

Government of Madras.

EDUCATIONAL DEPARTMENT.

Recd.

Regd.

} 1903.

Enclosures

Spare copies

G.O., No. 191, 17th March 1908.

Precis-writing Test.

Informing the Commissioner for Government Examinations that he may fix for each year, in consultation with the examiner, the time to be allowed for answering the paper on Précis-writing.

order
page no 55

(5)

35th
20th March 1908

Government of Madras.

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GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—the following paper :—

Letter—from the Hon'ble Mr. A. G. BOURNE, D.Sc., F.R.S., Commissioner for Government Examinations.

To—the Secretary to Government, Educational Department.

Dated—Madras, the 22nd February 1908.

No.—63-2 D.

In the table given in paragraph 11 of the notification relating to the Special Tests, showing with other particulars the time to be allotted to each question paper, three hours are allowed for Précis-writing. I have the honour to enquire whether I may not in future, under paragraph 3 of the notification, fix (in consultation with the examiners) the time of the papers so as to make it properly proportionate to its length. It is not always possible for an examiner to select a suitable set of connected letters of such a definite length that a good précis of them may be made in three hours, and if the length of a paper is a variable quantity it is of course necessary that the time should vary accordingly. I doubt if it can be said, with certainty, that the papers that have been set for the examination have always been such as could be well answered in three hours. Last year's paper, for example, was rather a lengthy one, consisting of 32 pages of closely printed matter, and though an intelligent candidate might have been able to answer it in the time given, it was, as the low percentage of success in the examination would seem to indicate, above the capacity of the majority of the candidates, who, possibly, if they had been allowed adequate time, would have been able to do better justice to the paper. I have been in communication with the examiners regarding the results of last year, and I find that, after a most careful and legitimately lenient valuation of the answer papers, they were not able to pass more than 10.8 per cent. I am also informed that in most cases failure was due not so much to deficiency in the power of correct linguistic expression, as to inability to grasp the salient facts of the correspondence and to differentiate what is important from what is not. It is probable that if more time had been allowed more at any rate of the *graduate* candidates, of whom only about 15 per cent. passed, would have been able to send up better papers. Again considering the importance of the examination as a service test, and its extensive application to almost all departments of the service, it seems only fair to the candidates that the conditions under which it is conducted should, as far as possible, be in conformity with those under which précis-work is actually done in an office. A clerk required to write an office-note giving a narrative abstract of the correspondence contained in last year's paper would probably have taken more than three hours to do it in. For a paper on précis-writing, the greater part of the time allotted to which has to be spent in reading and thinking over the paper, so as to arrive at a logical arrangement of the contents of the correspondence, it is necessary that a fairly wide margin should be allowed in the matter of time.

Order—No. 191, Educational, dated 17th March 1908.

The Commissioner for Government Examinations will be informed that he may, under paragraph 3 of the Special Test notification, fix for each year in consultation with the examiner, the time to be allowed for answering the paper on Précis-writing.

(True Extract.)

H. D. TAYLOR,
Ag. Secretary to Government.

To the Commissioner for Government Examinations.

EDUCATIONAL DEPARTMENT.

NOTES CONNECTED WITH G.O., No. 191, EDUCATIONAL,
DATED 17TH MARCH 1908.

[SUBJECT.—Time allowed for answering the paper set for the Précis-writing Test.]

From the Commissioner, Government Examinations, dated 22nd February 1908,
No. 63-2 D.

Under paragraph 11 of the Special Test notification, the time allowed for answering the paper set for the Précis-writing test is three hours.

2. The Commissioner for Government Examinations says that it is not always possible for an examiner to select a suitable set of connected papers of such a definite length that a good précis of them may be made in three hours and that if the length of a paper is a variable quantity it is of course necessary that the time should vary accordingly. He appears to think that the low percentage of success at the Précis-writing test is mostly due to want of adequate time for answering the paper and that if more time is allowed the percentage of success will be higher.

3. The Commissioner accordingly enquires whether under paragraph 3 of the notification he may not in future fix in consultation with the examiners the time allowed for answering the paper so as to make it properly proportionate to its length.

4. It is for consideration whether the Commissioner's proposal may be accepted.

T.K.—4-3-08.

The proposal appears to be a reasonable one.

K. RANGASWAMI AYYANGAR—5-3-08.

Please put up copies of papers and percentages of passes for the last five years.

C. A. SOUTER—6-3-08.

Telephoned to Commissioner, Government Examinations for Précis-writing question papers for the last five years.

K.R.—7-3-08.

The percentages of passes at the Précis-writing examination during the last five years were as follows :—

* The percentages given represent whole numbers.		Year.	Number examined.	Number passed.	Percentage.*
†	Vide table II, page 10 of G.O., No. 533, Educational, dated 14th August 1907.	1906-1907 + ..	1,724	487	28
†	Vide table II, page 9 of G.O., No. 549, Educational, dated 16th August 1906.	1905-1906	1,854	127	7
†	Vide table II, page 12 of G.O., No. 569, Educational, dated 18th August 1905.	1904-1905	1,561	144	9
		1903-1904	(Examination cancelled).		
†	Vide table II, page 12 of G.O., No. 384, Educational, dated 16th August 1903.	1902-1903	1,247	142	11
†	Vide table II, page 12 of G.O., No. 384, Educational, dated 16th August 1903.	1901-1902	1,334	166	12

Copies of the question papers set for the Précis-writing examination during the five years ending 1907, are added to the current file.

T.K.—7-3-08.

K. RANGASWAMI AYYANGAR—9-3-08.

I happened to be one of the examiners this year and set the paper. I also set the paper in the previous year. I quite admit that the last paper was long. It was much longer than I thought it would be when editing it. It is full, however, of enclosures and the like which are already précised and the omission of which makes no difference. Otherwise the paper is an easy one. I may say that Mr. Galletti and I worked out a model précis to work on in about three-quarter of an hour. Recognising the length, however, we agreed to mark very leniently. I give below the last four papers, their page length and the percentage of passes—

Year.	Length.	Percentage.
1907	32	10.8
1906	20	28
1905	24	7
1904	22 (about)	9
1903	26 (about)	Cancelled.

2. The paper set by me in 1906 was ridiculously easy. I did not examine in it as I was on leave, but I was told that even then the papers were very poor. In 1905 and 1904 though the papers were shorter, the percentages of passes were less than in this year. I may say that one of the examiners examined in all these papers. The matter is therefore not a mere question of length.

3. I am convinced that a large proportion of the candidates consists of raw school-boys and others who are merely "having a shot". It is necessary in the interests of the public service, that the paper should not be too easy, for this examination tests more than any other a man's capabilities. If it is made easy we shall have a far larger number of candidates, which is to be greatly deprecated, and the examination will lose its intrinsic value. I am inclined, therefore, to think that the Commissioner for Government Examination's suggestion is a good one, for it gives the good candidate a better chance of passing, whereas the poor candidate will not be greatly benefited. But heaven help the examiner if he has an extra hour's writing to read!

C. A. SOUTER—9-3-08.

I think that the suggestion that the time to be allowed for answering a précis paper may be fixed in advance in accordance with the length of the paper selected, may be accepted. It is true that length is not the only factor so long as the language is suitable and there is a repetition, but candidates who are not employed in a Government office, would probably waste a lot of time in wading through the correspondence, especially when it is printed in such small type—before he really settles to work to winnow the wheat from the chaff. It is much harder to read a lot of papers in small type on flimsy paper than in Government Order form.

The paper for 1906 contained despatches and correspondence of the Secretary of State and the Government of India—those for 1905 and 1907 related to local subjects.

H. D. TAYLOR—10-3-08.

I see no objection to the Director of Public Instruction's proposal being accepted.

Please draft for approval.

H. B[RADLEY]—11-3-08.

H. D. TAYLOR—12-3-08.

The draft placed below is submitted for approval.

T.K.—13-3-08.

K. RANGASWAMI AYYANGAR—13-3-08.

C. A. SOUTER—14-3-08.

Approved.

H. D. TAYLOR—16-3-08.

[G.O., No. 191, Educational, dated 17th March 1908.]

CURRENT FILE.

CONTENTS.

From	Number.	Date.	Pages.
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PAPERS PUT UP WITH CURRENT No. _____

Papers of the department to which the current belongs.

Number.	Date.	Original (=O.) or spare copy (=S. C.).	Remarks. (In this column such of the papers as have been removed — for copying, printing, etc., should be marked with a cross.)	Initials of Referees with date in token of return to Referee department.

Papers of other departments.

Department.	Number.	Date.	Original (=O.) or spare copy (=S. C.).	Despatcher to note the return of the papers to the departments concerned.

Stock Form No. 135
2,700—17-6-05.

EDUCATIONAL DEPARTMENT.

Received _____ 190 , Registered _____ 190



Subject.

Enquiring with reference to para 3 of the Special Test notification whether the time fixed for the Precis-writing paper may, in consultation with the Examiners be made proportionate to its length.

ENCLOSURES.

No. _____

Spare copies *Nil.*

No. $\frac{63}{28}$

Station *Madras*, Dated the *22nd* February 1908.



From (Name) *The Hon'ble Mr. A. G. Bowring, D.S.G.E.R.S.,*

(Designation) *Commissioner for Government Examinations*

To *The Secretary to the Government of Madras,*
Educational Department.

Gt,

In the table given in para 11 of the notification relating to the Special Tests, showing with other particulars the time to be allotted to each question paper, three hours are allowed for Precis-writing. I have the honour to enquire whether I may not in future, under para 3 of the notification, fix (in consultation with the Examiners) the time of the papers so as to make it properly proportionate to its length. It is not always possible for an Examiner to select a suitable set of Connected

Letters of such a definite length that a good précis of them may be made in three hours, and if the length of a paper is a variable quantity it is of course necessary that the time should vary accordingly. I doubt if it can be said, with certainty, that the papers that have been set for the Examination have always been such as could be well answered in three hours. Last year's paper for example, was rather a lengthy one, consisting of 32 pages of closely printed matter, and though an intelligent candidate might have been able to answer it in the time given, it was, as the low percentage of success in the Examination would seem to indicate, above the capacity of the majority of the candidates, who, possibly, if they had been allowed a adequate time, would have been able to do better justice to the paper. I have been in communication with the Examiners regarding the results of last year, and I find that, after a most careful and legitimately lenient valuation of the answer papers they were not able to pass more than 10.8 per cent. I am also informed that in most cases failure was due not so much to deficiency in the power of correct linguistic expression, as to inability to grasp the salient facts of the correspondence and to differentiate what is important from what is not. It is probable that if more time had been allowed more at any rate of the graduate candidates, of whom only about 15 per cent. passed, would have been able to send up better papers.



1907

INSTRUCTIONS TO CANDIDATES.

Having read the accompanying correspondence, draw up a Memorandum or Précis, i.e. a brief and clear statement of its contents, not paper by paper, but in the form of a narrative. The object of the Précis is that a person who has not time to read the original correspondence may, by reading the Précis, become acquainted with all the leading features of what passed. The merits of such a Précis are: (1) that it should contain all that is of importance in the Correspondence, and nothing that is unimportant; (2) that it should present the matter in a consecutive and readable manner; (3) that it should be as brief as is compatible with completeness and distinctness. Brevity and clear handwriting should be particularly studied.

READ—the following papers:—

G.O., No. 976 L., dated 16th August 1906.

Read—the following papers:—

Letter—from N. S. BRODIE, Esq., M.A., I.C.S., President, District Board, Guntur.

To—the Secretary to Government, Local and Municipal Department.

Dated—the 10th May 1906.

No.—Dis. 605/D.B.

I have the honour to submit herewith copies of resolutions Nos. 246 and 267 passed at the meetings of this District Board held, respectively, on the 24th February 1906 and 31st March 1906; and, in doing so, I beg to state that two railway lines have been projected in this district for early construction by the District Board—one from Guntur to Répalle, distance 38 miles, and the other from Phirangipuram to Gurazala, distance 50.64 miles. The estimate for the former line is Rs. 16,50,000 and for the latter, Rs. 12,59,640.

2. Of these two lines, the one from Guntur to Répalle is of the first importance. The necessity for this line is admitted on all hands. It passes, for the most part, through a rich deltaic taluk, which has not, for want of good metalled roads, any proper means of intercommunication. The people themselves are anxious for the line as is evidenced by the fact that nine mahazar-petitions were presented by the inhabitants of Tenali

taluk, urging the necessity of the line and requesting it to be undertaken as early as practicable. Apart from its necessity as an easier and quicker means of communication for the dense population of this part of the district, it will be a very remunerative line as it passes through a very rich and productive portion of the district and will conduce to a considerable development of traffic over the Madras Railway from Tenali. It also provides a quick means of communication between Guntur and Tenali, the want of which is much felt, the present route via Bezwada being circuitous and inconvenient. The traffic on the road between Guntur and Tenali is very heavy, and as this will mostly go by rail when the line is constructed, a very considerable saving may be expected in the upkeep of the road which is a very costly one owing to the nature of the soil. The same applies with even more force to the road between Tenali and Répalle which has been recently constructed and runs almost entirely over black cotton soil. An annual saving of Rs. 5,200 is anticipated on this account alone and the amount will probably be much larger. For these reasons it has been decided to put the line from Guntur to Répalle in hand at once, leaving the other line from Phirangipuram to Gurazala to be taken up later when funds permit. It is not expected that the latter line will be very productive and it may even be constructed from the grant for famine railways on which list it is at present borne.

3. As for the route of the Répalle line, this Board in its resolution No. 246, dated 24th February 1906, while approving of the plans and estimates as noted in the printed report of the Southern Mahratta Railway Company, preferred the route passing through the villages of Dhulipudi, Chavali, &c., but from the records subsequently traced out, it was ascertained that this route had never been surveyed, and that it would not touch Kollur, Bhattiprolu and Répalle, villages of greater importance than those noted in the resolution. The matter was therefore laid for reconsideration before a special meeting of the Board held on 31st March 1906, when it was resolved that the line should be constructed in accordance with the views expressed by the Kistna District Board in its resolution No. 139, dated 10th July 1902. This route was surveyed at the cost of the old Kistna District Board, with the approval of the Government accorded in G.O., Mis. No. 2112 L., dated 10th December 1901, and an estimate for it was also prepared by an Executive Engineer of the Southern Mahratta Railway Company. Both the surveyed line and the estimates seem to have the approval of the Consulting Engineer for Railways under the Government of Madras, who has yet all the plans and sections of the proposed railway line with him. For the present, the Board has unanimously adopted the surveyed route, subject to such modifications as may be suggested by the Engineering Department for facilitating construction.

4. In this connexion I beg to point out that the District Board Engineer has made certain suggestions with regard to the reduction of the estimates and modifications of the gradients. He suggests a saving in ballast at Rs. 3,106-8-0 per mile, which for the 38 miles amounts to Rs. 1,18,047. He proposes a further saving of Rs. 10,000 in the carriage of building materials. He is of opinion that the gradients require alterations, and he adds therefore a sum of Rs. 12,000 to the estimate for this purpose, besides the addition of a sum of Rs. 3,800 for the construction of a service road without which he thinks the line cannot be laid out.

In all the net reduction he proposes in the estimate is Rs. 1,12,247, and this reduces it to Rs. 15,39,753 (Rs. 16,50,000—Rs. 1,12,247) or in round figures to Rs. 15,50,000.

He makes a further suggestion that out of the proceeds of the special cess already in hand, the Board may undertake the construction of the earthwork, minor bridges, &c., leaving the major portion of the work to be finished by the loan to be taken.

These are points which are more or less technical and upon which the Board is not competent to offer any remarks, and it therefore leaves them to be decided by Government in consultation with its Consulting Engineer for Railways.

5. Taking for the present the estimate as prepared by the Southern Mahratta Railway Company as the basis for action, the capital required for the proposed railway line is Rs. 16,50,000. The Board has already a sum of Rs. 2,60,380 to its credit realized from the levy of the special railway cess, &c.—

	RS.
Accumulated railway cess transferred from the Kistna District Board including the investment of Rs. 80,000	1,56,905
Cess collected up to 31st March 1906	1,00,682
Interest on investment collected up to 31st March 1906	2,793
Total	2,60,380

Here credit is not taken for the amount to be realized during 1906-1907. So if the amount in the Board's hand be deducted from the estimated capital, what is required is Rs. 13,89,620 (Rs. 16,50,000—Rs. 2,60,380) or 14 lakhs in round figures.

6. The Board can never be expected to accumulate this amount from the proceeds of the special railway cess unless many years lapse. If it therefore depends upon this resource for its railway construction, it will never accomplish it in the near future as it will take many years before the Board can accumulate such a large sum for it to commence railway construction with it, and the proceeds of the railway cess will have, moreover, to be allowed to accumulate with no immediate use for them. Under such circumstances, the Board will have to raise the necessary capital from the investing public in the open market or from Government. The former course is out of question as the experience of the Tanjore District Board has shown that it is not realizable, and so impracticable. The only feasible way for financing the scheme is to apply to Government for a loan on the security of the special cess as well as the entire security of the resources of the District Board under the provisions of the Local Authorities Loans Act XI of 1879, and accordingly the Board has resolved to respectfully solicit Government for a loan of the required capital (fourteen lakhs) so as to enable it to construct the much needed railway line from Guntur to Répalle.

7. The Board, I beg to say, is in a position to liquidate the debt in a short time. The capital required is 14 lakhs. The annual interest at 4 per cent., which is the rate of interest chargeable under G.O., No. 696 L., dated 9th June 1903, is Rs. 56,000. The population of the villages within

a belt of 4 miles on each side of the line was 229,032 in 1901, and it must be more now; but taking this number for the present purpose, the gross earnings amount to Rs. 2,29,032 according to Mr. Spring's calculation which is taken at Re. 1 per head per annum. The working expenses according to the terms offered by the Southern Mahratta Railway Company (and no other Company, it may be assumed, will demand more than this) amount to 50 per cent. of the gross earnings, i.e., Rs. 1,03,064. The other half will be the net profit to the Board. This, together with the proceeds of the railway cess (Rs. 75,980 per annum), amounts to Rs. 1,78,994. The Board with such a large amount in hand is in a solvent position to liquidate the debt at no distant date. It can annually allow a lakh of rupees as a sinking fund towards the clearance of the amount to be borrowed and Rs. 56,000 towards interest, which becomes smaller and smaller year after year. The amount required is not very large, and it may be granted in one instalment for the line to be begun and completed as early as possible. According to the above calculations which are based upon information furnished by experts in railway business, the loan can be cleared in about twelve years. The Board is prepared to agree to all reasonable terms under the provisions of the Local Authorities Loans Act.

8. With reference to clause 4 of the Board's Resolution No. 246 of the 24th February 1906, I beg to support the request of the Board and to urge that action may be taken promptly in accordance with it. Tenali taluk, as a whole, is growing in every direction, and the value of land is going up by leaps and bounds. It is in every way advantageous to acquire the land required for the railway line at as early a date as practicable, and if delayed, more compensation will have to be paid later on than at present. I beg to request therefore that, pending the sanction of the loan, special orders may be accorded for the purchase of the needed land from the accumulated funds in the hands of the Board at present.

9. As regards the agency to be employed and the terms of the construction and the working of the railway line, I beg to state that the Southern Mahratta Railway Company is willing to undertake both on the same conditions as have been sanctioned by its Board in the case of the Kurnool Branch Railway line. As resolved by this Board, they seem to be reasonable as they compare favourably with those on which the South Indian Railway Company is working the Tanjore District Board's Railway lines: but the Board is not in a position to accept the offer as it is not known whether that Company's own contract with Government is to be renewed next year or not. The only other Company that could construct and work the line is the Madras Railway Company; but it is doubtful whether it can take up this line as it has no rolling-stock for a narrow gauge in this part of the Presidency. It has also, it seems, to renew its contract in 1907. In these circumstances, the Board leaves this important matter in the hands of Government for decision.

10. A loan application is herewith submitted as required under G.O., No. 696 L., dated 9th June 1903.

11. Copies of the following papers are herein enclosed for reference:—

(1) District Board Engineer's letter, dated 30th November 1905, offering certain suggestions regarding the reduction of the estimates and modifications of gradients.

(2) Same officer's letter, dated 25th January 1905, making some suggestions as regards the construction of the earthwork, minor bridges, &c., under the direct control of the Board itself.

(3) Letter No. 8490/10034, dated 8th December 1905, from the Agent, Southern Mahratta Railway Company, proposing to make and work the line on certain conditions.

(4) Southern Mahratta Railway Company's memorandum of agreement for the construction of the line.

(5) Memorandum of agreement for the working of the line.

(6) Kistna District Board's Resolution No. 139, dated 10th July 1902.

ENCLOSURES.

Proceedings of the District Board, Guntūr, dated 24th February 1906.

Read—(1) The printed report and estimates with reference to the Guntūr-Répalé Branch Railway line prepared by the Executive Engineer of the Southern Mahratta Railway Company, dated 20th May 1902.

(2) The Guntūr District Board Engineer's letter, dated 30th November 1905, offering certain suggestions with regard to the reduction of the estimates and modifications of the gradients.

(3) The same officer's letter, dated 20th January 1906, making some suggestions as regards the construction of the earthwork and minor bridges, &c., under the direct control of the Board itself with the help of, and under the supervision of, the District Board Engineer.

(4) Letter No. 8490/10034, dated 8th December 1905, from the Agent, Southern Mahratta Railway Company, proposing to make and work the line on the same terms as those sanctioned by the Company's Board in the case of the Kurnool line, and forwarding memorandum of agreement for the construction and working of the Kurnool Branch.

(5) Memorandum of the Vice-President, Guntūr District Board, laying before the Board a summary of the above correspondence, and suggesting ways and means for financing the scheme, viz., the construction of the Guntūr-Répalé Branch.

Resolution No. 246.—(1) The District Board unanimously resolves to undertake the construction of the Guntūr-Répalé Branch Railway line.

(2) It approves of the plans and estimates as noted in the printed report of the Southern Mahratta Railway Company subject to the modification in paragraph III of page 4 wherein an alternative route serving the important villages of Peravali, Dhulipudi, Chavali and Kanagala is suggested, and it, the Board considers, is more important as it taps very important populous villages.

(3) The Board respectfully solicits Government to be pleased to grant a loan of the necessary capital (14 lakhs) for constructing this line under the provisions of the Local Authorities Loans Act VI of 1873.

(4) Pending the sanction of the loan, the Board is of opinion that it is in every way advantageous and advisable to take early steps for the acquisition of the land needed with the amount already in the hands of the Board from the proceeds of the special railway cess, and it therefore solicits orders of Government for the acquisition at an early date.

*Proceedings of the District Board, Guntūr, dated
31st March 1906.*

Special.

Read Guntūr District Board's Resolution No. 246, dated 24th February 1906, regarding the construction of Guntūr-Répalpe Branch Railway line.

Read also Kistna District Board's Resolution No. 139, dated 10th July 1902, on the subject.

Resolution No. 267.—On reconsideration, the District Board considers that the line from Tenali to Répalpe should be constructed in accordance with the views of the Kistna District Board expressed in its Resolution No. 139, dated 10th July 1902, subject to any modifications which may be suggested by the Engineering Department for facilitating construction. The line by Dhalipudi is not surveyed and is altogether unsuitable. The papers will now be submitted to Government in accordance with the previous resolution together with the suggestions of the District Board Engineer in order that sanction may be accorded for the commencement of construction at an early date. The offer of the Southern Mahratta Railway Company appears to be a reasonable one, but the Board is not in a position to decide whether to accept it or not unless it is decided that the Southern Mahratta Railway Company's own contract with Government is to be renewed in 1907. The only other Company that could work the line is the Madras Railway Company, but it has no narrow gauge rolling-stock in this part of the Presidency. This also is about to have its contract renewed in 1907. The Board would leave it to Government to decide which of these Companies should be given the contract.

Letter—from the Agent, Southern Mahratta Railway.

To—the President, District Board, Guntūr.

Dated—Dharwar, the 8th December 1905.

No.—8490/10094.

Your letter No. 1582 of the 25th ultimo asking whether this Company is prepared to construct and work the Branch line from Guntūr to Tenali if the District Board provide funds.

2. Surely, the 'Tenali' is a mistake, and the line referred to is the one Guntūr-Tenali-Répalpe. It would, I think, be a great mistake to stop short at Tenali. Assuming that this is the case and that the line will be constructed to Répalpe, I beg to say that I shall be prepared to recommend to my Board that the branch should be made and worked on the same terms as those sanctioned by them in the case of the Kurnool line.

3. As to these terms, I enclose—

(1) Memorandum of agreement for the construction of the Kurnool Branch.

(2) Memorandum of agreement for the working of the Kurnool Branch.

4. Clause 5 of the construction agreement providing for second-hand rails would not be applicable for your branch which would be laid with new rails, and I think it would be but businesslike to add to both the agreements an arbitration clause. The Railway Board or the Consulting Engineer for Railways, Madras, might be specified as the arbitrator in case of any disputed questions, which, however, I trust, would not arise, as in getting out the agreements I have tried to make them extremely simple and clear.

5. I invite your attention to the very favourable nature of the terms offered under the Kurnool agreements. I enclose copy of paragraph 2 of a letter addressed to the President, District Board, Kurnool, on the subject. It shows this clearly. Please also note how Mr. Lockyer in his estimates estimated (see page 25 of the report and estimates) the working expenses, if worked by an existing Main Line Administration, at 55 per cent. of gross receipts, but if by an independent Administration, at 60 or 65 per cent.; all this, as against the 50 per cent. offered in the Kurnool line terms.

Memorandum of agreement between the District Board, Kurnool, and the Southern Mahratta Railway Company (hereinafter called the Company) for the construction of the Kurnool Branch Railway (hereinafter called the branch), i.e., the Branch Railway running from Kurnool road station on the Southern Mahratta Railway to Kurnool.

Funds for construction.—The District Board shall provide the Company from time to time, as required, with the funds necessary for the construction of the branch under the various heads and sub-heads mentioned in the construction estimates.

2. *Staff.*—The pays and travelling allowances of all officers, subordinates, clerks, &c., engaged by the Company for the construction of the branch shall be debited to construction account of the branch, as also the travelling allowances of the Company's staff when engaged in inspecting the branch.

3. *Stores.*—The Company shall charge the construction account with the following charges on account of stores, viz.—

On stores supplied from England, $2\frac{1}{2}$ per cent. of cost.

Upon sleepers and materials purchased in India, 5 per cent.

Upon stores issued from the Company's stores, 10 per cent.

Upon stores and materials carried over the lines worked by the Company, at usual railway construction rates, viz., one-fifth of a pie per mannd per mile.

4. *Supervision charges.*—Over and above these charges the District Board shall pay the Company on account of general supervision a sum equal to 1 per cent. of the total cost of constructing the branch.

5. *Second-hand rails.*—The Company shall provide the second-hand 41½ lb. rails required for the line at a rate of Rs. 75 a ton *plus* freight over Southern Mahratta Railway at one-fifth of a pie per maund per mile.

6. *Accounts.*—The Company shall maintain and render monthly such accounts of the outlay incurred on the construction of the branch as are prescribed by Government.

Memorandum of agreement between the District Board, Kurnool, and the Southern Mahratta Railway Company (hereinafter called the Company) for working the Kurnool Branch Railway (hereinafter called the branch), i.e., the Branch Railway running from Kurnool road station on the Southern Mahratta Railway to Kurnool.

This agreement shall be subject to the approval of the Government of Madras, the Board of the Southern Mahratta Railway Company, as also of the Secretary of State for India.

2. *Term.*—It shall come into force as from the date of opening of the branch and shall remain in force for a term of fifteen years from that date. Thereafter it may be determined by one year's notice on either side; always provided that if the Company's contract with the Government of India is not renewed in 1907, this agreement shall then be at an end.

3. *Working.*—The working of the branch shall be done by the Company, who shall provide all the engines, carriages, wagons, sheets and other appliances for the equipment of trains and the whole of the staff, materials, stores, &c., required for working and maintaining the branch. The Company shall have entire control of the train and traffic arrangements and be responsible for the collection of all the revenue earnings pertaining to the branch.

4. *Junction.*—The Company shall work the junction station at Kurnool road free of charge, and provide all sidings, buildings, &c., required for the junction within station limits.

5. *Alterations, improvements and additions.*—All new works shall be carried out by the Company on estimates first approved of by the District Board. Works, the cost of which exceed Rs. 1,000 each, shall be debited to Capital, the required funds being provided by the District Board before the works are started. Works costing not more than Rs. 1,000 each shall be charged to Revenue, i.e., be met from the gross receipts of the branch before these are divided, as indicated in clause 10 between the Company and the District Board.

6. *Telegraph.*—The construction of any necessary telegraph lines shall be arranged for by the Company with Government and the rental on the capital cost thereof shall be paid by the Company.

7. *Police.*—The Company shall maintain for the purposes of the branch such a police force as may be considered necessary under the orders of the Government of Madras.

8. *Rates and fares.*—The coaching fares and rates for goods, parcels, and

miscellaneous traffic to be charged over the branch shall be those for the time being in force on the Company's lines. The same terminals shall be charged on the branch as on the Company's lines.

9. *Accounts.*—The Company shall maintain for the branch, accounts similar to those given for other branches, such as the Kolhapur State Railway, Birur-Shimoga Railway, &c., and copies shall be sent to the district as required.

10. *Payment to the company.*—For the services as above detailed the Company shall receive, half-yearly, 50 per cent. of the gross earnings of the branch, the balance being handed over to the District Board. These payments shall be made on the accounts being passed by Government.

11. *Rebate.*—If at the end of any calendar year during the continuance of this agreement the payments received by the District Board under the above clause should be insufficient to make up a sum equal to 3½ per cent. per annum on the actual expenditure of the branch as charged in its capital account then shall the Company pay by way of rebate such a sum as shall make up the required 3½ per cent., always provided that such additional payment shall not exceed 25 per cent. of the gross earnings received by the Company on traffic other than railway stores interchanged between the Branch and the Company's lines.

*Proceedings of the District Board, Kistna, dated
10th July 1902.*

* * * * *

Read letter No. 132, dated 23rd June 1902, from the Executive Engineer, Kistna District Branch Railway survey, forwarding tracings of the index plan of the Guntur-Répalé branch and offering remarks on the alternative routes.

Resolution No. 139.—The Board considers that the Railway line should not follow the red-dotted line, between the 8th and the 16th mile, but should follow either the thick red line, or preferably, if engineering considerations do not forbid, the blue-dotted line. The route along the yellow-dotted line is out of the question; it takes the railway away from the villages of Kollur, Bhattiprolu, and Répalé it was meant to serve. It must run from the 22nd mile as shown by the thick red line. From the 31st mile it should follow the dotted red line to the 37th mile, if the Bhattiprolu drain is diverted as proposed; but if the drain is not diverted, the railway must run as surveyed. The Board considers the terminus between Répalé and Peteru as in any case better than that to the west of Répalé.

Memorandum, No. 1472, dated 28th June 1906.

The attention of the District Board is drawn to the notification of the Government of India embodying their circular No. 514 R.C., dated 17th April 1896, relating to branch line terms which was republished at pages 534 to 539 of Part I-A of the *Fort St. George Gazette*, dated 28th April 1896, and

the Board is requested to specify clearly the precise nature of the concessions, such as the grant of free land, it asks for.

2. The District Board is also requested to expedite its reply to paragraph 4 of G.O., No. 717 L., dated 11th June 1906.

H. D. TAYLOR,
Ag. Secretary to Government.

To the President, District Board, Guntūr.

Letter—from N. S. BRODIE, Esq., M.A., I.C.S., President, District Board, Guntūr.

To—the Secretary to Government, Local and Municipal Department.

Dated—the 7th July 1906.
No.—R.S.C. 116-D.B.

With reference to paragraph 4 of G.O., No. 717 L., dated 11th June 1906, I have the honour to submit herewith a copy of this Board's Resolution No. 55, dated 30th June 1906, which fully sets forth its views as to why the Guntūr-Répalé Railway line should be undertaken in preference to the Phirangipuram-Gurazala line. I have nothing more to add than to say that I fully concur with the opinion expressed by the Board for the simple reason that if this line which is undoubtedly a paying concern be carried out at first, it will place the Board in such a financially solvent position as to allow it to undertake similar works in future such as the Gurazala line without any delay, whilst if the Gurazala line is first constructed it is not likely to be worked at anything but a loss which will be a drain on the railway cess fund and necessitate delay in carrying out the Tendli line.

ENCLOSURE.

*Proceedings of the District Board, Guntūr, dated
30th June 1906.*

Read G.O., No. 717 L., dated 11th June 1906, recommending the sanction of the Phirangipuram-Gurazala Railway line in preference to the Guntūr-Répalé line.

Resolution No. 55.—The reasons for pressing for the early completion of the Guntūr-Répalé line have already been set forth in the President's letter Dis. No. 605-D.B., dated 10th May 1906, which does not appear to have been read in the Government Order under consideration. The Board adheres to the opinion therein expressed, although there is no doubt something to be said for carrying out the Gurazala line soon. The construction of the Guntūr-Répalé line will place the Board in funds to carry out other projects whilst the construction of the Gurazala line will merely cripple their finances and delay work of the sort generally.

Order—No. 976 L., dated 16th August 1906.

In the circumstances, the railway line from Guntūr to Répalé may be given the preference. But the Government are not prepared to approve of the proposal that any portion of the work should be carried out by Local Fund agency, as suggested by the President, in paragraph 4 of his letter No. 605, dated 10th May 1906. The District Board Engineer's ordinary duties in connexion with roads and communications and other works are enough to occupy his full attention, and as the alignment and gradients over portions of the proposed line do not appear to have been finally settled, it seems desirable to hold the Railway Company, by which the line is to be constructed, responsible for the entire work. It is also possible that a Railway Company would decline to accept the work of construction in part only.

2. The question of gauge to be adopted for this line is under consideration. After the gauge and the consequent cost of construction are definitely settled, the District Board may submit a formal application for the loan required.

3. Meanwhile, the District Board is requested to send in a formal application stating—

(1) the estimated cost of the line on both gauges for which the following figures may be adopted:—

	RS.
Metre gauge	16,50,000
Broad "	21,00,000

(2) the financial position of the District Board,

(3) the amount of the loan required from the Provincial loan account,

(4) the concessions—such as free land—that are asked for (vide Government of India branch line terms circular), and

(5) the terms on which the Southern Mahratta Railway will work the line.

The terms on which the Madras Railway will work the line, if a light broad gauge line is decided on, will be settled with the Madras Railway by Government; these are not likely to exceed 50 per cent. of the gross receipts.

(True Extract.)

H. D. TAYLOR,

Ag. Secretary to Government.
To the President, District Board, Guntūr.
Public Works (Railway) Department.

Letter—from J. S. BROWN, Esq., Officiating Secretary to the Government of Bombay, Public Works Department, Railway Branch.

To—the Secretary to the Government of Madras, Public Works Department, Railway Branch.

Dated—Bombay Castle, the 25th June 1906.
No.—1836.

I am directed to forward, in compliance with the wishes of the Agent,

Southern Mahratta Railway Company, a copy of his letter No. 8490/5258, dated 14th June 1906,* to the address of the Junior Consulting Engineer for Railways, Dharwar, protesting against the action of the District Board, Guntūr, in advocating (*vide* their Resolution No. 267, dated 31st March 1906), the construction of only a line from Tenāli on the Madras Railway to Répalle instead of the through line from Guntūr on the Southern Mahratta Railway *via* Tenāli to Répalle.

2. In this connexion I am to point out that since the project was submitted (*vide* the correspondence ending with your letter No. 2158-Railway, dated 20th December 1902) Guntūr has become the head quarters of a Collectorate, and in consequence the connexion between Tenāli and Guntūr seems all the more necessary in order to afford direct communication with Madras and the rich delta lands.

ENCLOSURES.

Letter—from the Agent, Southern Mahratta Railway.
To—the Junior Consulting Engineer for Railways, Dharwar.
Dated—the 14th June 1906.
No.—8490/5258.

I have the honour to send herewith a copy of my letter No. 5106 of 11th instant to the President, District Board, Guntūr, as also copies of that Board's resolutions Nos. 246 and 267 of 24th February 1906 and 31st March 1906, respectively, for favour of communicating the contents thereof to the Madras Government and to the Railway Board. If no remarks have hitherto been made by me regarding the altered intentions of the Guntūr District Board with respect to the proposed branch line, it will be seen from the enclosures that this has been owing to the fact that such altered intentions have only now come to my knowledge.

2. The intention of the District Board apparently is now merely to construct the section from Tenāli to Répalle, if they obtain the approval of Government to so doing. The line would thus form a branch to the Madras Railway only, and be entirely cut off from this Company's system. As it is evident from the wording of the District Board's resolution No. 267 that they desire still to adhere to the metre gauge for their new line, I need not dilate on the disadvantages which would accrue were this intention given effect to. Not only would the cost of the line be largely increased, over that which it has been estimated to cost, by the necessity of providing for special rolling-stock, workshops, &c., but the inconvenience attendant on a break of gauge at the junction with the broad gauge would be considerable. It is true that this break of gauge would still exist at Tenāli (for the Madras Railway) even were the branch extended up to Guntūr and worked as part of the Southern Mahratta Railway, but for the large proportion of passengers and goods from the newly opened up tracts within the important town of Guntūr as a centre, the inconvenience and expense attendant on a break of gauge would be avoided.

3. If the line be constructed from Tenāli to Répalle only, the people

of the Tenāli taluk, which is an important grain-growing district, would in great measure lose the advantage of being brought into railway communication with the famine-affected areas through which our Bellary-Kistna line runs, as all supplies that could reach there would require to find their way round by Tadepalli necessitating a long haulage and a second transshipment. Moreover, the tract of country lying between Guntūr and Répalle is itself a fertile one which makes it all the more difficult to understand why the District Board now desire to exclude it from the advantage which it would gain from being brought into railway communication with surrounding districts.

4. I trust, therefore, that the District Board's resolution No. 267 of 31st March last may yet be reconsidered and that their original proposal to construct a branch line from Guntūr to Répalle will be given effect to.

Letter—from the Agent, Southern Mahratta Railway.
To—the President, District Board, Guntūr.
Dated—Dharwar, the 11th June 1906.
No.—5106.

In thanking you for sending me a copy of resolution No. 267 of your Board's Proceedings of 31st March last, received by me on 7th instant under your Vice-President's endorsement, dated 30th ultimo, but which appears only to have been dispatched on 4th instant, I beg to inquire whether resolution No. 246 of 24th February 1906, a copy of which you also send me, is to be considered as cancelled by that of 31st March.

2. In your letter of 25th November 1905, you asked me whether this Company was prepared to construct and work a branch line from Guntūr to Tenāli. In my reply, I inquired whether 'Tenāli' was not a mistake, and whether Répalle was not meant. Assuming that an error had crept in, I detailed the proposals I was prepared to recommend to my Board for constructing and working the branch. Since then two reminders asking how the matter stood have been sent to you, but in reply the only communication received has been your Vice-President's letter of 12th February 1906, in which he informed me the subject would be placed before the District Board at their meeting to be held on 24th idem '*when I would be informed of its decision.*' The next communication received is that now under acknowledgement.

3. If it be the case that resolution No. 246 of February last is now to be considered as cancelled by resolution No. 267 of 31st March, whereby it was apparently decided to build the portion from Tenāli to Répalle only, I have, I consider, grave reason to complain of the delay which has been allowed to occur in communicating the change to me—a delay which may conceivably affect the interests of this Railway very materially. In view of the interest displayed by this Company throughout since the assistance construct the branch line was first mooted, as evidenced by the assistance given to your Board by the preparation of surveys, &c., as also by the offer of terms for working the branch if constructed, I think it cannot be doubted that we were entitled to more consideration than has been shown us by the communication of a Resolution more than two months after it had been

further letter from the Agent, Southern Mahratta Railway Company, to the address of the Junior Consulting Engineer for Railways, Dharwar, No. 8490/5734, dated 26th/28th June 1906, and of its accompaniment, from which it will be seen that it is the intention of the District Board, Guntūr, to undertake the construction of the whole line from Guntūr to Répalle and not only the portion from Tenāli to Répalle, as was inferred by the Agent from the previous Proceedings of the District Board.

ENCLOSURES.

Letter—from the Agent, Southern Mahratta Railway.

To—the Junior Consulting Engineer for Railways, Dharwar.

Dated—the 26th/28th June 1906.

No.—8490/5737.

In continuation of this office No. 8490/5258, dated 14th June 1906, I have the honour to forward herewith, for favour of communication to the Railway Board, a copy of letter No. 699-D.B., dated the 17th instant, from the Vice-President, District Board, Guntūr, from which it will be seen that it is the intention of the District Board to undertake the construction of the whole line from Guntūr to Répalle instead of from Tenāli to Répalle as was inferred from the previous Proceedings of the Board.

I regret the misunderstanding should have arisen.

Letter—from M.R.By. Rao Bahadur P. VENKATAKRISHNAYYA
NAYUDU Garu, B.A., Vice-President, District Board, Guntūr.

To—the Agent, Southern Mahratta Railway Company (Limited),
Dharwar.

Dated—the 17th June 1906.

No.—699-D.B.

With reference to your letter No. 5106, dated 11th June 1906, I have the honour to inform you that, owing to certain circumstances which I need not explain to you, copies of this Board's resolutions Nos. 246 and 267 of the 24th February and 31st March 1906, could not be submitted to Government earlier than about the middle of last month, and soon afterwards you were sent copies of the same. The delay was therefore unavoidable.

2. From your letter under reply, it appears that you have misunderstood the situation. The resolution of this Board passed on the 31st March 1906 does in no way cancel the whole of the resolution of the 24th February inasmuch as the former resolution relates only to a modification of the first clause of the resolution of the 24th February 1906. In the first clause, it was proposed to adopt the alternative route from Tenāli to Répalle passing through the villages of Peravali, Dhulipudi, &c., but on reconsideration it was found that this route was not at all advantageous and it was therefore modified by the resolution passed on the 31st March, wherein it was stated that the line should be constructed in accordance with the views of the Kistna District Board expressed in its resolution No. 139, dated 10th July 1902, according to which the line along the villages, Kollur, Bhattiprolu

and Répalle, which are more important than Peravali, Dhulipudi, &c., so that the modification aimed at in the resolution of 31st March 1906 relates only to a portion of the railway line, that from Tenāli to Répalle.

As regards the other portion, namely, from Guntūr to Tenāli, there was no difference of opinion, and as such it was not modified in the resolution of the 31st March, but that of 24th February 1906 was tacitly approved.

3. It is never the intention of this Board to take up the line from Tenāli to Répalle, but to construct the entire line from Guntūr to Répalle, *via* Tenāli; and it is for this entire line that Government has been solicited for a loan of the required funds, namely, fourteen lakhs of rupees. If the line from Tenāli to Répalle alone be constructed you say that your interests would be materially affected, and I wish to impress upon you that such a line would alter our interests to a greater extent. This Board would never therefore undertake the construction of a partial line which would not at all be beneficial to it nor would it be politic. I assure you now that the Board has resolved to undertake the construction of the entire line from Guntūr to Répalle passing through Tenāli.

Letter—from the Agent and Manager, Madras Railway.

To—the Consulting Engineer for Railways.

Dated—the 26th July 1906.

No.—O/1732/1064.

I have the honour to append an extract from the *Madras Mail* of 23rd June 1906:—

'A survey has been carried out by the Southern Mahratta Railway for a branch line from Guntūr station on the Southern Mahratta Railway (through Tenāli on the Madras Railway) to Répalle on the Kistna, a length of 38 miles. The primary object of this branch is to provide greater facilities for removing the produce of the rich grain-growing tract of the Tenāli taluk and easier and quicker means of locomotion for its dense population. Owing to the canals being closed during harvest time, the grain from these parts cannot be readily moved to market for want of good roads. The newly-constituted Guntūr District Board has recently had the question of the construction of the Tenāli-Répalle section (22 miles) of this branch line under consideration, whose orders are awaited. An early start on this project may now be expected.'

This subject has been brought before the Railway Board at a meeting held at Bangalore on the 18th instant, when the following note was recorded:—

'This subject had been put down by the Madras Railway for discussion, and the Railway Board enquired what we had to say about it. An article in the *Madras Mail* of 23rd June 1906 stated that the Southern Mahratta Railway had made a survey for a metre gauge line from Guntūr *via* Tenāli to Répalle.'

'The Madras Railway desire to point out that they had not previously had any opportunity of expressing their views and that Guntūr is the head quarters of a district, that it is a large centre of trade, that considerable quantities of merchandise pass between it and broad gauge stations (in addition to loose cotton sent from broad gauge stations on the N.G.S. and

North-East lines to Guntūr, 165,139 maunds of pressed cotton were in December 1905 half-year alone, consigned from Guntūr to Cocanada and Madras for export) and that the whole of this broad gauge traffic with Guntūr has at present to be transhipped at Tadepalle; that the existing traffic shows the desirableness of a broad gauge connection with Guntūr in order to avoid the inconvenience and delays to which the traffic is subjected owing to the necessity of transhipment at Tadepalle, that the proposed District Board line which is to run through Tenali, an important station on the North-East line, offers a very favourable opportunity for making the broad gauge connection and that such a line could be constructed with second-hand permanent-way material at a comparatively low cost.

The Railway Board suggested that the best course for the Madras Railway to follow would be to communicate their views to the Local Government with whom the initiation of Local Board Railways rested.

I may add that in addition to the cotton traffic mentioned above, grain and seeds to the extent of 105,911 maunds were forwarded by North-East line stations to Guntūr in December 1905 half-year and 23,491 maunds were forwarded by Guntūr to North-East Line stations in the same period. We have thus, in cotton, grain and seeds alone an existing traffic between North-East line stations and Guntūr of about 300,000 maunds in the half-year which now has to suffer transhipment, and the high minimum charge connected with the short lead by the metre gauge route, which would alone form the nucleus of a traffic for the feeder line if constructed on the broad gauge, but would not leave its present route if it was on the narrow gauge.

The subject of the eventual construction of this line was first mentioned in your letter No. 264/O, dated 1st August 1903, when the proposal of the Southern Mahratta Railway to open an out-agency at Vellatur was brought forward and in referring to it my Board in paragraph 9 of their letter No. 1118, dated 1st October 1903, then said—

The district that will be affected lies well within the sphere of action of the East Coast Railway, and the Madras Railway will be prepared to render Government any assistance in its power in the development of its traffic, which is of very considerable importance to the success of the East Coast Line.

I have the honour to ask that this letter may be placed before the Government of Madras with a request that we may be informed whether proposals for constructing and working a line from Guntūr, through Tenali to Répalle on the broad gauge may be put forward by the Madras Railway.

Letter—from J. S. Brown, Esq., Officiating Secretary to the Government of Bombay, Public Works Department, Railway Branch.
To—the Secretary to the Government of Madras, Public Works Department, Railway Branch.

Dated—Bombay Castle, the 7th August 1906.
No.—2185.

In continuation of my No. 1902, dated the 2nd July 1906, on the subject of the construction of the Guntūr-Tenali-Répalle Branch Railway, I am directed to forward, for the information of the Government of Madras,

copy of a further letter No. 8490/6682, dated the 30th July 1906, from the Agent, Southern Mahratta Railway Company, to the address of the Junior Consulting Engineer for Railways, Dharwar, explaining with reference to the objections raised by the Madras Railway Company at the meeting with the Railway Board recently held at Bangalore, the advantages to be gained by the adoption of the metre gauge for this branch.

ENCLOSURE.

Letter—from the Agent, Southern Mahratta Railway.

To—the Junior Consulting Engineer for Railways, Dharwar.

Dated—the 30th July 1906.

No.—8490/6682.

At the meeting with the Railway Board held at Bangalore on 18th instant, the Chairman stated that before any decision could be come to regarding the gauge to be adopted for the proposed Guntūr-Répalle line, it would first be necessary for the Board to be in possession of the opinion held by the Government of Madras. As the Madras Railway are, I understand, submitting their case in support of the broad gauge to that Government, I have to request you will kindly forward a copy of this letter also at your early convenience.

2. The proposal to construct a railway from Guntūr to Répalle, crossing the Madras Railway at Tenali, emanated from the Guntūr District Board. The country through which the Railway will run is wholly within the area administered by that Board which has its head quarters at Guntūr—a town already served by the Southern Mahratta Railway. The object of the new line is to bring the tract of country lying to the south and west of the river Kistna into closer touch with this town, and also to tap the rich grain-growing country around Répalle, the produce from which would find a ready market within the famine-affected areas lying to the east of Guntūr and through which the Southern Mahratta Railway now runs. These objects will, I submit, be better gained by means of a metre gauge line than by a broad gauge. In support of my contention I adduce the following:—

(1) There can be no question of the ability of a metre gauge railway to deal with the volume of traffic likely to arise. I need not therefore argue this point.

(2) The cost of a line laid on a gauge similar to that of the Southern Mahratta Railway would probably be at least 80 per cent. less than would be the case were it laid on the broad gauge. Maintenance charges would also be proportionately less.

(3) The people of the district through which the new line is to run, as represented by their District Board, themselves desire the adoption of the narrower gauge.

(4) The chief town of the district and head quarters of the local authorities is already served by a metre gauge railway (Southern Mahratta Railway). As the junction between this railway and the new line will be at this town, it would be an inconvenience to the people were a second, and in my opinion unnecessarily wide, gauge railway introduced there.

(5) Should it be determined to construct the new line on the broad gauge, its advantage to the famine-afflicted areas lying to the west of Guntūr would be greatly minimized. It is not altogether unreasonable to assume that, if so constructed and in the hands of an administration whose interests lay in a direction other than that of these famine-stricken areas, difficulties would be placed in the way of free and cheap intercourse between these areas and the source of supply. Did this unhappily prove to be the case, districts where scarcity so often prevails would by the construction of the new line be little, if anything, better off than they are now.

(6) It may be objected by the Madras Railway that by constructing the line on the metre gauge, this railway would be encroaching on what they consider to be their preserves. Such an argument cannot, however, be taken seriously. We are already crossing the Madras Railway at Bezvada and thereby gaining access to the country lying to the east of that line. If therefore it be admitted, as I cannot doubt that it will, that a metre gauge line will serve the country through which it is proposed to construct the railway equally well, if not better, than a broad gauge line would, the mere fact that the narrower gauge will cross the broader cannot, I think, be used as an argument for excluding the former.

(7) Surveys and estimates have already been completed for constructing the proposed line on the metre gauge, so that no delay would occur in effecting a start, should it be decided to construct it on this gauge. Should the broad gauge be adopted, a large portion of the work done in this direction, and its attendant expenditure, would be rendered useless.

(8) The only other point I think I need touch upon is the possibility of the Madras Railway putting forward a suggestion that the line be made and worked by them, not as a broad gauge, but as a 2' 6" gauge line. The disadvantages arising from the introduction of a third gauge would be even more than would be the case were the broad gauge brought into Guntūr. The cost of construction and maintenance of a 2' 6" gauge railway would offer no advantage over one of the metre gauge, as in addition to the arrangements it would be necessary to make for the equipment of the line with special stock, and for its repair, the existing facilities at the junction station of Guntūr for handling traffic would not be made use of. Great expense would therefore require to be incurred in remodelling this yard. Further, in times of pressure it would not be possible to draw on the main line for stock to meet an emergency. All things considered therefore, it would appear that no advantage would be gained by the introduction of a gauge less than that of the metre.

3. I beg that when forwarding this to the Government of Madras, a copy may at the same time be sent to the Railway Board.

Letter—from the Consulting Engineer for Railways.
To—the Secretary to the Railway Board.
Dated—Ootacamund, the 20th October 1906.
No.—996/O.

In reply to your letter No. R.P. 70-A/2, dated the 6th October 1906, inquiring when the representation of the Madras Railway and the views of the Local Government may be expected on the proposal to construct the

Guntūr-Répalie line by the Agency of the Southern Mahratta Railway, I have the honour to inform you that the matter is still under consideration, but reply will, it is hoped, be sent very shortly.

Letter—from the Agent and Manager, Madras Railway.
To—the Consulting Engineer for Railways.
Dated—the 3rd November 1906.
No.—S./1732/1589.

In continuation of my letter No. S./1732/1205, dated the 17th August 1906, I have the honour to enclose an extract paragraph 27 from a letter from the Company's Secretary in London No. 1197, dated 11th October 1906, regarding the Guntūr-Tenāli-Répalie proposed Railway. Paragraph 9 of my Board's letter No. 1113 of 1st October 1903 referred to was forwarded to you with my letter No. 15523/2042 of 23rd October 1903.

ENCLOSURE.

Extract from a letter from the Company's Secretary, dated 11th October 1906, No. 1197.

* * * * *
 27. With paragraph 17 of your letter No. 2795 of 30th August 1906, you forward a copy of a letter you have addressed to the Consulting Engineer for Railways, Guntūr-Tenāli-Répalie proposed Railway. Madras, on the subject of the proposed Guntūr-Tenāli-Répalie feeder line, and I am to convey the Board's approval of the action which you have taken. The Board, in paragraph 9 of their letter No. 1113 of the 1st October 1903, expressed the view that this district lies well within the sphere of action of the East Coast Railway, and consider that the feeder should be constructed on the standard gauge with second hand material.
 * * * * *

Letter—from G. A. ANDERSON, Esq., Secretary to the Government of Madras, Public Works Department (Railways).
To—the Chairman, Chamber of Commerce, Madras and Cocanada.
Dated—Madras, the 6th November 1906.
No.—265 R.M.

- (1) Letter from Agent and Manager, Madras Railway, No. O/1732-1064, dated 26th July 1906.
- (2) Letter from the Agent, Southern Mahratta Railway, to the Junior Consulting Engineer for Railways, Dharwar, No. 8490-6682, dated 30th July 1906.
- (3) Note by the Consulting Engineer for Railways, Madras, dated 21st August 1906.

I am directed to forward the marginally noted papers relating to the construction of a line of railway from Guntūr to Répalie, and to request that you will kindly favour the Government at a very early date with the views of the Chamber as to the gauge and agency which it would be preferable to adopt for this project.

**Memorandum No. 266 R.M., P.W.D., Railways, dated
6th November 1906.**

The undermentioned papers relating to the construction of a line of railway from Guntūr to Répalle are forwarded to the President, District Board, Guntūr, with the request that he will furnish the Government at a very early date with the views of the District Board as to the gauge and agency which it would be preferable to adopt for this project:—

- (1) Letter from the Agent and Manager, Madras Railway, No. O/1732-1064, dated 26th July 1906.
- (2) Letter from the Agent, Southern Mahratta Railway, to the Junior Consulting Engineer for Railways, Dharwar, No. 8940-6682, dated 30th July 1906.
- (3) Note by the Consulting Engineer for Railways, Madras, dated 21st August 1906.

G. A. ANDERSON,
Secretary to Government.

Letter—from the Secretary, Chamber of Commerce.

To—the Secretary to Government, Public Works Department (Railways).

Dated—Madras, the 13th November 1906.

I beg to acknowledge receipt of your letter No. 265 R.M., dated the 6th instant with enclosures, regarding proposed line from Guntūr to Répalle, and to say that it will be placed before the members in due course.

Letter—from J. T. GILLESPIE, Esq., B.A., I.C.S., President, District Board, Guntūr.

To—the Secretary to Government, Public Works Department (Railways).

Dated—the 19th November 1906.

No.—Dis. No. 1329/D.B.

With reference to your correspondence No. 266 R.W., dated 6th November 1906, relating to the construction of a railway from Guntūr to Répalle, I have the honour to forward herewith a resolution of the District Board fully setting forth its views as to the gauge and agency which it would be preferable to adopt for this project.

ENCLOSURES.

*Proceedings of the District Board, Guntūr, dated
29th September 1906.*

Read G. O., No. 976 L., dated 16th August 1906, regarding the Guntūr-Répalle Railway line.

Read also District Board's resolution No. 101, dated 25th August 1906, on the subject.

Read mahazar. Also office note of the President, District Board, on the subject.

Resolution No. 125—The Mahazar from the inhabitants of Guntūr will be forwarded to Government with the remark that the Board is unanimously of opinion that the line should be constructed on the broad gauge provided that the terms on which the Madras Railway Company undertakes to construct and work a broad gauge line do not exceed the terms already offered by the Southern Mahratta Railway Company for a metre gauge line. The Board also approves of the President's Memorandum as to the lines on which a reply should be sent to paragraph 3 of G.O., No. 976 L., dated 16th August 1906.

*Proceedings of the District Board, Guntūr, dated
15th November 1906.*

Read Government Memorandum No. 266 R.M., dated 6th November 1906, from Under Secretary to Government, Public Works Department (Railway), requesting the views of this District Board as to the gauge and agency to be preferred for the Guntūr-Répalle Branch line.

Resolution No. 147—The District Board has already (see resolution No. 125, dated 29th September 1906) expressed itself strongly in favour of a broad gauge line to be constructed and worked by the Madras Railway Company (or its successor in the administration of the North-East Line after the termination of the former company's contract next year) provided that this company will undertake to work the line when completed on terms which will compare favourably with those which the Southern Mahratta Railway Company undertook to work for (see enclosed copy). As to the terms for which the Madras Railway Company would undertake the working of the line on the broad gauge the District Board has yet received no information, but assuming that those terms are not less favourable than those offered by the Southern Mahratta Railway Company for working a metre gauge line the Board is more than ever convinced of the wisdom of adopting the broad gauge. The arguments adduced by the Southern Mahratta Railway Company in favour of the metre gauge are feeble in the extreme and as this company is chiefly interested it may be presumed that no strange arguments are likely to be forthcoming. The District Board fully agrees with the remarks of the Consulting Engineer for Railways, in reference to these arguments and would only point out in addition that the assumption of the Southern Mahratta Railway Company that the people of the district through which the new line is to run, as expressed by their District Board themselves desire the adoption of the narrower gauge is quite opposed to fact. The District Board have only once expressed an opinion on the relative merits of the two gauges, and that was strongly and unanimously in favour of the broad gauge line (see resolution No. 125, dated 29th September 1906). On a full consideration of all the pros and cons, as set forth in the representations of the Southern Mahratta Railway Company and the Madras Railway Company, the District Board once more declares itself unanimously of opinion that the line from Guntūr to Répalle should be constructed and worked by the Madras Railway

Company on the broad gauge, provided of course that that company will be willing to work the broad gauge line for terms that will compare favourably with those offered by the Southern Mahratta Railway Company for working a metre-gauge line.

Letter—from the Chairman, Chamber of Commerce.

To—the Secretary to Government, Public Works Department (Railways).

Dated—Madras, the 4th December 1906.

I have the honour to inform you, in reply to your letter No. 265 R.M., dated the 6th ultimo, that this Chamber is emphatically of opinion that the proposed line from Guntūr through Tenālī to Répalle should be on the broad gauge, and that it should be constructed and worked by the Madras Railway Company. In view of the exhaustive note (dated the 21st August) of the Consulting Engineer for Railways, which it has perused with much interest and satisfaction, the Chamber considers that it would be a matter of supererogation for it to repeat the unassailable arguments therein set forth, and it will therefore content itself with saying that it entirely agrees with them, and trusts that the Southern Mahratta Railway will not be allowed to exploit the trade of a district which is clearly within the sphere of influence of the Madras Railway, and to subject the district to unjustifiable competition.

Letter—from the Secretary, Chamber of Commerce.

To—the Secretary to Government, Public Works Department (Railways).

Dated—Cocanada, the 2nd January 1907.

I am directed by the Chamber to acknowledge receipt of your letter

- (1) Letter from the Agent and Manager, Madras Railway, No. O/1732-1064, dated 26th July 1906.
- (2) Letter from the Agent, Southern Mahratta Railway, to the Junior Consulting Engineer for Railways, Dharwar, No. 8490-6682, dated 30th July 1906.
- (3) Note by the Consulting Engineer for Railways, Madras, dated 21st August 1906.

were made over to the Southern Mahratta Railway.

The opening up of the rich country between Tenālī and Répalle is so evidently within the sphere of the Madras Railway's activities that the Chamber would deem it absolutely unfair if a foreign Company were allowed to step in and deprive the Company in possession of their legitimate traffic.

No. 265 R.M., dated Madras, 6th November 1906, with enclosures as per margin, inviting an expression of the Chamber's views as to the agency and gauge preferable for the proposed railway from Guntūr to Répalle.

I am first to thank you very cordially for affording an opportunity to this Chamber to explain its views on a subject of deep moment to the well-being of these districts. It would be a calamity if the new line

Besides, the interest of the Répalle taluk itself requires that the agency should be in the hands of the Madras Railway. This Company has good markets both in the north and to the south, and the keen competition between them is a certain guarantee that the cultivators will automatically secure for themselves the fullest value for their produce, an object which Government cannot fail to sympathize with.

In a matter of this kind too the Chamber respectfully submit that Government are morally bound to consider and foster the trade of the adjacent districts. It is only within the last twelve years, by the construction of the East Coast Railway, that these districts have begun to shake off the lethargy of ages. Industrial concerns are springing up on all sides. In Kristna and Gōdāvari, of rice mills alone eighteen have been built owing their existence to the new order of things. These concerns furnish steady employment for a large number of men, women and children, and their very life depends on an abundant supply of the raw material, and this is just what the Southern Mahratta Railway—if the new line were in its hands—would do its best to deprive them of; for necessarily the policy of the Southern Mahratta Railway Company would be to encourage trade along its own line and to prevent traffic going to the Coast districts.

The Chamber consider that the new line should be built on the broad gauge system, so as to link up at Tenālī with the Madras Railway, and enable the traffic from both ends to proceed north or south without break of bulk accordingly as it is the interest of the local trade to have it sent.

The travelling public too, had they any means of making themselves heard, would be loud in their call for the conveniences of a uniform gauge, which only the broad gauge between Tenālī and Répalle can supply.

Letter—from G. A. ANDERSON, Esq., Secretary to the Government of Madras, Public Works Department (Railways).

To—the Secretary to the Railway Board.

Dated—the 11th January 1907.

No.—67 Ry.

I am directed to refer to your letter No. R.P. 70-A/2, dated the 6th October 1906, inquiring when the protest by the Madras Railway, and the views of the Madras Government, on the proposal to construct the Guntūr-Répalle line by the agency of the Southern Mahratta Railway may be expected.

2. In reply, I am to forward, herewith, the views of the Madras Railway, the Madras and Cocanada Chambers of Commerce, and the District Board, Guntūr, as contained in the documents accompanying this letter, together with a note by the Consulting Engineer for Railways, Madras, and to inform you that this Government consider that the line should be made on the broad gauge either as an addition to the North-East line of the Madras Railway, or as a District Board line, the construction and working in either case being in the hands of the Madras Railway Company.

Letter—from the Secretary to the Railway Board.
 To—the Secretary to the Government of Madras, Public Works
 Department (Railways).
 Dated—Calcutta, the 27th February 1907.
 No.—R.P. 70-A/6.

I am directed to acknowledge the receipt of your letter No. 67 Ry., dated 11th January 1907, relative to the proposed construction of the Guntūr-Répalé Branch Railway, and to say that before they can proceed further with the matters under consideration the Railway Board will be glad to know whether there is any prospect of the District Board being in a position, assuming that they desire it, to raise the capital without State assistance.

2. I am to explain that the Secretary of State having decided to bring District Board lines financed by Government loans within the programme of railway expenditure, there is little prospect of the branch line being sanctioned for construction unless the District Board are able to raise the capital themselves or through an independent Company on their guarantee.

Letter—from N. S. BRODIE, Esq., M.A., I.C.S., President, District
 Board, Guntūr.
 To—the Secretary to Government, Local and Municipal Depart-
 ment.

Dated—Guntūr, the 11th October 1906.
 No.—Dis. 1215/D.B.

With reference to G.O. No. 976 L., dated 16th August 1906, I have the honour to submit herewith a copy of the acting President's memorandum giving in detail all the information called for in paragraph 3 thereof, and approved by the District Board in its resolution No. 125, dated 29th September 1906, a copy of which is herein enclosed.

2. As regards the gauge to be adopted for the construction of the Guntūr-Répalé Branch line, I beg to forward herewith a mahazar petition from the inhabitants of Guntūr praying for the construction of this line in broad gauge with the suggestive remark of the District Board that it is unanimously of the same opinion for the following reasons:—

(a) Guntūr is already served by a narrow line, and it is not therefore in need of another narrow gauge line for its connexion with the general railway system.

(b) Guntūr has a very extensive trade, but its further development is being greatly hampered for want of a broad gauge line linking it with the East Coast Railway line.

(c) A narrow gauge line does not tend to an economical means of carriage, and the difficulties of transhipment lead to much loss, unnecessary expense, delay and inconvenience; but all these will be obviated if a broad gauge line be preferred.

(d) The general trend of the trade of this part of the country is mostly with Madras, Calcutta and Bombay, which are knit together by broad gauge lines, whereas there is very little trade with Marmagaoa—the terminus

of the Southern Mahratta Railway. It is therefore to the advantage of this country that a broad gauge line should be preferred.

(e) Though the initial cost for the construction of a broad gauge line be a little more, it is worth being incurred on the ground that it links a fertile and populous tract of the country with the general broad gauge lines, and thus affords greater facilities for transportation of traffic, tending thereby to develop traffic and leading to increased earnings to the Board. The Board will therefore be none the worse, but all the better, by going in for a broad gauge line.

(f) The Southern Mahratta Railway Company will also be benefited as owing to the risk of transhipments, it is not getting such large quantities of grain and other produce for being carried along its line, but should a broad gauge line tap the rich rice-producing country, it will be given greater facilities for the carriage of the produce from Guntūr—the emporium of trade for this part of the country.

3. Such are the views of the Board as well as of the people, with which I fully concur, and I request you to be pleased to move Government to issue orders as regards the gauge to be adopted and the consequent cost of construction.

4. A copy of the District Board's resolution No. 101, dated 25th August 1906, referred to in the preamble, and a loan application in the usual form are hereto appended.

ENCLOSURES.

*Proceedings of the District Board, Guntūr, dated
 25th August 1906.*

* * * * *
 Read G.O. No. 976 L., dated 16th August 1906, regarding the Guntūr-Répalé Railway line.

Resolution No. 101.—This must lie over until the District Boards of Kistna and Tanjore reply to the letter of the President asking for information as to the concessions granted to them by Government.

*Proceedings of the District Board, Guntūr, dated
 29th September 1906.*

* * * * *
 Read G.O. No. 976 L., dated 16th August 1906, regarding the Guntūr-Répalé Railway line.

Read also District Board Resolution No. 101, dated 25th August 1906, on the subject.

Also office-note of the President, District Board, on the subject.
 Resolution No. 125.—The mahazar from the inhabitants of Guntūr will be forwarded to Government with the remark that the Board is unanimously of opinion that the line should be constructed on the broad gauge. The

Board also approves of the President's memorandum as to the lines on which a reply should be sent to paragraph 3 of G.O., No. 976 L., dated 16th August 1906, provided that the terms on which the Madras Railway Company undertakes to construct and work a broad gauge line do not exceed the terms already offered by the Southern Mahratta Railway Company for a metre gauge line.

Memorial—from the inhabitants of Guntūr.

To—His Excellency the Governor in Council (through the District Board, Guntūr).

Dated—the 28th September 1906.

MAY IT PLEASE YOUR EXCELLENCY.—We have come to understand that the District Board, Guntūr, has resolved upon connecting the town of Guntūr by rail with Répalle, a rising town in the centre of the grain-producing villages in the Tenāli taluk, irrigated by the Kistna water.

The advantages of the above line are manifold.

This important town has no doubt the advantage of being connected with the Ceded Districts, &c., on one side and the junction of Bezvada on the other, by a narrow gauge line under the management of the Southern Mahratta Railway Company.

But the want of its connexion with a broad gauge line may, in the long run, tell upon its commercial advantages a good deal.

The present trade of Guntūr is no doubt extensive, and if the town is directly connected with a broad gauge line, it will double itself.

This town has a population of 34,000 according to last census and it is increasing day by day.

It has about twenty factories worked by steam power besides a big Jute Mill under construction. Representatives of important European firms, such as Messrs. Ralli Brothers, Volkart Brothers, Best & Co., Dymes & Co., and R. P. Gill & Co., carry on trade here on an extensive scale.

The exports of the town are immense. About 60,000 bales of pressed cotton are exported annually to Manchester, Antwerp, and other towns, European and Asiatic.

Hundreds of thousands of bags of rice are made up here in the various rice factories and sent to Hyderabad, Bengal, Madras, and other places.

The export of pulses, chillies, wheat, castor-oil seed, turmeric, and cardamoms is of no small extent.

The imports are by no means less. Lakhs of grain bags, large quantities of cotton, chillies, pulses, tobacco, wheat, and piece-goods are imported. The town is connected with every important place in the district by roads, and the traffic is so large that the municipal toll-gates fetch an annual income of Rs. 25,000 to the local municipality.

Cotton grown in the districts of Kistna, Gōdāvari, Kurnool, and even Nellore and the Dominions of His Highness the Nizam, is imported to the town of Guntūr for the purpose of ginning and pressing before it is exported.

The goods that are so extensively imported and exported have to be transhipped at Bezvada, causing much inconvenience and expense to the trading public.

Even if this town is connected with the Bezvada-Madras Railway at Tenāli by Guntūr-Répalle Railway, it does not improve matters unless it is of broad gauge.

If a broad gauge line be laid from Guntūr to Répalle *via* Tenāli, a very flourishing town with an extensive rice trade on the Bezvada-Madras Railway line, goods may be sent to any part of India without necessity of transshipment, and the unnecessary expense, delay and inconvenience of transshipment will be avoided.

Besides, the taluk of Tenāli, which the proposed line will tap, is deservedly known as the granary of the Presidency.

It supplies no small quantity of paddy and rice to several parts of India. Its connexion, therefore, with the rest of India by a broad gauge line from its interior will be of immense value.

A through communication from Madras to this town (Guntūr) by means of the proposed broad gauge line connected with the Madras-Bezvada line will be very convenient for the travelling public.

It appears that the difference in cost between broad gauge and narrow gauge for this line is about 4 or 5 lakhs of rupees, which is too trifling to be considered in comparison to the advantages to be derived from the broad gauge line.

For the foregoing reasons, we humbly pray that Your Excellency be graciously pleased to order the construction of Guntūr-Répalle line in broad gauge.

Memorandum.

With reference to paragraph 3 of G.O., No. 976 L., dated 16th August 1906, the following information may be furnished:—

1. *The financial position of the Board.*—The Board has an income of Rs. 89,710 annually from its railway cess, and as soon as the Guntūr-Répalle Railway line is constructed, the gross earnings calculated at one rupee per head of population per annum may be estimated at Rs. 2,21,760 according to Palmer's method of estimating probable traffic, the population of the villages within a belt of four miles on each side of the line having been ascertained to be 221,760 at the last census in 1901. It may be assumed that the working expenses will not exceed 50 per cent. of the gross earnings—*vide* the terms on which the Southern Mahratta Railway Company has offered to work the line. This would leave a balance of Rs. 1,10,880 annually to the credit of this Board, which together with Rs. 89,710, the annual income from the railway cess, would make up an annual income of Rs. 2,00,590. With such a large income the Board will be in a position to repay the loan taken for the construction of the line in a few years. The Board can safely undertake to repay at the very least one lakh of rupees every year after the line is opened for traffic, so that if 16 lakhs are borrowed for a broad gauge line, the loan can be repaid in sixteen years at the outside, beginning from the date on which the line

is opened for traffic. Out of the balance of its annual railway income the Board will also be able to allot a sufficient sum every year for the payment of interest on the loan now applied for the sum required for this purpose becoming less and less every year in arithmetical progression, as the instalments of the loan are repaid. Even at the outset when the amount of interest payable is at its maximum there will remain a balance of over Rs. 35,000 every year available for expenditure on repairs and other contingencies in connexion with the line and any portion of this balance that is not required for immediate expenditure can be utilized for the more speedy extinction of the Board's railway debt or capitalized for the further development of railway enterprise in the district. From the richness and populousness of the country through which the line will pass, it seems highly probable that the earnings of the railway will be greater than has been taken credit for above, and that the Board's future financial position will be proportionately more satisfactory. The Board has no other debt besides the one which it now proposes to contract for the construction of the Repalle Railway line, and the loan applied for may be secured on all the revenues of the District Board which are otherwise unencumbered.

2. The estimated cost of the line will be approximately Rs. 21,00,000 or Rs. 16,50,000, according as the broad or narrow gauge is adopted. From this may be deducted, however, a sum of Rs. 1,25,000, the approximate cost of acquisition of the land required for the railway, which it is hoped will be borne by Government. The net cost of the line to the District Board will therefore be Rs. 19,75,000 or Rs. 15,25,000, according to the gauge adopted. The railway cess accumulated up to the end of March last amounted to Rs. 2,63,000 and a further amount of Rs. 89,716 will accrue from the same source by the end of March next. The total of these two amounts together with the interest that will accrue by the end of March next on the amount of railway cess already invested may be put down as Rs. 3,61,000 in round figures. Deducting this from Rs. 19,75,000 or Rs. 15,25,000, the estimated net cost of the railway, the amount which will have to be borrowed to make up the required capital comes to Rs. 16 lakhs or 11½ lakhs, according as the broad or narrow gauge is finally decided upon.

3. As for the concessions admissible under Government of India Circular Order No. 514, Rc., dated 17th April 1906.

The following concessions will be asked for under article 3 of the resolution:—

(1) The grant of the land required for the construction of the proposed line, including land for quarrying ballast and other kindred purposes, free of cost;

(2) The supplying and maintaining of electric telegraphs and telegraphic appliances by Government on the usual terms.

(3) Railway materials for the branch railway to be carried over State lines at the special rates prescribed for such materials belonging to State Railways.

4. The terms on which the Southern Mahratta Railway Company will work the line.—These are embodied in the Company's printed draft memorandum of agreement which will be submitted to Government together with a copy

of the Agent's letter No. 8490/10034, dated 8th December 1905, agreeing to accept these terms for working the Guntur-Repalle line. As regards these terms the Board is of opinion that 45 per cent. of the gross earnings should be a sufficient remuneration to either the Madras Railway Company or the Southern Mahratta Railway Company for working the line, seeing that the branch line will serve as a feeder to the main line and that as it will run through much richer country than the main line it will benefit the Company that works it indirectly to a considerable extent by bringing in a good deal of additional traffic to its main line.

GUNTUR DISTRICT BOARD'S OFFICE,
10th October 1906.

J. T. GILLESPIE,
President.

Order—No. 414 L., dated 2nd April 1907.

In G.O., No. 976 L., dated 16th August 1906, the District Board of Guntur was requested to make a formal application to Government for such concessions as it required in connexion with the proposed line of railway from Guntur to Repalle which the Board had in view. The Board was requested to state in submitting the application—

(1) the estimated cost of the line on both the metre and the broad gauges for which the following figures might, it was suggested, be adopted:—

	RS.
Metre gauge	16,50,000
Broad "	21,00,000

(2) the financial position of the District Board.

(3) the amount of the loan required from the Provincial loan account, and

(4) the terms on which the Southern Mahratta Railway would work the line.

The Government added that the terms on which the Madras Railway would work the line, if a light broad gauge line was decided on, would be settled with the Madras Railway by Government and that these were not likely to exceed 50 per cent. of the gross receipts.

2. The President of the District Board accordingly submits with his letter No. 1215, dated 11th October 1906, a memorandum furnishing in detail the information required by Government and a resolution of the Board in which that body applies among other concessions for a loan of Rs. 16 or Rs. 11½ lakhs from Government according as the line is to be on the broad or metre gauge, preference being given to the broad gauge system.

3. The Government regret that there is little prospect of funds becoming available in the near future for the grant of the required loan from the Provincial loan account. The District Board will therefore be advised to consider the desirability of endeavouring to raise the requisite funds by loan in the open market under the provisions of the Local Authorities Loans Act, 1879, and to submit to Government a fresh application altering the terms of its previous application referred to in the preceding paragraph.

4. In suggesting the sum of Rs. 21,00,000 as the cost of the broad gauge line, Government had in contemplation a light railway with the minimum initial equipment, the standard to be developed with the development of traffic, an arrangement which would spread the expenditure over a longer period. The same procedure is of course practicable in whatever way the necessary capital may be raised, but in view of possible difficulty in raising a supplementary loan of only a few lakhs in the open market, it is considered advisable to raise the estimated cost slightly so as to cover the expenditure for the first few years. As the estimated accumulated balance of the railway cess on the 31st March 1907 is likely to exceed 3 lakhs of rupees, the loan to be raised may be placed at Rs. 20 lakhs. In these circumstances, the District Board is requested to state whether it will be prepared to endeavour to raise a loan of this amount in the open market by means of debentures bearing interest at 4 per cent. per annum to be repaid after twenty years out of the proceeds of a sinking fund to be formed out of the net earnings of the railway. The annual income derivable from the railway cess will suffice to meet the interest on the loan until the line has been actually opened to traffic.

(True Extract.)

H. D. TAYLOR,
Ag. Secretary to Government.

To the President, District Board, Guntūr.
" Public Works Department (Railway).
" Financial Department.

1906 22

PRÉCIS-WRITING.

Time—Three Hours.

INSTRUCTIONS TO CANDIDATES.

Having read the accompanying correspondence, draw up a Memorandum or Précis, i.e. a brief and clear statement of its contents, not paper by paper, but in the form of a narrative. The object of the Précis is that a person who has not time to read the original correspondence may, by reading the Précis, become acquainted with all the leading features of what passed. The merits of such a Précis are: (1) that it should contain all that is of importance in the Correspondence, and nothing that is unimportant; (2) that it should present the matter in a consecutive and readable manner; (3) that it should be as brief as is compatible with completeness and distinctness. Brevity and clear handwriting should be particularly studied.

No. 63. From THE GOVERNMENT OF INDIA, to the Secretary of State for India,—No. 51, dated 3rd October 1894.

We have the honour to forward, for your information, a copy of the papers entered in the annexed list, relative to a proposal made by the Government of Madras to appoint Subordinate Judges in that Presidency to be Assistant Sessions Judges to try Sessions cases referred to them by the Sessions Judges.

2. In 1890 the Government of Lord Lansdowne, in communicating to Local Governments the orders contained in Lord Cross's Despatch No. 104, dated the 12th September 1889, regarding the proposals of the Public Service Commission so far as they related to the Judicial and Executive branches of the Administration, requested them to consider whether officers of the Provincial Service exercising only civil judicial functions should not undergo some period of probation in criminal business before they were appointed to a District and Sessions Judgeship. The Government of Madras expressed the opinion that this object could be secured either by the creation of two or three additional Subordinate Judgeships and the employment of about the same number of Subordinate Judges as Additional Sessions

Judges, or by the appointment of all Subordinate Judges to be Additional Sessions Judges. There was, however, then no evidence to show that the agency for conducting Sessions trials in the Madras Presidency required to be strengthened; and Lord Lansdowne's Government considered that the desired result might be attained by transferring temporarily a Subordinate Judge, who gave promise of becoming an efficient District and Sessions Judge, to the Executive line and employing him upon ordinary criminal work as a Deputy Magistrate and Collector. The Government of Madras have now represented that in order to permit of the efficient working of this system, it would be necessary to prescribe a Revenue test to be passed by Subordinate Judges prior to their first appointment, as some guarantee of fitness for revenue duties would be needed in their cases. But as only a few Subordinate Judges and District Munsifs would under this system be transferred temporarily to the Executive line, the Madras Government consider that the knowledge of Revenue matters would, as regards the majority of these officers, be of little use in the performance of their ordinary duties, and consequently the tests to be passed by them would be needlessly increased. They have come to the conclusion that the best method of securing the training of Subordinate Judges in criminal work will be to appoint these officers to be Assistant Sessions Judges, to try Sessions cases referred to them by the Sessions Judges. The latter (it is said), being thus relieved of Sessions work, will be able to an equal extent to relieve Subordinate Judges of civil appeals and suits.

3. We consider it undesirable that a Subordinate Judge, without having had any previous experience in criminal work, should be entrusted with the powers exercised by a Sessions Judge, still less with the oversight of Criminal Courts which would be involved in his appointment to be Additional Sessions Judge. But the present proposal (*vide* section 409 of the Code of Criminal Procedure, 1882) does not involve the investment of Subordinate Judges with any appellate power, and sections 31 and 408 of the Code of Criminal Procedure respectively limit the powers of sentence of an Assistant Sessions Judge and provide for an appeal from his decisions to the Court of Session. Moreover, all cases reach an Assistant Sessions Judge after a careful preliminary inquiry by a Magistrate; and Subordinate Judges, experienced only in the work of the Civil Courts, will, we think, be better qualified to try cases in which such a preliminary inquiry has been carried out than to undertake the investigations, involving familiarity with police procedure and practice, which have to be performed by Magistrates in India. The Subordinate Judges, who would under the present proposal be invested with criminal judicial powers, are the picked men of their class; and having regard to their seniority and their standing in the Service it might frequently be found unsuitable to employ them in subordinate magisterial posts. For these reasons we are prepared to support the proposal to invest Subordinate Judges in Madras with the powers of Assistant

Sessions Judges, provided that the proposal is restricted to the conferment of these powers on selected Subordinate Judges to the extent necessary to provide an adequate supply for filling the appointments of District and Sessions Judge (four in number) which have been listed as open to the Madras Provincial Civil Service.

4. As, however, the offices of Assistant Judges in the Regulation Provinces are reserved to the Indian Civil Service by Statute 24 and 25 Vict., cap. 54, it is necessary, before the proposal can be carried out, that a rule should be made by us, with the sanction of the Secretary of State in Council, in accordance with Statute 33 Vict., cap. 3, section 6. We accordingly submit for the necessary sanction the enclosed rule authorizing the Government of Madras to appoint certain Subordinate Judges to be also Assistant Sessions Judges. The precise number of the officers to be so appointed will be subsequently determined by us. It will probably not be found necessary that more than two Subordinate Judges should exercise these powers at any one time.

LIST OF ENCLOSURES.

1. Draft rule referred to in paragraph 4 of the Despatch.
2. Extract, paragraph 3, from a letter from the Government of Madras, No. 326 (Public), dated the 11th May 1894.
3. Telegram to the Government of Madras, No. 1098, dated the 22nd June 1894.
4. Letter to the Government of Madras, No. 1099, dated the 22nd June 1894.
5. Telegram from the Government of Madras, No. 325, dated the 9th July 1894.
6. Telegram to the Government of Madras, No. 1300, dated the 31st July 1894.
7. Telegram from the Government of Madras, No. 379, dated the 4th August 1894.

Draft rule referred to in paragraph 4 of the Despatch.

In exercise of the power conferred by the Statute 33 Vict., cap. 3, section 6, and in continuation of the rules published in Notification No. 2159, dated the 2nd November 1892, the Governor General in Council has been pleased to make the following rule, which has been sanctioned by the Secretary of State in Council with the concurrence of a majority of the members present:—

'The Government of Madras may appoint any Subordinate Judge, being

a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge.'

Extract, paragraph 3, from A LETTER FROM THE CHIEF SECRETARY TO THE GOVERNMENT OF MADRAS, to the Secretary to the Government of India, Home Department,—No. 326 (Public), dated the 11th May 1894.

3. In connexion with this subject, I am directed to inform you of the action taken by this Government with reference to the training of District Munsifs and Subordinate Judges in criminal work.

In paragraph 15 of Mr. MacDonnell's letter of the 14th February 1890, No. 300, it was suggested that officers of the Provincial Service exercising only civil judicial functions should undergo some such training before being appointed to a District and Sessions Judgeship, four of which posts have in this Presidency been declared open to the members of that Service. This Government was of

Paragraph 17 of Public
letter, dated 4th June
1890, No. 401.

opinion that this object could be secured either by the creation of two or three additional Sub-

Judgeships and the employment of about the same number of Sub-Judges and Additional Sessions Judges, or by the appointment of all Sub-Judges to be Additional Sessions Judges. In paragraph 8 of Home Department letter of the 27th May 1892, No. 1535, you intimated the opinion of the Government of India that the desired result might be attained by transferring temporarily a Subordinate Judge who gave promise of becoming an efficient District and Sessions Judge to the Executive line and employing him upon ordinary criminal work as a Deputy Collector and Magistrate.

In order to permit of the efficient working of this system, it would be necessary to prescribe a Revenue test as one of those to be passed by these officers prior to first appointment, for some guarantee of fitness for Revenue duties would be needed in their cases. But as only a few Sub-Judges and District Munsifs would under this system be transferred temporarily to the executive line, the knowledge of revenue matters would, as regards the majority of these officers, be of little use in the performance of their ordinary duties, and consequently the tests to be passed by them would be needlessly increased.

His Excellency the Governor in Council has, in consultation with the Honourable the Judges of High Court, come to the conclusion that the best method of securing the training of Sub-judges in criminal work will be to appoint these officers to be Assistant Sessions Judges to try Sessions cases referred to them by the Sessions Judges, who being thus relieved of Sessions work might to an equal extent take the civil appeals and suits now falling on Sub-Judges. In view of the ample judicial training and the high capacity of those officers as a class, there is no danger in entrusting them with such powers. The necessary steps to carry this into effect are being taken.

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From THE SECRETARY TO THE GOVERNMENT OF INDIA, HOME DEPARTMENT, to the Chief Secretary to the Government of Madras,—Telegram No. 1098, dated the 22nd June 1894.

Your letter 326, dated 11th May. Madras Provincial Civil Service Rules. Proposal in paragraph 3 regarding appointment of Subordinate Judges to be Assistant Sessions Judges cannot be carried out except in accordance with Statute 33 Vict., cap. 3, section 6. Letter follows.

From C. J. LYALL, Esq., C. S. I., C. I. E., Secretary to the Government of India, Home Department, to the Chief Secretary to the Government of Madras,—No. 1099, dated the 22nd June 1894.

I am directed to acknowledge the receipt of your letter No. 326 (Public), dated the 11th ultimo, forwarding a copy of the rules for admission to the Madras Provincial Civil Service as finally revised and issued by the Government of Madras. In paragraph 3 of your letter it is stated that, with a view to secure the training of Subordinate Judges in criminal work, His Excellency the Governor in Council proposes to appoint these officers to be Assistant Sessions Judges to try Sessions cases referred to them by the Sessions Judges, and that he is causing steps to be taken to carry the proposal into effect.

2. With reference to this proposal, I am directed to say, in continuation of the telegram from this Department, No. 1098, dated 22nd instant, that as the offices of Assistant Judges are reserved to the Indian Civil Service by Statute 24 and 25 Vict., cap. 54, it is necessary, before the proposal can be carried out, that a rule should be made by the Governor General in Council with the sanction of the Secretary of State in Council under Statute 33, Vict., cap. 3, section 6, authorizing the Local Government to appoint any Subordinate Judge to be also an Assistant Sessions Judge. Before considering, however, whether such a rule should be recommended for the sanction of the Secretary of State, the Government of India will be glad to learn the probable time when the appointments of District and Sessions Judges or any of them listed as open to the Madras Provincial Civil Service are likely to become available for transfer to that Service.

From THE CHIEF SECRETARY TO THE GOVERNMENT OF MADRAS, to the Secretary to the Government of India, Home Department,—Telegram No. 325, dated the 9th July 1894.

Your 1099, June 22nd. This Government would respectfully advance that Scheduled appointment is Assistant Judge and not Assistant Sessions Judge. Latter is not appointment properly so called, but merely investiture with certain powers under Criminal Procedure Code. Taking average rate

of retirements and deaths for past four years, Manavedan Raja, senior Statutory, would get permanent Judgeship or Collectorate by about 1899. First Provincial Service officer will get permanent Judgeship about July 1902. Vacancy at present exists for appointment Provincial Service officer as acting Judge. Please pass very early orders, as recent investiture Sub-Judges with powers Assistant Sessions Judges to assist District Judges in clearing arrears been withheld.

From THE SECRETARY TO THE GOVERNMENT OF INDIA, HOME DEPARTMENT, to the Chief Secretary to the Government of Madras,—Telegram No. 1300 (Public), dated 31st July 1894.

Your telegram 325, 9th instant. Proposed appointment of Subordinate Judges to be Assistant Sessions Judges. Governor General in Council having again considered the point adheres to view stated in letter of 22nd ultimo, that Subordinate Judges cannot be appointed Assistant Sessions Judges save in the way there indicated. Government of India will consider desirability of making rule under Statute 33 Vict., cap. 3, section 6, but would be glad to know whether Madras Government desire to make any further remarks upon the subject.

From THE CHIEF SECRETARY TO THE GOVERNMENT OF MADRAS, to the Secretary to the Government of India, Home Department,—Telegram No. 379, dated the 4th August 1894.

Your telegram 1300 (Public), 31st July. This Government considers appointment Subordinate Judges as Assistant Sessions Judges to be important factor in working of Provincial Service scheme, as after considerable discussion it was decided that this was best practicable method for securing training of these officers in criminal work in order to fit them for post District and Sessions Judge.

No. 64. From THE SECRETARY OF STATE FOR INDIA, to the Government of India,—No. 104 (Public), dated the 8th November 1894.

Having considered in Council the draft Rule which accompanied your Government's letter No. 51, dated the 3rd ultimo, I have accorded my sanction to it with the concurrence of a majority of the members present.

2. The reasons which have induced Your Excellency's Government to propose this special rule for the Presidency of Madras are fully stated in the third paragraph of the letter under reply. They appear to me very cogent, but they would seem to apply to other Provinces also, and not

exclusively to Madras. I presume that your Government are desirous of trying the experiment in one Province before proposing a rule of general application.

No. 65. HOME DEPT. (Public) Notification No. 67, dated the 24th January 1895.

In exercise of the power conferred by the Statute 33 Vict., cap. 3, section 6, and in continuation of the rules published in Notification No. 2159, dated the 2nd November 1892, the Governor General in Council has been pleased to make the following rule which has been sanctioned by the Secretary of State in Council with the concurrence of a majority of the members present:—

‘The Government of Madras may appoint any Subordinate Judge, being a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge.’

No. 66. From J. P. HEWETT, Esq., C.I.E., Officiating Secretary to the Government of India, to the Chief Secretary to the Government of Madras,—No. 68, dated the 24th January 1895.

With reference to the correspondence ending with your telegram No. 379, dated the 4th August last, I am directed to forward copy of the papers noted in the margin, from which it will be seen that, under Statute 33 Vict., cap. 3, section 6, a rule has been issued by the Government of India, with the sanction of the Secretary of State in Council, authorizing the Government of Madras to appoint any Subordinate Judge being a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge. In view of the fact that the number of District and Sessions Judgeships thrown open to the Madras Provincial Service is four, the Governor General in Council considers that it should be sufficient to appoint not more than two Subordinate Judges to exercise the powers of Assistant Sessions Judges at any one time, and this view is expressed in paragraph 4 of the Despatch to the Secretary of State of 3rd October last. I am accordingly to ask that not more than two Subordinate Judges may be appointed at any one time to be Assistant Sessions Judges under the rule now sanctioned.

The Governor General in Council would be glad, when the rule has been in operation for two years, to learn the opinion of the Government of Madras as to how it has worked.

Despatch to the Secretary of State, No. 51, dated the 3rd October 1894.

Despatch from the Secretary of State, No. 104, dated the 8th November 1894.

Home Department Notification No. 67, dated the 24th January 1895.

No. 67. From THE CHIEF SECRETARY TO THE GOVERNMENT OF FORT ST. GEORGE, to the Secretary to the Government of India, Home Department,—No. 1463 Public, dated 10th November 1897.

I am directed to refer to Mr. HEWETT's letter, No. 68, Public, dated 24th January 1895, which communicated a rule issued under the provisions of Statute 33 Vict., cap. 3, section 6, authorizing this Government to appoint any Subordinate Judge, being a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge. The Governor General in Council desired to be furnished with the opinion of the Government of Madras as to the working of the rule after it had been in operation for two years.

2. The Judges of the High Court now report that the experiment has proved successful; that the two Subordinate Judges who were appointed Assistant Sessions Judges discharged their duties on the whole well and rendered valuable assistance in two Sessions Divisions where the work was heavy; and that this training has rendered them better qualified to do duty as Sessions Judges. His Excellency the Governor in Council endorses this view.

No. 68. From J. P. HEWETT, Esq., C.I.E., Officiating Secretary to the Government of India, to the Chief Secretary to the Government of Bengal, the Chief Secretary to the Government of the Punjab,—Nos. 69-71, dated the 24th January 1895.

I am directed to forward, for the information of the Government of Bengal the Punjab, a copy of the papers marginally noted, relating to the issue by the Government of India, with the sanction of the Secretary of State in Council, under Statute 33 Vict., cap. 3, section 6, of a rule authorizing the Government of Madras to appoint any Subordinate Judge, being a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge. I am to invite attention to paragraph 3 of the Despatch to the Secretary of State of 3rd October last, in which are stated the reasons for which the Government of India recommended the proposal of the Government of Madras to invest Subordinate Judges in that Presidency with the powers of Assistant Sessions Judges. The proposal, it will be observed, is to be restricted to the conferment of these powers on selected Subordinate Judges to the extent necessary to provide an adequate supply for filling the appointments of District and

Despatch to the Secretary of State, No. 61, dated the 3rd October 1894, and enclosures.

Despatch from the Secretary of State, No. 164, dated the 8th November 1894.

Home Department Notification No. , dated the

the proposal of the Government of Madras to invest Subordinate Judges in that Presidency with the powers of Assistant Sessions Judges. The proposal, it will be observed, is to be restricted to the conferment of these powers on selected Subordinate Judges to the extent necessary to provide an adequate supply for filling the appointments of District and

Sessions Judges which have been listed as open to the Provincial Civil Service. The number of District and Sessions Judgeships thrown open to the Madras Provincial Civil Service is four, and the Government of India have, in accordance with the opinion expressed in paragraph 4 of their Despatch of 3rd October last, prescribed two as the number of Subordinate Judges who can, under the rule, be appointed at the same time to be Assistant Sessions Judges in the Madras Presidency.

2. I am to ask whether, in the opinion of His Honour the Lieutenant-Governor (and Chief Commissioner), it would be desirable to adopt as regards Bengal a rule similar to that sanctioned for the Madras Presidency and subject to the same limitation as regards the extent to which appointments are to be made under the rule.

No. 69. From H. J. S. COTTON, Esq., C.S.I., Chief Secretary to the Government of Bengal, to the Secretary to the Government of India, Home Department,—No. 1040 A, dated 16th February 1895.

I am directed to acknowledge the receipt of your letter No. 69, dated the 24th January 1895, on the subject of the appointment of Assistant Sessions Judges in this Province.

2. In reply, I am to state that the present circumstances of Bengal do not, in the Lieutenant-Governor's opinion, call for measures similar to those which have been adopted in the Madras Presidency. Six Judgeships have, in Bengal, been thrown open to the Provincial Service. Of the Statutory Civilian serving in these Provinces, one, *viz.*, Mr. Brojendra Kumar Seal, is already a substantive District and Sessions Judge, and five* others may be said to be qualified or qualifying for the remaining Judgeships. Of these five officers, Kumar Gopendra Krishna Deb, who holds the appointment of Inspector-General of Registration, will probably be made a Judge when it comes to his turn for promotion. There is already, therefore, an adequate supply for filling up all the Judgeships thrown open to the Provincial Service for some time to come. Moreover, it has already been decided by the Government of India, in Mr. Lyall's letter No. 1537, dated the 27th May 1892, that officers of the Judicial branch of the Provincial Service who may be selected for listed posts can most conveniently be trained in criminal and Revenue work by being employed in a corresponding grade as Deputy Magistrates.

3. For these reasons Sir Charles Elliott does not consider it necessary at

- *1. Kumar Gopendra Krishna Deb.
- 2. Mr. Syed Nural Huda.
- 3. Mr. Ahsanuddin Ahmad.
- 4. Mr. Barada Charan Mitra.
- 5. Mr. Kedar Nath Roy.

present to adopt special measures for training members of the Provincial Service to be District and Sessions Judges, but as the time will shortly come when it may be necessary to take such a course, His Honour would be glad to be informed what the pay and position of a Subordinate Judge or Munsif would be if selected for appointment to the higher service as a Judge, and temporarily made an Assistant Sessions Judge. I am to point out that it would be necessary that his place in the Judicial branch of the Provincial Service should be filled up, as all the officers in that Service are fully employed, and that he could not be appointed to fill a vacancy in the Executive branch of the Service, as the block in promotion thus caused would be a hardship to the junior members of that Service. In the circumstances it would seem that his appointment should be made into a supernumerary or additional grade, but it is not clear what his salary and prospects would be.

No. 70. From J. P. HEWETT, Esq., C.I.E., Officiating Secretary to the Government of India, to the Chief Secretary to the Government of Bengal, —No. 874 A, dated 31st May 1895.

I am directed to acknowledge the receipt of your letter No. 1040 A, dated the 16th ultimo, on the subject of the proposed appointment of Subordinate Judges in Bengal to be also Assistant Sessions Judges.

2. I am in the first place, with reference to the observation in paragraph 2 of your letter under reply, that it has already been decided by the Government of India in Mr. Lyall's letter No. 1587, dated the 27th May 1892, that officers of the Judicial branch who may be selected for listed posts can most conveniently be trained in criminal and Revenue work by being employed in a corresponding grade as Deputy Magistrates, to say that, on further consideration, objections to such a plan have occurred to the Government of India which render its adoption undesirable in Provinces, like Bengal, where the status of Subordinate Judges is relatively high. The Governor General in Council is not certain that a system under which a specially selected Subordinate Judge would be detached from Civil Court work and employed altogether on that of a Deputy Magistrate, would be generally acceptable to the class of Subordinate Judges, while any system under which he would combine the duties of a Civil Judge with those of a Deputy Magistrate would, owing to the dual control to which he would be subjected, in all probability lead to friction. In view of these circumstances His Excellency in Council prefers that a trial should be given to the alternative method of training Subordinate Judges for the work of Sessions Judge by appointing them also to be Assistant Sessions Judges.

3. From paragraph 3 of your letter, in which a question is raised as to what the pay and position of a Subordinate Judge would be if selected for

appointment to the higher service as a Judge, and temporarily made an Assistant Sessions Judge, it appears that the object of the proposal on which His Honour's opinion was invited in my letter No. 69, dated the 24th January last, has been to some extent misapprehended. It was not, I am to explain, intended that any selection 'for appointment to the higher service as a Judge' should be made when a Subordinate Judge is temporarily appointed to be an Assistant Sessions Judge. The post of District and Sessions Judge for which he would be trained, and to which an appointment would eventually be made is a 'listed' post which has been thrown open to the Provincial Civil Service. The present proposal is merely to train likely selected officers belonging to the Provincial Service for ultimately filling the listed post, but without giving to individuals so selected any pledge of appointment. No transfer to a higher service is involved, nor does any question of pay arise. It is simply proposed that a Subordinate Judge, who may be considered a likely candidate for advancement to a listed appointment of District and Sessions Judge, should perform criminal business as an Assistant Sessions Judge in addition to his ordinary civil work. Any necessary adjustment of the civil work would be effected by the transfer of civil cases from his files to those of other officers.

4. I am to ask that the arrangement above explained may be further considered by His Honour, and to say that, in view of the necessity for eventually taking special measures to train members of the Provincial Service to be District and Sessions Judges, the Governor General in Council proposes, unless the Lieutenant-Governor has anything to urge against this being done, to recommend to the Secretary of State that a rule similar to that which has been adopted in Madras should be applied to Bengal.

No. 71. From H. J. S. COTTON, Esq., C.S.I., Chief Secretary to the Government of Bengal, to the Secretary to the Government of India, Home Department, —No. 305 A-D, dated the 17th June 1895.

I am directed to acknowledge the receipt of your letter, No. 874 A, dated 31st May 1895, on the subject of the proposed appointment of Subordinate Judges in Bengal to be also Assistant Sessions Judges.

2. The Lieutenant-Governor agrees in the view expressed by the Government of India that it is desirable that selected Subordinate Judges should be trained for the criminal work of Sessions Judges, by appointing them also to be Assistant Sessions Judges. It is not, however, desirable that more appointments of this kind should be made than are likely to be needed to provide men for filling posts which will become vacant in the near future. To give these powers to several Subordinate Judges, when there is no reasonable prospect of more than one or two vacancies for which they would be eligible

occurring during the next two or three years, would be to create expectations which cannot be fulfilled, and would therefore cause disappointment.

3. From this point of view, I am to observe that in Bengal not more than six Judges are eligible for selection from the Provincial Service, and that the full number is now appropriated by members of the Statutory Service, *viz.*—

Mr. Brojendra Kumar Seal, Judge of Burdwan.
Kumar Gopendro Krishna Deb, Judge of Dacca.
Mr. Syud Nurul Huda, Officiating Judge of Jessore.
Mr. Ahsanuddin Ahmad, Officiating Judge of Nadia.
Mr. Boroda Charan Mitter, Officiating Judge of Faridpur.
Mr. Kedar Nath Roy, Officiating Judge of Pabna.

There is no immediate vacancy, therefore, to which a Subordinate Judge could be appointed.

4. Mr. Brojendra Kumar Seal will, however, attain the age of 55 in June 1896; it is not known whether he will apply for a further extension of service; but although the point does not appear to have been decided, it is presumed that the Provincial rules for superannuation will be held to apply to Statutory Civilians, and in that case it is not improbable that he will apply for, and he possibly may obtain, an extension of his service. All the other Statutory Civilians are younger in age than the average Subordinate Judge, and no early vacancy can be reckoned on in their ranks. But as they may be expected to take leave in the ordinary course, the temporary vacancies so created may unobjectionably be filled up by the appointment of selected Subordinate Judges. Looking, therefore, to the reasonable prospect of vacancies (permanent and temporary) occurring among the six Statutory Judges now employed in Bengal, the Lieutenant-Governor is disposed to think that two selected Subordinate Judges should be chosen, in communication with the High Court, who may be appointed to be Assistant Sessions Judges with a view to training them to subsequently fill appointments in the grade of District and Sessions Judge.

5. Sir Charles Elliott desires me to take this opportunity of inquiring whether it will be competent to Government to appoint a Subordinate Judge who has been trained as Assistant Sessions Judge, to officiate as a District and Sessions Judge during a temporary privilege leave-vacancy of a Covenanted Judge, although the six listed posts may at the time be filled up by six Statutory or Provincial officers. If this could be done it would be a great convenience to the Administration, for, as the Government of India are aware (in consequence of the deficiency in the number of Covenanted Civilians of from 10 to 17 years' service), the Lieutenant-Governor is not unfrequently compelled either to refuse privilege leave to Judges, or to appoint very junior officers to act for them during their absence. If permission to make such an appointment is accorded, it would, in the

Lieutenant-Governor's opinion, be desirable to place three, and not two, Subordinate Judges in training for District Judgeships.

6. The question of the prospects of a Subordinate Judge who may be selected to officiate as a District and Sessions Judge, and when he may hope to be confirmed in that appointment, does not appear to be very clearly laid down; but it is presumed that the ruling* of the Government of India in Mr. Umesh Chandra Batabyal's case would be held to apply, and that it would not be possible to confirm any such officer as a District and Sessions Judge until the claims of all Covenanted Civilians of the year 1884 and above that year had been considered and satisfied.

7. Subject to the considerations stated in this letter, I am to say that the Lieutenant-Governor has no objection to the promulgation of such a rule regarding the appointment of Assistant Sessions Judges as has been adopted in Madras.

No. 72. From J. P. HEWETT, Esq., C.I.E., Officiating Secretary to the Government of India, to the Chief Secretary to the Government of the Punjab.—No. 1000, dated 1st April 1895.

With reference to my letter Nos. 69-71, dated the 24th January 1895, I am directed to inquire when a reply may be expected.

From H. C. FANSHAW, Esq., Officiating Chief Secretary to the Government of the Punjab, to the Secretary to the Government of India, Home Department,—No. 675, dated the 8th May 1895.

In reply to your letter No. 71, dated the 24th of January 1895, I am directed to submit, for the information of the Government of India, a copy of a letter No. 1072 G, dated the 27th of March 1895, from the Registrar of the Chief Court, Punjab, and of its enclosures, and to state that the Lieutenant-Governor concurs in the opinion expressed by the Judges of the Chief Court, that it is unnecessary to adopt, as regards the Punjab, a rule similar to that sanctioned for the Madras Presidency, which provides for the investiture of a limited number of Subordinate Judges, belonging to the Provincial Civil Service, with the powers of Assistant Sessions Judges, as a training for the appointment of District and Sessions Judges which have been listed as open to the Provincial Service.

From THE OFFICIATING REGISTRAR, Chief Court, Punjab, to the Officiating Chief Secretary to the Government of the Punjab,—No. 1072 G, dated 27th March 1895.

With reference to your letter No. 369, dated the 12th instant, and

correspondence from the Government of India asking for the opinions of the Judges on the proposed adoption, as regards the Punjab, of a rule similar to that in the Madras Presidency, which provides for the investiture of Subordinate Judges of the Provincial Civil Service with the powers of Assistant Sessions Judges as a training for the appointments of District and Sessions Judges, I am desired to forward copies of the opinions of the Judges on the subject.

OPINIONS.

I think it would be very undesirable to create Assistant Sessions Judges in the Punjab for the purpose of training members of the Provincial Service for the two appointments of Divisional and Sessions Judges which will hereafter be open to them.

No doubt it would be desirable that the officers who may hereafter be selected for these appointments should have more experience in criminal work than they are likely to gain as District Judges. But I do not think any special steps need be taken to secure this. District Judges are already first class Magistrates, and occasionally take up important criminal cases. In some instances they have also, I believe, been invested with powers to hear criminal appeals, and they are occasionally employed as Additional District Magistrates on the Frontier. I think it is sufficient to trust to these means for their training. A good Civil Judge, with the general experience and knowledge of the country which would be necessarily possessed by any member of the Provincial Service who could have any claim to a Sessions Judgeship, would have no difficulty in his work.

Certainly those members of the Provincial Service who have acted in temporary emergencies as Sessions Judges, have not shown any failing in this respect. To bestow special powers on selected members of the Provincial Service for the mere purpose of training them would, I think, often give rise to false hopes, or create heart-burnings and raise difficulties when the time for actual appointment arrived.

The 22nd March 1895.

C. A. ROE,
Judge.

The appointment of Assistant Sessions Judges may have its advantages in other Provinces where District Magistrates are not invested with powers under section 30 of the Criminal Procedure Code. In the Punjab it would be otherwise. When Assistant Sessions Judges would be appointed they would try cases which could be tried by District Magistrates with enhanced powers, and they would have to try them with the aid of Assessors and after commitment to the Sessions. I think it is not desirable that any cases should be so tried which can now be tried by District Magistrates in a prompter and more convenient manner.

In the Punjab there is no necessity to give officers of the Provincial Service, likely to be so appointed Sessions Judges, training as Assistant Sessions Judges. No officer is likely to be so appointed who will not have had considerable experience of criminal work, at least as Magistrate of the 1st class, if not also as a District Magistrate.

The 25th March 1895.

J. FRIZELLE,

Judge.

I am of the same opinion.

The 25th March 1895.

H. T. RIVAZ,

Judge.

I concur.

The 25th March 1895.

A. W. STODDON,

Judge.

I also think so.

The 25th March 1895.

P. C. CHATTERJI,

Judge.

No. 73. From THE GOVERNMENT OF INDIA, to the Secretary of State for India,—No. 51, dated the 6th August 1895.

With reference to the correspondence ending with Your Lordship's predecessor's Public Despatch, No. 104, dated the 8th November last, we have the honour to forward a copy of the papers entered in the enclosed list relative to the proposed introduction into other Provinces of a rule under the Statute 33 Vict., cap. 3, section 6, similar to that sanctioned for the Madras Presidency in regard to the appointment of Subordinate Judges to be also Assistant Sessions Judges.

2. In his Despatch of the 8th November last, Sir Henry Fowler sanctioned a rule under the Statute 33 Vict., cap. 3, section 6, authorizing the Government of Madras to appoint any Subordinate Judge, being a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge, and observed that the reasons which had induced us to propose the rule for the Madras Presidency seemed to apply to other Provinces as well as to Madras. In our Home Secretary's letters, No. 69 to 71, dated the 24th January last, we consulted the Governments of Bengal, the North-Western Provinces and Oudh, and the Punjab as to the desirability of adopting, as regards those Provinces, a rule similar to that sanctioned for the Madras Presidency, and subject to the limitation that the number of appointments to be made at the same time under the rule should, as in the case of the Madras Presidency, be not more than necessary to provide an adequate supply for filling the appointments of District and Sessions Judge in Bengal and the North-Western Provinces

important criminal cases, it is unnecessary to adopt, as regards that Province, a rule similar to that sanctioned for the Madras Presidency. Two District Judgeships have been listed in the Punjab as open to the Provincial Service and these posts will afford to members of the Provincial Service in that Province the same opportunities for qualifying for the post of Divisional and Sessions Judge as will be afforded in Bombay by the listing of the two Assistant Judgeships. We therefore agree that a rule such as has been prescribed in the Madras Presidency is not necessary in the Punjab.

7. We shall address Your Lordship later as to the question of adopting in respect of the North-Western Provinces and Oudh a rule similar to that sanctioned for the Madras Presidency.

LIST OF ENCLOSURES.

1. Draft rule referred to in paragraph 3 of the Despatch.
2. Letters to the Governments of Bengal, the North-Western Provinces and Oudh, and the Punjab, Nos. 69-71, dated the 24th January 1895.
3. Letter from the Government of Bengal, No. 1040 A, dated the 16th February 1895.
4. Letter to the Government of Bengal, No. 874 A, dated the 31st May 1895.
5. Letter from the Government of Bengal, No. 305 A-D, dated the 17th June 1895.
6. Letter from the Government of the Punjab, No. 675, dated the 8th May 1895, and enclosures.

Draft rule referred to in paragraph 3 of the Despatch.

In exercise of the power conferred by the Statute 33 Vict., cap. 3, section 6, and in continuation of the rules published in Notifications No. 2159, dated the 2nd November 1892, and No. 67, dated the 24th January 1895, the Governor General in Council has been pleased to make the following rule which has been sanctioned by the Secretary of State in Council with the concurrence of a majority of the members present:—

‘The Government of Bengal may appoint any Subordinate Judge, being a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge.’

No. 74. FROM THE SECRETARY OF STATE FOR INDIA, to the Government of India, — No. 87 (Public), dated the 26th September 1895.

I have considered in Council the letter of your Government, No 51, dated

6th of August last, relative to the introduction into the territories subject to the Lieutenant-Governor of Bengal of a rule under the Statute 33 Vict., cap. 3, similar to that recently sanctioned* for the Madras Presidency in regard to the appointment of Subordinate Judges to be also Assistant Sessions Judges.

2. I have to inform you that I have accorded my sanction to the rule with the concurrence of a majority of the Members of my Council present at a meeting.

No. 75. HOME DEPARTMENT (Public) Notification No. 1859, dated the 8th November 1895.

In exercise of the power conferred by the Statute 33 Vict., cap. 3, section 6, and in continuation of the rules published in Notifications No. 2159, dated the 2nd November 1892, and No. 67, dated the 24th January 1895, the Governor General in Council has been pleased to make the following rule, which has been sanctioned by the Secretary of State in Council with the concurrence of a majority of the members present:—

‘The Government of Bengal may appoint any Subordinate Judge, being a member of the Provincial Civil Service and a Native of India of proved merit and ability, to be also an Assistant Sessions Judge.’

No. 76. FROM L. M. THORNTON, Esq., Deputy Secretary to the Government of India, Home Department, to the Chief Secretary to the Government of Bengal, — No. 1887 (Public), dated the 16th November 1895.

I am directed to acknowledge the receipt of your letter No. 305 A-D, dated the 17th June 1895, on the subject of the proposed appointment of Subordinate Judges in Bengal to be also Assistant Sessions Judges.

2. In reply I am to forward, for the information of His Honour the Lieutenant-Governor, a copy of the papers noted on the margin, from which it will be seen that Her Majesty's Secretary of State for India has sanctioned a rule similar to that sanctioned for the Madras Presidency, empowering the Lieutenant-Governor of Bengal to make such appointments. With reference to paragraphs 4 and 5 of your letter under acknowledgement, I am to say that, as stated in paragraph 5 of the Despatch to the Secretary of State, dated the 6th August last, the Government of India will resort to the provisions of sections 3 and 4 of the Statute 24 and 25 Vict., cap. 54, whenever the Government of Bengal establishes the necessity for appointing an experienced Subordinate Judge who has been trained as an Assistant

Despatch to Secretary of State, No. 51, dated the 6th August 1895.

Despatch from Secretary of State, No. 87, dated the 26th September 1895.

Notification No. 1895, dated 8th November 1895.

* Public Despatch to India, No. 104, dated 8th November 1894.

Sessions Judge to officiate as a District and Sessions Judge in a temporary privilege leave-vacancy, and such an appointment involves a temporary excess above the number of listed Judgeships. The Government of India consider, therefore, that, as proposed by His Honour, the number of Subordinate Judges who may at the same time be placed in training for District Judgeships by appointment as Assistant Sessions Judges may be limited to three.

The Governor General in Council would be glad, when the rule now sanctioned has been in operation for two years, to learn the opinion of the Government of Bengal as to how it has worked.

3. Referring to the question raised in paragraph 6 of your letter, I am to say that for the reasons explained in paragraph 4 of the letter from this Department, No. 285, dated 30th April last, regarding the case of Mr. Umesh Chandra Batabyal, it will not be possible, so long as the listed posts which became available to the Provincial Service down to and in 1883 are filled as at present, to appoint any officer of the Provincial Civil Service substantively to be a Magistrate and Collector or District and Sessions Judge, until the claims of members of the Indian Civil Service appointed in 1884 have been considered.

PRÉCIS-WRITING.

Read—again G.O., No. 430, Revenue, dated 29th April 1903.

ABSTRACT.—Recording, with remarks, Board's Proceedings approving and sanctioning the revised scheme for goat-browsing in the Rapur taluk, Nellore district.

Read—the following Proceedings of the Board of Revenue (Land Revenue), Forest Mis. No. 939, dated 25th October 1904.

The Hon'ble Mr. C. J. WEIR, I.C.S.,
Commissioner of Land Revenue.

Read—again Board's Proceedings, Forest No. 145, Press, dated 25th May 1903, communicating to the Collector of Nellore and the Conservator of Forests, Central Circle, Government Order recording, with remarks, Board's Proceedings approving and sanctioning the revised scheme for goat-browsing in the Rapur taluk, Nellore district.

Read—again also Board's Proceedings, Forest Mis. No. 565, dated 20th August 1903, passing orders on the proposals of the Collector of Nellore for extending the goat-browsing scheme to the Atmakur and Udayagiri taluks in the Nellore district.

Read—also the following letter from A. BUTTERWORTH, Esq., I.C.S., Collector of Nellore, to the Secretary to the Commissioners of Land Revenue (through the Conservator of Forests, Central Circle), dated 12th April 1904, No. 62-R. For :—

With reference to Board's Proceedings, Forest Mis. No. 565, dated 20th August 1903, I have the honour to submit herewith my proposals for the introduction of the goat-browsing scheme on a triennial rotation in the Atmakur and Udayagiri taluks. The present grouping is in the main a re-arrangement of the reserves which were originally proposed to be thrown open to goats on a two-year rotation. The area which will be open to goats during any one year will, under the present scheme, be about 7,000 acres in Udayagiri and 12,500 acres in Atmakur, against 10,000 and 19,000

acres respectively under the biennial scheme. 23 villages of the Udayagiri taluk and 49 villages of Atmakur are affected by the proposed scheme, and the total number of goats in these villages is, according to the latest account, 8,884 and 19,962 respectively. It is not likely that permits will be taken for the entire number of these animals, as some of the open blocks are situated at an inconvenient distance from the villages, and the area open to browsing is not sufficiently large to provide for all the goats available. Assuming that 6,000 permits will be taken in Udayagiri and 12,000 in Atmakur, we may anticipate a gross revenue of Rs. 4,500 at four annas per goat. The establishment required will be three supervisors and 15 watchers at a cost of Rs. 1,440, as shown below:—

	RS.
3 Supervisors at Rs. 15; 45×12	540
15 Watchers at Rs. 5; 75×12	900
Total	1,440

Anticipated net revenue . 3,060

2. The number of villages to be served under the biennial and triennial schemes is the same, but whereas, under the former scheme, every village but one was within three miles of a reserve, under the triennial scheme half the villages are five or six miles away. It may be taken that three miles is the maximum distance to which goats will be taken, except by professional breeders.

The biennial system is thus unquestionably the better from the point of view of the people, and unless the convenience of the people is closely studied we shall simply find illicit browsing taking place.

I am doubtful whether the triennial system will secure 6,000 permits in Udayagiri and 12,000 in Atmakur, but I feel pretty confident that under a biennial system we could secure 6,000 in Udayagiri and 15,000 in Atmakur, which would bring in an additional revenue of Rs. 750.

I prefer the biennial system for several reasons. Doubtless the effect of browsing on the forest would be less marked if we could really secure two years' rest, but we shall not do it. The reserves being too far, we shall have the nominally closed reserves browsed over stealthily.

3. The District Forest-officer and I are however agreed on one point, and that is that some system of goat-browsing is needed. The importance of the goat on account of its flesh, hide, and dung is considerable. If against that we had to set injury to valuable forest I should say let the goat go. But the case is not so here. If large irrigation schemes under the Kistna and Tungabhadra are carried out, we may be able to plant up some of our reserves with decent trees, irrigate them, and grow timber and good grass. But at present the 'forest' of Nellore is almost invariably a stretch of low thorny scrub which nature seems to have especially

designed for goats, and which is almost valueless for other purposes. Nor is there any hope of improving a great deal of the 'forest,' inasmuch as the soil is too thin and poor to grow anything but shrubs and stunted trees. By treating such reserves as if they contained timber trees and rigorously excluding the goat, we are neglecting to avail ourselves of the special advantages which Nellore affords to the goat-breeder. We are also losing revenue to no advantage, for in reality goats are browsed in the reserves at present to no small extent, and the persons who get the fees which might go to Government are the dishonest forest subordinates.

I am, therefore, wholly in favour of establishing a system of goat-browsing for Atmakur and Udayagiri (if not Kanigiri also), and I am of opinion that the recent establishment of such a system in Rapur will be found to be conducive to the welfare of the people, without doing any irreparable injury to the scrub jungle concerned.

4. With regard to paragraph 2 of the Board's Proceedings under reply, it is reported that permits for 21,000 goats have been licensed out of an estimated number of 30,000. So far then we have not nearly worked up to the ideal of having practically all the goats licensed. This is attributable to some extent to the carelessness of the Ranger Shams-ud-din Sahib, but it is also reported now that the estimate of 30,000 was excessive. A fresh census is now being made. Next year we ought to be able to see pretty clearly how many goats are not being licensed. At present I cannot answer satisfactorily the Board's question.

So far as can be judged at present, the closure of the alternate blocks in Rapur seems to be fairly effective.

5. I beg to suggest that, until the goat-browsing scheme of Rapur has become fairly established, we should say nothing about raising the fee. When that time has arrived we may notify that a higher rate will be levied after a given period, say, a year so as to prevent hardship. For several years to come I would leave the rate at four annas.

ENCLOSURE.
GOAT-BROWSING SCHEME.

Number of circle.	Reserves included in the circle.			Particulars of each block.			Adjoining villages.
	Number.	Name of the reserve.	Area.	Description.	Area.	Year of browsing.	
I	2	3	4	5	6	7	8
I	175	Balayapalli	500	Udayagiri taluk.	ACS.	First year.	Balayapalli, Gandipalem, Totalcheruvipalli, Aiyavarpalli, and Guvudi.
	202	Totalcheruvipalli	1,085	(a) North ... 175	170		
	203	Guvudi, East	1,490	East ... 202	865		
	204	Guvudi, West	1,663	East ... 204	893		
		Total	4,718	Total ...	1,968		
II	165	Duttalur	4,850	(b) Middle ... 765	185	Second year.	Ibid.
	128-A	Udayagiri East and Appasum-dram	1,500	Middle ... 202	850		
		Total	6,350	West ... 204	890		
				Total ...	1,945		
	196	(c) South ... 175	165	South ... 175	165	Third year.	Ibid.
		West ... 202	850	West ... 202	850		
		West ... 203	1,490	West ... 203	1,490		
		Total ...	2,005	Total ...	2,005		
	165	(d) North ... 165	1,618	North ... 165	1,618	First year.	Udayagiri, Appasum-dram, Mandalanay-nisali, Duttalur, and Nandipadu.
	128-A	North ... 128-A	500	North ... 128-A	500		
		Total ...	2,118	Total ...	2,118		
				Total ...	1,616		
	196	(b) Middle ... 165	1,616	Middle ... 165	1,616	Second year.	Ibid.
		West ... 128-A	500	West ... 128-A	500		
		Total ...	2,116	Total ...	2,116		
				Total ...	1,616		
	174	(c) South ... 165	1,616	South ... 165	1,616	Third year.	Ibid.
		East ... 128-A	500	East ... 128-A	500		
		Total ...	2,116	Total ...	2,116		
				Total ...	1,616		

GOAT-BROWSING SCHEME.—continued.

Number of circle.	Reserves included in the circle.			Particulars of each block.			Adjoining villages.
	Number.	Name of the reserve.	Area.	Description.	Area.	Year of browsing.	
I	2	3	4	5	6	7	8
III	210	Bairavaram	1,790	Udayagiri taluk— contd.	ACS.	First year.	Bairavaram, Nallagonda, Bhimavaram, Nandipadu, Chikakapadu, Baidavada, Chikakapadu, Yernakollu, Gundamadakala, and Sunlavaram.
	196	Nandipadu	2,215	(a) North ... 210	900		
				North ... 196	789		
				North ... 174	1,100		
IV	174	Yernakollu-Gundamadakala	3,600	Total ...	2,438	Second year.	Ibid.
				(b) Middle ... 210	595		
				South-east ... 196	728		
				South ... 174	1,100		
I	200	Udayagiri-Yerrakonilab extension	601	Total ...	2,438	Third year.	Ibid.
	221	Udayagiri-Valligonda A extension	1,258	(a) 200	900		
		Total	1,863	(b) North ... 221	682		
				(c) South ... 221	631		
	43	Srikolam	1,621	Atmakur taluk.	731	First year.	Chakolu, Brahmanapalli, Chikakapadu, and Kampasamudram.
	79	Mariyapadu (Vellore)	1,400	(a) West ... 43	600		
	162	Peramankondur	750	South ... 79	600		
		Total	3,671	Total ...	1,821		
	43	(b) South ... 162	400	South ... 162	400	Second year.	Ibid.
	79	East ... 43	400	East ... 43	400		
	162	Total ...	1,200	Total ...	1,200		
				Total ...	150		
	162	(c) North ... 79	750	North ... 79	150	Third year.	Ibid.
		South ... 162	1,400	South ... 162	1,400		
		Total ...	3,671	Total ...	1,150		
				Total ...	1,150		

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GOAT-BROWSING SCHEME.—continued.

Number of circle.	Reserve included in the circle.		Particulars of each block.				Adjoining villages.
	Number.	Name of the reserve.	Area.	Description.	Area.	Year of browsing.	
I	2	3	4	5	6	7	8
			ACS.	Atmakur taluk—contd.	ACS.		
	157	Abbasahilipatti, Gudipadu, and	1,937	(a) North-east 149	700		
	158	Petta Annamalai and Gudipadu west	945	North-west 157	700		
	151	Basavola and Pungudi	1,850	Total ...	2,900	First year.	
	152	Dabagunta and Rajavola	2,187	(b) North ... 158	945		
	149	Boylacheruvella	700	South ... 151	800		
		Total ...	7,209	Total ...	2,745	Second year.	
				(c) South-west 157	777		
				South ... 152	1,987		
				Total ...	2,164	Third year.	
III	163	Mahimadur	9,840	(a) North ... 163	3,280	First year.	
				(b) Middle ... 163	3,280	Second year.	
				(c) South ... 163	3,280	Third year.	
IV	122	Bomnavaram	3,000	(a) North ... 122	1,000		
	150	Do.	1,775	North ... 150	880		
	161	Do.	780	Total ...	1,880	First year.	
		Total ...	5,555	(b) Middle ... 122	1,000		
				South ... 151	780		
				Total ...	1,780	Second year.	
				(c) South ... 122	1,000		
				South ... 160	885		
				Total ...	1,885	Third year.	

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GOAT-BROWSING SCHEME.—continued.

Number of circle.	Reserve included in the circle.		Particulars of each block.				Adjoining villages.
	Number.	Name of the reserve.	Area.	Description.	Area.	Year of browsing.	
I	2	3	4	5	6	7	8
			ACS.	Atmakur taluk—contd.	ACS.		
	216	Baddavolu	1,075	(a) North ... 216	325		
	211	Kaluvoya	2,350	North ... 211	780		
		Total ...	3,425	Total ...	1,105	First year.	
				(b) South-west 216	430		
				Middle ... 211	780		
				Total ...	1,210	Second year.	
				(c) South-east 216	320		
				East ... 211	780		
				Total ...	1,110	Third year.	
VI	41	Turpukambampadu	861	(a) North ... 40	269		
	218-B	Do.	821	North ... 42	383		
	218-A	Do.	463	Total ...	1,146	First year.	
	42	Talagurayapuram	1,121	(b) South ... 41	891		
		Choyeth	1,121	South ... 42	785		
		Total ...	4,018	Total ...	1,969	Second year.	
				(c) ... 218-A	452		
				... 218-B	821		
				Total ...	1,273	Third year.	
				(d) North ... 230	605		
				East ... 125	880		
				Total ...	1,435	First year.	
				(b) Middle ... 230	605		
				" ... 125	880		
				Total ...	1,435	Second year.	
				(c) West ... 230	606		
				" ... 125	840		
				Total ...	1,446	Third year.	
VII	230	Nallapollem	1,816	(a) North ... 230	605		
	125	Prabagripattanam	2,600	East ... 125	880		
		Total ...	4,316	Total ...	1,435	First year.	
				(b) Middle ... 230	605		
				" ... 125	880		
				Total ...	1,435	Second year.	
				(c) West ... 230	606		
				" ... 125	840		
				Total ...	1,446	Third year.	

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Read—also the following letter from E. D. M. HOOPER, Esq., Conservator of Forests, Central Circle, to the Secretary to the Commissioners of Land Revenue, dated Madras, 15th May 1904, R. on C. No. 1559:—

In forwarding the Nellore Collector's letter No. 62-R./Forest, dated 12th April 1904, regarding extension of browsing facilities in the reserved forests of that district, I would remind the Board that the intention of the policy laid down in Proceedings is distinctly shown in paragraphs 14 to 17 of Board's Proceedings, Forest No. 316, dated 5th October 1901.

The opening of certain reserves to light browsing was approved in order to save the adjoining unreserved area from complete denudation by goats, which would result in the villagers concerned being deprived of the forest produce which they enjoy the communal privilege of taking from the unreserved lands.

This opening of a few reserves was purely tentative and with the expressed opinion of the Board that conservancy would be impeded by it. Under the arrangement it was decided to allow one goat to browse on an acre which was to be closed after one season for two years.

The subsequent alterations have led to the doubling of the demand on the acre which is closed subsequently for one year only—in other words the growth is given only one season to recover from the havoc by two goats instead of being allowed a rest of two years after the feeding of one animal.

It is now proposed to extend the system of destruction to the whole central zone of the district, and though the Collector nominally proposes a triennial rotation, which he has abandoned already in Rapur, he openly advocates the abandonment of conservancy throughout the tract unless it can be carried through with full satisfaction to the goat-owning interest. The argument throughout is that the goat is a most important item in the rural economy of Nellore and must be provided with browsing ground, and as the interest of the ryots prevents the unreserved land growth being sacrificed to browsing this must be provided in reserved forest.

It follows then that our costly Forest Settlement has been a waste of public funds, for the Board in permitting a single goat to enter on each acre in a few reserves during a season to be followed by its closure for two years felt that conservancy might thereby be interfered with if not prevented in such tracts, and it necessarily follows that the strain being trebled the results will be to obliterate our past work and prevent any future success.

The Collector is clearly of opinion that we are powerless to exclude goats from forests and that as the areas could not grow timber they should be given to goats. I do not agree with him in thinking that goats cannot be excluded. In other districts where the administration is not so hopeless in the matter and personally approves of the policy, goats have been

excluded from forest and their numbers sensibly reduced, and I know of few areas even of the rockiest description along the East Coast, from Tinnevely to the Chilka lake, which will not grow a scrub growth of fuel which is of considerable value.

On the other hand it is hardly for me to express any opinion on the relative economic value of the goat and of forest produce or the relative claim of the goat or of cattle or of the ryot to unreserved land and its produce. I can only say that I agree with the District Forest-officer, with the previous Conservator and Board Member, that Forest Conservancy must be much hampered by the admission of the goat to the slightest extent, and is impossible under the system now in Rapur which is practically advocated in other taluks. Under such circumstances the whole area concerned had better be disafforested, but I foresee that the general economy of the district will suffer by the reversal of a policy which for over 20 years has been followed under disadvantageous conditions with the approval of Collector, Board of Revenue, and Government. I enclose a map showing the extent of the areas involved.

Reference on the above, dated 30th June 1904, For. No. 259.

The Collector is requested to report through the Conservator on the following points:—

- (1) whether any or all of the reserves which it is now proposed to throw open to goat-browsing are capable, if protected and closed to goats, of producing fuel and timber to meet the domestic and agricultural requirements of the villagers;
- (2) whether, if these reserves are sacrificed as tree-producing reserves to goats, the fuel, &c., needed by ryots, can be supplied by the remaining reserves;
- (3) whether the reserves which it is proposed to throw open to browsing are yielding at present any revenue from fuel or timber; and
- (4) what the effect of reservation has been on the tree growth in these reserves.

(Signed) N. MACMICHAEL,
Acting Secretary.

To the Collector of Nellore (through the Conservator of Forests,
Central Circle).

Read—also the following letter from W. LYS, Esq., I.C.S., Acting Collector of Nellore, to the Secretary to the Commissioners of Land Revenue (through the Conservator of Forests, Central Circle), dated 26th August 1904, No. 141-R, For. :—

With reference to the Board's Forest Reference No. 259, dated 30th June 1904, I have the honour to reply *seriatim* to the points therein raised, as follows:—

(1) The reserves would produce fuel, but none of them are capable of producing timber, even if the most intensive protective measures were adopted.

(2) Throughout the greater portion of both taluks (Udayagiri and Atmakur) most, if not all, of the reserved areas have been included in the proposed scheme, and those reserves which have not been so included are in most cases too far away to be of general use as regards the supply of fuel. There is, however, I think, no need to fear a general denudation of the forests opened to browsing, provided certain precautions are adopted, such as the prohibition against the carrying of cutting implements, for as long as the growth is not cut and hacked about it would not be greatly damaged by browsing. At any rate, the throwing open of these areas to goats is not likely to result in an immediate destruction of the existing scrub jungle, and if it is found that much harm is done, the scheme can be modified.

(3) The reserves included in the scheme may be said to bring in an annual revenue of Rs. 25 from timber (i.e., small rafters and sticks for house-making) and about Rs. 200 from fuel.

(4) The effect of reservation on the tree-growth is not sufficiently marked to be particularly noticeable. It is all scrub of the poorest description, and although protection has undoubtedly improved it, yet, as I have said above, the improvement is slight as yet.

Endorsement by E. D. M. HOOPER, Conservator of Forests, Central Circle, dated 13th September 1904, R. C. No. 1559 of 1903.

Forwarded. The remarks I have made on the Collector's No. 138 R., dated 24th August 1904, deal with this subject so far as the Rapur range is concerned and apply to this reference.

Read—also the following letter from W. LYS, Esq., I.C.S., Acting Collector of Nellore, to the Secretary to the Commissioners of Land Revenue (through the Conservator of Forests, Central Circle), dated 24th August 1904, No. 138-R. For. :—

With reference to Board's Proceedings, No. 145, Forest, dated 25th May 1903, I have the honour to report as follows on the working of the goat-browsing scheme in Rapur taluk.

2. The first organized attempt to deal with the problem of goat-browsing in this district was made in July 1902, when the scheme sanctioned by the Board in its Proceedings, Mis. No. 505, Forest, dated 4th July 1902, was brought into operation. Under this scheme 48 out of the 58 reserves in the Rapur taluk were selected for goat-browsing and arranged into ten circles of three blocks each, one set of these blocks being thrown open

to browsing every year. It was found in December 1902 that this arrangement was not successful, not more than 16,243 goats out of 40,000 which was the number of these animals estimated to exist in the taluk, having been licensed till then for reasons explained at length in this office letter No. 1-R., Forest, dated 11th January 1903, embodied in the Board's Proceedings under reply. The original scheme was thereupon revised by adding two more reserves and grouping them into 19 circles of two blocks each, so that about half the area might be available for browsing every year. This was sanctioned in Board's Proceedings, Mis. No. 215, Forest, dated 8th April 1903, and was brought into force on the 1st July 1903.

3. Financially the new scheme cannot be said to have been very successful. For while the number of goats licensed during 1902-1903 under triennial rotation system was 17,013, the number licensed during 1903-1904 under the biennial rotation system was not more than 20,775, while the total number of goats estimated to have been in existence at the time of the introduction of the new scheme in the villages affected thereby was 30,000. This is attributable in part to an error in the original census as stated in paragraph 4 of this office letter No. 62-R., Forest, dated 12th April 1904, and a fresh census taken in June 1904 shows that the number of goats in the villages concerned is 25,194. The maximum number for which permits can be expected to be taken under the new scheme will therefore be 25,000.

4. The decrease in the number of goats from 40,000 in 1901-1902 to 25,000 in June 1904 is said to be the result of large sales which have taken place since the appointment of a special staff to watch the areas under the goat-browsing scheme, and may in itself be regarded as a healthy sign; for it is possible that the goat-owners have recognized that Government has done its best to meet their requirements and that they cannot expect to have more than half the area of the reserves thrown open to their goats in any one year. This view seems also borne out by the fact that there has been during the year of the operation of the new scheme a marked fall in the number of goats impounded in the taluk, i.e., from 12,316 in 1902-1903 to 4,044 in 1903-1904, as will be seen from paragraph 14 of the administration report for 1903-1904. It is, however, too soon to say that the above conclusions are quite correct, and it will be necessary to take an annual census of goats in the Rapur taluk for two or three years more to gauge the real effect of the new scheme.

5. The proposal made in paragraph 9 of this office letter of 11th January 1903, viz., that no block should be opened save on the condition that permits are taken out for the full estimated number of goats existing in the villages dependent thereon, has not been feasible in practice. For it often happens that a single block serves two or more villages besides their hamlets; and it seems hard and impolitic to refuse to issue permits or

to close a block, which ought to be thrown open under the scheme, against a majority of the villagers, who are prepared to take out permits for their goats, merely because a few persons do not care to have their animals licensed. As it is, these refractory few may, under the proposed rule, cause a loss of revenue to Government and put their neighbours to considerable inconvenience.

6. The establishment maintained under the new scheme has been the same as that under the old one, viz., three supervisors and fifteen watchers.

7. The closed blocks of the new scheme appear to have been fairly well protected and the scheme deserves a trial for a couple of years or so more.

Read—also the following letter from E. D. M. HOOPER, Esq., Conservator of Forests, Central Circle, to the Secretary to the Commissioners of Land Revenue, dated Madras, 13th September 1904, R. C. No. 2013:—

In forwarding the Nellore Collector's letter No. 138-R., dated 24th August 1904, on the further working of the goat-browsing scheme in Rapur taluk, I have the honour to remark as follows:—

(1) The arguments put forward for the non-fulfilment of the revenue estimates are more curious than convincing, and the explanations tend rather to show that the goat is of no more consequence in Nellore than in other districts. I am becoming daily more certain that the continuance of the experiment sanctioned by the Forest Member Mr. Higgins has no justification, and that if the reserves are to be opened to browsing for the protection of growth on unreserved lands or for the necessities of the goat, it is our duty to remove such areas from the class of reserved forest. It is a waste of administrative power to employ a Conservator of Forests on the consideration of a working-plan for browsing, as the initial and principal object of such reservation and if such continued reservation of forest as browsing reserve is to be persevered with, it is a forcible argument in favour of district reserves being entirely controlled by the Collector without us, in this case, the criticism and protest of a circle officer.

In my previous letters I have shown how the encouragement of goats by abandoning reserved forests to them is a stultification of all previous policy and departmental action, and having seen a considerable area of so-called scrub in Rapur and along the East Coast Railway, I can only say that I consider it capable of growing not only fuel and small timber but an enormous amount of leaf manure, and I would remind the Board of the fact that the production of this commodity in enormous quantities well distributed over the dry taluks will be a *sine qua non* of the success of any system of canal irrigation now to be proposed, and the goat is the main difficulty in the way of such growth. It is, therefore, to my mind a fatal step to

make any compromise with the goat especially at this juncture. I would merely remark in conclusion that I lay no stress on the remark that the goats do not seem to effect much damage or the observations that the scrub grows but slightly or yields little revenue or that it is impossible to keep out goats. It is impossible to prove any such statements while, as regards the exclusion of goats, they are declared to be kept out of the tracts not opened to browsing.

I am entirely of opinion that with a District Forest-officer more hopeful of the results of excluding goats from Reserved Forests, the subordinate staff would be more successful in their executive work in this respect, and I would prefer to personally dissociate myself as Conservator from any such delusive and anomalous proposition as to reserve forests for goat-browsing.

Resolution—Forest Mis. No. 939, dated 25th October 1904.

The Board agrees with Mr. Hooper. Before, however, passing final orders it desires to ascertain exactly what effect the browsing has had on the forest growth, and whether it is true that the jungles hitherto thrown open to browsing or in which it is proposed hereafter to admit goats will grow nothing but scrub. The Conservator is therefore requested to inspect personally the reserves in Rapur in which goat-browsing has been allowed as well as those in Atmakur and Udayagiri in which it is proposed to introduce the goat-browsing scheme and to report on the points above referred to to the Board.

(True Extract.)

(Signed) N. MACMICHAEL,
Acting Secretary.

To the Conservator of Forests, Central Circle.

Copy to the Secretary to Government, Revenue Department.

„ the Collector of Nellore.

READ—also the following Proceedings of the Board of Revenue (Land Revenue), Forest No. 58, dated 9th March 1905:—

The Hon'ble Mr. C. J. WEIR, I.C.S.,
Commissioner of Land Revenue.

Read—again the following Proceedings of the Board of Revenue (Land Revenue), Forest Mis. No. 565, dated 20th August 1903:—

The Hon'ble Mr. H. A. SIM, I.C.S.,
Commissioner of Land Revenue.

Read—the following letter from A. BUTTERWORTH, Esq., I.C.S., Collector of Nellore, to the Secretary to the Commissioners of Land Revenue (through the Conservator of Forests, Central Circle), dated 5th June 1903, No. 101-R. For:—

Adverting to the correspondence ending with Board's Proceedings, Forest Mis. No. 215, dated 8th April 1903, approving the revised scheme for the regulation of goat-browsing in the Rapur taluk, I have the honour to submit my proposals for the extension of the scheme to two other taluks of this district, namely, Udayagiri and Atmakur.

2. The question of allowing goats into some of the coast reserves is still under discussion and this zone includes almost all the reserves in the Gudur, Nellore, Kávali, and Kandukur taluks. In Kanigiri taluk, only nine reserves, with an area of 16,000 acres in the aggregate, could be rendered available to goats; these reserves lie scattered all about the taluk, and it does not seem possible to bring them under a well-regulated and workable scheme. Further, provision can at best be made only for 13 Government villages of Kanigiri taluk, and there is plenty of zamindari and shrotriem forest within easy reach of the villages of this taluk. In Ongole there is only a single reserve—the Chimakurthi hill—besides the casuarina plantations of Kottapatam and Kanuparti. There then remain the two taluks of Atmakur and Udayagiri, which, next to Rapur, seem best adapted for the system of alternate closure of the browsing blocks. I accordingly submit for the approval of the Board the enclosed scheme for regulating goat-browsing in these two taluks.

3. The general principles of the scheme are the same as those followed in the revised scheme for the Rapur taluk submitted with my No. 1-R./For., dated 11th January 1903: viz., (1) that the blocks will be worked on a biennial rotation, i.e., that each circle will be divided into two blocks which will be thrown open in alternate years; (2) that the open areas of each year will be as near the villages dependent upon them as possible; and (3) that as far as possible the breaking up of reserves into two or more blocks should be avoided for the reason that efficient control is otherwise rendered difficult.

4. The Atmakur scheme comprises twenty reserves of the Atmakur taluk and one reserve (No. 79, Marripad) of the Nellore taluk which is situated on the Atmakur border. The area of these twenty-one reserves is 38,034 acres, the total number and area of the reserves of the Atmakur taluk being 28 and 130,674 acres respectively. The area open during the first year will be 19,991 acres and that in the second 18,043 acres. About 20,000 goats in 53 out of the 74 Government villages of the taluk can be provided for by the scheme; so that one goat can browse over roughly three-quarters of an acre on the average. No provision can be made for the remaining twenty-one villages of this taluk as there are no reserves

which adjoin those villages which can safely be thrown open to goats. The reserves not thrown open to goats are mainly the forests of the Veligondas, and Yerrakondas and the Palmyra tope reserves.

5. The Udayagiri scheme comprises eleven reserves with an area of 20,673 acres in the aggregate; the total number and the area of the reserves of the taluk being 16 and 121,233 acres respectively. The excluded reserves are principally the Udayagiri hill, the Udayagiri Veligondas and Yerrakondas, and the Korisikondas which cannot expediently be thrown open to goats. About 10,000 goats in 22 out of the 34 Government villages of the taluk will, it is estimated, be provided for by the scheme; the areas thrown open being 10,248 acres in the first year and 10,425 acres in the second.

6. As in the Rapur scheme, horned cattle will be admitted freely into both the closed and the open blocks, sheep will be excluded from the closed blocks, sheep and horned cattle will be admitted with goats into the open ones and the fee per goat will be 4 annas. I am not sure that hereafter we may not be able to raise the rate for goats but it would be premature to do so now, as it has only recently been raised from 1½ annas to 4 annas.

7. The establishment required for the scheme will be three supervisors at Rs. 15 and twelve watchers at Rs. 5 for the Atmakur taluk, and two supervisors at Rs. 15 and eight watchers at Rs. 5 for the Udayagiri taluk. Provision for this staff was made by me in the scale of temporary establishment for 1903-1904 forwarded with my No. 90-D/For., dated 23rd January 1903.

8. The financial result of the proposed scheme is as follows:—

Estimated number of goats in Atmakur	20,000
Do. do. in Udayagiri	10,000
Total	30,000

Rs.
At 4 annas per goat 7,500

Establishment—

5 Supervisors at Rs. 15	75
20 Watchers at Rs. 5	100
175 × 12	2,100
Surplus	5,400

In estimating the above surplus, no account has been taken of the revenue which will be derived by the admission of horned cattle and sheep into the goat-browsing areas.

9. I request the sanction of the Board for the introduction of the scheme from the 1st July 1903.

10. The Udayagiri and Atmakur taluk maps with the goat-browsing circles marked in them are herewith sent for reference and return.

ENCLOSURE.
GOAT-BROWSING SCHEME.

Circle number.	Number, name, and extent of the reserves.	Area of each block.	Area of each circle.	Year of opening.	Villages adjoining each block.
1	2	3	4	5	6
	Udayagiri taluk.	ACS.	ACS.		
I	(1) 175. Balayapalli . . . 500 202. Totalacheruvupalli Western 265 (2) Rest of 202. Totalacheruvupalli . . . 800	765 800	1,565	1903-1904 1904-1905	Balayapalli, Gandipalem, Totalacheruvupalli, and Aiyavaripalli.
II	(1) 204. Guvvadi West 1,663 (2) 203. Guvvadi East 1,490	1,663 1,490	3,153	1903-1904 1904-1905	Balayapalli, Gandipalem, Guvvadi, and Totalacheruvupalli.
III	(1) 126-A. Appasamudram 1,500 (2) 163. Duttalur, north of the road 2,290	1,500 2,290	3,790	1903-1904 1904-1905	Udayagiri, Appasamudram, and Mandallanayanipalli.
IV	(1) 165. Duttalur, south of the road 2,560 (2) 210. Bairavaram . . . 1,790	2,560 1,790	4,350	1903-1904 1904-1905	Duttalur, Bairavaram, China Machanur, Nandipadu, and Bhimavaram.
V	(1) 196. North half of Nandipadu . . . 1,100 (2) 196. South half of Nandipadu . . . 1,115	1,100 1,115	2,215	1903-1904 1904-1905	Budavada, Nandipadu, and Chilakapadu.
VI	(1) 231. Veligondas A extension, north of the road . . . 860 (2) 200. Yerrakondas extension . . . 600 221. Veligondas A extension, south of the road . . . 540	860 600 1,140	2,000	1903-1904 1904-1905	Brahmanapalli and Kampasamudram.
VII	(1) 174. Yerukollu Gundamadakala eastern half . . . 1,800 (2) 174. Yerukollu Gundamadakala western half . . . 1,800	1,800 1,800	3,600	1903-1904 1904-1905	Yerukollu, Gundamadakala, and Sankavaram.
	Total . . .	20,678	20,673		

GOAT-BROWSING SCHEME.—continued.

Circle number.	Number, name, and extent of the reserves.	Area of each block.	Area of each circle.	Year of opening.	Villages adjoining each block.
1	2	3	4	5	6
	Atmakur taluk.	ACS.	ACS.		
I	(1) 182. Peramanakondur 750 79. Marripadu (Nellore taluk) . . . 1,400 (2) 43. Srikolannu . . . 1,521	2,150 1,521	3,671	1903-1904 1904-1905	Chiramana, Kolagotla, Kondamedikondur, Korimerla, Peramana, Srikolannu, and Vasil.
II	(1) 157. Abbasahipeta, &c. 1,527 (2) 153. Abbasahipeta West 945	1,527 945	2,472	1903-1904 1904-1905	Gudipadu, Gumparlapadu, and Peda Analur.
III	(1) 149. Boyilachiruvella 700 151. Rajavolu Pungodu 1,850 (2) 152. Dubagunta Rajavolu 2,187	2,550 2,187	4,737	1903-1904 1904-1905	Aravedu, Pandipadu, Anamasamudram, Dubagunta, and Rajavolu.
IV	(1) 163. Mahimalur, north half . . . 4,920 (2) 163. Mahimalur, south half . . . 4,920	4,920 4,920	9,840	1903-1904 1904-1905	Pongur, Amanichiruvella, Mahimalur, Dharmaravacharuvupalli, Devarayapalli, Inagalur, and Minagallu.
V	(1) 122. Bommavaram, east half . . . 1,500 (2) 122. Bommavaram, west half . . . 1,500	1,500 1,500	3,000	1903-1904 1904-1905	Bommavaram.
VI	(1) 180. Anantasagarani A 1,775 (2) 161. Anantasagarani B 780	1,775 780	2,555	1903-1904 1904-1905	Uppalapadu, Anantasagarani, Budavada, Gaviravaram, Inagalur, Mangupalli, Pathallapalli, and Variguntapadu.
VII	(1) 216. Baddevolu . . . 1,075 (2) 211. Kaluvaya . . . 2,350	1,075 2,350	3,425	1903-1904 1904-1905	Baddevolu, Brahmanapalli, Kaluvaya, Kallur, Madannagaripalli, and Topugunta.

GOAT-BROWSING SCHEME.—continued.

Circle number.	Number, name, and extent of the reserves.	Area of each block.	Area of each circle.	Year of opening.	Villages adjoining each block.
1	2	3	4	5	6
	Atmakur taluk.—cont.				
VIII	(1) 42. Chejerla ... 1,121 40. Telugurayapuram ... 763 218-A. Turpukambampadu extension A ... 452 (2) 41. Turpukambampadu ... 861 218-B. Turpukambampadu extension B ... 821	ACS. 1,121 763 452 861 821	ACS. 2,336 4,018 1,682	1903-1904 1904-1905	Turpukambampadu, Chejerla, Kakivaya, Kotitirtham, Nagulavellatur, Telugurayapuram, and Zenamadala. Turpukambampadu, Chejerla, Kakivaya, Kotitirtham, Nagulavellatur, Telugurayapuram, Kalavapalli, and Zenamadala. Battulapalli, Nallapalem, Navuru, Nedurpalli, Prabhagiri-patnam, and Tati-parti.
IX	(1) 230. Nallapalem, east half ... 908 125. Prabhagiri-patnam, west half ... 1,250 (2) 230. Nallapalem, west half ... 908 125. Prabhagiri-patnam, east half ... 1,250	908 1,250 908 1,250	2,158 4,316 2,158	1903-1904 1904-1905	Do. do.
	Total ...		88,094		

Note.—Portions or the whole of any of the blocks included in the Goat-browsing scheme may at any time be excluded from the operation of the scheme for the purpose of leasing them out to cattle-owners or for any other sufficient reason in the discretion of the District Forest-officer.

Endorsement by E. D. M. HOOPER, Esq., Conservator of Forests, Central Circle, dated Camp Kuppam, 22nd June 1903, Ref. on No. 1559.

[Endorsement on Nellore Collector's letter to Board, Ref. on Cur. No. 1559, dated 13th June 1903, on the subject of goat-browsing.]

Forwarded.

In addition to the reserves mentioned in the Collector's letter printed in Board's Proceedings, Forest No. 316, dated 5th October 1901, the following reserves are now proposed to be thrown open to goat-browsing.

Appasamudram and Yerrakondas extension in the Udayagiri taluk and Srikolam in the Atmakur taluk.

The establishment proposed by the Collector for this purpose was not sanctioned in the temporary establishment scale for 1903-1904 as no definite

scheme had then been received (vide remarks on page 5 of Board's Proceedings, Forest No. 51, dated 19th February 1903, also my endorsement R. on C. No. 81, dated 3rd March 1903, in Board's Proceedings, Forest No. 145, dated 25th May 1903). The cost will be met from savings in the district or elsewhere provided the Board approve the Collector's proposal, but it does not accord with the views of Mr. Higgins (vide paragraphs 14 to 17 of the Proceedings, No. 316 of 5th October 1901): it was there laid down that a long rotation should be applied to reserves adjoining goat porambokes which may be opened to browsing, and that the experiment in Rapur be completed before extending it to other taluks. The balance of reserved forests left after practically abandoning those mentioned will be five blocks in Udayagiri and eight in Atmakur.

Read—the following letter from A. BUTTERWORTH, Esq., I.C.S., Collector of Nellore, to the Conservator of Forests, Central Circle, dated 17th June 1903, No. 103-R. For. :—

In continuation of my letter No. 101-R/For., dated 5th instant, regarding the extension of the goat-browsing scheme to the Atmakur and Udayagiri taluks of this district, I have the honour to forward, at the request of the District Forest-officer, copies of his office-notes to me on the subject for your information with the following remarks :—

(1) The rate for goats was raised only a year ago from 1 anna 6 pies to 4 annas, and it is much too soon in my opinion to raise it again; for we have no idea how the four-anna rate will work.

(2) The policy of throwing open to goats areas of useless forest has been definitely approved by the Board of Revenue, and I see no use in raising the general question again. The object of the scheme is to afford assistance to the people in a large and lucrative trade, and not merely to preserve an animal the droppings of which are useful as manure.

(3) The references to the effect of the scheme in Rapur do not appear to have much force, because the scheme so far in force there was admittedly defective, and it has been replaced by a scheme which has not yet come into operation.

2. In regard to the proposal to have no annual closing, the Board, in sanctioning the revised Rapur scheme, tacitly approved my proposal to try the system of biennial rotation with the object of seeing how it works. If it fails, the District Forest-officer's scheme of throwing open the forests perpetually can be tried.

ENCLOSURE No. 1.

EXTRACT from the note of the District Forest-officer, dated 3rd January 1903.

As regards the proposal to open blocks in alternate years, why not go

a step further and allow browsing to take place yearly in all the reserves set apart for goats? It seems to me that the effect of continuous browsing would be very little greater than that of browsing in alternate years. Indeed under the former plan, there would be this advantage, that the browsing would be very much lighter because the area open would be so much larger. It would, moreover, have the effect of removing tiresome restrictions, would save the people and us a deal of trouble, and would make it unnecessary to maintain a special watching staff.

(Signed) E. R. MURRAY,
District Forest-officer.

ENCLOSURE No. 2.

NOTE from the District Forest-officer, dated 2nd June 1903.

I think there can be no doubt whatever that the four-annas rate is too low and that eight annas would be readily paid. The latter rate should be levied, especially now that the blocks will be closed for one year only, and much more damage in consequence done to them.

It seems a pity to throw open large areas to these animals, with the certainty that they will greatly deteriorate in a few years for a paltry return of Rs. 4,000 or Rs. 5,000 *per annum*. It is admitted that very large profits can be made out of goats, the comparatively small fee now paid together with the facilities it is proposed to afford for browsing, are large therefore to result in their number being very largely increased. This is a point which, I think, requires some thought—especially as the goat is not necessary for agriculture; it is absurd to say that it is. I think too that if these reserves are to be thrown open to browsing, it would be better, as I have already remarked in my note of the 3rd January last, to allow it to take place throughout the areas included in the scheme instead of closing and opening blocks alternately. One of the reasons for making this suggestion was the relief the people would enjoy from prosecution for trespass, &c. Since the scheme was introduced into Rapur, there have been 182 prosecutions, the accused having been fined a sum of Rs. 2,283 besides in some cases being imprisoned and flogged. All this, besides the expense incurred on the special staff, would be saved with the adoption of my plan, and I think there can be no doubt whatever that the single year's rest given each block under the plan at present adopted cannot appreciably benefit the growth.

All we have realized from the Rapur scheme is the paltry sum of Rs. 3,500.

(Signed) E. R. MURRAY,
District Forest-officer.

Endorsement by E. D. M. HOOPER, Esq., Conservator of Forests, Central Circle, dated 27th June 1903, R. on C. No. 1559.

Forwarded. There is much to be said for Mr. Murray's view that to secure merely a biennial rotation the restrictions are hardly worth imposing. The trade is acknowledged to be a very lucrative one, and the owners are as well given authority to practically devastate public lands at no cost to themselves. In my reference No. 1559, dated 22nd June, I have noticed the leading differences between the Collector's and Board's schemes, and the fact has to be borne in mind that the goat has his apologists among Collectors and among them also his most determined opponents.

Resolution—Forest Mis. No. 565, dated 20th August 1903.

The Board sanctioned a rotation of two years for the Rapur taluk, because it was laid down in paragraph 17 of Board's Proceedings, Forest No. 316, dated 5th October 1901, that the demand for goat-browsing was greatest there, and that the arrangement was to be more or less experimental, and not to be extended, until the result of it could be seen. The Board must hesitate, however, before sanctioning an immediate extension of the same arrangement to other taluks, and is disposed to consider that the three-year rotation originally laid down should be adhered to. The Collector is requested to report therefore how the reserves could be arranged on a three years' system.

2. The Collector is requested also to report whether the condition proposed to be laid down, in paragraph 9 of his letter in Board's Proceedings, Forest No. 145, dated 25th May 1903, has been successful in practice: and also to what extent the closure of the alternate blocks in Rapur has proved real and effective.

3. The Board considers that it would be well to warn goat owners that they must expect a rise in the rate of fee for goats in due course.

(True Extract.)

(Signed) A. R. CUMMING,
Secretary.

To the Collector of Nellore, with two maps returned.
Copy to the Conservator of Forests, Central Circle.

Read—again Proceedings of the Board of Revenue (Land Revenue), Forest Mis. No. 939, dated 25th October 1904:—

Read—also the following letter from E. D. M. HOOPER, Esq., Conservator of Forests, Central Circle, to the Secretary to the Commissioners of Land Revenue, dated 3rd February 1905, R. on C. No. 2013:—

In accordance with orders conveyed in Proceedings, Mis. No. 939, dated

25th October 1904, I have the honour to report regarding the goat-browsing proposals therein referred to.

2. As directed in the Proceedings, I visited the taluks of Atmakuru, Udayagiri, and Rapur, and inspected most of the areas proposed to be opened to browsing in the two former and a number of reserves in Rapur in which goats have been permitted to browse under Mr. Butterworth's scheme. I was accompanied by Mr. Morris the Collector through Atmakuru and Udayagiri.

3. As regards the effect of the browsing in the past three years the reserves visited had been browsed for two out of three years in most cases, because, though two-thirds of a reserve were closed the first year in the next season, the rotation was changed from three to two years and half only was closed.

4. I saw therefore areas to which goats have been admitted since June last, some which had previously been closed for a year, and others closed to goats after being browsed over for one or two years, and lastly reserves which have been reopened after a year's closing. Their previous condition I had no means of determining. The number of browsing animals that have been licensed could be inferred by taking the return of permits issued in the adjoining villages, for, though the permit nominally is valid for the whole district of Nellore, the goats are not taken further than the nearest reserve. From the return I received it would appear that the average browsed per acre in the Rapur reserves was about .68, but we have no knowledge how many animals browsed without permit.

5. The effect of browsing was very evident. The growth of *Carissa carandas*, of *Maba buxifolia* and other bushy trees was trimmed, but it was more especially noticeable that the larger tree growths, such as *Acacia latronum*, *Acacia leucophloea*, and *Acacia sundra*, were much damaged by mutilation of their branches, which are pulled down or snapped off for the goats to eat their leaves and pods. This drawback was not noticeable in the reserves of other taluks visited and which are closed to browsing.

6. The Board has also asked if the Rapur reserves and others in the central zone will produce other than scrub. My opinion is that, taking into consideration the soil and climate, the areas in question will yield not only the small fuel they are now giving, but also wood suitable for the requirements in construction and agricultural implements of the village and town population of the taluk. The tree species already represented in this poor growth are capable of acquiring much larger dimensions than at present they possess, and thus for their produce-yielding qualities alone the reserves are worth protecting.

7. Having thus categorically replied to the Board's inquiries, I would further remark on the subject of the goat industry in those parts that I have

visited. The area of the reserves in the central zone is only small as compared with the unreserved areas. The original idea of the goat agitation was to open the reserves to preserve the unreserved land produce for the village communities—vide Mr. Higgins' note—but, as a matter of fact, the goat industry had already practically denuded the unreserved lands, and in consequence had been long in decadence when the agitation began. Besides the kancha protection afforded to unreserved pastures kept goats out of them except for very limited portions of the year. So the goat owners as a last resource want the reserves to turn to.

8. The question then is whether the prospective value of our settled reserves is to be given up to provide a last fillip to an expiring industry. The argument that the goat is a manure producer is set forward as an additional reason for our protecting him, but, on the other hand, there is the fact that the irrigation projects north and south of the Penner will depend upon the supply of leaf-manure which will have to be transported considerable distances, and the goat cannot take its place.

9. I am therefore opposed to the protection of the goat in Rapur, Atmakuru, and Udayagiri, at the expense of the forests, and would suggest that the orders for his admission into reserved forests be cancelled.

10. The original proposal to admit the goat, because our establishment failed from corrupt motive to exclude him, is to my mind a counsel of despair, and not prompted by sound administration. The second proposal now sanctioned to license two per acre could only disimprove matters, for while entry of goats if forbidden could be detected, the entry of goats beyond the limited number is an offence not possible to detect.

As a matter of fact the present system of licensing goats goes beyond the sanction, for any number is being licensed in any locality under the general rules published in the Forest sheet.

11. My inspection of the Atmakuru-Udayagiri reserves leads me, however, to consider that we could disafforest with advantage certain outlying small reserves; but as this suggestion is not prompted by any consideration of the goat, it will be made the subject of a separate reference.

Resolution—Forest No. 58, dated 9th March 1905.

The Board has no doubt that under the Rapur goat-browsing scheme the reserved forests in the taluk are being damaged and denuded, but sanctions its continuance for another year, in view of the fact that the current year is not a favourable one in which to curtail grazing privileges. The Board does not apprehend that much additional damage will thereby ensue, and considers that it should, on the other hand, be possible by that time to ascertain precisely the results of the scheme in all its aspects. As

regards Mr. Hooper's remark that he had no means of determining the condition of the forests when the scheme was inaugurated, the Board observes that Mr. Murray, who has been the District Forest-officer since December 1900, should be able to supply the necessary information.

2. The Board does not approve of the Collector's proposals to extend the scheme to the Atmakur and Udayagiri taluks, where there is a probability of large irrigation schemes being introduced. An abundant supply of leaf-manure is essential for the wet cultivation thereunder, and the irrigation schemes, if carried out, will also result in a much larger demand for small timber for agricultural implements and for houses than at present. The conservancy of the forests, in order to meet this prospective demand, is of the utmost importance, and the Collector will accordingly instruct his District Forest-officer to see that the existing rules about the exclusion of goats from the reserves are strictly enforced.

3. The Conservator's proposals about the disafforestation of the outlying reserves in the Udayagiri and Atmakur taluks are awaited. The Board observes, from Mr. Rice's report printed in Board's Proceedings, No. 324 (Revenue Settlement, Land Records and Agriculture), dated 29th August 1904, that considerable areas of forest are commanded by the Tungabhadra scheme.

(True Extract.)

(Signed) N. MACMICHAEL,
Acting Secretary.

To the Collector of Nellore.

- " Conservator of Forests, Central Circle.
- " Secretary to Government, Revenue Department.

GOVERNMENT EXAMINATION

Special Tests—OCTOBER, 1904.

PRÉCIS-WRITING.

Time—Three Hours.

INSTRUCTIONS TO CANDIDATES.

Having read the accompanying correspondence, draw up a Précis, i.e. a brief and clear statement of its contents, not paper by paper, but in the form of a narrative. The object of the Memorandum or Précis, as stated should be, not paper by paper, but in the form of a narrative, is that had not time to read the original correspondence might, by reading the in possession of all the leading features of what passed. The merits of are: (1) to contain all that is important in the correspondence, and unimportant; (2) to present this in a consecutive and readable shape as distinctly as possible; (3) to be as brief as is compatible with clear distinctness. Brevity and clear handwriting should be particularly striven

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 wall, Esq., Chairman, Cochin Chamber of Commerce, to Colonel R.E., Calcutta, dated Cochin, 4th April, 1879.

Interview which a deputation of the members of this Chamber had with me, I have now the honour to address you on the subject of the harbour, and to request that you will be pleased to submit this memorandum for its favourable consideration.

I have heard with pleasure that professional opinion is unanimous on the subject that the harbour could be converted into a first-class harbour at a reasonable cost; and in view of the observations at the interview referred to, I gather that, as it is essential to the commerce of the place, it should be sanctioned, it should be demonstrated by reliable data that the work required to the extent of at least 4 per cent. on the proposed outlay, I beg to submit the following statistics of Shipping Tonnage and Imports and Exports for the years 1877-78, which have been carefully compiled from official records and returns.

It will be observed that the trade of Narrakal has been included as vessels frequent that port, not because it has any traffic of its own, but because of its safe anchorage during the south-west monsoon, when Cochin is the whole of the business done there is on account of the mercantile port, so that virtually it is part and parcel of the trade of British India, and not be temporarily diverted to that place, if facilities for landing and unloading of goods during the monsoon existed here.

These statistics speak for themselves, this Chamber would urge upon you the fact that, allowing the figures relating to Narrakal to stand, the volume of the import and export trade of Cochin alone are of sufficient magnitude to justify this Chamber's holding out the prospect of the merchants being well supplied with the whole of the interest on the estimated amount required for the improvement of the harbour.

Results during the last two seasons have been as follows:—

	Cochin.	Narrakal.
	TONS.	TONS.
...	73,817	19,648
...	56,165	27,424
...	129,982	47,072
...	61,147	3,456
...	45,629	1,518
...	106,776	4,974
...	134,964	23,104
...	101,794	28,942

Imports of export goods go free of duty, and it is also probable that import duties on such goods are considerably reduced, this Chamber is decidedly of opinion that exporters would cheerfully consent to pay a tax of Rs. 1 per ton on such goods, in view of the numerous advantages which they would derive from the improvement of the harbour, chief among which would be the saving of time and expense in the conveyance of goods to and from the harbour, which

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 5. From your personal inspection of this harbour you are no doubt satisfied that its capabilities are such that it could without difficulty accommodate twenty-five large ships, but should any portion of the river or backwater belonging to the neighbouring state of Native Cochin be required, this Chamber has the assurance of those in authority in that state, that no obstruction or difficulty need be anticipated, as the Government of His Highness the Rajah of Cochin will be prepared to make any reasonable concessions which may be required by our Government.

6. Another matter which the Chamber would bring to your notice is the existence, in abundance, of material for works of the proposed kind at Kakanad, a place in Native Cochin in close proximity to this port. The groyne which were thrown out on this as well as on the Vypeen shore some years ago, when the encroachments of the sea threatened the town, are composed of granite brought from this place. Large quantities of material of this description are available, and could be conveyed by the backwater at comparatively cheap rates.

7. The Chamber would further beg to observe that, during the late famine, an immense trade was carried on between the rice-ports and Cochin, and almost all the towns on the line of railway and in Travancore to the south received a large share of their supplies from this port. Narrakal proved a valuable auxiliary to Cochin, as during the south-west monsoon numerous cargoes were landed there and conveyed to the famine-stricken districts. Vessels which were unable to approach any other port on the coast found shelter at Narrakal, and discharged their cargoes. Had landing and shipping facilities been available at Cochin during the rainy season all those vessels which resorted to Narrakal would have come into this harbour and landed their goods more expeditiously and cheaply.

8. The Chamber would take this opportunity of stating that the subject of extending the railway to Cochin is now engaging the serious attention of the Cochin Sirkar and the mercantile community, and arrangements are already in progress to bring the project forward in a definite and tangible shape. The proposed line will run through a thickly populated country. Taking this fact in connexion with the well-known fertility of the country and the importance of the port of Cochin as the natural outlet for the produce of the neighbouring native states, an enormous goods and passenger traffic may safely be calculated upon. It would be superfluous to dilate upon the numerous advantages which the railway to Cochin would secure to the country, but the Chamber would only remark that a railway in times of famine is simply invaluable. The Secretary of State for India, in his dispatch of the 10th January, 1878, appointing the Famine Commission, writing on this subject observes:—The value of railways as an assurance to the population against the worst sufferings of famine has been singularly illustrated during the past year. Without their aid it would have been wholly impossible to convey sufficient grain to the inland districts. Their resources, however, were strained to the utmost, and at one time a serious apprehension was entertained that they would be overtasked. How far it will be possible, with a due regard for financial considerations, to bring a wider range of country within their immediate reach is a question which will doubtless occupy your earnest attention at an early period. Considering the magnitude of the rice-trade of this port, particularly during the prevalence of the famine, and the difficulty experienced in conveying supplies in large quantities to Tirur, the nearest railway station, cheaply and expeditiously, owing to the want of water in the canals, a line from Cochin to Shornur would be an excellent feeder in similar emergencies, especially when time and expenditure are two important considerations. The Chamber need not dwell further on this subject, as it will in due course go before the Government in a matured and definite form.

9. The Chamber would take this opportunity of thanking you for the ready and courteous attention with which you have received its representations, and, in concluding, it hopes that the claims of the Cochin harbour to improvement will meet with the consideration they deserve at the hands of Government.

Government of Madras
Public Works Department,
Stonehouse, Ootacamund,
1st October, 1880.

To

J. H. ASPINWALL, Esq., Cochin.

MY DEAR SIR,

I am much obliged for your letter of the 28th ultimo, and for the courteous invitation which it contained. Should I be enabled to visit Cochin, I should be most happy to put up during my stay with you, but at the present moment my plans are a little uncertain, and I half fear that I shall be unable to visit, as I had intended, the Western Coast harbours till January. In any case I will give you as early intimation as I can.

Meanwhile I should be glad to know precisely what are the proposals in connexion with the port, as I have not myself had an opportunity for visiting it, nor have I seen any report by Colonel Thomason. His scheme, whatever it was, went in all probability to the Supreme Government.

From what I have generally been given to understand, Cochin has in the Narrakal mud-banks a costless and safe landing-place throughout the south-west monsoon, while at all other times there is no serious inconvenience from the present bar so far as landing and discharging cargo is concerned.

Having lately visited our northern ports, I had occasion to study the general conditions under which harbours could be constructed at the mouths of our rivers, and as you will see from my note attached to the G.O. of 13th August, I was obliged to come to unfavourable conclusions (see particularly paras. 29 to 39 inclusive).

Setting aside the question of a railway, which I should presume, is sufficiently before Government, do you really need any large or expensive harbour works? and if so, what form should they take, bearing strictly in mind the action which is inevitable at the mouths of all our rivers?

Yours very truly,

(Signed) R. H. SANKEY, Colonel, R.E.

From W. T. Holmes, Esq., Honorary Secretary, Cochin Chamber of Commerce, to the Secretary to Government, Public Works Department, Madras, dated Cochin, 8th October, 1880, No. 68.

Mr. J. H. Aspinwall has placed before the Chamber your letter to him, dated 28th instant, with a view to the Chamber addressing you direct on the subject of the proposals in connexion with the improvement of this port.

2. Your remarks and paragraphs 29 to 39 of your note attached to Government Order of 13th August have been carefully considered, and by desire of the members of the Chamber, I have the honour to offer the following observations for your consideration.

3. In the month of November, 1878, Colonel A. Thomason, R.E., visited the port and met the members of this Chamber to confer about proposals for the improvement of the harbour and the ability of the trade of the port to bear a charge for interest, at 4 per cent. per annum on the cost of the proposed improvements.

4. Owing to Colonel Thomason's short stay in Cochin and to the fact that the Chamber had no previous knowledge of his intention to visit the port, there was not time to bring before him all the information bearing on the latter point, but in conference it was understood that no engineering difficulty existed in the way of converting the port into a first-class harbour at a moderate cost.

5. The works which were under contemplation at this interview were the construction of two piers from the mouth of the backwater so as to confine the current flowing outward and direct its full force on the bar; to construct such protective works to prevent erosion of the sea-beach north and south of these piers as might be necessary; and to construct quay walls inside the harbour, on the south side, from the present mouth to the Calvetty canal, and on the north side on the face of V been Point.

6. These works were roughly estimated to cost £250,000, and it was left with the Chamber to show that the trade of the port was able to pay interest at 4 per cent. per annum on this outlay. This the Chamber did in a letter to Colonel Thomason, dated 4th April last, a copy of which Mr. Aspinwall has forwarded to you.

7. The Chamber, however, is now of opinion that, as a beginning, works of much less magnitude than those originally contemplated might suffice, and would propose the construction of the piers seawards and such protective works on the sea-shore to the north and south of them as may be considered necessary. These works might be expected to cost considerably less than the amount formerly estimated. Other works might be subsequently constructed as the development of the trade of the port required.

8. For any work that may be decided on there is abundance of stone within moderate distance of Cochin which could be conveyed by backwater at cheap rates from the quarries to the works.

9. In considering the question whether the proposed works, if carried out, would permanently effect their object, the Chamber inclines to the opinion that they would, and it feels some confidence in it because a similar opinion seems to have been arrived at by professional men who have visited and inspected the port. The circumstances of this port are so widely different from those of Vizagapatam and other ports on the Madras coast, that conclusions which may be perfectly sound with reference to the latter may be found quite inapplicable here.

10. The Cochin backwater is considerably over one hundred miles, extending to the north and south of Cochin, in length; is in some parts about fifteen miles broad, is perhaps nowhere less than one and a half to two miles broad throughout its greatest length; and is of great depth in many places. Into this inland sea, all the rivers, some of them considerable, from the Travancore and Cochin hills debouch (the nearest of them being fully ten miles from Cochin), and find a passage into the sea at Cochin and Paliport; but in the passage of their waters down the still backwater the silt brought down by them is wholly deposited, so that by the time they reach Cochin there is no matter borne in them, even in the height of the monsoon floods, which, depositing outside, could form a bar. In fact, the water flowing out of the opening generally called the Cochin river is practically free from silt. It would appear from this that the bar at the Cochin mouth of the backwater is not caused by the deposit of silt brought down by the rivers, but is owing to the action of the surf endeavouring to re-form the profile of the coast-line broken through by the overflowing current, as pointed out by Mr. Robertson, and, if this opinion is correct, there is ground for belief that such works as are proposed would have the effect of permanently removing the bar.

11. It may here be mentioned that the depth of water on the bar at high water is 16½ to 17 feet, and at low water 14½ to 15 feet, and not 11 feet as stated by Mr. Robertson.

12. With reference to the facilities offered by Narrakal to shipping operations during the monsoon months, the Chamber would point out that there are serious drawbacks to those facilities, amongst which may be mentioned the inconvenience arising from the place being at so great a distance from Cochin, the cost of keeping extra staff there, the extra cost of boat-hire, the cost and inconvenience of portage across the land between the backwater and the sea, the damage done to cargo by long exposure to wet in passing between the two places and on to the ships, and, not least, the loss sustained by the pilfering by boatmen and others which cannot be checked. In these things there are reasons sufficient for a strong desire amongst merchants of this place to be independent of Narrakal as a shipping port. But as a port of safety in stormy weather, when ships might be unable to make this port, Narrakal would always be available as a temporary anchorage.

13. The Chamber notices with gratification that there is a prospect of your visiting the port, and trusts that you will find it convenient to do so at an early date.

(Signed) W. T. HOLMES,
Honorary Secretary.

storms as are met with on that coast ever experienced here. The long shelving bottom perhaps explains the comparative lightness of the seas breaking on this shore.

12. It is not anticipated that there would be any special risk to ships passing in between the piers during the south-west monsoon. The process of warping would be quite unnecessary, for, as every wind that blows during that period is a fair wind for entering the port, ships once in the channel would be able to sail right in. The wind, however, at that and other times of the year, when the early morning land-winds do not prevail, does not serve ships going out, and for use at all such times it might be desirable to keep a small tug-steamer at the port.

13. The Chamber regrets that a statement of imports and exports for twenty years is not available, but one for ten years, which has been compiled by the Chamber from official records, is attached hereto and its figures are reliable.

14. On the subject of the dues which the sea-borne trade of the port can bear, to pay interest on the required capital, the Chamber feels better qualified to express an opinion than on some of the other points raised in your letter under reply.

15. The average annual imports and exports for ten years are found to be—

							TONS
Cochin and	Imports	...	...	...	...	...	44,513
Narrakal	Exports	...	...	...	...	...	55,799
Total							100,312

16. At the present time ships of 300 to 400 tons burthen come into the inner harbour, and, in discharging and loading their cargoes, merchants find a saving of at least 12½ annas per ton in boat-hire as compared with the cost of discharging and loading when ships are outside (including Narrakal shipments), and on the supposition that two-thirds of the imports and exports, say 66,875 tons, are discharged and loaded outside, the further reduction in boat-hire occasioned by all ships coming inside would represent Rs. 52,940 or thereabouts annually, being an average of 8 annas and 5 pies per ton on the whole trade.

17. If, however, ships were not only all able to come inside, but provision was made for them to discharge and load at quays, there would be a saving of R. 1-1-0 per ton in boat-hire on the aforementioned two-thirds of the total imports and exports and of about 5 annas per ton on the remaining third now discharged and loaded inside, averaging 13 annas and 4 pies per ton on the whole trade, and representing Rs. 83,593 annually.

18. But the full benefit which Cochin merchants would derive from the contemplated improvements is not to be measured by these savings only. Various facilities would be furnished, such as reduction of risk of damage to goods and loss by theft, greater expedition in the shipping and discharging of goods, ability to carry on shipping operations under conditions of sea and weather which now bring them to a standstill, and, not least, the avoidance of considerable inconvenience, delay, and extra expenditure, which are at present experienced in having to carry on shipping operations at Narrakal. These things have an appraisable value and were taken into consideration when the Chamber informed Colonel Thomson, in its letter of the 4th April, 1879, that for harbour improvements, which would include quay-walls in the inner harbour, the trade of the port could afford to pay R. 1-8-0 per ton by way of wharfage or bunder fees if necessary, a statement from which the Chamber does not recede. However, as far as the Chamber understands the subject, a less tax would more than suffice to pay 4 per cent. interest per annum on the supposed outlay of £250,000, say 12 annas per ton in the case of harbour improvements not including quay-walls, and one rupee per ton in the case of improvements including quay-walls.

19. The facilities and quicker dispatch which ships would gain under these circumstances might well be considered sufficient ground for an increase in the tonnage-dues they pay to the port, and the Chamber would propose an increase of one anna per ton all round. The existing rates are—

On ships from or to foreign $\frac{\text{and}}{\text{or}}$ British ports, 3 annas per ton for 90 days;
Coasting steamers, 4½ annas per ton for 30 days;
Native and coasting craft employed entirely in coasting trade, 1½ annas per ton for 60 days.

20. There is attached hereto a statement of the number of ships, tonnage, and port-dues for ten years at Cochin, which shows that the average tonnage for four years, from 1876-77 to 1879-80, to have been 207,312 tons. A charge of one anna a ton on this amount would give an income of Rs. 12,957 per annum. If the tonnage of ships visiting Narrakal was taken into account, the amount would be larger, but unfortunately statements cannot be obtained in time to go with this letter.

21. The Chamber is also of opinion that a large portion of the surplus port-dues collected might very justly be appropriated to this object. For the past four years they have averaged per annum at Cochin Rs. 28,692, and the expenditure against them, it is believed, has not averaged Rs. 7,000 per annum. The Chamber has no idea of the manner in which the surplus of Rs. 21,000 has been disposed of (though it is well known that it has not been expended on the port), but ventures to propose that at least three-fourths, if not the whole, of this surplus be applied to the improvement of the port.

22. Thus in one case can be raised, without any undue charge on the port, an income of Rs. 1,03,700 per annum as follows:—

Charges on landing and shipping, say	100,000 tons at	rs.
12 annas per ton	...	75,000
Increased port-dues	...	12,950
Transfer from port-dues	...	15,750
Total		1,03,700

representing, at 4 per cent. per annum interest, a capital of Rs. 25,92,500.

23. In the other case can be raised an income of Rs. 1,28,700 per annum as follows:—

Charges on landing and shipping, say	100,000 tons at	rs.
one rupee per ton	...	1,00,000
Increased port-dues	...	12,950
Transfer from port-dues	...	15,750
Total		1,28,700

representing, at 4 per cent. per annum interest, a capital of Rs. 32,17,500.

24. It may be added that a tax of even R. 1-8-0 per ton would compare favourably with the charges on shipping operations at the neighbouring and thriving port of Alleppey; and, proceeding as above, an annual income of Rs. 1,78,700 might be raised.

Charges on landing and shipping, say	100,000 tons at	rs.
R. 1-8-0 per ton	...	1,50,000
Increased port-dues	...	12,950
Transfer from port-dues	...	15,750
Total		1,78,700

representing, at 4 per cent. per annum interest, a capital of Rs. 44,67,500.

25. Such being the case, and if the works proposed are considered practicable, and can be constructed within the cost the port can pay interest on, the Chamber hopes that Government will give the subject favourable attention. The near completion of the Madras Harbour Works seems to afford an opportunity for taking the proposals concerning this port into consideration, for the working-plant soon to be set at liberty in Madras might be made available for any works sanctioned here.

From W. T. Holmes, Esq., Honorary Secretary, Cochin Chamber of Commerce, to the Secretary to Government, Public Works Department, Madras, dated Cochin, 14th December, 1880 No. 76.

A notice appears in the *Madras Mail* of the 11th instant that Mr. Parkes, the Consulting Engineer for the Madras Harbour Works, is to visit Beypore this month to report on the practicability of constructing a harbour there, and I am desired by the Chamber to request that you will be so good as to obtain the sanction of Government to Mr. Parkes visiting this port also for a like purpose.

2. The Chamber trusts that nothing will be decided about the proposed works at Beypore until the proposals for harbour improvements at this place have received consideration, and the fact that this port is second in trade and importance in the Madras Presidency, while Beypore remains, what it always was, only a fishing village, may be deemed to give it a prior claim on the attention of Government.

3. It is open to doubt that the construction of harbour-works at Beypore would ever be a remunerative undertaking, or that the produce of the Wynad which now goes to Tellicherry and Calicut for shipment (chiefly to Tellicherry) could be diverted from those places without a railway through the Wynad, and even that might be insufficient, for it is unlikely that curing firms established at those places will remove themselves to Beypore, and there seems to be less likelihood that they will incur the cost and risk of sending goods to Beypore for shipment when they can ship more cheaply and conveniently from their own ports.

4. Another point for consideration is the fact that there would be no produce for shipment from Beypore during the monsoon months, when it is probable the port would be quite deserted. The coffee crops usually begin to reach the coast about the end of November and are all shipped before the end of May, so that for about six months in the year the port would yield no revenue towards paying interest on capital expended on harbour construction. During the remaining months of the year shipments are now made without inconvenience from Tellicherry and Calicut, and at less expense than they could be made from Beypore, were that port converted into a harbour.

5. The construction of harbour-works here might be expected to pay from the very beginning, and when this port is placed in connexion with the railway system of the Madras Presidency, of which there seems a likelihood, the existing extensive trade of the port may be expected to greatly expand. Nature having done so much for it, it is probable that this port could be converted into a first-class harbour at much less cost than only moderate works could be carried out at Beypore.

6. For these reasons the Chamber hopes that the claims of this port to first consideration will have the attention of Government before the Beypore schemes, and that Government will be pleased to allow Mr. Parkes to visit this port with a view to harbour improvements.

From J. H. Taylor, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Secretary to Government, Public Works Department, dated Madras, 16th December, 1880, No. 11,132.

In returning the papers marginally noted, I have the honour to offer the following remarks.

From Mr. J. H. Aspinwall, dated 28th September, 1880.

From the Honorary Secretary, Cochin Chamber of Commerce, No. 68, dated 8th October, 1880.

From the Honorary Secretary, Cochin Chamber of Commerce, No. 76, dated 25th November, 1880.

of Government in the other most important scale are secured.

3. I personally consider it impossible to make Cochin a first-class harbour: nature has not done enough for it. A second-class one it may already be considered during the fine season, at which period, I believe, nearly all trade operations are conducted.

4. I will recapitulate my chief reasons for this opinion. In the first place, independently of the bar-obstruction, more than a sea-mile of about 18 feet of water has to be approached and passed over from the open sea with its heavy ground swell.

5. Now the least depths that would justify a large ship in approaching the coast and making a narrow harbour-mouth is, I consider, 5 fathoms or 30 feet, and I know no instance where so small an allowance even as that obtains at present. The removal of the bar, which is only from 2 to 4 feet less than the entire passage, would not remedy this crushing defect. The Cochin Chamber put the present depth on the bar at 16 feet, but I have known it fourteen.

6. On the subject of removing the bar by a natural process, I would observe that the sand-spits on either side of the entrance to Cochin come up nearly to the surface in some portions and above it in others. The contemplated walls would do very little more than guide the stream as it is now guided, and though the bar is found much diminished after a good scour during the heavy rains of the south-west monsoon, yet it speedily re-forms during the fine season and the regular return of ebb and flow. If the contemplated walls are to take the usual harbour form and, after reaching the bar, to converge to a narrow opening, I see no reason to doubt that the stream thus narrowed would soon represent the only deep portion, the sides sitting up as is evidenced at the Vizagapatam backwater and other places. Then as regards a first-class harbour, the passage between Cochin and Yypeen, where the deepest water is situated, is only 1,100 feet across, so that a first-class steamer of, say 350 feet, even if very tightly moored in the centre, would require the whole width to swing in safety, so that only one tier could be moored in line, and pilots now experience great difficulty in avoiding collision while bringing ships in under canvas, which would be increased if a large class of ships had to be provided for. One tug, in my opinion, would be a necessity.

7. The space inside the backwater after Yypeen is passed is also extremely limited. I have drawn a blue pencil mark about where the harbour would practically end. The remainder water-space, though having holes and swatches here and there, is too shallow for use and the holes have no leads into them. The hundreds of miles of backwater spoken of by the Chamber can, I therefore suppose, only be meant for boat-traffic. The chart sent with your letter is old—1858.

8. About the section of the walls being weaker than those at Madras, I am of opinion that the Madras system of blocks cannot be used at Cochin. The sand is now near the surface and a rubble-base would have no sufficient depth. The method used at Alexandria and Port Said, where large blocks are thrown in to find their own stop, would, I imagine, answer better.

9. No reliable data as to the comparative force of the sea on the East Coast and West Coast exist, except in one instance of the small Calicut pier, which has stood some years in its present position, the portion close to the shore having alone suffered from the surf, but I am confident some of the seas we have had in Madras during the same period would have destroyed it entirely. I should have been very glad if I could have conscientiously endorsed the hopeful and confident character of the correspondence forwarded with your letter, but the points I have raised demand, in my judgement, careful consideration. Colonel Thomason does not seem to have viewed Cochin or any other Madras harbour from a nautical point of view. If you adhere to the proposal to visit the West Coast in January in the *Margaret Northcote* with me, many subjects of great interest to Government will receive the attention that has not been properly given to them hitherto.

Order, 27th December, 1880, No. 2,943 W.

The Right Honourable the Governor in Council is of opinion that no action should be taken in regard to the proposed improvements to the harbour of Cochin, until, after personal inspection by the Chief Engineer and the Master Attendant, Madras, a joint report by the officers has been laid before Government and considered.

2. Arrangements will therefore be made for such inspection at an early date.

3. Meanwhile the Government of India will be requested to obtain the opinion of Captain A. D. Taylor, Superintendent, Marine Survey of India, on the general question. It is understood that Captain A. D. Taylor is intimately acquainted with the port, and his observations, accompanied by the latest chart, will doubtless be valuable.

4. The Government of India have already been requested by telegram on the 18th December to forward any report and plans which Colonel Thomason, R.E., may have laid before them in connexion with his recent examination of the harbour.

(True extract)

R. H. SANKEY, Colonel, R.E.,

Secretary to Government, P.W.D.

GOVERNMENT EXAMINATIONS.

Special Tests—OCTOBER, 1903.

PRÉCIS-WRITING.

Time—Three Hours.

INSTRUCTIONS TO CANDIDATES.

Having read the accompanying correspondence, draw up a Memorandum or Précis, i.e. a brief and clear statement of its contents, not paper by paper, but in the form of a narrative. The object of the Memorandum or Précis, which as already stated should be, not paper by paper, but in the form of a narrative, is that any one who had not time to read the original correspondence might, by reading the Précis, be put in possession of all the leading features of what passed. The merits of such a Précis are: (1) to contain all that is important in the correspondence, and nothing that is unimportant; (2) to present this in a consecutive and readable shape, expressed as distinctly as possible; (3) to be as brief as is compatible with completeness and distinctness. Brevity and clear handwriting should be particularly studied.

(1)

EXTRACTS from the Minutes of Consultation under date 27th November, 1835, No. 1,849, Public.

READ—The following letter from Dr. J. Macleod, Superintending Surgeon, Ceded Districts, to the Right Honourable General Sir Frederick Adam, K.C.B., dated Bellary, 1st October, 1835:—

I have the honour to solicit your attention to a subject of public interest, with a view of inducing your Excellency to bring it to the favourable notice of the Honourable the Court of Directors.

2. For several years, prior to the death of Sir Thomas Munro, I had been employed by Government on various occasions unconnected with my department. Amongst others, I was directed to direct my attention to the important object of devising a hydraulic cement that might be substituted for those received from England, and which could only be procured at great expense and still greater inconvenience.

3. The result of my experiments was communicated to Government in a letter to the Chief Secretary, dated 11th February, 1826. Lime had hitherto been considered and employed as the only known basis of water cements. But in the letter above mentioned I proposed to substitute pure magnesia, having recently found it to possess all the essential properties of the best hydraulic cements. And as abundance of pure magnesia was procurable, I recommended that a trial should be made of its 'fitness and durability.'

4. To this address I received an answer from the Secretary to Government, of which the following is a copy:—

No. 140, PUBLIC.

To

J. MACLEOD, Esq.

SIR,

I am directed to acknowledge the receipt of your letter of the 11th instant, and to state that the Honourable the Governor in Council deeming it highly desirable that the durability and fitness for general use of the cements prepared from the materials noticed by you should be ascertained, has authorized the Military Board to make, in communication with you, such experiments on a moderate scale as shall enable them to form an opinion as to the propriety of substituting these for European cements and employing them generally on the public works.

I am, &c.,

(Signed)

H. CHAMIER,

Acting Secretary to Government.

FORT ST. GEORGE,
21st February, 1826.

5. The experiments were accordingly performed on the walls of Fort St. George, and the result was reported by the Superintending Engineer to the Military Board in a letter, dated 2nd February, 1827, in which he states that the magnesia cement seems, as far as a judgement can at present be formed, 'in any respect equal to Parker's cement.'

6. A few days subsequent to the date of this report, on the 14th February, Sir Thomas Munro inspected the progress of these experiments in person, and was pleased to express a confident hope of their ultimate success. His judgement, as well as that recorded in the Superintending Engineer's report, has now been fully confirmed by the observation of eight years, and the *Fort St. George Gazette* informs me that Government are about to employ the magnesia cement on the public works.

7. This cement, as the Superintending Engineer observes, 'is equal in every respect to Parker's,' and very superior in appearance. Its pure white colour adapts it to a variety of purposes to which Parker's could not be applied.

8. Magnesia has also the advantage in point of economy. Parker's should be employed without admixture; but one vase of magnesia admits of $1\frac{1}{2}$ of sand, so that one of magnesia is equal to two and a half of Parker's. Colonel Garrard, the Chief Engineer, informs me that such are the proportions employed lately by Colonel Montith, and which he says has already formed a cement as 'firm as a rock.'

9. Having thus, as briefly as I could, given the above outline of my researches, I trust your Excellency will be pleased to view the subject favourably and to represent it in the same light to the Honourable Court. I trust I have supplied an important desideratum which will be found of permanent utility. The public works will now be rendered more durable than heretofore, and the inconvenient necessity of obtaining from England an expensive and bulky article will be effectually obviated.

ORDER THEREON—27th November, 1835, No. 1,849, Public.

The President records the following Minute, dated 23rd November, 1835:—

'The request contained in the accompanying letter from Dr. Macleod, Superintending

Surgeon in the Ceded Districts, dated 1st October last, appears to me so reasonable that I have no hesitation in recommending compliance with it, and propose that the advantages derived from Dr. Macleod's experiments and suggestions should be fully brought to the notice of the Honourable the Court of Directors.

(Signed) FREDERICK ADAM.

Resolved accordingly that the advantages derived from Superintending Surgeon J. Macleod's experiments and suggestions in the preparation of a hydraulic cement be fully brought to the notice of the Honourable the Court of Directors.

(2)

Dispatch from the Governor in Council of Fort St. George to the Honourable the Court of Directors, dated Fort St. George, 27th November, 1835, No. 42, Public.

8. We beg to forward copy of a letter from Superintending Surgeon J. Macleod submitting the result of experiments made by him in the preparation of water cements; and, as we consider that great advantages have been derived from his exertions, we are induced to recommend the subject to the favourable notice of your Honourable Court.

(3)

Public Department.

EXTRACT from the Minutes of Consultation, under date 7th August, 1837, No. 1,218.

The Governor in Council proceeds to pass order on the following dispatch from the Honourable Court of Directors, dated London, the 19th April, 1837.

'With reference to paragraph 45 of our dispatch in this department, dated the 10th August, 1836, we now forward in the packet copy of a letter addressed to us by Dr. Macleod of your medical establishment, in which he adverts to the beneficial employment at your Presidency of the magnesian cement discovered by him, and suggests the expediency of extending its use to the other Presidencies. We have drawn the attention of the Governor of Fort William to this suggestion in a dispatch, dated the 19th October, 1836. The subject is again brought to our notice in a further letter from Dr. Macleod in view to the grant to him of a suitable remuneration for his discovery. A copy of this letter is also herewith transmitted.

'2. You state in your Public dispatch of the 27th November, 1835, paragraph 3, that great advantages have been derived from the exertions of Dr. Macleod, but we are desirous of being furnished by you with more detailed information than is supplied by the documents before us as to the extent to which the cement is now employed on our public works at your Presidency, whether it has entirely or to what degree superseded the use of other cements, and what is its cost as compared with those cements.

'3. When supplied with this information, which we are desirous of receiving at the earliest opportunity, we shall take Dr. Macleod's present request into consideration.'

ENCLOSURES.

To

J. C. MELVILL, Esq., Secretary, &c., India House.

SIR,

With reference to a dispatch from the Madras Government, Public Department, dated 27th November, 1835, in which the success of the researches made by order of Government for the discovery of hydraulic cements is brought to the notice of the Honourable Court, I beg to suggest the expediency of extending the benefit of the discovery made at Madras to the other Presidencies, particularly to Calcutta.

Paragraph 3 and reply in paragraph 45 of letter, dated 10th August, 1835.

The Honourable Court will have observed that magnesia in a state of perfect purity is as plentiful and accessible in some of the southern Provinces as lime or chunam, particularly on the banks of the river near Trichinopoly, where it was recently discovered. From this spot it can be conveyed to shipping at a trifling charge. It is more easily calcined than lime, its affinity for carbonic acid being considerably weaker, and resumes its carbonic acid again much more slowly than lime, and, of course, retains its properties when calcined proportionately longer. It should be also observed that calcined magnesia can be conveyed by ships without the least risk or danger, which is not the case with lime. The violent and destructive heat suddenly evolved by the latter on the application of water does not result in the case of magnesia. This pure magnesia must not be confounded with the dolomite of Europe, from which it is entirely different. The former has never been found in Europe.

The Honourable Court have been made acquainted with the properties of the magnesian cement generally by the dispatch above mentioned. In its exquisite white colour, and the high polish it admits of, this cement differs entirely from all European cements (hydraulic) hitherto known. In appearance it resembles the Madras chunam, which, I believe, is still a desideratum at Calcutta. It has been tried there, but was not found to answer. The magnesian cement is equally beautiful, with the durability of a hydraulic cement. These properties would render it not only of public utility there as at Madras, but also adapt it for purposes of ornamental architecture, particularly applicable to the city of Calcutta.

With regard to the cost of *magnesia*, a ton of chunam at Madras (say 20 parahs of 110lb. each) costs about 14 shillings. *Magnesia* may be estimated at the same, and this ton of *magnesia* admits of twice its weight of sand, thus forming 3 tons of cement, the materials of which cost only 5 shillings a ton.

My object in this address is to request that you will be pleased to point out these circumstances to the Honourable Court, in order that the subject might be brought to the notice of the Supreme Government in India, with a view of not only employing the cement on the Public Works as at Madras, but also of recommending its use to architectural purposes generally.

The Honourable Court will perceive the advantage that might be taken of this article as a ballast or dead weight for ships, so much wanted at Madras. Being as yet unknown in Europe, it may probably hereafter be applied to many useful and ornamental purposes. In that case its exportation from Madras, where alone it is found, might be attended with many advantages. Several ships last season were compelled to put back for want of dead weight, particularly the *Royal William* and the *Prince George*, in which I returned to England.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) J. MACLEOD,
Superintending Surgeon, Madras.

LONDON, 12 UPPER GOWER STREET,
29th September, 1836.

12, UPPER GOWER STREET,
December, 1836.

To
J. C. MELVILL, Esq.,
&c., &c., &c.

Sir,

1st. I have the honour to solicit the attention of the Honourable the Court of Directors to a subject already brought before them by the Madras Government in a dispatch (Public Department), dated 27th November, 1835, and particularly to my letter of the 1st October, 1835, enclosed therewith, of both of which I annex copies.

2nd. The importance of the discovery therein detailed is fully acknowledged by the Madras Government after ten years' experience, and I trust that the Honourable Court will view the subject in the same favourable manner. Since the period when I communicated

to Government the successful result of the experiments which I was directed to make on the walls of Fort St. George in 1826 in search of a *hydraulic cement*, then unknown in India, the Honourable Court have ceased sending Parker's cement from this country. The use of such a cement was absolutely necessary for the security of the Public Works, but the expensive and inconvenient plan of sending it from England is no longer resorted to.

3rd. A specimen of magnesian cement chipped off from the wall of Fort St. George accompanies this letter. It will be seen at once that it is altogether different from, and superior to, the hydraulic cements of Europe, and its cost in India is the same as common mortar.

4th. The annexed letter from Dr. Ure will explain the nature of this discovery in a scientific point of view. I do not but that the opinion of so distinguished a chemist will have due weight in the estimation of the Honourable Court.

5th. I trust I have supplied an important desideratum which will be found of permanent public utility, and from the use of which an immense annual saving will accrue to Government. It is unnecessary to enter into further details, as the importance of hydraulic cements is well understood in this country, and when the extent of public works in India is taken into consideration the advantage to be derived from them may be said to be incalculable.

6th. In conclusion, I humbly submit these particulars to the indulgent consideration of the Honourable Court, and trust they will be pleased to assign me a suitable remuneration for a discovery of public importance, from which, as the Madras Government inform the Honourable Court, '*great advantages have been derived.*'

I have, &c.,
(Signed) J. MACLEOD,
Superintending Surgeon, Madras.

COPY.

Letter from Dr. A. URE referred to in the 4th paragraph of the preceding letter.
13, Charlotte Street, Bedford Square, 9th December, 1836.

MY DEAR SIR,

I feel much interested with the new fact, which you communicated to me several years ago, that you had discovered in the native carbonate of magnesia of Madras an excellent material for making a hydraulic cement or mortar for building terraces, tanks, piers, &c. I regard this discovery of yours both as highly curious in a scientific point of view and as very valuable to the East India Company, affording their servants a cheap substitute for the expensive and often defective Roman cement of this country, and one of greater beauty for architectural purposes. I hope the Directors of our Eastern Empire will duly appreciate this contribution to their territorial resources, and reward your ingenuity and perseverance as they well deserve.

I have, &c.,
(Signed) ANDREW URE.

To J. Macleod, Esq.

ORDER THEREON—No. 1,218, dated 7th August, 1837.

The Board observe that a copy of the Military Board's report on the magnesian cement discovered by Surgeon Macleod was transmitted to the Honourable Court with the letter from this department, dated the 23rd October, 1832, No. 42, paragraph 7.

Ordered that a copy of the dispatch now received be forwarded to the Military Board and Board of Revenue in the Department of Public Works, with instructions to submit the further report called for in paragraph 2 at their earliest convenience.

(4)

Public Department.

No. 1,650.

To

THE BOARD OF REVENUE.

GENTLEMEN,

With reference to the order of Government of the 7th August last, No. 1,218, I am directed by the Right Honourable the Governor in Council to request that you will submit the report therein called for, respecting Dr. Macleod's magnesian cement, at your earliest convenience.

I have, &c.,

(Signed)

ROBERT CLERK,

Secretary to Government.

31st October, 1837.

(5)

Public Department.

EXTRACT from the Minutes of Consultation, under date 21st November, 1837,
No. 1,799.

READ—the following letter from the Board of Revenue (Public Works), to the Chief Secretary to Government, dated 13th November, 1837, No. 591:—

With reference to the orders of Government, under date the 7th August and 31st October last, calling for a report as to the extent to which magnesia cement is now employed on the public works at this Presidency, whether it has entirely, or to what degree, superseded the use of other cements, and what is its cost with regard to them, I am directed by the Board of Revenue to state that the third being the only division in which magnesia cement has been employed under their orders, they called upon the Civil Engineer to report upon the results of the experiments made with this cement in works lately executed under his superintendence, and also directed that officer to

Dated 14th October, 1837.

report upon any other experiments he might have subsequently made. The accompanying letter is

the reply received from the Civil Engineer, which the Board beg may be submitted to the Right Honourable the Governor in Council.

2. Captain Cotton states that the only work in which the cement has been used to any extent is in the construction of the apron of the upper anicut, and in that instance it entirely failed. The cause of failure is, however, attributed by that officer solely to inexperience in the use of the magnesia, as, notwithstanding the failure, he considers it of the greatest value as a material for masonry cement.

3. The magnesia was first tried by Captain Cotton, in 1834, in making some cubes of brickwork, and he then found it set very rapidly, and in a few months it became so hard that it was impossible to separate it from the bricks, into however small pieces the cubes were broken.

4. Captain Cotton further reports that he has lately made a great variety of experiments with magnesia obtained from different quarries and mixed up with various proportions of sand and other materials, and almost every one formed an excellent cement, setting generally in one or two hours sufficiently to be secured from the effects of water passing over it.

5. In making the late experiments, however, that officer observes that one circumstance greatly perplexed him, which was that he found, if a ball were plunged into water before it had begun to set, it would not set at all. As this was not the case with the experiments made by him some years ago, he endeavoured to discover the cause, and thinks that it proceeds from the magnesia which was employed in the late experiments having been procured from beneath the surface of the ground, which is much softer when first taken up than that found at the surface, although it is equally pure and becomes hard by exposure. He states also that, although he has failed in

making cement formed of magnesia taken from below the surface *set in water*, he has succeeded with some made from surface stones, and adds that this cement is a most important addition to works of masonry by rendering them much stronger than if made with lime, and on account of the magnesia being quite secure from injury by water within an hour or two after it is used, thus enabling repairs to be effected during the season of the freshes, which could not be before done from the want of such a material as this.

6. The balls of cement received with the Civil Engineer's letter are forwarded for the inspection of the Right Honourable the Governor in Council; they are composed of different proportions and materials, as will be observed by the labels attached.

Of these Captain Cotton remarks—

1st. That every one forms a strong cement.

2nd. That the strongest appear to be—

(1) A mixture of ore and magnesia in equal parts, both finely pounded and sifted,

(2) Magnesia alone,

(3) Magnesia 1 part and sand 1 or 1½,

(4) Magnesia and sand in the proportion of 1 of the former to 2 and to 3 of the latter.

3rd. That the mixture of lime and iron stone with the magnesia also forms a very hard cement.

This last was tried chiefly with reference to its use at Madras, as it would be much cheaper than magnesia and sand alone.

7. Referring to the above specimens, Captain Cotton observes that 'as they have all been made within a few weeks, the proportional degree of hardness may alter,' and this appears to have been the case with the specimen of 'magnesia alone,' which does not appear to be so good as any of the others, although classed as 'second' when forwarded by the Civil Engineer.

8. Regarding most of the specimens, however, the Board think there can be no doubt that they are excellent and particularly adapted for the exterior faces of works, and, as observed by Captain Cotton, the hardness of the material will enable it to be employed as plaster, where otherwise granite must have been used, which is so expensive an article in the Delta.

9. With regard to the cost of the magnesia in comparison with other cements, Captain Cotton observes that in 1833 he was not aware that it could be procured nearer than Salem, which is on an average 130 miles from the large works in his division; but since that time he has heard of its having been found at various places much nearer to the river; and two days previous to the date of his letter, it was discovered by the Collector in a hill close to the bank of the Cauvery, about 20 miles above Trichinopoly. This site Captain Cotton remarks is most favourable, as water carriage can be obtained to every part of the Delta, and will make its cost so moderate as to allow of its being extensively used—

A parash of prepared magnesia conveyed to any part of the Tanjore district is estimated by Captain Cotton to cost As. 11-6.

The price of a parash of stone chunam in the same district averages from 2½

to As. 0-8.

The cost of parash of prepared magnesia, if conveyed to Madras, is estimated

at Rs. 1-2-0.

The present price of a parash of shell chunam at Madras is As. 4-3.

10. Accompanying Captain Cotton's letter is a memorandum of the method pursued by him in burning and preparing magnesia, a copy of which the Board will circulate to each Civil Engineer.

11. In conclusion, I am desired to request that a copy of Dr. Macleod's report to

Government on the discovery and preparation of this material may be furnished to this office for distribution to the Civil Engineer's department.

(Signed) I have, &c.,
STAFFORD VARDON, Lieutenant,

MADRAS, Assistant Secretary to the Board of Revenue
13th November, 1837. in the Department of Public Works.

ENCLOSURE

From Captain A. T. Cotton, Civil Engineer of the Third Division, to the Secretary to the Board of Revenue (Department of Public Works), Fort St. George, dated Talamalay, 14th October, 1837.

I have the honour to acknowledge the receipt of your memorandum of the 9th September accompanying copies of papers on the subject of magnesia.

With respect to its use on public works in this division, I beg to state that it has only yet been applied in one instance to any extent, viz., in constructing the apron of the upper anicut. In that case it entirely failed. I am now, however, fully satisfied that it was owing to our not being experienced in the use of the material. The main cause of its not having been more extensively used hitherto has been the expense of it. When I took charge of this division in 1833, I was not aware that it was to be obtained nearer than Salem, which is on an average 130 miles distant from the works of this division, and this made the cost very great. Since that I have heard of its being found at various points much nearer to the river, but it was only two days ago that it was discovered by the Collector in a hill close to the bank of the Cauvery, about 20 miles above Trichinopoly. This is a most favourable site, as it gives us water carriage to every part of the Delta, and will make its cost so moderate that it may be very extensively used. I had several times sent people to search for it and offered rewards, yet no information respecting this site had reached me, though I conclude from Dr. Macleod's letter that it must have been known to that gentleman.

The cost of it will now be as follows:—

	RS.	A.	P.
Quarrying 1 candy of 500 lb. of stone	0	4	0
Charcoal and burning ditto	0	3	0
Pounding, &c.	0	1	0
Weight when burnt, 250 lb. or $\frac{1}{2}$ candy	0	8	0
Cost of 1 ton on the spot	4	8	0
Cost of 1 parah or 3 c. feet	0	4	0
Conveyance for 50 miles by water, the average distance of the irrigation works of the Delta As. 2-6 per parah	0	2	6
Packing in casks, the casks being returned	0	5	0
Total per parah	0	11	6

At this rate it will not add much to the cost of works, and it will no doubt be constantly used in future.

Its cost at the coast and at Madras will be—

	RS.	A.	P.
Price of 1 ton burnt and pounded as above, stated at the quarry	6	8	0
Packing in casks, including cost of casks	12	0	0
Conveyance to the coast by water, distant 110 miles	4	0	0
Total per ton burnt at the coast	22	8	0
Conveyance to Madras by sea	4	0	0
Sundries	0	8	0
Or deducting part of the value of the casks	27	0	0
Cost at Madras per ton burnt	7	0	0
Or per parah	20	0	0
Or per parah	1	2	0

The cost of the raw stone will be—

	RS.	A.	P.
Quarrying 1 ton	1	2	0
Conveyance to the coast	3	4	0
Do. to Madras	3	8	0
Sundries	1	0	0

Cost of 1 ton raw at Madras 8 14 0

which when burnt will weigh $\frac{1}{2}$ ton. I am of opinion that upon the whole it will be best to convey it to Madras unburnt and to burn it there; it will certainly be safer, and I judge cheaper too; I could not recommend its being transported by water except in casks.

With respect to its use as a material for masonry cement, notwithstanding the failure above mentioned, I consider it of the greatest value. I tried it first about three years ago by making what are here called cubes of brickwork, and found it set very rapidly, and in a few months it became so hard that it was impossible to separate it from the bricks; however small the cube was broken up, the bricks were always broken without the cement being separated from them. I have lately made a great variety of experiments with it, using stone from various quarries and with different proportions of sand and other materials. Almost every one of them has formed an excellent cement, setting generally in one or two hours sufficiently to be secure from the effects of water passing over it. I have, however, been greatly puzzled in one respect in my late experiments, viz., that in almost all of them I found that a ball of the cement, if plunged immediately in water before it had begun to set, would not set at all. As I had certainly found the case otherwise when I tried it some years ago, I was at a loss to account for this circumstance, nor have I yet been able to satisfy myself about it entirely, though I think that I have now found the real cause. The stone taken from the surface of the ground is all extremely hard, while in general that found below the surface is much softer though apparently equally pure, and it hardens by exposure to the air. There is therefore some difference between the surface stone and that found below, and though I have failed in making the cement from the latter set *in* water, I have lately tried some surface stone with success, and it is probable that the early trials were made with surface stones. I must, however, make further trials as, till this is ascertained, it cannot be considered a perfect water cement. I have tried stone from many different quarries, have taken the greatest care in burning it, and mixing it immediately, with reference to this point, so that I think it is impossible but that it must be owing to the nature of the particular stone used that it has failed in this respect, and not to imperfect burning, &c. It is to this circumstance, viz., that it was not known that it was liable not to set if immediately covered with water, that I now attribute its failure in the instance above mentioned. Notwithstanding this, however, it is undoubtedly a most important addition to the means we have hitherto had for managing the irrigation of the Delta, both by enabling us to form a masonry of much greater strength than could be formed with lime and also on account of its being quite secure from injury by water within an hour or two after it is used. As the rivers never continue full for many days together, slight repairs can now always be performed during the season of the freshes, which before could not be effected from the want of such a material as this. Its extreme hardness also will enable us in many cases to use it as plaster where otherwise granite must have been employed, which is so very expensive a material in the Delta.

I have the honour to forward herewith some balls of cement of different proportions and materials. The hardest is formed of magnesia and the magnetic iron ore found in this neighbourhood.

On the specimens now sent I have to remark—

1. That every one forms a strong cement.

2. That the strongest appears to be—

- (1) A mixture of ore and magnesia in equal parts, both finely pounded and sifted,
- (2) Magnesia alone,
- (3) Magnesia 1 part and sand 1 or $\frac{1}{2}$ parts,
- (4) Magnesia and sand in the proportion of 1 of the former to 2 and to 3 of the latter.

3. That the mixture of lime and ironstone with the magnesia also forms a very hard cement. I tried this chiefly with reference to its use at Madras, as it would make a much cheaper cement there than magnesia and sand alone would be. It must, however, be observed that all these specimens have been made within a few weeks, and the proportional degree of hardness may alter after some months. The iron ore is extremely pure, containing, I am informed, 75 per cent. of iron. I regret that I had not the reports of Dr. Macleod when I made these experiments, as they would probably have given me more information than I could gain by my own inquiries. I have the honour to request that the Board will be pleased to obtain copies of those reports for the use of the department in this division.

I beg to send also, herewith, a memorandum of the method I have used in preparing the magnesia cement.

Memorandum on burning and preparing Magnesia.

The stone should first be broken, so small that no pieces are more than $2\frac{1}{2}$ or 3 inches thick; if it is in thicker lumps, they will not burn through in a small kiln; if the kiln is very large, so that they will remain in it for 48 hours, they may be much larger. Some air-holes should be left through the sides of the kiln, low down, to assist the draught if it will not burn up well; but when the kiln is once thoroughly lighted, it will probably be necessary to shut them up, to prevent the heat becoming too great, in which case the outside of the magnesia will melt, while the inside remains half burnt; it does not require a very great heat to melt the stone, which spoils it. I think as great a heat (short of melting it) as possible is advisable, though not probably absolutely necessary, but the most essential thing appears to me to be that it should remain exposed to that heat for a considerable time; 24 hours for small pieces of 3 inches thick, and more time if not broken so small. It must be continually drawn out from the bottom of the kiln, but not quicker than to allow of the kiln being discharged once in 24 hours; and if in taking out this quantity (viz., 14 parabs in 24 hours) it is found that the charcoal comes out unburnt, it should be drawn more slowly, and if there is no appearance of the stone being vitrified, more air may be allowed to enter by the draught holes. The stones should be drawn carefully and picked out from the ashes.

The stone, if well burnt, will break easily with the hands, and show quite through, its very peculiar internal structure very much resembling starch when broken into small pieces*. It will pound very easily indeed into a fine powder. If it does not crumble freely in the hands, it is not burnt enough.

In lighting the kiln a great quantity of charcoal should be put in first, otherwise the first stone will not be burnt; if it should be found not to be burnt enough, it may be put in again at the top. The kiln should on no account be allowed to sink low; it should be kept constantly full late at night; it should be piled up; and if no person attends it at night very little air should be admitted that it may not burn fast till the morning, so that all the stone may not be less than 24 hours exposed to the heat. If there are not some symptoms of vitrification in some of the stones, it is probable that the heat is not sufficient, in which case more air must be admitted, and if with that it burns out too rapidly a greater proportion of charcoal must be used.

The burnt stone may be easily pounded in a mortar, and it should be passed through a hair sieve or muslin, and mixed with $1\frac{1}{2}$ or 2 parts of sand, which had better be sifted too†.

It must be beaten well, and I think a much sand thoroughly while dry. It will set in some degree in two or three hours, and become hard in a few days, after which it will continue still to harden though slowly for many months or probably years. Some plastering tried at the anicut became in a fortnight harder than any stone except granite, marble, and stones of the first degree of hardness.

It will make an excellent cement if mixed with more sand, though not so hard as with the proportion mentioned. I find that a mixture of lime makes it less liable to crack, when used as plaster, but it will not be so hard. I should, however, recommend its being

tried for a terrace in the proportions of lime 1, magnesia 4, and sand 10. It has not yet been much tried for plastering; it cracks a little if mixed with only an equal quantity of sand, but probably with a large quantity it might not. If it is used for terraces some trials should be made, as it has never yet been so applied here.

When the magnesia is mixed with an equal bulk of magnetic iron ore, pounded and sifted, it makes a cement of extreme hardness; and probably the hematite ore from Rosanoor, 20 miles north-west of Sooloorpet in Nellore, would answer equally well.

The magnesia, of course, absorbs carbonic from the atmosphere after it is burnt, but I think very gradually. If pounded and put into chatties or casks, I have no doubt it would keep for years; the chatties should be washed over with lime to make them air-tight.

It would not, however, be much injured, I think, by being kept in a heap in a dry godown for four or five months; of course, the sooner it is used the better.

If it is wished to make a trial of the Rosanoor ore, there is some at the Red Hills which might be used.

(Signed) A. T. COTTON, Capt.,
Civil Engineer, Third Division.

TALAMALAY,
30th October, 1837.

ORDER THEREON, dated 21st November, 1837, No. 1,799.

Resolved that the report on Dr. Macleod's magnesian cement received with the above letter be communicated to the Honourable the Court of Directors, in reference to their dispatch of 19th April, No. 8 of 1837, and also to the Military Board, who will be pleased to furnish the information called for on the subject, under dates 7th August and 31st ultimo.

Ordered that a copy of Dr. Macleod's letter of 11th February, 1826, reporting the discovery of the cement, be furnished to the Board of Revenue as requested.

(True Extract.)

(Signed) ROBERT CLERK,
Secretary to Government.

(6)

EXTRACT from the Minutes of Consultation under date 12th December, 1837,
No. 1,853.

READ—the following letter from the Secretary to the Military Board, to the Secretary to Government, Public Department, dated Fort St. George, 30th November, 1837.

Referring to the 2nd paragraph of the letter from the Honourable Court of Directors, dated 19th April, 1837, and to the orders contained in the extracts of Minutes of Council, dated 7th August following and 21st instant, I have the honour by desire of the Military Board to forward copy of a letter from the Superintending Engineer, Presidency Division, reporting upon the properties of magnesia as a cement.

Captain Underwood having explained in the above communication the cause of the delay in submitting the document at an earlier date, the Board trust that the same will be found satisfactory.

ENCLOSURE.

To
THE SECRETARY TO THE MILITARY BOARD.
SIR,

I regret much that I have been unable at an earlier period to furnish, in obedience to the orders of the Military Board, a report upon the properties of magnesia as a cement. This delay has been occasioned by my limited knowledge of the substance as to its utility in building and its qualification as a substitute for chunam, never having had an opportunity of trying it either experimentally or practically till the receipt of your first communication. This, I trust, will plead my excuse for having compelled you to repeat the Board's instructions to me on the subject.

On the receipt of your first letter, dated 15th August, 1837, I lost no time in commencing a series of experiments upon the magnesia in store in my department, and the following has been the result of these short and (I must confess) rather unsatisfactory trials. I must premise that the magnesia from which we made these experiments has been in our store ever since the year 1835, and although I am aware that some are of opinion that exposure to the atmospheric air does not deteriorate from the qualities of this earth, yet, I must confess, I cannot bring myself to the same opinion, and the result of these operations, has confirmed me in it, for Colonel Monteith (to whose extensive practical knowledge of magnesia, derived from numerous experiments and operations performed with it by him, I am greatly indebted) states he himself found the greatest dissimilarity in many essays with magnesia, although mixed with exactly the same proportions of ingredients. Might not this discrepancy have arisen from the different qualities of the magnesia as acted upon by the time it had been on hand?

The magnesia used by me in the first instance set very rapidly when united simply with water, but when we added even the smallest portion of sand, the mixture became short and crumbly, and although carefully heat and ground it was with difficulty we could make it sufficiently adhesive to form a plaster. Conceiving that it might be in too crude a state, I directed a small portion to be recalcined, and it was found that, in the operation, the magnesia had lost, when taken out of the kiln, nearly one-half of its previous weight. With this fresh calcined magnesia I again made several experiments, but did not find that much advantage had been derived by the process it had gone through. The same difficulties attended our operations, and the same loose nature of the mixture was experienced. After careful grinding on a stone chunam grinder, we were enabled to make some balls of the composition which set rapidly and soon obtained a considerable degree of hardness, but its adhesive qualities as a plaster or mortar quite failed.

Colonel Monteith was kind enough to give me the result of his careful and numerous experiments, and as these are founded upon much surer data, and in consequence much more valuable than my own observations, I beg to include in this report some of that officer's remarks on this subject. Colonel Monteith observes as follows: 'From some specimens left in the office by Major Sim, but without a direction or any notes, I requested Mr. Fischer of Salem to send me two candies of magnesia, which arrived in, I think, May, 1833. It had been prepared with great care, packed in double gunny bags, and arrived in excellent order. On this quantity I immediately commenced a series of experiments, and found it so perfectly answer the purpose that I recommended its being adopted as a substitute for Parker's or other Europe cements; the price was, however, far too high to allow its general use in the foundations of important buildings. As it was intended to continue the operations of pointing, &c., and begun with Parker's round a considerable portion of the fort, a large quantity of the magnesia cement arrived by sea from Salem. The quality of this second supply was so decidedly inferior to the first that I considered it necessary to request a committee to examine and report on the cause of the difference. After a careful chemical examination no difference in the nature of the substance could be observed, but the calcination had been carelessly performed—some of this I had reburnt, but still the experiments differed totally from the former.'

'The great excellence in the first experiments had been its property of hardening under water, even if put in immediately after it had been mixed, and in a few minutes the substance became hard though perfectly submerged. In the second batch it either did not set at all or required several days, when balls made with it, though apparently hard on the outside, crumbled in the interior.'

It appears from the above memoranda (which coincide in a great measure with the experiments I have just made) that in the use of this substance great disappointment may frequently be experienced, for in the second supplies of magnesia used by Colonel Monteith although no chemical difference appeared to exist, yet a great discrepancy followed in the result. It must be borne in mind that the experiments which I have tried have been upon the same magnesia which Colonel Monteith speaks of as so inferior to the first batch he received from Salem, and our present operations have been performed after a lapse of two years, which may fully account (in my opinion) for the unfavourable result attending them.

Colonel Monteith thus concludes the memoranda he kindly favoured me with: 'As a cement I consider it contains the necessary qualities in an equal degree to the best of the

European cements, provided great care be taken in calcining and pounding, during both of which operations it is liable to be rendered useless. If ill-mixed or imperfectly burnt it never answers, is not easily reduced to powder, and at all times requires the most vigilant supervision.' From the experiments made by me the last remarks are fully borne out.

In conclusion I beg to state that upon a careful examination of the magnesia cement which had been experimentally laid upon some of the faces of the works by Major Sim and Colonel Monteith, a considerable time ago, a portion had almost entirely disappeared, while others retained their pristine appearance and were firm and hard. The failure of the magnesia cement may have arisen in some instances from the old chunam not having been properly removed previously to the new plastering being applied, and thus causing it to chip off; for it is a most essential preliminary to clear every old wall of the former coating of plaster, and if not carefully done chunam in similar operations will equally fail.

I have the honour herewith to forward a few specimens made by me, which, by your reference to the list below, will point out their several compositions, and although their relative qualities may not be fairly judged from the manner in which they are formed, yet they will be sufficient to show the relative value of the proportions of the ingredients used.

These balls generally took more than 24 hours to harden, and the trials made with each of the compositions to connect two bricks completely failed after 48 hours' rest, as the bricks were without much difficulty torn asunder with the hands.

A plaster formed of one part of sand and one of magnesia (or equal proportions) made a very strong coating on a brick, but required at least 48 hours to set—

Experimental Balls.

No. 1 U ...	{ Magnesia 1	No. 4 U ...	{ Magnesia 1
	{ Sand 1		{ Sand 1½
	{ Clinkers 1	No. 5 U ...	{ Magnesia 1
No. 2 U ...	{ Magnesia 1		{ Sand 2
	{ Clinkers* 1	No. 6 U ...	{ Magnesia 1
	{ Magnesia 1		{ Fine sand 1
No. 3 U ...	{ Tile dust 1		
	{ Sand 1		

* Or the scorin or deposits found in the Blacksmith's forge.

The above were all made from the magnesia taken from the stores.

No. 1 ...	{ Magnesia 1	No. 4 ...	{ Magnesia 1
	{ Sand 1		{ Sand 1½
	{ Clinkers 1	No. 5 ...	{ Magnesia 1
No. 2 ...	{ Magnesia 1		{ Sand 2
	{ Clinkers 1		
	{ Magnesia 1		
No. 3 ...	{ Tile dust 1		
	{ Sand 1		

These were formed of the magnesia recalcined.

Of the above specimens, No. 4 U and 6 U appear to be the most compact and close-grained, and retained their hardness under water after they had been allowed once to set.

I fear that these observations of mine may be considered rather imperfect, but I trust the Military Board will be pleased to bear in mind the very limited period I have been allowed to make personal observations and to deduce from them a sufficiently decided opinion, and this consideration will plead not only an excuse for its weakness but an apology for the delay in sending in this report.

I have, &c.

(Signed) J. J. UNDERWOOD, Captain,
Superintending Engineer,
Presidency Division.

FORT ST. GEORGE,
29th November, 1837.

ORDER THEREON, dated 12th December, 1837, No. 1,883.

Resolved that foregoing letter be brought to the notice of the Honourable the Court of Directors, with reference to their dispatch of the 19th April, No. 8 of 1837.

(True Extract.) (Signed) ROBERT CLERK,
Secretary to Government.

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C. G. E.