M.R.O. 1—77,606—8-6-37.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2203, 2204, Press
242, 243, 244, Mis.

Dated 18-9- 1872.

Not to be folded or roughly handled

No. 242. Read the following letter from the Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 28th August 1872, No. 444 :—

WITH reference to the order of Government dated the 26th July 1872, No. 1,788, I have the honour to submit a letter* from the Agent of the Great Southern of India Railway, giving cover to a report from the Chief Engineer upon the junction arrangements at Trichinopoly, showing the manner in which Mr. Logan proposes to work the new station in view of the certain ultimate conversion to the narrow gauge of the existing line between Negapatam and Erode.

* No. 4,659, dated 27th August 1872, with 8 Enclosures :—
1 Report.
1 Estimate.
2 Plans.
4 Sections.

2. Mr. Logan has gone so fully into all the arguments for and against the different proposed sites for the junction that it seems unnecessary for me to do more than express my entire concurrence with him in the opinion that the site marked C is, upon the whole, decidedly the most suitable to the general convenience of the public and of the Railway Company; and that if this site (C) be decided on, the best mode of effecting the junction is by the line marked No. 1, which is shown by Mr. Logan to be as economical as any other mode that has been proposed.

3. I trust that, with the explanation which has now been given, the Government of India will approve of the proposed situation of the junction station and the arrangements connected therewith.

From the Agent of the Great Southern of India Railway, to the Consulting Engineer for Railways, dated Negapatam, 27th August 1872, No. 4,659.

IN reply to your letter No. 312 of the 3rd instant, I attach hereto copy of a report (No. 2,134, dated the 24th idem) from the Chief Engineer, regarding the proposed junction arrangements at Trichinopoly. The plans therein referred to have been sent to your address by this morning's train.

Copy of letter No. 2,134, *dated August 24th*, 1872, *from Chief Engineer to the Agent.*

I HAVE to acknowledge receipt of your No. 2,117 of 6th instant, forwarding Government order, No. 1,788 of the 26th ultimo, on a letter No. 897 from the Government of India regarding the proposed site for the junction station at Trichinopoly.

2. The Government of India remark that (1) I have not explained why the new line should not run into the existing station at Trichinopoly; (2), that if a new junction station is required, they wish it explained why that station should not be placed "on the old line of railway instead of at some distance from it, involving the construction of a new railway and the abandonment of part of the old line, or a duplication of railway lines in a place where two lines are not wanted."

3. In May 1870 I forwarded a survey showing the proposed location of the line; in February 1871 the working plans and surveys of the line as staked out were sent forward with my estimate for the broad gauge; and, finally, in August 1871 the same surveys were again sent on to Government with my estimate for the narrow gauge. More than once, during the period of nearly two years which elapsed between the sanction of the general location of the line and the final sanction by the Government of India (received in March 1872) to our plans and estimates,

the Consulting Engineer and his Deputy were at Trichinopoly and discussed the question of the proposed junction station on the ground. With the Acting Consulting Engineer I went over the sites now under reference, and I understood him to concur in my views.

4. I have always considered that the discussions with, and inspections by, the Consulting Engineer were intended to diminish, as far as possible, the necessity for correspondence, and I did not, therefore, consider it necessary to enter into such detail as I would have done, had I been submitting my plans to the judgment of those who were comparatively ignorant of the locality and its requirements.

5. With reference to the question of site for the proposed junction station, when the first portion of this railway was made from Negapatam to Trichinopoly, the terminal station at Trichinopoly was, by order of the Government of Madras, placed at the point E (on the accompanying plans 220, 221, and 222) under the impression, I believe, that any extension towards Erode would be carried straight on, so as to skirt along the high ground on the southern edge of the irrigated lands lying immediately to the south of the river Cauvery.

6. When the best route for the Erode Extension came to be investigated by my predecessor Mr. Carr, he pointed out that it would be injudicious to carry the line along the high ground referred to, the neighbourhood being poorly populated, and only fringed on one side by cultivation; the proper course being to get close to the town and bazaars of Trichinopoly, passing thence through the villages and centres of traffic lying in the irrigated lands parallel and close to the river Cauvery. This view was adopted by the Madras Government, and the extension was constructed accordingly.

7. It had always been a grievance with the merchants and others in Trichinopoly that the small terminal station at E was so far away from them, being about three miles from the centre of the town and one mile and half from the nearest bazaar.

8. In planning the Erode Extension it was, therefore, an object to place a depôt for goods as close to the business-part of the town as possible, and the result was the present station at A.

9. The station at E was intended to be retained for the use of passengers in the cantonment and the upper part of the town; hence the abrupt turn referred to in paragraph 3 of the letter* from the Government of India. It was found, however, E being at so great a distance from all concerned, that no traffic came, and the small station there was abandoned.

* No. 897.

10. The "abrupt turn" or curve referred to by the Government of India is of 16 chains radius, and has been found extremely inconvenient in working, causing delay and considerable wear and tear in rails and tyres; so much so that it was only in the reasonable certainty that the Southern Extension would be carried out, when the curve would be removed; that sanction was not asked to have it taken up and flattened long ago.

11. Again, it has long been felt to be a very great inconvenience to the inhabitants, Civil and Military, of the Cantonment and the upper bazaars that no station nearer than the fort is attainable, and a road-side station has frequently been agitated for to be placed somewhere inside the cantonment; so much was this want felt that the Consulting Engineer in 1869 officially requested that passengers should be taken up and set down in the cantonment; and this has, to a certain extent, been done, but under considerable inconvenience to the public, as no shelter has ever been provided, the expectation being that on the extension of the railway to the south suitable accommodation in the shape of a station would be provided.

12. The fort station (existing) on the one hand and the small station at E (abandoned) on the other, being both inconveniently distant from the cantonment and upper bazaars, I had to consider (1) the place at B, mentioned in paragraph 4 of the letter from the Government of India; (2), the spot marked G; and (3), the site marked C proposed in my plans and estimates.

13. A glance at the accompanying plans and sections will show that a station at B would be extremely expensive and inconvenient in the acquiring of land, in construction, and in maintenance and working. The ground is covered with house-property; the levels are such that a great quantity of filling would be requisite, the land falling away on both sides of the centre line of railway. The choice of site, moreover, is limited on the north by Musselmans' Burying-ground of considerable extent (shown at H on plan No. 222). When the Erode Extension was laid out the Musselman community petitioned Government against the line being taken across the grave-yard, and it was only on its being shown to them that the public interests demanded the sacrifice, coupled with a promise that as little ground as possible would be taken, that the opposition was withdrawn.

Proceedings of the Madras Government, Public Works Department,
18th September 1872.

14. Towards the south the space available is limited by rising ground, while, even if ample space existed for a good junction station, every ton of Rolling Stock and goods from north to south and *vice versa* would have to be lowered and raised again 15 feet each way, site B being about 15 feet below the level of site C; all traffic on the main line would not only be carried down and up in this way, but a run of about one mile and a quarter more would be entailed than if the station were at C; that is to say, the distance from C to B and thence to D is greater by one mile and a quarter than the distance from C direct to D along line No 1. Thus, every ton of goods over the main line would be lowered and raised 15 feet, and run one mile and a quarter more than necessary.

The run into the station also being contrary to the direction to be taken by main line trains would involve, with mixed trains as all ours are, the breaking up and reforming of every train at the junction before it could proceed. The amount of extra cost on goods, delay in shunting, and wear and tear in stock, consequent on such an arrangement, it is hardly necessary to enlarge upon.

15. The site B is so obviously central that other things being equal, I believed it to be the best. But I found that the following inconveniences would result from its adoption (1) the objectionably sharp curve in getting round to E would remain; (2), another of a similar character would have to be introduced to leave B for the south (line No. 3); (3), the main line traffic would, as described above with reference to B, have to run into this station G in a direction contrary to that in which it has eventually to proceed; (4) even if the extent of station ground shown at G could, by altering existing gradients, be obtained on a level, the north end of the site, where owing to the levels it would be most economical to build the station, terminates in a falling gradient of 1 in 127, which would, I consider, be the source of much inconvenience, if not of danger, where a great deal of shunting would have to be carried on (5); the site G would necessitate a large amount of filling, from its being on side-lying ground, honey-combed by excavations of the railway ditches and ballast pits; (6), the site and neighbourhood being surrounded by private dwellings, the annoyance to the inhabitants and consequent depreciation of property would be serious.

16. I thus came to the conclusion that the site marked C would best combine the conditions of public convenience and engineering requirements (1). It is quite as central with regard to the cantonment and its bazaars as the site marked G, while it is much closer to the more important points of the station in a Military and defensive point of view, *e.g.*, the European Infantry and Artillery Barracks, the Arsenal, Commissariat Stores, and the Grand Powder Magazine—a matter of no small account in the movement of troops and stores, and may be of vast importance in any time of political trouble.

17. Having satisfied myself that this (C) would be the best site for the junction station, and the next object being its connection with the existing line of railway, it occurred to me to form the junction at the points F and B. This plan would doubtless be slightly the cheapest in first cost; but while leaving untouched the existing objectionable curve between E. and F it would add another equally sharp and expensive in working.

18. I am aware that the curve would not be so injurious on the narrow as it has been on the broad gauge; but sharp curves even on the narrow gauge are unadvisable where the country is comparatively flat and open, and where no heavy expenses are to be avoided by the adoption of such curves so to compensate for the increased wear and tear of permanent-way and rolling stock.

19. The Government of India appears to think (*vide* lotter, paragraph 5) that the traffic over this point of the line will be small for many years to come. This is, of course, as yet comparatively a matter of speculation; but I anticipate that the traffic, especially on this portion of the line, will, as a rule, be considerably greater than that which exists now; while at certain seasons of the year very long and heavy passenger-trains will have to be run day and night as has just been the case on the occasion of the great Nagore festival.

20. If the traffic from this source is occasionally very heavy now, it will be doubly so on the opening of the Southern Extension to Madura, one of the holiest cities in Southern India; and its proximity to Ramisserum, another sacred spot, is such that a vast influx of pilgrims from all parts of the country is sure to ensue.

21. The southern country, too, being opened up will undoubtedly cause a heavy increase to the passenger-traffic towards festivals on the now open line, and I leave you to say how inconvenient, if not dangerous, at such seasons it would be to have a cramped up station with bad approaches.

22. Estimating the cost of each of the three lines referred to, marked Nos 1, 2 and 3 respectively on the accompanying plans Nos. 220, 221, and 222, the following is the result; for details see Appendix A, assuming the lines to be made with new material :—

Line No.	1	...	...	Rupees 75,786
,, ,,	2	...	...	,, 53,248
,, ,,	3	...	...	,, 69,937

But by the construction of line No. 1 one mile and seven-eighths of a mile of permanent-way will be set free from the present railway, and the cost of this may be fairly deducted from No. 1. The rails on the open line weigh 68 lbs. to the lineal yard, and taking the length of rails set free (17-8 mile) at the same cost as the light narrow gauge ones delivered at Trichinopoly, the amount to be deducted from the cost of line No. 1 is Rupees 16,181, and the comparison given above will then be altered thus :—

Line No.	1	...	...	Rupees 58,605
,, ,,	2	...	...	,, 53,248
,, ,,	3	...	...	,, 69,937

Three twelve feet girder spans not taken to account in the above deduction will also be available by the abandonment of this part of the old line.

23. It thus appears that of the two sites (G and C) C would be in reality not only the most suitable to the general convenience of the public and of the Railway Service, but it would practically cost about the same as No. 2, while its advantages in ease and economy of working would be undoubled.

24. The site at C moreover has this further advantage over that at G, that if Government, approving of the former, see cause to order the adoption of line No. 3 now, at any time hereafter line No. 1 can be constructed, especially as the land for it has already been acquired and handed over to the Railway Company.

25. I venture to express the hope that even should Government consider my judgment at fault in this matter, it will be conceded that the subject has, at least, received careful consideration, and that not from a mere narrow professional point of view, but on the broad general principles of what—all things duly weighed—is best suited to the public interests; assuming the site at C adopted, the present station at A will remain the goods, depôt at Trichinopoly for that town and places to the west.

To work into A as a junction station would involve, as I have before pointed out, a fall and rise for all main line traffic of 47 feet; and a run of four and a quarter miles more than if the junction is worked at C, and in addition the reforming of all through-trains from having to reverse their direction on leaving Trichinopoly for the east and north.

Proceedings of the Madras Government, Public Works Department,
18th September 1872.

GREAT SOUTHERN OF INDIA RAILWAY.

ENGINEERING DEPARTMENT, SOUTHERN EXTENSION.

Comparative Estimates of proposed Junctions with the open Line.

ABSTRACT.

—	Line No. 1.	Line No. 2.	Line No. 3.
	RS.	RS.	RS.
Construction of Line	35,523	25,441	29,317
Ballast and Permanent	40,263	27,807	20,960
Extra filling for station ground	.....	.....	19,660
	75,786	.....	.....
Deduct cost of permanent-way material available from present Railway by adoption of line No. 1 ...	16,181	.....	.....
	58,605	53,248	69,937

TRICHINOPOLY,
24th August 1872.

(Signed) DAVID LOGAN,
Chief Engineer.

Comparative Estimates of proposed Junctions with the open Line.

DETAIL.

Estimate.	Line No. 1 shown on the accompanying Plans by a full blue line.		Line No. 2 shown on the accompanying Plans by a full red line.		Line No. 3 shown on the accompanying Plans by a dotted red line.	
	RS.	RS.	RS.	RS.	RS.	RS.
III.—*Construction of Line.*						
1. Earth-work	10,575	.....	6,497	.....	2,654	.....
2. Bridge-work—						
1. Minor bridges and culverts ...	579	.....	1,181	.....	720	.....
2. Large bridges...	4,252	.....	.....	.....	9,660	.....
3. Level crossings, etc.	6,114	.....	6,099	.....	3,769	.....
4. Fencing	14,003	.....	11,664	.....	12,514	.....
		35,523		25,441		29,317
IV.—*Ballast and Permanent-way.*						
1. Ballasting	3,230	.....	2,235	.....	1,683	.....
2. Permanent-way	37,033	.....	23,572	.....	19,277	.....
		40,263		27,807		20,960
Extra filling for Station Ground B.	.....	.....	.....	.....	19,660	19,660
	.....	75,786	.....	53,248	.....	69,937

TRICHINOPOLY,
24th August 1872.

(Signed) DAVID LOGAN,
Chief Engineer

No. 243. ORDER THEREON, 18th September 1872, No. 2,203.

RAILWAY, No. 39.

ORDERED that these papers be forwarded to the Government of India :—

(Here enter No. 2,204, dated 18th September 1872.)

(True Extract.)

Colonel, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.
Exd. F. R. Bantleman.

Govt. of {1872} Madras.

PUBLIC WORKS.

To

THE CONSULTING ENGINEER

FOR RAILWAYS.

Dated September 18th.

Recd. *Encl.*

G. O., 18th September 1872, No. 2,203.

SEPTEMBER

Nos. 242-243

New Railway Station at Trichinopoly.—Passing orders on letter from the Consulting Engineer forwarding a report from the Chief Engineer explaining the grounds upon which the site for the new railway station was determined.

PUBLIC WORKS DEPARTMENT,
OOTACAMUND, *18th September* 1872.

No 244.

No 2,204.

To

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

RAILWAY, No. 40.

SIR,—I am directed by His Excellency the Governor in Council to submit for the consideration of the Government of India the accompanying letter from the Consulting Engineer for Railways, giving cover to a report from the Chief Engineer of the Great Southern of India Railway Company, in which that officer explains the grounds upon which the site for the new Railway Station at Trichinopoly was determined; I am to express a hope that the Government of India will accord their sanction to the proposed arrangements which have the full approval of the Consulting Engineer, and appear to His Excellency the Governor in Council to have been thoroughly well considered and to be the best possible under the circumstances described.

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

Colonel, R.E.,
Secretary to Government.

Exd. F. R. Bantleman.

RAILWAY DEPARTMENT. CONSULTING ENGINEER'S OFFICE.

No. 2144

From

Lieut. Colonel C. J. H. M. Shaw Stewart R.E.
Consulting Engineer for Railways,

To

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

SIR,

With reference the Order of Government dated the 26th July 1872, No. 1788, I have the honour to submit a letter from the Agent of the Great Southern of India Railway, giving covers to a report from the Chief Engineer upon the junction arrangements at Trichenopoly, showing the manner in which it is proposed to work the new station

× No 4659 dated 27th August 1872. with 8 enclosures
1 report.
1 estimate.
2 plans.
4 sections.

in view of the certain ultimate conversion to the narrow gauge of the existing line between Nagapatam and Erode.

2. Mr Logan has gone so fully into all the arguments for and against the different proposed sites for the junction, that it seems unnecessary for me to do more than express my entire concurrence with him in the opinion that the site marked C is upon the whole, decidedly the most suitable to the general convenience of the public and of the Railway Company; and that if this site (C) be decided on, the best mode of effecting the junction is by the line marked No 1, which is shown by Mr Logan to be as economical as any other mode that has been proposed.

3. I trust that, with the explanation which has now been given, the Government of India will approve of the proposed situation of the junction station, and the arrangements connected therewith.

I have the honour to be,
Sir,
Your most obedient Servant
Lieut Col RE
Cons: Engineer for Railways.

Madras
28 August
1872

No. 4659 GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE,

NEGAPATAM, August 27th 1872

From

THE AGENT,

Great Southern of India Railway,

To The Consulting Engineer
for Railways
Madras

SIR,

In reply to your letter No. 312 of the 3rd instant, I attach hereto copy of a report (No. 2134 dated the 24th idem) from the Chief Engineer, regarding the proposed Junction arrangements at Trichinopoly. The plans therein referred to, have been sent to your address by this morning's train.

I have the honor to be
Sir,
Your most obdt Servt
William A Betts
Agent

RAILWAY DEPARTMENT.

No. 4208 1872.

From
The Consulting Engineer for Railways,

To
The Secretary to Government, P. W. Department, Fort Saint George.

Dated 28 August 1872.
Recd. 30

Submitting a letter from the Agent of the G. S. of I. Rly giving cover to a report from the Chief Engineer upon the Junction arrangements at Trichinopoly

18 Aug 1872
Rec. 4 Sept 1872

Copy of Letter No 2134 dated August 24th 1872.
From Chief Engineer to the Agent

I have to acknowledge receipt of your No 2117 of 6th instant, forwarding Government order No 1788, of the 26th Ultimo, on a letter No 897 from the Government of India regarding the proposed site for the junction Station at Trichinopoly

2. The Government of India remark that (1) I have not explained why the new line should not run into the existing Station at Trichinopoly. (2) that if a new junction Station is required, they wish it explained why that Station should not be placed "on the old line of Railway, instead of at some distance from it: involving the Construction of a new Railway and the abandonment of part of the old line, or a duplication of Railway lines, in a place where two lines are not wanted."

3. In May 1870, I forwarded a Survey shewing the proposed location of the line; in February 1871, the working plans and Surveys of the line as staked out were sent forward with my estimate for the broad gauge; and, finally, in August 71, the same Surveys were, again, sent on to Government with my estimate for the narrow gauge. More than three, during the period of nearly two years which elapsed, between the sanction of the general location of the line and the final sanction by the Government of India / received in March 1872 / to our plans and estimates, the Consulting Engineer and his Deputy were at Trichinopoly - and discussed the question of the proposed junction Station on the ground with the acting Consulting Engineer, I went over the

Sites

Sites now under reference and I understood him to concur in my views.

4. I have always considered, that the descriptions with and inspections by the Consulting Engineer were intended to diminish, so far as possible, the necessity for Correspondence: and I did not, therefore Consider it necessary to enter into such detail as I would have done, had I been submitting my plans to the judgment of those who were Comparatively ignorant of the locality and its requirements.

5. With reference to the question of Site, for the proposed Junction Station, when the first portion of this Railway was made from Vegapatam to Trichinopoly, the terminal Station at Trichinopoly was by order of the Government of Madras, placed at the point E. (Vide the accompanying plans 220-221 & 222) under the impression, I believe, that any extension towards Erode would be carried straight on; so as to skirt along the high-ground on the Southern Edge of the irrigated lands lying immediately to the South of the River Cauvery.

6. When the best route for the Erode extension, came to be investigated by my predecessor Mr Carr, he pointed out that it would be injudicious to carry the line along the high grounds, referred to, the neighbourhood being poorly populated, and only fringed on one side by Cultivation - the proper course being to get close to the Town and bazaars of Trichinopoly: passing thence, through the villages and centres of traffic lying in the irrigated lands parallel and close to the river Cauvery. This view was adopted by the Madras Government: and the extension was constructed accordingly.

7

7. It had, always been a grievance with the Merchants and others in Trichinopoly, that the small terminal Station at E. was so far away from them; being about three miles from the Centre of the Town and one mile and a half from the nearest bazaar.

8. In planning the Erode Extension it was, therefore an object to place a depôt for goods as close to the business part of the Town as possible and the result was, the present Station at A.

9. The Station at E. was intended to be retained for the use of passengers in the Cantonment and the upper part of the Town, hence, the abrupt turn refer-
No 897 -red to in para 3 of the letter from the Government of India. It was found, however, E being at so great a distance from all concerned, that no traffic came; and the small Station there was abandoned.

10. The "abrupt turn" or curve referred to by the Government of India, is of 16 chains radius: and has been found extremely inconvenient in working. Causing delay and considerable wear and tear in rails and tyres. So much so, that it was only in the reasonable certainty, that the Southern Extension would be carried out - when the curve would be removed - that sanction was not asked, to have it taken up and flattened long ago.

11. Again, it has long been felt to be a very great inconvenience to the inhabitants Civil and Military of the Cantonment and the upper bazaars. that no Station nearer than the first is attainable; and a road-side Station has frequently been agitated for, to be placed somewhere inside the Cantonment. So much was this want felt, that the Consulting Engineer in

in 1869, officially requested that passengers should be taken up and set down in the Cantonment and this has, to a certain extent, been done; but, under considerable inconvenience to the public, as no shelter has ever been provided the expectation being, that on the extension of the Railway to the South, suitable accommodation, in the shape of a Station, would be provided.

12. The Fort Station (existing) on the one hand and the small Station at C (abandoned) on the other, being both inconveniently distant from the Cantonment and upper bazaars, I had to consider (1) the place at B. mentioned in para 4 of the letter from the Government of India (2) the spot marked G and (3) the site marked C proposed in my plans and estimates.

13 A glance at the accompanying plans and sections will show, that a Station at B would be extremely expensive and inconvenient in the acquiring of land, in Construction, and in Maintenance and working. The ground is covered with house property; the levels are such, that a great quantity of filling would be requisite: the land falling away on both sides of the centre line of railway. The choice of site moreover is limited on the north by a Mussulman burying ground of considerable extent (shewn at H on plan No 222). When the Erode Extension was laid out, the Mupulmen Community petitioned Government against the line being taken across the grave yard. and it was only on that being shewn to them, that the public interests demanded the sacrifice, coupled with a promise

promise that as little ground as possible would be taken that the opposition would withdraw.

14 Towards the South the space available is limited by rising ground, while, even if ample space existed for a good Junction Station, every tow of Rolling Stock and goods from North to South and vice versa, would have to be lowered and raised again 15 feet each way- Site B being about 15 feet below the level of Site C- all Traffic on the main line would not only be carried down and up in this way, but a run of about one mile and a quarter more would be entailed, than if the Station were at C. That is to say, the distance from C to B and thence to D, is greater by one mile and a quarter, than the distance from C direct to D, along line Nº 1. Thus every tow of goods over the main line would be lowered and raised 15 feet and run one mile and a quarter more than necessary.

The run, into the Station, also, being Contrary to the directions to be taken by main line trains, would involve, with Mixed trains as all ours are, the breaking up and reforming of every train at the junction, before it could proceed- The amount of extra Coal on Goods, delay in Shunting, and wear and tear in Stock, Consequent on such an arrangement, it is hardly necessary to enlarge upon.

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to

to B, would remain (2) another of a similar character, would have to be introduced to leave D for the South (line No 3) (3) the main line traffic would, as described above with reference to B, have to pass into this Station G in a direction, Contrary to that in which it has eventually to proceed. (4) even if the extent of Station ground shewn at G could by altering existing gradients be obtained on a level, the North end of the site, owing to the levels it would be most convenient to build the Station, terminates in a falling Gradient of 1 in 127 - which would, I consider, be the source of much inconvenience, if not of danger, where a great deal of shunting would have to be carried on - (5) the site G would necessitate a large amount of filling, from its being on side-lying Ground, honey combed by excavations of the Railway ditches and ballast pits - (6) the site and neighbourhood being surrounded by private dwellings, the annoyance to the inhabitants and Suspected depreciation of property would be serious.

16 I, thus, came to the Conclusion, that the site marked C, would best combine the Conditions of public convenience and Engineering requirements - (1) It is quite as central with regard to the Cantonment and its bazaars as the site marked G, while it is much closer to the more important points of the Station in a Military and defensive point of view: e.g. the European Infantry and Artillery Barracks the Arsenal, Commissariat Stores and the Grand Trunk Road magazine - a Matter of no small account in the movement of Troops and Stores - and, may be, of more importance

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so, on the opening of the Southern Extension

to

to Madura, one of the holiest cities in Southern India: and its proximity to Rameseram, another Sacred Spot, is such that a vast influx of pilgrims from all parts of the Country, is sure to ensue

21 The Southern Country, too, being opened up, will undoubtedly cause a heavy increase to the passenger traffic towards festivals on the new open line: and I leave you to say how inconvenient, if not dangerous, if such seasons it would be to have a cramped up Station with bad approaches

22 Estimating the cost of each of the three lines referred to marked Nos: 1, 2 and 3 respectively on the accompanying plans Nos: 220, 221 & 222 the following is the result for details see appendix A. assuming the lines to be made with new Material

Line No 1	Rs 75786
2	" 53248
3	" 69937

But, by the Construction of line No 1 one mile and seven eighths of a mile of permanent way will be set free from the present Railway: and the Cost of this may be fairly deducted from No 1. The rails on the open line weigh 66 lbs to the lineal yard and taking the length of rails set free (1 7/8 mile) at the same cost as the light narrow Gauge ones, delivered at Pichmopoly, the amount to be deducted from the cost of line No 1 is Rupees 16,181- and the Comparison seven above will, then be altered thus

Line No 1	Rs 58605
2	" 53248
3	" 69937

Shaer

Three twelve feet Girder Spans not taken to account in the above deduction will, also, be available, by the abandonment of this part of the old line.

It thus appears that of the two lines (C and C) C would be in reality not only the most suitable to the General Convenience of the public and of the Railway Service, but it would practically, cost about the same as No 2 while its advantages in ease and economy of working would be un-doubted

24. The line at C, moreover, has this further advantage over that at G, that if Government approving of the former, see cause to order the adoption of line No: 3 now, at any time hereafter, line No 1 can be constructed, especially as the land for it has already been acquired and handed over to the Railway Company.

25 I venture to express the hope, that even should Government consider my judgment at fault in this matter, it will be conceded that the subject has, at least, received Careful Consideration: and that, not from a mere narrow professional point of view; but, on the broad general principles of what all things duely weighed, is best suited to the public interest. assuming the line at C adopted, the present Station will remain the goods depot at Inchanofy for that town & places to the west

To work into it as a junction Station would involve as I have before pointed out, a fall and rise for all Main line Traffic of 47 feet; and a run of ~~two~~ four and a ~~half~~ quarter miles more than if the junction is worked at C and in addition the reversing of all through trains

from

from having to pursue their direction on leaving Ipsheimopoly for the East and North

/ True Copy /

William Bell

Agent

23. Appendix A.

Great Southern of India Railway

Engineering Department Southern Extension

Comparative Estimates of proposed Junctions with the open line.

Abstract

	Line No 1	Line No 2	Line No 3.
Construction of Line	35,523 " "	25441 " "	29317 " "
Ballast and Permanent	40,263 " "	27,807 " "	20960 " "
Extra filling for station ground			19660 " "
	75786 " "		
Deduct cost of permanent way material available from present Railway by adoption of line No 1	16,181		
	58,605 " "	53,248 " "	69,937 " "

Trichinopoly 24th August 1872
Chief Engineers Office

(Signed) David Logan
Chief Engineer

Great Southern of India Railway

Engineering Department Southern Extension

Comparative Estimates of proposed Junctions with the open line

Detail

Estimate	Line No 1 Shewn on the accompanying plans by a full blue line		Line No 2 Shewn on the accompanying plans by a full red line		Line 3 Shewn on the accompanying plans by a dotted red line	
III Construction of Line						
1 Earthwork	10,575 " "		6,497 " "		2654	
2 Bridgework						
1 Minor Bridges & Culverts	579 " "		1,181		720	
2 Large Bridges	4,252 " "				9,660	
4 Level Crossings & c^{a}	6,114 " "		6,099 " "		3,769	
5 Fencing	14,003	35,523 " "	11,664 " "	25,441 " "	12,514	29,317 " "
IV Ballast & Permanent way						
1 Ballasting	3,230		2,235 " "		1,683	
2 Permanent way	37,033	40,263 " "	23,572	27,807 " "	19,277 " "	20,960 " "
Extra filling for Station grounds B					19 660	19 660 " "
		75,786		53,248		69 937

Trichinopoly 24th August 1872
Chief Engineers Office

(Signed) David Logan
Chief Engineer

Accepted
agent

No. 22600 P. W. D.

Rec. Office Madras Govt.

Read the following:-

From the Secretary to Govt. (H.R. No 444 of 28 August 92)

ordered that these papers be forwarded to the Govt. of India.

H.R. Le

No. 22264.

The Secretary to the Govt. of India.

Sir

I am directed by His Excellency the Governor in Council to submit for the consideration of the Govt. of India the accompanying letter from the Consulting Engineer for Railways

P.W. 1892.

Pw 15-41

Pw Copying

C.E. for Railways

No. dated 25/9/92

giving cover to a report
from the Chief Engineer
of the Great Southern
of India Railway
Company in which
that officer explains
the grounds upon
which the site for the
new Railway Station
at Trichinopoly was
determined; I am to
express a hope that
the Government of
India will accord
their sanction to the
proposed arrangements
which have the full

approval of the Con-
-sulting Engineer
and appear to His
Excellency the Governor
in Council to have
been thoroughly well
considered and to
be the best possible
under the circum-
-stances described.

I have &c.

(Sd) Lytton

25
2

Depts. 25/9/72 with 35 plans
Ch. 4 Encs. 2203
1072
6 plans dispd by Hayley 9/10/72.

No. 4206

Govt. of {1872} Madras.

PUBLIC WORKS.

To The Consulting Engineer for Railways

&

To The Secretary to the Govt. of India

Dated

Recd. Encl.

G. O., 18th Septr. No. 2203-224

Nos. 212-213-214

New Railway Station at Trichinopoly. Papers and letters from the Engineer forwarding a report from the Chief Engr explaining the grounds on which the site for the new Ry Station was determined.

Forwarded with remarks, letter from the Consg. Engr. & Monthly Return