

Public Works (1897) Department.

G.O., No. 2350 W

DATED 25 August 1897

[Despatch Abstract.]

Ostacumun Lake Reclamation Project, Pro S.
L & M Dept requesting the Municipal Council, Osta-
cumun to place at once a sum of Rs. 4,000
at the disposal of the E. Engineer in charge of
the — Comtd to S.E. IV. Civil and the sanction
of the Municipal Dept requested to ~~create~~ the
amount ^{being treated} as an addition to the P. W. Grant
under 45. Provincial Civil Works.

Indexed.

[illegible]

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

B No. 2350 W. 225897

The Local Annual Report.

No. 1749 n. mis

Communicated to the
Suptg. Engineer IV Circle with
reference to para 4 of L. O. No:
1587 Waf 11 June 1897.

Dated 9-8-97.

Received

Registered { 13-8-57

Enclosures

Spare copies

2. In accordance with para 4,
Chapter VII, Vol II of the P. W.
Code, the sanction of the Fi-
nancial Department will
be requested to treat the
amount as an addition to
the P. W. grant under 45.
Provincial Civil Works.

SUBJECT.

SUBJECT.

Dotacamund Lake Reclamation Project

Requesting the Munl. Council
of Dotacamund to place at once a
sum of Rs 4,000 at the disposal
of the Executive Engineer in charge of
the _____ out of the balance of
Rs 16,35.50, remaining from the Provincial
grants already drawn by it on
account of the water-supply
scheme.

May 3 1895
To The S. E. IV Circle
" Rev. P. W. Auto
" Financial Dept

2. 15. 38y R 19/8

READ the following paper :—

Order No. 1749 M. Mis., dated 9th August 1897.

(True extract)

John

for Secretary to Government.

To

The Chairman, Municipal Council, Ootacamund,
thro' the Collector of Nilgiris, the Nilgiris.

,, Public Works Department.

,, Financial Department.

BUILDINGS AND ROADS.
CIVIL WORKS.

Government of Madras.
PUBLIC WORKS.

1897.

1897.

1897.

G.O., No. 1587 W., 11th June 1897.

JUNE.

Ootacamund Lake Reclamation Project

Approving the proposal to pay Mr. Irwin for earthwork in connection with the — at the rate mentioned; requesting His Excellency the Lieutenant General Commanding the Forces to be so good as to state whether the services of the 4th Pioneer can be placed at the disposal of the Executive Engineer for employment on the lake works, and, if so, to arrange for its removal to Ootacamund as early as possible; and referring for consideration in the Local and Municipal and Financial Departments the application for an additional grant of Rs. 40,000 for the current official year.

BUILDINGS AND ROADS.
CIVIL WORKS.

Government { 1897 } of Madras.
PUBLIC WORKS.

Recd.

Enclosures

Regd.

1897.

Spare copies

G.O., No. 1587 W., 11th June 1897.

JUNE.

Ootacamund Lake Reclamation Project

Approving the proposal to pay Mr. Irwin for earthwork in connection with the — at the rate mentioned; requesting His Excellency the Lieutenant General Commanding the Forces to be so good as to state whether the services of the 4th Pioneer can be placed at the disposal of the Executive Engineer for employment on the lake works, and, if so, to arrange for its removal to Ootacamund as early as possible; and referring for consideration in the Local and Municipal and Financial Departments the application for an additional grant of Rs. 40,000 for the current official year.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

REPORT on the Ootacamund Lake-filling by Mr. J. F. SOMERS-EVE, Executive Engineer.

I took charge of this work on Tuesday the 25th. The plans, sections and revised estimate are under check in the Coimbatore division office, and will not be up here until about 31st. After that I shall like to go into them before submitting them.

2. The work is now being carried on by Mr. Irwin as a piece-worker. He has apparently no agreement, either written or verbal, but he has been working under the understanding that he should obtain a fair profit. He has apparently been unable to obtain much imported labour, and the little he has got, has been unable to keep. This I ascribe to the fact that he has not been able to offer a sufficiently high rate, and has perhaps not given them sufficient comforts. There have been other difficulties such as cholera, obstructions by Municipality and Collector, &c., all of which have made importation somewhat hazardous.

3. In G.Os., Nos. 1709 C. and 125 D., it is stated that "progress is unsatisfactory" and "that something should be done to hasten the work."

I therefore considered the various ways to increase the labour, all of which necessitated winding up accounts with the present piece-worker.

The ways I found were three—

- (1) Entering into a contract with a reliable contractor with a time-limit.
- (2) Bringing up a regiment of the Pioneers (4th) and utilizing local labour on piece-work.
- (3) Throwing the work open to petty piece-work.

I am in correspondence with Mr. Collin Mackenzie as to No. 1, but I fancy he will want a considerably higher rate than the one now proposed.

The third way will be indefinite, of course, as to results and will give considerable trouble as to accounts, and will be expensive in the way of hutting if much imported labour comes up, as the maximum number to be allowed in the Native Jail is 200. The second scheme seems to me to be the most favourable, and I therefore enquired of the Military authorities if the services of the 4th Pioneers could be made available. The attached demi-official letter from the Deputy Adjutant-General shows that this is the case.

I entered into correspondence with Colonel Stevens, the Officer Commanding the 4th Pioneers, and he agreed to take up the work on piece-work. The accompanying rough draft agreement will show that this department will have to incur no other expenses than Rs. 1,000 for hutting, and that the usual difficulties attending the employment of Military labour on Civil works will thus be obviated.

In addition to this labour, which will amount to 600 (probable working strength 500), I propose to utilize the local labour under Mr. Irwin or other piece-worker. This should give a working strength of at least 1,000.

4. The Chief Engineer in his G.O., No. 125 D., sanctions the rate of Rs. 15 on the condition that that strength is maintained, and this is the rate I have, therefore, offered.

5. Mr. Irwin, although he has no agreement, should be fairly and properly dealt with, and the Superintending Engineer considered that it was necessary to come to an amicable and satisfactory agreement with him before other arrangements were made, or he was finally settled with.

The only unsettled question was the rate for earthwork, all other minor items having been agreed to by Mr. Irwin and the Executive Engineer, Mr. Malet, and the Superintending Engineer.

Mr. Malet proposes a rate of Rs. 15 for earthwork, and gives data and comparisons for similar work on the plains.

Mr. Irwin was good enough to produce his books before me at short notice, and, after careful examination, I find that if he is paid at that rate he will make a profit of about Rs. 4,500 or 17 per cent. on his expenditure. This I consider not by any means too much for the work done and trouble taken by him, and I therefore recommend its payment, in anticipation of the sanction of the revised estimate. Mr. Irwin states that he is satisfied with the measurements as recently arrived at by Mr. Malet, and agrees to settle up finally on the rates recently fixed up to 29th May. All work he may do hereafter will be settled up finally month by month.

6. It will be necessary before applying for the Pioneers to ensure that there is a sufficiency of money. The budget grant for the year is Rs. 53,069, being the unexpended balance of the old estimate, whereas the revised estimate will be some Rs. 40,000 in excess, requiring an additional grant of Rs. 40,000.

7. It is of vital importance that the Pioneers should reach here before the monsoon breaks, and there is little time to lose. The following points therefore require immediate orders and sanction :—

- (a) Permission of the Chief Engineer to pay present piece-worker at the rate of Rs. 15 per 1,000 for earthwork in anticipation of sanction of the revised estimate.
- (b) To provide for an additional grant of Rs. 40,000 for the current official year.
- (c) To apply for the services of the 4th Pioneers, through Government, on the enclosed terms.

(Signed) J. F. SOMERS-EVE,
Executive Engineer on Special Duty.

28th May 1897.

ENCLOSURE.

In the event of it being decided that the services of the 4th Pioneer Regiment can be employed on the Ootacamund Lake-filling, the following are the draft terms of contract between the Officer Commanding and the Executive Engineer in charge of the work :—

1. *Payments*—(a) Earthwork at Rs. 15 per 1,000 cubic feet.
(b) Blasting rock at Rs. 55 per 1,000 cubic feet.
2. *Tools*.—Mamooties, crowbars and pick-axes will be supplied as far as possible. Jumpers, spoons and explosives to be provided by the Pioneers. If supplied by the Public Works Department, the rate will be lowered proportionately, providing that in no case will the regiment be expected to pay more than Rs. 500 for tools (not explosives).
3. *Plant*—will be provided as far as available and must be maintained by the regiment.
4. *Carriage of troops*—will be paid by the regiment, but an advance for expenses in coming up will be made by the Executive Engineer. Such advance to be recovered in three monthly instalments.
5. *Quarters*—will be provided in the European and Native Jails as personally shown to Major Stevens. Rs. 1,000 will be granted for the purpose of making latrines, forming beds, &c. This is to be spent at the will of the Commanding Officer, subject to the condition that proper sanitary arrangements are made.
6. No other charge whatever will be met from Public Works Department funds, other than payments made for work done, tools and the above lump sum. All other expenses to be met by the regiment.

7. Payments to be made fortnightly or monthly as desired, but the monthly payment is to be a final one. Measurements will be taken by the Executive Engineer or those deputed by him in consultation with the Officer Commanding the Regiment, and the Executive Engineer's decision to be considered as final.

I concur in the above.

Ootacamund,
28th May 1897.

(Signed) G. B. STEVENS, Major,
Offg. Commandant, 4th Madras Pioneers.

No. 292 W.

Forwarded to the Chief Engineer for consideration of Mr. Somers-Eve's proposals.

(Signed) J. HANNAN,
Superintending Engineer.
29th May 1897.

ORDER—No. 1587 W., dated 11th June 1897.

In the report read above Mr. Somers-Eve, Executive Engineer in charge of the Ootacamund Lake reclamation project, applies—

- (1) for permission to pay Mr. Irwin, the present piece-worker, at the rate of Rs. 15 per 1,000 cubic feet for earthwork;
- (2) for the services of the 4th Pioneers for employment on the work; and
- (3) for an additional grant of Rs. 40,000 for the current official year.

2. The proposal to pay Mr. Irwin for earthwork at the rate mentioned is approved.

3. His Excellency the Lieutenant General Commanding the Forces will be requested to be so good as to state whether the services of the 4th Pioneers can be placed at the disposal of the Executive Engineer for employment on the lake work on the terms mentioned in the draft agreement drawn up by the Executive Engineer in consultation with the Officer Commanding the Regiment; and, if so, to arrange for its removal to Ootacamund as early as possible. It is very desirable that the regiment should arrive before the monsoon breaks.

4. The application for an additional grant of Rs. 40,000 for the current official year will be considered in the Local and Municipal and in the Financial Departments.

(True Extract.)

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Secretary to Government.

To the Superintending Engineer, IV Circle.

„ Deputy Adjutant-General, for the information of His

Excellency the Lieutenant General Commanding the Forces.

„ Examiner, Public Works Accounts.

„ Financial Department,

„ Local and Municipal Department, } with copy of note by the Hon'ble Mr. Bliss.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From W. B. DEWINTON, Esq., Executive Engineer, Coimbatore Division, to the Superintending Engineer, IV Circle, dated 23rd October 1895, No. 4276.

As directed in your No. 503/C.I., dated 27th August 1895, I have the honour to forward herewith plans, sections and estimates for filling in the Ootacamund lake above the Willow bund.

2. I greatly regret that there has been so much delay in the matter, but much time was wasted in looking for the old surveys and estimates referred to by you, which, when found, proved useless, and a fresh survey and sections had to be made.

3. I also regret that the estimate should be so much higher than was anticipated. The reasons for the large excess are as follows :—

(1) My anxiety that the estimate should be ample for the work required and should not need revision. To gain this end I have allowed ample provision for the great settlement which is inevitable when earth is thrown into water of such depth on a boggy bottom. I have provided for finding a considerable quantity of rock in the cutting on south side of lake, as it is impossible to say beforehand how much exists, and I have provided for filling in to 3 feet above present water level, i.e., to level of race course on north side, to prevent the ground reclaimed from being a continual swamp. None of these provisions are apparent in former estimates.

(2) Provision for draining the land reclaimed, not included in previous estimates.

(3) Provision for land compensation.

(4) Provision for extension of lake supply channel and culvert.

(5) Provision for removing turf and surface soil and relaying.

On the other hand my rate is somewhat less on south side of lake than that provided in previous estimates.

4. I believe that the estimate now submitted will be found to be ample and will, very possibly, show a considerable saving in execution—while I am sure that, even if the whole amount is required, it will be money well spent and do incalculable benefit to the health of Ootacamund.

5. I beg for early orders on the subject, especially with regard to the construction of the culvert under the Willow bund and excavation of channel thereto, which is the first step necessary.

No. 413 W.

Copy forwarded with enclosures to the Chief Engineer, Public Works Department, with reference to G.O. No. 2066 W., dated 19th August 1895.

2. The undersigned is of opinion—

(1) That the initial rate for earthwork of Rs. 10 per 1,000 is excessive and that the work should, and can be done, for an initial rate of Rs. 8;

(2) that laying 3" drain pipes is not necessary;
 (3) that removing and relaying turf and top soil is not desirable. The result would not be commensurate with the cost.

If the above suggestions are approved, there will be a saving on the estimate of Rs. 27,592.

26th October 1895.

(Signed) J. HANNAN,
 Superintending Engineer, IV Circle.

Note by the Chief Engineer, Public Works Department.

The estimate for filling in the upper portion of the Ootacamund lake, as submitted by the Superintending Engineer, IV Circle, amounts to Rs. 1,27,900, an amount so greatly in excess of what was expected, that it becomes necessary to consider very carefully whether so large an estimate is really necessary.

2. It may be said at once that the estimate prepared some time ago by the Sanitary Engineer's Department was quite insufficient; it provided for raising the reclaimed ground to a level some 2 feet lower than that now provided by Mr. deWinton, which latter is certainly not unnecessarily high, and it provided for leaving one or more small ponds in the deepest portions of the reclaimed area, which would have greatly interfered with the value of the latter as a recreation ground.

3. The first point on which reduction appears possible is the rate for earthwork; Mr. deWinton allows an initial rate of Rs. 8 per 1,000 cubic feet, with an addition of As. 8 for every 20 yards of lead; the Superintending Engineer considers that an initial rate of Rs. 8 should suffice, and Mr. deWinton himself says that the estimate will "very possibly show a considerable saving in execution."

4. The allowance of As. 8 per 1,000 cubic feet for every 20 yards of lead also appears to be excessive; with proper organisation and with appliances for transport, such as any contractor to whom a work of this class may be entrusted will certainly adopt, the cost ought not to be more than half this amount.

5. It is not good policy to underestimate the probable cost of a work, but it is, if possible, worse policy to overestimate it, for in the latter case those responsible for its execution have no motive for economy, and contractors' tenders, as well as the cost of work departmentally executed, have a remarkable tendency to rise up to estimated rates.

6. I consider therefore that the cost of the 5,085,800 cubic feet of earth available from the side cutting should not exceed Rs. 11 per 1,000 cubic feet at the outside, and that the estimated rate may safely be reduced to this amount.

7. It will be noted that Mr. deWinton adds one-sixth to the quantity of earth required for filling, on account of "Settlement." Settlement in the ordinary sense of the word there will certainly be none, as the earth will, after settlement, certainly not occupy a smaller space than it does in its natural position on the flank of the hill from which it is to be taken; but it is very possible that a certain amount over and above what the sections show will be absorbed by the soft and muddy bottom of the lake; I doubt whether this amount will be anything like the one-sixth allowed by Mr. deWinton, but I would not reduce the estimated quantity on this account, but would allow the excess to go towards balancing the reduction proposed below.

8. Again a reduction of one-sixth is allowed in the amount available from the cutting on the side of the lake, on account of rock; this seems an overliberal allowance, as all small boulders and decomposed rock can be used, but may stand, any surplus being used as proposed at the end of the previous paragraph.

9. A very serious item in the estimate is the heavy cost of the earth (1,778,300 cubic feet) to be obtained from the Jail Hill owing to the fact that the side cutting will not give the full quantity required. If the views expressed in the two last paragraphs are correct, the quantity to be thus obtained will not be quite so great as that

estimated, and a still further reduction may be made by taking the side cutting down to a lower level than that shown on the sections; there is no reason why this should be 5 feet above the ground level of the reclamation, and it may be taken at least 3 feet lower than the sections show. This will give in round numbers an additional supply of quite 600,000 cubic feet, and with a moderate allowance for the extra earth obtainable, if the loss by settlement and allowance for rock is less than Mr. deWinton's estimate, the quantity to be obtained from the Jail Hill would probably not greatly exceed one million of cubic feet.

10. The cost of the earth obtained from this source is so great, and the objections to cutting into the side of the hill are, in my opinion, so strong, that it is desirable to consider whether it is worth while using this million of cubic feet at all.

11. It will be seen from the estimate that the filling for the first 200 feet from the Willow bund, *i.e.*, up to about cross section No. 5 on the plan practically absorbs this quantity, which would be used if the filling stopped at cross section No. 5 instead of extending right up to the Willow bund, and I am strongly of opinion that this plan should be adopted; there is no particular virtue in the Willow bund which should render it compulsory for the reclamation to extend thereto, and the nearer we approach to it, owing to the increasing depth of water, the more costly the reclamation becomes.

12. The reduction of 200 feet in the length of the recreation ground will be insignificant as compared with its total length, while the saving in cost will be substantial.

13. A further saving of Rs. 8,088 may be made by the omission of the provision for drainage pipes, which I agree with the Superintending Engineer in considering entirely unnecessary; to say nothing of the fact that I think Mr. deWinton has considerably underestimated their cost.

14. A somewhat doubtful point in the estimate is the provision of Rs. 5,775 for removing and relaying the turf on the race course, but on the whole, I think it should be allowed.

15. If the suggestions made above be approved, the estimate will be altered as follows:—

	RS.
<i>Deduct—</i>	
Reduction of rate at Rs. 2-8-0 per 1,000 cubic feet on 5,085,800 ...	12,714
Omission of earth from Jail Hill ...	32,009
Drain pipes ...	8,088
Total ...	52,811
<i>Add—</i>	
600,000 cubic feet extra from southern cutting at Rs. 11 per 1,000...	6,600
Total ...	46,211

Reducing the total amount of the estimate to Rs. 81,589, or, say, Rs. 82,000, an amount which, though considerably in excess of what was expected, is not in my opinion excessive, considering the immense value of the ground which will be reclaimed.

MADRAS,
 18th November 1895.

(Signed) J. PENNYCUICK, Colonel, R.E.,
 Chief Engineer, P.W.D.

No. 3914 C.

I return the plan with the centre line of rails marked thereon. The inner rail will be about 14 feet from the wire fence on the Willow bund at its nearest point.

The Willow bund road will not therefore require removal.

The railway could, if desired, be shifted 10 feet or 15 feet further away from the Willow bund road.

9th December 1895.

(Signed) F. R. UPCOTT,
 Consulting Engineer for Railways.

ORDER—No. 3246 W., dated 19th December 1895.

It appears from the papers that the cost of filling the upper portion of the Ootacamund lake is considerably greater than was anticipated, and is estimated by the Executive Engineer, Coimbatore Division, at Rs. 1,27,900; this amount can, in the opinion of the Chief Engineer, be reduced to Rs. 1,00,000 by the measures proposed in paragraphs 6 to 9 and paragraph 13 of his note.

2. The estimate reduced to Rs. 1,00,000 by the modifications mentioned in paragraph 1 of this order is accordingly sanctioned,* and the work should be put in hand and carried to completion with the least possible delay.

* Registered as Provincial No. 87 W. of 1895-96 and classified as Miscellaneous Public Improvements, Original Works.

3. The Superintending Engineer, IV Circle, will report as soon as possible what sum he can expend during the current year, and whether he can carry it out with the staff at present at his disposal; if not an early application for the additional establishment required should be submitted.

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, IV Circle,
with plans and estimate (24).
" Examiner, Public Works Accounts.
" Local and Municipal Department, for communication
to the Municipal Council, Ootacamund.

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1895} Madras
PUBLIC WORKS.

Dated December, 19th.

Recd.

Encl.

G.O. No. 3246 W., 19th Dec. 1895.

DECEMBER.

Ootacamund Lake

Estimate of Rs. 1,00,000 for filling in the upper portion of the —, sanctioned, and the work ordered to be carried to completion with the least possible delay.