to designing & digging out his own channel for an inferior capacity to the overseers, subject to further enlargement, as new calculations are taken from experience. There will be no waste of money or labour in this scheme as the depth of the channels must remain the same. Until the main channel is completely excavated according to a revised estimate which I propose putting under preparation

at once, I should not meddle with the subsidiary channels at all.

2. The Court of Wards have not overestimated the importance of this great work from the remunerative aspect, and I have now to deal only with the consideration how and what funds are to be provided. According to our latest Overseers reports, we have nearly 5000 able bodied persons working on tank repair in the three distressed Taluqs. So that by the end of the March or sooner, if these numbers increase we may expect to see all the estimates now sanctioned worked through; and so much labour begging for employment through the six months until July, when the ordinary rains commence; and ryots are wanted at home to prepare the fields for cultivation. So it is a

question of more funds for state relief Works through April, May, June, or more funds for execution of tank and other profitable work within the estate. Every one is agreed on which class of work the Zemindary labor ought to find employment in case of such a distress as the present; & therefore Convinced as I am of the soundness of this project; and anxious to avail myself of the large amount of able bodied labour now organized, I have no hesitation in putting forward the proposal that the Government advance the sum necessary under the Lands Improvement Act. As the revised estimate will not be commenced until the answer of the Court of Wards is received upon this & Mr. Arbuthnott's letter, I earnestly solicit that the Overseer's estimate Rs 85,500 for the main channel alone may be accepted as the basis of

of a liberal grant of funds on that account. Of course, if this important work is sanctioned, the Government must find some other agency for the superintendence of the Kannudy and Virdooputty state relief road than Mr. Arbuthnott's. There is no question that if this or any other project in which the Estate interest is so deeply involved can be set apart, Mr. Arbuthnott who draws his salary from the Estate ought to be working there.

I have &c.
Sd. J. Lee Warner
Spl. Asst. Collector

(True copy)

No. 9.

Submitted to the Court of Wards with reference to their Proceedings dated 25th October 1876 No. 2657 I approve of Mr. Lee Warner's proposals and recommend that the digging of the channel as suggested by him may be ordered to be commenced at once. I think that a separate estimate of the work that can be done as a Famine relief work should be prepared; that the Estate should pay the value of work actually done, according to this estimate and that the extra cost if any, caused by the employment of women, Children and half-starved men should be debited to Famine Relief. I can scarcely select any roads for construction in this part of the country where distress will increase daily till next cultivating Season. The Soil is chiefly black cotton over which we have hitherto failed in our attempts to make roads at the rate of even a mile a year & at a cost of nearly Rs. 6000 a mile as may be seen between Permagudy & Ramnad.

If

714/14

If this Channel belonged to Government we would concentrate in it all our famine relief expenditure for the District through which it runs and any arrangement with the Estate must be better than throwing away money on roads, which owing to the difficulties of soil will not be completed or maintained hereafter out of Local Funds.

It is very important that the Department of Public Works subordinates should be strengthened in order that I may not have to ask Mr. Arbuthnott for any assistance but the weakness of the Department is great. The Estimate for the Cumoody and Virdupatty road is needed emergently, and I cannot get it through the Sett. Survey was finished two months ago.

Madura }
23d Jany 1877 }

Sd W. McQuhae
Collector

(True copy)

C. L. Colton
Ag Sub Secretary

Enclosure in
Pro: of the Court of Wards
to the Actg. Secy to
Govt. Rev: Departt:
dated 10th ~~Feby~~ Feby/77

D 1/425/77

Copy of letter from
the Collector of
Madura, dated
23rd Jany/77 No. 9.

No. 353.

Collector's Office,

No. 71. Madura 6th February 1877.

714/16

From

W. McQuhae Esquire,
Collector of Madura.

To

H. E. Stokes Esquire,
Ag. Secretary to the Board of Revenue,
Madras.

Sir,

I have the honor to request the Board's instructions regarding the road from Camoody to Virudupatty sanctioned as a famine relief work in Proceedings Miscellaneous No. 37 dated 3rd Ultimo.

2. It is now found that the compensation for the land along the whole line of 30 miles will not be less than Rupees 20,000 and consequently

Mr Turner has not commenced work. The question is whether this compensation can be paid in the first instance at least, out of famine relief funds and if not what is to be done for famine relief work in Ramnad. The people are leaving the country in streams both to the northward and to Ceylon but this cannot go on much longer and we must provide work without delay for a large number who cannot find employment by migrating elsewhere. I recommended the Raghunatha Cauveri scheme and if that be sanctioned we may abandon this road from Camoody to Virdupattie for the present, but if not I can suggest no substitute but this road.

3. The number that left the ports in the District for Ceylon in 1875 and 1876 with the number that returned are as follows:—

	Number that left the ports for Ceylon.	Number that returned from Ceylon.
1875	62,629	56,718½
1876	1,07,253	30,772

The numbers that passed northwards into Tanjore can only be estimated but are very great. This depopulation of the country has made it an easy matter hitherto to meet the famine but it cannot last. There must be a limit to the number that can find employment in Ceylon and Tanjore.

I have &ca
(Signed) W. Mc. Quhae
Collector.

(True Copy)

Ag. Subsecretary

Ed VH.

Enclosure in Courts
Proceedings to the
Addl Secretary to
Government R.D.
dated 10th February 1877.

7 1/424/77

Copy of letter from
the Collector of Madura
dated 6th February 1877.
No. 71
G.O.-1/6 February/77 No 7 &c

Spl. Asstt. Collector's Office
Ramnad 2nd Feby. 1877

3

714/18

No. 32

1

Pica

From
J. Lee Warner Esquire
Spl. Asstt. Collector
Ramnad

To
W. McQuhae Esquire,
Collector of Madura

Sir

I have the honor to inform you that I have this day written to Mr. Arbuthnott to proceed to the lower end of the Ragunatha Cauveri Channel, and commence laying out work on the modified section proposed in my letter No. 13 dated 13th Jany. 1877. For Extra Establishment I have assigned to him the 2 Mastries sent down by the D.P.W. for employment on State Reliefwork and two of Mr. Gompertz's measurers.

I

I want Mr Arbuthnott to have 3 miles of levellings on three lines ready by the 15th; so that I can place one thousand persons at each end. The Central Range Overseer reports that most of his large tank repairs will be completed about the 25th; and the laborers will then be searching for employment elsewhere. I have suggested to Mr Arbuthnott that they can then be brought on to the Channel work in gangs; and the work can proceed in charge of the Overseer. The whole revised Estimate cannot be ready with plans and sections before the end of March. I hope

hope therefore that if you have any objection to my employing labor in this way before the sanction of the Court of Wards is received, you will at once let me know.

I have &c

(Sd) J. Lee Warner
Spl Asstt Collector

No 15

(True Copy)

Submitted to the Court of Wards with reference to my endorsement dated 23rd January 1877 No 9 on Mr Lee Warner letter No 13 of the 13th Idem and with the request that sanction to commence the Regunatha Cavery may be granted as soon as possible and communicated by telegram. The commencement of the Road from Kannudy to Virdupatty having been postponed; there is now no famine relief work open in Ramnad except the road between Kamudy and Sayelgudy which will soon be finished.

Madura
Collector's Office
7th February
1877

(Sd.)
W. McQuhae
Collector

(True Copy)

Acting Sub Secretary

Enclosure in Court
Proceedings to the
Actg Secretary to
Government R.D.
dated 10th Febry 1877

F 2
424/77

Copy of letter from
the Collector of
Madura dated 7th
February 1877 No 15

714/21

Revenue Department

Proceedings of the Court of Wards
Dated 10th February 1877

Read letters from the Collector of Madura dated 6th and 7th February 1877 Nos 71 and 15.

Submitted for the early orders of Government in continuation of the Court's Proceedings dated 10th Instant No ___

2. In the first of the foregoing letters the Collector of Madura suggests that the Ragunatha Cavery scheme be undertaken as a relief work in the Ramnad Estate in lieu of the road from Kumathi towards Virdupatti for which Rs 15,000 was recently sanctioned by telegram, it having now been ascertained that the Compensation for the land required for the whole line of road will amount to no less a sum than Rs 20000.

Item No 12 in the list embodied in Collector's letter of 7th Nov 76 recorded in G.O. of 18 Nov 76 No 1722.

In the second letter Mr McQuhae

requests that the Court's sanction for the commencement of the execution of the Ragunatha Cavery project may be granted as soon as possible and communicated by telegram. It appears that the tank repairs which have hitherto afforded employment to laborers in the Ramnad Estate will be completed on the 25th instant and that work must be found without delay.

2 The Court of Wards have already strongly supported the proposal that the scheme alluded to should be undertaken as a relief work, the excess over the value of the work done being borne by the State and they request the early orders of Government on the recommendation. The Collector should furnish the estimate of the work suited for execution as a relief work with the least possible delay. It is clear that the road

must

must be abandoned, payment of so large a sum from relief funds in compensation for land taken up being out of the question.

(True Extract)

Ag Sub Secretary

To

The Additional Secretary to Govt
Revenue Department
with copies of 2 Letters

24/5/[illegible]
[illegible]

Rev: 1877: Feb
I. No. 424

Proceedings of the
Court of Wards
dated 10 February 1877
Dept 10
Recd 10 Feby
Ent. 2. 10/2/77
F.W.

Submitting for early
orders of Govt. letters from
the Collr. of Madura regarding
the Ragunatha Cauvery Project
being taken as a relief
work

No 5-53

17

7/4/23

Revenue Departt

Proceedings of the Court of Wards
dated 10 February 1877

Read again Proceedings of the Court of Wards, 25th October 1876 No. 2657.

Read also letter from Collector of Madura dated 23d January 1877 No. 9.

With the foregoing letter the Collector submits further information regarding the Ragunatha Cauvery project after investigation by Mr. Arbuthnott the Assistant Engineer in charge of the Estate; the latter has found the plans and estimates correct with the exception of the water register which he considers not to be based on sufficiently trustworthy data; the maximum discharge of ordinary floods is now estimated at not more than 4706 cubic feet per second instead of nearly 15,000. It is stated, however, that there is no reason why all the tanks estimated for should not be begun at once, as there is plenty of water to fill them and the main channel could also be constructed of an inferior capacity to that originally planned subject to enlargement, when the dimensions required have been more accurately ascertained. It is not proposed to touch the subsidiary

channels at present.

2. Mr. Lee Warner urges most strongly the advisability of commencing the main Channel at once for which the Overseer's estimate is Rupees 85,500 pending the preparation of a revised estimate for the whole scheme; work must shortly be found for a large body of labourers at present employed on tank repairs, and if the estate does not provide it, State relief works will be a necessity. Mr. Mc Quhae points out that the construction of roads in this part

of the Country is out of the question, and considers the excavation of the Regunada Canary Channel admirably suited for a relief work; he suggests that a separate estimate of the work that is suited for execution as a relief work should be prepared, the estate being called upon to pay only the value of the work done, the extra cost arising from the employment of inferior ~~labour~~ labour being debited to the State. This proposition meets with the Court's cordial approval and

and they most strongly recommend it to the favorable consideration of Government. They fear that unless this plan be adopted the work cannot be undertaken at present as the estate has not the ready money at its disposal nor could a loan be obtained under the Land Improvement Act under recent orders, even if the information regarding the project were sufficient to admit of an application being made in conformity with the rules, which at present is not the case. The work will eventually prove remunerative to the Estate, whilst the State will be reimbursed as regards a Considerable portion of the expenditure incurred in relieving the distressed population of this part of the country. It appears that the tank repairs will provide occupation till the middle or end of March, meanwhile the revised estimate could be prepared by Mr Arbuthnott and the works marked out.

3. As regards sanction for the execution of the

Recd: 1877 Sept

D. No. 425

Proceedings of the Court of Wards

Pros: 16th Feby/77

Dated 10 Feby 1877
Despd 10 " "
Recd 10 " "
en 2 JHG 10/2/77

Paper

Ragunatha Cauvery Project — in Ramnad Estate, [illegible] ditto Requesting Govt. to refer papers &c — for opinion of Chief Engineer for Irrigation, and recommending to favorable consideration Collector's suggestion that a separate estimate of the work suited for execution as a R. work be prepared, the estate being called upon to pay only the value of the work done.

No. 553 & 554 -

Court of Wards
Read ~~Asst~~ Rep. dated Feb. 10th/77 No.
& Ct of Wards ~~Asst~~ Rep. of same date No.

G.O. No. 714. 16 Feb 1877

The Government sanction the immediate commencement of the ~~scheme~~ for the restoration of the Raghanatha Cavery main channel from its upper end, as a relief work, at the cost of the Ramnad Estate.

2. The excavation will, in the first instance, be only sufficient to admit of the maximum discharge estimated by the Assistant Engineer Colebrook in his letter of the 29th Dec. 76. No. A.

3. The papers will be referred to the Chief Engineer for Irrigation for ~~an expression~~ ~~of his opinion~~ report on the whole project.

16/2/77 J.H.G.

M.S. Copy to ~~Bd of Rev.~~ Court of Wards on 19 Feb
— 12 — 35-P.C. of 5/3
P.W. Dept.
6 the Chief Engineer for Irrigation
5 the Financial Dept.

G.O.

Ranganatha Caveri
Channel

Desp: in M. S.

G.O 16/3/77

Copy orders
19.3.77

JH. (1/2/77)

7/2
30

10 Feb 77

My dear Garstin

I send by order a letter from Mr. [illegible] & its Enclosure, for information.

The Board are sending today Prop.s about the Raghunatha Caveri project in the Ramnad Estate, and I am to ask you kindly to get the thing shoved through as quickly as possible. It is important that the project should at least be ready for Execution.

Yours sincerely,
H. E. Stokes

Madras
8th Feby 1877

My dear Stokes

Please show the enclosed to the Board. The something "new that has worried me" according to Lee Warner is simply that there is no money to go on with Estate works unless Govt. abandon Peshcush & treat the "Ramnad Causeway" as a famine relief work the greater part of the cost of which will fall on the Estate. This depopulation of the country is all very well up to a certain point but it will suddenly cease when Tanjore & Ceylon are full – Of course the people will not work on relief works while they hope to get regular wages elsewhere but there will be little to eat in South Ramnad till January next except ship rice & there will soon be no money to buy it

I recommend the sanction of the Regunada Cauvery as a Govt. relief work making the Estate pay for value of work actually done – Money will be found & work done

under the same rules as any other relief work & we may trust Mr Arbuthnott to declare the actual value of work done & take any bond that is considered necessary from the Estate afterwards

I cannot tell how many people of the poorer classes will remain in the Country but those who do must work or starve They have nothing to do & nothing to eat & it is only the rapid depopulation that prevents their misery being more apparent

The Board know that in this District we have been most strict with regard to Relief works – Except in

one single tank for which
Martin is responsible or rather
his subordinates. Not an anna
has been wasted. task work has
been enforced from the beginning
& though only destitute people are
allowed on the works we have in
several cases done the earthwork
below D.P.W. rates

I claim that we have been managing
famine relief with the utmost economy
& caution & on that ground I
claim the Board's indulgence &
support for my proposals

My policy from the first has been
have work ready but be strict in
admitting people & in exacting work
I say now that we must have a relief
work open in Ramnad & there is
nothing we can take but Ragunatha Cauvery

Yrs sincerely

714/30

REVENUE DEPARTMENT.

No.

From Rev. Bd.

Dated Feb. 12th 1877.

FOR ORDERS.

* (as Court of Wards)

It is evident that a
relief work will be
urgently required im-
-mediately & that al-
-most the only work
available is this large
work the Ragunatha
Cauvery — The scheme
requires careful survey
but I would allow
the Main channel to
be commenced at once
as a Relief work —

The Rev. Bd. have forwarded
to Govt. 2 Pro. on the
same day relating to
the Ragunatha Cauvery
Channel works in
Ramnad —
In the first they suggest
the preparation of a
revised estimate and
the marking out of the
works being sanctioned
and the question of
the expediency of
carrying the out ~~the work~~
being referred to the
Irrigation Dept. for
an expression of
opinion — They
~~[illegible]~~
also support the Coll's
proposal that the
scheme shd. be regarded
as a relief work the

actual valuing of the
work done being charged
ag[ains]t the Ramnad
Estate or the excess
to the State.

In the second P[ara] they
request the early orders
of Govern[men]t on the above
recommendation but
do not commit
themselves to a direct
proposal that the
works sh[oul]d be commenced
in anticipation of the
submission of the
revised Estimate.

It seems that the
tank-work repairs
on which the Ramnad
people are at present
employed will be
finished by the 25th
Dec: instead of lasting
till the [illegible]
end of March as
anticipated before.
The great emigration
from Ramnad [illegible]

(I) request the Chief Engineer
to report on the work
as a relief project

RM
12/2

([illegible]) ×

Seriously agree and that
they immediate attention
sh[oul]d be given to this work.
The D.O. note of the
local officers indicate
a serious condition of
things. Mass-movement
of population do not occur
without most serious cause.
12/2

I see no objection
to the clearing & repair
of main channel
from upper end (so that
work done will bring [illegible])
at once as a [illegible]

---

relief work but a very
careful consideration
must be given to this
large project before it is
embarked on — it must be
referred to C. E. for inquiry
at once — The repair of
channel sh[oul]d be at cost
of State —

× & Asst. Engineer.

C — 15/2

---

to be more acute the
necessity for opening relief
works there till now but
the Col[lecto]r. is now pressing this
Government & there seems
to be nothing else in the
way of large works but
this channel.

It is suggested that the
commencement of the work
of repairing the main
channel be at once
sanctioned as a relief
work & in accordance
with the views of Mr.
Arbuthnot × that he sh[oul]d submit
a revised estimate for it
as quickly as possible.
The papers might at the
same time be referred to
the Chief Engineer for desig[nin]g
as to the likelihood of the
works being remunerative
and as to the extent to
which the subsidiary channels
from the main one sh[oul]d be
put in hand.

Orders are requested

12/2/77

1 Read Bd R

FOR ORDERS.

Special

Rangamatti Cavern Channel

[illegible] 1877

[illegible] 14

424

425

C 12-2-77 R 15-2-77