M.R.O. 1—17,000—3-6-37.

(1) Number of pages.

(2) Date of repair.

(3) Initials of the Referencer.

MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No. 2379- PD Press Mis.

159-61

Dated 15- 10- 1874.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 10th October 1872.

No. 159. Read the following letter from the Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 13th August 1872, No. 425 :—

I HAVE the honour to acknowledge the receipt of your endorsement, dated the 29th ultimo, forwarding, for any observations I might wish to offer, a letter* from the Government of India, requesting to be favoured with an expression of opinion as to any changes which would be recommended in the alignment of the railways proposed in this Presidency "in case it were decided that the amalgamation of the three Companies should be effected, that is to say, what bearing, if any, the fusion of the three Companies into one Company should have on the revision of the existing projects."

* No. 1,023-R., 5th July 1872, with enclosures.

2. After full consideration it seemed to me impossible to enter upon any discussion of the question without investigating the proposals made by the Chairman of the Madras Railway Company in the Minute* which was submitted to the Secretary of State on the 14th November 1871, and the arguments upon which those proposals were based. So far as I am aware, with the exception of the proposals comprised in the Minute in question, no changes from the alignment of the railway extension as decided on by Government have ever been brought forward for consideration; and I have felt the more constrained to examine the opinions therein set forth from the fact that the Minute has attracted great attention in England, and that in Mr. Grant Duff's letter, dated the 19th January 1872, it is stated that His Grace the Secretary of State is impressed with many of the views and arguments contained therein. I have the honour to append the observations* which it seemed to me necessary to make in connection with that Minute; and it will be seen that I dissent from most of the conclusions at which the Chairman of the Madras Railway arrived.

* *Vide* enclosures to letter from Government of India.

* With a Map.

3. The object of the Government, when recommending those extensions of the railway system which are now under consideration, was to provide for the requirements of the five south-eastern districts, viz., South Arcot, Tanjore, Trichinopoly, Madura, and Tinnevelly. In the appended observations I have fully discussed the manner in which the railway extensions approved of by Government meet the requirements of those districts; also the points in which, in my opinion, the Chairman's proposals fail to meet those requirements. I have tried to show that the Government scheme of railway extensions was decided on from considerations of what was, upon the whole, best suited to the wants of each portion of the south-eastern districts, as well as to the wants of the country generally. Those considerations had no reference whatever to the railway system of any individual Company, and I am of opinion that, in the event of the amalgamation of the three Companies, no change in the alignment of the proposed extensions can be recommended.

OBSERVATIONS ON THE MINUTE BY THE CHAIRMAN OF THE MADRAS RAILWAY COMPANY.

PARAGRAPH 2.—It may be safely assumed that in drawing up his scheme of railways for India, Lord Dalhousie regarded as paramount the interests of the State and of the public, the interests of the Companies being amply secured by the guarantee of a 5 per cent. dividend. It will hereafter be shown that in this particular instance the Chairman's proposal, if carried out, would tend to deprive the public of cheap accommodation by making them travel additional and unnecessary distances in order to utilise an existing line commercially ill-located, while the total profits of the railways in this Presidency will certainly not be increased by any line of action which has the effect of postponing the construction of the proposed line from Madras to Cuddalore and Tanjore.

2. PARAGRAPH 3.—Lord Dalhousie's Indian Railway scheme was undoubtedly limited to a few trunk lines, chosen chiefly, if not altogether, for Military and Political considerations ; but there is nothing upon record to show that he looked on the trunk railway system of India as being finally limited to those few lines, or that, in his opinion, all future additions should take the shape of branch lines. But if it could be shown that such was Lord Dalhousie's opinion at the time when the introduction of railways into India was first discussed, it is not too much to say that even his high authority could not be appealed to as binding the present Government after the enormous changes of the last quarter of a century. Every proposal for an additional railway, whether as a new and independent line, or as a subsidiary branch to an existing line, must be judged upon its merits.

3. PARAGRAPH 4.—The line proposed for the Carnatic Railway cannot be said to be parallel to the Madras Railway ; on the contrary they radiate from a common centre, gradually diverging till, at the points where they respectively meet the line of the Great Southern of India Railway, they are 119 miles apart.

The line of the Carnatic Railway is not correctly marked on Colonel Smith's map, and the figures in this paragraph are far from accurate. By the shortest practicable cart-road, Cuddalore, Porto Novo, and Chellumbrum are about 120 miles distant from the nearest stations on the Madras Railway ; and the average distance, by cart-road, between the two lines is certainly much nearer 100 miles than 55 miles.

4. PARAGRAPH 5.—A few remarks may here be made on the general question as to the superior efficiency and economy of the two systems referred to by Colonel Smith, viz., a trunk line with branches on the one hand, and a radial system of communication on the other, to serve the same tract of country. If the tract in question happens to be a level plain, with no unbridged rivers and no mountains, equally populous and fertile in all its parts, and equally well provided with roads, it may perhaps be the case that one trunk line, with numerous branches throwing out feeders, will accommodate the traffic as effectively as a number of trunk lines radiating from a common centre, and possibly with greater economy. But even under such conditions, no general rule can be laid down ; and the special circumstances of every province into which it is proposed to introduce railways must be specially considered. On the other hand, if the tract of country to be dealt with is traversed by a number of large unbridged rivers ; if it is intersected by several mountain ranges ; if the population, instead of being equally distributed, is concentrated in a few important centres ; if all the roads, or most of them, lead to those few centres of trade and population ; and if, instead of being of uniform fertility, it happens to be divided into successive regions of garden-land, jungle, and mountains ; it may be safely asserted that a railway system, consisting of one trunk line with branches, will not supply its wants in the most efficient and economical manner.

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5. But it is waste of time to discuss general principles. The case now under consideration how the wants of the South Arcot and Tanjore districts can best be supplied. Four, and only ir, practicable branches can be made from the south-west line of the Madras Railway with the ject of serving portions of these districts. The first, from Salem by Ahtoor, and down the lley of the Vellaur, to Chillumbrum and Porto Novo. The second, from Samulputty down the lley of the Panar to Cuddalore. The third, from Arcot by Arnee, Wandiwash, and Tinde- pum, to Pondicherry. The fourth, a continuation of the Carnatic Company's existing line ween Arconum and Conjeveram, passing by Chingleput, Carangooly, and Tindevanum. The t of these is condemned by all who know the country as traversing a tract producing little ond jungle, and no proposal has ever been made to construct a branch railway by this route. e second route was examined in April 1872 by the Chief Engineer of the Madras Railway, and his report to the Board of Directors it is thus spoken of :—"The distance is about 100 miles, d the country for the greater part of the way is barren, rugged, and very thinly populated acre is nothing whatever to recommend this route, as no line of railway, however cheaply con- ucted, would pay its working expenses." The fourth route, from Arconum by Conjeveram and ingleput, is provided for as a part of the scheme which has been approved by the Government the Carnatic Railway Company, and need not be considered here. There remains for sideration the third route, uniting Arcot with Pondicherry ; and in this one branch consists e whole capability of the Madras Railway to supply the wants of the South Arcot and Tanjore stricts. In fact, the question at issue is narrowed to a comparison of the advantages respectively ered by this branch, and by the scheme to which the Government of India have already accorded eir approval ; or, in other words, the question is whether it is more advantageous to connect ndevanum with Arcot on the one hand, or on the other with Chingleput, and thence with Madras d Arconum.

6. Before going further, it is well that the objects in view in proposing to open up railway mmunication through the districts of South Arcot and Tanjore should be clearly stated. roughout his minute, Colonel Smith seems to recognize only two objects, (1) the improvement the traffic on the Madras Railway, and (2) the requirements of the French Merchants in Pondi- erry. In like manner the Chief Engineer of the Madras Railway, in his report already quoted pm, writes thus :— "The merchants at Pondicherry are altogether in favour of this route (by ndevanum to Arcot) in preference to a direct line to Madras, inasmuch as it would afford the ickest and shortest communication with Cuddapah, Bellary, and Bombay ; Bangalore and the Mysore untry ; and Salem, Coimbatore, and the Western coast. The importance to the Madras Railway terests of a scheme which would supersede the proposed Carnatic Railway cannot be over-esti- ated." These two objects are desirable in their way, but they are of altogether minor and condary importance. The chief objects which the Government had in view in recommending the nstruction of a line of railway through South Arcot and Tanjore were to bring those food-producing stricts into direct communication with the large population centred at Madras, and to supply its creasing demands both for home consumption and for export ; to be able in cases of emergency to arrow supplies of grain into the Bellary District which has so often suffered from famine ; to accom- odate the very large traffic which now passes over the road leading from Madras in a southerly irection through these districts—a traffic much larger than is to be found upon any other line of oad of equal length in Southern India ; and to bring into inter-communication with each other the arge towns of Tanjore, Combaconum, Myaveram, Chillumbrum, Porto Novo, Cuddalore, Pondi- herry, Panrooty, Tindevanum, and Chingleput. By the scheme which has already received the pproval of Government, every one of these objects will be effected in a manner at once the most irect, the most economical, and the most effectual. On the other hand, the branch from Pondi- herry to Arcot altogether fails to meet some of these objects. It could not accommodate the raffic on the Great Southern road, nor could it improve the means of inter-communication between he large towns in South Arcot and Tanjore.

The distance of the southern rice-fields from Madras would be increased by 53* miles, and their distance from Bellary by at least 8† miles. The country served by it is generally poor and sparsely populated; and no part of its line is likely to pay until it comes between Wandiwash and Tindevanum within reach of the line which has been marked out for the Carnatic Railway. In a word, no one who knows the country through which the Arcot branch runs would dream of proposing a railway, unless ulterior interests were to be served; the proposed branch stops at the very threshold of "the rich tract", of the Garden of Southern India", which it is the object of every one connected with the Government of this Presidency to bring into direct communication with Madras and the north.

* Tindevanum to Chingleput	41	Miles.
Chingleput to Madras	35	,,
	76	,,
Tindevanum to Arcot	64	,,
Arcot to Madras	65	,,
	129	,,
† Tindevanum to Chingleput	41	Miles.
Chingleput to Arconum	38	,,
	79	,,
Tindevanum to Arcot	64	,,
Arcot to Arconum	23	,,
	87	,,

7. With regard to French interests, of which so much has been said, it may be justly questioned whether they are likely to be directly advanced more effectually by a branch to Arcot than by the Carnatic Railway scheme, which will enable Pondicherry to communicate with Arconum through Chingleput. It may be safely asserted that the French merchants hope to get as much traffic from Cuddapah and Bellary as from Mysore, and it has just been shown that the Chingleput route to Arconum (the North-West line junction) is shorter by 8 miles than the Arcot route. Indirectly, and at the expense of Madras, the Arcot branch would doubtless in some respects prove more beneficial to the interests of the Pondicherry Merchants than the Carnatic Railway scheme; but with every desire to accommodate our neighbours, it may be safely asserted that the Government of India can never consent to sacrifice the direct interests of two of these richest provinces to the indirect interests of the few merchants who reside at Pondicherry, or to foster the trade of that port at the cost of Madras. Much as the Pondicherry Merchants may desire to have a branch to Arcot, they would in all probability greatly prefer that a line should be constructed along the route which has been so emphatically condemned by the Chief Engineer of the Madras Railway, viz., from Pondicherry to Samulputty, inasmuch as such a line would place them at an advantage over Madras of 19 miles as regards traffic from Mysore and of 51 miles as regards traffic from Salem and all stations to the west.

8. Paragraph 6.—Colonel Smith here gives only one side of the question as between the "trunk and branch" system and the "radial" system. Thus, while the adoption of the branch advocated by him would shorten the distance between Pondicherry and Mysore by 38‡ miles, it would, as has been shown, lengthen the distance between Pondicherry and Madras by 53 miles; while it would utterly fail to provide railway communication between Madras and the rich country to the south of Pondicherry.

‡ Tindevanum to Arcot	64	Miles.
Tindevanum to Chingleput ...	41	Miles.
Chingleput to Arconum	38	,,
Arconum to Arcot	23	,,
	102	Miles.

9. Paragraph 7.—The items specified here by Colonel Smith, as showing the greater economy of the "trunk and branch" system than of the "radial" system, have in reality no bearing upon the question as between those two systems. They are all points to be weighed, in considering the relative economy and efficiency of one great united Company, as compared with two or more independent Companies. The double terminal stations and the double establishments do not depend upon the location of the lines, and are by no means essential to two radial lines owned and worked by one Company.

10. Paragraph 8.—The correctness of the statement contained in this paragraph that "two or more trunks in the same area necessarily compete with one another" depends entirely upon

the meaning attached to the term *area*. In the case now under consideration it may be asserted that the Carnatic Railway will not operate in the area which now supplies the Madras Railway with traffic. It is highly improbable that it will attract one ton of goods or one passenger that would, under present circumstances, go to the Madras Railway. All competent and impartial authorities in this country are well aware that the regions from which the Madras Railway on the one hand, and the Carnatic Railway on the other, will severally draw their traffic, are separated by natural barriers, almost impassable; and they are unanimous in believing that the Carnatic Railway scheme, as approved of by Government, will deprive the Madras Railway of no appreciable portion of its present income. The greatest possible loss is gauged by the existing traffic on the portion of the Great Southern of India Railway between Caroor and Erode, which does not pay the working expenses.

11. Paragraph 9.—In this paragraph Colonel Smith again deals with the general question as to the advantages which the "trunk and branch" system offers over the "radial" system of railway communication. So long as the question is argued in general terms there is doubtless much that may be urged upon either side; but the case now under consideration is, how the interests of South Arcot and Tanjore can best be served; and it is simply a waste of time to discuss general principles.

12. Paragraph 12.—This paragraph conveys a wrong impression of the short piece of narrow gauge railway between Arconum and Conjeveram. It is here spoken of as "a small branch tramway;" whereas in reality it is a thoroughly well constructed railway on the 3½ feet gauge, being actually of larger dimensions than what has been determined on as the future Indian narrow gauge. Financially, it has been unsuccessful, as might have been safely predicted of an isolated line only 19 miles in length: but its capabilities for conveying both passengers and goods are fully equal to the requirements of almost any part of India; and there is probably no line of railway in existence upon which passengers and goods could be profitably carried at lower rates than upon this short line. This is proved during the annual festival at Conjeveram; unfortunately the occasions on which its capabilities can be tested are of rare occurrence.

13. Paragraph 13.—With reference to this paragraph it may be simply said that it is not proposed to drop the connection with the Madras Railway at Arconum, inasmuch as the existing line between Arconum and Conjeveram will be retained and extended to join the main line of the Carnatic Railway at Chingleput.

14. Paragraph 14.—It is by no means certain what is meant by "the area subtended by" the Madras Railway; but if in that expression Colonel Smith means to include the whole of that portion of the Indian Peninsula which lies to the south and east of the line joining Madras and Beypore, the competence of the Madras Railway "to operate upon the whole traffic of that area" may be justly questioned. It has already been shown that its capability to provide for the wants of South Arcot and Tanjore consists in the proposed branch between Arcot and Pondicherry.

15. The expression used by the Chairman, in speaking of the proposed line of the Carnatic Railway, as "a rival line of a much less solid character," is calculated to mislead. In the first place there can be no possible rivalry between the two railways. Each will operate in its own region, separated from the other by clearly marked barriers; and it will be scarcely possible for the respective interests to come into collision. In the next place, although the dimensions of the proposed line are undoubtedly slighter than those of the Madras Railway, if the difference in the gauge and in the weight to be hauled be taken into account, they are as solid and substantial, and as well adapted to the work to be done, as are the larger dimensions of the Madras Railway.

16. Paragraph 15.—Upon the map accompanying the Chairman's Minute a curved line has been traced, "fixing, along the whole line, the points where the distance from the rail is half the direct distance from Madras," which line it is said "will be found to include ⅓ths of all the country lying between the present south-west line and the proposed Carnatic line extended to Tanjore." In this paragraph Colonel Smith endeavours to prove that the whole traffic of the country lying within this *line of half distance* "could be attracted to the Madras Railway, for

conveyance to Madras, at the rate of 1 Anna per ton per mile, and a much larger proportion at reduced rates, if a new line did not exist."

17. If the line of the Madras Railway were perfectly straight; if it passed through a perfectly level country, with all rivers bridged, and well supplied with roads of equal quality, leading from all directions to the stations along the railway; if the nearest station, as measured on the map, were readily accessible from every point by a good cart-road leading to the station in a direct line; if the price of cart-hire were the same on every road; and if the price assumed by Colonel Smith, 3 Annas per ton per mile, were correct; the theory broached by him might possibly be accepted. But it is not difficult to show that, in practice, it must break down in all directions.

18. From the fact that this part of the Madras Railway forms a curve concave towards the south, it will almost always happen that goods sent from the south to the nearest station will find themselves on reaching the Railway farther from Madras than when they started. Take for example, a point on the Panar river, 110 miles in direct distance from Madras, and within Colonel Smith's *half distance line*. If goods were sent from this point to the nearest station, they would have to be carted over some 60 miles to Samulputty, where they would be 151 miles from Madras by rail, 41 miles further than when they started. Again, take a point on the Vellaur river, 140 miles from Madras, also within the *half distance line*. Goods sent from this to Salem, the nearest station, would have to be carted some 70 miles, and would then be 207 miles from Madras, 67 miles further than when they started. The double break of bulk at the Receiving and Delivery stations must also militate against the action of the theory; especially as the native merchants at a distance from the railway have no Agents at the small road-side stations to whom their goods can be consigned for despatch by rail.

19. But the most fatal objection to the theory is to be found, as might be expected, in the physical character of the country embraced by the *half distance line*. It is for the most part a mountainous tract, traversed by large unbridged rivers, and with direct means of access to none of the Madras Railway stations. From the greater part of the tract, if the Madras Railway is to be reached at all, it must be by circuitous and inferior roads, with heavy gradients, skirting the hills and passing through the gorges that intersect them. On the other hand, the roads leading to Madras are generally straight, level, in good order, and provided with bridges over almost all the rivers. It is not to be wondered at if, under these circumstances, the cost of cart-hire on the roads leading to the roadside stations is nearly double, mile for mile, of the cost on the roads leading to Madras. The certainty of getting a return road from Madras, of course, contributes to this result. The rate of cart-hire named by Colonel Smith, 3 Annas per ton per mile, is probably below the mark in the case of the ordinary cross-country roads; while on the principal thoroughfares, such as the Great Southern road leading from Madras to Trichinopoly, the average rate paid is about 1¾ Annas per ton per mile.

20. To prove the impossibility of relying on the Chairman's theory it is sufficient to refer to the cases of Conjeveram and Trichinopoly, both of which towns fall well within his *half distance line*. Conjeveram is situated 45 miles from Madras by road, and 19 miles from Arconum, with which it is connected by the Carnatic Company's line, the whole distance from Madras by rail being under 61 miles. In spite of all the attempts which have been made by the Agents of both Companies to induce the goods traffic to go by rail, they have not been able to succeed in diverting from the road an appreciable fraction of it. The case of Trichinopoly is similar. Its distance from Madras by road is 198 miles, and from Erode, with which it is connected by the Great Southern of India Railway, 86 miles; its whole distance from Madras by rail being 329 miles. In spite of the two towns being connected by an unbroken line of railway, by far the greater part of the goods traffic between Madras and Trichinopoly is carried by road.

21. As a matter of fact, instead of "more than ⅔ths of the country lying between" the Madras Railway and the proposed Carnatic Railway being efficiently served by the former line, it appears that a large portion of this tract, more than half of it, is not served at all by the Madras Railway. Moreover, of the portion served by the Madras Railway, the greater part is either poor land or jungle. The remainder of the tract, which at present has no railway accommodation, is

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in general populous and fertile in a high degree; its southern half comprises the richest and most densely peopled parts of Southern India.

22. PARAGRAPH 17.—Colonel Smith here assumes that the charge for the carriage of goods is "in the proportion of 12 Pies per ton per mile by the rail, 3 Annas by the common road, and 3 Pies by sea." Of these, the charge by rail may be taken as a fair average rate. It has been already stated that the charge by road on the main thoroughfares does not exceed an average rate of 21 Pies per ton per mile. As to the charge by sea, 3 Pies probably represents the extreme lowest charge which is made by small country vessels; but to this must be added at least 2 Rupees for shipping and landing charges, which in the case of the small ports between Negapatam and Madras would double, and in some cases triple, the 3 Pies rate. It is unnecessary to point out the risk and uncertainty which result from sending valuable agricultural produce in small country craft. As proof of this, it may be mentioned that at present a great quantity of such produce is sent from Negapatam by steamer, the freight paid being 15 Rupees per ton for 160 miles, or about 18 Pies per ton per mile.

23. The one-sidedness of the arguments used in the Chairman's Minute is seen from the fact that while from Terookovaloor, a village on the Panar river, within his *half distance line*, he expects goods for Madras to travel about 60 miles by road to Samulputty, and thence 151 miles by rail, in place of going some 45 miles by road to Pondicherry, and thence 90 miles by sea; when the Carnatic Railway is in question he states that "there is hardly a part where it would not be cheaper for a merchant having goods *actually* on the line to carry them by land to the coast and send them to Madras by sea."

24. To show the errors in this last sentence it will be sufficient to take any two places on the Carnatic line, for example Chingleput and Tindevanum, and apply to them Colonel Smith's figures and rates. From Chingleput the cost of sending one ton of goods to Madras would be—

	RS.	A.	P.
By Rail—			
35 miles, at 1 Anna	2	3	0
	RS.	A.	P.
By Sea—			
20 miles to Sadras, at 3 Annas	3	12	0
44 miles to Madras, at 3 Pies	0	11	0
Shipping and Landing charges	2	0	0
	6	7	0

From Tindevanum the charge for the same service would be—

	RS.	A.	P.
By Rail—			
76 miles, at 1 Anna	4	12	0
	RS.	A.	P.
By Sea—			
24 miles to Pondicherry, at 3 Annas	4	8	0
88 miles to Madras, at 3 Pies	1	6	0
Shipping and Landing charges	2	0	0
	7	14	0

25. PARAGRAPH 19.—The Chairman here says that "for long distances the agricultural produce of the districts traversed is of too small value to pay railway charges." The grounds on which this assertion is made are not evident. He is speaking of the line from Madras to Cuddalore, 128 miles in length, so that the "long distances" must be taken in a comparative sense. But as regards the capability of agricultural produce to pay railway charges, it is probably sufficient to state that on the Madras Railway, during the year 1871, agricultural produce, in the strictest sense of the term, paid a sum of 16¼ lakhs of Rupees, representing more than 45 per cent. of the total receipts from goods; and that the country through which the Carnatic Railway will run is undeniably much richer than the average of the country traversed by the Madras Railway.

26. PARAGRAPH 20.—When the Chairman speaks of the Carnatic Company as "operating within the area which properly belongs to the Madras Company, he makes an assertion which it

would be difficult to prove. It has been already noticed that the traffic area of the Madras Railway is separated from the districts of South Arcot and Tanjore by a remarkable chain of natural barriers ; and that the capability of the Madras Railway to throw branches into these districts is limited to the proposed line from Arcot to Pondicherry. A glance at the position of the lines now worked by the Great Southern of India and the Carnatic Companies will show that they have at least as strong a claim as the Madras Railway Company to afford the accommodation required by the districts in question.

27. In the letter* to the Government of India to which Colonel Smith alludes in this paragraph, the Government of Madras enunciated "the principle of apportioning to each Company the traffic within the well-defined limits of the districts each may be said already to occupy ;" but by no stretch of language can the Madras Railway Company be said to occupy the South Arcot and Tanjore Districts.

* No. 940, dated 30th March 1871.

28. PARAGRAPH 21.—The scheme approved of by Government for the Carnatic Railway provides for direct communication not only between Pondicherry and Madras, but also between Pondicherry and Arconum : thus giving the French merchants readier access to the Bombay line than they would have by the branch to Arcot. Colonel Smith states that by taking the line from Tindevanum by Arcot, instead of by Chingleput, the distance between Pondicherry and Madras will be increased by 17 miles only ; when, in fact, the increased distance will be 53 miles.

29. PARAGRAPH 22.—The observations made above, on paragraph 7, refer to this paragraph also.

30. PARAGRAPH 23.—The Chairman here expresses his conviction that the roughly framed estimate of £5,000 per mile, as the cost of the narrow gauge line, "is much below what the ultimate cost will be."

The estimates for the Carnatic line between Madras and Cuddalore have not yet been prepared : but for the extension of the great Southern of India Company's line, between Trichinopoly and Tuticorin, they amount to £4,600 per mile. These estimates were prepared by the same Chief Engineer who carried out the works on the open line of the Great Southern Railway ; and both in preparation and in revision the rates, before being accepted, were subjected to the closest scrutiny. It is confidently expected that the works will be executed within the estimated cost ; and on such a point the opinion of competent and responsible authorities on the spot is perhaps entitled to as much weight as that of the Chairman of the Madras Railway Company. The manner in which the line between Arconum and Conjeveram is referred to in this paragraph is somewhat misleading. It is stated that "the very tramway above referred to, though partly laid on the common roads, has cost, including all expenses, nearly £3,300 per mile." It should be borne in mind that this so-called "Tramway" is a substantial line of railway, complete in all respects, well fenced, and well equipped, with engines and rolling stock ; also that its dimensions are larger than those of the proposed narrow gauge lines. It is "laid on the common roads" only in the sense that for part of the distance half the width of the roadway was given up to the Company : its gradients are all distinct from those on the road, and the rivers have been bridged by the Company.

31. PARAGRAPH 24.—The statement in the first part of this paragraph is scarcely correct. That there should be direct communication by rail between Madras and the Southern Provinces is undoubtedly an advantage ; but the completion of "a continuous line of one uninterrupted narrow gauge from Madras to Tuticorin of 435 miles in length" was not one of the chief recommendations of the proposed extension of the Carnatic line to Tanjore. In the letter* to the Government of India to which Colonel Smith alludes in paragraph 20 of his Minute, it is distinctly stated that this extension is "strongly advocated on its own merits as a very necessary addition to the Great Southern of India Railway system, and as likely to be, in itself, highly remunerative." The line from Madras to Tuticorin cannot be rightly considered as a trunk line for the conveyance of through traffic. The section between Madras and Tanjore is undoubtedly required for the districts through which it passes ; and assuming it to be determined on, the question arose whether the communication with the south ought to be effected, viâ Caroor and Erode, or viâ Trichinopoly and Tanjore. This question has been settled in favour of the latter route.

* No. 940, dated 30th March 1871.

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10th October 1872.

32. PARAGRAPHS 26 to 31.—In these paragraphs Colonel Smith brings under discussion the whole of the two schemes for railway extension, which, after the fullest consideration, have been approved of by the Government to meet the requirements of the five south-eastern provinces, viz., South Arcot, Tanjore, Trichinopoly, Madura, and Tinnevelly. These two schemes were essentially distinct from each other ; each formed a separate proposal, and was approved of upon its own merits, but in treating of them as a whole the objects which Government had in view may be said to be somewhat as follows :—To give to the principal south-eastern towns, to Chingleput, Tindevanum, Pondicherry, Panrooty, Cuddalore, Porto-Novo, Chillumbrum, Myaveram, Combaconum, Tanjore, Trichinopoly, Negapatam, Dindigul, Madura, Tirumungalum, Tinnevelly, and Tuticorin, direct communication with the capital of the Presidency, and with Bellary and Bombay ; to give them means of inter-communication with each other ; to give to the cotton of Tinnevelly, and to the miscellaneous produce of Madura ready access to the sea ; and to give to the city population of Madras, and to the cotton-growers of Bellary and Tinnevelly, direct communication with the rice-fields of Tanjore and of South Arcot. With the Government schemes Colonel Smith contrasts a proposal of his own ; and, at the risk of repetition, it is as well to state clearly what the respective plans consist of.

33. The Government of India propose to construct a railway on the metre gauge from Madras viâ Cuddalore and Combaconum to Tanjore, with a branch from Chingleput to join the existing line at Conjeveram, and another* from Tindevanum or Belpur to Pondicherry. They propose further to convert to the metre gauge the whole line of the Great Southern of India Company between Negapatam and Erode ; and, lastly, to construct another railway on the metre gauge from Trichinopoly viâ Dindigul and Madura to Tinnevelly and Tuticorin.

* The Pondicherry branch is to be constructed by a French Company.

34. On the other hand, Colonel Smith advocates the insertion of a third rail on the Madras Railway between Madras and Erode, and on the Great Southern Railway between Erode and Caroor ; with the construction of a branch line on the narrow gauge from Caroor to Tuticorin. He gives figures which show that, while the Government schemes will cost £2,060,300, his proposals would come to only £1,169,200, with an apparent saving of £891,100. With regard to the Chairman's figures, two remarks must be made, first, that if the addition of a third rail between Tanjore and Trichinopoly would cost £1,300 per mile on a wooden road, the same operation would cost much more between Madras, Erode, and Caroor, or an iron road ; second, that if traffic coming from the south is to be carried to Madras without breaking bulk, a considerable amount of narrow gauge rolling stock will be specially required, for which no provision has been made.

35. But the real question at issue is, whether the Chairman's proposal provides the accommodation required by the Government and by the country. He himself states (paragraph 29) that the saving of £891,100 would be effected "by a more efficient performance of the duty." It is scarcely necessary to go again over the ground, and to point out that Colonel Smith's scheme fails altogether to provide for the districts of South Arcot and Tanjore. It may be safely affirmed that herein lies the pith of all this discussion. The Government have at last determined that their two richest provinces shall be brought into direct communication by rail with Madras ; and the Madras Railway authorities can bring forward no scheme which will meet the requirements of the Government and of the country ; but they appear to have set themselves resolutely to oppose the scheme which has been brought forward by other Companies and approved of by the Government.

36. PARAGRAPH 32.—In this paragraph the branch between Arcot and Pondicherry is alluded to ; the Chairman estimates its cost at £365,000 in round numbers. The Chief Engineer of the

Madras Railway gives a different estimate as the result of his inspection of the country. He states that the distance by Arnee is about 88 miles, and that the cost of the line would be probably £6,000 per mile; thus giving a total expenditure of £528,000. The construction of this branch would therefore reduce the Chairman's nominal saving to £363,100, without providing for the objects to which the Government attach so much importance.

37. PARAGRAPH 35.—The feasibility of Colonel Smith's plan for making "all the locomotive stock of any branch line adapt itself by self-acting mechanism indifferently to either a narrow or broad gauge, without the least impediment at the junction," is, to say the least, open to question. It is, however, certain that any such plan must add to the weight, and to the cost of the narrow gauge stock; and must, *pro tanto*, deprive the narrow gauge system of the advantages which were expected from it.

38. PARAGRAPH 36.—It is suggested here, as well as in paragraph 33 of the Chairman's Minute, that, if the direct line between Madras and Tanjore be abandoned, the Carnatic Company should extend their existing line from Conjeveram as far as Chingleput: but with what object, it is not easy to imagine. It has already been shown that from Conjeveram, from which the respective distances to Madras by road and by rail are 45 and 61 miles, the whole goods traffic goes by road; and it is not assuming too much to predict that from Chingleput, whence the respective distances to Madras would be 35 and 80 miles, neither goods nor passenger traffic would go by rail.

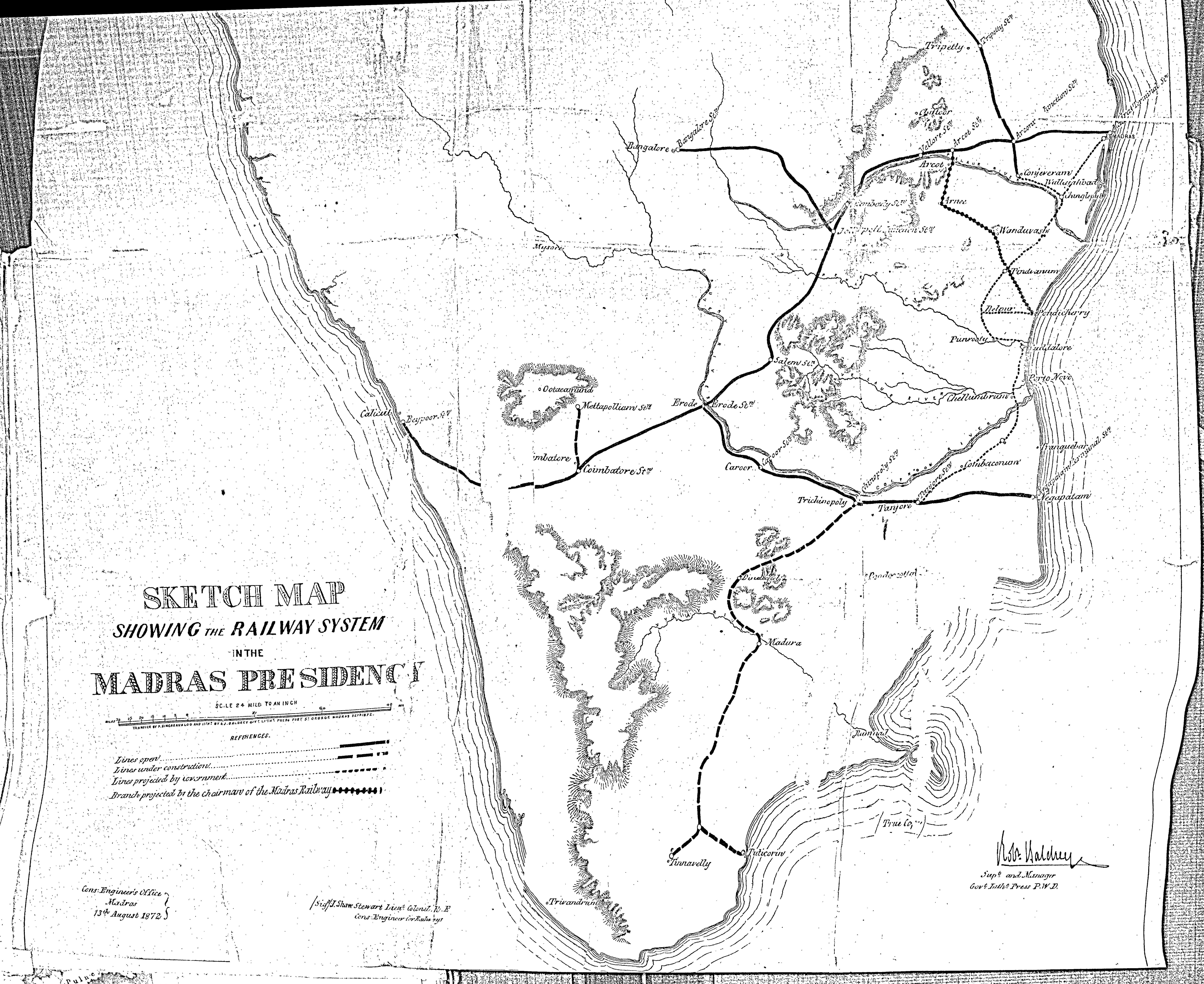
39. Further on in this paragraph it is stated that "to the south of Pondicherry, it is certain that both the difficulties and expense of construction would be increased, and the prospect of additional traffic diminished." It seems unnecessary to make any comment upon so strange a statement, beyond the remark that the points noticed in it have received the fullest consideration both from the Companies, who are eager toconstruct the line, and from the Government, upon whom rests the responsibility for its selection. It is not easy to see the connection which the points here brought forward by the Chairman have with the Madras Railway Company.

40. PARAGRAPH 37.—Here again it is assumed that the sole object of the Government scheme is to secure "a continuous uniform line from Tuticorin to Madras." The requirements of South Arcot and Tanjore are ignored.

41. PARAGRAPH 39.—It is here stated that the Shareholders in the Madras Railway Company "subscribed their moneys under a distinct contract, guaranteeing 5 per cent. interest on their outlay, and the ultimate prospect of 10 per cent. as the result of economical and judicious management." It is scarcely necessary to remark that the contract does not guarantee "a prospect of 10 per cent;" the Government guaranteed to the Company a minimum dividend of 5 per cent., and the Company, on the other hand, undertook that their profits should be restricted to a possible maximum of 10 per cent. There can be no doubt that, had there been good reason to expect the net profits to amount to 10 per cent., the Government would have raised the capital required for constructing the railway upon more favourable terms.

42. PARAGRAPH 40.—With regard to the concluding paragraph of the Chairman's Minute, two remarks seem called for, 1st, to repeat that the line proposed between Madras and Tanjore will not compete with the Madras Railway, and cannot deprive it of any appreciable portion of its existing traffic; 2nd, that their contract in no way protects the Company from competition, and that if at any time the requirements of the country should demand the construction of a line likely to interfere, to some extent, with the Madras Railway traffic, the Government have full power either to construct it, or to encourage its construction. The responsibility of such a measure would rest solely with the Government, and the whole of the possible loss would fall solely upon them. In any case the Madras Railway Company would receive their guaranteed dividend.

MADRAS, (Signed) J. H. M. SHAW STEWART, Lieut.-Colonel, R.E.,
13*th August* 1872. *Consulting Engineer for Railways.*


SKETCH MAP
SHOWING THE RAILWAY SYSTEM
IN THE
MADRAS PRESIDENCY
SCALE 24 MILES TO AN INCH
TRANSFER BY P. SINGARAVALOO AND LITH? BY R.J. BALDREY GOVT LITH? PRESS FORT ST GEORGE MADRAS SEPR 1872.
REFERENCES.
Lines open
Lines under construction
Lines projected by Government
Branch projected by the chairman of the Madras Railway
Cons: Engineer's Office
Madras
13th August 1872
/Sigd/ J. Shaw Stewart Lieut. Colonel R.E.
Cons: Engineer for Railways
Supt. and Manager
Govt. Lithc. Press P.W.D.
Madras
Tripetty
Tripetty Stn
Arconum Junction Stn
Arcot Stn
Vellore Stn
Chittoor
Bangalore
Bangalore Stn
Conjeveram
Wallajahbad
Chingleput
Arnee
Wanduvash
Tindivanum
Pondicherry
Delour
Cuddalore
Porto Novo
Chellumbrum
Tranquebar
Combaconum
Tanjore Stn
Negapatam
Tanjore
Trichinopoly
Caroor
Erode
Erode Stn
Salem Stn
Mettapolliam Stn
Ootacamund
Coimbatore
Coimbatore Stn
Calicut
Beypoor Stn
Mysore
Dindigul
Madura
Ramnad
Tuticorin
Tinnevelly
Trivandrum
True Co.

Proceedings of the Madras Government, Public Works Department,
10th October 1872.

No. 160. ORDER THEREON, 10th October 1872, No. 2,379.

RAILWAY, No. 21.

RESOLVED that copy of this Memorandum by the Consulting Engineer for Railways be forwarded to the Government of India and Secretary of State for India with the expression of the opinion of this Government that no change of alignment of the proposed new railways of Southern India is called for under any circumstances:—

(Here enter No. 2,380, dated 10th October 1872.)

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. G. A. Turton.

SKETCH SHEWING THE AREA OF COUNTRY
WITHIN A DIRECT DISTANCE FROM THE RAILWAY
ONE HALF THE DISTANCE FROM MADRAS

Toomcoor
Nundydroog
Ponganoor
Colar
Venkatagurra
Coriatum
Vellore
ARCOT
Arnee
Javadic Hills
Chinnapatam
Amboor
Sudaroor
Tanimbadi
Durmahpoor
Tengericottah
Singarpetta
Changamah
Womalvor
Shevaroy Hills
Sherwaroy Hills
Attoor
Sattimungalum
Sunkerry Droog
Erode
Sereemoogay
Namcal Droog
Avenashy
Teroopar
Coimbatore
Caroor
Durapoorum
Polachy
Dhullee
Pulney
Dhullee Hills
Pulney Hills
Dindigul
Madura
Tripetty
Gurrumbaddy
Tadeky
Naggery
Shotingur
Trittany
Tripassore
Trivelore
Puliaul
Ennore
Poonamallee
St. Thos Mount
Palaveram
G. Conjeveram
L. Conjeveram
Wallayabad
Sadras
Belpur
Cuddalore
Porto Novo
Tranquebar
Gumbaconum
Negapatam
Adrumpatam
Poodoocottah

BANGALORE
BANGALORE TERMINAL ST
CADGOODY ST
MALLOOR ST
COLAR ROAD ST
CORIATUM ST
VEERINJEEPOORUM
VELLORE ST
VELLUM
ARCONUM JUNCTION ST
SHOLINGUR ST
ARCOT OR AMMOOR ST
MADRAS
CHINNAMAPETT ST
PERAMBORE ST
AVADY ST
TINNANOOR ST
TRIVICORE ST
CUZEMBAKOOR ST
TERMINAL STATION
MALEYTTY ST
GOOPUM ST
AMBOOR ST
VALAMBADDY ST
JAULARAPETT JUNCTION
TRIPATORE ST
SHAMULPUTTY
MORAPOOR ST
MULLAPOORAM ST
SHEVAROY HILL OR ANTOOR ST
SALEM
SALEM ST
Mc DONALD'S CHOULTRY ST
SUNKERRY DROOG ST
RODE ST
PERANDOORAY ST
WUTKULLEE ST
AVENASHY ROAD ST
NOYEL R.
COIMBATORE ST
PUDDAKERRY ST
CAUVARY R.
CAUVARY RIVER
AMBRAWATTY R.
BHOWANI R.
PALAR R.
CHEAUR R.
PANAR RIVER
VELLAUR
COLAROON RIVER
TRICHINOPOLY
TANJORE
CHINCLEPUT
PONDICHERRY
BELPUR
POODOOCOTTAH
GREAT SOUTHERN EXTENSION TO TUTICORIN
PROPOSED LINE OF RAILWAY
LINE OF HALF DISTANCE
GREAT SOUTHERN RAILWAY

20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

17

PUBLIC WORKS DEPARTMENT,
OOTACAMUND, 10*th October* 1872.

No. 161.

No. 2,380.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
PUBLIC WORKS DEPARTMENT.

RAILWAY, No. 22.

SIR,—In letter No. 1,023-R., of 5th July, the Government of India request to be informed what changes in the alignment of proposed railways would be recommended by the Madras Government in case it were decided that the amalgamation of the three Companies working in this Presidency should be effected; that is to say, what bearing, if any, the fusion of the three Companies into one should have on the revision of the existing projects.

2. In reply, I am directed to state that whether or not the amalgamation of the three Companies is decided upon, His Excellency the Governor in Council adheres to the opinions already expressed as to the alignment for the proposed new railways in Southern India. As expressing fully and clearly the grounds on which those opinions were formed, I am at the same time to transmit to you a Memorandum drawn up by the Consulting Engineer for Railways and having reference to a Minute on the subject by the Chairman of the Madras Railway. In that Memorandum the advantages possessed by the alignment already approved by this Government over any alternative projects are, as appears to His Excellency in Council, sufficiently demonstrated.

I have the honour to be,
Sir,
Your most obedient servant,

Colonel, R.E.,
Secretary to Government.

Exd. G. A. Turton.

Govt. of {1872} Madras.

PUBLIC WORKS.

To

THE SECRETARY TO THE GOVERNMENT

OF INDIA.

Dated October 10th.

Recd. *Encl.*

G. O., 10th October 1872, No. 2358.

OCTOBER.

No. 161

ADHERING to the opinions already expressed as to the alignment of the proposed Railways in Southern India, and forwarding copy of Memorandum by the Consulting Engineer on the subject.

From the Officiating Deputy Secretary to the Government of India, Public Works Department, (Railway,) to the Secretary to the Government of Madras, Public Works Department, (Railway,) dated Simla, 5th July 1872, No. 1,023 R.

I AM directed to acknowledge the receipt of your letter No. 1,322, dated 14th May 1872, forwarding a copy of a report, dated 1st May 1872, from the Consulting Engineer for Railways, urging that the Great Southern of India and the Carnatic Railways should be amalgamated, the Madras Railway being worked under distinct agency, and expressing the concurrence of the Government of Madras in Colonel Shaw-Stewart's views. The Government of India learn also that a copy of this letter was sent to the Secretary of State, in letter No. 4 of 1872.

2. The Government of Madras is acquainted with the general purport of the discussion which has been lately carried on between the Secretary of State and the three Boards of Directors in England; but I am desired, for convenience, now to forward a copy of a Despatch No. 26, dated 22nd February 1872, from the Secretary of State, which informs the Government of India that His Grace has proposed the amalgamation of the Madras Railway Company with the other two Railway Companies, being actuated by the belief that such a combination would be attended with greater advantages than those to be anticipated from a fusion of only two of the Railway Companies whose operations are carried on in Southern India. The Secretary of State has gone further than was contemplated by the Government of India, who thought, in 1871, that an amalgamation of the two smaller Companies only was desirable.

3. Without pursuing further this aspect of the question, the Governor General in Council wishes, in the first instance, to discuss its effects irrespective of the different views which the several Companies may entertain, and I am, therefore, to request that the Government of India may be favoured with an expression of opinion from the Madras Government as to any changes in the alignment of the proposed railways which that Government would recommend, in case it were decided that the amalgamation of the three Companies should be effected, that is to say, what bearing, if any, the fusion of the three Companies into one Company should have on the revision of the existing projects.

4. I am to request that a copy of your reply may be communicated direct to Her Majesty's Secretary of State.

From the Secretary of State, to His Excellency the Right Honourable the Governor-General of India in Council, (Railway,) dated India Office, London, 22nd February 1872, No. 26.

WITH reference to your Excellency's Despatch of the 13th July last, No. 75, relative to Railway extensions in Southern India, in which you suggest that overtures should be made to the Great Southern of India and the Carnatic Railway Boards, in view to the amalgamation of the two Companies, I have to inform you that, cordially concurring in this suggestion. I have acted upon it. Indeed, I have gone further, and have proposed the amalgamation of the Madras Company also, with the other two, as it appeared to me that such a combination would be attended with greater advantages than those to be anticipated from a fusion of two only of the Railway Companies whose operations are carried on in Southern India. A copy of the correspondence with the several Boards, so far as it has yet extended, is transmitted herewith for information, and I shall keep

your Excellency informed of the further steps that may be taken in the matter. Until a decis on this point is arrived at, consideration of the particular scheme submitted with your Despa under reply will be deferred.

PART I.

Correspondence with the Great Southern of India Railway Company.

No. 1.

From H. MERIVALE, Esq., to H. W. NOTMAN, Esq., dated India Office, 6th September 187

I AM instructed to transmit, for the information of the Directors of the Great Southern o India Railway Company, copy of a Despatch from the Government of India, stating the result of their deliberations in regard to a syste of Railways for Southern India. The line which has received *the support of that Governmen* commences at Tuticorin and proceeds, *via* Madura, Trichinopoly, Tanjore, Combaconum, Belpur and Chingleput, to Madras, and would, under present circumstances, be constructed partly by th Great Southern of India Railway Company, and partly by the Carnatic Railway Company; but i will be seen that the Government of India has proposed that the two undertakings should b united and formed into one and the same concern.

* No. 75, dated 13th July 1871.

2. It appears to the Duke of Argyll that the proposed amalgamation would on many ground be advantageous to the interests of the two undertakings, and His Grace is desirous of being informed whether the Directors of the Great Southern of India Railway Company are prepared t co-operate in effecting it.

No. 2.

From H. W. NOTMAN, Esq., Secretary, to the Under Secretary of State for India, dated 2, Leadenhall Street, London, E.C., 13th October 1871, No. 481.

WITH reference to your letter of the 6th September last, I am now desired to acquaint you that this Board are willing to co-operate in effecting an amalgamation of this Company with the Carnatic Railway Company, on such equitable terms as may be agreed upon.

2. In the event, however, of any difficulty arising in carrying out this suggested amalgamation, the Board desire me to inform you that they are prepared, not only to undertake the construction of the line, with the narrow gauge, to the river Coleroon, as proposed by the Government, but that, in consequence of the adoption of that gauge upon the extensions generally, which they understand has now been finally decided upon by His Grace the Duke of Argyll, and the saving which it is estimated will thereby be effected, they would probably be able, with the capital which has already been raised and *paid into the Treasury of the India Office*, to carry the line beyond the Coleroon for a further distance of from 65 to 70 miles.

3. As soon as His Grace is in a position to come to a decision on this subject, the Directors will be glad to be favoured with the same, in order that no time may be lost in carrying out his views.

No. 3.

From M. E. GRANT DUFF, Esq., to H. W. NOTMAN, Esq., *dated India Office*, 16th January 1872.

WITH reference to recent correspondence on the subject of a proposed amalgamation of the Great Southern of India and the Carnatic Railway Companies, I am directed to state that the Duke of Argyll is gratified to learn, by your letter of the 13th October last, No. 481, that the Directors of the Great Southern of India Railway Company were prepared to co-operate in effecting the amalgamation "on such equitable terms as may be agreed upon."

2. The question was not at that time pursued, in consequence of some hesitation on the part of the Carnatic Board to agree to the proposition. His Grace, however, attached so much importance to the benefits likely to ensue from the early union of the undertakings that he requested the Board again to consider the subject. A copy of the correspondence with that Board is forwarded herewith; and the Directors of the Great Southern of India Railway Company will perceive that the Carnatic Board are about to submit the proposition for the approval of their shareholders.

3. Under these circumstances it is probable that the mode of carrying out the amalgamation may soon have to be considered. But since the matter was last under notice, it has been thought most desirable that the amalgamation should not be confined to the Great Southern of India and the Carnatic Companies, but should embrace also the Madras Railway Company. A copy of the correspondence on the subject with the Board of the latter Company is also sent herewith for the Directors' information. The Duke of Argyll hopes that the Board will agree with him in the desirableness of adopting the larger scheme, and that they will be prepared to co-operate carrying it out.

From H. W. NOTMAN, Esq., Secretary, to the Under Secretary of State for India, dated 2, Leadenhall Street, London, E.C., 17th January 1872, No. 497.

I HAVE the honour to acknowledge receipt of your letter of the 16th instant, which was laid before the Directors of this Company at their meeting yesterday.

2. In reply, I am instructed to acquaint you that, as previously, the Board were willing to co-operate in effecting an amalgamation of this Company with the Carnatic Railway Company, so now they will be prepared to co-operate in carrying out the larger scheme, suggested in the letter under reply, embracing the Madras Railway in the proposed amalgamation, upon such equitable terms as may be agreed upon, being satisfactorily arranged.

PART II.

Correspondence with the Carnatic Railway Company.

No. 1.

From H. MERIVALE, Esq., to M. R. SCOTT, Esq., dated India Office, 6th September 1871.

I AM instructed to transmit, for the information of the Directors of the Carnatic Railway Company, copy of a Despatch* from the Government of India, stating the result of their deliberations in regard to a system of Railways for Southern India. The line which has received the support of that Government commences at Tuticorin and proceeds *via* Madura, Trichinopoly, Tanjore, Combaconum, Belpur, and Chingleput, to Madras, and would, under present circumstances, be constructed partly by the Great Southern of India Railway Company, and partly by the Carnatic Railway Company; but it will be seen that the Government of India has proposed that the two undertakings should be united and formed into one and the same concern.

* No. 75, dated 13th July 1871.

It appears to the Duke of Argyll that the proposed amalgamation would on many grounds be advantageous to the interests of the two undertakings, and His Grace is desirous of being informed whether the Directors of the Carnatic Railway Company are prepared to co-operate in effecting it.

No. 2.

From M. R. SCOTT, Esq., Secretary, to the Under Secretary of State for India, dated 62, Moorgate Street, London, E,C., 3rd October 1871.

I AM desired by the Board of Directors of the Carnatic Railway Company, with reference to the India Office letter, dated 6th September, and its enclosures, inquiring whether the Directors are prepared to co-operate in effecting an amalgamation with the Great Southern of India Rail-

way Company, to state that, having reference to the circumstances under which the Company was formed, to the object the Directors had in view of demonstrating the beneficial results to India of the construction of narrow gauge, light, and cheap lines of railway, to the reasonable expectation of the proprietary that they shall reap the fruit of their foresight and enterprise, and to the certain prejudice of their interests which will attend the suggested fusion of the two Companies, the Directors are unable to recommend the shareholders to entertain the proposition at present.

2. When the two Companies shall have completed their respective systems, the working results shall have been ascertained, and the financial value of the two undertakings can be fairly estimated, should His Grace the Secretary of State deem it advisable, the Board will be prepared to give the subject their full and attentive consideration.

3. The Board observe that the Government of India consider Tanjore the most suitable point of junction of the two lines, a view of which the Board believe that the soundness will be confirmed in practice.

No. 3.

From M. E. GRANT DUFF, Esq., to M. R. SCOTT, Esq., dated India Office, 4th January 1872.

THE Secretary of State has had before him in Council the replies* which were returned by the Directors of your Company and of the Great Southern of India Railway Company to his† inquiries whether they would be prepared to co-operate in effecting an amalgamation of the two Companies.

2. While the Directors of the Great Southern of India Railway Company have expressed their willingness to join in effecting an amalgamation on such equitable terms as may be agreed upon, the Directors of the Carnatic Railway Company state that they are unable to recommend their shareholders to entertain the proposition at present, but that at some future time, when the two Companies shall have completed their respective systems, and the financial values of the two undertakings can be fairly estimated, the Board will be prepared to reconsider the proposition.

3. As it appears to the Secretary of State that one great advantage to be gained by the amalgamation of the two Companies will be lost by the delay suggested by the Directors, he is induced to ask the Board again to re-consider the proposal. Not only economy of construction and management, but unity of purpose, would be secured by the amalgamation of the two capitals as soon as practicable. He would even go further, and, being of opinion that considerable public benefit would ensue from the junction of the three Companies now engaged on lines of Railway in the Madras Presidency, he would be glad if the Madras, the Great Southern of India, and the Carnatic Railway Companies would agree to apply their joint resources to one system of railways for Southern India, and so avoid anything like diversity of interest or competition.

4. With regard to the comparative value of the three lines, the Secretary of State would remark, in reference to the observations of the Directors on this point, that the guarantee is what would really influence the public and the shareholders in their estimation of the property.

5. The Secretary of State accordingly again commends the subject to the consideration of the Board, and if they continue to have doubts with regard to the feelings of the shareholders, he would suggest that the case should be submitted to them in order that their opinion may be ascertained.

* Letter from Carnatic Railway Company, dated 3rd October 1871.
Letter from Great Southern of India Railway Company, dated 13th October 1871.
† Letter from India Office, dated 6th September 1871.

No. 4.

From M. R. SCOTT, Esq., Secretary, to the Under Secretary of State for India, dated 62, Moorgate Street, London, E. C., 10th January 1872, No. 4/72.

I AM desired by the Board of Directors of the Carnatic Railway Company to acknowledge your letter of the 4th instant, requesting, for reasons assigned, that the Directors will reconsider the subject of an amalgamation, and that, if they have any doubts as to the feelings of the shareholders, that the case may be submitted, in order that their opinion may be ascertained.

In reply I am directed to state, that the Board's views upon the subject were clearly stated in their communication of the 3rd October last, but that, under all the circumstances referred to in your letter, and without recognizing the view taken that the guarantee alone influenced the shareholders to embark in the undertaking, the Board will bring under the consideration of the shareholders at their annual meeting next month, the suggestion that an amalgamation of the three Companies should be effected upon such a fair and equitable basis as shall be agreed upon.

No. 5.

From M. R. SCOTT, Esq., Secretary, to the Under Secretary of State for India, dated, 62, Moorgate Street, London, E. C., 24th January 1872, No. 10/72.

I AM desired by the Board to forward you a copy of the Report, from which it will be seen that the subject of the amalgamation has been specially referred to, and also a copy of a Resolution of the Board, with a memorandum on the subject of a communication which the Board understand has been submitted to the Secretary of State by the Madras Railway Company, in reference to the proposals of the Carnatic Company.

ENCLOSURE IN No. 5.

62, Moorgate Street, London,
18th January 1872.

AT a Meeting of the Directors of the Carnatic Railway Company held this day, the following Memorandum upon the Resolutions of the Madras Railway Company of the 10th November last was read.

Memorandum.

THE Chairman of the Madras Railway Company has written a minute upon the proposed extension of the Carnatic and Great Southern of India Railway Companies from Madras to Tuticorin, which has been sent by the Madras Board to the India Office. The minute describes "the unsound character" and "injurious consequences" of the proposals of the Carnatic and Great Southern of India Railway Companies; assumes that the line is not, on an average, further than fifty-five miles from the Madras line, and must, therefore, be a competing line; that the Carnatic, so far as the first section from Arconum to Conjeveram, was "quite unsuccessful," "built of slight dimensions and cheap character;" "that the traffic of four-fifths of the line on one side would be carried by the Madras Railway;" that, on the sea-side, it would be cheaper to carry by sea than by rail; that "there is not much prospect of satisfactory returns;" that the Madras Railway Company can do the work much better than any new Company, "the whole area being worked with unity of purpose and action, instead of the conflict of competing interests, opinions, and authority;" that the Pondicherry trade can preferably come round by the Madras line; that the Carnatic Railway cannot be constructed cheaply, and will cost much above the 5,000*l* per mile estimated; that the 435 miles proposed to be constructed, "confessedly of weaker construction," and "capable of working only at slow speeds," could be avoided by allowing the Madras Railway to connect the Tuticorin terminus with their line,—and suggesting that, "if there were a promise of success, it would be proper for the Madras Company to undertake the work," if not, "it ought not to be undertaken at all;" and "that it would be more for the interests of the Carnatic shareholders to unite their capital with that of the Madras Company," than to pursue "one hazardous scheme after another."

The Madras Railway Board, in transmitting this minute to the Secretary of State, intimate that, in their opinion the Carnatic extension is "not at all required to meet the wants of the trade," and will be comparatively "unremunerating," and strongly deprecate the "great injustice of encouraging the construction of a competing line."

The Board's Resolutions are dated 10th November 1871.

The Carnatic Board have only been made aware of the nature of this document on the 13th January 1872, after they had, at the suggestion of the Secretary of State, consented to submit the question of an amalgamation of the three Companies to their shareholders for consideration. Whether it would not have been more advantageous to have sent the Madras Railway Company's Resolution to the Carnatic Company, with a view to hear the other side, it is needless to inquire, but it is desirable that the opinions and grounds of action on the part of the Carnatic Company should be clearly expressed, that the Secretary of State may be enabled rightly to estimate the merits and demerits of the respective plans.

That the Madras Railway Company should desire to secure a monopoly of all Southern India is not surprising, but their views indicate very imperfect information as to the sound and economical principles which should alone guide the Government decision.

The accuracy of the statements contained in the minute may be estimated by the few following facts:—

The Carnatic Railway, so far as open, has earned about 3 per cent. profit already upon the short section of nineteen miles; it is therefore in no respects "unsuccessful;" it can convey when required, and has conveyed, the traffic at thirty-five miles an hour; it has been constructed well, cheaply, and strongly, and the Company are certainly entitled to claim at least equal credence for the correctness of their estimate of future cost as the Madras Company for their unsupported assertion that it will be much exceeded. The Company's operations have been conducted with sufficient regularity and judgment to repudiate the charge of advocating "one hazardous scheme after another." The distance between the Madras Railway and the sea averages nearly ninety miles, and no person conversant with railway traffic questions would for one moment argue that a line at a distance of about sixty-six miles, running north and south, could be a competing line with another running east and west and partly south, with this large unoccupied interval of 15,000 square miles between them; and it is a no less incorrect assertion that four-fifths of the traffic on one side would ever reach the Madras line, or that the sea would be preferred as an alternative on the other. The Pondicherry trade requires the Carnatic line, and not to be taken round, at increased cost of time and money, by the circuitous route of the Madras Railway. The didactic opinions that the Carnatic line "is not at all required to meet the wants of the trade," that it will be "unremunerative," that, if likely to be successful, the Madras Company should have the Carnatic Company's line, and, if not, it should not be made at all, and that it would be preferable for the latter Company to unite their capital with the Madras Company,—however naturally entertained by the Madras Company,—import neither evidence nor argument into the discussion; but the avowal that the Madras line had been laid out, for political reasons, "on a trace most unpromising," and that the construction of the Carnatic line "will put an end for ever to any hopes which might have been previously entertained" by the Madras Company, probably embodies the whole gist of the question.

The Directors of the Carnatic Railway Company have shown their readiness to obtain full and fair consideration on the part of their shareholders to the suggestion of the Secretary of State for an amalgamation into one undertaking of the several Railway Companies in the Madras Presidency, and they have no doubt that the arguments upon which this course is recommended will have their due weight with the shareholders in their decision.

The Board only desire to place on record, for their own justification, that, however disposed they may be to meet any reasonable requisition or suggestion emanating from the Secretary of State, they would decline to entertain it under any circumstances if they had reason to believe that the recommendation had been influenced by the fallacious assumptions which pervade the document above referred to.

Resolved that, with reference to the minute of the Chairman of the Madras Railway Company, and the Resolutions of their Board on the 10th November last, as the Directors of the Carnatic Railway believe the statements contained in the minute to be, for the most part, unfounded and erroneous, a copy of the foregoing memorandum be forwarded to the India Office, for the information of His Grace the Secretary of State for India in Council.

By order of the Board,
M. R. SCOTT,
Secretary.

No. 6.

From H. MERIVALE, Esq., to the Under Secretary of State for India, dated India Office, 1st February 1872.

I am directed by the Duke of Argyll to acknowledge receipt of your letter of the 24th ultimo, No. 10, forwarding copy of Report to be submitted to the shareholders on the 5th instant; also copies of a memorandum on the minute by the Chairman of the Madras Railway Company of the 14th November last, and of the Board's resolution thereon.

With reference to the last paragraph of the memorandum I am to state, that it is his Grace's desire to receive and consider the views of all parties interested in the proposed amalgamation of the three Railway Companies whose operations are carried on in the Madras Presidency; and that the memorandum now forwarded will receive the same attention as that bestowed on the minute by the Chairman of the Madras Railway Company.

I am to add, that the conviction that it would be for the benefit alike of the Government, the public, and the shareholders that the Companies should amalgamate, was arrived at by the Secretary of State in Council on general grounds, quite independent of those set forth in Colonel Smith's minute, on which the Carnatic Board animadvert.

No. 7.

From M. R. SCOTT, Esq., Secretary, to the Under Secretary of State for India, dated 62, Moorgate Street, London, E. C., 6th February 1872, No. 14/72.

I have the honour, by the desire of the Board of Directors, in continuation of their letter of 10th January 1872, to state, for the information of His Grace the Secretary of State, that the suggestion conveyed in your letter of 4th January 1872, upon the subject of the proposed amalgamation of the three Companies now engaged in Railways in the Madras Presidency, was submitted to the members of this Company in general meeting yesterday, upon which the following resolution was passed unanimously:—

Resolved "That, with reference to the suggestion of His Grace the Secretary of State of an amalgamation of the three Railway Companies in the Madras Presidency, the shareholders, not prejudging any arrangements which may be conducive to the general interests, and capable of being effected on fair and equitable conditions, authorize the Directors to negotiate provisionally."

From W. EDWARDS, Esq., for Secretary, to the Board of Directors, Madras Railway Company, to the Under-Secretary of State for India, dated 33, New Broad Street, London, E. C., 2nd October 1871, No. 2,741.

Part III.

Correspondence with the Madras Railway Company.

No. 1.

It having come to the notice of the Board of Directors that a proposition is about to be submitted to His Grace the Secretary of State for India in Council for the construction of certain lines of railway, ending eventually in the completion of a continuous line from Madras to Tuticorin, a measure which they are of opinion will be most injurious to the interests of this Company, and by no means the best suited to promote the welfare of the people, I am instructed

to request that you be good enough to bring to the notice of His Grace the fact that hitherto no communication has been made to this Company of the intention of the Government of India in respect of this important matter, and that the Board are most anxious to be permitted to submit the facts within their knowledge and their views upon the whole question before any final decision is taken.

No. 2.

From J. COSMO MELVILL, Esq., to JULIAN BYRNE, Esq., dated India Office, 20th October 1871.

I AM directed by the Secretary of State for India to acknowledge the receipt of your letter of the 2nd instant, No. 2,741, relative to the proposed completion of a continuous line of railway from Madras to Tuticorin, and to acquaint you, in reply, that he will be happy to receive a communication of the views of the Directors of the Madras Railway Company on the subject.

From JULIAN BYRNE, Esq., Secretary, to the Under-Secretary of State for India, Madras Railway Company, 33, New Broad Street, London, E.C., dated 14th November 1871, No. 2,750.

ADVERTING to Mr. Melvill's letter of the 20th ultimo, I am directed to forward, herewith, a minute by the Chairman, with reference to the proposed narrow gauge line from Madras to Tuticorin, together with copy of Resolutions passed by the Board, expressive of their views on the subject, and I am to request that His Grace the Secretary of State for India in Council will be pleased to give his favourable consideration thereto.

MINUTE

ON THE SUBJECT OF THE PROPOSED NARROW GAUGE LINE FROM MADRAS TO TUTICORIN.

THE correspondence which has been laid before the Board is of a nature which entitles it to their most serious consideration, and it may be of importance to draw the attention of His Grace the Secretary of State to the unsound character of the measures now pressed upon him for sanction, and the injurious consequences likely to flow from their adoption.

2. When the late Marquis Dalhousie applied his great Parliamentary experience of English railways to the establishment of a system for India, one of the objects contemplated was, to prevent the mischiefs which in England have attended the indiscriminate and unconnected establishment of rival competing lines, interfering with one another, and depriving both the public of cheap accommodation and the shareholders of satisfactory profits.

3. The system which Lord Dalhousie established was, accordingly, that of a few trunk lines, to which it may be presumed it was intended that branches should afterwards be attached; more especially as it can be shown that in that way only can the maximum of useful effect be produced at a minimum of cost.

4. But this principle seems to be lost sight of in the measures now proposed for acceptance; the ultimate effect of which is clearly the establishment of a second *trunk* line, in general direction parallel to that of the Madras Railway, in no part more distant than about 87 miles, and on the average about 55 miles; taking its general direction, according to the description given of it, as from Madras direct to Belpur, and thence to Tanjore and Trichinopoly, about 200 miles in length.

5. Before making any remarks upon this special proposal, it may be as well to point out in what respect, comparing the two systems of a trunk line with branches on the one hand, and on the other a second or more trunk lines to cover the same ground, the former is preferable.

6. In the first place it must be noticed that two trunk lines, converging to a common centre, though they would give facility of communication with that centre to the towns on their own track, fail to provide means of communication to the *other* side of *other* trunk lines, except by the tedious *détour* through the centre, and back again. For instance, if the proposed line were constructed from Tanjore to Madras, passing near Pondicherry, the inhabitants of the last-named city could not communicate with the territories of Mysore except by the long *détour* either by Trichinopoly, Erode, and Jollarapett, or by Madras and Jollarapett, a distance of at least 250 miles.

7. Another important point of difference between the two systems is the much greater economy of the trunk and branch over the double trunk system. For the latter there is a double and useless expenditure, in the first instance of the large terminal station and buildings connected with it, and many of the other stations, and the great permanent burthen of a double establishment both in England and India. The consequence of this is, that while a trunk line could in many cases afford to carry goods on its branches for a mere trifle, the large establishments and fixed charges being already paid for, a second trunk is compelled to secure the highest rates it can obtain, to meet its heavy demands of a permanent character.

8. Again, I may observe that two or more trunks in the same area necessarily compete with one another, and the profit from the maximum traffic of the given area is divided between two or more capitals instead of only one.

9. To provide a given area with accommodation for traffic requires, not numerous trunk lines, but one trunk line, with as many branches as can be profitably constructed; these again throwing out feeders of a cheaper kind, if there be traffic enough to make them remunerative. This method will in time, as trade is developed, provide the whole country with an arterial system of communication. It is impossible to do so by direct lines from the centre to every important point; and if traffic charges by the rail be adjusted, not according to distances along the branch and trunk, but according to the direct distance (as the crow flies) between the centre and every given point, the only respect in which accommodation by the branch and trunk will fall short of that by a direct line will be as to time; and the slight difference in that respect, compared with the enormous improvement actually effected, cannot be thought worthy of a moment's consideration.

10. It may be necessary here to advert to the argument that branches cannot be conveniently worked with a trunk line of a different gauge. This will be disposed of hereafter, *vide* paragraph 35.

11. We may now proceed to remark upon the scheme referred to in the correspondence, and in doing so, its origin and past history ought to be mentioned.

12. In the year 1865, a Company constructed a small branch tramway from Arconum to Conjeveram. It was built cheaply, being laid, wherever it was expedient to do so, upon the common roads. It was quite unsuccessful, and a proposition was made and acceded to by the Secretary of State, to extend the line to Cuddalore, for which purpose a contract has been entered into.

13. Subsequently it has been proposed to drop the connection with the Madras Railway, and form the line direct from Madras to Cuddalore, with the object eventually of carrying it on to Tanjore or Trichinoply, and connecting it by the aid of the Great Southern of India Railway, with a new line of narrow gauge, extending from Trichinopoly to Tuticorin, thus forming one continuous narrow gauge line of 435 miles in length from Madras to the Southern Port.

14. This would in reality be a *trunk* line, built of the slight dimensions and cheap character of a branch, and it appears to be in serious contemplation, after the Government have encountered the great expense of completing a substantial trunk line of the most solid dimensions and character, and competent to operate upon the whole traffic of the area subtended by it, to put it aside, and incur the expense of a rival line of a much less solid character, to share the work, and mar the prospects of both undertakings.

15. In order to exhibit this clearly, it is necessary to premise that, assuming the cost of conveying goods by land to be 3 Annas per ton, per mile, it is capable of demonstration that throughout more than ⅞ths of the country lying between the two lines, the merchandize and heavy goods could be attracted to the Madras Railway, for conveyance to Madras, at the rate of 1 Anna per ton, per mile, and a much larger proportion at reduced rates, if a new line did not exist. Hence, on its west side the only goods traffic which can be expected for the new line is a share of that within reach of the Madras Railway.

16. It is obvious, in fact that, on the establishment of the new trunk, all the traffic of the districts lying between it and the present railway would be divided between them, notwithstanding the whole could be attracted to and carried by the latter, either by adjustment of the rates, or the construction of cheap branches where called for.

17. As regards the eastern side of the new railway, assuming the charge for goods to be in the proportion of 12 Pies per ton, per mile, by the rail, 3 Annas by the common road, and 3 Pies by sea, it is the fact, that with the exception of the immediate neighbourhood of Madras, and a few miles below the latitude of Porto Novo, where the country is brought within the influence of the Great Southern of India Railway, there is hardly a part where it would not be cheaper for a merchant having goods *actually on* the new line, to carry them by land to the coast and send them to Madras by sea.

18. Hence it appears that it is not reasonable to expect any large amount of goods traffic from the eastern side of the proposed new line. On the western, as above-stated, it would take part of the traffic now within reach of the Madras Railway.

19. Referring exclusively to the first half of the above line, viz. :—that which is already approved from Madras to Pondicherry, I would observe that there is not much prospect of satisfactory returns. It is probable that quite close to Madras there would be a considerable passenger and a fair goods traffic, consequent on the demands of the million inhabitants of that city; but for long distances the agricultural produce of the districts traversed is of too small value to pay railway charges, and there is little other. Bulky and cheap goods, when destined for Madras from a distance and near the coast, will almost in all cases be sent by sea, and the profits of the line be mainly supported by passengers.

20. Such a line, if carried no further than Pondicherry, would not materially interfere with the existing Madras line, except in so far as *any* new Company operating within the area which properly belongs to the Madras Company must interfere with its fair hope of success. What this Company is prepared to undertake, and which it is desirable to entrust to it, according to the views of the Government of Madras,* is the duty of supplying all the traffic accommodation required by the districts within reach, and which having large establishments on the spot, it can do so much better than any new Company; the whole area being worked with unity of purpose and action, instead of the conflict of competing interests, opinions and authority.

* Colonel Orr's letter to the Government of India, No. 940, of the 30th March 1871, paragraph 8.

21. As regards the connection with Pondicherry, I will venture to hazard the opinion that, while the traffic from that city would be insufficient to justify the continuation beyond Chingleput,

* When the charge by the rail is ⅓ that by the common road, the cost of conveyance will be the same either direct by the road, or by the road and rail, at every point whose direct distance from the rail is ⅓ its direct distance from the centre, *e. g.*, if the rate by the road is 2 Annas and by the rail 1 Anna, a merchant sending goods from a point 20 miles distant from the rail, and 40 from the centre, would have to pay the same money in either case, viz, by the road and rail, 40 Annas for the road, and 40 Annas for the rail, total 80 Annas, and by the road only 2 Annas multiplied by 40 or, 80 Annas; putting out of view the greater speed and security by the rail. To all nearer than the point there is a difference in favour of the rail according to distance. Now if a curve be traced fixing along the whole line, the points where the distance from the rail is ⅓ the direct distance from Madras, it will be found to include ⅞ths of all the country lying between the present South West Line and the proposed Carnatic Line, extended to Tanjore. But the charge by the rail might be taken, as in fact it is, at only ⅓rd that by the road (it would be even less than this if the rates were reduced, which is impossible by the common road); and hence if it be granted that merchants will in the main adopt that method of carrying out their trade which is cheapest and best, then it will follow that as it would answer the purposes of ⅞ths of the country to use the rail when the charge by it is ⅓ that of the common road, it must "à fortiori" do so when it is only ⅓rd. It may be shown that it would answer for 9-10ths of the country.

a branch from the main line, Arcot Station, (which would incidentally remove the difficulty of the want of connection between the city and the rail) would be far more useful to French trade than direct communication with Madras. What is required by French interests, as it appears, is a communication with the interior; and although a branch through Tindevanum to Arcot would increase the length of the journey to Madras from 121 (*viè* Belpur) to 138 miles, the extra cos of which might be easily compensated by an adjustment of the rates, the fact of its placing the French merchants within easy access, both of the whole of Mysore by the Bangalore Branch, and the interior of India by the Bombay line, could not fail to give it the preference. Such a line too, instead of vainly competing with the sea, would, in conjunction with the Madras Railway, attract all the traffic between the Palar and Panar Rivers, taking it either to Madras or the interior of the country, as might be desired.

22. The above remarks apply to the proposed line to Cuddalore, as approved, to which may be added, referring to the observations of paragraph 20 that, if made at all, such a line could be worked much more cheaply by the Madras Company than any separate and independent one. If the line would pay at all, it would do so far more readily to a Company already possessing large terminal stations and efficient establishments, than it could to another Company burthened with the cost of creating and maintaining them. If there were a promise of success, having the advantages just named, it would be proper for the Madras Company to undertake the work; if not, it really ought not, in the interests of the people of India, to be undertaken at all.

23. It ought to be mentioned, both as respects the direct line to Chingleput and Cuddalore, and its extension to Tanjore or Trichinopoly, that, crossing as they must, the whole drainage of the country, it is hardly possible they could be constructed very cheaply. The estimate of £5,000 per mile, laid before the Government of India, has been accepted and used in this minute, but I feel bound to express my own conviction that it is much below what the ultimate cost will be. The cheapest of the present main lines, the Great Southern of India, though carefully planned so as to avoid the difficulties of the drainage, and though but "sparingly stocked," has cost £8,658 per mile, to this date, and I cannot bring myself to think it probable that a new railway, on the proposed track, even allowing for its slighter scantling, will be durably constructed for so very much less. The very Tramway above referred to, though laid partly on the common roads, has cost, including all expenses, nearly £3,300 per mile.

Government of India, to Secretary of State, No. 75 of the 13th July 1871, paragraph 8.

24. One of the chief recommendations of the proposed future extension of the line to Tanjore or Trichinopoly seems to be the apparent advantage of completing a continuous line of one uninterrupted narrow gauge from Madras to Tuticorin, of 435 miles length. As it is admitted to be of the utmost consequence to secure the cheapest possible means of providing the required accommodation, it may be useful to consider in what respect this proposal, if carried out, would realise these views.

25. The exact course and location of the line not being as yet fixed, there is some difficulty in stating distances with accuracy; the whole track from Madras to the south being variously stated from 435* miles to upwards of 450† miles.

* Government of Madras, to Government of India, 30th March 1871, No. 940.
† Government of India, to Secretary of State, 13th July 1871, No 75, Railway.

26. If we take the distance from Madras, *via* Tanjore and Trichinoply to Tuticorin at 435 miles, and from Trichinopoly to Tuticorin at 196,‡ there remain 239 miles as the length of track from Madras to Trichinoploy, of which about 208 would be new narrow gauge track from Madras to Tanjore, and the remaining 31 miles the Great Southern standard gauge from Tanjore to Trichinopoly, with a third rail added.

‡ Colonel Orr's letter to the Government of India, 14th February 1871, No. 457, paragraph 3.

27. Assuming for the present that the narrow gauge line costs only £5,000 per mile, and the insertion of a third rail £1,300 per mile, the estimated cost of the whole communication from north to south would be, according to the proposed plan, as follows :—

Madras to Tanjore	...	208	miles at £5,600	...	£1,040,000
Tanjore to Trichinopoly	...	31	,, 1,300	...	40,300
Trichinopoly to Tuticorin	...	196	,, 5,000	...	980,000
		435	Total	...	£2,060,300

28. Here we have an outlay of more than two millions sterling, to produce a trunk line confessedly of weaker construction, and capable only of being worked at comparatively low speed.

29. If, as an alternative, the already existing trunk were made use of by inserting a third rail throughout its entire length, and carrying the Southern extension through Caroor to Salem, the whole distance from Madras to Tuticorin would be only 415 miles, instead of 435; the upper part of the line, that subject to the greatest traffic, would be of a thoroughly substantial character, while the lower half would be carried through that part of the country, on all hands declared to be the most eligible,* both as to engineering difficulties, and as to the population and productiveness of the country; while the expense would be only as follows :—

* Government of India, to Government of Madras, 17th March 1871, No 469s, paragraph 2, also paragraph 3 for the distance from Caroor to Tuticorin 160 miles.

Madras to Salem	...	207	miles at £1,300	...	£269,100
Salem Tuticorin	...	208	,, 5,000	...	1,040,000
		415			£1,309,100

thus effecting a saving of £751,200 by a more efficient performance of the duty.

30. The saving of £751,200 may be increased to £139,900, so as to become £891,100 by omitting the above proposed new junction between Caroor and Salem, and laying the third rail

from Caroor to Erode	...	...	...	...	...	41 miles
and from Erode to Salem	...	...	...	...	...	36 ,,
					Total ...	77

The figures being—

	77 miles at £1,300	...	...	£100,100
Instead of	48 ,, at £5,000	...	...	240,000
			Difference ...	£139,900

31. When we consider what would be gained by the extra £139,900 spent in the new junction, and observe that it would effect a saving of 29 miles out of 444, it ought not to be forgotten that, as to the additional charge for conveyance, that would be compensated by adjustment of the through rates; and that, as to the saving of time, an abbreviation of an additional fifteenth part, when the time for passengers is shortened four-fold, and for goods thirty-fold, is hardly worth so large a sum in the present position and circumstances of the country.*

*Telegraphic communication between distant towns may be kept up by wires laid in the most crooked positions, without practical inconvenience; and in like manner, though in a much less degree, the advantages of railway communication are but slightly impaired by want of perfect straightness. When so vast a portion of India is deprived of any means of railway communication at all, no province has a claim to the choice of "alternative" lines to effect the same object.

* Government of India, to the Secretary of State, 13th July 1871, No. 75, paragraph 4.

32. According to the alternative scheme last described, the entire Madras line would be competent to deal, not only with the Great Southern extension, but also with any number of branches from either the east or west side of its track, the whole sum to be expended being £1,169,200 instead of two millions. In addition to which, if the wishes of the inhabitants of Podicherry were to be attended to, a branch from that city to the Arcot Station, taking the town on its way, would be executed at a cost of £365,000 more, making the total expenditure in that case £1,534,200.

33. The remarks which will be shortly made hereafter, paragraph 35, tend to show the possibility of utilising the present Conjeveram to Arconum Tramway, in conjunction with the Madras line, by obviating the break of gauge; and in that case the Carnatic Company might possibly think it expedient, if the direct line to Madras be not carried out, to extend the Tramway as far as Chingleput; but it would be more for the interests of the Shareholders to unite their capital with that of the Madras Company, and co-operate in maintaining the original system of a main line with branches wheresoever they can be stretched with advantage, rather than by pursuing one hazardous scheme after another, be led into an unprofitable expenditure of funds far more needed to meet the wants of other parts of India, besides the incidental mischief done to capital already in the field.

34. I cannot avoid expressing my own belief that if all the existing vested interests of the establishments connected with the Carnatic Railway Company were satisfied by the most liberal compensation possible, and an amalgamation with the Madras Company effected, the money spent in doing so would be but a trifle, compared with the wasteful consequences of persevering in a wrong system.

35. Reference has been already made in paragraph 10 to the possibility of removing the difficulties in the way of working together the main line and branches of a different gauge; and, adverting to the opinion expressed by the Government of India as to the great importance of providing the necessary accommodation for the public at the least possible expense, I have long been impressed with a sense of the very great advantages to India which, under present circumstances, would result from a solution of the problem; and after a long consideration of the subject, I am satisfied that at the expense of from £30 to £40, per truck or carriage, all the locomotive stock of any branch line may be made by self-acting mechanism to adapt itself indifferently to either a narrow or broad gauge, without the least impediment at the junction. Carriages already constructed could not be converted to the proposed system except at an increased expense; but it is an important fact that the extra cost of enabling the whole of the rolling stock of the Great Southern new narrow gauge extension to be run indiscriminately upon either the branch or main line, would not exceed £20,000 to £30,000, so that the practical effect of inserting the third line of rails along the Madras and Great Southern main lines would be accomplished without the expense of it. It is probable that it would not be thought desirable to provide more than a very small proportion of the vehicles of the Great Southern extension with the means of traversing both railways; but it would be necessary to make alterations in the main lines to adapt them to the system, the expense of which would be very small.

36. From what has been stated above, it will be gathered that the existing Tramway from Conjeveram to Arconum might at a small expense be brought into effective operation in union with the main line; and if the Tramway were extended to Chingleput, the cost would be about £69,300. That, as regards the direct line from Madras to Cuddalore, there is but little promise beyond that of passenger traffic, most of it in the immediate neighbourhood of Madras; and that, to the south of Pondicherry, it is certain that both the difficulties and expense of construction would be increased, and the prospect of additional traffic diminished; whilst, for the purpose of completing the through communication from Tuticorin to Madras, that object may be realised at a comparatively trifling expense, by making the junction of the narrow gauge extension at Caroor, thus opening the richest part of the country, and making use of the main lines by a slight alteration of the new rolling stock, and thereby superseding the necessity of the narrow gauge from Madras to Tanjore, and from Tanjore to Trichinopoly, altogether.

37. There is a yet further alternative. It has been shown above that even under the proposed conditions all the objects of a continuous line from north to south without the inconveniences of a break of gauge, may be effected at a mere trifling expense. It remains to be added that, should the general question of the propriety of introducing a different gauge into our Indian Empire be re-considered, and the plans at present under discussion modified by the substitution for the narrow gauge of a cheaper form of construction on the standard gauge, the desired continuous uniform line from Tuticorin to Madras would be secured without any extra expense whatever.

38. Before concluding this minute, I would briefly point to one aspect of the question which ought not altogether to be lost sight of.

39. The shareholders of this, as well as some other Companies, subscribed their moneys under a distinct contract, guaranteeing 5 per cent. interest on their outlay, and the ultimate prospect of 10 per cent. as the result of economical and judicious management. If there be any one Company more than another entitled to the watchful consideration of the Government, the Madras Company surely is so in a peculiar degree, having had a line marked out for it, for political reasons, on a trace commercially most unpromising.

40. Even if it were not inexpedient on general grounds to allow competition between Railways guaranteed by the State, this Company, at the least, ought for the above reason, to be carefully shielded from it; and, sensitive as all capitalists proverbially are, it is to be feared that sooner or later, a complaint cannot fail to be raised, if it be discovered that, after all the outlay incurred and the efforts made to give success to their enterprise under very discouraging conditions, a rival line has not only been permitted to be formed, but even encouraged by the State, thereby putting an end for ever to any hopes which might have been previously entertained.

(Signed) J. T. SMITH,
Chairman,
Madras Railway Company.

RESOLUTIONS

PASSED AT A MEETING OF THE BOARD OF DIRECTORS OF THE MADRAS RAILWAY COMPANY, ON THE 10TH OF NOVEMBER 1871.

RESOLVED:—

That the Chairman's minute be forwarded for the information of the Secretary of State for India, with an expression of the opinion of the Board on the following points:—

1*stly.*—That the proposed coast line of Railway from Madras to Tanjore is not at all required to meet the wants of trade, and will, they have reason to believe, be unremunerative, as compared with lines in other parts of India.

2*ndly.*—That there is not likely to be a large amount of through traffic from Tuticorin to Madras, it being a fact that all the cotton, the produce of the Tinnevelly district, is now shipped direct from Tuticorin to England, and that if there were it could be provided for quite as efficiently and at a great saving of expense by laying a third line of rails along the present Madras line.

3*rdly.*—Even if a narrow gauge line were in existence as far as Belpur, the saving effected by carrying the Great Southern extension from Caroor and laying a third rail along the Madras and Great Southern lines would be more than £300,000.

4*thly.*—That if Colonel Smith's views be correct, the only expenditure necessary to afford an easy connection between the Great Southern extension and Madras may be saved by an outlay of a few thousand pounds in the extra cost of the rolling stock of the extension line.

5*thly.*—That in the opinion of the Board the best point for the junction of the Great Southern Extension Line is at Caroor, and in the opinion of their Consulting Engineer the extension ought to consist of a light railway of the same gauge as the main line. If, however, this be not acceded to, the Board are of opinion that a third rail should be added to the Madras line, provided the plan alluded to in the Chairman's minute of constructing the rolling stock, so as to suit both gauges, be found not to succeed.

6*thly.*—That the Board strongly support the arguments contained in the Chairman's minute as to the great injustice to their shareholders of encouraging the construction of a competing line.

No. 4.

From M. E. GRANT DUFF, Esq., to JULIAN BYRNE, Esq., dated India Office, 19th January 1872.

I am directed by the Duke of Argyll to acknowledge receipt of your letter of 14th November last, No. 2,750, enclosing copy of a minute by the Chairman of the Madras Railway Company, on the proposed narrow gauge line from Madras to Tuticorin, with copies of Resolutions passed by the Board on the subject.

These papers have received the attentive consideration of His Grace in Council, and upon them I am to make the following remarks:—

Being impressed with many of the views and arguments contained in the Chairman's minute, His Grace is desirous that the whole subject of railway communication in Southern India should be again carefully examined, before the system is definitively decided on.

He is of opinion that the development and carrying out of this system, as well as its economical construction and working, is more likely to be satisfactorily accomplished by placing it in the hands of one agency, which would exclusively apply itself to the object in view, rather than through the instrumentality of three separate Companies, with interests which, as the Board and their Chairman point out, may probably be antagonistic to each other. What, therefore, the Duke of Argyll now wishes to propose is that the Great Southern of India and the Carnatic Railway Companies (the union of which he had previously suggested) should be further amalgamated with the Madras Railway Company.

The correspondence with the Boards of those Companies is forwarded, herewith, and the Secretary of State commends the subject to the consideration of the Directors of the Madras Railway Company, and he hopes that they will find they are able readily to co-operate with the other Boards for effecting an amalgamation upon fair and equitable terms.

No. 5.

From JULIAN BYRNE, Esq., Secretary, to the Under Secretary of State for India, 33, New Broad Street, London, E. C., 2nd February 1872.

I HAVE been directed to acknowledge the receipt of Mr. M. E. Grant Duff's letter of the 19th instant, forwarding copies of correspondence with the Directors of the Great Southern of India and Carnatic Railways, and expressing the hope of the Secretary of State that the Board will be able readily to co-operate with the Boards of those Companies in effecting an amalgamation upon fair and equitable terms.

In reply, I am instructed to state, for the information of His Grace, that while this Board quite recognize the truth of the opinion that the development and carrying out of the system of railway communication in Southern India is more likely to be satisfactorily accomplished by one agency than through the instrumentality of three separate Companies, they very much regret their inability to recommend to their proprietors the adoption of new undertakings which, in their present form, they consider injurious to their interest, or to consent to associate themselves in the management of the extensive interests committed to their charge with a disproportionate number of colleagues whose views differ from their own.

The attention of the Secretary of State in Council has already been drawn by the Chairman's minute and the Board's resolutions to the fact that a line of railway along the edge of the sea, like a line skirting a barren desert, could not be expected to be so profitable as one passing through the midst of fertile country, even if the sea offered no competition, and that, from the

circumstance of the proposed Carnatic line crossing all the drainage of the country, it must necessarily be more expensive to construct than an arterial branch line passing along a valley the seat of cultivation.

If the project of the Carnatic Company be carried out, as at present proposed, it could not, as the Board think, be expected to be otherwise than a burden upon the State for many years to come, and, in like manner, the present Great Southern Railway and its extension would probably be a loss to the Government for a very considerable time.

It would, therefore, be clearly contrary to the interests of the proprietors of the Madras Railway to assent to an union of their capital, now making steady advances towards the fulfilment of the guarantee and a possible surplus, with the capitals pledged to these undertakings, except on the condition that this Board should previously agree to such a modification of the proposals now under consideration as may, in their opinion, tend to make them, if not speedily profitable, yet at all events not so prolonged a burthen as they would be in their present form.

Considering how entirely the interests of the Government and the Madras Railway Company are identified in discouraging a policy that will be prejudicial to the traffic of the railway, the Board, while anxious to express their willingness to meet the wishes of the Secretary of State as far as possible, feel bound to reiterate the expression of their hope that His Grace will not sanction the scheme of the Madras Government, as sketched out in the letter of the Government of India of the 13th July 1871, which as been communicated to them.

No. 6.

From M. E. GRANT DUFF, Esq., to JULIAN BYRNE, Esq., dated India Office, 15th February 1872.

I AM directed by the Secretary of State for India to acknowledge receipt of your letter of the 2nd instant, No. 2,781, stating the views of the Directors of the Madras Railway Company, with respect to the proposed amalgamation of that Company with the Great Southern of India and the Carnatic Railway Companies.

The Board's objections to the amalgamations are explained to be a disinclination on their part "to recommend to their proprietors the adoption of new undertakings which, in their present form, they consider injurious to their interests, or to consent to associate themselves in the management of the extensive interests committed to their charge with a disproportionate number of colleagues whose views differ from their own."

I am, however, to point out that, although agreements have already been entered into with the Great Southern of India and Carnatic Railway Companies for the extension of the line of the former Company to Tuticorin and of that of the latter to Cuddalore, one practical effect of the proposed amalgamation would be to enable a united Board, in communication with the Government, to revise the whole subject of railway extension in Southern India, and to modify the arrangements hitherto contemplated in whatever manner might appear best calculated to meet the requirements of the public, and to prevent needless competition between different parts of one and the same railway system.

His Grace cannot doubt that all the members of a united Board, to whatever section of the amalgamated undertaking they had previously belonged, would be ready impartially to consider whatever modifications of plan might be laid before them, with a view to such important objects.

The Duke of Argyll begs that the Directors will weigh these considerations before they regard their decision as final; and, finding that they are still in favour of the policy of avoiding competition by forming one united association, he hopes that they will not object again to review all the circumstances of the case, and that they will not come to the conclusion that it would be opposed to the interests of the shareholders to agree to the proposed amalgamation.

REFERRED to the Consulting Engineer for Railways for any observations he may have to offer.

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

All communications should be addressed to the Secretary.

No. 1023 R.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY.

To

THE SECRETARY TO THE GOVERNMENT OF MADRAS,
PUBLIC WORKS DEPARTMENT (RAILWAY).

SIMLA, JULY 5, 1872.

SIR,

I AM directed to acknowledge the receipt of your letter No. 1322, dated 14th May 1872, forwarding a copy of a report dated 1st May 1872, from the Consulting Engineer for Railways, urging that the Great Southern of India and the Carnatic Railways should be amalgamated, the Madras Railway being worked under distinct agency, and expressing the concurrence of the Government of Madras in Colonel Shaw-Stewart's views. The Government of India learn also that a copy of this letter was sent to the Secretary of State in letter No. 4 of 1872.

2. The Government of Madras is acquainted with the general purport of the discussion which has been lately carried on between the Secretary of State and the three Boards of Directors in England; but I am desired, for convenience, now to forward a copy of a despatch No. 26, dated 22nd February 1872, from the Secretary of State, which informs the Government of India that His Grace has proposed the amalgamation of the Madras Railway Company with the other two Railway Companies, being actuated by the belief that such a combination would be attended with greater advantages than those to be anticipated from a fusion of only two of the Railway Companies whose operations are carried on in Southern India. The Secretary of State has gone further than was contemplated by the Government of India, who thought, in 1871, that an amalgamation of the two smaller Companies only was desirable.

3. Without pursuing further this aspect of the question, the Governor General in Council wishes, in the first instance, to discuss its effects irrespective of the different views which the several Companies may entertain, and I am, therefore, to request that the Government of India may be favored with an expression of opinion from the Madras Government as to any changes in the alignment of the proposed railways which that Government would recommend, in case it were decided that the amalgamation of the three Companies should be effected, that is to say, what bearing, if any, the fusion of the three Companies into one Company should have on the revision of the existing projects.

4. I am to request that a copy of your reply may be communicated direct to Her Majesty's Secretary of State.

I have the honor to be,
SIR,
Your most obedient Servant,

H. Brownrigg *Colonel, R. E.,*
Offg. Deputy Secretary.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY.

To

THE SECY. TO THE GOVT. OF MADRAS,
P. W. DEPT.

No. 1023 R.

Dated Simla, 5th July 1872.

Received —16—

In reply to letter No. 1322, *dated the* 14*th May* 1872, *forwards copy of a despatch from the Secretary of State on the subject, and requests an expression of opinion as to any changes in the alignment of the proposed railways which the Madras Government would recommend in case it were decided to carry out the amalgamation of the Carnatic, the Great Southern of India, and the Madras Railways, that is to say, what bearing, if any, the fusion of three Companies into one Company should have on the revision of the existing projects. Requests that a copy of their reply may be sent direct to Her Majesty's Government.*

India Office,
London, 22nd February 1872.

Railway,
No. 24

To His Excellency The Right Honourable The Governor General of India in Council.

MY LORD,

With reference to your Excellency's Despatch of the 13th July last, No. 75, relative to Railway extensions in Southern India, in which you suggest that overtures should be made to the Great Southern of India and the Carnatic Railway Boards, in view to the amalgamation of the two Companies, I have to inform you that, cordially concurring in this suggestion, I have acted upon it. Indeed, I have gone further, and have proposed the amalgamation of the Madras Company also, with the other two, as it appeared to me that such a combination would be attended with greater advantages than those to be anticipated from a fusion of two only of the Railway Companies whose operations are carried on in Southern India. A copy of the correspondence with the several Boards, so far as it has yet extended, is transmitted herewith for information, and I shall keep your Excellency informed of the further steps that may be taken in the matter. Until a decision on this point is arrived at, consideration of the particular scheme submitted with your Despatch under reply will be deferred.

I have the honour to be,
My Lord,
Your Lordship's most obedient humble Servant,
(Signed) ARGYLL.

ENCLOSURES.

PART I.

CORRESPONDENCE with the Great Southern of India Railway Company.

No. 1.

India Office,
6th September 1871.

Sir,

I am instructed to transmit, for the information of the Directors of the Great Southern of India Railway Company, copy of a Despatch* from the Government of India, stating the result of their deliberations in regard to a system of Railways for Southern India. The line which has received the support of that Government commences at Tuticorin and proceeds, *viâ* Madura, Trichinopoly, Tanjore, Combaconum, Belpur, and Chingleput, to Madras, and would, under present circumstances, be constructed partly by the Great Southern of India Railway Company, and partly by the Carnatic Railway Company; but it will be seen that the Government of India has proposed that the two undertakings should be united and formed into one and the same concern.

* No. 75, dated 13th July 1871.

It appears to the Duke of Argyll that the proposed amalgamation would on many grounds be advantageous to the interests of the two undertakings, and His Grace is desirous of being informed whether the Directors of the Great Southern of India Railway Company are prepared to co-operate in effecting it.

I am, &c.,
(Signed) HERMAN MERIVALE.

H. W. Notman, Esq.

No. 2.

Great Southern of India Railway Company,
2, Leadenhall Street, London, E.C.,
13th October 1871.

No. 481.

Sir,

With reference to your letter of the 6th September last, I am now desired to acquaint you that this Board are willing to co-operate in effecting an amalgamation of this Company with the Carnatic Railway Company, on such equitable terms as may be agreed upon.

In the event, however, of any difficulty arising in carrying out this suggested amalgamation, the Board desire me to inform you that they are prepared, not only to undertake the construction of the line, with the narrow gauge, to the River Coleroon, as proposed by the Government, but that, in consequence of the adoption of that gauge upon the extensions generally, which they understand has now been finally decided upon by His Grace the Duke of Argyll, and the saving which it is estimated will thereby be effected, they would probably be able, with the capital which has already been raised and *paid into the Treasury of the India Office*, to carry the line beyond the Coleroon for a further distance of from 65 to 70 miles.

As soon as His Grace is in a position to come to a decision on this subject, the Directors will be glad to be favoured with the same, in order that no time may be lost in carrying out his views.

I have, &c.,
(Signed). HENRY W. NOTMAN,
Secretary.

The Under Secretary of State
for India.

No. 3.

India Office,
16th January 1872.

With reference to recent correspondence on the subject of a proposed amalgation of the Great Southern of India and the Carnatic Railway Companies, I am directed to state that the Duke of Argyll is gratified to learn, by your letter of the 13th October last, No. 481, that the Directors of the Great Southern of India Railway Company were prepared to co-operate in effecting the amalgamation "on such equitable terms as may be agreed upon."

The question was not at that time pursued, in consequence of some hesitation on the part of the Carnatic Board to agree to the proposition. His Grace, however, attached so much importance to the benefits likely to ensue from the early union of the undertakings that he requested the Board again to consider the subject. A copy of the correspondence with that Board is forwarded herewith; and the Directors of the Great Southern of India Railway Company will perceive that the Carnatic Board are about to submit the proposition for the approval of their shareholders.

Under these circumstances it is probable that the mode of carrying out the amalgamation may soon have to be considered. But since the matter was last under notice, it has been thought most desirable that the amalgamation should not be confined to the Great Southern of India and the Carnatic Companies, but should embrace also the Madras Railway Company. A copy of the correspondence on the subject with the Board of the latter Company is also sent herewith for the Directors' information. The Duke of Argyll hopes that the Board will agree with him in the desirableness of adopting the larger scheme, and that they will be prepared to co-operate carrying it out.

I am, &c.,
(Signed) M. E. GRANT DUFF.

H. W. Notman, Esq.

No. 4.

Great Southern of India Railway Company,
2, Leadenhall Street, London, E.C.
No. 497. 17th January 1872.

Sir,

I have the honour to acknowledge receipt of your letter of the 16th instant, which was laid before the Directors of this Company at their meeting yesterday.

In reply, I am instructed to acquaint you that, as previously, the Board were willing to co-operate in effecting an amalgamation of this Company with the Carnatic Railway Company, so now they will be prepared to co-operate in carrying out the larger scheme, suggested in

the letter under reply, embracing the Madras Railway in the proposed amalgamation, upon such equitable terms as may be agreed upon, being satisfactorily arranged.

I am, &c.,
(Signed) HENRY W. NOTMAN,
Secretary.

The Under Secretary of State
for India.

PART II.

CORRESPONDENCE with the Carnatic Railway Company.

No. 1.

India Office,
Sir, 6th September 1871.

I am instructed to transmit, for the information of the Directors of the Carnatic Railway Company, copy of a Despatch* from the Government of India, stating the result of their deliberations in regard to a system of Railways for Southern India. The line which has received the support of that Government commences at Tuticorin and proceeds, *vid* Madura, Trichinopoly, Tanjore, Combaconum, Belpur, and Chingleput, to Madras, and would, under present circumstances, be constructed partly by the Great Southern of India Railway Company, and partly by the Carnatic Railway Company; but it will be seen that the Government of India has proposed that the two undertakings should be united and formed into one and the same concern.

* No. 75, dated 13th July 1871.

It appears to the Duke of Argyll that the proposed amalgamation would on many grounds be advantageous to the interests of the two undertakings, and His Grace is desirous of being informed whether the Directors of the Carnatic Railway Company are prepared to co-operate in effecting it.

I am, &c.,
M. R. Scott, Esq. (Signed) HERMAN MERIVALE.

No. 2.

Carnatic Railway Company, Limited,
62, Moorgate Street, London, E.C.,
Sir, 3rd October 1871,

I am desired by the Board of Directors of the Carnatic Railway Company, with reference to the India Office letter, dated 6th September, and its enclosures, inquiring whether the Directors are prepared to co-operate in effecting an amalgamation with the Great Southern of India Railway Company, to state that, having reference to the circumstances under which the Company was formed, to the object the Directors had in view of demonstrating the beneficial results to India of the construction of narrow gauge, light, and cheap lines of railway, to the reasonable expectation of the proprietary that they shall reap the fruit of their foresight and enterprise, and to the certain prejudice of their interests which will attend the suggested fusion of the two Companies, the Directors are unable to recommend the shareholders to entertain the proposition at present.

When the two Companies shall have completed their respective systems, the working results shall have been ascertained, and the financial value of the two undertakings can be fairly estimated, should

His Grace the Secretary of State deem it advisable, the Board will be prepared to give the subject their full and attentive consideration.

The Board observe that the Government of India consider Tanjore the most suitable point of junction of the two lines, a view of which the Board believe that the soundness will be confirmed in practice.

I have, &c.,
(Signed) M. R. Scott,
Secretary.

The Under Secretary of State
for India.

No. 3.

India Office,
4th January 1872.

Sir,

The Secretary of State has had before him in Council the replies* which were returned by the Directors of your Company and of the Great Southern of India Railway Company to his† inquiries whether they would be prepared to co-operate in effecting an amalgamation of the two Companies.

* Letter from Carnatic Railway Company, dated 3rd October 1871.
Letter from Great Southern of India Railway Company, dated 13th October 1871.

† Letter from India Office, dated 6th September 1871.

2. While the Directors of the Great Southern of India Railway Company have expressed their willingness to join in effecting an amalgamation on such equitable terms as may be agreed upon, the Directors of the Carnatic Railway Company state that they are unable to recommend their shareholders to entertain the proposition at present, but that at some future time, when the two Companies shall have completed their respective systems, and the financial values of the two undertakings can be fairly estimated, the Board will be prepared to reconsider the proposition.

3. As it appears to the Secretary of State that one great advantage to be gained by the amalgamation of the two Companies will be lost by the delay suggested by the Directors, he is induced to ask the Board again to reconsider the proposal. Not only economy of construction and management, but unity of purpose, would be secured by the amalgamation of the two capitals as soon as practicable. He would even go further, and, being of opinion that considerable public benefit would ensue from the junction of the three Companies now engaged on lines of railway in the Madras Presidency, he would be glad if the Madras, the Great Southern of India, and the Carnatic Railway Companies would agree to apply their joint resources to one system of railways for Southern India, and so avoid anything like diversity of interest or competition.

4. With regard to the comparative value of the three lines, the Secretary of State would remark, in reference to the observations of the Directors on this point, that the guarantee is what would really influence the public and the shareholders in their estimation of the property.

5. The Secretary of State accordingly again commends the subject to the consideration of the Board, and if they continue to have doubts with regard to the feelings of the shareholders, he would suggest that the case should be submitted to them in order that their opinion may be ascertained.

I am, &c.,
(Signed) M. E. Grant Duff.

M. R. Scott, Esq.

No. 4.

Carnatic Railway Company (Limited),
62, Moorgate Street, London, E.C.
10th January 1872.

No. 4/72.

Sir,

I am desired by the Board of Directors of the Carnatic Railway Company to acknowledge your Letter of the 4th instant, requesting, for reasons assigned, that the Directors will reconsider the subject of an amalgamation, and that, if they have any doubts as to the feelings of the shareholders, that the case may be submitted, in order that their opinion may be ascertained.

In reply I am directed to state, that the Board's views upon the subject were clearly stated in their communication of the 3rd October last, but that, under all the circumstances referred to in your letter, and without recognizing the view taken that the guarantee alone influenced the shareholders to embark in the undertaking, the Board will bring under the consideration of the shareholders at their annual meeting next month, the suggestion that an amalgamation of the three Companies should be effected upon such a fair and equitable basis as shall be agreed upon.

I have, &c.,
(Signed) M. R. Scott,
Secretary.

The Under Secretary of State
for India.

No. 5.

Carnatic Railway Company (Limited),
62, Moorgate Street, London, E.C.
24th January 1872.

No. 10/72.

Sir,

I am desired by the Board to forward you a copy of the Report, from which it will be seen that the subject of the amalgamation has been specially referred to, and also a copy of a resolution of the Board, with a memorandum on the subject of a communication which the Board understand has been submitted to the Secretary of State by the Madras Railway Company, in reference to the proposals of the Carnatic Company.

I have, &c.
(Signed) M. R. Scott,
Secretary.

The Under Secretary of State
for India.

Enclosure in No. 5.

Carnatic Railway Company, Limited,
62, Moorgate Street, London,
January 18th, 1872.

At a Meeting of the Directors of the Carnatic Railway Company held this day, the following Memorandum upon the Resolutions of the Madras Railway Company of the 10th November last was read.

Memorandum.

The Chairman of the Madras Railway Company has written a minute upon the proposed extension of the Carnatic and Great Southern of India Railway Companies from Madras to Tuticorin, which has been sent by the Madras Board to the India Office. The minute describes

"the unsound character" and "injurious consequences" of the proposals of the Carnatic and Great Southern of India Railway Companies; assumes that the line is not, on an average, further than fifty-five miles from the Madras line, and must, therefore, be a competing line; that the Carnatic, so far as the first section from Arconum to Conjeveram, was "quite unsuccessful," "built of slight dimensions and cheap character;" "that the traffic of four-fifths of the line on one side would be carried by "the Madras Railway;" that, on the sea-side, it would be cheaper to carry by sea than by rail; that "there is not much prospect of satisfactory returns;" that the Madras Railway Company can do the work much better than any new Company, "the whole area being worked "with unity of purpose and action, instead of the conflict of competing "interests, opinions, and authority;" that the Pondicherry trade can preferably come round by the Madras line; that the Carnatic Railway cannot be constructed cheaply, and will cost much above the 5,000*l.* per mile estimated; that the 435 miles proposed to be constructed, "confessedly of weaker construction," and "capable of working only at "slow speeds," could be avoided by allowing the Madras Railway to connect the Tuticorin terminus with their line,—and suggesting that, "if there were a promise of success, it would be proper for the Madras "Company to undertake the work," if not, "it ought not to be under-"taken at all;" and "that it would be more for the interests of the "Carnatic shareholders to unite their capital with that of the Madras "Company," than to pursue "one hazardous scheme after another."

The Madras Railway Board, in transmitting this minute to the Secretary of State, intimate that, in their opinion the Carnatic extension is "not at all required to meet the wants of the trade," and will be comparatively "unremunerating," and strongly deprecate the "great injustice of encouraging the construction of a competing line."

The Board's Resolutions are dated 10th November 1871.

The Carnatic Board have only been made aware of the nature of this document on the 13th January 1872, after they had, at the suggestion of the Secretary of State, consented to submit the question of an amalgamation of the three Companies to their shareholders for consideration. Whether it would not have been more advantageous to have sent the Madras Railway Company's Resolution to the Carnatic Company, with a view to hear the other side, it is needless to inquire, but it is desirable that the opinions and grounds of action on the part of the Carnatic Company should be clearly expressed, that the Secretary of State may be enabled rightly to estimate the merits and demerits of the respective plans.

That the Madras Railway Company should desire to secure a monopoly of all Southern India is not surprising, but their views indicate very imperfect information as to the sound and economical principles which should alone guide the Government decision.

The accuracy of the statements contained in the minute may be estimated by the few following facts.

The Carnatic Railway, so far as open, has earned about 3 per cent. profit already upon the short section of nineteen miles; it is therefore in no respects "unsuccessful;" it can convey when required, and has conveyed, the traffic at thirty-five miles an hour; it has been constructed well, cheaply, and strongly, and the Company are certainly entitled to claim at least equal credence for the correctness of their estimate of future cost as the Madras Company for their unsupported assertion that it will be much exceeded. The Company's operations have been conducted with sufficient regularity and judgment to repudiate the charge of advocating "one hazardous scheme after another." The distance between the Madras Railway and the sea averages nearly ninety miles, and no person conversant with railway traffic questions would for one moment argue that a line at a distance of about sixty-six miles, running north and south, could be a competing line with another running east

and west and partly south, with this large unoccupied interval of 15,000 square miles between them; and it is a no less incorrect assertion that four fifths of the traffic on one side would ever reach the Madras line, or that the sea would be preferred as an alternative on the other. The Pondicherry trade requires the Carnatic line, and not to be taken round, at increased cost of time and money, by the circuitous route of the Madras Railway. The didactic opinions that the Carnatic line "is not "at all required to meet the wants of the trade," that it will be "unre-"munerative," that, if likely to be successful, the Madras Company should have the Carnatic Company's line, and, if not, it should not be made at all, and that it would be preferable for the latter Company to unite their capital with the Madras Company,—however naturally entertained by the Madras Company,—import neither evidence nor argument into the discussion; but the avowal that the Madras line had been laid out, for political reasons, "on a trace most unpromising," and that the construction of the Carnatic line "will put an end for ever to any hopes which might have been previously entertained" by the Madras Company, probably embodies the whole gist of the question.

The Directors of the Carnatic Railway Company have shown their readiness to obtain full and fair consideration on the part of their shareholders to the suggestion of the Secretary of State for an amalgamation into one undertaking of the several Railway Companies in the Madras Presidency, and they have no doubt that the arguments upon which this course is recommended will have their due weight with the shareholders in their decision.

The Board only desire to place on record, for their own justification, that, however disposed they may be to meet any reasonable requisition or suggestion emanating from the Secretary of State, they would decline to entertain it under any circumstances if they had reason to believe that the recommendation had been influenced by the fallacious assumptions which pervade the document above referred to.

Resolved—That, with reference to the minute of the Chairman of the Madras Railway Company, and the Resolutions of their Board on the 10th November last, as the Directors of the Carnatic Railway believe the statements contained in the minute to be, for the most part, unfounded and erroneous, a copy of the foregoing Memorandum be forwarded to the India Office, for the information of His Grace the Secretary of State for India in Council.

By order of the Board,
M. R. Scott,
Secretary.

No. 6.

India Office,
1st February 1872.

Sir,

I am directed by the Duke of Argyll to acknowledge receipt of your Letter of the 24th ultimo, No. 10, forwarding copy Report to be submitted to the shareholders on the 5th instant; also copies of a memorandum on the minute by the Chairman of the Madras Railway Company of the 14th November last, and of the Board's resolution thereon.

With reference to the last paragraph of the memorandum I am to state, that it is his Grace's desire to receive and consider the views of all parties interested in the proposed amalgamation of the three Railway Companies whose operations are carried on in the Madras Presidency; and that the memorandum now forwarded will receive the same atten-

tion as that bestowed on the minute by the Chairman of the Madras Railway Company.

I am to add, that the conviction that it would be for the benefit alike of the Government, the public, and the shareholders that the Companies should amalgamate, was arrived at by the Secretary of State in Council on general grounds, quite independent of those set forth in Colonel Smith's minute, on which the Carnatic Board animadvert.

I have, &c.
(Signed) HERMAN MERIVALE.

The Under Secretary of State
for India.

No. 7.

Carnatic Railway Company, Limited.
62, Moorgate Street, London, E.C.;
6th February 1872.

No. 14/72.

Sir,

I have the honour, by the desire of the Board of Directors, in continuation of their letter of 10th January 1872, to state, for the information of His Grace the Secretary of State, that the suggestion conveyed in your letter of 4th January 1872, upon the subject of the proposed amalgamation of the three Companies now engaged in Railways in the Madras Presidency, was submitted to the members of this Company in general meeting yesterday, upon which the following Resolution was passed unanimously:—

Resolved—"That, with reference to the suggestion of His Grace the "Secretary of State of an amalgamation of the three Railway Com- "panies in the Madras Presidency, the shareholders, not prejudging "any arrangements which may be conducive to the general interests, "and capable of being effected on fair and equitable conditions, "authorize the Directors to negotiate provisionally."

I have, &c.,
(Signed) M. R. SCOTT.
Secretary.

The Under Secretary of State
for India.

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PART III.

CORRESPONDENCE with the Madras Railway Company.

No. 1.

Madras Railway Company,
33, New Broad Street, London, E.C.
2nd October 1871.

No. 2741.

Sir,

It having come to the notice of the Board of Directors that a proposition is about to be submitted to His Grace the Secretary of State for India in Council for the construction of certain lines of railway, ending eventually in the completion of a continuous line from Madras to Tuticorin, a measure which they are of opinion will be most injurious to the interests of this Company, and by no means the best suited to promote the welfare of the people, I am instructed to request that you will be good enough to bring to the notice of His Grace the fact that hitherto no communication has been made to this Company of the intention of the Government of India in respect of this important matter, and that the Board are most anxious to be permitted to submit the facts within their knowledge and their views upon the whole question before any final decision is taken.

I am, &c.,
(Signed) WM. EDWARDS.
for Secretary.

The Under Secretary of State
for India.

No. 2.

India Office,
20th October 1871.

Sir,

I am directed by the Secretary of State for India to acknowledge the receipt of your letter of the 2nd instant, No. 2741, relative to the proposed completion of a continuous line of railway from Madras to Tuticorin, and to acquaint you, in reply, that he will be happy to receive a communication of the views of the Directors of the Madras Railway Company on the subject.

I am, &c.,
(Signed) J. COSMO MELVILL.

Julian Byrne, Esq.

No. 3.

No. 2750.

Madras Railway Company,
33, New Broad Street, London, E.C.,
14th November 1871.

Sir,

Adverting to Mr. Melvill's letter of the 20th ultimo, I am directed to forward herewith a minute by the Chairman, with reference to the proposed narrow-gauge line from Madras to Tuticorin, together with copy of Resolutions passed by the Board, expressive of their views on the subject, and I am to request that His Grace the Secretary of State for India in Council will be pleased to give his favourable consideration thereto.

I am, &c.,
(Signed) JULIAN BYRNE,
Secretary.

The Under Secretary of State
for India.

MINUTE

ON THE SUBJECT OF THE PROPOSED NARROW-GAUGE LINE FROM MADRAS TO TUTICORIN.

49/35

The correspondence which has been laid before the Board is of a nature which entitles it to their most serious consideration, and it may be of importance to draw the attention of His Grace the Secretary of State to the unsound character of the measures now pressed upon him for sanction, and the injurious consequences likely to flow from their adoption.

2. When the late Marquis Dalhousie applied his great Parliamentary experience of English railways to the establishment of a system for India, one of the objects contemplated was, to prevent the mischiefs which in England have attended the indiscriminate and unconnected establishment of rival competing lines, interfering with one another, and depriving both the public of cheap accommodation and the shareholders of satisfactory profits.

3. The system which Lord Dalhousie established was, accordingly, that of a few trunk lines, to which it may be presumed it was intended that branches should afterwards be attached; more especially as it can be shown that in that way only can the maximum of useful effect be produced at a minimum of cost.

4. But this principle seems to be lost sight of in the measures now proposed for acceptance; the ultimate effect of which is clearly the establishment of a second *trunk* line, in general direction parallel to that of the Madras Railway, in no part more distant than about 87 miles, and on the average about 55 miles; taking its general direction, according to the description given of it, as from Madras direct to Belpur, and thence to Tanjore and Trichinopoly, about 200 miles in length.

5. Before making any remarks upon this special proposal, it may be as well to point out in what respect, comparing the two systems of a trunk line with branches on the one hand, and on the other a second or more trunk lines to cover the same ground, the former is preferable.

6. In the first place it must be noticed that two trunk lines, converging to a common centre, though they would give facility of communication with that centre to the towns on their own track, fail to provide means of communication to the *other* side of other trunk lines, except by the tedious *détour* through the centre, and back again. For instance, if the proposed line were constructed from Tanjore to Madras, passing near Pondicherry, the inhabitants of the last-named city could not communicate with the territories of Mysore except by the long *détour* either by Trichinopoly, Erode, and Jollarapett, or by Madras and Jollarapett, a distance of at least 250 miles.

7. Another important point of difference between the two systems is the much greater economy of the trunk and branch over the double trunk system. For the latter there is a double and useless expenditure, in the first instance of the large terminal station and buildings connected with it, and many of the other stations, and the great permanent burthen of a double establishment both in England and India. The consequence of this is, that while a trunk line could in many cases afford to carry goods on its branches for a mere trifle, the large establishments and fixed charges being already paid for, a second trunk is compelled to secure the highest rates it can obtain, to meet its heavy demands of a permanent character.

8. Again, I may observe that two or more trunks in the same area necessarily compete with one another, and the profit from the maximum traffic of the given area is divided between two or more capitals instead of only one.

9. To provide a given area with accommodation for traffic requires, not numerous trunk lines, but one trunk line, with as many branches as can be profitably constructed; these again throwing out feeders of a cheaper kind, if there be traffic enough to make them remunerative. This method will in time, as trade is developed, provide the whole country with an arterial system of communication. It is impossible to do so by direct lines from the centre to every important point; and if traffic charges by the rail be adjusted, not according to distances along the branch and trunk, but according to the direct distance (as the crow flies) between the centre and every given point, the only respect in which accommodation by the branch and trunk will fall short of that by a direct line will be as to time; and the slight difference in that respect, compared with the enormous improvement actually effected, cannot be thought worthy of a moment's consideration.

10. It may be necessary here to advert to the argument that branches cannot be conveniently worked with a trunk line of a different gauge. This will be disposed of hereafter, vide para. 35.

11. We may now proceed to remark upon the scheme referred to in the correspondence, and in doing so its origin and past history ought to be mentioned.

12. In the year 1865, a Company constructed a small branch tramway from Arconum to Conjeveram. It was built cheaply, being laid, wherever it was expedient to do so, upon the common roads. It was quite unsuccessful, and a proposition was made and acceded to by the Secretary of State, to extend the line to Cuddalore, for which purpose a contract has been entered into.

13. Subsequently it has been proposed to drop the connection with the Madras Railway, and form the line direct from Madras to Cuddalore, with the object eventually of carrying it on to Tanjore or Trichinopoly, and connecting it by the aid of the Great Southern of India Railway, with a new line of narrow gauge, extending from Trichinopoly to Tuticorin, thus forming one continuous narrow-gauge line of 435 miles in length from Madras to the Southern Port.

14. This would in reality be a *trunk* line, built of the slight dimensions and cheap character of a branch, and it appears to be in serious contemplation, after the Government have encountered the great expense of completing a substantial trunk line of the most solid dimensions and character, and competent to operate upon the whole traffic of the area subtended by it, to put it aside, and incur the expense of a rival line of a much less solid character, to share the work, and mar the prospects of both undertakings.

15. In order to exhibit this clearly, it is necessary to premise that, assuming* the cost of conveying goods by land to be 3 annas per ton per mile, it is capable

* When the charge by the rail is one half that by the common road, the cost of conveyance will be the same either direct by the road, or by the road and rail, at every point whose direct distance from the rail is one half its direct distance from the centre, e.g. if the rate by the road is 2 annas and by the rail one anna, a merchant sending goods from a point 20 miles distant from the rail, and 40 from the centre, would have to pay the same money in either case, namely, by the road and rail 40 annas for the road and 40 annas for the rail, total 80 annas, and by the road only 2 annas multiplied by 40 or 80 annas; putting out of view the greater speed and security by the rail. To all nearer than the point there is a difference in favour of the rail according to distance. Now if a curve be traced fixing along the whole line, the points where the distance from the rail is one half the direct distance from Madras, it will be found to include four-fifths of all the country lying between the present South West Line and the proposed Carnatic Line, extended to Tanjore. But the charge by the rail might be taken, as in fact it is, at only *one-third* that by the road (it would be even less than this if the rates were reduced, which is impossible by the common road); and hence if it be granted that merchants will in the main adopt that method of carrying out their trade which is cheapest and best, then it will follow that as it would answer the purposes of four-fifths of the country to use the rail when the charge by it is one half that of the common road, it must "à fortiori" do so when it is only one-third. It may be shown that it would answer for 9-10ths of the country.

of demonstration that throughout more than four-fifths of the country lying between the two lines, the merchandize and heavy goods could be attracted to the Madras Railway, for conveyance to Madras, at the rate of 1 anna per ton per mile, and a much larger proportion at reduced rates, if a new line did not exist. Hence, on its west side the only goods traffic which can be expected for the new line is a share of that within reach of the Madras Railway.

16. It is obvious, in fact, that, on the establishment of the new trunk, all the traffic of the districts lying between it and the present railway would be divided between them, notwithstanding the whole could be attracted to and carried by the latter, either by adjustment of the rates, or the construction of cheap branches where called for.

17. As regards the eastern side of the new railway, assuming the charge for goods to be in the proportion of 12 pies per ton per mile by the rail, 3 annas by the common road, and 3 pies by sea, it is the fact, that with the exception of the immediate neighbourhood of Madras, and a few miles below the latitude of Porto Novo, where the country is brought within the influence of the Great Southern of India Railway, there is hardly a part where it would not be cheaper for a merchant having goods *actually on* the new line, to carry them by land to the coast and send them to Madras by sea.

18. Hence it appears that it is not reasonable to expect any large amount of goods traffic from the eastern side of the proposed new line. On the western, as above stated, it would take part of the traffic now within reach of the Madras Railway.

19. Referring exclusively to the first half of the above line, viz.:—that which is already approved from Madras to Pondicherry, I would observe that there is not much prospect of satisfactory returns. It is probable that quite close to Madras there would be a considerable passenger and a fair goods traffic, consequent on the demands of the million inhabitants of that city; but for long distances the agricultural produce of the districts traversed is of too small value to pay railway charges, and there is but little other. Bulky and cheap goods, when destined for Madras from a distance and near the coast, will almost in all cases be sent by sea, and the profits of the line be mainly supported by passengers.

20. Such a line, if carried no further than Pondicherry, would not materially interfere with the existing Madras line, except in so far as *any* new Company operating within the area which properly belongs to the Madras Company must interfere with its fair hope of success. What this Company is prepared to undertake, and which it is desirable to entrust to it according to the views of the Government of Madras,* is the duty of supplying all the traffic accommodation required by the districts within reach, and which having large establishments on the spot, it can do so much better than any new Company; the whole area being worked with unity of purpose and action, instead of the conflict of competing interests, opinions and authority.

*Col. Orr's letter to the Government of India, No. 940 of the 30th March, 1871, para. 8.

21. As regards the connection with Pondicherry, I will venture to hazard the opinion that, while the traffic from that city would be insufficient to justify the continuation beyond Chingleput, a branch from the main line Arcot station (which would incidentally remove the difficulty of the want of connection between the city and the rail) would be far more useful to French trade than direct communication with Madras. What is required by French interests, as it appears, is a communication with the interior; and although a branch through Tindevanum to Arcot would increase the length of the journey to

Madras from 121 (via Belpur) to 138 miles, the extra cost of which might be easily compensated by an adjustment of the rates, the fact of its placing the French merchants within easy access, both of the whole of Mysore by the Bangalore Branch, and the interior of India by the Bombay line, could not fail to give it the preference. Such a line too, instead of vainly competing with the sea, would, in conjunction with the Madras Railway, attract all the traffic between the Palar and Panar Rivers, taking it either to Madras or the interior of the country, as might be desired.

22. The above remarks apply to the proposed line to Cuddalore, as approved, to which may be added, referring to the observations of para. 20 that, if made at all, such a line could be worked much more cheaply by the Madras Company than any separate and independent one. If the line would pay at all, it would do so far more readily to a Company already possessing large terminal stations and efficient establishments, than it could to another Company burthened with the cost of creating and maintaining them. If there were a promise of success, having the advantages just named, it would be proper for the Madras Company to undertake the work; if not, it really ought not in the interests of the people of India, to be undertaken at all.

23. It ought to be mentioned, both as respects the direct line to Chingleput and Cuddalore, and its extension to Tanjore or Trichinopoly, that, crossing as they must the whole drainage of the country, it is hardly possible they could be constructed very cheaply. The estimate of £5,000 per mile, laid before the Government of India, has been accepted and used in this minute, but I feel bound to express my own conviction that it is much below what the ultimate cost will be. The cheapest of the present main lines, the Great Southern of India, though carefully planned so as to avoid the difficulties of the drainage, and though but "sparingly stocked," has cost £8,658 per mile to this date, and I cannot bring myself to think it probable that a new railway on the proposed track, even allowing for its slighter scantling, will be durably constructed for so very much less. The very Tramway above referred to, though laid partly on the common roads, has cost, including all expenses, nearly £3,300 per mile.

Government of India to Secretary of State, No. 75 of the 13th July, 1871, para. 8.

24. One of the chief recommendations of the proposed future extension of the line to Tanjore or Trichinopoly seems to be the apparent advantage of completing a continuous line of one uninterrupted narrow gauge from Madras to Tuticorin, of 435 miles length. As it is admitted to be of the utmost consequence to secure the cheapest possible means of providing the required accommodation, it may be useful to consider in what respect this proposal, if carried out, would realise these views.

* Government of Madras to Government of India, 30th March, 1871, No. 940.

† Government of India to Secretary of State, 13th July, 1871, No. 75 Railway.

25. The exact course and location of the line not being as yet fixed, there is some difficulty in stating distances with accuracy; the whole track from Madras to the South being variously stated from 435* miles to upwards of 450† miles.

‖ Col. Orr's Letter to the Government of India, 14th February, 1871, No. 457, para. 3.

26. If we take the distance from Madras via Tanjore and Trichinopoly to Tuticorin at 435 miles, and from Trichinopoly to Tuticorin at 196,‖ there remain 239 miles as the length of track from Madras to Trichinopoly, of which about 208 would be new narrow gauge track from Madras to Tanjore, and the remaining 31 miles the Great Southern standard gauge from Tanjore to Trichinopoly, with a third rail added.

27. Assuming for the present that the narrow gauge line costs only £5,000 per mile, and the insertion of a third rail £1,300 per mile, the estimated cost of the whole communication from North to South would be, according to the proposed plan, as follows:—

Madras to Tanjore	208 miles at	£5,000	... ...	£1,040,000
Tanjore to Trichinopoly ...	31 „	1,300	... ...	40,300
Trichinopoly to Tuticorin ...	196 „	5,000	... ...	980,000
	435	Total	... ...	£2,060,300

28. Here we have an outlay of more than 2 millions sterling, to produce a trunk line confessedly of weaker construction, and capable only of being worked at comparatively low speed.

29. If, as an alternative, the already existing trunk were made use of by inserting a third rail throughout its entire length, and carrying the Southern extension through Caroor to Salem, the whole distance from Madras to Tuticorin would be only 415 miles, instead of 435; the upper part of the line, that subject to the greatest traffic, would be of a thoroughly substantial character, while the lower half would be carried through that part of the country, on all hands declared to be the most eligible*, both as to engineering difficulties, and as to the population and productiveness of the country; while the expense would be only as follows,—

* Government of India to Government of Madras, 17th March, 1871. No. 469 R, para. 2., also para. 3 for the distance from Caroor to Tuticorin 160 miles.

Madras to Salem	207 miles at	£1,300	... ...	£269,100
Salem to Tuticorin	208 „	5,000	... ...	1,040,000
	415			£1,309,100

thus effecting a saving of £751,200 by a more efficient performance of the duty.

30. The saving of £751,200 may be increased £139,900, so as to become £891,100 by omitting the above proposed new junction between Caroor and Salem, and laying the third rail from Caroor to Erode 41 miles

and from Erode to Salem ... ... 36 „

Total ... 77 „

The figures being—

77 miles at £1,300	... ...	£100,100
Instead of 48 „ at £5,000	... ...	240,000
Difference	...	£139,900

31. When we consider what would be gained by the extra £139,900 spent in the new junction, and observe that it would effect a saving of 29 miles out of 444, it ought not to be forgotten that as to the additional charge for conveyance, that would be compensated by adjustment of the through rates; and that, as to the saving of time, an abbreviation of an additional fifteenth part, when the time for passengers is shortened fourfold, and for goods thirtyfold, is hardly worth so large a sum in the present position and circumstances of the country.*

32. According to the alternative scheme last described, the entire Madras line would be competent to deal, not only with the Great Southern extension, but also with any number of branches from either the east or west side of

* Government of India to the Secretary of State, 13 July, 1871, No. 75, paragraph 4.

* Telegraphic communication between distant towns may be kept up by wires laid in the most crooked positions, without practical inconvenience; and in like manner, though in a much less degree, the advantages of railway communication are but slightly impaired by want of perfect straightness. When so vast a portion of India is deprived of any means of railway communication at all, no province has a claim to the choice of "alternative" lines to effect the same object.

its track, the whole sum to be expended being £1,169,200 instead of two millions. In addition to which, if the wishes of the inhabitants of Pondicherry were to be attended to, a branch from that city to the Arcot station, taking the town on its way, would be executed at a cost of £365,000 more, making the total expenditure in that case £1,534,200.

33. The remarks which will be shortly made hereafter, para. 35, tend to show the possibility of utilising the present Conjeveram to Arconum Tramway, in conjunction with the Madras line, by obviating the break of gauge; and in that case the Carnatic Company might possibly think it expedient, if the direct line to Madras be not carried out, to extend the tramway as far as Chingleput; but it would be more for the interests of the Shareholders to unite their capital with that of the Madras Company, and co-operate in maintaining the original system of a main line with branches wheresoever they can be stretched with advantage, rather than by pursuing one hazardous scheme after another, be led into an unprofitable expenditure of funds far more needed to meet the wants of other parts of India, besides the incidental mischief done to capital already in the field.

34. I cannot avoid expressing my own belief that if all the existing vested interests of the establishments connected with the Carnatic Railway Company were satisfied by the most liberal compensation possible, and an amalgamation with the Madras Company effected, the money spent in doing so would be but a trifle, compared with the wasteful consequences of persevering in a wrong system.

35. Reference has been already made in para. 10 to the possibility of removing the difficulties in the way of working together the main line and branches of a different gauge; and, adverting to the opinion expressed by the Government of India as to the great importance of providing the necessary accommodation for the public at the least possible expense, I have long been impressed with a sense of the very great advantages to India which under present circumstances would result from a solution of the problem; and after a long consideration of the subject, I am satisfied that at the expense of from £30 to £40, per truck or carriage, all the locomotive stock of any branch line may be made by self-acting mechanism to adapt itself indifferently to either a narrow or broad gauge, without the least impediment at the junction. Carriages already constructed could not be converted to the proposed system except at an increased expense; but it is an important fact that the extra cost of enabling the whole of the rolling stock of the Great Southern new narrow-gauge extension to be run indiscriminately upon either the branch or main line, would not exceed £20,000 to £30,000, so that the practical effect of inserting the third line of rails along the Madras and Great Southern main lines would be accomplished without the expense of it. It is probable that it would not be thought desirable to provide more than a very small proportion of the vehicles of the Great Southern extension with the means of traversing both railways; but it would be necessary to make alterations in the main lines to adapt them to the system, the expense of which would be very small.

36. From what has been stated above, it will be gathered that the existing tramway from Conjeveram to Arconum might at a small expense be brought into effective operation in union with the main line; and if the tramway were extended to Chingleput, the cost would be about £69,300. That, as regards the direct line from Madras to Cuddalore, there is but little promise beyond that of passenger traffic, most of it in the immediate neighbourhood of Madras; and that, to the south of Pondicherry, it is certain that both the difficulties and expense of construction would be increased, and the prospect of additional traffic diminished; whilst, for the purpose of completing the through communication from Tuticorin to Madras, that object may be realised at a comparatively trifling expense, by making the junction of the narrow-gauge extension at Caroor, thus opening the richest part of the country, and making use of the main lines by a slight alteration of the new rolling stock, and thereby superseding the necessity of the narrow gauge from Madras to Tanjore, and from Tanjore to Trichinopoly, altogether.

37. There is a yet further alternative. It has been shown above that even under the proposed conditions all the objects of a continuous line from north to south without the inconveniences of a break of gauge, may be effected at a mere trifling expense. It remains to be added that, should the general question of the propriety of introducing a different gauge into our Indian Empire be reconsidered, and the plans at present under discussion modified by the substitution for the narrow gauge of a cheaper form of construction on the standard gauge, the desired continuous uniform line from Tuticorin to Madras would be secured without any extra expense whatever.

38. Before concluding this minute, I would briefly point to one aspect of the question which ought not altogether to be lost sight of.

39. The shareholders of this, as well as some other Companies, subscribed their moneys under a distinct contract, guaranteeing 5 per cent. interest on their outlay, and the ultimate prospect of 10 per cent. as the result of economical and judicious management. If there be any one Company more than another entitled to the watchful consideration of the Government, the Madras Company surely is so in a peculiar degree, having had a line marked out for it, for political reasons, on a trace commercially most unpromising.

40. Even if it were not inexpedient on general grounds to allow competition between Railways guaranteed by the State, this Company, at the least, ought for the above reason, to be carefully shielded from it; and, sensitive as all capitalists proverbially are, it is to be feared that, sooner or later, a complaint cannot fail to be raised, if it be discovered that, after all the outlay incurred and the efforts made to give success to their enterprise under very discouraging conditions, a rival line has not only been permitted to be formed, but even encouraged by the State, thereby putting an end for ever to any hopes which might have been previously entertained.

J. T. SMITH,

Chairman,

MADRAS RAILWAY COMPANY.

RESOLUTIONS

PASSED AT A MEETING OF THE BOARD OF DIRECTORS OF THE MADRAS RAILWAY COMPANY, ON THE 10TH OF NOVEMBER, 1871.

RESOLVED:—

That the Chairman's minute be forwarded for the information of the Secretary of State for India, with an expression of the opinion of the Board on the following points:

1stly. That the proposed coast line of Railway from Madras to Tanjore is not at all required to meet the wants of trade, and will, they have reason to believe, be unremunerative as compared with lines in other parts of India.

2ndly. That there is not likely to be a large amount of through traffic from Tuticorin to Madras, it being a fact that all the cotton, the produce of the Tinnevelly district, is now shipped direct from Tuticorin to England, and that if there were it could be provided for quite as efficiently and at a great saving of expense by laying a third line of rails along the present Madras line.

3rdly. Even if a narrow gauge line were in existence as far as Belpur, the saving effected by carrying the Great Southern Extension from Caroor and laying a third rail along the Madras and Great Southern lines would be more than £500,000.

4thly. That if Colonel Smith's views be correct, the only expenditure necessary to afford an easy connection between the Great Southern Extension and Madras may be saved by an outlay of a few thousand pounds in the extra cost of the rolling stock of the extension line.

5thly. That in the opinion of the Board the best point for the junction of the Great Southern Extension Line is at Caroor, and in the opinion of their Consulting Engineer the extension ought to consist of a light railway of the same gauge as the main line. If, however, this be not acceded to, the Board are of opinion that a third rail should be added to the Madras Line, provided the plan alluded to in the Chairman's minute of constructing the rolling stock, so as to suit both gauges, be found not to succeed.

6thly. That the Board strongly support the arguments contained in the Chairman's minute as to the great injustice to their shareholders of encouraging the construction of a competing line.

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No. 4.

India Office,
19th January 1872.

Sir,

I am directed by the Duke of Argyll to acknowledge receipt of your letter of 14th November last, No. 2750, enclosing copy of a minute by the Chairman of the Madras Railway Company, on the proposed narrow-gauge line from Madras to Tuticorin, with copies of Resolutions passed by the Board on the subject.

These papers have received the attentive consideration of His Grace in Council, and upon them I am to make the following remarks.

Being impressed with many of the views and arguments contained in the Chairman's Minute, His Grace is desirous that the whole subject of railway communication in Southern India should be again carefully examined, before the system is definitively decided on.

He is of opinion that the development and carrying out of this system, as well as its economical construction and working, is more likely to be satisfactorily accomplished by placing it in the hands of one agency, which would exclusively apply itself to the object in view, rather than through the instrumentality of three separate Companies, with interests which, as the Board and their Chairman point out, may probably be antagonistic to each other. What, therefore, the Duke of Argyll now wishes to propose is that the Great Southern of India and the Carnatic Railway Companies (the union of which he had previously suggested) should be further amalgamated with the Madras Railway Company.

The correspondence with the Boards of those Companies is forwarded herewith, and the Secretary of State commends the subject to the consideration of the Directors of the Madras Railway Company, and he hopes that they will find they are able readily to co-operate with the other Boards for effecting an amalgamation upon fair and equitable terms.

I am, &c.,
(Signed) M. E. GRANT DUFF.

Julian Byrne, Esq.

No. 5.

Madras Railway Company,
33, New Broad Street, London, E.C.,
2nd February 1872.

Sir,

I have been directed to acknowledge the receipt of Mr. M. E. Grant Duff's letter of the 19th instant, forwarding copies of correspondence with the Directors of the Great Southern of India and Carnatic Railways, and expressing the hope of the Secretary of State that the Board will be able readily to co-operate with the Boards of those Companies in effecting an amalgamation upon fair and equitable terms.

In reply, I am instructed to state, for the information of His Grace, that while this Board quite recognize the truth of the opinion that the development and carrying out of the system of railway communication in Southern India is more likely to be satisfactorily accomplished by one agency than through the instrumentality of three separate Companies, they very much regret their inability to recommend to their proprietors the adoption of new undertakings which, in their present form, they consider injurious to their interest, or to consent to associate themselves in the management of the extensive interests committed to their charge with a disproportionate number of colleagues whose views differ from their own.

The attention of the Secretary of State in Council has already been drawn by the Chairman's Minute and the Board's Resolutions to the

fact that a line of railway along the edge of the sea, like a line skirting a barren desert, could not be expected to be so profitable as one passing through the midst of fertile country, even if the sea offered no competition, and that, from the circumstance of the proposed Carnatic line crossing all the drainage of the country, it must necessarily be more expensive to construct than an arterial branch line passing along a valley the seat of cultivation.

If the project of the Carnatic Company be carried out, as at present proposed, it could not, as the Board think, be expected to be otherwise than a burden upon the State for many years to come, and, in like manner, the present Great Southern Railway and its extension would probably be a loss to the Government for a very considerable time.

It would, therefore, be clearly contrary to the interests of the proprietors of the Madras Railway to assent to an union of their capital, now making steady advances towards the fulfilment of the guarantee and a possible surplus, with the capitals pledged to these undertakings, except on the condition that this Board should previously agree to such a modification of the proposals now under consideration as may, in their opinion, tend to make them, if not speedily profitable, yet at all events not so prolonged a burthen as they would be in their present form.

Considering how entirely the interests of the Government and the Madras Railway Company are identified in discouraging a policy that will be prejudicial to the traffic of the railway, the Board, while anxious to express their willingness to meet the wishes of the Secretary of State as far as possible, feel bound to reiterate the expression of their hope that His Grace will not sanction the scheme of the Madras Government, as sketched out in the letter of the Government of India of the 13th July 1871, which has been communicated to them.

I am, &c.,
(Signed) JULIAN BYRNE,
Secretary.

The Under Secretary of State
for India.

No. 6.

India Office,
15th February 1872.

Sir,

I am directed by the Secretary of State for India to acknowledge receipt of your Letter of the 2nd instant, No. 2781, stating the views of the Directors of the Madras Railway Company, with respect to the proposed amalgamation of that Company with the Great Southern of India and the Carnatic Railway Companies.

The Board's objections to the amalgamation are explained to be a disinclination on their part "to recommend to their proprietors the "adoption of new undertakings which in their present form they con-"sider injurious to their interests, or to consent to associate themselves "in the management of the extensive interests committed to their "charge with a disproportionate number of colleagues whose views "differ from their own."

I am, however, to point out that, although agreements have already been entered into with the Great Southern of India and Carnatic Railway Companies for the extension of the line of the former Company to Tuticorin and of that of the latter to Cuddalore, one practical effect of the proposed amalgamation would be to enable a united Board, in communication with the Government, to revise the whole subject of railway extension in Southern India, and to modify the arrangements hitherto contemplated in whatever manner might appear best calculated to meet the requirements of the public, and to prevent needless competition between different parts of one and the same railway system.

His Grace cannot doubt that all the members of a united Board, to

whatever section of the amalgamated undertaking they had previously belonged, would be ready impartially to consider whatever modifications of plan might be laid before them with a view to such important objects.

The Duke of Argyll begs that the Directors will weigh these considerations before they regard their decision as final; and, finding that they are still in favour of the policy of avoiding competition by forming one united association, he hopes that they will not object again to review all the circumstances of the case, and that they will not come to the conclusion that it would be opposed to the interests of the shareholders to agree to the proposed amalgamation.

I am, &c.,
(Signed) M. E. GRANT DUFF.

Julian Byrne, Esq.

RAILWAY DEPARTMENT. CONSULTING ENGINEER'S OFFICE.

No. 425

From Lieutt.-Colo. J.R.M. Shaw Stewart, P.E.,
Consulting Engineer for Railways,

To Colonel G.W. Walker, P.E.,
Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

I have the honour to acknowledge the receipt of your endorsement dated the 29th ultimo, forwarding, for any observations I might wish to offer, a letter* from the Government of India requesting to be favoured with an expression of opinion as to any changes which would be recommended in the alignment of the Railways proposed in this Presidency,

* No. 1023. R. 5th July 1873 with enclosures.

Presidency, in case it were decided that the amalgamation of the three Companies should be effected, that is to say, what bearing if any, the fusion of the three Companies into one Company should have on the revision of the existing projects.

2. After full consideration, it seemed to me impossible to enter upon any discussion of the question without investigating the proposals made by the Chairman of the Madras Railway Company in the Minute × which was submitted to the Secretary of State on the 14th November 1871, and the arguments upon which those proposals

× vide enclosures to letter from Government of India

were based. So far as I am aware, with the exception of the proposals comprised in the Minute in question, no changes from the alignment of the railway extension as decided on by Government have been brought forward for consideration, and I have felt the more constrained to examine the opinions therein set forth, from the fact that the Minute has attracted great attention in England, and that in Mr. Grant Duff's letter dated the 19th January 1872, it is stated that His Grace the Secretary of State is impressed with many of the views and arguments contained

contained therein. I have the honour to append the observations which it seemed to me necessary to make in connection with that Minute; and it will be seen that I dissent from most of the conclusions at which the Chairman of the Madras Railway has arrived. * with a map.

3. The object of the Government when recommending those extensions of the railway system which are now under consideration, was to provide for the requirements of the five south-eastern districts, namely, South Arcot, Tanjore, Trichinopoly, Madura, and Tinnevelly. In the appended observations I have fully discussed the manner in which the railway extensions approved of by Government meet the requirements of those districts; also the points in which, in my opinion, the Chairman's proposals fail to meet those requirements. I have tried to shew that the Government scheme of railway extensions was decided on from considerations of what was, upon the whole, best suited to the wants of each portion of the south-eastern districts, as well as to the wants of the country generally. Those considerations had no reference whatever to the railway system of any individual Company; and I am of opinion that, in the event of the amalgamation of the three Companies, no change in the alignment of the proposed extensions can be recommended.

I have the honour to be
Sir
your most obedient servant

Madras
13th August 1872

Lieut. R.E.,
Cons. Engineer for Railways.

Observations on the Memorial
of Thos Shannon & Others Residents
of Castlebay Connemara

Prayer of Petition

Memorial that an examination may be made
of the Harbour of Castlebay with a view
to the formation of a Harbour of Refuge
at that place.

Land Valuation Office Dublin 12th August 1872

Sir

I am directed by the Commissioners of Valuation to transmit to you the accompanying Memorial addressed to the Lord Lieutenant of Ireland by Thomas Shannon and others residents of Castlebay praying that an examination may be made of the Harbour of Castlebay with a view to the formation of a Harbour of Refuge at that place.

The Commissioners request that you will be pleased to bring the Memorial under the consideration of the Lord Lieutenant.

I am Sir
Your obedient Servant
Robert Kane
Secretary

The Secretary
Board of Works

P. O. 1872 Dept
Bds: of Govt Inclosrs
No 3950.

From
Kelso Bay Connemara

To
The Secretary Bd of Works
Dublin

Dated 13th Aug 1872
Recd 14th Aug 1872

No 425

1 Plan.
1 Env: V.

Observations.
as to the alignment
of Railways on Grounds
of meeting held by
Chairman of the
Mid Cl.
Nos 2379-2380 & 10 Aug 1872

No 159

Kelso to Castlebay 16 Aug 1872

tend to deprive the public of cheap accommodation, by making them travel additional and unnecessary distances in order to utilise an existing line commercially ill-located; whilst the total profits of the Railways in this Presidency will certainly not be increased by any line of action which has the effect of frustrating the construction of the proposed line from Madras to Beddadore and Bangal.

2. Lord Dalhousie's Indian Railway scheme was undoubtedly limited to a few trunk lines, chosen chiefly, if not altogether, for military and political considerations; but there is nothing upon

upon record to show that he looked on the trunk Railway system of India as being finally limited to those few lines, or that, in his opinion, all future additions should take the shape of branch lines. But if it could be shown that such was Lord Dalhousie's opinion at the time when the introduction of Railways into India was first discussed it is not too much to say that even his high authority could not be appealed to as binding the present Government after the enormous changes of the last quarter of a century. Every proposal for an additional Railway, whether

as

as a new and independent line, or as a subsidiary branch to an existing line, must be judged upon its merits.

3 The line proposed for the Carnatic Railway cannot be said to be parallel to the Madras Railway; on the contrary they radiate from a common centre, gradually diverging till at the point where they respectively meet the line of the Great Southern of India Railway they are 119 miles apart. Paragraph 4

The line of the Carnatic Railway is not correctly marked on Colonel Smeeth's map, and the figures in this paragraph are far from accurate. By the shortest practicable cart road Cuddalore, Pettanoro, and Chellumbrum are about 120 miles distant from the nearest stations on the Madras Railway, and the average distance, by cart road between the two lines is certainly nearer 70 miles than 55 miles.

Paragraph 5

4 A few remarks may here be made on the general question as to the respective efficiency and economy of the two systems referred to by Colonel Smeeth, namely, a trunk line with branches on the one hand, and a radial system of communication on

the special circumstances of every
province into which it is pro-
posed to introduce Railways
must be specially considered.
On the other hand, if the tract
of country to be dealt with is
traversed by a number of large
unbridged rivers, — if it is
intersected by several mountain
ranges, — if the population,
instead of being equally distri-
buted, is concentrated in a
few important centres, — if
all the roads, or most of them
lead to those few centres of trade
and population, — and if, instead
of being of uniform fertility,
it happens to be divided into
successive

on the other, to serve the same —
tract of country. If the tract
in question happens to be level
plain — with no unbridged rivers
the — and no mountains — equally
rich productive and fertile in all
its parts — and equally well
provided with roads, — it may
perhaps be the case that one trunk
line, with numerous branches
meeting every other feeders, will ac-
commodate the traffic as —
effectively as a number of trunk
lines radiating from a common
centre, and possibly with
greater economy. But even
under such conditions no general
rule can be laid down; and
the

successive Regions of garden-land, jungle, and mountains.— It may be safely asserted that a Railway system, consisting of one trunk line with branches, will not supply its wants in the most efficient and economical manner.

But it is waste of time to discuss general principles. The case now under consideration is how the wants of the South Arcot and Tanjore districts can best be supplied. Four, and only four, practicable branches can be made from the South-West line of the Madras Railway with the object of serving portions of these districts. The first, from Salem by Attoor, and down the valley of the Vellaur, to Chellumbrum and Portonovo. The second, from Samulpatty, down the valley of the Panar, to Cuddalore. The third, from Arcot by Arnee, Wandewash, and Tenderamum, to Pondicherry. The fourth, a continuation of the Carnatic Company existing line between Arcanum and Conjeveram, passing by Chingleput, Tarangoly, and Tenderamum. The first of these is condemned by all who know the country as a branch a tract producing little beyond jungle, and no proposal has ever

ever been made to construct a branch Railway by this route. The second Route was examined in April 1872 by the Chief Engineer of the Madras Railway, and in his Report to the Board of Directors it is thus spoken of:- "the distance is about 100 "miles, and the country for "the greater part of the way "is barren, rugged, and very "thinly populated. There is "nothing whatever to recommend "this Route, as no line of Railway "however cheaply constructed — "would pay its working expenses."
The fourth route, from Arconum by Conjeveram and Chingleput, is

is provided for as a part of the scheme which has been approved by the Government for the Carnatic Railway Company and need not be considered here. There remains for consideration the third route, viz. by Arcot with Pondicherry and on this one branch consists the whole capability of the Madras Railway to supply the wants of the South West and Sayore districts. In fact, the question at issue is narrowed to a comparison of the advantages respectively offered by this branch, and by the scheme to which the Government

Government of India have already accorded their approval; or, in other words, the question is whether it is more advantageous to connect Tindivanum with Arcot on the one hand, or on the other with Chingleput, and thence with Madras and Pondicherry.

Before going further, it is well that the objects in view in proposing to open up Railway communication through the districts of South Arcot and Tanjore should be clearly stated. Throughout his Minute, Colonel Smith seems to recognise only two objects, (1) the improvement

7

of the Traffic on the Madras Railway; and (2) the Requirements of the French merchants in Pondicherry. In like manner the Chief Engineer of the Madras Railway, in his Report already quoted from, writes thus:-

"The merchants at Pondicherry
"are altogether in favour of the
"route (by Tindevanum to Arcot)
"in preference to a direct line
"to Madras, inasmuch as it
"would afford the quickest and
"shortest communication with
"Cuddapah, Bellary, and Bombay
— Bangalore and the Mysore
"country — and Salem, Coimbatore,
"and the Western coast. The

importance

"importance to the Madras Railway
"interests of a scheme which would
supersede the proposed Carnatic
"Railway cannot be over-estimated."
These two objects are desirable
in their way, but they are
of altogether minor and secondary
importance. The chief objects
which the Government had in
view in recommending the
construction of a line of Railway
through South Arcot and Tanjore,
were to bring those food-pro-
ducing districts into direct
communication with the large
population centred at Madras,
and to supply its increasing
demands both for home consumption
and

61 49

and for export; to be able in
cases of emergency to throw
supplies of grain into the
Bellary district, which has
so often suffered from famine;
to accommodate the very large
traffic which now passes over
the road leading from Madras
in a Southerly direction through
these districts, a traffic much
larger than is to be found
upon any other line of road
of equal length in Southern India;
and to bring into inter commu-
nication with each other the
large towns of Tanjore, Coimbatore
Trichinopoly, Dindigul, Pollachi,
Portonovo, Cuddalore, Pondicherry,
Pamboty,

Pavoorty, Veinderanum, and Chingleput. By the scheme which has already received the approval of Government, every one of these objects will be effected in a manner at once the most direct, the most economical, and the most effectual. On the other hand, the branch from Pondicherry to Arcot altogether fails to meet some of these objects. It could not accommodate the traffic on the great southern road, nor could it improve the means of intercommunication between the large towns in South Arcot and Tanjore.

The

The distance of the southern line

Vinderanum to Chingleput	41 miles	fields from Madras
Chingleput to Madras	35	would be increased
	76	by 53 miles; and
Vinderanum to Arcot	64	their distance from
Arcot to Madras	65	Bellary by at
	129	least 8 miles.
Vinderanum to Chingleput	41 miles	The country served
Chingleput to Arcot	38	by it is generally
Vinderanum to Arcot	79	poor, and sparsely populated: and
Arcot to Arcot	64	no part of its line is likely to
	23	pay until it comes between
	87	Wandewash and Vinderanum

with each of the lines which has been marked out for the Carnatic Railway. In a word, no one who knows the country through which the Arcot branch

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branch lines would dream of proposing a Railway, unless ulterior interests were to be served: the proposed branch stops at the very threshold of the fertile tract, — the garden of Southern India, — which it is the main object of every one connected with the Government of this Presidency to bring into direct communication with Madras and the North.

7. With regard to Special interests, of which so much has been said, it may be justly questioned whether they are likely to be directly advanced more effectually by a branch

to Arcot than by the Carnatic Railway scheme, which will enable Pondicherry to communicate with Arcanum, through Villenoor. It may be safely asserted that the French merchants hope to get as much traffic from Cuddapah and Bellary as from Mysore, and it has just been shown that the Villenoor route to Arcanum (the North-West line junction) is shorter by 8 miles than the Arcot route. Indirectly, and at the expense of Madras, the Arcot branch would doubtless in some respects prove more beneficial to the interests of the Pondicherry

merchants

merchants than the Carnatic Railway scheme: but with every desire to accommodate our neighbours, it may be safely asserted that the Government of India can never consent to sacrifice the direct interests of two of their largest provinces to the indirect interests of the few merchants who reside at Pondicherry; or to foster the trade of that port at the cost of Madras. Much as the Pondicherry merchants may desire to have a branch to Arcot, they would on all probability greatly prefer that a line should be constructed along

along the route which has been so emphatically condemned by the Chief Engineer of the Madras Railway, namely, from Pondicherry to Samulpatty, inasmuch as such a line would place them at an advantage over Madras of 19 miles as regards traffic from Aloysode, and of 61 miles as regards traffic from Salem and all stations to the west.

Paragraph 6. 8 I should think there are two sides of the question as between the trunk and branch system and the radial system. Then, while the adoption of the branch advocated by them would shorten the distance

between

between Pondicherry and Moyone by 38 miles; it would, as has been shown, lengthen the distance between Pondicherry and Madras by 53 miles; while it would utterly fail to provide Railway communication between Madras and the South country to the South of Pondicherry.

Tindavanum to Arcot	64
Tindavanum to Chingleput	41
Chingleput to Arcot	38
Arcot to Arcot	28
	102

9 The items specified paragraph 8 here by Colonel Smith, as showing the greater economy of the "trunk and branch" system than of the "radial" system, have in reality no bearing upon the question as between

between those two systems. They are all given to be weighed in considering the relative economy and efficiency of one great united Company, as compared with two or more independent Companies. The double terminal stations, and the double establishments, do not depend upon the location of the lines, and are by no means essential to two Radial lines owned and worked by one Company.

paragraph 8.

10 The correctness of the statement contained in this paragraph that "two or more" "trunks in the same area" —— necessarily

"necessarily complete unto one another," depends entirely upon the meaning attached to the term "area". In the case now under consideration it may be asserted that the Carnatic Railway will not operate in the area which now supplies the Madras Railway with traffic. It is highly improbable that it will attract one ton of goods or one passenger that would, under present circumstances, go to the Madras Railway. All competent and impartial authorities in the country are well aware that the regions from which the Madras Railway

on

on the one hand, and the Carnatic Railway on the other, will generally draw their traffic are separated by natural barriers almost impassable, and they are unanimous in believing that the Carnatic Railway scheme, as approved of by Government, will deprive the Madras Railway of no appreciable portion of its present income. The greatest possible loss to be gauged by the existing traffic on the portion of the Great Southern of India Railway between Carur and Erode, which does not pay the working expenses.

Paragraph 9

11 In this paragraph Colonel Smith again deals

with

with the general question as to the advantages which the Trunk and Branch systems offers over the Radcliffe system of Railway communication. So long as the question is argued in general terms, there is doubtless much that may be urged upon either side, but the only consideration is how the interests of South Coast and Bangalore can best be served; and it is simply a waste of time to discuss general principles.

12 This paragraph contains a wrong impression of the short piece of narrow gauge railway between Arcanum and Conjeveram.

Paragraph 12

It is here spoken of as a small branch tramway; whereas in reality it is a thoroughly well constructed Railway on the 3'6" feet gauge, being actually of larger dimensions than what has been determined on as the future Indian narrow gauge. Financially it has been unprofitable, as might have been safely predicted of an isolated line only 19 miles in length: but its capabilities for conveying both passengers and goods are fully equal to the requirements of almost any part of India; and there is probably no line of Railway in existence upon which passengers and goods could

could be profitably carried at lower Rates than upon the short line. This is proved during the annual Festival at Conjeveram, unfortunately the occasions on which its capabilities can be tested are of rare occurrence.

13 With reference to the paragraph which may be proposed to deal the connection with the Madras Railway at Arconum, inasmuch as the existing line between Arcoonum and Conjeveram will be retained, and extended to join the main line of the Carnatic Railway at Chingleput.

Paragraph 14

14 It is by no means certain what is meant by "the area subtended by" the Madras Railway; but if in that expression Colonel Smith means to include the whole of that portion of the Indian Peninsula which lies to the South and East of the line joining Madras and Beypoor, the competence of the Madras Railway "to operate upon the whole traffic of that area" may be fairly questioned. It has already been shown that its capability to provide for the wants of South Arcot and Tanjore consists in the proposed branch between Arcot and Pondicherry.

15

15. The expression used by the Chairman, in speaking of the proposed line of the Carnatic Railway, as "a feral line of a much less solid character", is calculated to mislead. In the first place, there can be no possible rivalry between the two Railways. Each will operate in its own legend, separated from the other by clearly marked barriers; and it will be scarcely possible for the respective engines to come into collision. In the next place, although the dimensions of the proposed line are undoubtedly slighter than those of the Madras Railway, of the difference in the gauge and in the weight to be hauled be taken into account, they are quite sufficient and admirably adapted to the work to be done, as are the larger dimensions of the Madras Railway.

Paragraph 15. 16. Upon the map accompanying the Chairman's Minute a curved line has been traced, passing along the whole line, the points where the distance from the sea is one-half the direct distance from Madras" which line "is

so

17. If the line of the Madeira Railway were perfectly straight; — if it passed through a perfectly level country; — were all bridges bridged, — and well supplied with roads of equal quality, leading from all directions to the stations along the Railway; — if the nearest stations, as measured on the map, were readily accessible from every point by a good cart road leading to the stations in a direct line; — if the price of cart-hire were the same on every road; — and if the price assumed by Colonel Smith, 3 annas per ton per mile, were correct; —

is said "will be found to include four fifths of all the country lying between the present South-West line and the proposed Coimbatore line, extended to Salem" in the paragraph Colonel Smith endeavours to prove that the whole traffic of the country lying within the line of half distance "could be attracted to the Madeira Railway, for conveyance "to Madras, at the rate of "1 anna per ton per mile, and "a much larger proportion at "reduced rates, if a new line "did not exist"

the theory broached by him might possibly be accepted. But it is not difficult to show that in practice it must break down in all directions. 18 [illegible] the fact that the Madras Railway offered a considerable saving to the Railway, for example, a point on the Paiar River, 110 miles in direct distance from Madras, and

and neither Colonel Smith's half-distance line. If goods were sent from the point to the nearest station, they would have to be carted over some 60 miles to Samulputty, where they would be 151 miles from Madras by rail, 41 miles further than when they started. Again take a point on the Vellaur River, 140 miles from Madras, also within the half distance line. Goods sent from this to Salem, the nearest station, would have to be carted some 70 miles, and would then be 207 miles from Madras, 67 miles further than when they started.

1861 59

double

double break of bulk, at the
receiving and delivery stations,
must also militate against the
action of the theory; especially
as the native merchants at a
distance from the railway have
no agents at the small roadside
stations to whom their goods can
be consigned for despatch by train.
19 But the most fatal
objection to the theory is to be
found, as might be expected, in
the physical character of the country
embraced by the half distance line.
It is for the most part a mountain-
ous tract, traversed by large
unbridged rivers, and with
direct means of access to none of
the

the Moradeo Railway stations.
From the greater part of the tract,
if the Moradeo Railway is to
be reached at all, it must be
by circuitous and inferior roads,
with heavy gradients, skirting
the hills and passing through
the gorges that intersect them:
On the other hand, the roads leading
to Moradeo are generally straight
level, in good order, and provided
with bridges over almost all the
rivers. It is not to be wondered
at if, under these circumstances,
the cost of cart-hire on the roads
leading to the roadside stations
is nearly double, mile for mile,
of the cost on the roads leading

to

to Madras. The certainty of getting a return load from Madras of coffee contributes to the result. The rate of carriage named by Colonel Lovett, 3 annas per ton per mile, is probably below the mark in the case of the ordinary cross-country roads which on the principal strength of fares, such as the great Bangalore road leading from Madras to Seringapatam, the average rate paid is about 1¾ annas per ton per mile.

20 To prove the impossibility of relying on the Chairman's theory it is sufficient to refer to the cases of Conjeveram and Seringapatam, both

both of which towns fall well within his half distance line. Conjeveram is situated 46 miles from Madras by road, and 49 miles from Arcanum, with which it is connected by the Carnatic Company's line; the whole distance from Madras by rail being under 61 miles. In spite of all the attempts which have been made by the Agents of both Companies, to induce the goods traffic to go by rail, they have not been able to succeed in diverting from the road an appreciable fraction of it. The case of Seringapatam is similar

It

the distance from Madras by road is 98 miles, and from Erode, with which it is connected by the Great Southern of India Railway, 86 miles, the whole distance from Madras by rail being 329 miles. The two towns being connected by an unbroken line of Railway, by far the greater part of the goods traffic between Madras and Beauliampoly is carried by road.

21 "As a matter of fact, instead of "more than four-fifths of the country lying between" the Madras Railway and the proposed Carnatic Railway

Paragraph 17.

being efficiently served by the former line, it appears that a large portion of that tract, more than half of it, is not served at all by the Madras Railway. Moreover of the portion served by the Madras Railway, the greater part is distant from good or passable roads. The remainder of that tract, which at present has no Railway accommodation, is in general populous and fertile in a slight degree; the Southern half comprises the poorest and most densely peopled parts of Southern India.

22 Colonel Smith here assumes that the charge for the

the carriage of goods &c in the
"proportion of 1½ pice per ton per
"mile by the Rail, 3 annas by
"the common Road, and 3 pice by
"sea". Of these the charge
by Rail may be taken as a fair
average rate. As has been
already stated that the charge
by Road in the main throughout
Javes, does not exceed an average
rate of 24 pice per ton per mile.
As to the charge by sea, 3 pice,
probably represents the extreme
lowest charge which is made
by small country vessels; but
to this must be added, at
least 2 rupees for shipping
and landing charges, which
on

(17) 63 412

in the case of the small ports
between Nagapatam and Madras
would double, and in some
cases treble, the 3 pice rate.
It is unnecessary to point out
the facts and uncertainty which
depart from rendering valuable
agricultural products in small
country craft. As proof of
this, it may be mentioned that
at present a great quantity of
such produce is sent from
Nagapatam by steamer, the
freight paid being 15 rupees
per ton for 160 miles, or about
18 pice per ton per mile.
The residue of
2 3
the arguments used in the
Chairman's

Chairman's Minute is seen from the fact that while from Serookavalor, a village on the Panar River within his half distance line, he expects goods for Madras to travel about 60 miles by road to Samulpetty and thence 151 miles by rail, in place of going some 45 miles by road to Pondicherry, and thence 90 miles by sea; — when the Carnatic Railway is in question he states that "there is hardly "a part where it would not "be cheaper for a merchant "having goods actually on the "line, to carry them by land "to the coast and send them to Madras by sea".

24 To show the errors in this last sentence it will be sufficient to take away two places on the Carnatic line, for example Chingleput and Tinderanum, and apply to them Colonel Smith's figures and rates. From Chingleput the cost of sending one ton of goods to Madras would be

	Rs. a. p.
by rail, 35 miles at 1 anna,	2 - 3 - 0

by sea	Rs. a. p.
20 miles to Sadras at 3 annas	3 - 12 - 0
44 miles to Madras at 3 pie	0 - 11 - 0
shipping and landing charges	2 - 0 - 0
	6 - 7 - 0

From Tinderanum the charge for the same service would be

	Rs. a. p.
by rail, 76 miles at 1 anna,	4 - 12 - 0

by

by sea,

24 miles to Pondicherry at 8 annas, — Rs. 4-8-0
88 miles to Madras at 3 pies, — 1-6-0
shipping and landing charges, — 2-0-0
7-14-0

25 The Coimbatore Chamber say that for long distances the agricultural produce of the Carnatic Districts cannot bear the small value to pay Railway charges. The grounds on which this assertion is made are not evident. The opening of the line from Madras to Cuddalore, 128 miles in length, so that the long distances must be taken in a comparative sense. Best as regards the capability of agricultural produce to pay Railway charges, it

Paragraph 25

11 65

is probably sufficient to state that on the Madras Railway, during the year 1871, agricultural produce, in the largest sense of the term, paid a sum of 16¼ lacs of Rupees, representing more than 40 per cent of the total receipts from goods; and that the country through which the Carnatic Railway will pass is undeniably much richer than the average of the country traversed by the Madras Railway.

Paragraph 26

26. When the Chairman of the Carnatic Company appears before the Committee, as appears written, the area which properly belongs to the Madras

Madras Company, the matter
an assertion which it would be
difficult to prove. It has
been already noted that the
traffic area of the Madras
Railway is separated from the
districts of South Arcot and
Tanjore by a remarkable chain
of natural barriers; and that
the capability of the Madras
Railway to throw branches into
these districts is limited to
the proposed line from Arcot
to Pondicherry. A glance at
the position of the lines now
worked by the Great Southern
of India and the Carnatic
Companies will show that they

115

have at least as strong a claim
as the Madras Railway Company
to afford the accommodation
required by the districts in
question.

27 In the letter to
the Government of India to which
Colonel Sprye alludes in the
paragraph, the Government of
Madras communicated the principle
"of appertaining to each Company
"the traffic within the well-defined
"limits of the districts each may
"be said already to occupy";
but by no stretch of language
can the Madras Railway Company
be said to occupy the South

Arcot

P: 940 & 30
March 1870

Arcot and Bangalore districts.

28. The extension approved paragraph 22.
of by Government for the
Carnatic Railway provides for
direct communication not only
between Pondicherry and Madras
but also between Pondicherry
and Arconum thus giving the
French merchants readier means
to the Bombay Railway than they
would have by the Branch to
Beach Salamic Railway
that by taking the line from
Villenevum by Arcot, instead
of by Tchingleput, the distance
between Pondicherry and Madras
will be increased by 17 miles
only

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only, when in fact the increased
distance will be 53 miles.

29. The observations made
above, on paragraph 7, refer to
the present paragraph also.

30. The Chairman then paragraph 28.
expressed his conviction that the
original proposed extension of £5.000
per mile, as the cost of the narrow
gauge line, would be found ample
the estimates for will be
the estimates for the Carnatic line
between Madras and Cuddalore
have not yet been prepared:
but for the extension of the
Great Southern of India Company
line, between Pondicherry and
Villenevum

Subscription, they amounted to £4,600
per mile. These estimates were
prepared by the same Chief
Engineer who carried out the
works on the open line of the
Great Southern Railway; and
both in preparation and in
revision the plans before being
accepted, were subjected to the
closest scrutiny. It is
confidently expected that the
works will be executed within
the estimated cost, and on
such a point the opinion of
competent and responsible
authorities on the spot, is
perhaps entitled to as much
weight

as that of the Chairman
of the Madras Railway Company.
The manner in which the line
between Arconum and Conjeveram
is referred to in the paragraph
is somewhat misleading. It
is stated that the new tramway
is stated to be roughly
"about 30 miles in length, laid
"on the common roads, has
"cost, including all expenses,
"nearly £3300 per mile." It
should be borne in mind that
the so-called "tramway" is a
substantial line of railway,
complete in all respects, well
fenced, and well equipped with
engines and rolling stock;

also

also that its dimensions are larger than those of the proposed narrow gauge lines. Where laid on the common Roads only, in the sense that for part of the distance half the width of the Roadway was given up to the Company's to gradients are all decidedly from those on the Road, and the rivers have been bridged by the Company.

37 The statement in the first part of this paragraph is nearly correct. That there should be direct communication by Rail between Madras and the Southern Provinces is undoubtedly

undoubtedly an advantage: but the completion of a continuous line of one uninterrupted narrow gauge from Madras to Tuticorin, of 160.5 miles in length, was not one of the chief recommendations of the proposed extension of the Carnatic line to Tanjore. In the Letter to the Government of India to which Colonel Smith alludes in paragraph 20 of his minute, it was distinctly stated that the exclusive & strongly advocated "on its own merits, irrespective "necessary additions to the whole scheme "Southern of India Railway system, "and as likely to be, in itself, highly

No 940 of 30th March 1871.

paragraph

"highly remunerative." The line
from Madura to Dindigul cannot be highly considered as
a remote line for the conveyance
of through traffic. The section
between Madura and Dangore is
undoubtedly required for the
district through which it passes:
and assuming it to be determined
on the question, as mentioned,
the communication with the south
ought to be effected direct
and Erode, or via Periyakoolay
and Dangore. The question
has been settled in favour of
the latter route.

3, 2 In these paragraphs paragraph 2 & 3

Colonel

Colonel Smith being of opinion
discussion the relative merits of the two
schemes for Railway extension which,
after the fullest consideration,
have been approved of by the
Government to meet the requirements
of the five south eastern provinces,
namely South Arcot, Dangore
Trichinopoly, Madura and Tinnevelly.
These two schemes were essentially
distinct from each other: each
formed a separate proposal, and
was approved of upon its own merits,
but in treating of them as a whole,
the object which Government had
in view may be said to be
somewhat as follows:—

10

to send to the principal south-eastern
towns, to Chingleput, Seindevanum,
Pondicherry, Porto Novo, Cuddalore,
Pollo Nore, Chetlumbrum, Nyaneram,
Combaconum, Sanjore, Trichinopoly,
Negapatam, Dendegut, Madura,
Vedemungalum, Gennevelly, and
Tuticorin, direct communication
with the capital of the Presidency,
and with Bellary and Bombay;
to give them means of intercommu-
nication with each other; to
give to the cotton of Gennevelly,
and to the miscellaneous produce
of Madura ready access to
the sea; and to give to the city

population

population of Madras, and to
the cotton-growers of Bellary
and Gennevelly, direct commu-
nication with the rice-fields
of Sanjore and of South Arcot.
With the Government scheme
Colonel Smith contrasts a
proposal of his own, and, at
the risk of repetition, will re-state
well & plain clearly what the
respective plans consist of.

3.3 The Government of
India propose to construct a
railway on the metre gauge from
Madras, viâ Cuddalore and
Combaconum, to Sanjore; with
a branch from Chingleput to
join

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join the existing line at Conjeveram,
and another from Vendavanum
to Pondicherry.
They propose further to convert
to the metre gauge the whole line
of the Great Southern of India
Company between Negapatam
and Erode, and lastly to
construct another Railway on
the metre gauge from Dindigul
via Dindigul and Madura
to Tuticorin and Tuticorin.

"The Proposed branch is constructed on a Broad Gauge"

34 On the other hand
Colonel Smith advocates the
insertion of a third rail on
the Madras Railway between
Madras and Erode, and on
the

the Great Southern Railway
between Erode and Karoor;
with the construction of a branch
line, on the narrow gauge, from
Karoor to Tuticorin. He gives
figures which show that, while
the Government scheme will cost
£ 2,060,300 his proposals would
come to only £ 1,169,200; with an
apparent saving of £ 891,100.
With regard to the Chairman's
figures two remarks must be
made: first — that if the
addition of a third rail between
Sangor and Trichinopoly would
cost £ 1,300 per mile, on a wooden
road, the same operation would
cost

cost much more between Madras, Erode, and Cavoor on an iron road. — second — that if traffic coming from the south is to be carried to Madras without breaking bulk, a considerable amount of narrow gauge rolling stock will be specially required, for which no provision has been made.

35 But the real question at issue is whether the Chairman's proposal provides the accommodation required by the Government and by the country. The Government states (paragraph 29) that the saving of £ 89,100 would be effected by a more efficient performance of the duty. It is scarcely necessary to go again over the ground, and to point out that Colonel Smith's scheme for altogether to provide for the debris of Sankh Point and Dayone. It may be safely affirmed that herein lies the determination of all the discussion. The Government have at last determined that these two projects shall be brought into direct communication by rail with Madras: and the Madras Railway authorities can bring forward no scheme which

Companies

which will meet the requirements of the Government and of the country; but they appear to have set themselves resolutely to oppose the scheme which has been brought forward by other Companies and approved of by the Government.

36. In the paragraph Paragraph 31.
the branch between Brest and Pondicherry is alluded to, the Chairman estimates its cost at £365,000, on round numbers. The Chief Engineer of the Madras Railway gives a different estimate as the result of his inspection of the country. He states that the distance, by rail, is about 88 miles, and that the cost of the line would be probably £6,000 per mile; thus giving a total expenditure of £528,000. The enhancement of this branch would therefore reduce the Chairman's nominal saving to £362,000, nevertheless providing for the objects to which the Government attach so much importance.

Paragraph 35.

37. The feasibility of Colonel Smith's plan for making all the locomotive stock of any branch line adapt itself by self-acting mechanism indifferently to either a narrow or broad gauge without

"without the least impediment at
"the junction" is, to say the least
open to question. It is however
certain that any such plan must
add to the weight and to the
cost, of the narrow gauge stock,
and must, pro tanto, depress
the narrow gauge system of the
advantages which were expected
from it.

38. It is suggested here, paragraph
as well as in paragraph 33
of the Chairman's minute, that,
if the direct line between Madras
and Bangalore be abandoned, the
Guaranteed Company should extend
their existing line from Conjeveram
as far as Chingleput: but

writ

137 75

with what object it is not easy
to imagine. It has already been
shown that from Conjeveram
from which the respective
distances to Madras, by road
and by rail, are 46 and 61 miles,
the whole goods traffic goes by
road, and it is not assumed
too much to predict that from
Chingleput, which is the respective
distance to Madras would be
35 and 80 miles, neither goods
nor passenger traffic would go
by rail.

Further on in the
39. paragraph it is stated that,
"to the south of Pondicherry, it

is

"is certain that both the difficulties
and expense of construction
would be increased, and the
prospect of additional traffic
diminished." It seems unnecessary
to make any comment upon so
strange a statement, beyond the
remark that the Board noticed
in it have received the fullest
consideration both from the
Government, who are eager to
construct the line, and from
the Government upon whom
rests the responsibility for
its selection. It is not easy
to see the connection which the
point here brought forward by
the

Paragraph 37.

the Chairman bears with the Madras Railway Company.

40. Next we are asked to assume that the sole object of the Government scheme is to secure "a continuous uniform line from Dulcheem to Madras. The requirements of South Arcot and Tanjore are ignored."

Paragraph 39.

41. It is then stated that the shareholders in the Madras Railway Company "subscribed their money under a distinct contract, guaranteeing 5 per cent interest in their entirety, and the ultimate prospect of 10 per cent as their result of

communal

economical and judicious manage-
ment. It is scarcely necessary
to remark that the contract does
not guarantee a profit of
10 per cent. The Government
guaranteed to the Company
a minimum dividend of 5 per
cent, and the Company, on
the other hand, undertook that
their profits should be restricted
to a possible maximum of 10
per cent. There could be no doubt
that, had there been good reason
to expect the net profits to
amount to 10 per cent, the
Government would have raised
the capital required for

Paragraph 40

1877

consolidating the Railway upon
more favourable terms.

With regard to
42 the consolidation of the
Colonial Debt
remarks were called for:
first, to repeat that the terms
proposed between Mr Cadman and
Sir Joseph Whitworth & Co
Railway and
their Meadows
cannot be approved of;
secondly, that the Company
state their contract in no way
protects the Company from
competition, and that if at
any time the requirements of
the

"the country should demand the
condemnation of a line likely
to interfere, to some extent, with
the Madras Railway traffic, the
Government have full power
either to construct it, or to
encourage its construction:
the responsibility of such a
measure would rest solely with
the Government, and the whole
of the possible loss would fall
solely upon them. In any case
the Madras Railway Company
would receive their guaranteed
dividend.

Madras
13th August
1872

I have &c.
(Signed) Maitland
Lt Col R.E.

Cons: Ques: for Railways

P.W. 39/50
Rec'd 20th Aug

To
The Secretary to the
Government of India
&c &c &c

Sir
I am directed to
acknowledge the receipt
of the letter from the
Government of India
dated 5th July 1872
No 1023 R, inviting
an expression of the
views of this Govern
-ment on the question
as to what bearing
the amalgamation of
the three existing
Railway Companies

The Govt of India
asks are opposed to any
"any changes in the
alignment of the
proposed Railways
which are shown and
recommended in case
it were decided that
the amalgamation of
the 3 Companies should be
effected, - that is to say,
what bearing (if any)
the fusion of the 3 Compas

into one would have

on the proposed alignments

of Railways in

Southern India —

~~Although this call~~

~~would appear to have~~

~~been made ineffectively~~

~~of the different views~~

~~entertained by the~~

~~several Companies~~

~~on the question~~, His

Excellency the Governor

in Council has no

hesitation in expressing a decided opinion

that no revision

of

"into one Comprehensive Scheme

"based on the revision of

"the existing projects".

This is certainly clearly

expressed: but the

answer to it seems to

be that whether or

not it be decided the

amalgamation of the

3 Companies is decided

upon, we adhere to the

opinion which we have

already expressed as to

the alignment for the

proposed new Railways

in S. India: — and

that, on respectfully

and clearly the grounds

the projects to which

have been already

proposed can be re-

commended in any

case; and ~~in doing~~ I am directed ~~to~~

invite the attention of

the Govt of India

to the accompanying

Note by the Consulting

Engrs; which contains

a masterly resume

of the principles and

arguments which

have guided the Madras

Govt in their selection

of the alignments pro-

posed, and in which

the merits of those

upon which their opinions were formed, and to draw up a memorandum from the Consulting Engineers for Railways (having reference to the letter of the Madras Govt on the subject) by which the advantages proposed by the alignment should appear and for or any alternative project can (or appear to us) sufficiently demarcated

JM

AJT.

P. W. D.

Rev. Otto Read 23rd [illegible]
Read the following:-
From the Secretary India —
to Government —

Resolved that

copy of this Memo:
randum by the Con-
sulting Engineer for
Railways be forwarded
to the Government of
India and Secretary
of State for India
with the expression of
the opinion of this
Government that no
change of alignment
of the proposed

alignments, also con-
nected with the schemes,
or the adoption of which)
of Bhimaji he presumes
if the proposed amalgamation
would necessitate, are
fully discussed.

Enm

new Railways of
(Southern India) is
called for under any
circumstances.

To the C. Engrs for Rys
Dept. 21/10/72

2380

To.

The Secretary to the Govt
of India, P. W. D.

Sir

In letter No 1023 R
of 5th July, the Government
of India request to be
informed what changes
in the alignment of
proposed Railways
would be recommended by the Madras
Government in case
it were decided that
the amalgamation of

the 3 Companies working in this Presidency should be effected; that is to say, what bearing, if any, the fusion of the 3 Companies into one should have on the revision of the existing projects.

In reply, I am directed to state that whether or not the amalgamation of the 3 Companies is decided upon, His Excellency the Governor in Council adheres to the opinions already expressed as to the

alignment for the proposed new Rail-ways in Southern India. ~~[illegible]~~ expressing the grounds on which those opinions were formed ~~[illegible]~~ memorandum drawn up by the Consulting Engineer for Railways, having reference to a Minute on the subject by the Chairman of the Madras Railway ~~[illegible]~~ the advantages possessed by the alignment already approved by the

Government over any
alternative projects
are, as appears to His
Excellency ~~in Council~~
sufficiently demonstrated.

Desp. 21/10/72 rate 36.
Share Chg of Exp. 237 gg.
1872.

Govt. of 1872 Madras.

PUBLIC WORKS.

To The Consulting Engr. for Railways.

To The Secretary to the Govt. of India

Dated

Read.

Encl. 3

G. O. 10th October No. 2379-2380.

Nos. 159-160 & 161

Railways — Passing Orders on papers relating to the alignment of proposed Railways in case it were decided that the Amalgamation of the three Companies should be effected.

Referring to the opinions already expressed as to the alignments of the proposed Railways in Southern India. And forwarding Copy of Government Order by the same on the subject.