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## MADRAS RECORD OFFICE.

Government of Madras.

*Public Works*

DEPARTMENT.

G.O. No. 28751294Press  
Mis.*Original*Dated 1/5

1875

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,  
7th May 1875.*

Read the following letters:—

No. 148. From J. W. RUNDALL, Esq., District Engineer, Tinnevely, to Colonel G. W. WALKER, R.E., Chief Engineer, Public Works Department, dated Palamcottah, 20th March 1875, No. 192.

I HAVE the honor to inform you that Mr. C. Norfor, Assistant Engineer, in charge of the Courtallum Sub-division, has in a letter, dated the 17th instant, requested that I would apply to you for his transfer to another Tamil District.

2. Mr. Norfor states that he desires this change "on account of the ill health he has experienced in this district off and on."

3. I have never known Mr. Norfor to be under medical treatment, and am disposed, therefore, to attribute his desire for a transfer to his having been censured by me for sending in certain Irrigation Repair Estimates, many details of which were quite unintelligible.

4. Should you wish to see these estimates as a specimen of Mr. Norfor's capacity, I will forward them to you, but otherwise hardly like to trouble you with them.

5. As the district will not be weakened by Mr. Norfor's transfer to another, I beg to recommend it.

6. As the northern range has but little new work, either Imperial or Local, and as Mr. Supervisor Berlie has prepared more estimates for Agricultural Repair Works than it is probable we shall have funds to carry out during the next two years, I would propose to transfer him to the Shermadevi Range as Sub-division Officer, and hold the Streevilliputur Sub-division in abeyance for the present.

7. Mr. McNair, the Northern Range Officer, is thoroughly acquainted with the range, and will, as long as the allotments are as low as they are likely to be next year, be able to superintend all work.

No. 149. From the same Officer, dated Camp at Puthugudi, 9th April 1875, No. 10.

I HAVE the honor, at the request of Mr. C. Norfor, Assistant Engineer, attached to this District, to forward, herewith, a letter to your address, with two enclosures.

1 List of Documents (containing six enclosures).

2. Mr. Norfor complains, firstly, that I misrepresented him in stating that his application for a transfer was due to his having been censured rather than to ill health.

3. The reasons for my opinion were that Mr. Norfor's application was written on the day he received the censure referred to, and that I had never known him either under medical treatment or suffering from ill health.

4. Mr. Norfor complains, secondly, that I have "ventilated his inefficiency" to Officers of Revenue Department, and forwards copies (including one letter of his to me, written but never sent) of correspondence with regard to two cases in which I blamed him, and in which when the Collector and Sub-Collector found fault with the departmental work, I stated when replying to them that Mr. Norfor being inefficient I could not be responsible. I still feel that I should be very sorry to be held responsible for the manner in which Mr. Norfor performs his duties.

5. As a further reference on the subject of Mr. Norfor's inefficiency has now been made by Mr. Norfor himself, I forward, though reluctantly, the estimates referred to in my letter, No. 192, of the 20th March. To my mind these estimates and

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Mr. Norfor's explanations show that he is unfit for the post he holds. If Mr. Norfor would in cases like this take his notes to the Range Officer and prepare estimates under his instructions, there would be some hope for him; but he insists on doing things his own way, generally does them wrong, and when found fault with considers himself ill treated.

6. I should mention that these estimates were called for by the additional Sub-Collector who had inspected the works referred to and noted generally what appeared to him to be wanted.

7. The estimates, my notes in returning them, and Mr. Norfor's replies, are forwarded.

8. The estimates were sent in by Mr. Norfor without any explanation or description of what was either wanted or proposed.

9. In one place Mr. Norfor estimates for a masonry revetment wall to protect a channel from erosion 3 feet thick for a height of  $2\frac{1}{2}$  feet. This is marked (a) on the estimate and notes. Although I pointed out that this could hardly be required, Mr. Norfor still considers such a thickness "absolutely necessary."

10. In another case marked (b) Mr. Norfor estimates for a thickness of 10 inches with a height of 3 feet. This is probably a mistake, as a different thickness and different height also is entered in the specification. I mention this to show how very troublesome it is to revise Mr. Norfor's estimates and correct his complicated errors.

11. Mr. Norfor estimated for masses of concrete (to stop leakage) without any reference to what they are to be founded on; and, if made in accordance with either his first or his amended specification, the concrete would certainly be a failure.

12. In the case of certain estimates for repairing the irrigation works of Kara-panadi river, I went over the works with Mr. Norfor and gave him full notes regarding the preparation of the estimates. When received these were also in many cases unintelligible, and had to be revised by Mr. Grant.

13. Similarly most of Mr. Norfor's estimates require as much trouble expended in revising them as would suffice to make them out originally; hence in this respect at least he is of no assistance to his Range Officer.

14. Were I remaining in the district, and not about to go on furlough, I should venture to make Mr. Norfor's removal a special request, as I have no hope of his being a useful member of the district staff.

No. 150.

ORDER THEREON, 7th May 1875, No. 1,294.

ESTABLISHMENT, No. 16.

MR. NORFOR's request for removal to another district will be complied with, as it is contemplated by the District Engineer in abeyance. But from perusal of the correspondence sent up to the Chief Engineer, at Mr. Norfor's own request, on this and on a former occasion, His Excellency the Governor in Council has been led to form a most unfavorable opinion of that gentleman's competence for the work of the Department. And finding that his name stands high on the roster for promotion to a senior grade, he considers it necessary that his period of probation shall be extended before he attains it. He will consequently be reduced in rank to a place amongst the Assistant Engineers of the 2nd grade just above the gentlemen who have lately been appointed

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from Cooper's Hill; and he is warned not to expect promotion to the 1st grade till reported by competent authority fit for the charge. Further report of continued incompetence will involve dismissal from the Department.

2. The Chief Engineer will arrange for his further employment.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,  
Secretary to Government.

To the Superintending Engineer, Bellary.  
" District Engineer, Tinnevely.

Exd. A. Grubert.

Spare Copies

3

*Proceedings of the Madras Government, Public Works Department,  
10th October 1872.*

No. 150. Read the following letter from the Superintending Engineer, 8th Division, to the Secretary to Government, Public Works Department, dated Courtallum, 2nd September 1872, No. 2,505 :—

In reference to G. O., 1st August 1872, No. 1,821, directing that the Tinnevely District shall be divided into three ranges, in lieu of two as at present constituted, I have the honour to report as follows.

2. As the decision of Government, communicated in the G. O. above quoted, is based on the consideration that "no alteration of Local Fund Circles is feasible," I take the liberty to point out that although the Sub-Collector's head-quarters are at present, as heretofore, at Shermadevi, it has long been under contemplation to remove the same to Tuticorin, and now that the railway is under construction it is more than probable, as I am informed, that the transfer in question will not be much longer delayed.

3. The accomplishment of this transfer will *per se* necessitate a change in the Local Fund Circles, so that any alterations of ranges now made, to suit the present Local Fund Circle limits, will again have to be revised.

4. I would also bring to your notice that the division of a district into Local Fund Circles has been found by experience to be attended with a certain amount of inconvenience, and there can be no doubt but that a single Board for the district with Sub-Committees working in different portions of it, that is in several localities, would be preferable.

5. I have already brought to the notice of Government the fact of there being no suitable accommodation for a Range Officer at Shermadevi, and as I feel confident that no Sanitary Officer would permit convicts to be lodged in the only building available, I submit that it is very hard that so responsible an Agent of the Government, as a Range Officer, should be compelled to reside in the place in question.

6. I would also remind you that the present Southern (or Irrigation) Range of the Tinnevely District was specially and only quite recently constituted, so as to embrace the whole area of irrigation of the Tambrapoorney river, and that the splitting up of that range as now proposed will materially interfere with the system which now obtains, and which was considered to be, and undoubtedly is, a most advantageous arrangement.

7. It is to be borne in mind, moreover, that the doubling up of ranges has the positive advantage of enabling the Sub-division Officer to give more time to his professional duties than he could as Range Officer, as he is freed from the laborious compilation of accounts and periodical returns required by the Controller.

8. Under these circumstances I am in hopes that the Government will be pleased to re-consider their determination to alter the existing constitution of ranges, the more especially as the present system is found to work well; and I consider it therefore only my duty to bring this matter prominently to the notice of Government.

9. Should, however, the Government not be pleased to accede to the above recommendation, I would at least urge that at all events the revision of the ranges

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be deferred until the introduction of the new system of District Engineers, which is to be inaugurated on the 1st October next.

10. My reason for making this request is that I have at present no qualified officer to spare for the charge of the new 3rd Range. Assistant Engineer Mr. Grant is now engaged on the very important duty of rebuilding the fallen arches of the Soolochenum bridge. While Lieutenant Shepherd, R. E., and Mr. Hughes cannot possibly, at this juncture, leave the Striviguntum anicut works; and it would not be proper to place an upper subordinate in charge of the new Shermadevi Range with an Assistant Engineer in charge of a sub-division thereof.

No. 151. ORDER THEREON, 10th October 1872, No. 2,375.

**ESTABLISHMENT, No. 15.**

His Excellency the Governor in Council does not see cause to alter the arrangement of ranges of the Tinnevely

District made in Government Order No. 1,821 of 1st August.

2. The objection that it would not be proper to place an upper subordinate in charge of a range with an Assistant Engineer in charge of a sub-division thereof, will be easily met by placing an Assistant Engineer in charge of the range and the upper subordinate in charge of the sub-division.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,  
Secretary to Government.

To the Superintending Engineer, 8th Division.

Exd. S. T. Austin.

*List of documents forwarded with  
letter No 10 dated the 9<sup>th</sup> April 1875  
to the Chief Engineer D. P. W. —*

*Mr. Harford's letter dated 28<sup>th</sup> March 1875  
to Chief Engineer and Secretary to Govern-  
ment D. P. W. with 2 enclosures —*

*an Estimate of Rs 165 for constructing a  
coaling wall in Brasapathu channel —*

*an packet containing 5 Estimates for  
repairs of irrigation works —*

*Mr. Harford's letter No 690 of the 17<sup>th</sup> March  
to the Shermadevi Range Officer —*

*Mr. Grant's letter No 2472 of the 25<sup>th</sup> March  
to the District Engineer —*

*Copy of District Engineer's endorsement  
on Mr. Grant's letter No 2273 and  
notes on Estimates prepared by Mr. Harford  
and copy of Mr. Harford's reply thereon —*

*J. W. Rumpall  
District Engineer  
Tinnevely*

Enclosure in a letter  
from the District Engrs  
Immedielly to the Chief  
Engrs O.P.W.

7 May / 75  
MBK 149

List of documents for  
-warded with letter no  
10 dated the 9<sup>th</sup> April  
1875 to the Chief Engineer  
O.P.W.

O.P. 2485/75

Enclos. 3

1. Estimate for  
constructing a  
Calingulak wall  
in Arasapattin  
Channel. Rs. 155.

1. Estimate for  
repairing Ara-  
sapattin Cham-  
nel Rs. 3248

1. Notes. -

No 2186

Enclosure on letter from the  
Officer in charge of Shermadeni Range  
dated 9<sup>th</sup> March 1875 No 2293.

The Estimates received herewith are  
returned with some notes I have made re-  
garding them to which notes, please obtain  
and forward Mr Norfor's early reply.

I suppose that if Mr Norfor had  
forwarded a covering and explanatory  
letter it would have been sent on. An  
estimate of this kind is not intelligible  
without detailed information regarding  
each item.

Mr Norfor's explanations in the  
body of the estimates are of the most  
childish description.

I quite agree with your remarks  
about Sukhaw Anei and a correct section  
of the rock over which water now pass-  
es, with readings at every 5' should be  
taken. I have applied to the additional  
Sub collector for a copy of the High  
Court decision so that we may act  
strictly in accordance with it.

I can not of course expect that  
you should inspect all these works -  
but

but these estimates show conclusively that Mr. Norfor is incapable of preparing estimates for ordinary irrigation repairs.

Please try and see the Pattelpudivu Aicut with special reference to the large sum estimated for replacing a prong.

Notes on Estimates for repairing Arasapathu channel & ca.

Estimate Rs 165 for constructing a Calingula in Arasapathu channel.

The object of the "Calingula" is not intelligible from Mr. Norfor's remarks. Mr. Grant in his covering letter says that the "Calingula" is intended to get rid of the water of an Odei, in which case it should be called an escape. See Chief Engineer's Circular No 52 of 21<sup>st</sup> August 1873. Mr. Norfor's design is altogether unsuitable. Mr. Norfor will be called on to state whether he took levels to ascertain the fall in the bed of the Odei and how many cross sections of the stream were taken by him. Also for what distance the levels were carried up the Odei. No levels whatever are shown either of channel bank, channel bed or Odei bed.

As proposed by Mr. Grant 2 vents—

each 3' should be allowed in the body of escape. b✓

The front slope would certainly require pitching and the rear should be protected by a masonry wing but it would be better to allow masonry wings for both front and rear: 6' width of rough stone apron will be sufficient.

The specification for mortar is absurd, if the lime is worth carrying 6 miles it would certainly stand 1 to 1½ of sand besides the soorkee.

Repairing Arasapathu channel

(a) No explanation is given why the masonry wall is required a little above the Calingula at head. There is no information as to the soil on which the wall is to be founded, neither is it explained why a wall 3' in thickness but only 2½' in height is wanted. Mr. Norfor will furnish the requisite information.

(b) Underpinning Calingula wall. The specification prepared by Mr. Norfor seems to show that he does not understand what is wanted. The cracks or holes in the work should be carefully picked out and filled with chips of stone and—

hydraulic mortar. In this case the mortar should be strongly hydraulic and probably  $\frac{1}{2}$  of loam and  $\frac{1}{4}$  of sand to 1 of lime would be the best composition.

(c) If there is a breach near where a Calingula has recently been built, it probably shows that this new Calingula has not sufficient waterway. This should as far as possible be ascertained before the proposed revetment wall is built. This wall though 3' high is made 2' thick which makes the extraordinary thickness of 3 for 2  $\frac{1}{2}$ ' wall the more astonishing.

(d) The covering stones if removed should have the old mortar scraped off them and be bedded on hydraulic concrete and carefully grouted. The rate allowed Rs 2 is probably insufficient to do all this properly. These details should have been specified.

(e) The amount of concrete allowed for underpinning is excessive. It will not of course answer simply to lay the concrete on sand and some foundation is required for it, if the rock can not be reached within a foot or so rubble would probably be best in this case. Holes in the face of the work should be picked out and carefully filled in and

the concrete afterwards plastered with hydraulic mortar.

(f) How can the syphon sluice be rebuilt without the upper part of the face wall being removed? It is very unlikely that no new stone will be required for the covering and that the whole can be carefully relaid in hydraulic mortar at Rs 2.

(g) Mr. Norfor should be called on to explain why he omitted to provide for repairing the crest of the Perungal Sicut. It would probably be well to

put a cut stone crest as the stone is said by Mr. Brandel to have been already collected. The remarks under

(e) apply to Mr. Norfor's estimate for underpinning the Perungal Sicut.

Mr. Brandel also asks that a new cut be made near the end of the channel but this has not been estimated neither any explanation of the omission given.

Is the Pottelpudur Sicut the same as that called Mariampilly Sicut in para 5 of Mr. Brandel's letter?

(h) What is the work to this retaining wall? If it is raising it should be

to stated.

(b) The amount of stone to be replaced is excessive. Is there rock below the sluiceway? Letters referred to similar ones entered in the estimate.

Palancottah } (Signed) J. W. Pinnodall  
13<sup>th</sup> March 1875 } District Engineer

Mr Norfor's reply

To

No 700  
The Sthermadene  
Range Officer

Sir,

District Engineer's No 2186 of  
13<sup>th</sup> March 1875 and its enclosure  
will be sent tomorrow.

With reference to your  
No 2439 of 19<sup>th</sup> Inst. I have  
the honor to return the Esti-  
mates as called for.

The reason of my saying  
the Estimates can not be re-  
turned till after the Easter  
holidays was that you re-  
quired an accurate cross  
section of the opening at Sukar  
Kui, and as my time up to  
25<sup>th</sup> will be engaged in pre-  
paring Estimates and making  
measurements of Minor New  
works you I can not devote  
time to it just now.

I now reply to the questions  
asked by the District Engineer  
I took levels up the today.

The river in ques-  
tion is a stream co-  
ming from ground  
falling away from  
high hills, though  
possibly it may have  
a fall of only 1' per  
mile and a nearly  
uniform section, it is

for about 3/4 mile distance to  
ascertain its fall. No cross  
sections with the level were  
taken, but I noted the sections  
by measurements. I also tested  
the Velocity practically by  
means of a float as there was  
water.

water coming down the oday  
at the time. The oday being  
(a small one I did not think  
it necessary to take cross  
sections with the level when  
I could do it just as  
accurately by measurements,  
especially as the stream was  
uniform in section.

2. One half doorker and  
one half sand is a mistake.  
I meant it to be two of doorker  
and two of sand. the sand  
and doorker will still be  
of equal proportions. I do not  
know why Mr. Grant objects  
to this. My proportions were  
in accordance to experi-  
ments tried by the late Mr.  
W. Fraser (or rather I meant  
it to be) but of course the  
District Engineer can alter  
them to what he likes.

(a) The wall in the Arasa  
pathu channel for which  
3 feet thickness has been  
allowed for a height of  $2\frac{1}{2}$   
feet in superstructure is  
meant to keep the water of  
the channel in its proper  
alignment. This thickness  
was also, I considered, absolutely  
necessary

to my mind very im-  
probable, and I have  
called for more in-  
formation. J. W. R.

Probably a  
little stone-  
putting is required  
in this case, with  
ground near the backing.

necessary, as the channel has a  
nasty let against the place  
where the wall will be built.  
It is only the wall that  
has to keep the water in its  
proper course. there is no  
additional support of  
earth behind. The nature  
of soil here is "sand mixed  
with stones." The other wall  
which is estimated for, is  
to be added on to an old  
wall now standing, and  
as the length of the new  
wall is only 6 feet long,  
I thought it best to keep  
to the old section, especially  
as the present wall is  
about 250 feet in length.

Mr. Fraser does not (C) There is no actual  
explain whether much breach where the Revetment  
a little water enters is provided but I thought it  
channel at this point, necessary torevet the bank  
in case of a breach. the foot  
of the bank and, in fact,  
halfway up the slope, is  
washed away. The thickness  
2 feet for this revetment I  
thought necessary, as the wall  
being built dry (no chumam)  
no small stones ought to be  
allowed in the work; but

of course the District Engineer can alter it to what he likes.

(8) Where the face walls are, there is no need to remove the body walls. the intermediate portions only want attending to.

(9) I do not think the Perungal Anicut wants its crest repairing - it is in very good condition. A few of the top bricks are a little worn out, but that is all. it might be plastered with hydraulic mortar out of sundries.

The new cut I consider a waste of money because the channel happens to have a little curve about a couple of hundred feet from its head, I hardly think it necessary to straighten it. if it is done to this channel it will have to be done to hundreds of other channels in the Range.

The Pottelputhur Anicut is not the same as the Manjanipilla. One is across the Mananadi and the other across the Gatha-nanadi River. The Pottelputhur anicut is the only one that has

has no water backed up by it in this season of the year. It is a well known fact that none of the other anicuts I inspected are dry even at this season of the year. The Pottelputhur anicut Body is in thorough order.

(h) There is no retaining wall - it will have to be built.

(k) The amount of stone to be replaced is certainly a large quantity, but it can't be helped, the stones are lying about scattered in all directions from want of a retaining wall. I did not

This is the very point which should have been ascertained.

notice any rock below the anicut.

I think I have now replied to all the questions asked by the District Engineer and in conclusion will remark that the District Engineer, it would appear to me, from your letter, feels hurt at the tone of my letter No 690 of 17<sup>th</sup> Instant as you say he desires to forward the Estimates and Correspondence to

the Chief Engineer. I do not  
myself see anything in the  
letter that he can take any  
objection to and that I  
could have a chance of  
withdrawing, except if it  
is by my mentioning that  
it was very discouraging  
to receive letters of the style  
the District Engineer has  
adopted of late; but this  
I still maintain, as I  
certainly have received  
those letters and I can al-  
ways refer to them if  
required.

As I have a right to  
receive a copy of the Dis-  
trict Engineer's letter to  
the Chief Engineer I request  
that a copy be sent to me.

I have you

(Signed) G. H. Norfor

Assistant Engineer

Courtesy

22<sup>nd</sup> March 1875

(True copies)

J. W. Randall

District Engineer

Truro

9<sup>th</sup> 7 May / 75

in B. N. 144

Copy of Dist. Engr's R. =  
= endorsement on Mr. Grant's  
letter no 2293 and notes  
on Estimates prepared, &  
copy of Mr. Norfon's reply  
thereon.

P. N. 2486 / 75  
22/75

No. 2442

29.3.75

From

The Officer in charge of No. 3 or

Sharmadavy Range

Tinnevely.

To

The District Engineer  
Tinnevely

Sir,

Enclo-5.

2 Estimates.

3 Letters from Mr. Norfon

nos 690 700 & 709 of

17, 22 & 24 March 1875

I have the honor to forward  
Mr. Norfon's Estimates for the  
irrigation works on the Gadana  
hills and Vannuacanthu  
Rivers called for by me at  
your request. I forward  
also the reply to your question  
Regarding these replies I  
need say nothing except  
in so far as Mr. Norfon refers  
to me by name, why he  
does so in a letter to my  
self I do not know.  
My original letter to you for  
forwarding these Estimates  
unfortunately a little obscure  
in the manner in the matter  
& Mr. Norfon has given my  
words a wrong construction.  
I said the time in the matter  
was allowed only an  
equal part of said & looked  
meaning that the time was  
specified as equal to the land.

plus the Sooku.  
Mr. Nofer. now corrects his  
Specification by giving 2 of  
Sand & 2 of Sooku & points  
out the coincidence that the  
Sand & Sooku are still equal  
in quantity. The corrected  
Mortar now stands thus

1 of Lime  
2 of Sand  
2 of Sooku. I believe  
this is what he intends  
but I will not be so rash  
as to say, certainly, that  
I have caught his meaning,  
for the paragraph is far from  
clear.

If I am right in my  
interpretation, I can only  
say that I think it likely  
that Mr. Nofer's recollection  
of the "experiments" tried by  
the late Mr. W. F. F. is  
hampered by time, for I  
do not think such a pro-  
portion for our lime would  
have been proposed.  
Mr. Nofer admits however  
that his Specification was  
a mistake, whether he  
has now improved in it  
I think doubtful.

Mr. Nofer meant to be  
he failed to  
standard he  
seems surprised  
attention to be

Correct is not taken as  
equal to his being so -  
I enclose also a letter  
No. 709 of 24 Inst. in  
which Mr. Nofer in-  
forms you that your  
supposition that his  
request for a transfer  
was prompted by his  
annoyance at being  
found fault with, is  
a mistake and re-  
quests you to correct  
it.

As it appears to me  
that a reference to the  
Chief Engineer is now  
rendered unavoidable  
I give below the number  
or dates of the various  
letters upon this matter  
consecutively, so as to  
admit of easy reference.  
The estimates were first sub-  
mitted to you with my  
No. 2393 of 9<sup>th</sup> Inst. in which  
you wrote your Memo No.  
2186 of 15<sup>th</sup> Inst. enclosing  
also a paper of "Notes"  
on the estimates.  
These papers forwarded

by me to Mr. Harper on the  
15<sup>th</sup> inst. produced in reply  
Mr. Harpers No. 690 of 14<sup>th</sup> inst  
which I enclosed which  
informs that the Estimates  
could not be returned till  
after Easter.

On this by your request I  
wrote Mr. H. 2439 of 16<sup>th</sup> inst directing  
the immediate return of the  
Estimates with answers to  
the questions put.

His replies are given in  
Mr. Harpers letter No. 700 of 22<sup>nd</sup>  
inst which with the Estimates  
is enclosed.

Mr. Harpers No. 709 of 24<sup>th</sup> inst  
also enclosed, is written on  
his receiving a copy of  
your letter to the Chief  
Magistrate forwarding his ap-  
plication for a transfer.

I have the honor to be

Sir, Your Obedt Servt

J. D. Grant  
Ch. Mag.

14

14

14

by me to Mr. Norfor on the  
15<sup>th</sup> Inst. produced in reply  
Mr. Norfor's No. 690 of 14<sup>th</sup> Inst.  
which I enclosed which  
informs that the Estimates  
could not be returned till  
after Easter.

On this day  
I wrote by the  
the usual  
Estimates to  
the quarters  
Mr. Norfor  
Mr. Norfor  
just which  
is enclosed  
Mr. Norfor  
also enclosed  
his receipt  
for letter  
of 15<sup>th</sup> for  
application of  
I had

No. 2672

Camp

From

The Officer in charge of No. 3 or

Sharmadavy Range

Tinnevely.

To The District Engineer  
Tinnevely

Dated

Recd.

25<sup>th</sup> March 1875

ENCLOSURES 5

SUBJECT.

Forwards Estimates for  
the irrigation works on  
the Gudamanathi and  
Tarananathi Rivers as  
received from Mr. Norfor  
at the request of the  
District Engineer. Com-  
municated by this office  
calling for them.

18.3.75  
24.3.75

To 690.  
To ~~18.3.75~~ ~~24.3.75~~ ~~18.3.75~~ ~~24.3.75~~ ~~18.3.75~~ ~~24.3.75~~  
Thursaday 16  
Range Officer

My remark was  
that filling the holes  
should be specified  
for in order that  
when the work is car-  
ried out the proper  
method of doing it,  
might not be lost  
sight of. L.W.R.

9<sup>th</sup> 7 May / 75  
in B. 149  
Mr. Grant's letter no  
2472 of the 25<sup>th</sup> March  
1875 to the address of  
the District Engineer.

O.P. 2483/45  
21/45

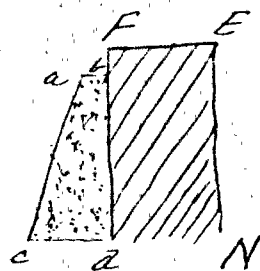
With reference to the  
District Engineer's letter  
in referring to the  
Sapatha account etc.  
I have the honor to  
inform you will call  
upon the District Engineer to  
let me know how  
I am to ascertain  
nearly and estimate  
for filling in holes  
and cracks with chips  
at places with hardening  
mortar when there is  
water backed up by  
the amount to about  
6 inches below its level  
as was the case with  
all the ancient suspension  
etc. ~~and~~ Judging from  
the leakage in rear  
I came to the conclusion  
that it was best to  
stop leakage by having  
a concrete wall or  
front built up against  
the body of the ancient  
to whatever height was  
necessary.

If there was no water  
standing up against  
the ancient I might  
see where the chips

might be introduced, but I should not be content with simply filling up the hollows but would allow a small batter <sup>in?</sup> front so as to make the ancient perfectly water tight.

I will give an example - See item marked (b).

Enclosed.



F E N a is the ancient body. a, b, z, c the concrete front.

The average width allowed in the estimate is 2 ft, but it is not necessary that to get this width - the top should be 1 ft and bottom 3 ft, a great portion of this will be utilized to fill up hollows &c in the body wall, the balance only will be used for the construction of this front wall, which in most cases would perhaps have an average width of 1 foot.

I should have, perhaps explained how I intended to concrete to be utilized, and I should have done so if I knew there was

any difficulty in understanding what was meant.

I admit there are different ways of preparing estimates of this description <sup>of work</sup> and perhaps neither you nor the District Engineer would have prepared the estimate in this form as I have done - but at the same time, because my method does not quite meet with the approbation of the District Engineer it is not to be taken as a precedent, that

I am "incapable of preparing estimates for ordinary irrigation repairs." Nothing can be more discouraging to be written to me to state the District Engineer has adopted a plate.

I must mention that this is not the first estimate the District Engineer has received from me of this nature. The Metakal Channel leads are being stopped in the way I have already described & the District Engineer has passed the estimate.

4. This method was also adopted in the Pulgor Ancient

The Metakal Channel was ad rock, & the leakage principally between the base of wall & the rock. The concrete used was a small one, & the work answers

its purpose original  
when carefully done.  
L.W.R.

You have stated in  
your forwarding letter  
to the District Supr  
that I state that  
the "Portapathway  
Ancient Estimate" is  
required because it  
is necessary.

Allow me to draw  
your attention to my  
remark again, where  
you will find it  
differently worded, viz

"Work necessary, as it  
is in need of repair"

By looking into the Esti-  
mate you will see  
what to repair are.

Why my remarks in  
the body of the Estima-  
tes are childish I  
fail to see. I always  
thought my a short,  
brief remark was  
required in this column.

This Estimate can  
only be submitted  
to you after the  
Easter holidays.

I have the honor to be  
Sir

Yours re

Wm. J. W.  
Ap. 1875

Auburn, N.Y.  
17-3-75

\* when answers to questions  
by Dist. Supr will be  
supplied.

No.

690

Camp

*Ambasarnudram*

From

The Officer in charge of

Courtallam Sub-Division

of No. 3 or Shary. Range.

To

The

*Officer in charge*  
*Shurmadarg*  
*Range*

Dated

*13* March 1875.

Recd.

ENCLOSURES *2 estimates.*

Your

No.

Dated

*Inform of the*  
*manner in which*  
*the estimates for re-*  
*pairing the Pottal*  
*pulthar anicuts &c*  
*were prepared.*

Detailed estimate No of 1874/75.  
Repairing Arasapathoo Anicut & channel.

| Particulars of work.                                                                  | Number. | Measurement |         |        | Contents. |
|---------------------------------------------------------------------------------------|---------|-------------|---------|--------|-----------|
|                                                                                       |         | Length      | Breadth | Height |           |
| <u>Naruthankottai Odappu.</u>                                                         |         |             |         |        |           |
| Extending masonry wall.                                                               |         |             |         |        |           |
| Foundations                                                                           | 1       | 7           | 6       | 3      | 126.      |
| Superstructure                                                                        | 1       | 6           | 4½      | 3      | 81.       |
| (a) Masonry wall required: a little above calingulak at head.                         |         |             |         |        |           |
| Foundations                                                                           | 1       | 19          | 4½      | 3      | 256½.     |
| Superstructure                                                                        | 1       | 18          | 3       | 2½     | 135.      |
| Total Rough stones in chumam left                                                     |         |             |         |        | 598½.     |
| or Cubic yards                                                                        |         |             |         |        | 22½.      |
| (b) Stopping leaks in calingulak at head by underpinning with concrete.               | 1       | 183         | 2       | 3      | 1098.     |
| Total concrete in chumam - cubic feet                                                 |         |             |         |        | 1098.     |
| or Cubic yards.                                                                       |         |             |         |        | 40⅔.      |
| (c) Retement near Kasavenpulla thodappu where a new calingulak has lately been built. |         |             |         |        |           |
| Foundations                                                                           | 1       | 15          | 3       | 2      | 90.       |
| Superstructure                                                                        | 1       | 14          | 2       | 3      | 84.       |
| Total Rough stones retement left                                                      |         |             |         |        | 174.      |
| or Cubic yards                                                                        |         |             |         |        | 6⅔.       |
| Commencing from the north end of Pattacurichy Top.                                    |         |             |         |        |           |
| Deepening channel & banking left side                                                 | 70      | 3½          | ½       |        | 102.      |
| Clearing bed of sand & banking Do                                                     | 25      | 3¼          | ¾       |        | 70.       |
| Do to Narul Odai & south end of top                                                   | 25      | 3½          | ½       |        | 44.       |

90 7 May/75  
in B.N. 11.4

Mr. Norpois letter no  
690 of the 17<sup>th</sup> March 75  
to the address of the  
Shermaderi Range Officer

P.R. 2483/75  
20/75

|                                                                             |   |     |                |                |                |
|-----------------------------------------------------------------------------|---|-----|----------------|----------------|----------------|
| Clearing bed of sand & south end of top                                     | " | 56  | 4              | $\frac{1}{2}$  | 112            |
| Banking left side                                                           | " | 40  | 3              | 1              | 120            |
| Clearing bed of sand                                                        | " | "   | 4              | $\frac{1}{2}$  | 80             |
| Do to sluice of Maryalodai tanks                                            | " | 78  | 4              | $\frac{1}{2}$  | 156            |
| Do                                                                          | " | 100 | 4              | $\frac{1}{2}$  | 200            |
| Do                                                                          | " | 200 | 4              | $\frac{1}{3}$  | 267            |
| Do to bund running northward                                                | " | 108 | 4              | $\frac{1}{3}$  | 144            |
| Straightening channel in a line with the<br>why south end of Palmyrah Topes | " | 100 | $6\frac{1}{2}$ | 1              | 650            |
| Clearing both sides                                                         | " | 36  | 1              | $\frac{3}{4}$  | 27             |
| Clearing bed of sand                                                        | " | "   | 4              | $\frac{1}{4}$  | 36             |
| Do                                                                          | " | 84  | 4              | $\frac{1}{2}$  | 168            |
| Clearing centre                                                             | " | 4   | 5              | $\frac{3}{4}$  | 15             |
| Clearing bed (gravel)                                                       | " | 128 | $2\frac{1}{4}$ | $\frac{1}{4}$  | 72             |
| Clearing bed of sand                                                        | " | 32  | $3\frac{1}{2}$ | $\frac{1}{2}$  | 56             |
| Clearing bed - gravel                                                       | " | 20  | $2\frac{1}{4}$ | $\frac{1}{4}$  | 11             |
| Do on sides to Odai - Do                                                    | " | "   | 1              | $\frac{1}{2}$  | 10             |
| Clearing bed of sand                                                        | " | 20  | $4\frac{1}{2}$ | $\frac{1}{2}$  | 45             |
| Clearing bed                                                                | " | 84  | $2\frac{1}{2}$ | $\frac{1}{3}$  | 70             |
| Do                                                                          | " | 172 | $2\frac{1}{2}$ | $\frac{1}{2}$  | 215            |
| Clearing left side                                                          | " | 4   | 1              | 1              | 4              |
| Clearing bed                                                                | " | 62  | $2\frac{1}{2}$ | $\frac{1}{3}$  | 43             |
| Clearing right side                                                         | " | 4   | 1              | 1              | 4              |
| Clearing bed                                                                | " | "   | $2\frac{1}{2}$ | $\frac{1}{3}$  | 3              |
| Do                                                                          | " | 74  | $2\frac{1}{2}$ | $\frac{1}{2}$  | 92             |
| Clearing right side                                                         | " | 20  | $\frac{3}{4}$  | $\frac{1}{2}$  | 7              |
| Clearing bed                                                                | " | 8   | 2              | $\frac{1}{4}$  | 4              |
| Closing breach in the bank                                                  | " | 4   | $3\frac{1}{4}$ | $1\frac{1}{2}$ | 20             |
| Removing hard rock in bed of ch.                                            | " | 9   | 2              | $\frac{1}{4}$  | $4\frac{1}{2}$ |
| Clearing bed                                                                | " | 54  | $2\frac{1}{2}$ | $\frac{1}{2}$  | 67             |
| Good                                                                        | " | 8   | "              | "              | "              |
| Clearing bed                                                                | " | 76  | 2              | $\frac{1}{4}$  | 38             |
| Do                                                                          | " | 16  | 3              | $\frac{2}{3}$  | 32             |
| Do right side                                                               | " | 40  | $\frac{1}{2}$  | $\frac{1}{2}$  | 10             |

|                                                                  |   |    |                |                |     |
|------------------------------------------------------------------|---|----|----------------|----------------|-----|
| Clearing bed                                                     | " | 40 | $2\frac{1}{2}$ | $\frac{1}{2}$  | 50  |
| Clearing left side                                               | " | 4  | 1              | $\frac{1}{2}$  | 2   |
| Do bed                                                           | " | 28 | $2\frac{1}{2}$ | $\frac{1}{2}$  | 35  |
| Good                                                             | " | 6  | "              | "              | "   |
| Clearing bed                                                     | " | 46 | $2\frac{1}{2}$ | $\frac{1}{2}$  | 57  |
| Do                                                               | " | 8  | $2\frac{3}{4}$ | $\frac{3}{4}$  | 16  |
| Do                                                               | " | 8  | $2\frac{1}{2}$ | $\frac{1}{2}$  | 10  |
| Do                                                               | " | 26 | $2\frac{3}{4}$ | $\frac{3}{4}$  | 54  |
| Good                                                             | " | 6  | "              | "              | "   |
| Clearing on both sides                                           | " | 28 | 2              | $\frac{1}{2}$  | 28  |
| Good                                                             | " | 6  | "              | "              | "   |
| Clearing right side                                              | " | 4  | 1              | $\frac{1}{2}$  | 2   |
| Good                                                             | " | 12 | "              | "              | "   |
| Clearing on both sides                                           | " | 12 | 1              | $\frac{1}{4}$  | 3   |
| Good                                                             | " | 20 | "              | "              | "   |
| Clearing bed                                                     | " | 72 | $2\frac{1}{4}$ | $\frac{1}{4}$  | 40  |
| Do                                                               | " | 36 | $2\frac{3}{8}$ | $\frac{3}{8}$  | 32  |
| Clearing on both sides                                           | " | 10 | $1\frac{1}{2}$ | $\frac{3}{8}$  | 6   |
| Do                                                               | " | 8  | 1              | $\frac{1}{4}$  | 2   |
| Do bed                                                           | " | 24 | $2\frac{1}{4}$ | $\frac{1}{4}$  | 13  |
| Good                                                             | " | 4  | "              | "              | "   |
| Clearing bed                                                     | " | 88 | $2\frac{1}{4}$ | $\frac{1}{4}$  | 50  |
| Do on both sides                                                 | " | 52 | 1              | $\frac{3}{8}$  | 19  |
| Do right side                                                    | " | 20 | $\frac{1}{2}$  | $\frac{1}{4}$  | 3   |
| Do bed                                                           | " | 24 | $2\frac{1}{4}$ | $\frac{1}{4}$  | 13  |
| Do on sides                                                      | " | 12 | $1\frac{1}{2}$ | $\frac{1}{4}$  | 4   |
| Do                                                               | " | 16 | 1              | $\frac{3}{8}$  | 6   |
| Do                                                               | " | 20 | 1              | $\frac{1}{4}$  | 5   |
| Do                                                               | " | 12 | 1              | $\frac{3}{8}$  | 4   |
| Good                                                             | " | 8  | "              | "              | "   |
| Clearing right side                                              | " | 4  | $\frac{3}{4}$  | $\frac{1}{2}$  | 2   |
| Good                                                             | " | 28 | "              | "              | "   |
| Closing breach in the bank                                       | " | 3  | $3\frac{1}{2}$ | $1\frac{1}{2}$ | 15  |
| Clearing bed                                                     | " | 40 | $2\frac{1}{2}$ | $\frac{1}{3}$  | 33  |
| Clearing bed of sand to a jungle stream<br>& Langoo Tyers garden | " | 62 | 4              | $\frac{5}{8}$  | 130 |

|                                   |   |     |                |               |                    |
|-----------------------------------|---|-----|----------------|---------------|--------------------|
| Goods                             | " | 2   | "              | "             | "                  |
| Clearing bed of sand              | " | 32  | 4              | $\frac{1}{2}$ | 64                 |
| Do                                | " | 10  | 3              | $\frac{1}{2}$ | 60                 |
| Goods                             | " | 16  | "              | "             | "                  |
| Clearing bed                      | " | 18  | 3              | $\frac{1}{2}$ | 27                 |
| Removing hard rock in channel     | " | 2   | 1              | $\frac{1}{4}$ | $\frac{1}{2}$      |
| Clearing bed                      | " | 32  | 3              | $\frac{1}{2}$ | 48                 |
| Removing hard rock                | " | 2   | 1              | $\frac{1}{4}$ | $\frac{1}{2}$      |
| Clearing bed                      | " | 72  | 3              | $\frac{1}{2}$ | 108                |
| Do                                | " | 28  | 3              | $\frac{3}{8}$ | 32                 |
| Do                                | " | 32  | 3              | $\frac{1}{4}$ | 24                 |
| Do right side                     | " | 164 | $2\frac{1}{2}$ | $\frac{1}{3}$ | 136                |
| Do bed                            | " | 92  | $\frac{3}{4}$  | $\frac{1}{4}$ | 17                 |
| Clearing left side                | " | "   | $2\frac{1}{2}$ | $\frac{1}{4}$ | 57                 |
| Do bed                            | " | 52  | $\frac{1}{2}$  | $\frac{1}{2}$ | 13                 |
| Do both sides                     | " | "   | $2\frac{1}{2}$ | $\frac{1}{2}$ | 65                 |
| Do bed                            | " | 24  | 1              | $\frac{1}{2}$ | 12                 |
| Do                                | " | "   | $2\frac{1}{2}$ | $\frac{1}{4}$ | 13                 |
| Clearing right side               | " | 28  | 1              | $\frac{1}{4}$ | 14                 |
| Do                                | " | 20  | $\frac{1}{2}$  | $\frac{1}{4}$ | 5                  |
| Do                                | " | "   | $2\frac{1}{2}$ | $\frac{1}{4}$ | 10                 |
| Do right side                     | " | 136 | 2              | $\frac{1}{4}$ | 68                 |
| Do bed                            | " | 8   | $\frac{1}{2}$  | $\frac{1}{4}$ | 2                  |
| Removing hard rock in the ch.     | " | 4   | 1              | $\frac{1}{4}$ | 1                  |
| Good up to Puthucalam Tanks       | " | 192 | "              | "             | "                  |
| Total cubic yards                 |   |     |                |               | 4433 $\frac{1}{2}$ |
| of which Earth & sand cubic yards |   |     |                |               | 4334               |
| Gravel                            |   |     |                |               | 93                 |
| Hard rock cubic yards             |   |     |                |               | 6 $\frac{1}{2}$    |

M. 2485  
19/15

## Repairs Agricultural

Chinnerelly District Tharmadary Range Ambasamudram Taluk  
Name and nature of works. Repairing Arasapathu aricut & channel.

| Statistics of cultivation |         |                 |         |                    |         | Total Repair        |        | Details of work      |               |                 |
|---------------------------|---------|-----------------|---------|--------------------|---------|---------------------|--------|----------------------|---------------|-----------------|
| Ayacut                    |         | 5 years average |         | Highest of 5 years |         | During last 5 years |        | Length of bund in ft | No of sluices | No of Colinguts |
| Extent                    | Revenue | Extent          | Revenue | Extent             | Revenue | Year                | Amount |                      |               |                 |
| 910                       | 5602    | 864             | 5899    | 868                | 5970    | "                   | "      | "                    | "             | "               |

Estimated by whom and when called for. By collector 14/11/74.  
Date of inspection of work by Sub Div Officer 9 January 1875.  
Remarks. Work necessary. Channel is much silted.

| Quantities       | Description of work             | Rate | Amount |     | Amount of each part |     |
|------------------|---------------------------------|------|--------|-----|---------------------|-----|
| 22 $\frac{1}{8}$ | Cyds of Rough stone in Chunam   | 3 8  | 77     | 94  |                     |     |
| 40 $\frac{2}{3}$ | Do of concrete in Chunam        | 3 "  | 122    | "   |                     |     |
| 6 $\frac{4}{5}$  | Do of Rough stone revetment     | 1 8  | 9      | 108 |                     |     |
| 4334             | Do of Earth & sand              | " 1  | 270    | 14  |                     |     |
| 93               | Do of Gravel                    | " 2  | 11     | 10  |                     |     |
| 6 $\frac{1}{2}$  | Do of Hard rock                 | 1 8  | 9      | 12  |                     |     |
|                  | Sundries                        |      | 18     | 8   | 520                 | " " |
|                  | Superintendence                 |      |        |     | 20                  | " " |
|                  | Total amount of estimate Payees |      |        |     | 540                 | " " |

I do hereby certify that the above estimate

amounting Rs 540-0-0 provides for every-  
thing necessary & no supplementary work  
will afterwards be required.

Courtallam  
25-2-75

Elloor

Assistant Engg.

Idikut  
C. M. L.

M. 485/25

Detailed estimate No of 1874/75.

Particulars of work.

| Particulars of work.                                        | Number | Measurement |         |        | Cubits.           |
|-------------------------------------------------------------|--------|-------------|---------|--------|-------------------|
|                                                             |        | Length      | Breadth | Height |                   |
| (1) <u>Yakamallur Anicut.</u>                               |        |             |         |        |                   |
| Removing covering stones on Anicut body<br>& replacing them | 1      | 186         | 4 1/2   | 3/4    | 627 3/4           |
| Total Old covering stone left<br>or by do.                  |        |             |         |        | 627 3/4<br>23 1/4 |
| (2) <u>Underpinning with concrete, Anicut body.</u>         |        |             |         |        |                   |
| Foundation                                                  | 1      | 187         | 3       | 3      | 1683              |
| Superstructure                                              | 1      | 186         | 2       | 3      | 1116              |
| Total concrete in chunam left<br>by do.                     |        |             |         |        | 2799<br>103 2/3   |
| <u>Channel.</u>                                             |        |             |         |        |                   |
| Commencing from the Anicut.                                 |        |             |         |        |                   |
| Clearing silt in bed of channel to Manabary<br>Nathagoo     | "      | 195         | 4       | 3/8    | 29 2 1/2          |
| Clearing bed to Aqueduct                                    | "      | 280         | 5       | 3/8    | 525               |
| Do to Parian tree                                           | "      | 260         | 5       | 1/2    | 650               |
| Do to Do                                                    | "      | 350         | 5       | 1/2    | 880               |
| Do to Pallathymada sluice                                   | "      | 180         | 4       | 1/2    | 360               |
| Do to Mattucalmada sluice Appendix No 1                     | "      | 116         | 4       | 3/8    | 174               |
| Do to Ammencoil bridge                                      | "      | 140         | 4       | 1/4    | 140               |
| Do to Yelupayady caul sluice Appendix No 2                  | "      | 476         | 4       | 1/4    | 476               |
| Do to Sellycaul Appendix No 3                               | "      | 268         | 4       | 1/2    | 536               |
| Do                                                          | "      | 168         | 4       | 3/8    | 252               |
| 1/2 C. 1/2 G. Do to Nuthempuram bridge                      | "      | 128         | 4       | 3/8    | 192               |
| Good to Nedunkolam Kumburmaday<br>Appendix No 4             | "      | 800         | "       | "      | "                 |
| Syphon sluice Appendix No 5                                 |        |             |         |        |                   |

|                                                                     |   |     |               |               |                   |
|---------------------------------------------------------------------|---|-----|---------------|---------------|-------------------|
| Good to Mattummadai sluice                                          | " | 70  |               |               |                   |
| $\frac{1}{2}$ C. $\frac{1}{2}$ G. Deepening bed to Valjematto maday | " | 176 | 3             | $\frac{1}{2}$ | 264               |
| Do                                                                  | " | 100 | 2             | $\frac{1}{4}$ | 50                |
| Good                                                                | " | 144 | "             | "             | "                 |
| Good to Panayadycolam                                               | " | 100 | "             | "             | "                 |
| Good to end of Do                                                   | " | 543 | "             | "             | "                 |
| C. Clearing bed of channel                                          | " | 40  | 3             | $\frac{1}{4}$ | 30                |
| Do                                                                  | " | 124 | 3             | $\frac{1}{4}$ | 93                |
| Do to Rock                                                          | " | 212 | 3             | $\frac{1}{4}$ | 159               |
| $\frac{1}{2}$ C. $\frac{1}{2}$ G. Do                                | " | 80  | 3             | $\frac{3}{8}$ | 90                |
| C. Do                                                               | " | 284 | 3             | $\frac{3}{8}$ | 319 $\frac{1}{2}$ |
| $\frac{1}{2}$ C. $\frac{1}{2}$ G. Do to Kurkelcolam coverthalag     | " | 320 | 3             | $\frac{1}{4}$ | 240               |
| $\frac{1}{2}$ G. $\frac{1}{2}$ Rock. Do                             | " | 100 | 3             | $\frac{1}{4}$ | 75                |
| C. Do                                                               | " | 190 | 3             | $\frac{3}{8}$ | 213 $\frac{3}{4}$ |
| G. Do Paragencolam coverthalag                                      | " | 124 | 3             | $\frac{3}{8}$ | 139 $\frac{1}{2}$ |
| G. Do to Pillaicolam coverthalag                                    | " | 150 | 3             | $\frac{1}{4}$ | 112 $\frac{1}{2}$ |
| G. Widening bed                                                     | " | 332 | 1             | $\frac{1}{4}$ | 83                |
| G. Deepening                                                        | " | "   | 3             | $\frac{1}{4}$ | 249               |
| C. Do to Road                                                       | " | 584 | 3             | $\frac{1}{2}$ | 876               |
| C. Do                                                               | " | 108 | 3             | $\frac{1}{2}$ | 162               |
| $\frac{1}{2}$ C. $\frac{1}{2}$ G. Do to foot bridge                 | " | 92  | 3             | $\frac{3}{8}$ | 103 $\frac{1}{2}$ |
| Deepening to Landycolam coverthalag                                 | " | 120 | 3             | $\frac{1}{2}$ | 180               |
| Total byards                                                        |   |     |               |               | 7917              |
| of which earth cubic yds                                            |   |     |               |               | 6670              |
| Gravel Do                                                           |   |     |               |               | 1209              |
| Rock Do                                                             |   |     |               |               | 38                |
| Rebuilding Mattummaday sluice. Appendix No. 1.                      |   |     |               |               |                   |
| + Rebuilding body                                                   | " | 8   | 1             | 1             | 8                 |
| Deduct for Vent                                                     | " | 1   | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{16}$    |
| Remaining brick in chunam byards                                    |   |     |               |               | 7 $\frac{15}{16}$ |
| Constructing Choppadyal sluice. Appendix No. 2.                     |   |     |               |               |                   |
| Body                                                                | " | 5   | 1             | 1             | 5                 |
| Deduct for Vent                                                     | " | 1   | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{16}$    |
| Remaining brick in chunam byards                                    |   |     |               |               | 4 $\frac{15}{16}$ |
| Constructing Lethangcaud sluice. Appendix No. 3.                    |   |     |               |               |                   |
| Body                                                                | " | 4   | 1             | 1             | 4                 |
| Deduct for Vent                                                     | " | 1   | $\frac{3}{8}$ | $\frac{3}{8}$ | $\frac{1}{8}$     |
| Remaining brick in chunam byards                                    |   |     |               |               | 3 $\frac{7}{8}$   |

Rebuilding Nedongolam Handyam maday sluice. Appendix No. 4.

|                                          |   |                 |               |               |                   |
|------------------------------------------|---|-----------------|---------------|---------------|-------------------|
| Body                                     | " | 8               | $\frac{1}{4}$ | $\frac{1}{4}$ | 12 $\frac{1}{2}$  |
| Front & rear wall                        | " | 6               | $\frac{5}{8}$ | 3             | 11 $\frac{1}{4}$  |
| byds                                     |   |                 |               |               | 23 $\frac{3}{4}$  |
| Deduct for Vent                          | " | 9 $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{9}{16}$    |
| Do for flooring, covering & facing sides | " | "               | 2             | $\frac{1}{4}$ | 4 $\frac{5}{8}$   |
| Deduction byds                           |   |                 |               |               | 5 $\frac{3}{16}$  |
| Remaining brick in chunam byds           |   |                 |               |               | 18 $\frac{9}{16}$ |
| Old cutstone in chunam Do                |   |                 |               |               | 5 $\frac{3}{16}$  |

Rebuilding syphon sluice. Appendix No. 5.

|                                                |   |    |               |               |                    |
|------------------------------------------------|---|----|---------------|---------------|--------------------|
| (f) Rebuilding body between face walls & walls | " | 22 | $\frac{1}{2}$ | $\frac{1}{2}$ | 49 $\frac{1}{2}$   |
| Deduct for Vent                                | " | 22 | $\frac{3}{8}$ | $\frac{3}{8}$ | 3 $\frac{1}{16}$   |
| Do for flooring, covering & facing sides       | " | "  | 3             | $\frac{1}{4}$ | 16 $\frac{1}{2}$   |
| Deduction byds                                 |   |    |               |               | 19 $\frac{7}{16}$  |
| Remaining brick in chunam byds                 |   |    |               |               | 29 $\frac{15}{16}$ |
| Old cutstone in chunam byds                    |   |    |               |               | 19 $\frac{7}{16}$  |

It can be seen that the upper part of the masonry has been made of stone which will be required for the same purpose.

Repairs Agricultural  
 Immireddy District Tharmadary Range Ambasamudram Taluk  
 Name and nature of work. Repairing Hakari Cult  
 Aricut and channel.

|                | Estimate by whom and when called for.         | By collector.                                                       |
|----------------|-----------------------------------------------|---------------------------------------------------------------------|
| 1 <sup>m</sup> | Date of inspection of work by Sub Div Officer | 9 January 1875.                                                     |
| 2 <sup>d</sup> | Remarks.                                      | Work necessary: The Channel is much silted and ancient ruins up in- |

| <u>Appendix No 3.</u> |                                                       |   |     |      |      |
|-----------------------|-------------------------------------------------------|---|-----|------|------|
| 3 7/8                 | bricks of Brick in Churnam                            | 4 | 8"  | 17   | 7"   |
|                       | Excavating foundation & sundries                      |   |     | 2    | 9"   |
|                       |                                                       |   |     | 20   | "    |
| <u>Appendix No 4.</u> |                                                       |   |     |      |      |
| 18 9/16               | bricks of Brick in Churnam                            | 4 | 8"  | 83   | 8 6  |
| 5 3/16                | Do Old Cut stone in Churnam                           | 2 | " " | 10   | 6"   |
|                       | Excavating foundation, Removing old work and sundries |   |     | 6    | 1 6  |
|                       |                                                       |   |     | 100  | "    |
| <u>Appendix No 5.</u> |                                                       |   |     |      |      |
| 29 15/16              | bricks of Brick in Churnam                            | 4 | 8"  | 134  | 11 6 |
| 19 9/16               | Do Old Cut stone in Churnam                           | 2 | " " | 39   | 2"   |
|                       | Excavating foundation. Removing old work & sundries   |   |     | 10   | 2 6  |
|                       |                                                       |   |     | 184  | "    |
|                       |                                                       |   |     | 1340 | "    |
|                       |                                                       |   |     | 60   | "    |
|                       |                                                       |   |     | 1400 | "    |

J.D. Grant  
- Aug 11 -

Ellorfu  
Assistant Engr.

Detailed Estimate No of 1874/75. 26V.

| Particulars of work.                                          | Number |        |         |        | Contents |
|---------------------------------------------------------------|--------|--------|---------|--------|----------|
|                                                               |        | Length | Breadth | Height |          |
| (g) <u>Perungal Aricut</u>                                    |        |        |         |        |          |
| Underpinning body of calingulak with concrete where it leaks. |        |        |         |        |          |
| Foundation                                                    | 1      | 60     | 3       | 3      | 540      |
| Superstructure                                                | 1      | 60     | 2       | 3      | 360      |
| Total concrete in chunam left                                 |        |        |         |        | 900      |
| by yards                                                      |        |        |         |        | 33 1/3   |

Q. No. 2485  
17/1/80

*Repairs Agricultural*  
*Chinnivelly District Tharmadavay Range Ambasamudram Taluk*  
*Name and nature of work. Repairing Perungal Aricut.*

| Statistics of cultivation |         |                 |         |                    |         | Total repairs       |      | Details of work        |               |                  |
|---------------------------|---------|-----------------|---------|--------------------|---------|---------------------|------|------------------------|---------------|------------------|
| Aryacut                   |         | 5 years average |         | Highest of 5 years |         | During last 5 years |      | Length of bund in feet | No of sluices | No of Calingulas |
| Extent                    | Revenue | Extent          | Revenue | Extent             | Revenue | Years               | Arms |                        |               |                  |
| 547                       | 4132    | 689             | 8327    | 688                | 8392    | "                   | "    | "                      | "             | "                |

Estimated by whom and when called for. By collector 14/11/74.  
 Date of inspection of work by Sub Div Officer 9 January 1875.  
 Remarks. Work necessary to stop leakage

| Quantities | Description of work                | Rate | Amount | Total |
|------------|------------------------------------|------|--------|-------|
| 33 1/3     | hyds of concrete in chunnam        | 3    | 100    | "     |
|            | Excavating foundation and sundries | 4    | 104    | "     |
|            | Superintendence                    |      | 6      | "     |
|            | Total Amount of estimate Rupees    |      | 110    | "     |

Courtallam  
 25-2-75

*J. D. Knight*  
*Author*

*Elor for*  
*Assistant Engineer*

*M. 2455*  
*15/1/75*

Detailed estimate No of 1874/75.

27

| Particulars of work                     | Number | Measurement |         |        | Contents      |
|-----------------------------------------|--------|-------------|---------|--------|---------------|
|                                         |        | Length      | Breadth | Height |               |
| Pottalputhur Aricut.                    |        |             |         |        |               |
| Underpinning west wing with concrete    | 1      | 24          | 3       | 2 1/2  | 180           |
| Total concrete in chunnam left          |        |             |         |        | 180           |
| or cubic yards                          |        |             |         |        | 6 2/3         |
| Replacing rough stone apron in front of |        |             |         |        |               |
| Vent No 1 from west                     | 1      | 11          | 7       | 2/3    | 51 1/3        |
| Good                                    | "      | 32          | "       | "      | "             |
| Replacing old rough stone apron         | 1      | 122         | 7       | 2/3    | 569 1/3       |
| Total Rough stone yards                 |        |             |         |        | 620 2/3       |
| Retaining wall                          | 1      | 3 1/2       | 5/6     | 3      | 305 7/15      |
| Total Rough stone in chunnam left       |        |             |         |        | 305 9/15      |
| or cubic yards                          |        |             |         |        | 11 1/3 33 1/3 |
| What is this? Is it a new               |        |             |         |        |               |
| column? and what is it for?             |        |             |         |        |               |
| existing and?                           |        |             |         |        |               |

Repairs Agricultural

Chinnivelly District Charamadav Range Ambasamudram Taluk.

Name and nature of work. Repairing Pottalaputhuricut

| Statistics of cultivation |         |                |         |                    |         | Total repairs       |      | Details of Est.        |               |                  |
|---------------------------|---------|----------------|---------|--------------------|---------|---------------------|------|------------------------|---------------|------------------|
| Ayacut                    |         | 5 year average |         | Highest of 5 years |         | During last 5 years |      | Length of bund in feet | No of sluices | No of Calingulas |
| Extent                    | Revenue | Extent         | Revenue | Extent             | Revenue | Years               | Area |                        |               |                  |
| 999                       | 9576    | 995            | 9181    | 999                | 9824    | "                   | "    | "                      | "             | "                |

Estimated by whom & when called for. By Collector.

Date of inspection of work by Sub Div Office 10 January 1875.

Remarks. Work necessary as it is in need of repair

| Quantities        | Description of work.            | Rate | Amount | Amount of each part |
|-------------------|---------------------------------|------|--------|---------------------|
| 6 $\frac{2}{3}$   | beds of basorets in chunnam     | 3    | "      | 20                  |
| 620 $\frac{2}{3}$ | Do of Roughstone                | 1    | 8      | 931                 |
| 33 $\frac{2}{3}$  | Do of Roughstone in chunnam     | 3    | 8      | 118                 |
| 47 $\frac{1}{2}$  | Do of Roughstone in chunnam     | 3    | 8      | 39                  |
|                   | Cundries                        |      |        | 1103                |
|                   | Superintendence                 |      |        | 47                  |
|                   | Total amount of Estimate Rupees |      |        | 1150                |

Courtallam  
25-2-75

D. G. S. S.  
Asst. Secy  
for  
Assistant Engg.

M. 2485/15/75

Detailed estimate No. of 1874/75

| Particulars of work.                      | Number | Measurement      |                 |                 | Cubits            |
|-------------------------------------------|--------|------------------|-----------------|-----------------|-------------------|
|                                           |        | Length           | Breadth         | Height          |                   |
| <u>Lukkaricut</u>                         |        |                  |                 |                 |                   |
| Closing opening in rock by a masonry wall | 1      | 30               | 3               | 1 $\frac{1}{2}$ | 135               |
| Wing                                      | "      | 10 $\frac{1}{4}$ | 2 $\frac{1}{2}$ | 1               | 25 $\frac{5}{8}$  |
| Do                                        | "      | 10 $\frac{1}{4}$ | 1 $\frac{1}{2}$ | 3               | 46 $\frac{1}{8}$  |
| Returns                                   | 2      | 3 $\frac{1}{2}$  | 2 $\frac{1}{2}$ | 1               | 17 $\frac{1}{2}$  |
| Do                                        | 2      | 3                | 1 $\frac{1}{2}$ | 3               | 27                |
| Total Roughstone in chunnam left          |        |                  |                 |                 | 257 $\frac{1}{4}$ |
| or cubic yards                            |        |                  |                 |                 | 9 $\frac{1}{3}$   |
| <u>Excavation</u>                         |        |                  |                 |                 |                   |
| Body                                      | 1      | 30               | 3               | 1 $\frac{1}{2}$ | 135               |
| Wing                                      | "      | 10 $\frac{1}{4}$ | 2 $\frac{1}{2}$ | 1               | 25 $\frac{5}{8}$  |
| Returns                                   | 2      | 3 $\frac{1}{2}$  | 2 $\frac{1}{2}$ | 1               | 17 $\frac{1}{2}$  |
| Total Soft Rock cubic ft                  |        |                  |                 |                 | 178 $\frac{1}{8}$ |
| or cubic yards                            |        |                  |                 |                 | 6 $\frac{2}{3}$   |

# Repairs Agricultural

Unnevelly District Tharmadav Range Ambasamudram  
Name and nature of work. Repairing Sukkan  
Anicut.

| Statistics of cultivation |         |                 |         |                    |         | Total Repairs       |        | Details of Tanks              |                  |                    |
|---------------------------|---------|-----------------|---------|--------------------|---------|---------------------|--------|-------------------------------|------------------|--------------------|
| Ayacut                    |         | 5 years average |         | Highest of 5 years |         | During last 5 years |        | Length of<br>Lined in<br>feet | No of<br>sluices | No of<br>catchment |
| Extent                    | Revenue | Extent          | Revenue | Extent             | Revenue | Year                | Amount |                               |                  |                    |
| 876                       | 5970    | 866             | 7680    | 868                | 7807    | "                   | "      | "                             | "                | "                  |

Estimated by whom & when called for. By Collector 14/11/74.  
Date of inspection of works by Sub Officer, 9th January 1875.  
Remarks. Work said to be necessary.

| Quantity                        | Description of work              | Date  | Amount  | Amount of each part |
|---------------------------------|----------------------------------|-------|---------|---------------------|
| 9 3/4                           | bricks of Roughstone in Chumara. | 3 8 " | 32 10 8 | ✓                   |
| 6 2/3                           | Do of Soft Rock                  | 1 8 " | 10 " "  | ✓                   |
|                                 | Sundries                         |       | 2 5 4   | 45 " "              |
|                                 | Superintendence                  |       |         | 3 " "               |
| Total amount of estimate Rupees |                                  |       | 48 " "  |                     |

Courtallam  
25-2-75

D. K. S. S.  
Autho

Chorfer  
Assistant Engr.

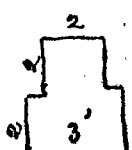
Specification Report to accompany  
the estimates for. Repairing Arasapathu channel.  
varicut, Hakanallur channel varicut. Perum-  
gal, Pottalaputhur, & Sukkan anicuts.

The concrete for the works should be  
Comprised of 3 of stone to 1 of mortar. the mortar  
to be of 1 of lime to 2 of sorghu and 2 of clean river  
sand. the Concrete should be well rammed  
in layers, and each bottom layer should  
be ~~set~~ while the succeeding one is applied.

The Roughstone for apron &c should  
be of as rectangular a shape as possible and  
should be closely packed.

When the Covering stones have to be  
removed & replaced, care should be taken  
that they are well imbedded in mortar  
and that the joints are close.

The Section of the retaining wall  
for the Pottalaputhur Anicut should be as  
shown in margin.



The foundations should be dug to full  
depth and levelled off <sup>for</sup> the masonry wall.  
along the Arasapathu Channel.

The opening near the Sukkan Anicut

should be excavated (the rock being soft) and the masonry wall built in a level with present crest of opening, one wing will be required on side of rock next to Anicut, the wing wall will be Semi-Circular with a radius of  $4\frac{1}{2}$  ft. Measured to outside of foundations; the returns in superstructure will be 3 ft long.

The rate for excavating the soft rock will be  $1\frac{1}{2}$  Rs @ Cyd.

Courtallam

25-2-75

Order for

Assistant Engineer

Pr. 2485/14/25

Class 111.  
Repairs Agricultural

Chinnervelly District  
Ambasamudram Taluk

Detailed and abstract  
estimate for Repairing  
Krisapathur and  
ancient Kharallur and  
Meharicut, Perungal,  
Pottalapurtham, and

Sukkarancut.

Estimate Repairs 3248

Sanctioned by.

106

# Detailed Estimate No. of

321

| Particulars of work          | Number | Measurements |         |        | Contents |
|------------------------------|--------|--------------|---------|--------|----------|
|                              |        | Length       | Breadth | Height |          |
| <u>Foundation</u> Body       | 1      | 43½          | 3½      | 3      | 456¾     |
| <u>Superstructure</u> Body   | 1      | 42           | 2       | 2      | 168      |
| Wing                         | 2      | 8¼           | 2       | 3¼     | 107¼     |
| Retaining wall               | 1      | 30           | 2       | 3      | 180      |
| Total Roughstone in Chm left |        |              |         |        | 912      |
| or bcyds                     |        |              |         |        | 33¾      |
| <u>Keutstone</u> Top of Body | 1      | 27           | 2       | ¾      | 40½      |
| Total Keutstone left         |        |              |         |        | 40½      |
| or bcyds                     |        |              |         |        | 1½       |
| Roughstone Apron             | 1      | 30           | 10      | 1½     | 450      |
| Total Roughstone left        |        |              |         |        | 450      |
| or cubic yds                 |        |              |         |        | 16⅔      |

Ep-7 May/75

m B. N. 149

Packet contain:  
ing 5 estimates for  
repairs of irrigation  
works-

Agricultural.  
 Tinnevely District Tharmadavay Range Ambasamudram Taluk  
 Name and nature of work. Constructing a balingula  
 Wall in the Arasapathu channel, near the Village of  
 Karuthapullyoor)

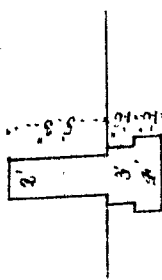
Estimated by whom & when called for By collector 14/11/74.  
Date of inspection of work by Sub Div Officer 9 January 1875.  
Remarks By the construction of this baling lock, a  
tunnel about 1/2 mile constructed across the Channel can  
be utilized as a road or passage.

Total amount of Estimate Rupees—

*J. D. Hunt*  
*Aut. Aug 2*

Chor for  
Assistant Eng<sup>r</sup>

*built for many*



Materials: Rough shoe, in chinam  
Sut: Clay.

Estimated Rs: 165--"

Chas. J. Fox  
Assistant Engineer.

122

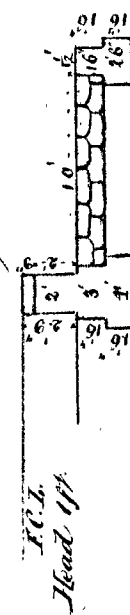
State 100% to 100%

# Plan

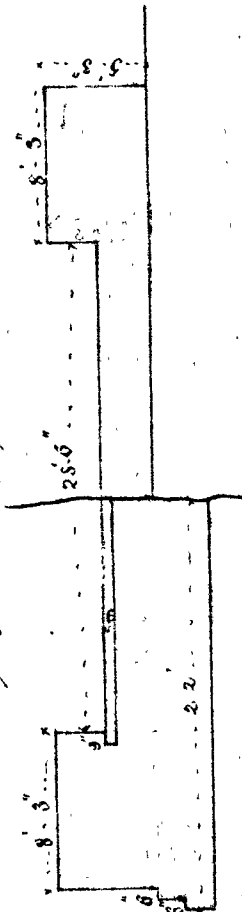
*Cataglyphis*

Crisafulli Channel.

*Cross Section*



## Math Section & Education



Oct 24 1895

## Specification

The foundations be excavated to full depth and levelled off before the masonry is begun with.

The stones used for the work be of as rectangular a shape as possible

The mortar be composed of 1 of lime,  $\frac{1}{4}$  of portland cement and  $\frac{1}{2}$  sand, the whole to be well mixed and beaten together before use.

The stones for the apron be closely packed and the interstices filled in with stone chips.

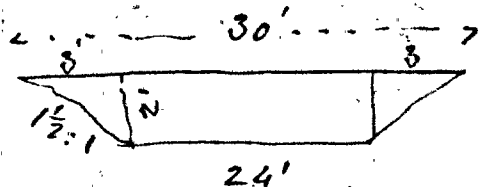
Lime be obtained from Kathapangon a distance of 6 miles: Stones from adjacent hills a distance of 2 miles:

bricks from Alwaranchy a distance of 4 miles.

W. H. S.  
Agent Secy.

Fall of o'day 1 ft per mile

Section of o'day



$$V = .92 \sqrt{2f \times \frac{A}{B}}$$

$$= .92 \sqrt{2 \times \frac{54}{31.2}} = .92 \sqrt{3.46} = .92 \times 1.8 = 1.65$$

$$A = \frac{24 + 30}{2} \times 2 = 54$$

$$D = 54 \times 1.65 = 89.10 \text{ cu ft per sec.}$$

Calculated

$$D = 3.5 \text{ ldn} \times d$$

$$89.10 = 3.5 \text{ l} \times 1 \times 1 = 3.5 \text{ l}$$

$$\therefore \text{l} = 25 \frac{2}{3} \text{ ft.}$$

all

2050718  
Agricultural.  
Minor new  
work.

Class III.

Agricultural

Emmervelly District  
Ambasamudram Taluk

Detailed and abstract  
estimate for constructing  
a Calingula Wall in the  
• Arasapattu channel.  
near the village of Ga  
ruthapillayur.

Estimate Depuo 165000

1209 of  
5/2/74

Cp-7 May/75  
in B. 165  
Estimate of Rs 165 for  
constructing a baligulak  
wall in Arasapathu  
channel.

(M. 2485/12/35)

No 37

Draws attention to letters  
from this office noting  
the margin and requests  
that the Estimate for the  
Metakal Repairs be for-  
warded without any further  
delay; also that Mr. Norfor  
be called on to explain  
by return post the reason  
of the delay in the prepara-  
tion of this Estimate.

The working season will  
be lost unless the Estimate  
is received at once.

(Signed) J. W. Randall  
Dist. Insp.  
15<sup>th</sup> April 1974

No 53.

Forwarded Mr. Norfor for  
perusal and return. Mr. Norfor  
is requested to expedite the pre-  
paration of this Estimate and to  
explain the cause of delay.

(Signed) J. D. Grant  
Dist. Insp.  
17<sup>th</sup> April 1974

907 May/75

in B No. 149

P.M. 24/85  
10/75

To The 3<sup>rd</sup> Range Officer

Sir. With reference to your endorsement No. 53 of 17<sup>th</sup> April on District Engineer No. 57 of 15<sup>th</sup> April I have the honor to inform you that I received while at Ambassam drum on 10<sup>th</sup> February the letter regarding the preparation of estimates for Mirakel Channel. I had work at that time to keep me there till over the middle of the month. Shortly after this I received a letter from you saying the District Engineer wanted the Manoo Channel Estimate.

I then on receipt of this proceeded to Alancolum and prepared the Estimate & submitted it early in March.

On 11<sup>th</sup> March Sir I was instructed what to do with respect to this Estimate by the District Engineer & Ambassam drum.

month or the official year, and  
I had no time to devote to  
preparing estimates, as I had  
works to measure up which  
entirely engaged my attention.

On 31<sup>st</sup> March I sent  
a copy of the letter regarding  
the Metakat Channel to Mr. Murray  
and asked him  
to submit to me the estimate  
before 13<sup>th</sup> April, the date  
fixed for his attending  
offering at Palamcottah for  
his examination in Tamil.

I myself was unable to see  
to it as I was obliged to stay  
at Courtallum up to 4<sup>th</sup>  
April to close accounts &c.  
on 5<sup>th</sup> I left for Ambasa-

muduru where I had to  
prepare a Survey of Palug  
Catchery. Munnetts Court, &  
from there I proceeded to

Alamethur and made  
measurements for a Siphon  
Shut to Manor Channel, and  
then to Paur where I re-  
sided for some time. Vellala-

& which Mr  
Randall wanted  
within a certain  
date. It just got  
to him in time  
he told me.

puthucolum. Tamil, here I  
met Mr. Murray, who told  
me he had not prepared  
the estimates for the Metakat,  
as, he said, he had no  
time. I have now, myself,  
prepared it, and it will  
be despatched, if possible,  
to day.

I have &c

20<sup>th</sup> April 1874 } Alor for  
Courtallum } Apot. Secy

No 138.

This letter only serves to show that Mr Norfor had, in common with most members of the Department, at this season, plenty of work to do.

The particular arrangement of his time, must rest with Mr Norfor himself, and knowing the urgency of the Metallurgical Channel Estimate the undersigned considers Mr Norfor should have arranged to visit the place and prepare the Estimates. (Time subtract)

(Signed) J. H. Randall  
Asst. Insp.

23<sup>d</sup> April 1876.

Palamcottah 29<sup>th</sup> June 1874  
From the District Surgeon  
The District Surgeon  
The District Surgeon

To the Collector of  
The District

I have the honor to acknowledge the receipt of your letter No. 176 of 25<sup>th</sup> Inst. regarding the mistake made in the order for the receipt of the same has not been that none has not been accomplished there

On 31<sup>st</sup> February and again on 17<sup>th</sup> I called on the Spermadory Range Officer to have estimates prepared. On their own receipt I again on the 15<sup>th</sup> April called for them to be sent in at once, and called upon Mr. Norfor to explain his delay.

Had there been an Officer & Officer in the Court of the Sub. Division I could have received

This was  
not received  
by me.  
All

to terminate early in March.

Decided Mr Norfords  
delay, there was in this case,  
I repeat to say, a further de-  
lay in Mr Grants Office,  
And thus the Estimate,  
did not reach me till  
the 7th May, on which date  
I authorized the Range  
Officer to proceed with the  
work and forwarded the  
Estimate to the Collector for  
sanction.

With the little display  
of energy in the Sub Division  
Officers part substantial  
progress might I think have  
been made.

I will see what can be  
done regarding the work when  
I visit the Tenasseray Taluk.

I have &c

(Signed) J. W. Rundall  
District Officer

No 671.

The above is an answer  
to a letter from the Collector

complaining that nothing has  
been done to the Metakal Chan-  
nel, the repairs to which Mr  
Puckle was very anxious  
should be carried out during  
the fast working season.

The preparation of the  
Estimate was strangely delayed  
by Apetitkyr. Mr Norford,  
and as the Collector now  
states that nothing has  
been done to the Commence-  
ment of the work, which  
was authorized on 7th May,  
the intention of the work  
seems to have been still more  
strangely delayed by that same  
Officer.

(Signed) J. W. Rundall  
29th June 1874 District Officer

for the Metakal Channel I  
received on 11<sup>th</sup> May: In  
my Diary for May 21<sup>st</sup>. \* which Mr  
Rundall got.  
I made the following Remarks.

Punblipetani:- "Arrived to  
show Contractor what to do re.  
sinking the Metakal Channel,  
he promises to collect materials  
and complete the work in  
3 weeks. I found it difficult  
to get a Contractor for this work.  
On 11<sup>th</sup> one was willing to  
about it, but he turned up on  
19<sup>th</sup> to say the work could not be  
done as water had to be let  
down to channel in 2 or 3 days.

Immediately wrote to the  
Sahibdar and found out that  
water was not required for  
another 3 weeks. I can only  
hope that the work will be  
completed in time.

22<sup>nd</sup> Met. & Metakal  
Channel with Contractor. See-  
me Cotton to whom I have  
given the Contract and showed  
him the details of the work."

You will now see

See there was no want of energy  
on my part, I had done  
every thing I could possibly  
do to push on the work.

If it was not that the snow-  
soon had set in early this year,  
a good deal more work, at  
least 3 more reaches could  
have been closed by masonry  
walls in this.

The District Engineer in  
his letter to the Collector pro-  
nounces me to be unfit man  
to hold charge of a Sub-  
Division, taking into consider-  
ation my explanations to  
him regarding the submission  
of the estimates, I hardly think  
he was justified in saying so,  
especially to the Head of  
the District. I have &c

Signed. Clifford  
Agent

2-7-74.

This letter was written but  
never sent. I wrote to  
Mr Rundall for advice about  
it in March. Clifford

No 78. Timmerly Sub Collector  
6th November 1871  
Sherrinading.

To the District Engineer  
Timmerly Sub Collector

With reference to your docket  
No 478 dated 26th September  
last. I have the honor to in-  
form you that Nedan-  
Colum Inaudar refuses to  
pay his share for work  
done to Nedan-colum Tank.  
He states that he  
only promised to pay his share  
for work done to Nedan-colum  
Tank for earthwork, that  
the rest of the work  
done in some places, and  
the work has not been  
properly executed. This State-  
ment is supported by the  
Tahsildar who said the same.

I do not see how the  
money can be collected in  
the absence of a written agree-  
ment. The Inaudar is,  
however, willing to pay his  
share of the cost of earthwork.  
I have the honor to be,  
(Signed) W. H. Hapfull  
Asst. Sub. Coll.

No 598.

To The Asst. Sub. Collector  
Sri.

I have the honor to acknowledge the receipt of your No: 78 of 6th Inst. regarding the Nedaculum Tank. Since, in a few days, let you know the sum to be received from the remainder for Earthwork.

2. It is perfectly true that the Government has not been well built, but while our officer is incapable as Mr. Norfor remains in charge of the Sub. Division, it is impossible for me to guarantee that works shall be satisfactorily executed.

I have to  
(Signed) J. W. Randall  
District Officer.

No 1464.

Forwarded to the Officer in Charge of Sharnadong

Range who is requested to report the quantity of Earthwork (1) Estimated (2) actually done for repairing Nedaculum.

Mr Grant will observe that owing to inattention to the undersigned's orders, the Government have been let out spending considerably more than a fair share of the cost of repairing this Tank.

The State of the Portment so recently made was noted in the undersigned's Journal under date 31<sup>st</sup> July 1874.

7/11/74 (Sd) J. W. Randall  
District Officer.

No 1032.

Forwarded to Mr Norfor with a request that he will supply the information required on the District's In-chargement. (Sd) J. D. Grant  
12. 11. 74. District Officer.

No 522.

To the 3rd Range Officer

Sir. With reference to your No. 1932 of 12<sup>th</sup> Inst. I have the honor to inform you that the total no of cubic yds of earthwork in the Aneolun is 8176 at a cost of Rs. 511. The work actually executed is 5027 C. yds at 314-3-0. Mr. I have a bill yet to be paid for Rs. 97-12-0. So that only Rs. 216-7-0 has been actually paid away.

The Regiment in the Nedanielun Tank having fallen in is attributed to two causes, 1<sup>st</sup> the old Regiment upon which the new Regiment was added having sunk; 2<sup>nd</sup> the work having been suddenly stopped, as to Regiment in several places.

is driven round, and it would  
be no difficult matter for the  
waves (in a high wind) to  
wash round and displace  
the Stones.

The portions of the work  
the District Engineer saw  
has neither been mea-  
sured nor paid for  
by me.

The new revetment  
which has been built  
from foundations is  
still standing without  
a Stone displaced.

This is the second instance,  
to my knowledge of the  
District Eng<sup>r</sup> having ven-  
tured my efficiency!  
the Revenue Department.

19-11-74. (By) Mr. J. R.  
A. J. R.

M. 2485/74

From

The Officer in charge of  
Thamada Range.

To

The District Engineer  
Chinnervelly

Sir,

In reply to your No 1464 of 7<sup>th</sup> Inst.  
I have the honor to inform you that for Madam-  
kolam Tanks in Tenkasi the amount of earth  
work estimated for is 8176 Cysds at Rs 511-0-0 of  
which 5027 Cysds at Rs 314-3-0 have been car-  
ried out but only Rs 216-7-0 paid for leaving  
an unpaid balance of Rs 97-12-0.

Mr. Noffs in replying to your  
Memo above quoted states that the work seen by  
you was neither measured nor paid for by him  
& that any defects can be remedied and further  
explains the reason of other portions having  
fallen down.

Even admitting the work to be bad  
as stated by the Tahsildar, it is no ground  
for the Tharamdar's repudiation of his share of  
the payment, as we are bound to see good  
work done. I do not consider the new work  
at all inferior and think the mistake was in

...aiding for the raising of an old revetment  
which could only maintain its own equili-  
brium with difficulty.

I enclose Mr. Toft's letter for  
your perusal.

I have &c

Sd. J. D. Grant.

Assistant Engineer

No 15 2<sup>d</sup>.

Please inform me whether  
the whole of the estimated quantity of earthwork,  
viz 3176 Cyds is required for the sedumblams  
work & will be carried. If so the Contractor  
will be called on to pay his share of the

Of this regarding to Mr. Toft's man-  
ners for revetment having slipped it was his  
business to have seen that the old revetment  
was in such good order that it would stand  
the extra stones; if not very good order to have  
repaired it, reviewing the estimate accordingly  
early. When the work was stopped, all  
work done should have been made secure.

If I understand Mr. Toft's ar-  
right, he means to say that the work which  
I complained of as badly done had not been  
succeeded by him. He never told me so.  
When I inspected the work in his com-  
pany.

694  
The packing of the new work may  
be good, but the top was uneven & had been  
done without reference to level.

Sd.

J. W. Prudall  
District Engineer

23/11/74.

of the Chunks, but then my attention was drawn  
to only those portions of the Chunks where work  
was actually going on and had been done.

Mr. Randall noticed the unevenness  
of the surface of the settlement of only the portions  
not paid for. The work that has been paid  
for is perfectly level. This estimate was not  
prepared by me.

26.3.75

Chorfer  
Assistant Engr.

II

Needles Point  
Tank

90-7 May/75

in B No 149

M. 2485/2/75

108/75

108/75

Courtallum  
March 26<sup>th</sup> 1875

Gol. G. W. Walker R.E.  
Chief Engineer and Secretary  
to Government  
D.P.W.

Sir,  
Mr. Randall has, in re-  
commending my transfer to another  
District attributed my wish for it,  
to my having been censured by  
him for certain Irrigation Repair  
Estimates.

After distinctly stating  
my desire for the change I con-  
sider it extremely hard that  
Mr. Randall should officially ex-  
press his doubts about the truth  
of my statement.

I have asked Mr. Ran-  
dall to inform you of his mistake,  
but I do not know whether he  
will do so, and therefore write about  
it to you myself.

Mr. Randall's reasons for think-  
ing I wanted the transfer seems  
to be an extraordinary one.

I know he is to leave the  
District early part of next month,  
and it would have been very  
silly

Silly on my part (as I have written  
to tell him) to desire the change,  
on the score of my being censured  
by him; had he intended to —  
remain on, there might have  
been some reason for thinking  
so, but no matter what his thoughts  
might have been, he should have  
given me the benefit of the  
doubt, as a gentleman.

6. Not having been under medical treatment (to his knowledge) is no argument to overthrow any statement.

7. The fact of Mr. Randall showing me up as he has done, simply because I have asked for a transfer compels me to place a few papers before you -

8. I will not express my  
opinion on them, but will  
leave you to judge for your-  
self.

9 You will observe that Mr  
Randall is not satisfied in  
confining his opinion of me  
to my own Department, but  
has thought it proper to express  
them to members of other  
Departments.

10. I have many short coms.

comings, no doubt, but in these particular instances you will agree with me <sup>I think</sup> that I was not to blame.

I have the honor to be  
Sir

Your most obedient Servant  
 Cecil Norfor  
 Assistant Engineer.

The letters I particularly refer to  
are marked 1, 2, in blue  
ink.

1944

The subject of Mr. Norfor's  
(junior) Transfer to no. 1  
The District is referred  
for orders -

That Officer's fitness  
for promotion from the  
rank of Asst. Eng. 2?  
I would not move rank of Asst. Eng. 2?  
Mr. Norfor. If he is thoroughly in-  
competent he ought not to occupy any  
post of responsibility. The District need (chief)  
but before he is Engineers -  
reduced I should like to have a resume  
of his short-comings: if really wishes to get away  
and especially if from a District in which  
they are so flagrant he is well known as  
as not to require an explanation from  
Mr. Norfor. As the policy  
of humoring him is  
after - But the policy

907 May/75  
No. 149

Mr. Norfor's letter  
and its enclosures to  
the Chief Engineer and  
Secretary to Govt D.P.W.

without taking some  
much notice of his  
incompetence is doubt-  
ful -

He is 2<sup>d</sup> in a list of 20  
Apts of the 2<sup>d</sup> grade, to  
which he was appoint-  
ed 4 years ago, in Feb  
1871 - He might be re-  
duced to the 3<sup>d</sup> grade;  
or to the bottom of the  
2<sup>d</sup> grade; or to a place  
in the 2<sup>d</sup> grade just de-  
bove the young men  
sent from Cooper's Hill -  
But the Dept. would  
be the better of being rid  
of such an incumbent  
altogether; for he is re-  
puted quite unfit for

and its enclosures  
the Chief Engineer and  
Secretary to Govt &

change of a Range, and  
it is difficult to move him  
to a General District where  
there will be suitable  
Sub Division - He cannot  
not be trusted in any  
District like Surgeon  
and South West - and  
the Engineers in charge  
of Districts where he might  
be employed (when re-  
duced in rank) would  
be rightly aggrieved at  
being saddled with  
him -

Wm. Mather (C.R.S.)  
Chief Eng. & D.S.O.

19th. 75.

21/11  
 21/85  
 Man spoken to: he  
 at this point the 4th  
 had looked at the  
 uniforms at that time  
 he is simply useless  
 & self sufficient & will  
 be any of these.

Mr. Edner & the  
 obtain of his new class  
 & let him work up again  
 I see that time & all  
 matter of the man.

21/11

21/11  
 90-129477-77  
 I am unable to place  
 in 2nd grade just above the  
 newly arrived Cooper Hill men  
 as Mr. Norfor that unless  
 a marked change is made in  
 his performance of his  
 duties his continuance in the 2nd grade will be in doubt.  
 RB 21-1-75  
 21/11

No 192 District Eng's Office Limerick  
 Balance Sheet 20 March 1875  
 From

To W. Randall Esquire  
 District Engineer Limerick

Colonel G. W. Walker R. E.  
 Chief Engineer P. W. G.

I have the honor to inform you  
 that Mr. C. Norfor Assistant Engineer  
 in charge of the Conallum Sub-Di-  
 vision has in a letter dated the 17  
 Instant, requested that I would  
 apply to you for his transfer to  
 another Limerick District.

2. Mr. Norfor states that he desires  
 this change "on account of the ill  
 health he has experienced in this  
 District off and on."

3. I have never known Mr. Norfor  
 to be under medical treatment, and  
 am disposed therefore, to attribute his  
 desire for a transfer, to his having been  
 censured by me for sending certain  
 Irrigation Repair Estimates, many details  
 of which were quite unintelligible.

4. Should you wish to see these estimates as a specimen of Mr. Nair's capacity, I will forward them to you, but otherwise hardly like to trouble you with them.

5. As the District will not be weakened by Mr. Nair's transfer to another, I beg to recommend it.

6. As the Northern Range has but little new work, either Imperial or Local, and as Mr. Supervisor Berlie has prepared more estimates for Agricultural Repair Works than it is probable we shall have funds to carry out during the next two years, I would propose to transfer him to the Sacramento Range, <sup>as sub-division officer</sup> and hold the Greenville sub-division in abeyance for the present.

7. Mr. Nair the Northern Range Officer is thoroughly acquainted with the Range, and will as long as the allotments are as low as they are likely to be next year,

be able to superintend all work. - 5/2

I have the honor to be  
Your most Obedt Servt

J. W. Russell  
District Engineer

For  
you  
K

recommends with  
 certain observations  
the transfer of her  
to her to another  
David District as  
 re-pledged by him &  
 that supervisor Mr. Belsie  
 be transferred to a mental  
 "home" district.

Ed. La. 1254. 7/5/72

Dates 20 }  
 Received 27 } March 1755.

Truissell  
Do. The Chief Engineer  
Bos. W.

Q. W. Jeffs Esqr.  
Jef<sup>ts</sup> 192.  
-town, Mo: 1952  
The District Judge

10

From,

J. W. Randall Esq  
District Engineer  
Furness, N.Y.

Colonel G. T. Walker, R. E.  
Chief Engineer D. P. W.  
Madras

Sir,  
I have the honor, at the request of  
Mr. L. Norfor, Assistant Engineer attached  
to this District, to forward herewith a letter  
to your address with 2 enclosures.

2. Mr. Norfar complains, <sup>stg</sup> that I misrepresented him in stating that his application for a transfer was due to his having been censured rather than to ill health.

3. The reasons for my opinion were, that Mr. Norfar's application was written on the day he received the Censure, referred to, and that I had never known him either under medical treatment or suffering from ill health.

4 Mr. Norfar complains 2<sup>nd</sup> that I have "ventilated his inefficiency" to officers of Revenue Department, and forwards copies (including one letter of his to me, written but never sent) of correspondence with regard to two cases in which

I blamed him, and in which when the collector and sub collector found fault with the Departmental work, I stated when replying to them, that Mr. Norfor, being inefficient I could not be responsible. I still feel that I should be very sorry to be held responsible for the manner in which Mr. Norfor performs his duties.

5. As a further reference on the subject of Mr. Norfor's inefficiency has now been made by Mr. Norfor himself, I forward, though reluctantly, the estimates referred to in my letter N. 192 of the 20<sup>th</sup> March. To my mind these estimates and Mr. Norfor's explanations show that he is unfit for the post he holds. If Mr. Norfor would in cases like this, take his notes to the Range Officer and prepare estimates under his instructions, there would be some hope for him but he insists on doing things his own way, generally does them wrong, and when found fault with considers himself ill treated.

6 I should mention that these estimates were called for by the additional sub collector who had inspected the works referred to and noted generally what appeared to him to be wanted.

7 The estimates, my notes in re: turning

turning them, and Mr. Norfor's replies are forwarded.

8 The estimates were sent in by Mr. Norfor without any explanation or description of what was either wanted or proposed.

9 In one place, Mr. Norfor estimates for a masonry revetment wall, to protect a channel from erosion, 3' thick for a height of 2½'. This is marked (a) on the estimate and notes. Although I pointed out that this could hardly be required Mr. Norfor still considers such a thickness "absolutely necessary".

10 In another case marked (h) Mr. Norfor estimates for a thickness of 10" with a height of 3'. This is probably a mistake, as a different thickness (and different height also is entered in the specification. I mention this to show how very troublesome it is to revise Mr. Norfor's estimates and correct his complicated errors.

11 Mr. Norfor's estimate for masses of concrete (to stop leakage) without any reference to what they are, to be found or made in accordance with either his first or his amended specification, the concrete would

certainly

certainly local failure.

12 In the case of certain estimates for repairing the irrigation works of Karapanaoli River, I went over the works with Mr. Varfor and gave him full notes regarding the preparation of the estimates. When received these were also in many cases unintelligible and had to be revised by Mr. Grant.

13 Similarly most of Mr. Varfor's estimates require as much trouble expended in revising them, as would suffice to make them out originally, hence in this respect at least he is of no assistance to his Range Officer.

14 Were I remaining in the District, and not about to go on furlough, I should venture to make Mr. Varfor's removal a special request, as I have no hope of his being a useful member of the District staff.

I have the honor to be  
Sir

Yours most obedient servant

L. W. Prindall  
District Engineer

Mr. 1845 Sept  
22/2/85  
Ch. 10.

-d'rom,  
The District Engineer  
Imuvellu.  
Do.  
The Chief Engineer  
D.P.W.

Dated 9<sup>th</sup>  
Received 13<sup>th</sup> April 1875.

Encls. 22.

Forwarded with explanation a letter and its enclosures from Mr. Konfor Assistant Engineer to the Chief Engineer and Secretary to Government D.P.W.  
H.B. No: 1294. 7-5-75.

912  
5223  
Dear Mr. C. b1 ✓  
There has been great bringing somewhere. We have nothing of Mr. Konfor's transfer to Bellary side Memo: No: 494. 7 May 75 and consequently transferred him to Cuddalore.  
The Establishment written had notice of Memo 494 - who made it out?  
R. Parsons!!  
on 10<sup>th</sup> May 75  
See original of 80.  
10.12.74 of 7 May 75  
17.5.75

P. H. Dept

Proceedings of the Madras Government.

Read the following:-

From the District Engineer (No. 192 of 20 May 1875)

No. ——— No. ——— (— 10 — 9 April —)

By O No. 1294 of 7 May 1875

Mr. Norford's request  
for removal to another  
District will be complied with  
as it is contemplated <sup>by the District Engineer</sup> to have  
the Strevelipattam Sub  
Division in charge. But  
from perusal of the corres-  
pondence sent up to the  
Chief Engineer, <sup>by</sup> Mr. Norford  
own request, on this and on a  
former occasion, His Excellency  
the Governor in Council  
has

has been led to form a  
most unfavorable opinion  
of that gentleman's com-  
petence for the work of  
the Department. And  
finding that his name  
stands high on the roster  
for promotion to a senior  
grade, he considers it ne-  
cessary that his period  
of probation shall be ex-  
tended before he attains  
it. He will consequently  
be reduced in rank to a  
place amongst the Assistant  
Engineers of the 2nd grade  
instation the gentlemen  
who have lately been ap-  
pointed from Leaphorn Hill.  
And he is warned not to  
expect promotion to the

1st grade till reported by  
Competent authority fit for  
Range charge. Further  
report of continued incompe-  
tence will involve dismis-  
sal from the Department.

The Chief Engineer will  
arrange for his further  
employment.

C. M. W.

To Mr. S. J. Bellamy  
... W. J. Linnell  
In - S. depts to both 7-5-75.  
P. C. - " - " - 13-5-75.

Do not dissent

No 494 7 May 1875

Adverting to the  
last paragraph of the  
above Proceedings the  
Chief Engineer orders  
the following transfer.

Mr. C. A. T. Horner  
from the Linnell to the  
Bellamy District

35  
3-

to Linnell  
Bellamy