

(1) Number of Pages 22

(2) Date of repair 28 2 68

(3) Initials of the Referencer 26 u. 68

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue

DEPARTMENT

G.O. No.
B.P. No.

1596

Press
~~Mis.~~

Dated

6-11-1875 ~~196~~

Not to be folded or roughly handled

1596
1

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

No. 95. Read the following Proceedings of the Board of Revenue, dated 26th August 1875, No. 2,419:—

Read the following letter from R. K. PUCKLE, Esq., Acting Third Member, Board of Revenue, in charge of the Settlement Department, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Madras, 15th July 1875, No. 1,441/40:—

With reference to Board's Proceedings, No. 428, dated 22nd February 1875, I have the honor to forward a letter from the Superintendent, Revenue Survey, enclosing Captain Cloete's report on the experimental redemarcation of two villages in the Trichinopoly District.

2. As the Board are aware there are but few demarcation marks standing in the Trichinopoly District. Some taluqs were surveyed without demarcation, others were demarked with earthen mounds, and only in a few instances were stones erected as field marks.

3. In the villages reported on, there are no field marks to be found, but Captain Cloete experienced no difficulty in tracing the survey fields in the irrigated lands; the edges forming the boundaries of these fields had not been shifted since survey, and all seem to have been cultivated year after year without change.

4. In the dry lands there was greater difficulty, more especially in the river bed, but the people know their own fields which are mostly gardens supplied by baling, and, practically, a revenue officer would have little difficulty in tracing the survey fields in the dry lands also. In the enclosure of his letter, Captain Cloete shows the errors discovered in survey; these are mostly trifling and are accounted for partly by the absence of marks on the ground, and partly by the method of computation in use when the survey was made.

5. To redemark these villages would cost Rupees 150 per square mile or three lakhs for the entire district of 2,000 square miles of field survey, redemarcation would of course necessitate resurvey, and resurvey would necessitate resettlement. The district was surveyed and settled only eleven years ago, and it is early yet to think of repeating these processes; the Survey Department, moreover, have pressing work to perform elsewhere, and I would urge the expediency of completing the survey of the entire Presidency before returning to resurvey any district. There is no real need of redemarcation; if the district can go without demarcation for eleven years, it can continue to go without for the remaining nineteen years of this settlement; the survey maps and settlement registers are quite sufficient, as Captain Cloete shows, to enable him to trace the fields throughout the irrigated lands, and the probabilities are that, with the aid of known fields and the topographical details shown in the maps, there are virtually not 5 per cent. of the fields in each village that cannot be distinctly traced; even these can be guessed near enough, and an outlay of three lakhs of rupees is out of all proportion to the benefit to be derived by securing accuracy in the definition of a few dry fields here and there.

6. I therefore recommend that Trichinopoly be left as it is till the completion of the settlement and survey in the other districts of the Presidency.

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

ENCLOSURE No. 1.

From Colonel F. J. B. PRIESTLEY, Superintendent of Revenue Survey, to R. K. PUCKLE, Esq., Acting Third Member, Board of Revenue, in charge of the Revenue Settlement Department, dated Chepauk, 8th July 1875, No. 1,953/100.

I HAVE the honor to inform you that I have this day received the report on the redemarcation of two villages in Trichinopoly from the Deputy Superintendent, No. 1 Party.

2. The examination showed little or no change of occupation since survey and settlement. Some errors in measurement and plotting and extent came to light chiefly due to the want of good demarcation, the measurement of four-sided taks, and the rough method of computation which was in vogue at the commencement of survey operations. The existence of these errors, however, would seem an argument against perpetuating them by carrying out the demarcation of the old survey fields.

3. The largest difference appears in the Padugai fields which are, however, always liable to change.

4. In the villages experimented on, no waste culturable land exists.

5. The ryots it seems are very anxious to have a property survey, but the expense* of demarcating the old survey fields and of the remeasurement made for that purpose must, I

* Rupees 274-13-0.

think, forbid even its adoption and render a property survey out of the question, more especially as it involves a resettlement.

6. Captain Cloete remarks that "if changes and extensions of cultivation are not to be measured and errors not to be adjusted, but only stones to be put up as nearly as possible at all bends shown on the old plans, then the work can be done as well and more cheaply by the Settlement Department." In this opinion I cordially agree, the more so as the Survey Department is fully and more profitably employed elsewhere.

7. May I request that you will communicate the result of the experiment to the Board of Revenue, with reference to their Proceedings, dated 22nd February 1875, No. 428.

ENCLOSURE No. 2.

Report on Redemarcation and Revenue Survey of two Villages in the Kulitalei Taluq, Trichinopoly District.

1. KALLAPALLI.—No. 35, Kallapalli.

Area by Settlement Register.

Dry 140-81.

Wet 238-19.

OLD AREA.—

Poramboke .. 88-81.

Total.. 467-81 acres.

Survey fields 270.

2. CHANGES IN CULTIVATION AND OCCUPATION.—There is no waste land in this village culturable, no additional land has therefore been brought under cultivation. The old field boundaries are nearly exactly the same as they were in 1859, excepting only of those fields through which the rail passes.

The printed settlement register is dated 1865, since that only one putta appears to have been transferred; this has caused alterations in twenty fields under the head "Puttadars' names" in the register.

There is one important difference between the present and the old register; in twenty-four cases, small portions of wet fields are shown in the settlement register as "mound" and "channel poramboke," the whole of these fields being under cultivation; in all these cases except one or two,

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

these small portions were under cultivation at the time of the original registration, but have only within the last few years been brought to account. The total area of these pieces of wet cultivation originally registered as "mound and channel porambokes" is 9-76 acres, or 4 per cent. of the whole wet cultivation in the village.

3. DEMARCATION MARKS.—Of field marks, as already reported, there are no vestiges in the district; the boundary pillars appear to have been in some measure restored a few years ago, under Mr. Banbury's orders; at the present redemarcation we found of the twenty-five pillars shown in the old plan of Kallapalli—eleven in good order, nine damaged and buried, and five missing altogether.

Two additional pillars not shown in the plan were found on the ground.

We have now erected permanent stone marks round every field, the material and necessary assistance having been cheerfully supplied by the villagers. It was not considered necessary to renew the theodolite stations with mathematical accuracy, as they will never hereafter be wanted as "stations," but only as boundary marks.

Total marks erected 733.

4. BOUNDARIES.—The old plan was used as a demarcation sketch, and the lines pointed out by the Curnam and landholders were followed wherever the shape of the ground agreed approximately with the maps; where the old fields were cut up by the rail, new road, &c., the old plan had to be ignored; but in the one or two exceptional cases where there was some doubt as to an exact boundary, the line was laid down from the old plan.

5. COMPARISON OF OLD AND NEW PLOTTING.—The old and the new field plotting are shown in one and the same map herewith sent, the former in black, the latter in red lines; the new plotting is correct, having closed within theodolite division lines; it will be observed that the difference between the position of the old and new lines is in most cases small, that in some parts of the map this difference gradually increases, till in one or two places it reaches two chains.

The incorrectness of the old map is entirely attributable to the system of plotting then in force, and to the following weak points of that system, all since remedied:—

(1.) The traversed boundary within which the fields had to close was far too large.
(2.) Fields were measured in four-sided figures instead of triangles.
(3.) Bends in a boundary were sometimes not shown, and straight lines shown as bends to save field correction.

(4.) Minor circuits of unmeasurable numbers (village sites, &c.,) were not run, and the attempts to measure them in four-sided figures were not successful.

(5.) The maps being sent out for testing with the supposed errors of measurement shown on them, Deputy Surveyors had opportunities (which they used) of making false corrections.

(6.) In some cases (on river and other sides) the field plotting was not tied in by a line of stations and offsets, but closed on its own responsibility, and offsets were then entered from the field plotting.

In view of these considerations the difference between the old and the new plotting in Kallapalli appears to be less than it might have been, and less than it will probably be found to be in other villages.

6. COMPARISON OF OLD AND NEW AREAS.—The traverse of the village is 458 acres, the aggregate of the fields by scale taken from the old map 455 acres, and from the new maps 457; but the aggregate area of the fields obtained by the Khusra method, and registered, is 468 acres, Q. E. 13 acres or nearly 3 per cent. more than the traverse area. This excess of aggregate areas of fields obtained by calculation over true traverse area is the natural result of the system of calculation for area then in force, the former will always exceed the latter to some slight extent when the fields are of regular shape, and very considerably in the case of narrow and crooked fields.

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

Comparing the areas of individual fields as registered with those now obtained, the following are the results:—

In 89 fields the difference is 5 cents and under.

49	"	6 to 10 cents.
76	"	11 to 30 "
25	"	31 to 50
13	"	51 to 1 acre
1	"	over 1 "

17 fields cut up by rail.

Total . . 270 survey fields.

The single case in which the difference is over an acre is in a large dry field (No. 260) adjoining the village boundary; the difference is caused chiefly by the alteration of an offset, the field is assessed at 10 Annas an acre.

Of the thirteen cases showing a difference between $\frac{1}{2}$ and 1 acre, six are poramboke fields (village sites, roads and channels); in one other case the difference is $\frac{3}{4}$ acre on a large dry field of 16 acres, and the remaining six are nunjah fields, in one of which the present survey shows an excess of 54 cents, owing to an incorrect measurement, and in the other five, the difference averages 56 cents minus the old excess, being caused by the incorrect system of calculating areas.

7. REMARKS ON SETTLEMENT REGISTER.—The 270 survey fields in this village have been subdivided and sub-lettered as 570 items; of these, 70 sub-numbers measure less than 10 cents.

One field of a little more than 2 acres is divided into 21 sub-numbers. The properties have in many cases, been clubbed to a greater extent than is allowed; in one wet field of 4 acres fourteen properties have been clubbed. It is supposed that the difference between old revenue areas and survey areas were, in such cases, proportionately distributed over all the properties included in the survey fields.

In four cases portions of survey numbers entered as poramboke are under cultivation without putta.

In seventeen cases important irrigation channels more than 4 yards wide have not been shown in the settlement register and are included in the puttas for the fields through which they pass: (on inquiry as to why Puttadars did not apply for deductions in these cases, the reply was that after the settlement deductions could not be made, only additions).

8. KULITALAI.—Area by No. 17, Kulitalai Village Settlement Register.

OLD AREA.—	Dry.....	117.42.
	Wet.....	339.88.
	Poramboke	119.30.

Total. . 576.60 acres.

Survey No. 229.

9. CHANGES IN CULTIVATION AND OCCUPATION.—There was no waste in the village fit for cultivation, and the limits of the survey fields are found now to exist as they were at the demarcation.

Three puttas have been transferred in the last ten years, causing alterations in the names opposite five of the survey fields, the cultivation here seems to be permanent, and, although the registers have been a good deal altered since their preparation, this appears rather to be on account of the entries incorrectly made originally, than by reason of changes of occupation (see paragraph 14 *post*.)

10. DEMARCATION MARKS.—No field marks were found in existence. Of the total twenty-four pillars on the village boundary according to the plan, three were missing, four damaged, seventeen restored a few years ago, some not exactly in their right places.

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

Permanent stone marks have now been erected at every bend of every field.

Total stones fixed 694.

11. BOUNDARIES.—See remarks for Kallapalli.

12. COMPARISON OF OLD AND NEW PLOTTING.—Map showing old and new lines is sent; in the southern portion the lines agree well with the exception of the offsets in the southwest, incorrectly taken originally; but in the northern portion of the map the differences are very great, extending in some cases to 4 chains.

The reasons for these differences are as detailed for Kallapallai (paragraph 5 *ante*), the fields appear not to have been correctly tied in on the river side.

13. COMPARISON OF OLD AND NEW AREAS.—Aggregate by Khusra old map... 576

Do. computing scale do. ... 570

New map 576

Traverse area 578

Differences between old registered areas and those now obtained.

In 54 Nos.	5 cents and under.
42 "	6 to 10 do.
73 "	11 to 30 do.
8 "	31 to 50 do.
14 "	$\frac{1}{2}$ to 1 acre.
10 "	over one acre.

Regarding the ten cases where the difference exceeds one acre, four occur in the Padugai lands of the Cauvery, which were sometimes submerged, and where neither demarcation nor measurement was carefully done.

The remaining six cases of more than 1 acre difference, as well as thirteen of from $\frac{1}{2}$ to 1 acre must (with one or two exceptions) be accounted for by incorrect measurements originally taken by measurements wrongly corrected, and by measurements taken to wrong points from want of any demarcation marks. As far as I have been able to ascertain, the limits of each property on the ground are now as they were fifteen years ago, or at least the differences are so small as not to be visible in our 16-inch map.

14. REMARKS ON SETTLEMENT REGISTER.—The 229 survey fields are divided into 375 sub-numbers; a few of these sub-numbers are of small extent, but the clubbing has been carried further than there was any necessity for, and beyond the extent allowed by the rules. In this village a property survey (with a few cases of clubbing) might have been carried out.

In eight cases, new sub-numbers have been given, since the settlement, to small channels formerly included in puttas.

In twenty-two cases, sub-numbers were given in the settlement register to nominal poramboke channels, &c., which porambokes having been since the settlement found not to be in existence, have now been included in the puttas from which they were formerly deducted.

The total area formerly so excluded and now included in puttas is 9.78 acres.

In a few other cases the areas of individual properties within survey numbers have been altered since the settlement.

General Remarks.

15. In the two villages selected for experiment there have been very few changes of occupation, there was no waste to take up; the boundaries of the fields appear never to be altered, and puttas seldom transferred; the land is probably very valuable.

In many other parts of the district, extensive changes and extension of cultivation will no doubt be found to have taken place since the first demarcation; if the old work is re-done, there will be no difficulty in putting the new cultivation on to it, but if not, plotting extensions in our old maps will be found very difficult.

16. The landholders unanimously clamour for demarcation and survey of each property separately, and were quite prepared to supply the materials for such demarcation; indeed they

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

object to renewal of the old demarcation (or rather the demarcation of the old survey numbers) unless every property is so marked, and it was only on my explaining to them that this was but an experiment to enable the Government to pass orders that they gave their assistance.

17. Where the properties average under an acre each, and in many cases measure only a few cents, the demarcation of each would be a large task, which the Government would not be prepared to undertake; on the other hand, if villagers do not send ready assistance to mark out the old survey fields there will be much delay.

18. Cost.—The cost of the demarcation, survey, and mapping of these two villages is as below:—

	RS.	A.	P.	
Demarcation	107	3	0	Total.
Survey	112	6	0	
Computation and Mapping	55	3	0	274 9 13

Total area, 1,070 acres.

At this rate the cost would be very great no less than—

Rupees 64 per square mile for demarcation.

" 67 survey.

" 33 mapping.

Doubtless the cost of operations over an extended area will be lower than the rate calculated in two small villages, and the average of the fields in the district will be found larger than in these two villages; but the work to be done amounts very nearly to the same as if nothing had ever been done in the district; only the village boundary survey can be utilized, while in some cases time will have to be wasted in ascertaining, by measurement, the spots where the marks were said to have been originally placed.

19. Redemarcation without efficient supervision and without resurvey can be of no use, and, if the work is to be done thoroughly, the cost will be not less than 150 Rupees a square mile, which would include the survey of all additional cultivation.

20. INTERSTITIAL FIELDS.—The boundaries of the interstitial fields being neither marked on the ground nor shown in the plan is one great objection to the Trichinopoly survey; the villagers object to it, the revenue authorities have nothing to guide them as to which part of the survey field forms each sub-number, and there is no check on the area of each sub-number.

P.S.—If changes and extensions of cultivation are not to be measured and errors not to be adjusted, but only stones to be put up as nearly as possible at all bends shown on the old plans, then the work can be done as well and more cheaply by the Settlement Department.

COIMBATORE,
7th July 1875.

(Signed) J. G. CLOETE, Captain,
Deputy Supt., Revenue Survey.

(True Copy.)

(Signed) F. J. B. PRIESTLEY, Colonel,
Supt., Revenue Survey.

ENCLOSURES Nos. 3 and 4.—Land Registers.

ENCLOSURES Nos. 5 and 6.—Settlement Registers.

ENCLOSURES Nos. 7 and 8.—Comparative Statements of old and new areas.

ENCLOSURES Nos. 9 to 12.—Comparison of old and new plotting.

ENCLOSURES Nos. 13 to 15.—Maps.

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

ENCLOSURE No. 16.—List of Enclosures to be returned.

ENCLOSURE No. 17.

From Captain J. G. CLOETE, Deputy Superintendent of Revenue Survey, to Colonel F. J. B. PRIESTLEY, Superintendent of Revenue Survey, dated Coimbatore, 9th July 1875, No. 848/363.

In continuation of my Report, No. 840/359, dated 7th instant, on Trichinopoly redemarcation, I have the honor to state that with the aid of the old maps the fields in the two villages experimented on could for the most part be identified, the nunjah fields with comparative ease.

2. At the same time, there is no doubt that in tracts of dry cultivation, or in waste fields without natural boundaries, the absence of all demarcation marks must render such identification impossible without measurement in each case.

3. I would also add in explanation of my "remarks on the settlement registers" and some other points noted in my report, that those remarks refer to the printed registers of 1864-65, in which no alterations appear to have been made; in the village "Chitta" and "Adungal" accounts many of the differences noted by me have been from time to time adjusted, a good many of them (I understand) during Mr. Banbury's Collectorate; but such changes, as far as areas are concerned, being mostly in sub-numbers, we have no means of ascertaining how far they have been correctly made.

(True Copy.)

(Signed) F. J. B. PRIESTLEY, Colonel,
Superintendent, Revenue Survey.

ENCLOSURE No. 18.

From Colonel F. J. B. PRIESTLEY, Superintendent of Revenue Survey, to R. K. PUCKLE, Esq., Acting Third Member, Board of Revenue, in charge of the Revenue Settlement Department, dated Chepauk, 10th July 1875, No. 1,972/103.

In continuation of my letter of the 8th July 1875, No. 1,953/100, I have the honor to forward copy of letter from the Deputy Superintendent, No. 1, Revenue Survey,

Dated 9th July 1875, No. 848/363. affording further information on the experimental redemarcation and survey of two villages in Trichinopoly.

SUBMITTED to Government with reference to G. O., dated 25th September 1874, No. 1,219.

2. In this letter, the late Acting Third Member in charge of the Settlement Department submits reports from the Superintendent of Revenue Survey regarding the experimental redemarcation and resurvey of two villages in the Trichinopoly District, with reference to the advisability of undertaking a redemarcation of the whole district.

3. It was found that notwithstanding the total absence of field marks, there was no difficulty in tracing the fields in irrigated lands, and that even in dry lands the difficulty was not so great as to destroy the practical utility of the survey maps. At the same time, Captain Cloete, the officer who superintended the works, is of opinion that the errors in the old survey, owing to the former system of plotting, are such that the restoration of the demarcation could only be done by trained Surveyors,

*Proceedings of the Madras Government, Revenue Department,
6th November 1875.*

and would in fact necessitate a resurvey of the district. This work is estimated by Mr. Puckle to cost about three lakhs of rupees.

4. In these circumstances, Mr. Puckle is strongly of opinion that the advantages to be gained are not proportionate to the great cost involved, and recommends that Trichinopoly be left as it is, until the survey work in the rest of the Presidency is completed.

5. Though the Board are not so sanguine as Mr. Puckle seems to be as to the ease with which the fields can be identified from the survey maps, and the extent to which these can be utilized for practical purposes, they are unable to suggest any more economical means of attaining the ends in view, and they endorse the recommendation which he has made.

6. In the villages now reported on, there was little culturable waste and little change in the occupation since the settlement. The mode of demarcating and surveying the lands newly taken up, and bringing the field survey up to date in Trichinopoly, must be considered with the same question for other districts. On this subject, and with reference to paragraph 2 of G.O., dated 13th July 1874, No. 872, the Board are still awaiting report from the Superintendent of Revenue Survey.

(True Copies and Extract.)

(Signed) H. E. STOKES,
Acting Secretary.

No. 56.

ORDER THEREON, 6th November 1875, No. 1,596.

Miscellaneous.

HIS EXCELLENCY in Council considers that no sufficient ground has been shown for undertaking so costly a project as the redemarcation of the district has been demonstrated to be, and resolves to direct its abandonment.

(True Extract.)

(Signed) L. A. CAMPBELL,
Under-Secretary to Government.

To the Board of Revenue.
„ the Acting Director of Revenue Settlement.
„ the Superintendent of Revenue Survey.

No. 2,419.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 26th August 1875.

Read the following letter from R. K. PUCKLE, Esq., Acting Third Member, Board of Revenue, in charge of the Settlement Department, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Madras, 15th July 1875, No. 1,441/40:—

With reference to Board's Proceedings, No. 428, dated 22nd February 1875, I have the honor to forward a letter from the Superintendent, Revenue Survey, enclosing Captain Cloete's report on the experimental redemarcation of two villages in the Trichinopoly District.

2. As the Board are aware there are but few demarcation marks standing in the Trichinopoly District. Some taluqs were surveyed without demarcation, others were demarked with earthen mounds, and only in a few instances were stones erected as field marks.

3. In the villages reported on, there are no field marks to be found, but Captain Cloete experienced no difficulty in tracing the survey fields in the irrigated lands; the edges forming the boundaries of these fields had not been shifted since survey, and all seem to have been cultivated year after year without change.

4. In the dry lands there was greater difficulty, more especially in the river bed, but the people know their own fields which are mostly gardens supplied by baling, and, practically, a revenue officer would have little difficulty in tracing the survey fields in the dry lands also. In the enclosure of his letter, Captain Cloete shows the errors discovered in survey; these are mostly trifling and are accounted for partly by the absence of marks on the ground, and partly by the method of computation in use when the survey was made.

5. To redemark these villages would cost Rupees 150 per square mile or three lakhs for the entire district of 2,000 square miles of field survey, redemarcation would of course necessitate resurvey, and resurvey would necessitate resettlement. The district was surveyed and settled only eleven years ago, and it is early yet to think of repeating these processes; the Survey Department, moreover, have pressing work to perform elsewhere, and I would urge the expediency of completing the survey of the entire Presidency before returning to resurvey any district. There is no real need of redemarcation; if the district can go without demarcation for eleven years, it can continue to go without for the remaining nineteen years of this settlement; the survey maps and settlement registers are quite sufficient, as Captain Cloete shows, to enable him to trace the fields throughout the irrigated lands, and the probabilities are that with the aid of known fields and the topographical details shown in the maps, there are virtually not 5 per cent. of the fields in each village that cannot be distinctly traced; even these can be guessed near enough, and an outlay of three lakhs of rupees is out of all proportion to the benefit to be derived by securing accuracy in the definition of a few dry fields here and there.

6. I therefore recommend that Trichinopoly be left as it is till the completion of the settlement and survey in the other districts of the Presidency.

28-3-12
5.10.14
To
Sd/-
REVENUE.
Madras.

THE BOARD OF REVENUE.

Secy. to Govt.
Secy. to Govt.
Secy. to Govt.

Dated November, 6th.

Recd.

G. O. 6th November 1875, No. 1,596.

NOVEMBER.

Nos. 95-96.

Redemarcation of Trichinopoly District.
Considering that no sufficient ground has been shown for undertaking so costly a project as the redemarcation of the district, and resolving to direct its abandonment.



Enclosure No. 1.

From Colonel F. J. B. PRIESTLEY, Superintendent of Revenue Survey, to R. K. PUCKLE, Esq., Acting Third Member, Board of Revenue, in charge of the Revenue Settlement Department, dated Chepauk, 8th July 1875, No. 1,953/100.

I HAVE the honor to inform you that I have this day received the report on the redemarcation of two villages in Trichinopoly from the Deputy Superintendent, No. 1 Party.

2 The examination showed little or no change of occupation since survey and settlement. Some errors in measurement and plotting and extent came to light chiefly due to the want of good demarcation, the measurement of four-sided taks, and the rough method of computation which was in vogue at the commencement of survey operations. The existence of these errors, however, would seem an argument against perpetuating them by carrying out the demarcation of the old survey fields.

3. The largest difference appears in the Padugai fields which are, however, always liable to change.

4. In the villages experimented on, no waste culturable land exists.

5. The ryots it seems are very anxious to have a property survey, but the expense of demarcating the old survey fields and of the remeasurement made for that purpose must, I think, forbid even its adoption and render a property survey out of the question, more especially as it involves a resettlement.

* Rupees 274-13-0.

6. Captain Cloete remarks that "if changes and extensions of cultivation are not to be measured and errors not to be adjusted, but only stones to be put up as nearly as possible at all bends shown on the old plans, then the work can be done as well and more cheaply by the Settlement Department." In this opinion I cordially agree, the more so as the Survey Department is fully and more profitably employed elsewhere.

7. May I request that you will communicate the result of the experiment to the Board of Revenue, with reference to their Proceedings, dated 22nd February 1875, No. 428.

ENCLOSURE No. 2.

Report on Redemarcation and Revenue Survey of two Villages in the Kulitalei Taluq, Trichinopoly District.

1. KALLAPALLI.—No. 35, Kallapalli.

Area by Settlement Register.

Dry 140-81.

Wet 238-19.

Poramboke . . 88-81.

OLD AREA.—

Total . . . 467-81 Acres.

Survey fields 270.

2. CHANGES IN CULTIVATION AND OCCUPATION.—There is no waste land in this village culturable, no additional land has therefore been brought under cultivation. The old field boundaries are nearly exactly the same as they were in 1859, excepting only of those fields through which the rail passes.

The printed settlement register is dated 1865, since that only one putta appears to have been transferred; this has caused alterations in twenty fields under the head "Puttadars' names" in the register.

There is one important difference between the present and the old register; in twenty-four cases, small portions of wet fields are shown in the settlement register as "mound" and "channel poramboke", the whole of these fields being under cultivation; in all these cases except one or two,

these small portions were under cultivation at the time of the original registration, but have only within the last few years been brought to account. The total area of these pieces of wet cultivation originally registered as "mound and channel poramboke" is 9-76 acres, or 4 per cent. of the whole wet cultivation in the village.

3. DEMARCATION MARKS.—Of field marks, as already reported, there are no vestiges in the district; the boundary pillars appear to have been in some measure restored a few years ago, under Mr. Banbury's orders; at the present redemarcation we found of the twenty-five pillars shown in the old plan of Kallapalli—eleven in good order, nine damaged and buried, and five missing altogether.

Two additional pillars not shown in the plan were found on the ground.

We have now erected permanent stone marks round every field, the material and necessary assistance having been cheerfully supplied by the villagers. It was not considered necessary to renew the theodolite stations with mathematical accuracy, as they will never hereafter be wanted as "stations," but only as boundary marks.

Total marks erected 733.

4. BOUNDARIES.—The old plan was used as a demarcation sketch, and the lines pointed out by the Curnam and landholders were followed wherever the shape of the ground agreed approximately with the maps; where the old fields were cut up by the rail, new road, &c., the old plan had to be ignored; but in the one or two exceptional cases where there was some doubt as to an exact boundary, the line was laid down from the old plan.

5. COMPARISON OF OLD AND NEW PLOTTING.—The old and the new field plotting are shown in one and the same map herewith sent, the former in black, the latter in red lines; the new plotting is correct, having closed within the theodolite division lines; it will be observed that the difference between the position of the old and new lines is in most cases small, that in some parts of the map this difference gradually increases, till in one or two places it reaches two chains.

The incorrectness of the old map is entirely attributable to the system of plotting then in force, and to the following weak points of that system, all since remedied:—

- (1.) The traversed boundary within which the fields had to close was far too large.
- (2.) Fields were measured in four-sided figures instead of triangles.
- (3.) Bends in a boundary were sometimes not shown, and straight lines shown as bends to save field correction.
- (4.) Minor circuits of unmeasurable numbers (village sites, &c.,) were not run, and the attempts to measure them in four-sided figures were not successful.
- (5.) The maps being sent out for testing with the supposed errors of measurement shown on them, Deputy Surveyors had opportunities (which they used) of making false corrections.
- (6.) In some cases (on river and other sides) the field plotting was not tied in by a line of stations and offsets, but closed on its own responsibility, and offsets were then entered from the field plotting.

In view of these considerations the difference between the old and the new plotting in Kallapalli appears to be less than it might have been, and less than it will probably be found to be in other villages.

6. COMPARISON OF OLD AND NEW AREAS.—The traverse of the village is 458 acres, the aggregate of the fields by scale taken from the old map 455 acres, and from the new maps 468 acres, but the aggregate area of the fields obtained by the Khusra method, and registered, is 468 acres, Q. E. 13 acres or nearly 3 per cent. more than the traverse area. This excess of aggregate areas of fields obtained by calculation over true traverse area is the natural result of the system of calculation for area then in force, the former will always exceed the latter to some slight extent when the fields are of regular shape, and very considerably in the case of narrow and crooked fields.

Comparing the areas of individual fields as registered with those now obtained, the following are the results:—

In 89 fields the difference is 5 cents and under.

49	"	6 to 10 cents.
76	"	11 to 30 "
25	"	31 to 50 "
13	"	51 to 1 acre
1	"	over 1 "

17 fields cut up by rail.

Total . . 270 survey fields.

The single case in which the difference is over an acre is in a large dry field (No. 260) adjoining the village boundary; the difference is caused chiefly by the alteration of an offset, the field is assessed at 10 Annas an acre.

Of the thirteen cases showing a difference between $\frac{1}{2}$ and 1 acre, six are poramboke fields (village sites, roads and channels); in one other case the difference is $\frac{3}{4}$ acre in a large dry field of 16 acres, and the remaining six are nunjah fields, in one of which the present survey shows an excess of 54 cents, owing to an incorrect measurement, and in the other five, the difference averages 56 cents minus the old excess, being caused by the incorrect system of calculating areas.

7. REMARKS ON SETTLEMENT REGISTER.—The 270 survey fields in this village have been subdivided and sub-lettered as 570 items; of these, 70 sub-numbers measure less than 10 cents.

One field of a little more than 2 acres is divided into 21 sub-numbers. The properties have in many cases, been clubbed to a greater extent than is allowed; in one wet field of 4 acres fourteen properties have been clubbed. It is supposed that the difference between old revenue areas and survey areas were, in such cases, proportionately distributed over all the properties included in the survey fields.

In four cases portions of survey numbers entered as poramboke are under cultivation without putta.

In seventeen cases important irrigation channels more than 4 yards wide have not been shown in the settlement register and are included in the puttas for the fields through which they pass: (on inquiry as to why Puttadars did not apply for deductions in these cases, the reply was that after the settlement deductions could not be made, only additions).

8. KULITALAI.—Area by No. 17 Kulitalai Village Settlement Register.

OLD AREA.—	Dry.....	117.42.
	Wet.....	339.88.
	Poramboke	119.30.

Total.. 576.60 acres.

Survey No. 229.

9. CHANGES IN CULTIVATION AND OCCUPATION.—There was no waste in the village fit for cultivation, and the limits of the survey fields are found now to exist as they were at the demarcation.

Three puttas have been transferred in the last ten years, causing alterations in the names opposite five of the survey fields, the cultivation here seems to be permanent, and, although the registers have been a good deal altered since their preparation, this appears rather to be on account of the entries incorrectly made originally, than by reason of changes of occupation (see paragraph 14 post.)

10. DEMARCATION MARKS.—No field marks were found in existence. Of the total twenty-four pillars on the village boundary according to the plan, three were missing, four damaged, seventeen restored a few years ago, some not exactly in their right places.

Permanent stone marks have now been erected at every bend of every field.
Total stones fixed 694.

11. BOUNDARIES.—See remarks for Kallapalli.

12. COMPARISON OF OLD AND NEW PLOTTING.—Map showing old and new lines is sent; in the southern portion the lines agree well with the exception of the offsets in the southwest, incorrectly taken originally; but in the northern portion of the map the differences are very great, extending in some cases to 4 chains.

The reasons for these differences are as detailed for Kallapallai (paragraph 5 ante), the fields appear not to have been correctly tied in on the river side.

13. COMPARISON OF OLD AND NEW AREAS.—Aggregate by Khusra old map... 576
Do. computing scale do. ... 570

New map 576
Traverse area 578

Differences between old registered areas and those now obtained.
In 54 Nos. 5 cents and under.

42	"	6 to 10 do.
73	"	11 to 30 do.
8	"	31 to 50 do.
14	"	$\frac{1}{2}$ to 1 acre.
10	"	over one acre

Regarding the ten cases where the difference exceeds one acre, four occur in the Padugai lands of the Cauvery, which were sometimes submerged, and where neither demarcation nor measurement was carefully done.

The remaining six cases of more than 1 acre difference, as well as thirteen of from $\frac{1}{2}$ to 1 acre must (with one or two exceptions) be accounted for by incorrect measurements originally taken by measurements wrongly corrected, and by measurements taken to wrong points from want of any demarcation marks. As far as I have been able to ascertain, the limits of each property on the ground are now as they were fifteen years ago, or at least the differences are so small as not to be visible in our 16-inch map.

14. REMARKS ON SETTLEMENT REGISTER.—The 229 survey fields are divided into 375 sub-numbers; a few of these sub-numbers are of small extent, but the clubbing has been carried further than there was any necessity for, and beyond the extent allowed by the rules. In this village a property survey (with a few cases of clubbing) might have been carried out.

In eight cases, new sub-numbers have been given, since the settlement, to small channels formerly included in puttas.

In twenty-two cases, sub-numbers were given in the settlement register to nominal poramboke channels, &c., which porambokes having been since the settlement found not to be in existence, have now been included in the puttas from which they were formerly deducted.

The total area formerly so excluded and now included in puttas is 9.78 acres.

In a few other cases the areas of individual properties within survey numbers have been altered since the settlement.

General Remarks.

15. In the two villages selected for experiment there have been very few changes of occupation, there was no waste to take up; the boundaries of the fields appear never to be altered, and puttas seldom transferred; the land is probably very valuable.

In many other parts of the district, extensive changes and extension of cultivation will no doubt be found to have taken place since the first demarcation; if the old work is re-done, there will be no difficulty in putting the new cultivation on to it, but if not, plotting extensions in our old maps will be found very difficult.

16. The landholders unanimously clamour for demarcation and survey of each property separately and were quite prepared to supply the materials for such demarcation; indeed they object to renewal of the old demarcation (or rather the demarcation of the old survey numbers) unless every property is so marked, and it was only on my explaining to them that this was but an experiment to enable the Government to pass orders that they gave their assistance.

17. Where the properties average under an acre each, and in many cases measure only a few cents, the demarcation of each would be a large task, which the Government would not be prepared to undertake; on the other hand, if villagers do not send ready assistance to mark the old survey fields there will be much delay.

18. Cost.—The cost of the demarcation, survey, and mapping of these two villages is as below.

	RS.	A.	P.	
Demarcation	107	3	0	Total.
Survey	112	6	0	
Computation and Mapping	55	3	0	274 0 13

Total area 1,070 acres.

At this rate the cost would be very great no less than—

Rupees 64 per square mile for demarcation.

" 67 " survey.

" 33 " mapping.

Doubtless the cost of operations over an extended area will be lower than the rate calculated in two small villages, and the average of the fields in the district will be found larger than in these two villages; but the work to be done amounts very nearly to the same as if nothing had ever been done in the district; only the village boundary survey can be utilized, while in some cases time will have to be wasted in ascertaining by measurement, the spots where the marks were said to have been originally placed.

19. Redemarcation without efficient supervision and without resurvey can be of no use, and, if the work is to be done thoroughly, the cost will be not less than 150 Rupees a square mile, which would include the survey of all additional cultivation.

20. INTERSTITIAL FIELDS.—The boundaries of the interstitial fields being neither marked on the ground nor shown in the plan is one great objection to the Trichinopoly survey; the villagers object to it, the revenue authorities have nothing to guide them as to which part of the survey field forms each sub-number, and there is no check on the area of each sub-number.

P.S.—If changes and extensions of cultivation are not to be measured and errors not to be adjusted, but only stones to be put up as nearly as possible at all bends shown on the old plans, then the work can be done as well and more cheaply by the Settlement Department.

COIMBATORE,
7th July 1875.

(Signed) J. G. CLOETE, Captain,
Deputy Supt., Revenue Survey.

(True Copy.)

(Signed) F. J. B. PRIESTLEY, Colonel,
Supt., Revenue Survey.

ENCLOSURES Nos. 3 and 4.—Land Registers.

ENCLOSURES Nos. 5 and 6.—Settlement Registers.

ENCLOSURES Nos. 7 and 8.—Comparative Statements of old and new areas.

ENCLOSURES Nos. 9 to 12.—Comparison of old and new plotting.

ENCLOSURES Nos. 13 to 15.—Maps.

ENCLOSURE No. 16.—List of Enclosures to be returned.

ENCLOSURE No. 17.

From Captain J. G. CLOETE, Deputy Superintendent, of Revenue Survey, to Colonel F. J. B. PRIESTLEY, Superintendent of Revenue Survey, dated Coimbatore, 9th July 1875; No. 848/363.

In continuation of my Report, No. 840/359, dated 7th instant, on Trichinopoly redemarcation, I have the honor to state that with the aid of the old maps the fields in the two villages experimented on could for the most part be identified, the nunjah fields with comparative ease.

2. At the same time, there is no doubt that in tracts of dry cultivation, or in waste fields without natural boundaries, the absence of all demarcation marks must render such identification impossible without measurement in each case.

3. I would also add in explanation of my "remarks on the settlement registers" and some other points noted in my report, that those remarks refer to the printed registers of 1864-65, in which no alterations appear to have been made; in the village "Chitta" and "Adungal" accounts many of the differences noted by me have been from time to time adjusted, a good many of them (I understand) during Mr. Banbury's Collectorate; but such changes, as far as areas are concerned, being mostly in sub-numbers, we have no means of ascertaining how far they have been correctly made.

(True Copy.)

(Signed) F. J. B. PRIESTLEY, Colonel,
Superintendent, Revenue Survey.

ENCLOSURE No. 18.

From Colonel F. J. B. PRIESTLEY, Superintendent of Revenue Survey, to R. K. PUCKLE, Esq., Acting Third Member, Board of Revenue, in charge of the Revenue Settlement Department, dated Chepauk, 10th July 1875, No. 1,972/103.

In continuation of my letter of the 8th July 1875, No. 1,953/100, I have the honor to forward copy of letter from the Deputy Superintendent, No. 1, Revenue Survey,

Dated 9th July 1875, No. 848/363. affording further information on the experimental redemarcation and survey of two villages in Trichinopoly.

SUBMITTED to Government with reference to G. O., dated 25th September 1874, No. 1,219.

2. In this letter, the late Acting Third Member in charge of the Settlement Department submits reports from the Superintendent of Revenue Survey regarding the experimental redemarcation and resurvey of two villages in the Trichinopoly District, with reference to the advisability of undertaking a redemarcation of the whole district.

It was found that notwithstanding the total absence of field marks, there was no difficulty in tracing the fields in irrigated lands, and that even in dry lands the difficulty was not so great as to destroy the practical utility of the survey maps. At the same time, Captain Cloete, the officer who superintended the works, is of opinion that the errors in the old survey, owing to the former system of plotting, are

such that the restoration of the demarcation could only be done by trained Surveyors, and would in fact necessitate a resurvey of the district. This work is estimated by Mr. Puckle to cost about three lakhs of rupees.

4. In these circumstances, Mr. Puckle is strongly of opinion that the advantages to be gained are not proportionate to the great cost involved, and recommends that Trichinopoly be left as it is, until the survey work in the rest of the Presidency is completed.

5. Though the Board are not so sanguine as Mr. Puckle seems to be as to the ease with which the fields can be identified from the survey maps, and the extent to which these can be utilized for practical purposes, they are unable to suggest any more economical means of attaining the ends in view, and they endorse the recommendation which he has made.

6. In the villages now reported on, there was little culturable waste and little change in the occupation since the settlement. The mode of demarcating and surveying the lands newly taken up, and bringing the field survey up to date in Trichinopoly, must be considered with the same question for other districts. On this subject, and with reference to paragraph 2 of G. O., dated 13th July 1874, No. 872, the Board are still awaiting report from the Superintendent of Revenue Survey.

(True Copies and Extract.)

J. H. French
Acting Secretary.

To the Acting Secretary to Government, Revenue Department,
with fourteen original enclosures, to be returned.
,, the Director of Revenue Settlement.
,, the Superintendent of Revenue Survey.
,, the Collector of Trichinopoly.

Exd. W. H. French.

*Best of the demarcation
has been shown for
incursing no large an
outlay as 3 lakhs
I would leave Trichy
alone. 1874*

*13 July 1874 No. 102. 103
- 25-10-1874. 229-30*

REVENUE DEPARTMENT.

No. 3807

From

R. of Rev.

Dated

26 August

1875.

FOR ORDERS.

*I do not think that
any sufficient necessity
has been shown for
incursing no large an
outlay as 3 lakhs
I would leave Trichy
alone. 1874*

*Do not abandon for the
present the idea of
a demarcation of the
S. It is not
necessary for
State purposes. It
will not gratify the
S. who want to
"property" survey.
It will involve an
expense of 3 lakhs
to do the thing thoroughly*

BOARD OF REVENUE,
MADRAS.

PROCEEDINGS, 26th August 1875, No. 2,419.

20th Sept 1875

Received 2:00 PM

AUGUST.
No. 2,419.

Experimental Redemarcation and Resurvey
of two villages in Trichinopoly District.
Letter from Director of Revenue Settlement
forwarding reports of Superintendent of Revenue
Survey regarding "and recommending
that the district be left as it is, until survey
work in the rest of the Presidency is completed,
submitted to Government. Report of latter
officer on certain points connected with the
subject, awaited.

20th Sept 1875
W. H. French

and then shall be followed
by A. Sawyer & Dr. Whapping
& A. L. Mumford. I make
the third critically

correct. As it stands
it is infinitely wrong
worse than that
be formerly had to
deal with. We can't
afford the expense of
doing the whole thing
over again.

Sentimental Union -
The reservoir - Got the
Barony is defective &
demarcation not -
is not of the question
23/10 Mr.

In whip L.
 Dicty. red. Generally
 excludes any constitutions
 simpler in leaving
 matters at the mercy of the
 11.10.76

FOR ORDERS.

Expenditure for
education & reading
of the village and
Lachinofly.

300

a
h
c
2
h
cor
11
w
h
a
a
a
h
h
h