Revenue Department

Minutes of Consultation

26th Jan. 1858.

பாதுகாப்பு பிரிவு–1

செப்பனிடுபவர் பெயர் — த. மணி

செப்பனிடுவதற்காக எடுத்துக் கொள்ளப்பட்ட நாள் 23/07

சரிபார்க்கும் முதல் மு.நி.பா.எ. கையொப்பம் 30/7/07

சரிபார்க்கும் 2–ம் மு.நி.பா.எ.. கையொப்பம் 31/10/07

ஆராய்ச்சி உதவியாளர் கையொப்பம்

Fort Saint George, Revenue Consultation of 26th January 1858.

No. 40. Read the following Extracts from the Proceedings of the Board of Rvenue; dated 18th December 1857, No. 4570.

Read letter from Director of Revenue Settlement forwarding revised Estimates of Establishment for the Survey and Assessment, and explaining the data on which they are framed; dated 7th December 1857.*

*In Cons. 18th Dec. 1857.

(Here enter No. 81.)

Read also Extract Minutes Consultation 11th December 1857, R. D.

(Here enter No. 1288.)

The letter first noted above was received, and Proceedings drafted previous to the receipt of the Extract Minutes Consultation of 11th December. The Board believe it will not be necessary to delay sending up these Proceedings to Government in consequence of the views expressed by Government in the above Extract Minutes Consultation, and it will only be necessary to modify them so far as regards the question of Demarcation Establishment.

2. In submitting these revised Estimates of Establishment, Mr. Newill has at the Board's suggestion framed them on the requirements of the full and final Establishment, on the understanding that only such portion of it as is now available, be for the present employed, and the full strength brought up gradually as opportunity offers. The consequence is, that the annual amount is even greater than what was before submitted, but in order to bring the sum total to the 76,40,000 Rupees of the Government Estimate in paras. 37 to 43 of Extract Minutes Consultation 14th August 1855, Mr. Newill anticipates that the extent named by Government (60,000 square miles) will be surveyed and assessed in little more than 13½ years, instead of 22 years.

3. As regards the *survey* the Estimate including 4 full "parties" is 2,41,920 Rupees per annum,† and it is Captain Priestley's opinion that they can survey 4,400 square miles in a year, so that the rate per square mile would be $\frac{24,1920}{4400}$ or 55 Rs. instead of 64 the Government estimate; and the period of employ $\frac{60000}{4400}$ or 13·6 years instead of 22. Mr. Newill however observes that until the full Establishment is complete, the rate would be 60 and then 56½ Rupees per square mile; still this "will admit of the whole extent "of 60,000 square miles being surveyed within the estimated total of "38,40,000 Rupees."‡

† *Para.* 6.

‡ *Para.* 7.

4. Then as regards *assessment* the *full* Establishment estimate including 4 "parties" each headed by a Deputy on 1,200 Rupees a month, is 2,56,844 per annum,§ and Mr. Newill expects they can assess 5,000 square miles in a year, so that the rate per square mile would be $\frac{25,6844}{5000}$ or 51⅕ Rupees instead of 64 the Government estimate; and the period of employ $\frac{60000}{2000}$ or 12 years, instead of 20 or 22. Mr. Newill however observes that until the full Establishment is complete, the rate would be about 63⅕ and 55⅕ per square miles|| "still within the estimated limit". From which the Board presume that Mr. Newill's Estimate is made to assimilate to that named by Government in para. 42 Extract Minutes Consultation 14th August 1855, namely 38,00,000 Rupees.

§ *Paras.* 15 *and* 16 *this includes* 10,000 *Rs. per annum for Office travelling batta, and contingencies.*

|| *Para.* 18.

5. In addition to this, Mr. Newill submits an Estimate for a Lithographic Press Establishment (not including the value of the Press) at 9,012 Rupees per annum, or a period of employ of 15 years, making a total of Rs. 1,35,180. So that the whole Estimate of Survey, Assessment,¶ and Lithography is 77,75,180 Rupees.

Para. 9.

¶ *The Assessment Estimate includes a few extra hands for Demarcation, a proposal for a separate Establishment will be referred to further on.*

6. Mr. Newill explains** that though the survey is expected to progress at the rate of 4,400 square miles, in the same time that the assessment progress es5,000, yet that the latter will not overtake the former in as much as the former has already a considerable start; and also because the latter Department will also at first be entirely new to their work.

** *Para.* 20.

7. The cost of the Lithographic Press and the Instruments required for the Survey office furniture and tents, and stationery has not been included. Captain Priestley in his letter to Mr. Newill and forming an enclosure to it, states his inability to furnish an estimate, Captain Priestley being now absent on leave, the Board presume the Government would not desire the submission of these Proceedings to be delayed till a further reference is made to him. A list however of the requisite instruments and office furniture, camp equipage and books accompanies Mr. Newill's letter.

In from South Arcot 21st February in Cons. 13th March 1857 sent to Government 15th May 1857.

8. The full *survey* Establishment is framed from that proposed by Captain Priestley in his Report on the operations of 1855-56 (marked D.) It is not quite so expensive as the one last submitted to Government. The only alteration that the Board would suggest, is that the 100 Rupees proposed to be allowed to each Deputy in Captain Priestley's estimate above referred to, for contingent charges had better be kept as a separate item, under the head of "contingent charges," and it would probably cover the expenses of moving office tents, constructing signals, &c., travelling allowances are included in the rates of pay proposed for the several members of the Survey Establishment.

9. The revision of the establishment for *assessment* has been carried much farther than that for survey. Mr. Newill now proposes 4 Deputies instead of 2, and that their pay should be 1,200 Rupees instead of 1,000 per mensem. Both they and the Director to draw the same fixed and extra tent allowance as a Collector. The reason for the extension has not been stated, but the Board conclude that Mr. Newill considers it necessary that to keep pace with the survey there should be 4 assessment as well as 4 survey parties. As regards the rate of allowance, it is not more than what the Board believe will be requisite to retain the services of selected officers for a considerable period.

* *Para.* 12.

10. The pay of the 'Chief Accountant' (the Board think the designation of 'Uncovenanted Assistant' would be better) is to be raised from 200 to 280 Rupees a month, in order to bring it to the level of that of a Head Sheristadar.* This seems reasonable.

11. The small establishment for demarcation formerly proposed, namely 960 Rupees per annum, has now been omitted, and a 3d supervisor on 100 Rupees a month, and a 3d classifier on 24 Rupees a month have been added to the former estimate for assessment. The Board with reference to Extract Minutes Consultation under date 11th December 1857, No. 1288, R. D., adverted to at the head of these Proceedings propose to add a separate Demarcation establishment, but they do not consider it necessary to strike out the extra supervisor and classifier from the assessment establishment which does not seem too extensive when compared with that of the survey.

12. In para. 22 Mr. Newill observes that "the cost of the boundary marks has not been "included, as it has already been proposed that it should be borne by the ryots under the pro- "visions of Act XX. of 1855. This may be conveniently advanced by Government in the first "instance." In his letter of 16th October 1857,† Mr. Newill proposed the recovery of the cost by postponing the reduction of assessment, in which the Board concurred in their Proceedings of 19th Ultimo to which a reply has not yet been received. The small field marks it is hoped may be made by the ryots themselves, if properly looked after without becoming an actual item of cost. This is just one of those essentials to the efficacy and rapidity of the survey which it is easy to *order*, but not so easy to see *enforced* without much personal trouble and inspection, and a wholesome exercise of Act XX. of 1855. The Board anticipate difficulties on this point at first, which will gradually diminish as the rule becomes widely known and strictly enforced.

†*In Consultation 20th Oct.* 1857.

13. And in connection with the above subject, the Board will now refer to the Extract Minutes Consultation of 11th December 1857, noted at the head of these Proceedings. It will be observed by Government that the urgent necessity for a proper and efficient mode of De-

marcation has been fully anticipated by the Board in their Proceedings of 19th November 1857,* which must have been before Government on the date of the above Extract Minutes Consultation. It will not therefore be necessary for them to dwell on this subject further than to remark that the quotations from Major Thuillier's Manual in the above Extract Minutes Consultation do not exactly refer to a state of things such as exists in the Madras survey, inasmuch as whenever the term 'demarcation' occurs in those quotations, it has reference to the demarcation of *village* boundaries, as may be seen by a reference to the Thakbut Map itself to which Government refer. If then a separate establishment is required for these, much more will it be necessary to *ensure* the demarcation of the *field* boundaries. The Board will, as directed, refer the matter to Mr. Newill, though they do not agree in the opinion expressed by him in para. 13 of his letter now under consideration where he proposes that "the demarcation should be conducted by the Collector." It is a duty requiring much more personal inspection and constant pushing on of reluctant ryots, than any Collector can undertake to be responsible for.

* *Paras.* 18, 19, 20, 21, 22, 23, 24, 25 *and* 26.

14. The demarcation establishment alluded to by Government in para. 10 of Extract Minutes Consultation of 11th December 1857, is the very same the Board referred to in para. 21 of their Pooceedings of 19th November 1857,* but as explained in para. 23 of the same Proceedings, they were embarrassed on account of the expense. The data of the Government Estimate, do not appear (though Government state they had reference to the North West Surveys) to have contemplated a demarcation Establishment. Mr. Newill's Assessment Establishment may probably have to commence at once on the lands already surveyed in South Arcot and Trichinopoly, and a separate Demarcation Establishment would certainly be desirable.

* The Government consider it to be that originally named for the N. W. Provinces, but a reference to para. 44 of Major Thuillier's Memorandum, in Extract Minutes Consultation 25th July 1857, No. 741, R. D. will shew that it refers to the lower Provinces of Bengal, where the kind of demarcation is more similar to that which will be required in this Presidency, and Major Thuilliers' remarks are most apposite.

15. The Government state in para. 9 of the above Extract Minutes Consultation that were sanction immediately granted for the Establishments asked for the consequence would be that they would not find a single day's work ready for them. The Board would not have pressed this early sanction on slight grounds, but they were led from Captain Priestleys' earnest desire to get his Establishment, to suppose that he new best whether he could employ them. The want of a regular Demarcation Establishment though it has hampered his operations hitherto, has by no means prevented them.

16. The Board did not refer to the Estimate made by Government without reference to the Extract Minutes Consultation which contained that estimate,† but they still submit that it was not framed on data suitable to the present occasion. The Government have in para. 4‡ given an example of the scale under which the estimates under notice were framed, and it is supposed the marginal comparison is for the purpose of shewing that the Establishment proposed by Mr. Newill and the Board is in excess, but an erroneous conclusion may be drawn from such comparisons, unless the *amount of work* performed is noted also. It does not *follow* that an Establishment on 50,000 Rupees is more expensive than one on 30,000 Rupees. As regards the data in the Extract Minutes Consultation of 14th August 1855 to which Government refer the Board, it may be observed in regard to the Estimate for assessment that any data taken from a village settlement such as that of the North West Provinces can hardly be said to apply to a Khetwar assessment.

†*The paras. were quoted in the margin of the Board's Proceedings 27th November* 1857.

‡ *Extract Minutes Consultation 11th December* 1857.

17. The Board trust however that without adhering too much to the experience of surveys in other parts of India so different from that required for Madras, the Establishments now proposed will be suitable. The correctness of Mr. Newill's anticipations that the sum of 76 lacs will not be exceeded rests entirely on the question whether 5,000 square miles per annum will be surveyed and assessed for 13½ years consecutive work, instead of a rate of 2,800 square miles per annum for 22 years.

18. With the assistance of Field maps one Classifier may get over 60 acres a day, but the Board are inclined to consider this a high average, for a continuance. The number of working days will probably be somewhat less than what Mr. Newill expects,* for time will necessarily be absorbed in preliminary investigations and inspections, and moving from one place to another. Still the expectation is not so sanguine as to lead the Board to require a reconsideration of it.

* *50 Classifiers, each 60 acres a day, and 275 working days in the year= 825000 acres or 1290 square miles for each of the 4 "Parties." Total 5160 (say 5000 square miles.)*

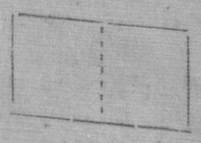
19. With regard to the survey, the Board perceive, both from the remarks at the end of the Estimate D. forwarded by Captain Priestley (forming an enclosure in Mr. Newill's present letter) and also from what Mr. Newill has stated in his letter of 13th November 1857† and in para. 10 of his present communication that Captain Priestley's estimate of 1,100 square miles per annum per "Party" (4,400 square miles per annum "for 4 Parties") contains a proviso which seems to intimate that the Superintendent of Survey is not to be responsible for the measurement or plotting of the small fields which may be comprised by his 1 acre (in irrigated land) or 2 acre (in unirrigated land) "survey blocks."

† *In Cons. 17th November 1857, submitted to Government with Board's Proceedings 17th November 1857.*

20. The Board have explained in the Proceedings marginally noted above, that this was not at all their intention when in their Proceedings of 27th February 1854‡ they proposed these blocks. They consider it indispensable that in every matter connected with the survey, the Superintendent should be the responsible person, and though Curnums may be taught to measure, their work should be under his control. It is a great object also that all the fields of each village should be surveyed simultaneously. If the Curnums, work is to *follow* the professional survey, some error is almost sure to arise, and there will be confusion in the numbering of the fields. The Board would suggest at all events that when the Surveyor measures his block, he fills up the outline figure of it which is now required in the field book, with the shapes and positions of its component small fields, and their numbers. The figure in the margin represents the space occupied by a field of two acres,§ and of subdivisions of $\frac{1}{8}$ acre were filled up by the *eye* of a practical Surveyor, their *content* might be taken from the paper with almost sufficient accuracy; and then a subsequent measurement by the Curnum would be feasible, and might not require on the part of the Superintendent more than an occasional field tested here and there. It may also be observed that the fields will not run so small in the Northern Districts to which the survey will at once proceed. The Board therefore are not disposed to reject Mr. Newill's estimate.

‡ *No. IX. Revenue Selections, para. 25.*

§ *A square of 6324 inch to a side, represents on paper one acre. Scale 16 inches to a mile.*



21. It is hoped that the Government will approve of the *full* establishment being estimated for at once, leaving it to the presiding officers to enlarge their present establishments as opportunity may offer, till they attain their full strength. The Board would also recommend, in accordance with the wishes expressed by Mr. Newill in paras. 11 and 14 of his letter, that the Director of Settlement, and Superintendent of Survey should each have authority to disburse to persons not fully qualified, but still usefully employed, a portion only of the full allowance, increasing it as the party becomes qualified. This has been found to work very well in the experience of the last few years, and is a saving to Government. The Board will also recommend, in consequence of the present duty being on so large a scale, and the Estimates only tentative at best, that the presiding officers have authority to apportion the salaries so as not to exceed the total amount sanctioned for each "Party"; reference having been first made to the Board of Revenue or the Local Government.

(A true Extract.)

(Signed) J. D. SIM, *Acting Secretary.*

No. 41. Read the following Extract from the Proceedings of the Board of Revenue; dated 24th December 1857, No. 4701.

Read letter from Director of Revenue Settlement, forwarding estimate for a demarcation Establishment, with his opinion thereon dated 22d December 1857.*

* *In Cons. 24th December 1857.*

(Here enter No. 97.)

The above letter is a reply made to the call of Government, for a separate demarcation Establishment, in their Extract Minutes Consultation of 11th December 1857, para. 11, No. 1288, Revenue Department.

2. The Board concur with Mr. Newill that it is not necessary to frame an Establishment on the scale proposed by Government, which as the Board have pointed out† was the one arranged for the lower Provinces of Bengal, and not for the N. W‡. At the same time the demarcation process is easier in the unirrigated and open country and the large fields of the Deccan§ than it will be in the Carnatic. The Board consider it sufficient to ask sanction for the establishment proposed by Mr. Newill||. Each party will cost 9,960 Rupees yearly, and 4 such parties¶ will be required eventually. The Board have already** met Mr. Newill's wish†† that his last assessment estimate including the extra supervisors, should stand as it is, but they misapprehended the exact numerical strength of his extra hands, the detail of which is now explained‡‡.

† *Board's Proceedigs 18th December 1857, No. 4573, para. 14.*
‡ *Para. 5 Mr. Newill's letter.*
§ *Paras. 3 and 4 Mr. Newill's letter.*
|| *Para. 7.*
¶ *Para. 8.*
** *Board's Pro. 18th Dec. 1857, para. 11.*
†† *Para. 8.*
‡‡ *Para. 2.*

3. In accordance with the directions of Government the Board called on Mr. Newill to submit an estimate for finding the stations of the Grand Trigonometrical Survey, but they concur with him that for the reasons stated in paras. 9 and 10 that no such estimate is required.

4. The remarks made by Mr. Newill in para. 11 have already been made by the Board in their Proceedings of 18th December 1857, para. 14.

(A true Extract.)

(Signed) J. D. SIM, *Acting Secretary.*

No. 42. ORDER THEREON, No. 96; dated 25th January 1858.

1. With the above Extracts from their Proceedings, the Board of Revenue submit for the consideration of Government two letters from the Director of Revenue Settlement, forwarding revised Estimates of Establishment for the Survey and Assessment Departments, and a Supplemental Estimate for a demarcation Establishment, which last was called for by Government in Extract Minutes Consultation of 11th December 1857, No. 1288, Revenue Department. The Board recommend the Estimates in their present form for adoption with very slight modification, observing at the same time that, for works on so large a scale, and of so novel a character in this Presidency, as those now about to be undertaken, considerable latitude must be allowed to the presiding officers for reapportioning the salaries in such manner as experience may show to be desirable, provided that the total amount sanctioned be not exceeded, and that the consent of the Board of Revenue, or of the local Government, to such proposed changes be first obtained.

2. Before proceeding to the consideration of these detailed Estimates, reference may be briefly made to the sketch Estimate of the expense likely to be involved in this undertaking, which was submitted to the Government of India and to the Honorable Court in Extract Minutes Consultation of 14th August 1855, No. 951, R. D.

3. It was therein calculated that, supposing the survey operations to be carried out by four parties, each of the strength of that at present employed under Captain Priestley, the whole area of 60,000 square miles, which it is considered will include all the land requiring to be subjected to that operation, might be surveyed in 22 years, at an expense of Rs. 38,40,000, or about Rs. 64 per square mile.

4. The expense of the Settlement operations for this extent of land was calculated at Rs. 10 per 100 acres, which approximation was obtained from the Report of the expense actually incurred on this account in the North West Provinces, and it was thus estimated that the settlement of the above named area of 60,000 square miles, or 38 million of acres, might be effected at a cost of Rupees 38,00,000, and thus the total of survey and assessment united was taken at Rupees 76,40,000.

Rupees 7 per 100 acres on the total area of the territory.

5. The Honorable Court, in their letter to this Government of 17th December 1856, admitted that this cost, large though it be, was "not incommensurate with the advantages sought to be obtained by it," and sanctioned the requisite expenditure, under which sanction the posts of Director of Revenue Settlement and of Superintendent of Survey have been already filled up, and it remains to furnish these officers with the means for carrying out the intentions of Government.

6. The plan submitted by Mr. Newill, in communication with Captain Priestley, and approved by the Board of Revenue, contemplates the completion of the entire operation within a period of about 14 years, instead of 22 as allowed for it by this Government, and with a more extended agency than they proposed, but without any increase of cost.

7. Time is an element of such importance in calculating the results of an operation such as that now in process of arrangement, that the value of the saving of one third of the whole period originally allotted for its completion, can scarcely be too highly estimated, and after careful scrutiny of the details of Mr, Newill's plan, the Government are prepared to admit that the results contemplated by it are attainable.

8. It is proposed that Captain Priestley, the Superintendent of Revenue Survey, shall organize four distinct parties of the strength detailed in the estimate, and as rapidly as the necessary class of agency can be procured, that each of these shall be under a Deputy Superintendent, and have allotted to it a separate geographical division of the operations, that each shall be preceded in its field of labour by a distinct demarcation establishment, and followed by the Settlement Department, and that the results of the survey as they are obtained shall be multiplied and recorded by a Lithographic press to be worked under the direction of Captain Priestley.

9. The annual expense of the whole survey Department is estimated at Rupees 2,41,920 exclusive of Stationery, Instruments and Camp-equipage, and Captain Priestley calculates their annual work at the rate of 60 acres a day for each Aumeen for 260 working days in the year, with the proviso that the sanctioned minimum size of Survey field (being 2 acres for dry, and 1 for wet land) shall be maintained.

10. This gives a total of 4,400 square miles annually for the whole 4 parties, including about 11 per cent. of waste land, at a cost of Rupees 55 per square mile, and the whole extent of 60,000 square miles will thus be surveyed in 14 years, within the estimated expenditure of Rupees 38,40,000. So long as only 2 parties may have been organised, the cost will be Rupees 60 per square mile, and when 3 shall be at work, it will be reduced to Rupees 56¼ per square mile, so that at the highest rate, it will be less than the original Government estimate of Rupees 64 per square mile.

11. In judging of Captain Priestley's estimate of work to be performed by the results hitherto obtained by him, it is to be borne in mind that, in South Arcot and Trichinopoly, the minimum size of a Survey field, now proposed for his future operations was not maintained, and that the labour is said to have been increased in the ratio of 3 to 5, by surveying and plotting each field, even down to ·005 of an acre, while much loss of time resulted from the want of previous demarcation of the fields, and from the lapsed jaghires, and other localities selected for survey, being often in detached portions, instead of presenting a compact field for operations. Moreover, difficulty was also experienced in retaining servants permanently on what was considered only a temporary establishment, yet, notwithstanding these serious hinderances, Mr. Newill observes* that the results obtained last season by Captain Priestley, with establishments on a lower scale than those employed in the North of India, are considerably in excess of the *maximum* attained during the first 9 years in Bengal and the N. W. Provinces, and the Government share his opinion of the promise they give of at least equal success and expedition in the more extended operations now to be undertaken.

Vide para. 10, *Mr. Newill's letter of 7th December* 1857.

* *Para.* 12, *letter of 22nd December* 1857.

Again, in comparing Captain Priestley's estimate of the cost of each of his Deputies, establishments with those sanctioned in the North West Provinces and in Bengal, it is pointed out that the item of "Khusreh," or field measurement, is included in the former, and omitted in the latter, and that the proportion of its cost, to that of the Professional Survey appears, from Captain Thuillier's Manual, to have been as Rupees 28½ to Rupees 20¼ per square mile, so that the charge for the double operation must have been more than twice as much as that of the Survey (professional) alone.

Para. 11 *of same letter.*
For the Professional Survey only.
Bengal, 37,524 *Rs. per Party.*
N. W. Prov. 31,287 „ „

For the Professional Survey and "Khusreh."
Proposed for Madras, 54,840, *Rs. per party.*

12. The intention of connecting the proposed Revenue Survey with the former Trigonometrical operations, renders necessary the employment of additional labour and superior skill, and the organization of the Public Works Department, when the salaries of its officers and their subordinates were made more adequate to the duties they had to perform, renders it imperatively necessary to fix those of the higher class of subordinates in the Survey Department at a suitable rate.

13. The Government resolve to recommend to the Supreme Government for sanction the estimate for the Survey Department as noted in the margin; but they approve of the Board's suggestion that the allowance for the Contingent Expenses of each Party shall be entered as a distinct item, and not as a personal allowance to the Deputy Superintendent at its head.

Abstract Survey Dept.	*Rs.*
Supt. of Rev. Survey per annum, ...	12,000
His Office	10,560
4 Survey "Parties" each under a Dpy. Supt. at 54,840	2,19,360
	2,41,920 *per annum.*

N. B.—This amount is exclusive of any Travelling allowances for the Superintendent and his office, and of saderwarad for his own and the Deputies' Establishments, and also of the cost of Instruments and Camp Equipage.

14. Considerations of the primary importance of obviating all risk of delay or hinderance to the Survey Parties, induced the Government in their order, dated 11th December 1857, to insist upon distinct and sufficient provision being made for the demarcation of boundaries, and Mr. Newill's plan includes a small Demarcation Establishment, at an estimated yearly cost of Rupees 9,960 for each of the 4 Parties required. He contemplates obtaining very considerable assistance in this work from the Revenue Subordinates in the several Talooks and Villages, but considers that his present estimate, though it may hereafter require modification in some of its details, and is on a much smaller scale than that employed in the North West Provinces, (referred to by Government in their order above quoted), whose duties were of a more important character than will arise under a Ryotwari or Khetwari settlement, will be sufficient for the purpose.

Demarcation Establishment.
4 Parties at Rs. 9,960, *per annum for each Party.* } *Rs.*39,840, *per annum.*

15. The Government will recommend this estimate for adoption, as also that for the Lithographic Press Establishment, amounting to Rupees 9,012 per annum, and which last it is calculated will be required for about 15 years, involving an estimated total expenditure on this account of Rs. 1,35,180.

Lithographic Press Establishment.
Rs. 9,012 *per annum for* 15 *years.*

16. Captain Priestley expects to be able to make considerable reductions in his Establishment of Draughtsmen when this Press is in full operation, and allowing for this saving of expense, it is calculated that the results of the Survey may be thus perpetuated in the convenient form of village, talook, and District maps, at a cost of less than Rs. 2 per square mile, while the maps will afford very valuable aid to the Assessing Department.

Abstract.

Settlement Establishment.

	Rupees.	
Director's salary, Tentage and Establishment...	57,280	*per annum.*
4 Deputies salaries tentage and Establishments..	1,89,564	"
Batta Saderwared and other contingent charges.	10,000	"
Rupees...	2,56,844	

17. For carrying on the work of Settlement "*pari-passu*" with the progress of the Survey, Mr. Newill submits estimates for his own establishment and for those of his 4 Deputies, involving an estimated total annual charge, on every account, of Rs. 2,56,844.

18. To enable him to select and retain efficient Deputies out of the Covenanted service, he has fixed on Rupees 1,200 per mensem for their pay, which is slightly higher than that of a Sub-Collector, and with a similar object in view, has proposed a rate of pay for his Head Native Subordinate (whom the Board propose to designate Uncovenanted Assistant), equal to that received by the Head Sheristadar in a Collector's office, and in these recommendations the Board concur.

Sub-Collector, Rupees.....1,166.

19. In estimating the amount and value of the work that may reasonably be expected from each assessment "party," Mr. Newill has calculated that the work of classifying will progress at least equally rapidly with that of surveying, and that, allowing 275 working days in the year, and after deducting 10 men for demarcation duty out of every Superintendent's party of 60 classifiers, the work may yet be expected to advance at the rate of 8,25,000 acres, or 1,290 square miles annually for each "party," giving an annual total of 5,160 square miles for the whole establishment of 4 parties, and he shows that, supposing only 5,000 square miles are attained, the cost of assessing and for demarcation of boundaries, will be about 51 Rupees per square mile, while the original estimate of Government at Rupees 10 per 100 acres would give Rupees 64 per square mile.

Ac. Classes. Working days.
60 × 50 × 275
= 8,25,000 *acres.*
= 1,290 *square miles per annum for 1 assessing "party."*

Annual cost of establishment. Annual work performed.
Rs. 2,56,844 ÷ 5,000 *square miles.*
= 51·37 *cost per square mile.*

20. The Board of Revenue remark upon this, that Mr. Newill's estimate of the number of working days in the year is probably too high, but that it is not so sanguine as to lead them to regret it. The Government however observe that, as a separate demarcation Establishment is now proposed to be entertained, the full number of classifiers will be available for their own proper duty.

Acs. C. Working days in the year.
55 × 60 × 260
= 8,58,000 *acres.*
= 1,340 *square miles for each party.*
or = 5,360 *square miles for the whole assessment establishment.*

21. Allowing then only 55 acres a day for each man, and only 260 working days in the year, the whole Assessment Department might be expected to get through 5,360 square miles at a cost (including the charge for the demarcation Establishment), of less than Rupees 56 per square mile. At this rate of progress the assessing department would in 14 years go over 75,000 square miles of country, being one-fourth more than the whole estimated area as beforementioned, but

Annual cost of Assessment establishment. Demarcation establishment.
Rs. 2,56,844 + *Rs.* 39,840.
= *Rs.* 2,96,684.

S. M. Rs.
5,360) 2,96,684.
Rs. 55-5 *As.*

as they will be quite new to their work, as more than a year's work is already prepared for them in South Arcot, and as Captain Priestley expects to increase his annual amount of work to possibly 5,600 square miles per annum, if found on experience to be expedient, there seems no reason to fear that the assessing department will over-run the surveying department, though their annual estimated work is in these papers calculated at 1,100 and 1,290 square miles respectively for a party. Admitting the sufficiency of Mr. Newill's reasons for the rates of pay proposed by him, and not considering the strength of his Establishments too great, the Government resolve to submit his estimates to the Supreme Government for sanction.

22. The total annual expenditure contemplated in these Estimates, amounts to Rupees 5,47,616, as noted in the margin, and as it may be expected to be continued during a period of about 14 years, the entire cost of the Survey and Assessment of the Madras Presidency is thus estimated to amount to Rs. 76,66,624, the original sketch estimate submitted by Government to the Honorable Court having been Rupees 76,40,000. Neither of these calculations included the cost of the requisite instruments for the survey department, nor is Captain Priestley able to furnish an estimate. His list of requirements will be forwarded to the Supreme Government with these estimates, with a request that as many of the instruments as can be supplied, may be sent down from Calcutta as soon as sanction is given to the establishments, so that no delay may occur in the parties commencing their work.

	Annual. *Rs.*	
Survey,	2,41,920	
Assessment,	2,56,844	*including Director's salary.*
Demarcation,	39,840	
Lithographic Press,	9,012	
Total...	5,47,616	
	14 *years.*	
	76,66,624	

23. The Government approve the Board's recommendation in their Proceedings of 19th November 1857, that Captain Priestley shall be permitted to purchase the instruments that may be hereafter wanted, charging their cost in a contingent bill, and obtaining special sanction where the price of any one instrument may exceed Rupees 300, and have ordered the adoption of the plan. The requisite camp equipage and furniture can be procured on indent through the Military Department, and an estimate should be submitted through the Board of Revenue for the necessary Lithographic Presses.

24. Sometime must elapse before the establishments proposed to be eventually employed can be organized. Properly qualified persons will not easily be found, and, in many instances, must be taught their duty by the Superintendent, and thus the whole annual expenditure contemplated in these estimates will not at once be incurred. But it is on every account most desirable that the work, from which such important results may be expected, should be pressed forward as rapidly as possible, and the Director of Assessment and Superintendent of Survey furnished with Establishments, without which, their salaries already sanctioned are little better than a waste of money.

25. It will be requested of the Government of India that authority may be given to the officer presiding over each of the Departments of Assessment and Survey, to disburse portions of the sanctioned pay to such persons as, though not perfectly qualified for their work, are yet the best that can be obtained, and generally to make such modifications in the pay of their establishments as on experience may be found desirable, with the understanding that, in no case, shall the amount allowed for an entire "Party" be exceeded, and that such changes shall be submitted for confirmation to the local Government. With so large and (in this Presidency) novel an undertaking as that under consideration, some discretionary power of this kind must be granted in the first instance to obviate the delay and inconvenience resulting from perpetual references, and early sanction for the work as estimated will be urgently pressed for, that the present season may not be lost.

26. One or two questions raised by the Board remain to be noticed, and first that regarding the measurement of the small fields included in the established standard "Survey Field." The Government entirely agree with the Board that this portion of the work must be controlled by the Superintendent of Survey, equally with the Professional Survey of the standard "Fields," and that the one should not be allowed to fall much behind the other, but at the same time, they do not see that this requirement need invalidate Captain Priestley's estimate of the rate at which the work of the survey will progress.

No IX. Government Selections "Revenue Survey" para. 25.

27. The original proposal approved by the Board was that, while the Aumeens' measurements should be limited to the "Survey Fields," and that these should be plotted in the usual manner, the component fields within them should be distinguished by dotted lines according to the measurement shown in the village accounts, and that the particulars of each small included field "as per old village account" should be entered in the "Register." This plan appears to have been suggested by Captain Priestley himself, and to have met with the Board's approval, and coincides in great measure with that now proposed in para. 20 Board Proceedings of 18th December 1857, and they observe that the sub-divisions of the fields will not run so small in the Northern Districts as they do in that part of the country to which Captain Priestley's operations have hitherto been confined. Mr. Newill states that he will be prepared, after conference with Captain Priestley, to propose a distinct arrangement for this purpose, and the Government will await the Board's further report on the subject.

28. Next, as to the erection and preservation of boundary marks, it is proposed that the cost shall, in the first instance, be advanced by Government, and recovered by postponing the reduction of the assessment, and it is hoped that the small field marks may be made by the Ryots themselves without becoming an item of cost. The same plan has been advocated by the Board in their Proceedings of the 18th Ultimo, and directed to be carried out in Ex. Mins. Cons. dated 19th Instant, No. 70.

(Signed) H. FORBES,
Acting Secretary to Government.

Ordered in consequence that the following letter be despatched.

No. 43. From H. FORBES, Esq., Acting Secretary to the Government of Fort Saint George; to the Secretary to the Government of India, dated 25th January 1858, No. 97.

SIR,

I am directed by the Right Honorable the Governor in Council to forward, for submission to the Right Honorable Governor General in Council, the accompanying detailed Estimates in the prescribed form for the Establishments required to carry out the General Revenue Survey of this Presidency as authorised by the Honorable Court.

2. It will be in the recollection of the Supreme Government that the proceedings of this Government, dated 14th August 1855, to which they beg reference may be made, contained a rough calculation of the expense likely to be involved in the measure, which they estimated at a sum of about Rupees 76,40,000, under the supposition that about 22 years would be occupied in the work.

3. The Honorable Court, in their Despatch to this Government of 17th December 1856, sanctioned the expenditure necessary for carrying out this much needed operation, and the appointments of Director of Revenue Settlement and Superintendent of Revenue Survey having been filled up, the Establishments now asked for, are required to give the Government the benefit of the expenditure now being incurred on their account, and to prevent, as much as possible, any further delay in the commencement of the work, which the Honorable Court concurred with this Government in deprecating.

4. The plan of operations which it is proposed to carry out by means of the Establishments for which sanction is now sought, contemplates the completion of the whole work within a period of 14 years instead of 22, as originally estimated by this Government, and without any material increase of expense. The area to which it is believed that the Survey operations will have to be extended includes an extent of about 60,000 square miles; and experience enables Captain Priestley, the Superintendent of Revenue Survey, to anticipate with confidence that the Establishments he proposes to organize will be able to perform their work at the rate of 4,400 square miles per annum, with a possibility of a considerable increase, while Mr. Newill, the Director of Revenue Settlement, contemplates the attainment of at least equal speed in his Department.

5. The value of the saving of time by the present plan, being just one-third of the period originally allowed for the completion of the operation by Government, can scarcely be over-estimated, whether in regard to the importance of the proposed measure to the Ryots, as tending to secure their tenure of their holdings, or to its effect in aiding the development of the resources of the country, increasing the Revenues, and lightening the individual incidence of the Land tax, by spreading it over a wider area, and this Government, after careful scrutiny of the details of the plan, see no reason to doubt that these objects will be attained as proposed.

6. The total annual expenditure that will be required, when the proposed Establishments have been raised to their full strength, (which however will not be feasible for some time to come), is Rupees 5,47,616, as noted in the margin, to be continued for a period of about 14 years, and thus aggregating a total expenditure of Rs. 76,66,624 for the whole work of the Survey and Settlement of this Presidency, for which, in the original sketch estimate, a sum of Rupees 76,40,000 was allowed.

Abstract.

	Annually. Rs.
Survey Department.....	2,41,920
Assessment Department.....	2,56,844
Demarcation Establishment.....	39,840
Lithographic Press.....	9,012
Total...	5,47,616 *per annum.*

7. The estimates provide for 4 distinct parties in the several departments of Demarcation, Survey, and Assessment, to be employed in distinct Geographical divisions of the country, their operations to be directed by the Director of Revenue Settlement, and Superintendent of Revenue Survey; each of the 4 Parties of the Assessing and Surveying departments being immediately superintended by an European Deputy Superintendent, who, in the former case, will be a Covenanted officer, and will also have under his orders a party of the Demarcation Establishment, while the work of the Lithographic Press will be carried on under the direction of the Superintendent of Revenue Survey.

8. The rates of pay have been fixed not higher than is believed to be necessary to enable the heads of the Departments to secure and retain the best available agency in their respective branches of the work. Mr. Newill's Deputies may thus be selected from officers of the rank of Sub-Collector, and his head Native Subordinate will not be liable to be tempted away by the offer of the post of Head Sheristadar. It is very essential to progress and uniformity in this important work that frequent changes in the staff should be prevented as much as possible, and with this end in view, his Lordship in Council is of opinion that the proposed rates of pay are not higher than necessary.

9. In the Survey Department again, it has been necessary to fix the rates of pay with reference to those given in the Public Works Department, which were not considered more than an adequate remuneration for the services rendered when the Department was recently re-organized, and it is essential to success in the work now in contemplation, that Captain Priestley should not be exposed to the risk of losing his trained Agents when they are becoming useful, through the temptation of higher pay in another Department.

10. The primary importance of obviating all risk of delay to the survey parties induced this Government to insist upon the provision of a distinct demarcation establishment, the importance of whose labours is frequently insisted upon in Captain Thuillier's "Manual," which has

been confidently referred to as a guide; and by the Lithographic Press, the results of the survey will be rapidly recorded, easily copied, and preserved in the convenient form of village, talook, and District Maps, which will afford material assistance to the Settlement Department, while Captain Priestley expects that its aid will eventually enable him to dispense with several Draughtsmen. To ensure greater accuracy in the survey, it is intended to connect it with the Great Trigonometrical Survey, and it is believed that but little increased expense will be caused by this measure.

11. The total sum proposed to be expended is, as stated above, Rupees 76,66,624 to be distributed over fourteen years, by an annual expenditure of Rupees 5,47,616, the original sketch estimate, which provided neither for a separate Demarcation Establishment, nor for the Lithographic Press, and which met with the sanction of the Honorable Court, having been Rupees 76,40,000.

12. The cost per square mile will be as follows according to a moderately estimated rate of progress,

——for the survey, including both the "Khusrah" and professional survey, about Rupees 55 per square mile, the original sketch estimate having allowed Rupees 64.

——for the assessment, and settlement of the surveyed area about Rupees 51, for which Rupees 64 were originally allowed.

——for the work of the demarcation establishment, including the settlement of disputed boundary questions, about Rupees 10, and for mapping the whole by means of Lithography in maps of different scales, according as they are village, talook, or District maps, about Rupees 2 per square mile; for these two last items no allowance was made in the original sketch.

13. These items would in the aggregate give an uniform rate of about Rupees 118 per square mile, while the total of the estimates now submitted will allow of an expenditure of about Rupees 128, which was the original estimate, so that an ample margin appears to be left to provide for the increased cost, which will be consequent on the necessarily slower rate of progress in the earlier stages of operations.

14. The Right Honorable the Governor in Council begs to recommend these Estimates to the Government of India for adoption, and to press for early sanction, that the present season may not be lost, and that a return may be obtained for the expense now being incurred for the Director of Settlement and Superintendent of Survey, whose salaries, so long as they remain unprovided with establishments, are little better than waste of money.

15. The whole annual expenditure for which they provide will not be at once incurred, as considerable difficulty will be found in obtaining the necessary class of skilled agents, who must in many instances no doubt be educated for their work by the Superintendent; and it is probable that operations must be at first commenced with not more than 2 parties, instead of with 4 parties, as is eventually contemplated, and were it not that his Lordship in Council is deeply impressed with the exceeding importance of the proposed work, both as a means of removing existing grounds of discontent among the Ryots of this Presidency, and also of largely increasing the revenues of the State without augmenting individual burdens, he would have hesitated to press the measure on the notice of the Supreme Government at this particular juncture.

16. In conclusion, I am directed to request that as a matter of expediency, in consideration of the novelty of the work in this Presidency, and the anticipated difficulty in obtaining the requisite agency, discretionary authority may be given to the presiding officers in either department, to disburse portions only of the fixed rates of pay to such persons as, though not perfectly qualified for the work, may still be the best that can be obtained, and generally to make such rearrangements of their staff as experience may dictate, provided that in no case shall the sum allotted for a party be exceeded, and that the consent of this Government shall be obtained to all such proposed changes, and I am lastly to request that immediately on sanction to the proposed Establishments being granted the Government of India will be pleased to order the despatch to this Presidency of as many of the instruments entered in the subjoined list as may be readily procurable in Calcutta, so that the Survey parties may be enabled at once to commence their work.

Estimated scale of Instruments for one "Party."

Names of Instruments.	No. of each.
Planimeter,	3
100 Feet chains iron with arrows,	15
Chains gunters do.,	100
Compasses beem wooden,	2
Do. large with pen and pencil legs brass pairs,	6
Do. small brass pairs,	60
Do. improved Prismatic with trepod stands,	9
Circumferentors with tripod stands,	9
Cross stanes,	15
Optical squares,	6
Color boxes,	2
Color branches of sizes,	24
Water branches,	2
Artificial horizon,	1
Barometer mountain,	1
Bars steel graduated 11 feet engraved and divided into feet, inches and tenths, for comparing Gunter's chains,	4
Drawing pens,	20
Road and dotting pens each, 2	4
Drawing pins for fastening maps to boards,	100
Flag staves,	50
Gunter's scales 2 feet brass,	2
Plotting and offset scales 16 inch to 1 mile Wooden,	12
Mathematical Instruments including proportional compasses in cases,	6
Opisometers,	6
Magnet bars in box,	1
Protractors brass rectangular,	10
do. Ivory do.,	12
Perambulators, Everest or Waugh's pattern,	1
Referring lamps with sight vane and plummet,	1
Rings spare for chains,	200
Rules brass flat 3½ feet heavy,	1
Do. do. 2½ feet,	1
Do. Ebony flat 3 feet or 4 feet,	1
Do. Parallel 18 inches brass on rollers,	1
Do. do. 12 inches brass on rollers,	1
Do. do. 3 feet ebony with bars,	1
Do. do. 1 foot do.,	6
Do. do. 6 inches do.,	2
Tapes measuring,	1
Telescopes reconnoitering,	1
Theodolites 7 inches transit,	1
Do. 5 do. do.,	3
Do. 6 do. Everest's pattern,	5
Do. 5 do. do.,	1
Tracing glass,	1
Thermometers,	1
Sextant in box,	4
Heliotropes for hilly country and minor triangulation,	6
Plane tables for hilly country and minor triangulation,	
Colors extra size.	
	18
Prussian blue lake, gamboge, each 6,	2
Light red burnt umber, each 1,	12
Burnt sienna,	

(Signed) H. FORBES,
Acting Secretary to Government.

REVENUE DEPARTMENT.—Statement of Temporary Establishment

Year.	Charges. Ordinary.	Extraordinary.
.....	.....	.....

Extract from Home Department of Government of India. No.	Date.	Office to which the proposition refers.	Nature of charge. Present scale.	Monthly. Rs.	A	P	Proposed scale.	Monthly. Rs.	A	P
		General Revenue Survey and Settlement of the Madras Presidency.					*Survey Department.*			
			1 Director of Revenue Settlement..... } 1 Superintendent of Revenue Survey..... }	3,016	10	8	1 Supt. of Rev. Survey, salary, &c.	1,000	...	...
				1,000	...	...	1 Office Assistant (as draftsman,)	200	...	...
							1 Do. do. (as computer,) ...	150	...	...
							3 Draftsmen at 40 Rupees each,	120	...	...
							1 Manager, ...	100	...	...
							5 Examiners and Writers, ...	120	...	...
							1 Copying Clerk, ...	20	...	...
							1 Record-keeper, ...	38	8	...
							2 Asst. do. at 12½ Rupees each, ...	25	...	...
							1 Head Moochee, ...	17	8	...
							6 Assistant do....	35	...	...
							1 Duffadar, ...	12	...	...
							6 Peons at 7 Rupees each, ...	42	...	...
								880	...	...
							For one survey party.			
							1 Deputy Superintendent, ...500	675	...	...
							Travelling allowance, ...100			
							Contingent expenses, 325	400	...	...
							1 European Assistant, ... 75			
							Travelling allowance, 225	300	...	...
							1 European Assistant, ... 75			
							Travelling allowance, ... 100			
							1 Head Surveyor, ... 90			
							1 Do. do. 80			
							1 Do. do.... 70			
							1 Do. do. 50	340	...	...
							1 Deputy Surveyor, ...120			
							3 Do. do. at 40, ... 120			
							4 Do. do. at 30, ... 25			
							1 Detail Surveyor, ... 60			
							3 Do. do. at 20, ...	375	...	...
							10 Survr. Ameens at 14 Rs. each, 140			
							30 Do. do. at 10, ... 300			
							10 Goomastahs at 9, ... 90			
							10 Do. at 8, ...80			
							20 Do. at 7, ...140	750	...	...
							N. B.—Head Surveyors to enter at 50 to receive 60 the second year.			

in this Department recommended for the sanction of the Government of India.

Total. Annually. Rs.	A	P	Proposition. Permanent. Increase per annum. Rs.	A	P	Permanent. Decrease per annum. Rs.	A	P	Temporary. Increase per annum. Rs.	A	P	Period.	Temporary. Decrease per annum. Rs.	A	P	Period.	Casual or Extraordinary.	Grounds of proposition.	Local Government's Recommendation.	Orders of the Govt. of India. Home Dept. Remarks.	Financial Dept. Remarks.	Financial Dept. Orders.
12,000	...	...							12,000	...	...											
10,560	...	...							10,560	...	...	Fourteen years.						Vide letter to the Secretary to the Govt. of India, dated 25th Jany. 1858, No. 97.	Favorable.			

REVENUE DEPARTMENT.—Statement of Temporary Establishment in this Department recommended for the sanction of the Government of India.

Year.	Charges. Ordinary.	Charges. Extraordinary.	Total.
.....	.....	.....	.....

Extract from Home Department of Government of India. No.	Date.	Office to which the proposition refers.	Nature of charge.	Present scale.	Monthly. Rs.	A	P	Proposed scale.	Monthly. Rs.	A	P	Proposition. Permanent. Increase per annum. Rs.	A	P	Permanent. Decrease per annum. Rs.	A	P	Temporary. Increase per annum. Period. Rs.	A	P	Temporary. Decrease per annum. Period. Rs.	A	P	Annually. Rs.	A	P	Casual or Extraordinary.	Grounds of proposition.	Local Government's Recommendation.	Orders of the Govt. of India. Home Dept. Remarks.	Financial Dept. Remarks.	Financial Dept. Orders.
		General Revenue Survey and Settlement of the Madras Presidency.		1 Office Manager, ... 75 1 Head Writer and computer, 35 4 Do. at 25, ...100 3 Do. at 20, ... 60 2 Do. at 15, ... 30					300	...	...																					
				1 Head draughtsman, ... 50 1 Do. ... ... 35 2 Do. at 30, ... 60 3 Do. at 25, ... 75 4 Do. at 20, ... 80 5 Do. at 15, ... 75					375	...	...																					
				1 Duffadar, ... 8 2 Do. at 7½, ... 15 10 Peons at 6, ... 60 3 Do. at 5, ... 15 4 Do. at 4½, ... 18 8 Do. at 4, ... 32 15 Measuring Peons at 5, 75 24 Do. do. at 4½, ...108 16 Do. do. at 4, 64					395	...	...																					
				1 Head station marker, ... 7 12 Do. do. at 5, 60 12 Do. do. at 4½, ... 54					121	...	...																					
				1 Moochee, ... 5½ 3 Do. at 4½, ... 13½ 1 Blacksmith, ... 6 1 Chuckler, ... 5					29	...	...																					
				Measurement allowance, &c.,					630	...	...																					
				Deduct for recess of 2 months.					4,690	...	...																					
				Measurement allowances, ...					1,260	...	...																					
				4 Head Survrs. travelling allowances					80	...	...																					
				30 Peons, ...					100	...	...																					
				For one survey party...					.....	...	...																					
				For four survey parties...					.....	...	...																					
				Note.—Travelling allowances are included in the above rates of pay.																												
				Total Superintendent's establishment and 4 survey parties...					.....	...	...																					
																								.....	...	...						
																								56,280	...	...						
																								1,440	...	...						
																								54,840	...	...						
																								2,19,360	...	...						
																								2,19,360	...	...						
																								2,41,920	...	...						
																								.....	...	...						

Vide letter to the Secretary to the Govt. of India, dated 25th Jany. 1858, No. 97. Favorable.

REVENUE DEPARTMENT.—Statement of Temporary Establishmen

in this Department recommended for the sanction of the Government of India.

Year.	Charges. Ordinary.	Charges. Extraordinary.	Total.
.. ...	....	.....	.....

Extract from Home Department of Government of India. No.	Date.	Office to which the proposition refers.	Nature of charge.	Present scale. Monthly. Rs.	A	P	Proposed scale. Monthly. Rs.	A	P	Proposition. Permanent. Increase per annum. Rs.	A	P	Permanent. Decrease per annum. Rs.	A	P	Temporary. Increase per annum. Period.	Rs.	A	P	Temporary. Decrease per annum. Period.	Rs.	A	P	Casual or Extraordinary.	Grounds of proposition.	Local Government's Recommendation.	Orders of the Govt. of India. Home Dept. Remarks.	Financial Dept. Remarks.	Financial Dept. Orders.
		General Revenue Survey and Settlement of the Madras Presidency.																											
			Assessment Department.																										
			1 Director of Revenue Settlement,				3,016	10	8																				
			Tentage, ...				87	8	...																				
			Extra do. for 4 months, ...				157	8	...																				
							3,261	10	8																				
			Office Establishment.																										
			1 Manager, ...				250	...	...																				
			1 Assistant do. and Indexer, ...				120	...	...																				
			1 Examiner, ...				80	...	...																				
			1 Head Clerk, ...				70	...	...																				
			1 Do.				50	...	...																				
			1 Do.				40	...	...																				
			1 Computer, ...				35	...	...																				
			1 Writer, ...				30	...	...																				
			1 Do.				24	...	...																				
			1 Do.				17	.	...																				
			1 Do.				15	...	...																				
			1 Do.				12	...	...																				
			1 Record-keeper, ...				80	...	...																				
			1 Translator in 3 languages, ...				80	...	...																				
			1 Uncovenanted Assistant, ...				280	...	...																				
			1 Deputy Assistant, ...				75	...	...																				
			1 Assistant, ...				50	...	...																				
			1 Do.				35	...	...																				
			1 Do.				25	...	...																				
			1 Do.				20	...	...																				
			1 Do.				15	...	...																				
			1 Record-keeper, ...				45	...	...																				
			1 Moochee, ...				10	8	...																				
			1 Do.				8	...	...																				
			1 Dufterbund, ...				10	...	...																				
			1 Sweeper, ...				4	...	...																				
			1 Jamadar, ...				17	8	...																				
			12 Peons at 7, ...				84	...	...																				
							1,582	...	...																				
			Extra Establishment while on Circt																										
			1 Dresser or Apothecary, ...				30																						
			1 Duffadar, ...				12																						
			6 Peons, ...				42																						
							104	...	...																				
			For four months ...				....	...	...																				

REVENUE DEPARTMENT.—Statement of Temporary Establishment

Year.	Charges. Ordinary.	Extraordinary.
.....	.....	.....

Extract from Home Department of Government of India. No.	Date.	Office to which the proposition refers.	Nature of charge.	Present scale.	Monthly. Rs.	A.	P.	Proposed scale.	Monthly. Rs.	A.	P.
		General Revenue Survey and Settlement of the Madras Presidency.						For one party			
								1 Depy. or Supt. of Settlement, ...	1,200	...	...
								Tentage, ...	87	8	...
								Extra do. 6 months, ...	157	8	...
									1,445	...	...
								1 Native Assistant, ...	140	...	...
								1 Head Goomastah, ...	50	...	...
								1 Do.	35	...	...
								1 Do.	25	...	...
								2 Do. at 15, ...	30	...	...
								1 Head Writer, ...	35	...	...
								1 Do.	15	...	...
								1 Translator, ...	40	...	...
								1 Moochee, ...	9	...	...
								1 Duffadar, ...	15	...	...
								6 Peons at 7, ...	42	...	...
								6 Do. at 6, ...	36	...	...
								1 Dresser, ...	35	...	...
									507	...	...
								1 Supervisor, ... 135			
								1 Goomastah, ... 30			
								2 Do. at 15, ... 30			
								8 Classifiers at 24, ... 192			
								8 Do. at 20, ... 160			
								2 Head classifiers at 30, ... 60			
								2 Do. do. at 28, ... 56			
								8 Peons at 6, ... 48			
									711	...	...
								1 Supervisor, ... 120			
								3 Goomastahs as above, ... 60			
								20 Classifiers do. ... 468			
								8 Peons do.... ... 48			
									696	...	...
								1 Supervisor, ... 100			
								1 Goomastah, ... 25			
								2 Do. at 14, ... 28			
								20 Classifiers as above, ... 468			
								8 Peons do. ... 48			
									669	...	...
									2 076	...	...
								For one party...	.....	...	...
								For four parties...	.....	...	...
								Batta Saderwared and contingent charges...	.....	...	...
								Total Director's Establishment four parties and contingent charges...	.....	...	...

in this Department recommended for the sanction of the Government of India.

Total.
.....

Proposition. Permanent. Increase per annum.	Decrease per annum.	Temporary. Increase per annum. Period.	Decrease per annum. Period.	Casual or Extraordinary.	Grounds of proposition.	Local Government's Recommendation.	Orders of the Govt. of India. Home Dept. Remarks.	Financial Dept. Remarks.	Orders.

Annually. Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P
14,400	...	...												
1,050	...	...												
945	...	...												
16,395	...	...												
6,084	...	...												
24,912	...	...												
47,391	...	...												
1,89,564	...	...							1,89,564					
10,000	...	...							10,000					
.....	...	...							2,56,844					

Vide letter to the Secretary to the Govt. of India, dated 25th Jany. 1858, No 97.

Favorable.

REVENUE DEPARTMENT.—Statement of Temporary Establishment

Extract from Home Department of Government of India.		Office to which the proposition refers.	Nature of charge.	Year.	Charges.	
					Ordinary.	Extraordinary.
				.....	.....	.....

No.	Date.		Present scale.	Monthly. Rs.	A	P	Proposed scale.	Monthly. Rs.	A	P
		General Revenue Survey and Settlement of the Madras Presidency.					*Demarcation Establishment.*			
							1 Inspector,	150	...	...
							1 Deputy, ...	50	...	...
							2 Head Goomastahs at 30, ...	60	...	...
							2 Do. do. at 20, ...	40	...	...
							25 Goomastahs at 15, ...	375	...	..
							31 Peons at 5, ...	155	...	...
							For one party...	830	...	...
							For 4 parties...	.....	...	...
							Lithographic Establishment.			
							1 Head Lithographer and Draughtsman,	90	...	...
							1 Do. do.			
							1 Do. do.			
							1 Do. do. 60			
							1 Do. do. 55			
							do. 50			
							do. 45			
							For tracing work.			
							2 Draughtsmen at 35, ... 70	210	...	...
							3 Do. at 30, ... 60			
							3 Asst. draughtsmen at 25, ... 75			
							7 Do. at 20, ... 60			
							4 Do. at 15, ... 45			
							Do. at 10, ... 70			
							Do. at 5, ... 20			
							Printers.			
							1 Head Printer,	400	...	...
							1 Printer, ...			
							2 Pressmen at 6, ... 20			
							1 Pressman, ... 14			
							 12			
							 5			
			Total per mensem...	4,016	10	8		51	...	...
			Total per annum...	48,200	...	...	Grand total per annum...	751	...	...
							Grand total for fourteen years...	.....	...	...

FORT ST GEORGE,
25th January 1858.

n this Department recommended for the sanction of the Government of India.

Total.	Proposition.						Grounds of proposition.	Local Government's Recommendation.	Orders of the Govt. of India.		
	Permanent.		Temporary.						Home Dept.	Financial Dept.	
	Increase per annum.	Decrease per annum.	Increase per annum.		Decrease per annum.				Remarks.	Remarks.	Orders.
			Period.		Period.		Casual or Extraordinary.				
Annually. Rs. A P	Rs. A P	Rs. A P		Rs. A P		Rs. A P						
9,960											
39,840				39,840				Vide letter to the Secretary to the Govt. of India, dated 25th Jany. 1858, No. 97.	Favorable.		
9,012				9,012							
.....				*5,47,616							
.....				76,66,624							

* This amount Includes the present charge.

(Signed) H. FORBES,
Acting Secretary to Government.

Revenue 1858 Despatch
Cons: 26th January
No 96
Extract Mins: of Consultation
D/ 25th January 1858

From R. Nuwill Esqr Director
of Revenue Settlement
D/ 19th Feby 1857 No 309.
in Cons:

Reviewing the Proceedings
of the Board of Revenue, relative
to the Establishments required for
carrying on the Gnl Revenue Survey
and Assessment of this Presidency

No 40 to 43

To the Govt of India
D/ 25th Jany 1858
No 97

Revenue Department

No 23

Extracts from the Proceedings of the Board
of Revenue, dated 18th December 1857.

Read letter from Director
of Revenue Settlement forwarding revis-
ed Estimates of Establishment for the
Survey and Assessment, and explaining
the data on which they are framed -
dated 7th December 1857.

In Cons 18th Dec 1857

(Here enter No 81)

Read also Extract Minutes Con-
sultation 11th December 1857 R D

(Here enter No 1208)

The letter first noted above was
received, and Proceedings framed previ-
ous to the receipt of the Extract Mi-
nutes Consultation of 11th December. The
Board believe it will not be necessary
to delay sending up these Proceedings
to Government in consequence of the

views

views expressed by Government in the above Extract Minutes Consultation, and it will only be necessary to move by them as far as regards the question of demarcation Establishment.

2. In submitting these revised Estimates of Establishment, Mr Newill has at the Board's suggestion framed them on the requirements of the full and final Establishment, on the understanding that only such portion of it as is now available, be for the present employed; and the full strength brought up gradually as opportunity offers. The consequence is, that the annual amount is even greater than what was before submitted, but in order to bring the sum total to the 76,40,000 ₹.64,000 Rupees of the Government Estimate in Paras 37 to 43 of Extract Minutes Consultation 14th August 1855 Mr Newill anticipates that the extent named by Government (60,000 Square Miles) will be surveyed and assessed in little more

more than 13½ years instead of 22 years.

3. As regards the Survey the Estimate including 4 full "Parties" is 2,41,920 Rupees per annum, and it was Capt Priestley's opinion that they can survey 4,400 Square Miles in a year, so that the rate per Square Mile would be 2,41,920/4,400 or 55 Rupees instead of 64 the Government estimate; and the period of employ 60,000/4,400 or 13·6 years instead of 22. Mr Newill however observes that until the full Establishment is complete, the rate would be 60 and then 56½ Rupees per Square Mile; still this will admit of the whole extent of 60,000 Square Miles being surveyed within the estimated total of 38,40,000 Rupees. *

* Paras 6.

4. Then as regards the Assessment the full Establishment estimate including 4 "Parties" each headed by a Deputy on 200 Rupees a Month, is 2,56,644 per annum * and Mr Newill expects they can assess 5,000 Square Miles in a year, so that the rate per Square Mile would be 2,56,644/5,000 or 51⅓ R. instead of 64 the Government estimate; and the period

* Paras 15 & 16 this includes 10000 Rs per annum for office Establishment Calcutta, & contingencies.

* Paras 7.

period of employ $\frac{63000}{5300}$ or 12 years, instead of 20 or 22. Mr Newill however observes that until the full Establishment is complete, the rate would be about 63½ and 55½ per square Mile* still within the estimated limit. From which the Board presume that Mr Newills Estimate is made to assimilate to that named by Government in Para 42 Extract Minutes Consultation 4th August 1855 namely 3800000 Rupees. — Para 18.

5. In addition to this Mr Newill submits an Estimate for a Lithographic Press Establishment (not including the value of the Press)* at 9912 Rs per annum or a period of employ of 15 years, making a Total of 135580. So that the whole Estimate of Survey, Apfesment*, and Lithography is 7775180 Rs. — * Para 3.

6. Mr Newill explains° that though the Survey is expected to progress at the rate of 4400 Square Miles in the same time that the Apfesment progresses 5000, yet that the latter will not overtake the former inasmuch as the former has already a considerable start, and also because the latter Department will also at first be entirely new to their work. — * The Apfesment Estimate includes 9 few extra hands for Demarcation a proposal for a separate Establishment will be referred to further on. ° Para 20.

7. The cost of the Lithographic Press and the Instruments required for the Survey Office furniture and tents, and stationery has not been included. Captain Priestley in his

Comelius (16) 27

his letter to Mr Newill and forming an Enclosure to it states his inability to furnish an Estimate. Captain Priestley being now absent on leave, the Board presume the Government would not desire the submission of these Proceedings to be delayed till a further reference is made to him. A List however of the requisite instruments and Office Furniture, Camp equipage and books accompanies Mr Newills letter.

8. The full Survey Establishment is framed from that proposed by Captain Priestley in his Report on the operations of 1855/56 (marked D) It is not quite so expensive as the one last submitted to Government. The only alteration that the Board would suggest, is that the 100 Rupees proposed to be allowed to each Deputy in Captain Priestleys Estimate above referred to, for contingent charges had better be kept as a separate item, under the head of "Contingent charges" and it would possibly cover the expenses of removing Office tents, constructing signals &c. Travelling allowances are included in the rates of Pay proposed for the several members of the Survey Establishment. — In Ltr from Secy to Govt dated 21 Feby and ans[wered] on 13th March 1857. Sent to Govt 15th May 1857.

9. The revision of the Establishment for

? Apply this for Light Office & in her next Minute.

for Assessment has been carried much further than that for Survey. Mr Sewell now proposes 4 Deputies instead of 2, and that their pay should be 1200 Rs instead of 1,000 per Mensem. Both they and the Director to draw the same Fixed and extra tent allowance as a Collector. The reason for the extension has not been stated, but the Board conclude that Mr Sewell considers it necessary that to keep pace with the Survey there should be 4 Assessment as well as 4 Survey parties. As regards the rate of allowance, it is not more than what the Board believe will be requisite to retain the services of selected Officers for a considerable period.

10. The pray of the 'Chief accountant' (the Board think the designation of 'Uncovenanted Assistant' would be better,) is to be raised from 200 to 280 Rupees a month, in order to bring it to the level of that of a Head Sheristadar*. This seems reasonable.

* Para 12.

11. The small Establishment for demarcation formerly proposed, namely 960 Rupees per annum, has now been omitted, and a 3rd Supervisor on 100 Rupees a

Appendix (17) 25

a Month, and a 3rd clasifier on 24 Rupees a Month have been added to the former Estimate for Assessment. The Board with reference to Extract Minutes Consultation number date 11th December 1857 No 1288 R.D. adverted to at the head of these Proceedings propose to add a separate Demarcation Establishment, but they do not consider it necessary to strike out the Extra Supervisor and Classifier from the Assessment Establishment which does not seem so extensive when compared with that of the Survey.

12 In Para 22 Mr Sewell observes that "the cost of the Boundary Marks has "not been included, as it has already been "proposed that it should be borne by the "Ryots under the provisions of Act XX of 1853. "This may be conveniently advanced by Go- "vernment in the first instance". In his letter of 16th October 1857 Mr Sewell proposed the recovery of the cost by postponing the reduction of Assessment, in which the Board concurred in their Proceedings of 19th Octo to which a reply has not yet been received. The small field marks it is hoped may be made by the Ryots themselves, if properly looked after without becoming an actual item of cost. This is just one of those essen- tials to the efficacy and rapidity of the Survey.

Ltr to Govt dated 20th Oct 57

survey which is easy to order, but not so easy to see enforced without much personal trouble and inspection, and a wholesome exercise of Act XX of 1855. The Board anticipate difficulties on this point at first, which will gradually diminish as the rule becomes widely known and strictly enforced.

13. And in connection with the above subject the Board will now refer to the Extract Minutes Consultation of 11th December 1857 noted at the head of these Proceedings. It will be observed by Government that the urgent necessity for a proper and efficient mode of Demarcation has been fully anticipated by the Board in their Proceedings of 19th November 1857 which must have been before Government on the date of the above Extract Minutes Consultation. It will not therefore be necessary for them to dwell on this subject further than to remark that the quotations from Major Thuillier's Manual in the above Extract Minutes Consultation do not exactly refer to a state of things such as exists in the Chowries Survey, inasmuch as wherever the term 'Demarcation' occurs in those quotations it has reference to the Demarcation of Village boundaries, as may be seen by a reference to the Thakbut Map itself to which Government refer. If then a separate Establishment is required for these, much more will it be necessary to ensure the demarcation of the field boundaries

Quotes Govt's order verbatim

* Paras 18-19-20-21-22-23-24-25 & 26

(18) 3

boundaries. The Board will as directed, refer the matter to Mr. Newill though they do not agree in the opinion expressed by him in Para 13 of his letter now under consideration where he proposes that "the demarcation should be conducted by the Collector." It is a duty requiring much more personal inspection and constant pushing on of reluctant ryots, than any Collector can undertake to be responsible for.

14. The Demarcation Establishment alluded to by Government in Para 19 of Extract Minutes Consultation of 11th December 1857 is the very same the Board referred to in Para 21 of their Proceedings of 19th November 1857, but as explained in Para 23 of the same Proceedings they were embarrassed on account of the expense. The data of the Government Estimate do not appear (though Government state they had reference to the North West Surveys) to have contemplated a Demarcation Establishment. Mr. Newill's Assessment Establishment may probably have to commence about on the lands already surveyed in South Arcot and Tuticorin, and a separate Demarcation

* The Government Order to be referred to is that originally named to the Board Minutes but a reference to Para 44 of Major Thuillier's Memorandum in Extract Minutes Consultation 25th July 1857 P 731 M.D. will show that the latter Govt. refers to the Lower Provinces of Bengal, where the term of demarcation is more limited as to that which will be required in this Presidency, and Major Thuillier's remarks are most apposite.

17

Demarcation Establishment would certainly be desirable.

15. The Government state in Para 3 of the above Extract Minutes Consultation that were sanction immediately granted for the Establishments asked for the consequence would be that they would not find a single day's work ready for them. The Board would not have pressed this early sanction on slight grounds, but they were led from Captain Priestley's earnest desire to get his Establishment to suppose that he knew best whether he could employ them. The want of a regular Demarcation Establishment though it has hampered his operations hitherto, has by no means prevented them.

16. The Board did not refer to the Estimate made by Government without reference to the Extract Minutes Consultation which contained that Estimate* but they still submit that it was not framed on data suitable to the present occasion. The Government have in Para 4* given an example of the scale under which the estimates under notice were framed, and it is supposed the

* the Paras were noted in the margin of the Board's Proceedings 27th November 1857.

* Extract Minutes 6th 11th December 1857.

(19) 23

the marginal comparison is for the purpose of shewing that the Establishment proposed by Mr Newill and the Board is in excess, but as erroneous conclusion may be drawn from such comparisons unless the amount of work performed is noted also. It does not follow that an Establishment on 5000 Rupees is more expensive than one on 3000 Rupees. As regards the data in the Extract Minutes Consultation of 11th August 1855 to which Government refer the Board, it may be observed in regard to the Estimate for Assessment that any data taken from a Village Settlement such as that of the North West Provinces can hardly be said to apply to a Khetwar Assessment.

17 The Board trust however that without adhering too much to the extensive of Surveys in other parts of India to different from that required for Madras, the Establishments now proposed will be suitable. The correctness of Mr Newill's anticipation that the sum of 7½ lacs will not be exceeded rests entirely on the question whether 5000 square miles per annum will be surveyed and

and assessed for 13½ years consecutive work, instead of a rate of 2,800 Square miles per annum for 22 years.

18. With the assistance of Field maps one Classifier may get over 60 acres a day, but the Board are inclined to consider this a high average, for a continuance. The number of working days will probably be somewhat less than what Mr. Newill expects, for time will necessarily be absorbed in preliminary investigations and inspections, and moving from one place to another. Still the expectation is not so sanguine as to lead the Board to require a reconsideration of it.

19 With regard to the Survey, the Board perceive, both from the remarks at the end of the Estimate D forwarded by Captain Priestley (forming an enclosure in Mr. Newill's present letter) and also from what Mr. Newill has stated in his letter of 13th November 1857* and in Para 10 of his present communication that Captain Priestley's estimate of 1100 Square miles per Annum per "Party" (1400 Square miles per Annum "for 4 Parties") contains a promise which seems to intimate that the Superintendent of

* 50 Classifiers each 60 acres a day and 275 working days in the year = 825000 Acres or 1290 Square miles for each of the 4 Parties: Total 5160 (say 5100 square miles.)

* In Letter 17th November 1857 submitted to Government with Board's Proceedings 3rd November 1857.

(20) 35 19

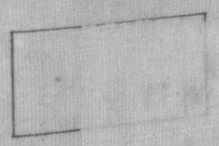
of Survey is not to be responsible for the measurement or plotting of the small fields which may be comprised by his 1 acre (in irrigated land) or 2 acre (in unirrigated land) "Survey blocks".

20 The Board have explained in their Proceedings marginally noted above, that this was not at all their intention when in their Proceedings of 27th February 1854* they proposed these blocks. They consider it indispensable that in every matter connected with the Survey the Superintendent should be the responsible person, and though Surveyors may be taught to measure, their work should be under his control. It is a great object also that all the fields of each Village should be Surveyed simultaneously. If the Surveyors work is to follow the professional Survey, some error is almost sure to arise, and there will be confusion in the numbering of the fields. The Board would suggest at all events that when the Surveyor measures his block, he fills up the outline figure of it which is now required in the field book, with the shapes and positions of its component small fields, and

* P. IX Miscellaneous Selections. Para 25.

and their numbers. The figure in the margin represents the space occupied by a field of two acres,* and of subdivisions of ½ acre were filled up by the eye of a practical surveyor, their content might be taken from the paper with almost sufficient accuracy, and then a subsequent measurement by the Gunter would be feasible, and might not require on the part of the Superintendent more than an occasional field tested here and there. It may also be observed that the fields will not run so small in the Northern Districts to which the Survey will at once proceed. The Board therefore are not disposed to reject Mr Neville's estimate.

* A square of 2.5 inch to a side, represents one acre. Scale 10 inches to a mile.



21. It is hoped that the Government will approve of the Full Establishment being estimated for at once, leaving it to the presiding officers to enlarge their present Establishments as opportunity may offer till they attain their full strength. The Board would also recommend, in accordance with the wishes expressed by Mr Neill in Paras: 11 and 12 of his letter, that the Director of Settlement, and Superintendent of Survey should

should each, have authority to disburse to persons not fully qualified, but still usefully employed, a portion only of the full allowance increasing it as the party becomes qualified. This has been found to work very well in the experience of the last few years, and is a saving to Government. The Board would also recommend, in consequence of the present duty being on so large a scale, and the Estimates only tentative at best, that the presiding officers have authority to apportion the salaries so as not to exceed the total amount sanctioned for each "Party"; reference having been first made to the Board of Revenue or the Local Government.

(A true Extract)

J. Pelly

Sg Secretary.

To

F. Fisher Esq.

Sg Secretary to Government

Revenue Department.

27/7/9

Revenue 1857 Sept.
No. 88 to Cons: 26th January/58

No. 1603

Extract from the
Proceedings of the
Board of Revenue.

Dated 18th Dec. 1857.
Rec'd 21st Dec. 1857
2 Encls. Returned

No. 4570.

S. P. B. 96
25 Jany

Submitting a letter from the Director of Revenue Settlement, with the Board's opinion in respect to the revised Estimates of Establishment for the Survey and Assessment, and explaining the data on which they are framed.

No. 40

6th Jany: No 13

Copy in a Letter to C.
of 1st March 1858 No.

3/12

(22) 29

Revenue Department.

No. 4707

Extract from the Proceedings of the Board of Revenue dated 24th December 1857.

No. 4707 Read letter from Director of Revenue Settlement, forwarding Estimate for a 'Demarcation' Establishment, with his opinion thereon dated 22nd December 1857.

Rec'd Con. 24th Dec 1857

(Here Letter No. 97)

The above letter is a reply made to the call of Government, for a separate Demarcation Establishment, in their Extract Minutes Consultations of 11th December 1857 para 11. No. 1288 R. D.

2 The Board concur with Mr Nevill that it is not necessary to frame an Establishment on the scale proposed by Government, which as the Board have pointed out* was the one arranged for the Lower Provinces of Bengal, and not for the N.W.* At the same time the Demarcation proceeds is easier in the unirrigated and open country and the large Fields of the Deccan* than it will

* Board's Rec: 18 Dec 1857 No. 4573 para 4th

* para 5 Mr Nevill's letter.

* paras 3 and 4 Mr Nevill's letter

(73)

42

4 will be in the Carnatic. The Board consider it sufficient to ask sanction for the Establishment proposed by Mr Newill. * para 7.
Each party will cost 9980 Rupees yearly, and to such parties* will be required eventually. The Board have already* met * para 8.
Mr Newill's wish* that his last Assessment * para 8.
Estimate including the extra Supervisors, should stand as it is, but they misapprehended the exact numerical strength of this extra hands, the detail of which is now explained.* * para 2

3 In accordance with the directions of Government the Board called on Mr Newill to submit an Estimate for finding the Stations of the Grand Trigonometrical Survey, but they concur with him that for the reasons stated in paras 9 and 10 that no such Estimate is required.

4 The remarks made by Mr Newill in para 11 have already been made by the Board in their Proceedings of 18th December 1857 para 11.

(A true Extract)

To H. Forbes Esqr
ag Secretary to Government
Revenue Department.

J. P. Lowe
ag Secretary

Comp. with
H. B. Boyle

* Board's Rec: 18th Dec 1857 para 11

27-7-94
Copy Letter Sent to
Mr Thomas Sinclair
27/7/1894

Received 28th July 1894
Read 30th July 1894
Ex Chard from the Pro-
ceedings of the Board
of Revenue.

Dated 24th December 1857
Read 29th December
Sub. Retirement
No. 4707
29 Dec

Acknowledge Letter
from the Director of Rev-
enue Settlement giving
his opinion on the pro-
priety of commencing a re-
Settlement and requesting
to be informed the date
on which the present re-
vision of the Estimate
is to take effect.
No. 41.

67 Vol. Pages 213 &

No 81 (24) 43/ 25

From

J. Newell Esquire
Director of Rev. Settlement

To

L. D. Sim Esquire
Acting Secretary to the
Board of Revenue

Sir

I have the honor to acknowledge the receipt of your letter of 27th Ultimo enclosing copy of Extract from Minutes of Consultation under date 25th Ultimo calling for an explanation of the data on which the present scheme for Establishments has been founded with reference to the calculation therein made of the possible Expenditure being an excess of the original Estimates.

2 In reply I beg leave to state that the Survey Department having hitherto been confined to the prosecution of Settlement operations which having been commenced I thought

it best to send up the Statement in
this incomplete state leaving it to
further experience to determine
what should be considered as Stan
dards of Establishment for the Survey
and Assessment Departments. It
seems however to be the wish of
Government to place before the
Government of India a more
comprehensive estimate to take
in the whole of the Operations throughout the Presidency. I have in com-
munication with the Superintendent
of Revenue Survey given the subject
a further consideration with this view,
and in concurrence with the advice
of the Board in para 2 of your letter
to send in an estimate for a full
establishment at once and then
by employing such portions of it as may
be required to begin with. I beg
to submit revised statements in the Appendix Nos 1 to 7

3 The Board however seem
to think that the expenditure for
the Survey should be estimated
at

at Rupees 175000 per annum for 4
parties and Capt.n Priestley has
complied with the requisition to
this effect, but from his letter of 12th Oct.
forwarded Copy of which is appended
he is evidently embarrassed as to
how to carry on his Operations on this
scale, and has not entered the Est.e
details of the Establishment. He
justly observes that the organization
of the Public Works Department
and the making the salaries of Officers
and their Subordinates more adequate to their duties render it ap-
pearance to raise those of the higher
Subordinates of his own department.
and upon reflection it will
I think be apparent that 200 Rupees
a month is not adequate for the
European Assistants, who will probably
not be commissioned officers drawing military pay in addition.
In Bombay there appear to be three Classes of
these Assistants receiving 250, 375
and 500 Rupees per mensem; —
in Bengal the salaries are lower
but there are not the same details of work.

+ Inserted in original Estimate. Vide para 3 of 4th Mi. 12th Aug 1855.

4 A further reason may be urged for placing these Salaries on a higher standard is the circumstance of the additional labor and superior skill that will be required in connecting the Revenue Survey with the former by geometrical operations, and making the work a perfect one, as recited in Extract Minute of Consultation under date 14th Augt 1857. P 815.

5 The Government in para 37 of Extract Minutes of Consultation, 14th August 1858 in placing before the Government of India and the Honble Court of Directors, the estimate for the survey, state distinctly that, while taking "for the purposes of the present computation" an Establishment of the strength granted for South Arcot, they intend to be guided by the experience of the Surveys of Upper India as respects both the number of Deputies' parties and the strength and Salaries of their Establishments, and in the following para, while stating that the

(26)

the Survey with such Establishment would occupy the period of 22 years, it does not seem to be intended that it should necessarily or would most conveniently be spread over this extended period. I trust therefore that instead of insisting, as suggested by the Board, that the Estimate should be confined to the sum apportionable to one out of the 22 years, a comprehensive plan embracing the whole work within a more limited time and the total Estimated amount will be entertained particularly as there is very advantage to be gained in shortening the period of operation and mine that I am aware of in delaying it, and it may also economy to curtail the Expenditure per annum at the disadvantage of employing superior agents on a lower Salary who may be expected to perform their work perfectly and of limiting the number of minor subordinates within what

may be properly controlled by the Superintendency officers. This principle of an extended and comprehensive field of operations is fully advocated in para 36 of Extract-Minute of Consultation 14th August 1855

6 In submitting his communication of 1st Assistant Capt. Priestley refers me to Appendix D of this report for 1856 for a scale of Salaries suited for securing qualified persons, and it is from this that the present statement (Appendix No 3) has been compiled with the addition of the Superintendents salary and other items required to render it complete. The experience already derived in the past 3 years' operations enables Capt. Priestley now to put forth his recommendation with confidence. The following gives at one view the proposed expenditure for the Establishment of the Superintendents and 4 Deputies parties.

+ appended also to his letter.

(27)

Salary &c. of Superintendent	1000	12000
His Office Establishment vide Statement No 4	880	19560
	1880	22560
1 Deputy's party including Salary and allowances of himself and Establishment as per Statement No 3		54840
4 Such parties		219360
Including the Superintendent and Establishment Making the Grand Total		241920

7 Capt. Priestley calculates the annual work of each party at the rate of 65 acres a day for each annum for 260 working days with the provision that a minimum of 2 acres for dry and 1 for wet lands should be allowed in the measurement of yields as already sanctioned. This gives 1100 Square miles for the year including about 10 per cent of waste land, and for the 4 parties a total of 4400 Square miles. The above estimated expenditure divided by this gives Rupees 55 per Square mile

av

as the cost of the Survey under 4 parties
and a Superintendent organized
on the above plan and is considera-
ably within the estimated rate
of Rs 64 per square mile given in
para 38 of Extract Minutes of Con-
sultation dated 14th August 1855, and
will admit of the whole extent of
60,000 square miles being surveyed
within the estimated total of Rs 3840000
with a fair margin for contingencies.
The work would thus occupy 14 years.
The cost of 2 parties only under the
Superintendent will be Rs 60 per
Square mile and that of 3+ will amount
to Rs 56/p per square mile, as that
the Estimate should not be exceeded in
the more limited operations.

8 The cost of instruments &c has not been included in the above calculation, both because this item formed no part of the original Estimate as particularized in para 37 of the above Extract Minutes of Consultation, and also because the same cannot be correctly ascertained at

+ 54840 / 2 = 27420 2 parties
10968 0 2 parties
22560 Superintendent
132240 Total
2200 / 60

+ 164520 3 parties
22560 Superintendent
187080 Total
3300 / 56/p

Appendices pos 386

Appendix 207

at the present time. (28) 21

9 The Lithographic Establishment in like manner formed no part of the original Estimate and is now calculated at Rupees 751 per mensem or Rs 9012 per annum or say for 15 years Rs 135180. Capt. Priestley expects that when the Trigl is in full operation he will be able to dispense with several draughtsmen which will much reduce the charge for this work, the importance of which in turning the Survey to the best account cannot be too highly valued. The cost will be the above calculation and with the reduction anticipated probably bunch within 2 Rs a square mile which will be well laid out in perpetuating the results of the Survey operations in the convenient forms of Village, Taluk and District Maps.

10 Surveys be objected to the preceding calculations that they are based upon a larger Standard of work than has so far been actually

attained by the party employed in South West and Trichinopoly.
Capt Priestley in his survey report
for 1856 has fully explained the
causes of the work coming short
of the extent calculated. It will
appear from paras 14 to 18 that the
minimum of 2 acres of dry and 1
of irrigated land was not observed
in the measurement of the fields.
And that this rule is of little help
to him with the conditions attach-
ed to it. The Ameens in many cases † para 15
measured more than the pre-
scribed number of fields, tho' from
the minute size of them, the area
of 60 acres per diem was not at- ° para 17
tained. The labor as there shewn
to have been increased in the ratio
of 3 to 5 by surveying and plotting
each field even down to .005 of an ‡ para 18
acre, and that the total area of
the Survey would have come up to
200 instead of 450 Square miles, or
about the prescribed Standard, had
the smaller fields been excluded
from

detail measurement under the
general rule above noticed. Other
serious difficulties were also experi-
enced in the fields not being
marked out for survey, and thus occasioned
much loss of time to the Ameens.
The lapsed jaghires and other localities
selected for survey were also often
in detached portions instead of
presenting a compact field for
operations. There was also a difficulty
of retaining servants permanently on
their establishment. Arrange-
ments will now be made for the
demarcation of boundaries ready
for the Survey, and the Survey Establish-
ment will assume a more perma-
nent character, and I shall also
be prepared after further enquiry
and conference with the Superin-
tendent of Survey to propose the best
means of getting over the main diffi-
culty of adjusting the details
of the minute fields without sub-
jecting them to professional Survey

by this Department, which does not appear essential for the grand object in view in newly apportioning the land tax; and, these difficulties being overcome, there seems every prospect, judging from the result already obtained under such disadvantageous circumstances, that the estimated Standard of work will be reached.

11 Sanction for 2 parties and for the Superintendent's Office is required for the approaching working season, and a third if not also a fourth party may probably be organized in the following year. The full amount of Estimate will not be expended at first but gradually arrived at as operations extend and the agency becomes fully qualified, and in the meanwhile selection is solicited for the Superintendent Survey to apportion the salaries to the grade best suited to circumstances, as was permitted by the Government of India in their

former Sanction dated 8th September 1854.

The Statement submitted with the Board's letter to Government of 9th ultimo will give an estimate of what is proposed to be expended, in the first instance, if such is required.

12. With regard to the Establishment at first proposed for the Settlement Operations I may explain that while the full Standard was set down in some items, a limited arrangement only was provided for in others in which further experience was more particularly wanted. Following however the course I have pursued with regard to the Survey branch of estimating at once for the full Establishment required, I have accordingly made some revision of the former statement in the following respects. To enable me to have the selection for the head of the Native Office from the best and most experienced individuals in Revenue matters and to retain an incumbent without the fear of his being drawn away for promotion to a Head Sheristadarship in a Collector's Office, I have introduced the Salary of the latter grade instead of the less

Amount

amount before set down and about which my misgivings were stated in my letter of 5th Ultimo — I should not perhaps be right in excluding myself from the choice of the best and that is to be had in carrying out measures of so important and permanent a character; but at the same time I shall not avail myself of the higher standard of salary if a less amount will secure the object.

13 I have moreover omitted the temporary arrangement for the demarcation of boundaries, and instead have added to a Deputy's party, a 3d Supervisor and Classifiers, whose services may be employed partly in the work in question and partly in classifying the land. In para 61 of my letter of 28th October last, I contemplated the probability of a Deputy or Superintendent being able to work a 3e Supervisor's party, and this will be the more easy if a portion say half, is engaged in marking the boundaries, leaving the other half to the work of classifying. In the first instance however I would still propose that the demarcation should be conducted by the Collector and

and the places of the servants of the Establishment engaged in it be filled up from this Estimate, as otherwise the Deputy or Superintendent must be appointed with his Establishment before the Survey commences, and he will not be economically employed in the interval between the fields becoming ready for assessing. When the Settlement is fairly begun, the Deputy may assume the Supervision of the demarcation of future work.

14 I have endeavored to make the Establishment efficient and to fix a sufficient scale of pay to secure ability and to remove pretext for exaction and corruption. Some what lower rates of salary will in the first instance be given in some cases, advancement being made dependent on good qualifications and conduct and increase of work as the operations — and I trust a wide discretion will proceed.

also be allowed in appropriating the sanctioned amount in the way best suited to meet the at present untried circumstances that may arise. Having no standard of reference in proposing the Establishment, and the work it is to

be

be engaged upon here yet uncommenced, it must in a great measure be considered experimental, but I hope it will be found sufficient, the experience may dictate a better distribution of the expenditure.-

15 The following then may be stated as the items of the proposed expenditure for the settlement of Poona premising that in para 63 of my letter of 28th October I pointed out that less than a Sub Collector's pay would not secure qualified Departies for any length of time and that in accordance with the views of the Board of Revenue in their letter to Government of 9th Feb 1844 Rs 12 000 has been estimated for their Salary.-

Director's Establishment		Monthly			Annually
Salary		3016	10	8	36200
Tentage		87	8		1050
Extra Do 6 Months		157	8		630
Office Establishment as per Detail Statement (Vide Appendix)	3/3	1582			18984
Extra on Circuit 6 Months (Do)		104			416
		4947	10	8	57280
4 Superintendents Party					
Salary		1200			14400
Tentage		87	8		1050
Extra Do 6 months		157	8		945
Office Establishment as per Detail Statement No 3		507			6084
Clerking Do	Do	2076			24912
					47391
Total Such parties would be					49364
Total Director's Establishment & parties					346 84

16 To this are to be added travelling batta to public servants of the Director and Superintendents Offices while on circuit and Contingent charges which cannot be calculated with any degree of accuracy but taking roughly Rupees 10000 for these items the total per annum for the Central Office and 4 parties will be

Rupees 2,56,844.

17 Next the question now comes as to what extent of work can be accomplished by this proposed establishment. For my letter of 28th October I did not enter into this, beyond stating my conviction that the Establishment proposed would account for the work at a cost not exceeding the estimated rate of 10 Rupees per 100 acres, or 6¼ Rupees per square mile given in para 42 of Colonel Minutes of Consultation dated 14th August 1845 I proceed to show now what I work way.

may reasonably be expected from the establish-
ments as now proposed

18 The number of Chaprassies under
a Superintendents Contract is 60, but as
explained in para 13 half a Superviseurs
party viz 30 will be employed in demarcation
duty, thus leaving 30 for the ajoojeing opera-
tions Deducting one fourth of the whole
years for unoccupied periods and sundays
there remain 275 working days. The ajoojeing
process will doubtless be admitted to be
less responsible task than the survey measure-
ment, and 100 acres per diem may be taken
as a reasonable average for the Chaprassies.
This will give 825,000 acres or about 1290
Square miles per annum for each party. Four
such parties will thus do 5160 square miles,
at taking only 5000 square miles, the Cost
would be about 57 Rupees a square mile
including also the expense of establish-
ment for the demarcation of boundaries,
which

Direct 57280
2 parties 14273
1/5 Contingencies 8000
1250 / 79453
3750 / 55.34

Direct 57280
2 parties 94782
3/5 contingencies 6000
250 / 158062
2500 / 63.2

5000 viz 1250 miles for each party.

5000 / 286644 / 57.37

(33) 61

which is much within the Estimate of
61 Rupees per square mile. If only
3 parties are entertained the cost of
these and the Director establishment
together will give Rupees 55 per
square mile, including also the cost
of the establishment for marking
the boundaries which may perhaps
be considered as belonging rather to
the survey charges. While only 2 parties
may be employed the cost will be
about 63 Rupees per square mile still
within the estimated limit, but this
Calculation is too high as it is based on the
cost of the full establishment which
will not be entertained.

19 If it is thought that
the full standard of work will not

be attained at once, it may be urged that the same probable difficulties would present themselves on a foregoing as on the first operation of the Survey, and the full complement of establishment will be gradually made up both in the numbers of the servants and in the amount of salary in named cases as above explained. The rate of cost for the settlement is incurred by the demarcation of boundaries being included and more particularly from the general direction of the 2 Departments being vested in the Director of Revenue settlement, without any portion of the charges of his establishment being allotted to the survey

20

(34)

20. It may be observed that the estimated work of an assessing party being 1250 (1290?) square miles per annum while that of a Survey party is only 150 square, the former will overtake the latter, but it is to be remembered that the assessing establishment being entirely new, its operations will be more limited at first and that also more than a year's work is ready for a party. Captain Priestley has also in contemplation the eventual enlargement of his Department so as to take in as much as 1400 square miles per annum for a party, if the experience gained with that now proposed, shows this to be expedient. There will therefore be no difficulty on this head. There will therefore be no difficulty on this and otherwise adjusting the establishment of the two branches so as to work pari passu.

21. Sanction should be obtained for and 2 Settlement parties, and the Director establish- ment of one of the latter may immediately take up the Surveyed portions of Trichinopoly and South Arcot, and the other may also be organized some months later after the Survey has started in Ra- jahmundry. It is difficult to define what portion of the establishment will be required at once, as it will be filled up progressively and in a great measure proportionately to the resultant work-

Vide Appendix E of the Survey Report 1856.

22. The cost of boundary marks has not been included as it has already been proposed that it should be borne by the Ryots under the provisions of Act 20 of 1855, that it may be conveniently advanced by Government in the first instance.-

23. The Board in para 16 of their letter of 9th ultimo, suggest that the Lithographic Establishment may be over for the present; but I would observe that this is immense advantage that the Village maps should be lithographed at once for the parts already Surveyed, as they will be useful for the Classifiers and save the original, of which there is now no Copy, from being worn out in the assessing operations.

24. The items requiring sanction at present may be summed up as follows-

For Settlement	per annum	
Director's Salary already sanctioned		
Establishment.	19,400	
1 Deputy or Superintendent's Salary	14,400	45,396
Estabt.	30,996.	
1 Dº as above.		45396
Tentage and Extra tentage of the higher grade to be allowed also to the Director and 2 Deputies when on Circuit.		
Batta to Office Establishment of Director and 2 Deputies on Circuit.		

(35) 69

Contingent charges, Office furniture &c.--

For Survey.

Superintendent Revenue Survey Salary already sanctioned.-	3333
Office Establishment-	10560
1 Deputy Superintendent Salary & Establishment	54840
1 Dº Dº.	54840
Lithographic Establishment-	9012
Cost of Instruments for 2 parties particularized in Appendix Nº 5.	333
Camp Equipage &c for 2 parties. appendix Nº 6.	
Contingent Charges.	

I have the honor to be,
Sir,
Your most Obedient Servant

H Allen

Director of Rev: Sett.

Office of the
Director of Rev: Sett.
Madras 7th December
1857.

Proposed Establishment for Division of Provincial Battalions.

1	Manager	250	..	..
1	Assistant Do and Auditor	120	..	..
1	Examiner	80	..	..
1	Head Clerk	70	..	..
1	Do	50	..	..
1	Do	40	..	..
1	Computer	35	..	..
1	Writer	30	..	..
1	Do	24	..	..
1	Do	17	..	..
1	Do	15	..	..
1	Do	12	..	..
1	Record keeper	80	..	..
1	Translator in 3 languages	80	..	..
1	Chief Accountant	250	..	..
1	Deputy Accountant	75	..	..
1	Assistant	50	..	..
1	Do	35	..	..
1	Do	25	..	..
1	Do	20	..	..
1	Do at 15	15	..	..
1	Record keeper	45	..	..
1	Storekeeper	10	8	..
1	Do	8	..	..
1	Purveyor and	10	..	..
1	Sweeper	4	..	..
1	Jamadar	17	8	..
12	Peons at 7	84	..	..
	Total per Mensem		1582	..
	Total per annum		18984	..

Extra Establishment
while on Circuit.

1	Dresser or Apothecary	50	..	..
1	Duffadar	12	..	..
6	Peons	42	..	..
	Total	104	..	..
	For four months		416	..
	Total per Annum		1400	..

No 2

Proposed Establishment for each Deputy or Superintendent of Settlement

1	Native Assistant	140	"	"	
1	Head Goomastah	50	"	"	
1	Do	35	"	"	
1	Do	25	"	"	
2	Do 15	30	"	"	
1	Head Writer	35	"	"	
1	Do	15	"	"	
1	Translator	40	"	"	
1	Moochee	9	"	"	
1	Duffadar	15	"	"	
6	Peons at 7	42	"	"	
6	Do at 6	36	"	"	
1	Dresser	35	"	"	
	Total				507
1	Supervisor	135	"	"	
1	Goomastah	30	"	"	
2	Do at 15	30	"	} 60	"
8	Classifiers at 24	192	"	"	
8	Do at 20	160	"		
2	Head Classifiers at 30	60	"		
2	Do Do at 28	56	"	" 468	"
8	Peons at 6	48	"		
1	Supervisor	120			
3	Goomastahs as above	60	"		
20	Classifiers Do	468	"		
8	Peons Do	48	"		
1	Supervisor	100	"		
1	Goomastah	35	"	"	
2	Do at 14	28	"	} 53	"
20	Classifiers as above	468	"		
8	Peons	48	"		
	Total				664
	Grand Total				2076
	Per annum				2583
					30996

No 3

Establishment for a Deputy Superintendent Survey party

62

		Rs	A	P	Rs	A	P
	Deputy Superintendent 500 Rupees at 7½ Rupees travelling allowance	75	"	"			
	Allowance 60% to cover contingent Expenses	100	"	"	675	"	"
	European Assistant 225 at 75 travelling allowance	300	"	"			
1	Do 225 at 75 Do	300	"	"	700	"	"
1	Head Surveyor at 100	100	"				
1	Do Do at 90	90	"				
1	Do Do at 80	80	"				
1	Do Do at 70	70	"	"	340	"	
	N. B Head Surveyors Leaves at 50 to receive for the second year						
1	Deputy Surveyor at 50	50	"				
3	Do Do at 40	120	"				
1	Do Do at 30	30	"				
1	Do Do at 25	25	"				
1	Detail Surveyor at 20	60	"	"	375	"	
3	Do Do at 20	110	"				
10	Surveyors Income at 14	310	"				
30	Do Do at 10	90	"				
10	Goomastahs at 9	80	"				
10	Do at 8	140	"	"	750	"	
20	Do at 7	75	"				
1	Office Manager at 35	35	"				
1	Head Writer and Computer at 35	100	"				
4	Do at 25	60	"				
3	Do at 20	30	"	"	310	"	
2	Do at 15	30	"				
1	Head Draughtsman at 30	35	"				
1	Do at 35	60	"				
3	Do at 30	75	"				
3	Do at 25	80	"				
4	Do at 20	75	"	"	375	"	
5	Do at 15	Carried forward			3515	"	"

		Brought forward			3315 " "
1	Draftsman	at 8	8 " "		
2	D°	at 7½	15 " "		
7	Head Peons	at 6	42 " "		
3	Peons	at 6	18 " "		
3	D°	at 5	15 " "		
4	D°	at 4½	18 " "		
8	D°	at 4	32 " "		
15	Measuring Peons	at 5	75 " "		
24	D° D°	at 4½	108 " "		
16	D° D°	at 4	64 " "	395 " "	
1	Head Station Marker	at 7	7 " "		
12	D° D°	at 5	60 " "		
1	Head Chainmen	at 4½	54 " "	121 " "	
3	D°	at 5½	3 8 "		
1	Blacksmith	at 4½	13 8 "		
1	Chainman	at 5	5 " "		
	Measurement allowance 10%			39 " "	
				630 " "	
	Total for 1 Month			4,690 " "	
	Deduct for wages of 2 Months for 12 Months			56,280 " "	
	Measurement allowance		1260 " "		
1	Head Surveyor travelling allowance		80 " "		
30	Peons		100 " "	1440 " "	
	Grand Total			59,840 " "	

Note — Travelling allowances are included in the above rates of pay

To Saharanpur

No 4

37

Proposed Office Establishment for the Superintendent of Revenue Survey. (38)

1	Office Assistant (as Draftsman)	200 " "
1	D° D° (as Computer)	150 " "
2	Draftsmen at 60 Rupees	120 " "
1	Manager	100 " "
3	Examiners and Writers	120 " "
1	Copying Clerk	20 " "
1	Record Keeper	28 8 "
2	Assistant D° at 12½	25 " "
1	Head Mooky	17 8 "
6	Assistant D°	35 " "
1	Cutcherie	12 " "
6	Peons at 7	42 " "
	Monthly	880 " "
	Yearly	10,560 " "

? Is no travelling allowance to be granted?

No allowance is allowed for

1776

No 5

(29)

73

Estimated Scale of Instruments for one Party

Names of Instruments.	No
Planimeter	1
100 feet chains Iron with Arrows	15
Chains Gunters do	10
Compasses Beem Wooden	2
do Large with pen and pencil legs brass pairs	6
do Small brass pairs	60
do Improved Prismatic with Tripod Stands	9
Cirumferenters with Tripod Stands	9
Cross Staves	15
Optical Squares	6
Color Boxes	2
Color branches of Sizes	24
Water branches	2
Artificial Horizon	1
Barometer mountain	1
Bars steel graduated 11 feet engraved and divided into feet, inches and tenths, for comparing Gunters chains	4
Drawing pens	20
Road and Dotting pens each 2	4
Drawing Pins for fastening maps to Boards	100
Flag Staves	50
Gunters Scales 2 feet Brass	2
Plotting and offset scales 16 inch to 1 Mile Wooden	12
Mathematical Instruments including proportional Compasses in Cases	6
3 piesometers	6
Magnet Bars in box	1
Protractors brass rectangular	10
do Ivory do	12
Perambulators Everest or Wangh's pattern	1
Reflecting lamps with sight vane and plummet	1
Rings Spare for Chains	200

Rules Brass Flat 3½ feet heavy	1
Do Do 2½ feet	1
Do Ebony Flat 3 feet or 4 feet	1
Do Parallel 18 Inches brass on rollers	1
Do Do 12 Inches brass on rollers	1
Do Do 2 feet Ebony with Bars	1
Do Do 1 foot Do	1
Do Do 6 Inches Do	6
Tapes measuring	2
Telescopes reconnoitering	1
Theodolites 7 Inches transit	1
Do 5 Do Do	1
Do 6 Do Everests pattern	3
Do 5 Do Do	5
Tracing Glass	1
Thermometers	1
Sextant in box	1
Heliotropes for Hilly Country and Minor Triangulation	4
Plane Tables for Hilly Country and Minor Triangulation	6

Colors Extra Size

Prussian Blue Lake, Gamboge. each 6	18
Light Red Burnt Umber. each 4	2
Burnt Sienna	12

Estimated Scale of Camp Equipage Books and office Furniture for one "Party" (140)

Names of Instruments	No of each
Camp Equipage	
Tents Hill or Staff Sergeants Lined with Chints	3
Do office double poled large Do	1
Do Do single poled Captains Do	1
Tarpaulins Waxed	6
Books	
Logarithm (Chambers, Youngs or La Landes)	1
Instructions on Topographical survey by Col Waugh	1
Mathematical Tables Gateses	4
Manual of Surveying	1
Nautical Almanac for the current year	1
Traverse Tables by Colonel Boileau	1
Table of Trigonometrical Survey Computations	1
Table of Land Measure	1
Pay and Audit Regulation Code of 1845	1
Multiplication Tables by Major Smith	6
Office Furniture	
Teak Wood Tables on trestles 6 + 3	6
Do Do Do 4 + 3	6
Large and small Boxes for office Stationary and Records	8
Office Stamp (brass)	1
Chuppressed Bells Do	30
Office Benches	10
Native Accountants Desks	20

(H)

No 1

Estimate for Lithographic Establishment

1	Head Lithographer and Draughts man		90 " "	90 "
1	Do	Draughts men and	60 " "	
1	Do	Lithographers Competent	55 " "	
1	Do	to do the neat work	50 " "	
1	Do	thoroughly	45 " "	210 "
	For tracing work.			
2	Draughtsmen	at 35	70 " "	
2	Do	at 30	60 " "	
3	Assistant Draughts men	at 25	75 " "	
3	Do	at 20	60 " "	
3	Do	at 15	45 " "	
7	Do	at 10	70 " "	
4	Do	at 5	20 " "	400 " "
	Printers			
1	Head Printer		20 " "	
1	Printer		14 " "	
2	Pressmen at 6		12 " "	
1	Pressman at 5		5 " "	51 "
		Per Mensem		751 " "
		Per annum		9012 " "

5124 To the Director of Rev.
22nd & 24th December/57

27-7-94

№ 4881

From

The Director of
Revenue Settlement

Dated 7 December 1857
Rec'd 7 — "
Inc 1.

Ans 18 Dec. 1857

1603/57.

Rent Board Coorg
25 Jan.

In Calming the data on which the Estimate for Establishments submitted by him has been founded and appending lists of Establishments and Estimates of instruments at present requiring sanction.

Chief Sec to Govt 18 Dec 57.
+ Ch. Mr. Smith

Survey Office
Cuddalore 1st December 1857.

Sir,

In compliance with the call made in your letter of the 28th Ultimo, I have the honor to enclose a revised estimate in which Batta travelling and Encasement allowances are included.-

I must confess my inability to estimate for stationery, instruments and office rents out of the Sum sanctioned. In Para 75 of "Selections from Records of the Madras Government № IX" it is expressly stated that there will be a charge for stationery and also that it is presumed Instruments will be supplied by Government.

In the establishment mentioned at the bottom of page 11 of the "Papers relating to the proposed general Survey" a Sum of 37-8 as above is mentioned for contingent expences which is only about enough to pay for petty repairs and trifling casual expences. In the revised estimate it is reduced to about Rupees 27 per mensem.-

The cost of Lithography also must be a separate item. The Maps can of course be lithographed in the Chief Engineer's Office, but as the expence must be born by Government in the Estimate

whatever office this work is performed, I think it is hardly necessary to dwell on the advantage of the process being carried on under the direction of the Superintendent of Revenue Survey.

I regret much the necessity of reducing the rates of pay proposed, more particularly those of the European Assistants.

I beg to direct attention to the fact that the rates proposed in 1855 were sufficient when an Officer in the Public Works Department received Rs 190 and trust that as it was considered necessary so greatly to increase the pay of the Officers composing a body so numerous as that of the Department Public Works a reconsideration of the subject will induce Government to sanction the increased allowances to the European Assistants employed in the Survey who when the 4 parties are completed will only number eight individuals.

I venture to forward a copy of the Establishment marked D in the appendix of my report for the year 1856.

By sanctioning three such parties the pay of the several Grades will be increased sufficiently to render entering the Department an object to eligible

(43)

eligible men of all ranks, at the same time the expence per square mile will be very moderate.

8/

In Bengal, unless I have been misinformed, a Surveyor has permission to regulate his expenditure, curtailing it under some heads where an increased outlay is necessary in others, provided that he does not exceed the Sum sanctioned; this discretion should most certainly be granted in Madras, as tying him down and restricting him to rules for every petty detail will inevitably have the worst consequences.

I have the honor to be,

Sir,

Your Most Obedient Servant

(Signed) F. J. B. Ricketts Capt.

Supt. Rev. Survey

To

G. Newill Esqre

Director of Rev. Survey

Madras

(True Copy)

Director

(14) 43

Revised Estimate for Superintendent and four Deputies including Establishments

83

1	Superintendent	1000	"	"
	Establishment	600	"	"
4	Deputies	2500	"	"
8	Assistants	1600	"	"
12	Head Surveyors	960	"	"
36	Deputy and Detail Surveyors	1100	"	"
120	Ameens	1230	"	"
120	Gomastahs	960	"	"
4	Head writers and Computers	200	"	"
4	Do Draughtsmen	140	"	"
36	Writers and Computers	720	"	"
36	Draughtsmen	720	"	"
412	Peons and measurers	1846	"	"
	Measurement allowance	1600	"	"
	Total Monthly	15176	"	"
	For 12 Months	182112	"	"
	Deduct allowances	8428	"	"
	Nett	178684	"	"
	Sanction	180000	"	"
	Contingencies	1316	"	"

During Recess

Deductions

Head Surveyors trntage		120	"
Deputy and detail Surveyors travelling allowance		110	"
Writers and Computers	Do	72	"
Draughtsmen	Do	72	"
Pay of Peons on leave		250	"
Measurement allowance		1600	"
Total		2224	"
		510	"
For 1 Month		1714	"
For 9 Months		8428	"

Additions

Ameens Compensation for Measurement allowance 510 " "

(48) 83

Proposed Survey Establishment Appendix D in Report for 1856

1	European Assistant 225+75 (travelling allowance)	400		
1	Do 225+75 (Do)	300	700	
1	Head Surveyor at 100	100		
1	Do Do at 90	90		
1	Do Do at 80	80		
1	Do Do at 70	70	340	
	N.B. Head Surveyors to enter at 50 to receive 60 the second year			
1	Deputy Surveyor at 50	50		
3	Do Do at 40	120		
4	Do Do at 30	120		
1	Detail Surveyor at 25	25		
3	Do Do at 20	60	375	
10	Surveyor Ameens at 14	140		
30	Do Do at 10	300		
10	Gomashtahs at 9	90		
10	Do at 8	80		
30	Do at 7	140	750	
	Office Establishment			
1	Manager at 75	75		
1	Head Writer and Computer at 35	35		
4	Do at 25	100		
3	Do at 20	60		
3	Do at 15	50	300	
3	Do at 12	50		
1	Head Draughts man at 35	35		
1	Do at 30	60		
2	Do at 25	75		
3	Do at 20	80		
4	Do at 15	75	375	
5	Do Carried forward		2840	

		Brought forward			2840
1	Duffadar	at 8	8	. .	
2	Do	at 7½	15		
7	Head Peons	at 6	42		
3	Lancers Do	at 6	18		
3	Do Do	at 5	15		
4	Do Do	at 4½	18		
8	Do Do	at 4	32		
15	Measuring Do	at 5	75		
24	Do Do	at 4½	108		
16	Do Do	at 4	64		395
1	Head Station Marker	at 7	7		
12	Do	at 5	60		
12	Do	at 4½	54		121
1	Moochy	at 5½	5	8 .	
3	Do	at 4½	13	8 .	
1	Blacksmith	at 5	5	. .	
1	Chanckler	at 5	5	. .	29
		Contingent Charges 30	30	. .	
					30
		Total for 1 Month			34 15
		for 12 Months			409 80
		Grant for 1½ Party			459 80
		To Ameens measuring allowance			5600

Deduct 10 per Cent on the Salaries of Head and Deputy Surveyors and Office men who receive — Travelling allowance

30 Rupees per month (during recess) 88—8 — add 10 Ameens to receive 3 Rs per Annum and 30 Do Do 2 Do 90 — Compensation for measurement allowance

82 We propose that the establishment be first tried and if it be found that a deputy Surveyor General and two European Assistants can Control and keep pace with even a larger Subordinate Establishment than that marked No 2 then that it be raised to that marked No 3

It will be perceived that no additional expense will be incurred by having 2 Deputy Surveyors Generals parties of the strength shewn in No 1 instead of 4 parties of the strength originally intended

If a minimum of 2 acres in poonjah and 1 in Punjah be sanctioned the 40 Ameens will at 60 acres a day for 300 working days complete about 975 Square miles of fields towards the allowance for which there is a sum of 50000 Rs of the 63000 required

The difference being added the yearly expenditure will be Rupees 47280 and allowing 125 Square miles of waste not measured as fields to have been included in the Survey, the whole area will amount to 1100 Square miles the expence per Square mile being about 43 Rupees allowing a most liberal margin it ought not to exceed Rupees 50

N. B. Expenses for erecting and Superintending boundary pillars are not Estimated for

I have &c

Director of Revenue &c

27-7-94

25-Jan

P 1603/57

Ln No 4881/57
Rec 18 Dec.

Copy

89 (117) R. 9.

No 96

Extract from the Minutes of Consultation
Under date the 25th January 1858.

Read the following Extract from the Proceedings of the Board of Revenue

(Here enter 18th December 1857 No 4570/4711)

A. G.

Let the 2 Letters from the Revenue Proceedings of the 18th Dec. be submitted for the consideration of the Board. The two Letters from the Director of Public Instruction forwarding Surveyed Estimates for the Survey of the Establishment for the Assessment of Lands, and a Supplemental Estimate for a Enumeration of Cattle &c. called for by the Board in their Proc. of 11th Dec. 1857 No. 4288 R.D. The Board recommend the Estimates in their present form for adoption. With the slight modification, however, at the same time that for Works of a large or rare, and of a novel character in this Residency, as those now about to be undertaken, considerable latitude must be allowed to the Presiding Officers for 25

: apportioning the salaries in such manner as experience may show to be desirable, provided that the total amount sanctioned for each "Dist." be not exceeded, and that the consent of the Govr. or of the Local Govt., to such proposed changes be first obtained.

7 Before proceeding to the consideration of the detailed estimates, reference may be briefly made to the whole estimate of the charge likely to be incurred in this undertaking, which has been submitted to the Govt. of India and to the Govt. in Council of 4. Augt. 1856. No. 57. P.D.

8 It has there been calculated that supposing the survey operations to be carried out by four Parties, each of the strength of that at present employed under Capt. Preston, the whole area of 60,000 square miles, which it is considered will include all the land requiring to be irrigated & that operations might be surveyed in 22. years, at an expense of £38,40,000. or about £64. per square mile.

9 The expense of the Settlement operations for this extent of land has calculated at £10. per 100. Acres, this Assessment

£1. per 100. acres. on the total area of the territory.

was obtained by the report of the Settlement Officer employed on the present Govt. Survey

It was then calculated that with the establishment of a Survey Party for the whole area of 60,000. square miles of 38 millions of Acres, might be effected at a cost of £38,00,000, and thus the total of Survey and Assessment under the old system at £76,40,000.

In the Govt. in their letter of this Dept. of 17. Sept. 1856. admitted that this cost, large as it is, was not incommensurate with the advantages to be obtained by the introduction of the proposed system, and sanctioned the requisite establishment under the old system of the Dept. of Survey & Settlement, which has been already settled at and it remains for the Officers with the Survey to carry out the intentions of Government.

The plan submitted by Mr. Merivale, in communication with Capt. Pilatby, and approved by the Board of Revenue, contemplated the completion of the entire operation within a period of about 14. years, instead of 22 as allowed for by the Govt. and with a more extended agency than they proposed, but without any increase of cost.

Time is an element of

such importance in calculating
the results of an operation such
as that now in process of arrange-
ment, that the value of the
[illegible] of one third of the stock
hitherto originally allotted for its
consideration can scarcely be too
highly estimated, and after
carefully perusing the details of
Mr. Wills plan, the Govt. are
fortunate & admit that the results
contemplated by it are attainable.

8. It is believed that Capt. Priestley the Asst. Secretary
shall organize four distinct Parties
of the Staff to establish the Stations,
and as rapidly as the necessary
data of agency can be secured,
each party of three shall be under
the Deputy Superintendent, and be
a separate geographical
division of the operations.

Each party shall be furnished in
the field of labour by a distinct
Organization & establishment,
and followed by the additional
supplies.

And the results of the survey as they are obtained
shall be multiplied and re-
corded by [illegible]
a Lithographic press & be worked
under the direction of Capt. Priestley.
the Superintendent of the Survey.

9. The annual value of the Survey
& establishment is estimated at $^{D^{rs}}$ 80-24/920
exclusive of stationery, instruments,
Camp equipage, and Capt. Priestley
calculates this annual work
at the rate of 60 miles a day

93
119

for each Triangle for 360
working days in the year
Lieut. Wilcox that the
sanctioned dimension
size of Survey field Party is two
for Sup.ent & for Assistants field
to maintain -

10. This gives - that of
4400 square miles annually
for the whole 4 Parties, in-
cluding about 11 per cent. of
Lake Land, at a cost of
D^rs 55 per square mile, and
the whole cost of 80000 D^rs
Wilcox bill thus be wrought
in 4 years. Within the estima-
ted Expenditure of D^rs 350,000.
So long as only 3 parties may
have been organized the cost
will be D^rs 50. per square mile
and Item 3. Shall be a
work. in bill be reduced
to 32½ per square mile. in
that of the figure 4 in 6, it
will be less than the original
Govt Estimate of D^rs 35. per
square mile.

In judging of Capt Priestley's
estimate of cost & the proposed
by the results hitherto obtained
China, it is the same in
India that in the Western
Hemisphere, the remuneration

[illegible] size of the survey fields, does not [illegible] for his future operations was explained. and that the latter is said to have increased in the ratio of 3. 2. 5. by surveying and plotting each field, known 2. 005 square each, & the much loss of time resulted from the want of stations identification of the fields, and from the latest figures, and other localities selected for survey, being often inaccessible for tents, instead of pitching a compact field for operations. Another difficulty was also experienced in retaining servants permanently on what was considered very low emoluments, & this, with other hindrances, &c.

Mr Smith observes that he has obtained last season by Calculation, with data & his instruments a more correct than most employed in the North of India, and considerably in excess of the maximum attained during the first 9 years in Bengal and the N. W. provinces, and he Est. share his opinion of the premier triangulation, quick success and expedition in the most detailed operations [illegible] he undertakes —

vide para. 8. Mr Smith's letter of 7. Dec. 37.

para 12. letter of 22. Nov 37.

para 11. of same letter.

For the Professional Survey only.

Bengal 27,524. R. per party.
N.W. prov. 31,287. —

For the Professional Survey and Khasia.

Expenses for Madras. 54,840. R. per party.

and the proportion of its cost. that of the Revenue survey appears, from Lieut. Thuillier's Manual, to have been as R. 28½. to R. 20½ per square mile. so that the charge for the detail operations may have been less than two annas per acre as stated in the Survey Professional papers.

93

Agree in comparing Capt Fitzclarence's estimate of the cost of each of his Deputies establishments to with those employed in the N.W. provinces and in Bengal it is proper to point out that it the item of "Khasia" or with measurement. is included in the former. and omitted in the latter.) and that of the survey of the Khasia mountains for the season of 1838-9. as stated at pages 5 & 6 of the "Manual" is about 2 the average of the cost of the Professional survey of pages 5 & 6 of the Manual. I have found from R. 20½ - to R. 22. 5. 8. and R. 26½. the double rate for detail the amount of Establishments for Madras.

10th The intention of permitting the personal Inconvenience & the former Superintendents to retain a portion of pecuniary allowances under necessary the existing rules of pay & personal labour and expenses. while, and the organization of the Public Works Departments, have the salaries of its Officers and their subordinates been increased & the duties thereof & performed, rendered it expedient necessary & that those of the higher classes of subordinates in the Survey Dept should be augmented on a suitable scale

13

The Government Reserve &c &c:
Communicated to the Superintendent
for sanction the estimate for
the Survey department as
noted in the margin, but
the approval of the Hon'ble suggestion
that the allowance for the contin-
gencies of each party
shall be entered as a distinct
item, and not as a personal
allowance to the Deputy
Superintendent at the head-

14 Considerations of the primary
importance of obviating all risk
of delay or hindrance to the
Survey parties, induced the
Govt. in their order dated 11. Feb. 57,
to insist upon distinct and
sufficient provision being made
for the demarcation of boundaries,
and the Revised plan includes
a small demarcation Es:
in this Amount, also an Estimated
cost of Rs. 9960. for
each of the 4. parties required
to complete obtaining
the considerable assistance
to this work from the
Instructions issued in the
Land Tables and Rules,
but considers that his Amount
is moderate, though it may hereafter

Abstract. Survey Estt.

Supt. of the Survey - per annum
Rs. 12,000
His Office - 10,560 -
4. Survey "Parties"
each under a
Dy. Superintendt
at Rs. 5,740 - 22,960
Rs. 2,45,520 - per annum

N.B. This amount is exclusive
of any Travelling allowances
for the Supt. and his Office, and
of Cadet Batta and for his own &
the Deputies establishment
and also of the cost of Instrument
and Camp equipage.

Demarcation Estt:
4. Parties - as
Rs. 9960. per annum
for each party. } Rs. 39,840. per an.

Lithographic Press Estt:

Rs. 9012. per annum for
15 years.

Expense and Inspection in
some of the details, and
is on a direct Scale that
in the N.W. Provinces, referred
by Govt. in their order
of 29 Sept. in this order
above quoted, those duties
are of a more important
character than will arise
under a System of the Revenue
Settlement, which is to be carried
for the purpose.
15. The Engineer recommended
this Estimate for adoption,
as also that for the Lithographic Press Establishment,
Instruments, ammunition
Rupees 9012. per annum,
and which sum is calculated
will be required for about
15 years, involving an
estimated total Expenditure
on this account of Rs. 135180.
16. Capt. Basevi requests the
attention to make considerable
reductions in the Establishment
of Draughtsmen
when the Revision is in full
operation, and allowing
for the saving of expense, it
is calculated that the result
of the Survey may be thus

Settlement

[illegible] Accounting
[illegible] Deputies has
[illegible] the work
[illegible] charging the Progress
at least Equally Equitably
with that of Surveying and
that, allowing 275 working
days to the year and after
deducting 10 days for Contin-
gencies, duty out of every Sixty
days of 60 Classified as
both Every 60 to be Equitable
Labourers at the rate of
25000 Acres. or 1296. Square
Miles annually for each
Deputy giving an annual
Total of 5760. Square Miles
for the whole Establishment
of 4. Deputies, and be
Shows that surveying only
5000. Square Miles annually
the cost of passing and
delineation of Boundaries
with be about 5/. Rupees
per Square Mile, while the
original estimate of Rs. at
Rs. 10. per 100 Acres. would give
Rs. 62. per Square Mile.
20. The Board of Revenue
remarks on this, that the
Pamphlet estimate of the Number
of Working days in the year
is probably too high. [illegible]

Abstract
Settlement Establishment

Director
Salary, Tentage and
Establishment Rs. 57,280 per annum

4. Deputies. salaries
Cutcherry and Establishment — 1,89,584. per annum

Batta. Travelling Establishment
Office contingent Charges — 10,000. per annum

Rs. 2,56,844.

Sub: Col: Rs. 1166.

Annual Cost of Establishment
2,56,844 ÷ 5000. Square Miles
Rs. 51.37. cost per Square Mile.

Annual work to be performed
5000. Square Miles

Rs. Cubic Contents of Working days
60 × 50 × 275
= 825,000 Cubic Ft.
= 1296. Square miles
per annum for
1. Assistant

Rs. 2,56,844.

Deputies
Labourers
Establishment

Deputies
Labourers
Establishment

Deputies
Labourers
Establishment

that it is not so sanguine as I had then & reject it
~~The Govt. trooper showed~~
~~that it is to be understood~~
that, as a separate enumeration establishment is not proposed & therefore that, the full number of Classifiers will be available for their own proper duty -
If allowing them only 55 hours a day for each enumerator and only 260 working days in the year, the whole Russian Empire might be expected to get through 5360 square miles at a cost (including the charges for the Enumeration & the Estimate) of Rs. 36. per square mile.

* As they ~~Accountants of Govt~~ will be quite able to get their work, as more than a year's work already prepared for them in St. Acct, and as Capt. Bisshy expects to have annual amount of work & possibly 7500 square miles per annum, if found on experience the Establishment, there is no reason to fear that the Assessing Dept. will ever run the Surveying Dept, though their ~~imperfect~~ estimated work is in their papers calculated at 1100-, and 1290 ~~square miles~~ square miles respectively for a party —

Area. Class: working days in the year
55 × 60 × 260
= 858,000 acres
= 1340 · 39/64 miles for each Party
or = 5360 · 39/64 miles for the whole Russian Empire

Amt. of Accts. Establt. Rs. + Amt. of Enumeration Rs.
Rs. 256844 + Rs. 39840
= Rs. 296,684

Miles. Rs.
5360 / 296,684
Rs. 55-3/4

* At this rate of progress the Revising Department would in 14 years go over 75,000 square miles of country, being one fourth more than the whole estimated area as before mentioned. but

Annual.
Rs.
Survey. 241,920
Accts. 256844. including Director's Salary.
Enumn. 39,840
Expenses. 9,012
Total Rs. 547,616
14 years
Rs. 76,66,624-

10
53
Rs. Revised Estimate for the Survey proposed by Captain Bisshy considering the whole of this Establishment under the Director & Assistant Superintendent with the Establishment & Estimates of the Assistant Commissioners for Inspections:

1st. The total Annual Expenditure contemplated in these Estimates amounts to Rs. 5,47,616, as detailed in the Margin, and as it may be expected the cost will be limited during a period of about 14 years, the entire cost of the Survey and Assessment of the Madras Presidency is thus estimated at Rs. 76,66,624-

Inasmuch as the original detailed Estimates submitted by Col. Pitcher in 1857 have been found to be sufficiently correct, and as the Survey has been carried on in accordance with them, I have not thought it necessary to call for any fresh Estimates, but have adopted the Original Estimates as the basis of my present Report.

2nd. In the Estimates which I have submitted for the Survey Establishment, I have included the cost of the Equipment, which was left entirely at the discretion of the Director. This list of Instruments will be forwarded by the Secretary to the Government with these Estimates, and

103

54

23 The Govt approve the Recommendation of the Board in their Proc. of 19th Nov. 53, that Capt. D. shall be permitted to purchase two Camels for Contingent Duty, and that Charges thereon be allowed in the Contingent Bill, and that a Special sanction to those Purchases be granted.

The Regimental Camp Equipage and Barrack Furniture can be procured on Indent from the Ord. Dept, and an Estimate should be submitted thro the Ord. Dept. for the Accademy & the Staff Corps.

Bussa.

to Dak may be decided later

as possible and the Director of Revenue Survey & Superintendent of Survey furnished with details of Establishments, distinguishing which salaries should be sanctioned as a little better than a part of Establishment. It will be required of the Govt of India that a Map may be given to the Officer presiding over each of the Departments of Revenue and Survey & Settlement for the districts portions of the Country sanctioned for the Establishments as the Govt of India may publish for their Information & it will be that can be obtained, and generally to make such modifications in the form of this Establishment as may subsequently be found desirable, with a understanding that, unless case shall be the amount allowed for an Entire Party is to be exceeded, and that such changes shall be submitted for confirmation & the Govt of India as long as

in this Railway Bond are
and stating as that under
consideration, some
discretionary power of the
kind must be granted in
the first instance to obviate the delay
and inconvenience resulting
from frequent reference,
and to sanction for the
work as estimated will be
regularly proceeded with; that
the Joint Engineers may not be
led to
2d. The question raised by the
2d. [illegible] remains
for the 20th, and first
that regarding the measure-
ment of the Sandy Fields
included in the established
standard "Survey Field".
3d. The Engineers entirely agree
with the Board that this
portion of the work must
be controlled by the Staff of
Survey. Equally with the Ref.
Survey of the Standard
Fields: and that the 5th
Field is not to be allowed to fall
much behind the other,
but at the same time they

Rx. Government Selections
Revenue Survey: para 25.

105
55

are not to be tied to this rate:
Quicksand Field intended
after Pilotage estimate
of the rate at which the
work of the survey will
progress.

25. The original proposal
approved by the Board was
that, while the Numbers
of measurements should be
limited in the "Survey Fields",
and that these should be
plotted in the usual manner,
the component fields within
them should be distinguished
by dotted lines according to
the measurements shown in
the Village accounts, and
the particulars of each
such included field, as
the Village account shows
to be entered in the "Register".
This plan appears to have
been suggested by Capt. Priest
himself, and to meet
with the Board's approval,
and coincides in great
measure with that now
proposed in para 20. Govt.
Rect. of 18th Oct. 53, and
they observe that the Subdivi-
sional fields will not run
so small in the Northern
Districts as they do in the

107

(56)

Finds, in a Letter
Dated 1st March 183

27-7-74
4.3.08
9/2/11

Revenues 1858 Charles
to Cons: 26th January

№ 96

Extract Minutes of Cons:
of 25th Jany. 58.

The Govr of India with Copy
of the Civil Service Estimate
for the Direction of Revenue
Establishment of 1858 for Cons:

The Director of Revenue
Establishment of 1858/59
for Cons:

Reviewing the Proceedings
of the Board, relative to the
revised Estimates of Establish-
ments required for carrying
on the General Revenue Sur-
vey & Assessment of the
Bombay

148

Dispatch
26 January 58.

(57)

№ 97

To
The Secretary to the
Govt of India.

Sir

For your Direction by the
next Dispatch to India
I am directed by the
Court of Directors to
transmit to you, for the
Govr Genl in Council, the
accompanying detailed
Estimate in the prescribed
form for the Establishments
required to carry on the
Survey & Revenue
Survey of the Bombay
Presidency as sanctioned by the
Govr Genl.

It will be in the
recollection of the Govr Genl
in Council that the proceedings
of this Govt dated 14th
August 1855, and
finally by the Despatch
from the Board of Cons:

4

W.C.

W.M

like this Dr: in depreciation
3 The plan of operations
which it is proposed to
carry on & the works necessary
for the Establishment for
which sanction is now
sought, contemplates the
completion of the whole
work within a period of
14 years instead of 22
as originally estimated
by this Dr: and either
an natural increase
of Revenue - the area
which it is believed
that the Levy per annum
will have to be extended
will include an Area of
about 60,000 Square
miles: and experience
in the Bombay Presidency
& the Madras Presidency
& the Ganges Survey
& the Bengal Dr:
& the Punjab Dr:
justifies the belief that the
existing Establishments
will be able to
perform their work
in the East of India
within the period

time a correct calculation
of the Expense likely to be
incurred in the undertaking
which they estimated
at a sum of about
Rupees 76,40,000 under
the Bombay Estimate
that about 22 years would
be occupied in the work
3 The Hon. Court in their
Despatch of this Dr: of
17 Dec. 1856, sanctioned
the Expenditure necessary
for carrying out this most
desirable operation, and
the appointment of
Director of Rev. Settlement
and Supt. of Rev. Survey
being then filled up,
to establishments for
which sanction was
asked for are required
since the Dr: the Surveyor
of the Expenditure during
the month on this account,
and I foresee, as much
as possible, any delay
in the completion of the work, which
the Hon. Court contemplated

Square miles for a measure
which Mr. Hawkins, the Director of Surv. to the Government
the attainment of what
Equal speed in his department.
The nature of the saving of
time by the present plan,
ing just one third of
the period usually allowed
for the completion of the operation
by any other scale,
to over-estimated, & whether
in regard to the importance of the proposed measure
& the Right to, as tending
to save this amount of
his lordships or the
expected in aiding the
development of the resources
of the country, increasing
the Revenue, and lightening
the individual incidence
of the land tax, by spreading
it over a wider area,
and thus lower it, after
careful scrutiny of the
details of the plan, the
Commissioners do not
that these objects will be
attained as proposed.
5 The total annual Expenditure
that will be required,
when the proposed

2.

(59) 113

Abstract.

	Annually.
Survey dept.	£ 24,920
Assess. dept.	2,50,844
Insurance dept.	39,840.
Litt. Fees.	9,012
Total £	5,47,516 per annum.

which has not been taken into
view & their future strength,
which I would recommend to
finish the whole work and
complete it in £ 547,516. as
stated in the margin, to
be continued for a period
of about 14. years. and
then aggregating a total
expenditure of £ 7,66,024.
for the whole 20 k. of the
Survey and Settlement
of this Presidency for
which, in the original
Detail Estimate, a sum
of £ 964,000 was allowed
6 The Estimates provide
for the distinct & separate
& annual expenditure
of Guarantee, Survey,
and Assessment, & the
employed in the distinct
geographical divisions
of the country, this
duration of the direction
by the Director of Revenue
& Superintendent
of Survey. Each
of whose duty, each
of the 4. Parts of the
Presidency and amongst
whose subordinates
Assistants
immediately the Superintendent

by an European Deputy
Supt. whose the former
case, will be a Commanded
Officer - and will also have
under his orders a party
of the Insurrection Establ.
-ishment. While the work
of the Lithographic Press
is to be carried on under
the direction of the Supt. of Rev:
Survey.

The rates of pay have
been fixed not higher than
is allowed the necessary
Establishments & care
must be taken to procure
the best available agency
in their respective branches
of the work. We should
~~not be enabled to~~ ~~[illegible]~~ expected
~~[illegible]~~ from persons of the
rank of the Collectors, and
we shall native subordinate
who will be liable to be
tempted away by the offers
of the post of Head Shroistadar
~~to the Supt. of Police~~ ~~[illegible]~~
~~[illegible]~~. It is very
essential to progress and
economy in this important work

(60)

that proper Establishments
for the Supt should be pro-
-vided as under, and
herewith, and in this
Establishment that may
be found necessary
in practice to be
proposed rates of pay
not higher than
are necessary to the service.

Depositories again. Plans
have been made for the
safety of pay & stores in the Public
Offices & those given in the Public
works Depositories. Which
have not considered more
than adequate, shewn
for the stores
for the Supt. Department
shew the Establishment, and it is
re-organised, and it is
essential & necessary as
the work shew in contempla-
-tion that Capt. Biston &
should retire from the
risk of losing his
trusted agents & the
any tempting offers of higher
to tempt him to another dept.
pay or another
of the Survey in preference
of the Survey parties
being the Survey parties
indicate the Establishment
upon the provision of a

distinct Triangulation for the Frontier. the importance of those Labours is frequently insisted upon in Sept. Instructions Manual, which Labours faithfully appear to have been executed, and by the Lithographic Plans the results of the Survey will be rapidly recorded, easily copied, and presented in the convenient form of Village Labour, and which will appear to the Lieutenant depart. Distinct Maps. Table Land Boundary Expect that it will be found to be Mutually Enabled to dispense with several Transatlantic Triangulations. To insure greater accuracy in the Survey it is intended to connect this Triangulation with the most Trigonometrical Survey. and it is believed that but little increased Expense will be caused by this Instrument.

The total Sum proposed to be Expended is, as stated above, Rs. 76,66,624. The Frontier and fourteen years, Rs. 5,47,616. Annual Expenditure of the original sketch Estimate, which provided Rs. 3 Lakhs for a separate Triangulation & Lithographic Party for the Trigonometrical Survey, and which Rs. 76,20,000. Sanction of the Hon. Court having Limit

The cost per square

(12)

(6)

mile will be as follows according to a moderately estimated rate of progress

1st For the Survey, including the "Khurak" and Professional Survey, about Rupees 55. per square mile the original sketch estimate having allowed Rs. 64.

2nd For the Assessment, and Settlement of the Surveyed area Rupees 51. - for Trichi Rs. 64. - not originally allowed.

3rd For the cost of the Trigonometrical Establishment including the Attached Boundary Survey, distinct Triangulation about Rupees 10.

and for Mapping the whole by means of Lithography. in lieu of Village Labour according as they are Village Labour or Distant Rupees 2. per square mile, for the last three two last items has been added allowance has been made in the original sketch.

The Items entered in the aggregate sixteen

whole annual
Expenditure for which
they provide, will not
be at once incurred,
to an considerable diminish
the difficulty in obtaining
the necessary class of
skilled agents. Men
must in many instances
be trained to the work by the
Superintendent; and
it is probable that
operations must be
at first commenced
with a few hands instead
of parties; instead
of parties as
plated - and our
it is that this Lordship
will be duly impressed
with the necessity and
fortune of the proposed
work, but as a balance
of running against
grounds of discontent
among the Agents of
the Residency, and
the

proximate cost of about
Rs. 118. per square mile,
while the total of the
Estimates now submitted
will allow of Rs. 128. which
on the original estimate,
so that an ample margin
appears to be left to provide
for the increased cost, &
will be incurred consequent
on the necessarily slower
rate of progress in the earlier
stages of operations.

The R. W. the S. in
Lego recommends three
Estimates to the Govt. of
India for adoption, and
to press for an early
sanction, that the pleasure
upon may be had,
and that a return may
be obtained for the Expense
now being incurred for
the Director of Settlement
and Supt. of Survey, three
Salaries, so long as they
remain unprovided with
Establishments as
with little than half of

Draft

abroad largely increasing the Revenues of the State without augmenting individual burdens, I would have hesitated to press the measure on the notice of the Supreme Govt. at this particular juncture.

In conclusion I am directed to repeat that as a matter of expediency, in consideration of the Novelty of the work in this Presidency, and the anticipated difficulty in obtaining the requisite agency & establishments, authority may be given to the Presidency Officers in either department, to disburse portions only of the fixed rates of pay & such persons as, though not perfectly qualified for the work, may satisfactorily be obtained, and generally to make such arrangements as may be found necessary for the efficiency of this Staff - as experience may dictate. Provided that no increase shall thereby be authorized for a Party be exceeded - and that the consent of this Govt. shall be obtained to all such proposed changes.

I have &c.

H.T.

5. Jan. 27/58

And I am directed to request that

(63) (2)

as immediately as practicable the proposed establishments may be sanctioned by the Govt. of India will be placed in order to enable the Presidency of Bombay to make the requisite arrangements for the commencement of the work - so that the surveying parties may be enabled to proceed to Coimbatore &c

J. & S. H. Geo. 25th January 1858

Enclosing a Letter to England
Dated 1st March 1858 No 5.

27-7-94
7/3/61

Revenue 1858 - Deptt
Dy. to Cons: 26th January/58.

No. 97

To
The Secretary to the
Govt. of India
Dated 25th Jany/58

From Dy. Sec. to Govt. March/58 Spl. No. 396 & 1
From Dr. - - - - - No. 2 Gen. Cons. 12
13 & 14 Jan.

Forwarding detailed Estimate
of Establishments required
to carry on the General Revenue Admin.
of this Presidency, as authorized by
the Honorable Court and soliciting
sanction to the same.

No 43

125

(65)