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பாதுகாப்பு பிரதி-1

செப்பனிடுபவர் பெயர்:

செப்பனிடுதற்காக எடுக்கும்-
சொல்லப்பட்ட நாள்:

Fort Saint George, Revenue Consultation of 16th February 1858.

No. 33. Read the following letter from J. D. SIM, Esq., Acting Secretary to the Board of Revenue; to H. FORBES, Esq., Acting Secretary to Government Revenue Department, dated Fort Saint George 16th January 1858, No. 193.

Sir,

With reference to paras. 9 and 10 of Extract Minutes Consultation under date 13th October 1857, No. 1041, R. D., I have the honor under direction of the Board of Revenue to submit for the information of Government, the result of a further reference made to the Acting Collector of Masulipatam on the subject of the Survey classes; and also Mr. Robinson's report on the Survey classes of Malabar since 14th August 1856.

From Masulipatam 9th September in Consultation 9th November 1857.
Pro. to do. and Director of Revenue Settlement 9th November 1857.
To Collector 27th August 1857.
From Masulipatam 7th & 9th November in Cons. 14th December 1857.
From do. 9th December 1857 in Cons. 16th January 1858.
From Malabar, 12th do. ,, in Cons. 16th do. ,,

In Consultation 27th August 1857.

2. On the 27th August 1857 the Board called on Mr. Knox to ascertain if the Survey work had been checked by any of the Assistants of the District Engineer, and desired to know whether Captain Priestley's method of operations had been followed, as in Rajahmundry. They also transmitted to him such portions of their letter of 27th August 1857, No. 2655* as related to his District.

* *Renewed by Government in Extract Minutes Consultation, 13th October 1857, No. 1041, R. D.*

In Consultation 9th November 1857.

3. On the 9th September 1857 the Acting Collector forwarded to the Board a letter from his Assistant Mr. Chase,† who has charge of the Survey class. Mr. Chase informs the Board that Captain Priestley's method of operations might with advantage be adopted, *were it not* that the class have not the requisite instruments, and if they had they could not use them. Under these circumstances it is not easy to understand what Mr. Chase means. He states that the plan he has adopted is most simple and easily understood by natives, but the Board observe this by no means guarantees its accuracy, and the doubt is confirmed by a letter from Captain Orr, which will presently be noticed. Mr. Chase also informs the Board that the Survey class is 'eminently useful' for setting boundary disputes, and measuring Enams, and other necessary details, but 'beyond this it is almost valueless'. Its real value therefore is very ambiguously defined.

† *Dated 8th September 1857.*

In Cons. 16th Jan. 1858.

4. On the 9th December 1857, Mr. Knox forwarded to the Board copy of a letter from Lieutenant Chambers Acting District Engineer of the Kistna Division, reporting on the survey class. He states that they appear well grounded in the use of the Prismatic compass and chain, and that the methods they employ for calculating areas are 'simple' and with *one exception* correct. He adds that the Survey of the boundaries of the talook of Goodewadah promises to be a very useful work.

5. The "exception" to the correct measurement of areas, is in the use of Trapeziums, where the custom seem to be to take the means of opposite sides and multiply them for the content.‡ The process is quite erroneous, yet still in small fields, and those which are nearly rectangular parallelograms, the error in practice would be trifling. It is in fact the method used in the Khusrah Surveys of the N. W. Provinces, and that under Captain Priestley,§ though in the latter case the areas are checked by measured diagonals.

‡ *The Board conclude the youths know how to compute the area of a Trapezium when accuracy is required.*

§ *Appendix to the Board's report on the Survey 27th February 1854, para. 16 and 53 (No. IX. Printed Revenue Selections.)*

In Cons. 14th December 1857.

6. On the 13th November the Collector forwarded to the Board Mr. Chase's report on the survey classes, or rather of the work done by them from January to July of 1857. Some boundary disputes appear to have been settled, and plans made and recorded. Land newly brought under irrigation measured, and

several villages surveyed field by field, and the Board are still of opinion that the class should be kept up.

7. The Collector does not explain what are the 'Karaimanchi' alluded to in para. 10 of the Extract Minutes Consultation of 13th October 1857. The Board believe them to be documents taken from the Ensandars by the Surveyors certifying that they are ready to abide by their measurements. Similar Moochilkas were formerly taken by Captain Priestley's Surveyors from the village ryots.

8. The Collector of Canara has also sent in a report,* not so much of a Government Survey class, as of a Survey class in the Mission School of the Reverend Mr. Koch whose letter forms an enclosure in Mr. Fischers. It appears that this class is under a very efficient teacher Mr. Plebst, and is progressing satisfactorily. Mr. Fischer does not think it desirable to detach this arrangement, on account of the impossibility of obtaining the services of a teacher for a separate Government class, equal to the duty.

* *Dated 12th in Consultation 19th December* 1857.

The Collector in his letter of 24th December 1857, has forwarded some plans drawn by P. Sashachellum Pillay, the only person who has offered himself as instructor, but the Board do not consider them such as to evince a great knowledge of the science. He proposes however as an encouragement, to enter the three best pupils as 'volunteers' on the pay sanctioned by Government of 4 Rupees per mensem.† The Board are of opinion that under the circumstances it is the best course that can be adopted, but it would be well for the Collector to submit *periodical* reports accompanied by plans and Field Books, and to impress upon Mr. Koch that it is not merely to photographical Surveying, but measuring for content, and plotting to scale several fields or enclosures together, that is required.

In Consultation 16th January 1858.

† *Extract Minutes Consultation, 24th October 1856, No. 1351, R. D.*

‡ *The plans adverted to in para. 7 of Mr. Fisher's letter, have not been received.*

9. With reference to para. 16 of the Extract Minutes Consultation of 13th October 1857, the Board§ directed the Collector of Coimbatore to break up the Survey class and to return the instruments. The Collector in his letter noted marginally informed the Board that he had dismissed the two remaining apprentices, the others having been already discharged. He also states that they were all employed during the official year 1856-57 in working under the officers of the Department Public Works in making roads, and works of irrigation, and were not exercised at all during the year in Surveying. It is evident therefore that the dissolution of the Survey class was necessary, especially as Mr. Thomas notices that neither he nor his only Assistant had time to teach the apprentices.

§ *19th November* 1857, *No.* 3579.

3rd and 31st December 1857 *to Consultation 16th January* 1858.

10. The last letter referred to in *para. 1 of this letter reports* the state of the survey class of Malabar, under the auspices of Mr. W. Robinson, the Acting Collector. This officer has succeeded in making the class of real and valuable service, in the revenue survey of Cochin and its environs, in surveying and measuring lands taken up for Railway purposes, the new Malapparam Cantonments, and various lines of road.‖ The nominal roll furnished by Mr. Robinson, and his mode of estimating acquirements by marks¶ affords a ready means of ascertaining individual proficiency. Two only of the youths have passed into the public service** during the year, owing to the stagnation in promotion consequent on the reduction of the Department Public Works. The class of Volunteers,†† seem also to make good progress, and the work of the survey class generally has given Mr. Robinson *satisfaction*.‡‡ His opinion on this subject is quite sufficient to satisfy the Board.

‖ *Para.* 12.

¶ *Para.* 4.

** *Para.* 5.

†† *Para.* 6.

‡‡ *Para.* 7.

11. The substitution of chain work entirely, instead of combination of chain and compass,§§ is an improvement. It has many advantages, and is one in which practical Surveyors in England pride themselves. It is peculiarly adapted for measurement of content, is easily and accurately checked as the work is in progress, and is quite independent of any angular instrument whatever. The Plane table Compass though useful in road surveying, Military reconnoissance, &c. is not to be depended on especially in the hands of Natives. The Board however still think Captain Priestley's plan of taking a traverse round the village boundary to begin with, an excellent one. Its accuracy can be minutely and easily tested, and the plotting of the village outline can be easily and accurately accomplished without the use of that unsatisfactory instrument a protractor. The interior measurement of village fields is under Captain Priestley performed by chain alone. The great point however to be strictly watched in chain measurements, is the correctness of the chain itself. It is very apt to stretch, and if it breaks and is patched up it is seldom correct. The necessity of *constant* comparison with a standard, is evident.

§§ *Para.* 8.

12. The specimens of plans and field books submitted by Mr. Robinson, give but little information as to the efficiency of the class. There are 5 plans by 5 different pupils, but they are all identical,* and either copied from each other or from one original. It is merely a line of 1930 feet with about a dozen offsets. The so called 'field book' being of course of the most simple description. Each pupil calculates each compartment in the correct *method*, and the sum total is the area. They all make the area 329,714 square feet, whereas it is 329,686½. The error is not great, but it is evident the several computations are copied from each other.

* *They are all on the* 100 *feet to an inch scale.*

13. In para. 11 Mr. Robinson intimates his objection to the mode of survey practised by Captain Priestley, urges the adoption of the method of the 'Tithe commutation survey of England,' or the continental cadastre, and seeks instructions from the Board.

14. As Captain Priestley's method is one which has had the constant support of the Board, and as they may not have another opportunity of recording their sentiments in respect of it, inasmuch as they conclude all future survey communications will be transmitted to the Director of Revenue Settlement, they are desirous of recording their opinion, that for Revenue purposes they consider the *Traverse Circuit, and separate field chain method*, the best of any that have come under their consideration. The total area of each village can be very correctly ascertained, and as correctly plotted. The internal fields are separately measured, their areas computed, and their space plotted into the map, so that each ryot has the correct content, figure *to scale*,† and position of his field recorded in the map. At a little extra trouble and expense, the village maps and details can be combined into a *taluk map*, and taluk maps into district maps, and district maps into Indian sheet maps, with every topographical information laid down.

† *5 chains* (330 *feets*) *to* 1 *inch, or* 16 *inches to a mile. The side of a square acre is* 6324 *inches; and a square inch* = 2½ *acres exactly.*

15. There is no tithe commutation survey of England! Parishes are surveyed here and there independent of each other just as the farmers may happen to wish for commutation, and each Parish employs its own Surveyor. No doubt the "first class" maps namely those that receive the seal of the Tithe Commission Office, (who also perform the same duty for the Enclosure Commissioners) are correct and well executed maps, but the content of each field and tenement is only to be obtained by measuring from the *map itself*, and though the approved *scale* is 3 chains (198 feet) to an inch, or 26⅔ inches to a mile,‡ there is always a liability to error in computing contents from paper, especially if the enclosures are small, and it is doubtful of any Court of Justice would be satisfied with such computation in case of dispute as to content. Whereas a computation from a field book record of actual measurement in the field, made at the time of survey, would be evidence of a much more satisfactory character. In the next place if several of the *sealed* tithe commutation maps are put in juxta position, it is found they will not close with accuracy, and if it were required to make a map of a country from them, they would be rejected. Now correct traverse circuits (and their correctness *can* be secured) *will* close, and form a district map.

‡ *Maps of 4 chains to the inch are not received as "first class" if they stand good testing.*

16. The French and Belgian 'Cadastre' to which Mr. Robinson alludes, is a splendid work, and was equalled by the Grand Trigonometrical or Ordonance Survey of England, as long as the 1/36th§ scale was permitted. Every field and petty enclosure is shewn to scale, and the whole execution admirable; but it is founded

§ *Scale of* 25.344 *inches to a mile, or* 10.018 *each the side of a square acre. The expense is about a shilling an acre, or* 34 £ *per square mile.*

6. The Government do not consider it necessary to follow the Board in their comparison of Captain Priestley's method with that adopted in England and on the Continent. It is sufficient to know that after mature consideration Captain Priestley's method has been adopted for the Revenue Survey now in progress, as being in all respects that best suited for the economical and satisfactory attainment of the object in view.

7. Such being the case and one great object in view in establishing these Survey classes being to provide Captain Priestley with trained agents, there can be no question whatever that Captain Priestley's method is that which should be adopted in practise in all these classes, and that their attention should be directed to careful measurement for content, and plotting to scale, as pointed out by the Board, rather than to mere Topographical surveying.

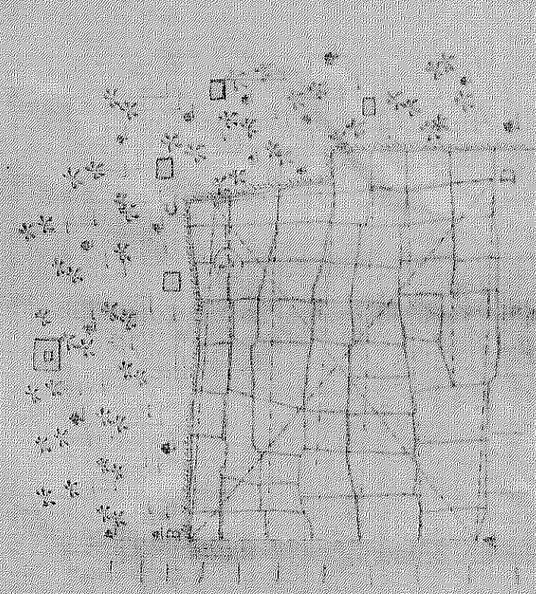
The scale generally made use of should be that adopted by Captain Priestley, and the necessity of keeping careful Field Books should be insisted on strongly.

8. The Government entirely approve of the proposal to secure some knowledge of surveying on the part of the village Menons, Shanbogues, or Curnums of the different districts, and among the Ameens attached to the several Courts, and trust to the Board of Revenue and Court of Sudder Udalut to further this plan by all the means in their power.

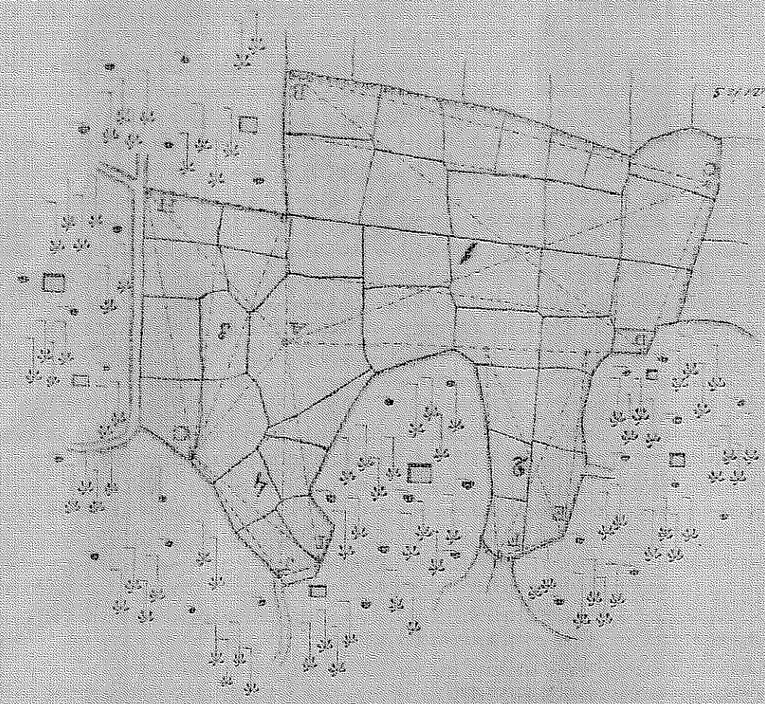
9. The Board of Revenue will dispose of all papers connected with this subject up to the end of the last year, but before giving any directions for the future, the Right Honorable the Governor in Council resolves to request that the Director of Revenue Settlement will, in communication with the Superintendent of Survey, submit his opinion as to the utility of keeping up these Survey Schools, now that a general department for the Presidency is on the point of being organised.

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

* 8 Chains 33 Links is Equal to 1 Rod
or Perch or 16½ Feet
the Side of a Square Rod
or Perch which Rod is also
called a Pole or Acre Measure



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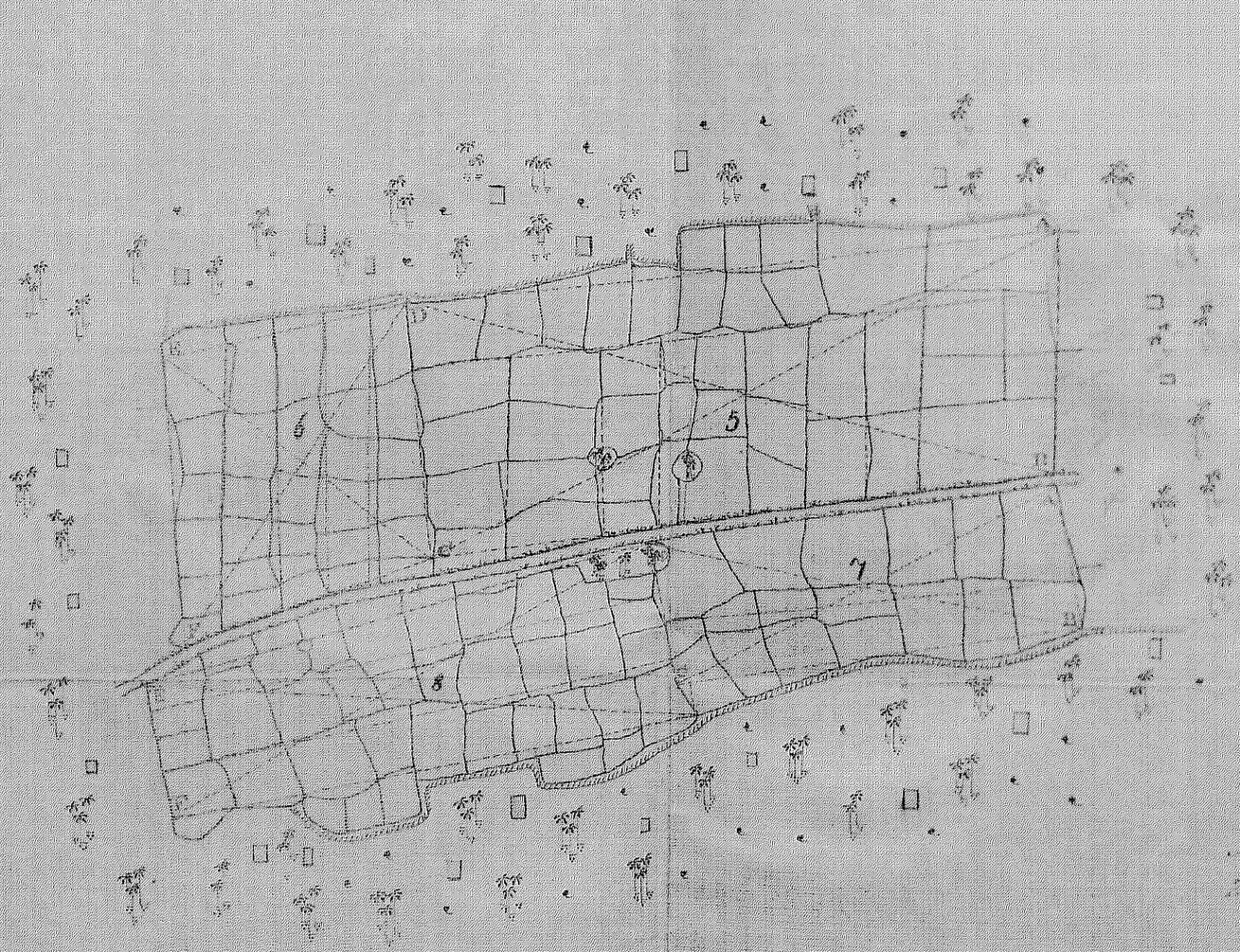
Plan
of
Lots
in
Section 37

Scale

3 6 3 9 Chains

Plan prepared by Public Land Survey
Field work completed 1st May 1878

28/1820



Scale

3 0 3 6 9 Ch.s

Surveyed & plotted by
Dyson Pulhoe

Area
A. R. P. Sols
21. 3. 27. 31

