№ 1958W PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 9th Augt. 1881

Read the following :—

From the Supdg Engr. 1st Circle } No. 1197 d/ 15 July 1881

The estimate amounting to Rs 2350 for establishment required for survey operations on the Buckingham Canal is sanctioned as follows:

	Amount of Este.	
4 surveyors for 4 months @ Rs 75 per month each - -	Rs 1670.	Registered as Provincial No. 25W of 1881-82 & classified as Establishment:
1 Draftsman for 4 months at Rs 50 per month		
2 – Do – for 3 months at Rs 25 per month each.		
2. – Do – for – Do. at Rs 20 per month each.		
20 Lascars & Contingencies - - - -	Rs. 680....	Minor Works. Registered as Provl. No. 54 W of 1881-82 & classified as Irrigation & Navigation Works for which Capital & Rev: accounts are kept. Capital, Works

26.7.81 D 5.8.8

~~[illegible]~~

2. a sum of Rs 1670 is allotted from the grant for Temporary Establishments in the Provincial Budget to meet the cost of the Surveyors and Draftsmen, and the Supdg Engr. will appropriate the amount required for Lascars, Rs 680, from the Current year's allotment for the Buckingham Canal.

G

S 29/7

1/8/81

B.P. 1958W 29th August 1881

The Supdg Engr. 1 Circle ✓
" Exr. P. W. Accts
with the esti: ✓
" C. Engr. for Irrigation ✓
Desw
10-8-81

Cir 1/8 O.S.S. 43/7. Retd 2/8.

0·30·7·81 R.5.8.81

1

Note by Budget Section.

C. No. 4117

P. W. Secretariat.

Note by Budget Section.

Work

Establishment re-quired for the Survey operations of the Buckingham Canal.

Remarks and References.

Fund	See note below	
Service Head		Rs
Departmental Head		—
Amount of estimate		Rs 2350
Expenditure in previous year		" "
Allotment in current year		" "
Balance required to complete		" 2350
Total Rs...		2350

Note of available funds.

Of the amount of the estimate, Rs 1200 for the Surveyors, and Rs 470 for the Draughtsmen should, under para 118 A. of the Code, be sanctioned under Establishment, and funds appropriated from the grant for Temporary Establishment - Rs 680 required for Lascars and Contingencies should be sanctioned as a Minor Work - No funds are available with Govt -

R.P.

Budget Clerk.

19/7/81.

Buckingham Canal Dn Office
Chepauk
15th July 1881

No 1197

From
The Offg Executive Engineer
Buckingham Canal Dn

To
The Chief Engineer
Public Works Department

Through
The Superintending Engineer
1st Circle

Sir,

Enclosure - 1.

I have the honor to submit herewith, for your approval and sanction, Estimate of Surveyors and Draughtsmen, required for completing the Surveys and Estimate of the Canal, in continuation of the sanctions of these establishments accorded in G.O. No. 1410 W of 16th June 1880 and G.O. No. 857 W of 29th March 1881 respectively.

2 I shall first proceed to explain the case of the Dra

lly.

Establishment. — It was sanctioned for 3 months, as from 1st April, to Cost Rupees 480 of this sum Rs. 379 were expended to end of June. The saving is due, to (1) a lesser rate of Salary having been paid for some of the Draftsmen. — and (2) these men, having been employed so long only as there was work for them: that is to say, the Surveys not being completed; there was not work to employ them for the full period. —

I beg to request, that in the case of this Establishment, it may be sanctioned as provided in Estimate, to be employed according to demand. —

The work of the Draftsmen, for the period they were employed consisted of — (1) Transferring to the Revenue Survey Village maps, fair copies, the Surveys so far as executed. — (2) Plain copying diversion lines Surveys. — (3) Enlarging the 4 inches to a Mile, Zamindary and Shotriem maps, to the 16 inch village maps scales for use of Surveyors. — (4) Preparing Estimates and Plans of Basin improvements. — (5) preparing working plans of Lock gates; Plans & Estimate for Timber Bridges. — (6) Plotting Longitudinal Section of Bench Marks with reference to the Dr. Havilland M. S. L. showing the low water tide Lines. — and high flood lines. — as also sundry works in connection with the Surveys. —

The work of the Draftsmen has been closely supervised by Mr Ellis, and they were thus employed so long only as there was work for them.

3. In the case of the Survey establishment I am compelled to Solicit sanction for continuing it 4 Months on the scale provided in the Estimate. —

My sanguine expectations of the operation of this establishment — as I estimated for it originally, have resulted in serious disappointment I regret to say. — The work was not popular, and there was difficulty all along in securing properly qualified hands. — The standard of work fixed upon was never obtained, and putting the Surveyors under stoppages for short work, proved so disastrous, that I was necessitated to abandon the system. —

Work was started about the end of June 1880, with 1 Head Surveyor, 1 Aſsistant Surveyor and 3 Sub Surveyors. The Aſsistant Surveyor resigned after 3 Months, as he objected being put under stoppages. His work turned out wholly useless. This Surveyor was Mr Mooneſse late Overseer of the P W. D and a certificated Overseer — Two of the Sub Surveyors did very fairly, and are still employed, promoted to the Aſsistant Surveyor class. These men are Ruthna Modalier and Chinniah Modalier, much of their work at first turned out badly, but they turned out good Surveyors eventually. The third Sub Surveyor, resigned after 2 Months his work proved useless, and so did that of another Sub Surveyor who stayed only 2 Months: another Aſsistant Surveyor, Thomas, late Overseer P. W. D, resigned after a short period, his work of leveling was shamefully out. He had the good sense to refund what he drew: — another Surveyor Vanugopaul worked for two Months and resigned, not submitting to stoppages. His work also was useless. — In the month of February last, I fell in with a very good Surveyor Vencata Row, and who is still employed. He with Ruthanum Modaly and Chinniah Modaly are the 3 now working and on whom I depend, to finish the remaining Surveys. —

It will be seen therefore that

the career of the Survey Establishment was very unsatisfactory, and involved an outlay incomensurate ~~[illegible]~~ with the work turned out, as so much of it proved useless — & the hands were quite unable to work up to the Standard at all.

4. In December last finding, that, withal the pressure put on the Surveyors, the plotting of their field work was quite neglected, with the Consent of the Superintendent of Works, I stopped field work and brought in the Surveyors, in January last, to Head quarters to complete the plotting and mapping. The Head Surveyor, late overseer Sashachella Mody, was engaged until near the end of May in completing the mapping &. The other 2 Assistant Surveyors completed a month earlier. So that during all these months field work was stopped, so far as these 3 hands was concerned;— while at Head quarters, plotting and mapping the 3 hands were paid as Draftsman on 40 and 35 Rs rates.— The Head Surveyor gave much trouble, owing to his intemperate habits, before he completed his plans. Omitting the Surveyors whose work proved useless, the following are the periods on which Surveyors were actually engaged on the field.

1	Head Surveyor	6 Months
2	Surveyors	8 Months
1	Do	5 Months

The Charges of the Survey Establishment computed to end of June amount to Rupees 4460-4-9 against the Estimate of Rupees 4 260-0-0 originally Sanctioned.

5 It must be noted that during the period of field work, the N.E. monsoon season and cyclone of November last, interfered greatly with work.— I observed that the accommodation in Boats did not permit

of the Surveyors plotting and mapping their work, the roof being low, not admitting of Tables being used, and the covered area so small. the Village maps also were so large:— and in the anxiety not to be put under stoppage of salary for short work, the Surveyors spent much of their time in the field, withal not fulfilling the Standard.—

I before noted that the work was not popular; so much so that I could not obtain hands at all, on the lower class rate.—and stoppages for short work had to be given up, for out of the 75 Rs., about 25 Rs was paid away for the Boat, and the stoppages at times amounted to very much.

6. The Surveying work I beg to submit also, turned out a more laborious task, than was contemplated, in the scheme, as submitted by the Superintendent of Works.—

It was premised that with the Revenue Survey Village maps,—the putting in of the Canal line with all its features, would be a simple matter. such was not the case, for ordinarily the determining of the "field," occupied time, its boundaries having to be chained to be certain: again in the large wastes along the coats, the demarcation stones occur at long intervals and very far—from canal, so that triangulating from them to the canal, occupied much time, as my own experience showed when assisting the Surveyors.— In the Zemindary and Shotriem Villages, which are not demarcated the canal had to be surveyed independently of the maps, several independent surveys had also to be executed, of diversions, Rivers at the crossings, flood banks &c.— In some instances these surveys were unnecessarily extensive and not, authorized, but executed by the Head Surveyor, as he considered such necessary.—In the levelling operations, the Surveyors lost much time, that is to say in the cross sections, owing to the ever varying level of water, from tidal influence; though working with fixed Bench Marks,- deep slush, and the consequent delay in getting through such work.

7. The Survey operations up to the present time executed, consist of.—

(a) A Longitudinal fly line of levels /twice checked/ from the De Havelland B.M. at Madras, along the Tops of all Mile and furlong stones up to the Rompero and Commamore Canal Lock;- much labour was expended on this work, as the Surveyors could not agree, in the Transfers of levels across the wide arms of water, at the large river crossings and some backwaters.—

(b) Complete Surveys and cross Sections from the Romperoo to Kundalaru (196 to 90 miles) with Surveys and levels of diversion at Kamparti, Mannairoo Chippelaroo, Koodoor Nalatoor and Kristnapatam. Together with Surveys and levels of Flood Banks at the Grundalcumma (right & left) Moosie (left) Pailaroo (right) and Manneroo (right and left)

(c) a detail survey of the country about Romparoo and Commamor Lock, up to Pedda Ganjam, owing to want of village map

(d) a detail Survey of Manneroo crossings.—

(e) A very detail survey of Pennair river at crossing of Canal, occupying a large area of country.

(f.) Detail Surveys of Canal, line, through the Zemindary villages for which there are no village maps—

(g) A very detail Survey of the Ramatheertham Backwater for diversion.—

(h) Complete Surveys & Sections from the Kundalaroo to Madras

(90 to 0) with detail surveys and levels of the diversions at Kundalaroo, at Soovarnamookee, at Doogarazapatam, along Lake section Jonanghapallam to Tettoopett, Pulicat to Ennore, Ennore to Lock - with detail Survey of Basin at Madras and adjoinings.—

(i) Detail survey through the Zemindary villages in above reach, for which there are no village maps.

(j) Survey and Sections of Southern Canal, for about 10 miles.

Note.— (1) In the reach (b) 196 to 90, the longitudinal sections of both banks have to be taken— flood banks for the Chippelaroo,— and sundry cross training banks to obstruct land & sea floods from getting behind canal banks— these training banks are of very short length each, rarely exceeding a furlong

(2) In the reach (h) there is the rest of the Lake diversion Tettoopett to Coromandel to complete which is in progress— also some cross sections, and training banks.— This reach will be fully completed in all July

Such is the extent of field work executed.

8 The Surveys remaining to complete after the end of July, will be the Southern Canal, up to Mercanam, which, by the end of July will have been carried 18 or 20 miles.—

It is not intended to survey the Junction canal, but adopt the existing maps.—

The entire Southern Canal up to Merkanam, will need to be plotted on the Revenue Survey maps. On this line the Zemindarys are very many, & will involve detail surveying.—

The above is the extent of field work remaining to be done which as executed will be mapped fair by the Draftsmen.—

9. Up to the present time, nothing has been done, towards preparing the General Estimate — specific works of Diversion, flood banks &c have been, and are being estimated for.—

The General Estimate has not been taken up, from a datum not having been as yet fixed. To determine this, the General Section, showing the relation of the (supposed) Original DeHavilland datum to canal as it is, had to be settled by means of the fly lines of levels (a) para 7.—

Owing to the conflicting results, of the several surveyors work of this line, caused by errors at transfers, at the wide expanses of water crossings, the result was till now in abeyance; it has been definitely disposed of now and a longitudinal Section is in hand, shewing the relation of the Canal to the DeHavilland M.S.L.; the Lines of lowest Tides, and High floods, so as to expose at a glance, the actual relation of Canal, to Tides and Floods, and dispose of the momentous question: what level or levels shall the canal bed, be fixed at.— The only information that will be wanting to complete the Section is the "true Mean Sea Level of Madras" which Captain Baird promised to furnish in February last, but as yet not received. The Section which will be completed during the week will be submitted for orders, so as to enable the General Estimate being put in hand.—

10. In conclusion I beg to submit that I am very hopeful of having the plans and Estimates ready for submission in November

mapped fair by the Draftsmen.—

next, at latest.

There are some points connected with the Estimate on which information is wanting, and which I will submit for orders shortly.

I have the honor to be
Sir,
Your Most Obedient Servant
C. Oleman
Offg. Executive Engineer
Buckingham Canal

Mr
D.C.

16th July 1881.

Alexr. Prendergast
Lieutt. Col: R.E.
Superintending Engineer
1st Circle.

[illegible] in the Draftsmen

ENCLOSURE
23 JUL 81
EXAMINER P.W. ACCOUNTS

R No. 390 Encl. 1
23/7/81.

No. 698 N.

To
C.

Please report whether all the items in the estimate may be charged against the grant for temporary establishment.

Dy. W
22/7

To W. ~~Issue No. 435 of 28/7/81~~
Encl. 1.

The 2nd. 3rd. & last items should be sanctioned as a minor work vide Code para 118 A.
The rest should be debited to Establmt.

C.

27/7

G.O. No. 1610 W. 16/6/80
B. No. 111 W. 15/1/81
" 857 W. 29/3/81

C. 30-7-81 R. 5?-8-81

P.W.C. No. 4115

From,
The Offg. Executive Engr.
Buckingham Canal No.

To.
The Chief Engineer
P.W. Departt.
Through the Supdg. Engr.
1st. Circle.

Dated 15 July 1881
Recd. 17
No. 1197

Survey Operations of the Buckingham Canal. — Reporting regarding the progress made on the — & requesting sanction to continue the Survey Establishment for a further period.

Entd. in Receipt Regr.

To.