M R O 1—4,002—16 9-48

(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. / B.P. No.	1154-55 (Ry)	Press / Mis.
Dated	9.5	1876.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 9th May 1876

No 144 Read the following letter from Lieutenant-Colonel J. H M SHAW-STEWART, R E, Consulting Engineer for Railways, to Major-General G W WALKER, R E, Secretary to Government, Public Works Department, dated Madras, 10th April 1876, No 183 —

In reply to paragraph 2 of the Order of Government, dated the 17th February 1876, No 439, I have the honor to state that I can see no prospect of the Northern Extension of the South Indian Railway being completed during the current year In my letter, dated the 10th ultimo, No 120, I reported to this effect, and I now submit, for the consideration of Government, a letter from the Agent, South Indian Railway, No 1,456, dated 3rd March 1876 with which is forwarded the Chief Engineer's explanation regarding the slow progress of the works

2 The dates now named for opening to the public the sections of the Northern Extension are—

Madras to Tindivanum	July 1876
Tindivanum to Cuddalore	July 1877
Cuddalore to Mayaveram	January 1878
Mayaveram to Tanjore	January 1877

3 In the case of each section the probable date of opening is again somewhat postponed, and this cannot fail to cause disappointment

4 With regard to the section between Tindivanum and Cuddalore, it will be observed that allusion is made to the uncertainty which exists as to the intentions of Government in dealing with the Poonnaur river, and to the delay in the prosecution of the railway works which has resulted therefrom That delay is, however, apparent rather than real, inasmuch as the bridge over the Poonnaur, which will undoubtedly be the key to the completion of the line, has been pushed on without intermission There has been a question at issue with regard to the level to be adopted in the bridge approaches, but the delay in deciding this point cannot, in my opinion, be said to have delayed the opening of the line

---

From W S BETTS, Esq, Agent of the South Indian Railway, to Lieutenant-Colonel J H. M SHAW-STEWART, R E, Consulting Engineer for Railways, dated Negapatam, 31st March 1876, No 1,456

Your letter No 218, of the 8th instant I forward herewith, for the information of Government, the explanation of the Chief Engineer regarding the slow progress of work in his department

2 It will be observed Mr Logan does not consider it possible that the entire Northern Extension may be opened for traffic in December next, he now estimates the several sections of that line will be completed upon the dates noted below—

Madras to Tindivanum	July 1876
Tindivanum to Cuddalore	July 1877
Cuddalore to Mayaveram	January 1878
Mayaveram to Tanjore	January 1877.

LETTER from the Chief Engineer, to the Agent of the South Indian Railway Company, dated Trichinopoly, 29th March 1876, No 7,435

I BEG to acknowledge receipt of your letter, No 2,318/1,267, of the 10th instant, giving cover to a letter from the Consulting Engineer, dated the 8th instant, together with a copy of the Proceedings of the Madras Government, No 439, of the 17th ultimo

It has been the cause of much regret and discouragement to me to find the Government of India takes so unfavorable a view of the progress made on our works, and I trust in the light of the following remarks Government may see fit to modify their opinion —

At the outset I desire to point out, that in forming an estimate of the probable dates of completion for the several portions of the line there was an element in my calculations over which I had no control, *viz*, the delivery of materials from England, and while freely admitting that I took what has turned out to be a very much too sanguine forecast of the progress to be made on the Madras-Cuddalore line, I ask it to be borne in mind that as Head of the executive department I am in a measure impelled to take a sanguine view of progress if only as a stimulant to exertion on the part of those on the works, while the fact of my over-sanguine estimates proved at least that my desire was towards speedy progress In saying that I am impelled to take a sanguine view of progress, I trust that it is needless to say that I do not mean that I am justified in overstating the rate of progress, but that I think it expedient to give as early a date as is consistent with the assumption that all things work favorably towards the result in view.

In January 1875, I was asked to state when the Southern Extension would be ready for opening, and I replied that the portion between Trichinopoly and Madura would probably be ready in July and the remainder in October 1875

At the time when I formed this estimate only 94 72 miles of the 215 had been laid, and only sufficient sleepers were in the country to lay 37 miles more, and rails to lay about 52 miles

With regard to the Trichinopoly-Madura portion the key to accomplishment was the completion of the Vygay bridge Thirty 70-feet girders for this bridge had been rivetted up in Trichinopoly, and, until the line was laid between that station and Madura, these girders could not be utilized The line was laid and a way through obtained by the end of April, and heavy material trains were then run between Trichinopoly, Madura and the south, crossing the river Vygay on a temporary line laid across its bed

Some delay took place in the erection of the Vygay bridge girders owing to floods, and the first train did not pass over the bridge until 10th July 1875 The line between Trichinopoly and Madura was inspected by the Consulting Engineer in July with a view to its being opened for traffic on the 1st August The opening was, however, deferred until the 1st September, not because the line was unfinished, but because the Government Telegraph was not in a sufficiently advanced state to allow of the traffic being worked with safety

The portion of line south of Madura I estimated would be ready for traffic in October 1875 Here, as with the northern portion, the uncertainty lay in the erection of the large girders, which had been rivetted together at Trichinopoly and Tuticorin and could be conveyed to their sites by rail only Owing to the late arrival of permanent-way from England the laying of the line was delayed, and the erection of the girders had to be undertaken in the middle of the monsoon, and the work was retarded by the occurrence of serious floods in some of the rivers Through communication was established between Madura and Tuticorin on the 22nd November 1875, and at the end of November the line was inspected by the Deputy Consulting Engineer and pronounced by him to be safe for public traffic This result was achieved only by the most laborious and unceasing energy of the staff employed The Officiating Consulting Engineer for Railways reported to Government under date the 13th October —

"The progress made since my last inspection cannot fail to be satisfactory to the Government The punctual and orderly distribution of materials and stores *evenly along* a distance of 40 miles, from a point distant nearly 200 miles in addition to the ordinary traffic by rail, to the extent of two train loads daily, involving the loading and despatch of as many as 380 carts

Proceedings of the Madras Government, Public Works Department, 9th May 1876

from one point in a day, is not an easy task in this country for a private Company to accomplish, and the arrangements for the erection of the large bridges promises to be equally successful"

Again, in a report to Government (dated 10th November 1875, No 609), Colonel Shaw-Stewart remarks "I trust that the progress which has been made upon the unopened part of the Southern Extension will be satisfactory to Government The work has latterly been performed at high pressure, and all engaged upon it have been subjected to constant exposure and much fatiguing drudgery The officers employed upon it have been Mr White, Deputy Chief Engineer, and Messrs. Spalding, Rice, Partridge, Nicholas and Dredge, Assistant Engineers The satisfactory result which I am able to report could have been secured only by great exertion and untiring energy on the part of these gentlemen"

The first passenger train conveying His Royal Highness the Prince of Wales and suite from Tuticorin to Madura passed along the line on the 10th December, and it might have been opened then for public traffic but you considered it advisable to defer the opening till 1st January 1876, in order to give more time for the progress of arrangements for passengers and goods Taking the actual dates of opening these two portions of line, it appears that in the case of the Trichinopoly-Madura portion my estimate was wrong to the extent of two months, and the part south of Madura three months, but the excess is in each case reduced by one month if the dates be taken when these portions were respectively ready for traffic

I have already in my letter, No 1,687 of 23rd January last, endeavored to explain some of the causes which combined to delay the completion of the line between Madras and Chingleput I am afraid that I have myself to thank in some measure for the criticisms of the Government of India, with regard to deferred dates of opening, in having been too sanguine in my estimates of progress I now see that I underrated the difficulties with which I had to contend, but I have at least the satisfaction of feeling that I did my best to push on, and I do not think that, under the circumstances, a much greater rate of progress could have been achieved without a very large addition to the cost of the line When I took charge of the Carnatic Company's works in September 1873, nothing whatever had been done towards collecting material or starting work in the districts, and much of the land required had neither been marked out nor handed over to the Company The greater part of the working season of 1874 was therefore taken up in retaking out the line, in revising the plans and waterways, and in settling the sources of supply for stone and brick Out of eight Assistant Engineers whom I found on the staff, one went away in October 1873 and two left during 1874, and new men came out from England The year 1874 was an unusually wet one, and much damage and delay was caused by rain and floods It will be seen, therefore, that the year 1874 was chiefly one of preparation in discovering and settling quarry and brickfield sites, in organizing and settling a working staff, and in revising earthworks and waterway allowances generally During 1875 the work was pushed by all available means, but still not with the speed which I had hoped Skilled labor of all kinds has to be imported, and the least touch of cholera scatters it again During harvesting operations unskilled labor is scarcely to be got, and this is the more unfortunate that the time of harvest is our best working season I have just come off a tour of inspection during which I found that the brickfield operations had been languishing for want of labor, so much so that moulders had to be dispensed with as hands could not be got to carry away the bricks and stack them in the kilns Bridge foundations and masonry work were impeded from the same cause, and I cannot see how the matter is to be remedied except by waiting until harvesting operations are over If it were possible it would not pay to import the labor required, and if it were imported at the slightest sign of cholera the coolies would make off At the river Palar, which is a large and important work, the bulk of the labor comes from villages 8 and 9 miles off The coolies will not live at the bridge, but, I am assured, walk this distance daily to and from the work

At the Sarum bridge the works were lately stopped during the prevalence of cholera by special request of the Head Assistant Collector, to prevent, if possible, the disease spreading through the intercourse of laborers coming from different villages in the neighbourhood

At Cuddalore, when I was there about ten days ago, the work of building the south abutment of the Guddelum bridge was entirely at a stand still for want of labor, and the works on the whole bridge suffered during February from the same cause, all or nearly all the available labor being away in the fields harvesting, and so all along the line through the populous district of Tanjore I found labor only beginning to come in as the rice crops were reaped, and the paddy threshed and carried home

It must be borne in mind that the works of the line between Tanjore and Cuddalore were only taken up as Engineers were available from the Southern Extension, a course which was reported to, and, I conclude, approved by Government and the Board Engineers are now posted and at work all along the line, and I anticipate a good outturn of work this season

With reference to the probable dates of opening, I am sanguine that the line between Madras and Tindivanum will be ready for traffic by the 1st July next, the date last fixed for completing to that point

I regret that the delay in resubmitting the revised plans for the stations between Madras and Chingleput prevented our being able to open to Chingleput at the date last fixed (*i e*, 1st April) I found that I could not overtake the work of revision in conjunction with the traffic and locomotive departments in time One Engineer, who was called in to aid in the office work of head-quarters, left the service, and, with the amount of work on hand, it was simply impossible to do what was required before the Consulting Engineer would sanction a start to the work. The plans have now all been revised and settled, every effort is being made to push ahead, and I may add that so far as stations' plans are concerned I do not think there will be any delay in future

Between Tindivanum and Cuddalore there is still considerable uncertainty as to the date of completion, owing to the nature of the foundations of the large bridges Most of these bridges are to be carried on brick cylinders sunk in the beds of the rivers, and experience proves that the rate of sinking the cylinders cannot be estimated with any degree of accuracy The best known methods and appliances are being adopted, but the rate of progress is greatly below what I had hoped The three principal rivers between Tindivanum and Cuddalore are the Chendur, the Poonaur, and the Guddelum, every effort is being made to push on these works, but taking the present rate of well sinking as the basis of calculation I cannot place the completing of this section of the line at an earlier date than 1st July 1877 In connection with this part of our system, I would remind you that in my No 2,841, of 16th August 1875, I advised you of the stoppage of all operations for several miles on each side of the Poonaur river The floods of May and October 1874 were so disastrous in that neighbourhood that it became necessary to alter the design of our works, but the nature of the alterations could not be decided upon until the intentions of Government in dealing with the Poonaur river were made known More than six months have elapsed since the date of my letter, and we have not yet been put in possession of the intentions of Government I have, however, proceeded on the assumption that the grading of the line recommended by the Deputy Consulting Engineer in his report, dated 23rd July 1875, is to be adopted as a temporary measure pending the sanction of Government

With regard to the section of line between Cuddalore and Mayaveram, there is the uncertainty of the completion of the bridges over the rivers Vellar and Coleroon, the cylinder foundations of these bridges will probably require to be sunk to a considerable depth If the opening of this section be deferred until the completion of the bridges, I hesitate to name an earlier date than January 1878

Between Mayaveram and Tanjore the foundations of the large bridges present the same element of uncertainty, and here there is an additional difficulty The shortness of the working season Foundation work can be carried on in the rivers only between the months of January and June

Every effort is being made, the work being carried on by night as well as by day, to complete the large bridge foundations before the floods come in the rivers in June next, and I have good reason to believe that these efforts will prove successful In case, however, of running

Proceedings of the Madras Government, Public Works Department,
9th May 1876.

the risk of again disappointing expectations, I think it better to give the probable date of opening between Mayaveram and Tanjore as 1st January 1877 This date, while it puts back the opening between Tanjore and Combaconum three months later than previously estimated, anticipates by six months the completion of the 20 miles between Combaconum and Mayaveram. From Mayaveram to the Coleroon I estimate may be opened for traffic by the middle of 1877.

I trust that I have said enough to satisfy Government that whatever the cause of slow progress on some parts of the line, it has not been from want of effort or desire on the part of all concerned to push on that delay has occurred I believe that all my Assistants have done their best to forward the progress and interests of the undertaking, possibly the responsibility rests on my shoulders of having overtasked the strength of some of them and expected too much

I conclude by begging Government to accept my assurance that everything is being done that can be done to forward the works, that our best efforts are being directed to secure as rapid progress as possible, and I feel sure that a little forbearance in consideration of the difficulties with which we have to contend will be amply repaid by the stimulus derived from efforts appreciated

(True Copy)

(Signed) W. S. BETTS,
Agent

NEGAPATAM,
30th March 1876.

No 145 ORDER THEREON, 9th May 1876, No. 1,154.

RAILWAY, No 19.

THE still further delay now anticipated in the opening of the several sections of the Northern Extension is, in the opinion of the Governor in Council, very unsatisfactory.

2. It is also to be regretted that under the circumstances the Chief Engineer of the Company should be allowed to go home on furlough for one year without even a medical certificate so far as is known to the Government No official report of Mr Logan's departure has yet been made.

3. It is observed that progress with the railway bridge over the Poonaur has not been interrupted by the discussion as to the treatment of the river, and that the delay in the opening of the section between Tindivanum and Cuddalore cannot be attributed to this cause.

(True Extract.)

(Signed) G W. WALKER, Major-General, R.E.,
Secretary to Government.

No. 146 (DOCKET, No. 1,155, dated 9th April 1876)

COPY of the above forwarded to the Government of India in continuation of docket, No. 784, dated 28th March 1876.

(True Extract)

Colonel,
Offg. Under Secy to Govt, P W.D,
for *Secretary to Government.*

Exd S T Austin
Spare Copies

MEMORANDUM.

From
THE UNCO ASSISTANT TO THE
Cons Engr. for Railways,
Madras,

To
THE Recd Sapol-
P. W. Dept
H.S. Hare

~~REQUESTS to be favoured for the use of the Office of the Consulting Engineer for Railways~~ your Memo No 2635, d/24. Apl. 76.
The Chief Engineer's Correct report.
Dy Con Engrs report d/23. July 1075 not
submitted & Government.

MADRAS,
26. Apl 1876

Thos Argyle
Unco. Asst. to the Cons. Engr. for Railways.

South Indian
SOUTHERN MAHRATTA RAILWAY

South Indian

No. 1456 GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE,

NEGAPATAM, 31st March 1876.

From

THE AGENT, South Indian
Great Southern of India Railway,

To The Consulting Engineer for Railways
Madras

SIR,

Your letter N° 218 of the 8th Inst I forward herewith for the information of Government, the explanation of the Chief Engineer regarding the slow progress of work in his Department.

It will be observed N° Logan does not consider it possible that the entire Northern Extension may be opened for traffic in December next, he now estimates the several sections of that line will be completed upon the dates noted below.

Madras to Tindevanum, July 1876
Tindevanum to Cuddalore, July 1877
Cuddalore to Mayaveram, January 1878
Mayaveram to Tanjore " January 1877

I have the honour to be,
Sir,
Your Most Obedt Servant

William Betts

Agent

Surveyor's Office
Madison 10th March 1854

By Post

Sir

I am directed by the Commissioners for Railways to request that you will forward to this Office a Plan and Section of the Railway from Galena to the Illinois & Wisconsin Railway Company's Line at Freeport, as required by the Act of Incorporation.

I am Sir
Your obedient Servant
Alfred Gallatin
Secretary

To
Major Edward G. W. Wadsworth
Secretary to Commissioners
Galena

Sir

I have the honour to acknowledge the receipt of your letter of the 17th February 1854 No 439, and to state that the Surveys and Plans required will be forwarded to this Office as soon as possible.

I have the honour to be
Sir
Your obedient Servant
[illegible]

From
Lieut. [illegible] U.S. Engrs
To
The Secy. Engrs
Illinois Railway

Dated 31st Oct
Rec'd 3 Nov
No 456

Requesting information

dated the 10th ultmo No 120 Replied to this effect; and I now submit for the consideration of Government a letter from the Legislative Council Madras with which is forwarded the Chief Engineers explanation No 1456 regarding the slow progress of the 3 March 76
works.

2. The dates now named for opening to the public the sections of the Northern Extension are,

Madras to Tindivanum. July 1876.
Tindivanum to Cuddalore. July 1877.
Cuddalore to Nayaveram. Jan.y 1878.
Nayaveram to Tanjore. Jan.y 1877.

3. In the case of each section the probable date of opening is again somewhat postponed, and this cannot

cannot fail to cause disappointment

4. With regard to the section between Tindivanum and Cuddalore it will be observed that allusion is made to the uncertainty which exists as to the intentions of Government in dealing with the Panar river, and to the delay in the prosecution of the Railway works which has resulted therefrom. That delay is however apparent rather than real, inasmuch as the bridge over the Panar, which will undoubtedly be the key to the completion of the line, has been pushed on without intermission. There has been a question at issue with regard to the level to be adopted

in

in the bridge approaches; but the delay in deciding this point cannot in any opinion be said to have delayed the opening of the line.

I have the honour to be
Sir
Your most obedient Servt
Mountmorres Colles
Consulting Engineer for Railways

Bridge Works Estimate
" 26: " " - 1426
" 24: July - 4198
" 22nd Aug - 3423
" 5: Sept/76 - 3031.50
" 17: " - 439
" 25: Inst. - 784

No 1154
Railway Department
No 2638
Dublin
The Commissioners
for Rlys

Dated 10 April 1876
Rec'd 11 April 1876
R.R. 183

To the Secretary to the Post Office
Ref. letter

No 144
Dated 9-5-76
Rec'd 10 May 76
Ans. 2 May/76
Inclosing sketch shewing that there is nothing in the Northern Extension Railway Act to prevent the opening of the Railway for Traffic.
Dublin Castle 26-4-76.

PUBLIC WORKS DEPARTMENT.

No. 1154

Proceedings of the Meeting Got
Under date the 9th May 1876.
Read the following

Letter from the Consulting Engineer for Railways No. 183 d/ 10th April 1876

~~FOR ORDERS.~~

The still further delay now anticipated in the opening of the several sections of the Northern Extension is in the opinion of the Engineer ~~extremely disadvantageous~~ in connection with any unsatisfactory ~~delay~~ ~~with the guarantee~~ of the Chief Engineer of the Company that every effort has been made by himself and his officers to maintain a good rate of progress,

~~and that their beetmorgies will continue to be devoted to the usual, the Govt. must apparently accept the position as unavoidable.~~

2. ~~But~~ It is ~~hardly satisfactory~~ that under the circumstances the Chief Engineer of the Company should be allowed to go home on furlough for one year without even a Medical Certificate so far as is known to the Govt. No official report of Mr. Logan's departure has yet been made.

3. It will be observed that progress with the Railway bridge over the Poonar has not been

Depd. 26-4-76.

been interrupted by the discussion as to the treatment of the river, and that the delay in the opening of the portion between Tindevanum and Cuddalore cannot be attributed to this cause.

Chamier, Major Genl. &c
Secretary to Govt. P.W.D.

P.E. docket No. 155 dy 28th April/76

No. 1155

Copy of the above forwarded to the Govt of India in continuation of docket No. 784 dy 28th March/76.

Depd. 16/5/76

P.E. for Rly No. 165/76

FOR ORDERS

No. 144-146

2635

Govt. of 1876 Madras.

PUBLIC WORKS.

To

The Court Engr for Railways

Dated

Read

Rd

Fwd

G O, 9th May 1876, No 1154
1155

Nos. 1154-56

Northern Extension of the South Indian Ry

Passing orders on letter from the Consr for Rys reporting that there is no prospect of the _____ being opened during the Current year

Forwarding copy of Pro: passed on letter from the Consr for Rys reporting that there is no prospect of the Northern extension of the South Indian Ry being opened during the Current year —