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(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No. 2527-28 (by) Press
B.P.-No. Mis.

Dated 21-9- 1876.

Not to be folded or roughly handled

Madras Railway Company
Agent and Manager's Office
Madras, 5th June 1876

No. 579

From

Robert B. Elwin, Esqre.,
Agent and Manager,
Madras Railway Company.

To

Lieut. Coll. J. H. M. Shaw Stewart R.E.
Consulting Engineer for Railways

Sir,

I have the honour to report as follows for the information of the Government with reference to the operations of the Company during the Official Year 1875-76.

2. The following covenanted Officers and Servants returned to England, resigned the service &c., &c.

Name.	Grade	Remarks
	Engineering Department.	
J. H. Going —	Deputy Chief Engineer —	Proceeded to England, 9 months Sick leave 8th May 1875. Died in Engl vide paragraph 3 of Secretary's Letter No. 56
F. F. Millett —	3d Class Asstt. Engineer —	Proceeded to England on 3 months Sick leave 22d May 1875. Leave exctended vide paragr 3 of Secretary's letter No. 6 and para 10 of — " — " — 5

Name.	Grade	Remarks.
	Engineering Department (Continued)	
Beresford Anderson	Chief Engineer	Proceeded to England on Sick Certificate 22d Nov 1875 Agreement terminated by the Board - vide paragraph 2 of Secretary's letter No 575.
George Webb	Covenanted Inspector	Resigned the service 29th May 1876.
George Stacey	Diver	Returned to England on the expiration of his Agreement 1st August 1875.
C Smith	Diver	Returned to England on Sick Certificate 31st January 1876.
	Locomotive Department.	
H B. Wright	Locomotive Superintendent	Resigned his appointment in England vide paragraph 7 of Secretary's letter No 562.
E. C Boodle	Asstt to Do	Resigned his appointment and returned to England 13th March 1876 - Died at Galle 16th March 1876
	Chief Accountant's Department.	
J. Cramp	Chief Accountant	Proceeded to England on one year's furlough 13th April 1875.

3 The following Officers and Servants arrived from England, viz.

Name.	Grade.	Date of arrival.
	Engineering Department	
Beresford Anderson	Chief Engineer	Returned from England whether he proceeded on Special duty 30 April 1876
E W. Stoney	1st Class Asstt. Engineer	Returned from furlough 7 October 1875.

Name.	Grade	Date of arrival.
Engineering Department (Continued)		
H R Robinson	1st Class Asstt Engineer	Returned from Sick leave 31st October 1875
J. J. Millett	3d do do	Returned from Sick leave. 11th November 1875
Abraham Palmer	Diver	3d August 1875.
Isaac Coombs	do	3d do
Samuel Green	do	3d do
Robert Kemsley	Borer	7th October 1875
Locomotive Department.		
J. H. Trevithick	Locomotive Superintendent	20th February 1876.
Henry Berry	Erector and Fitter	31st August 1875.
John Roach	Smith	31st do

4. On the 13th November last by my letter No. 1138. I reported to you the death of Mr. J. H. Going the Company's Deputy Civil Engineer, which occurred in England during his absence on Sick leave.

Letter No 253. 14th March 1876.

5. Mr. Boodle as you are aware, resigned his appointment in the Company's service on the 7th of March last, and I regret to have to record

that he died at Galle while on his way to England.

6. The mileage worked over during the year 1875-76 was the same as that worked over in 1874-75, viz 858 miles.

Traffic Department.

7. On the 1st October 1875 the undermentioned alterations were made in the rates for Cotton carried over the North West Line, viz:

	Pres to	Pres. per mile per ton.
Pressed to 35 lbs per Cubic foot	12	to 14
" 25 lbs " "	14	to 16
" 19 lbs " "	16	to 18
" 15 lbs " "	19	to 21

with special rates of 12 and 14 pies per ton per mile for Cotton pressed to 35 and 25 lbs respectively booked at Raichore, Adoni and Bellary to Madras.

Loose Cotton at owner's risk of fire booked to Madras or towards the South - 26 pies per ton per mile.

Loose Cotton at owner's risk of fire booked from and to certain Stations, or South of a Cotton pressing Station to such Cotton pressing Station - 18 pies per ton per mile.

8. On the 14th March last the rates for private Special Trains for short distances, consisting of an Engine, one first Class and one Second Class Carriage, were revised, as follows -

For distances less than 100 miles 4 Rupees per mile, with a minimum charge of Rupees 100- and a maximum charge of Rupees 300.
For distances exceeding 100 miles, Rupees 3 per mile.

9. The following special rates for Goods were introduced during the year.
12th April 1875- Specie at the undermentioned rates.

Less than 5 maunds		3 pies per maund	per mile
of 5 maunds and under	1 Ton	2½ "	"
" 1 ton	" 2 tons	2¼ "	"
" 2 tons	" 3 "	2 "	"
" 3 "	" 5 "	1½ "	"
" 5 "	" 10 "	1¼ "	"
" 12 "	and upwards	1 "	"

1st May 1875- Coffee, as an experimental measure at the undermentioned stations and rates.
Coimbatore to Madras at 12 pies per ton per mile.
Bangalore to Madras at 14 pies per ton per mile.
1st May 1875- Salt in Wagon loads at the rate charged for grain carried for distances of 300 miles and upwards, viz 6½ pies per ton per mile.
4th May 1875- Cuppas, at 6½ pies per ton per mile for distances of 50 miles and upwards in Wagon loads of not less than 6 Tons.

11

20th May 1875. Loose Cotton - from Moodandoor to Adoni at 18 pies per ton per mile.

20th May 1875. Loose Cotton, at 18 pies per ton per mile from Raichore to Bellary and Adoni, and at 26 pies per ton per mile from Tadpatri to Yerragoontla.

21st May 1875. Tiles, in Wagon loads of not less than 6 tons and at owner's risk from Beypoor to Madras, at 8 pies per ton per mile.

22d May 1875. Charcoal, at 8 pies per ton per mile in Wagon loads of not less than 3 tons for the Napier Foundry &c.

25th May 1875. Firewood, from Colar Road to Bangalore, at 7 pies per ton per mile.

4th June 1875. Linseed, at 7 Annas per maund in quantities of not less than 8 tons from Gooty to Madras.

7th June 1875. Ghee - from Salem to Bangalore, at 1st instead of 3rd Class Goods rate.

7th June 1875. Asphalte and Pitch from Madras to Beypoor at 8 pies per ton per mile.

14th June 1875. Engines purchased from the South Indian Company for State Railways to be run over Madras Railway at one Rupee per mile per Engine.

29th June 1875. Earth Salt, at 8 pies per ton per mile from Moodanoor to Bangalore, a distance of 327 miles equivalent to 8 annas per maund in wagon loads of not less than 8 tons.

3d. July 1875. Indigo. at 3d instead of 4th Class rate, tantamount to a reduction from 24 to 18 pies per ton per mile.

12th July 1875. Kerosene Oil. at 2d instead of 5th Class rate in assimilation with East Indian and Great Indian Peninsula Railways.

9th August 1875. Bread, as an experimental measure, at the Ice, Fish and vegetable rate, Bangalore to Madras.

9th September 1875. Sandalwood from any Station on Madras Railway to any Station on Great Indian Peninsula Railway at 10 pies per ton per mile in Consignments of not less than 6 tons and for distances of not less than 300 miles.

13th September 1875. Betel Leaves, as an experimental measure, at the Ice, Fish and vegetable rate, from Toongabudra Station to Adoni and Raichore.

27th November 1875. Astragram Sugar, Baugalore to Madras at 6 annas per maund equivalent to 9 pies per ton per mile in consignments of not less than 8 tons and at owner's risk.

8th December 1875. First and second Class Coorg Coffee and Betel Nut, Beypoor to Sholapoor in consignments of not less than 3 tons at 6½ pies per ton per mile.

6th January 1876. Bark - (of all kinds) booked at any station on the South West Line northwards, at 10 pies per ton per mile subject to a minimum load of 4 tons per wagon.

11th January 1876. Gingelly Seeds, at 8 and 6½ pies per ton per mile for distances over 200 and 300 miles, in Consignments of not less than 8 tons.

13th January 1876. Loose Cotton - from Auspree and Nuncherla Stations to Bellary at 18 pies per ton per mile at owner's risk.

13th March 1876. Jaggery and other Country produce grown in the Mysore District at 5 pies per ton per mile from Stations on the Baugalore Branch to Stations on the North West Line.

* January to April inclusive 1876.

of want of grain. During the first four months of the present Year the Company's receipts from Grain traffic alone show a falling off of upwards of Rupees 1,30,000 as compared with the same period in 1875.
The increase in the Working Expenses is due principally to the enhanced cost of Maintenance explained hereafter.

South West Line

11. The average cost of maintaining the South West Line and Bangalore and Nellgherry Branches including proportion of Pot Sleepers amounted to Rupees 155. 3 4 per mile per mensem as compared with Rupees 117. 2 11 per mile in 1874-75

12. This excess is due to the large expenditure incurred in repairing the damage done by the floods of October 1874 to the cost of laying down 10 miles of Creosoted Pine Sleepers on the Western Division, as an experiment to the substitution of Steel for Iron rails between the Central Station and Veyasarapandy and to the Expenses incurred in connection with the visit of His Royal Highness the Prince of Wales to Madras.

13. The damage done to the Bridges on this line by the Cyclone of May and by the floods of October 1874 has been repaired. A new bridge of four 30' girder openings was constructed

at Vanembady in place of the one of five 15' Girder openings which was totally destroyed in May 1874. The new structure was completed and passed for traffic on the 20th of June 1875. At Mailputty the four 15' arches which were also carried away in May 1874 have been replaced by two 30' Girder openings. The bridge was opened for public traffic on the 10th of August last. The Chief Engineer states that the two new bridges are in all respects sound and substantial structures.

14. The Goriatum Bridge, five arches of which were completely destroyed by the floods of October 1874, was permanently restored and reopened for traffic on the 17th of September the five arches having been replaced by eight 30' Square arches and a Steel Girder opening of 35' Span. The other Bridges on the South-West Line were kept up in good repair.

15 The Fencing was well maintained throughout the line. On some parts of the 4th Division Stone walling was substituted for the vegetable fence which it was found did not thrive.

Bangalore Branch Line

16 The way and works on this Line were well maintained during the year.

17. In consequence of the Chief Engineer

having considered that the waterway afforded by the existing Bridge of five 30' arches near Cadgoody (203 miles 14 Telegraph post) would prove insufficient in the event of an extraordinary flood, it has been determined to supplement it by a bridge of two 30' Girder openings and to provide the original Bridge with Curtain walls and flooring. The Plans and Estimates for these works were sanctioned on the 25th April 1876, vide your letter No. 435.

Neilgherry Branch Line

18. The way and works on this line were maintained in a satisfactory condition during the year.

North West Line.

19. The maintenance of this line cost Rupees 128. 10. 7 per mile per mensem as compared with Rupees 114. 0. 7 per mile in 1874-75; the increase being principally due to the extraordinary expenditure upon the bridges and works which were damaged by the floods of October 1874.

20. The Permanent Way, Earthwork, Station Buildings, P. P., were all maintained in good order.

21. The old Cheyair, Paupugree and Chittravutty Bridges which were very seriously damaged by the floods of October 1874, have been

substantially repaired and were re-opened for traffic on the 24th of May 1875 the traffic in the meanwhile having been worked by temporary means. The damage to the Ennair Bridge was of such a nature as to admit of immediate repair, and thus enable the Bridge itself to be again utilised. With regard to this Bridge the Acting Chief Engineer writes as follows in his report for the last half year.

"I found it necessary to alter the position of one of the temporary trestle piers of "this Bridge and also to have the trestles con- "generally screwed deeper, when this is done "this portion of the bridge will be more capable "of resisting floods than it ever was before. "The borings in the bed of this river are nearly "completed. Rock is found at an average "depth of about 50 feet and is overlaid by "beds of clay and sand, in many places "alternating. I fear that it will be necessary "to rebuild this bridge and I shall as soon "as the borings are completed forward a report "on the subject."

22. <u>New Ennair Bridge</u>. Not much progress has been made with this Bridge. All the Cylinders with the exception of four have been sunk to rock, and the Chief Engineer states that little can be done till the Pneumatic Apparatus now in use at the Duggry is available. The raising of the piers and the construction of four additional openings which were recently sanctioned by Government, are now in progress.

Consulting Engineer's Letter No. 1231 dated 19th Nov 1875.

23. The Huggry Bridge. Very satisfactory progress has been made at this bridge. The Acting Deputy Chief Engineer in his report for the quarter ended 31st March states that 16 pairs of Cylinders have been bedded in rock and are ready for Concrete and that in about 6 weeks or two months the co European Divers will be available for work elsewhere, the Engineer in charge of the co Bridge having been most successful in inducing Natives to work both in the co Pneumatic Apparatus and Diving dresses. The Cylinders for the western piers have not yet been received from England, but the Acting Chief Engineer proposes to transfer to the Huggry, the Cylinders which have just been received for the Cheyair with a view to complete the former bridge as rapidly as possible.

24. The Fencing on the North West Line was efficiently upheld during the year.

Protective Works.

25. The Protective works at the Goreattum (old bridge) Palar, Poiney and Naggery Rivers have been stopped, as you are aware, since May last, the Government of India having called for Plans and Estimates of new Bridges over these Rivers, together with Sections of the Strata forming their beds. This as I have already informed you the Acting Chief Engineer

Letter to Consulting Engineer No 156 dated 15th Feby 1876

states he will be unable to furnish for some time to come, as fresh borings will have to be made in consequence of the old ones being considered unreliable.

Electric Telegraph

26. The working of the telegraph has been satisfactory during the year, and the Cost of maintenance less than the average.

I have the honour to be
Sir
Your most obedient Servant.

Robt Kyle Lewis

Agent and Manager

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,

Madras, 187

No.

From

LIEUT.-COLONEL J. H. M. SHAW-STEWART, R.E.,

Consulting Engineer for Railways.

To

MAJOR-GENERAL W. WALKER, R.E.,

Secretary to Government,

Public Works Department,

Fort Saint George

SIR,

Madras Railway

Secn

The Agent & Manager

To The Consulting Engineer for Railways

Dated 5th June 1876.
Received 7th June 1876.
Cy. No. 579.

Reporting with reference to the operations of the Company during the official year 1875-76.

other points which attracted attention.

2. The causes of the increase in train mileage, and the falling-off in third class passenger traffic, have already been explained, and are fully dealt with in the Traffic Manager's Report which will shortly be submitted.

3. The increase in the consumption of fuel per train mile does not appear to be satisfactorily accounted for. The mileage of vehicles, dead weight and the tare mileage of freight appear to vary in almost exact proportion to the train mileage; from which it

it seems probable that there is very little, if any, increase in the average gross weight of trains. This cannot be definitely determined until the analysis should have been prepared; but, judging from information now available, we see no reason to expect that the result will show an increase corresponding to the enhanced fuel consumption. The following table shows the quantities of fuel used by the traffic train mileage and the lbs. of fuel per train mile expressed in coal for the last few half-years:-

Coal

		Coal, Coke and Fuel	Wages	Total expenses	Traffic train miles	Coal &c. per traffic train mile
		£	£	£		
1st	1874	6,286	28,527	15,792	967,860	36.53
2nd		5,723	29,878	15,682	957,623	36.6
1st	1875	6,579	32,599	17,445	1,048,134	37.21
2nd		7,101	35,819	19,071	1,079,625	39.51

prior to the receipt of Woodhouse's letter with reference to the question of the large number of locomotives constantly under repair, which has on former occasions attracted notice, the Locomotive Superintendent explains (vide paragraph 6 of Mr. Elwin's letter) that, omitting cases of trivial repair occupying less than two days, the number is reduced from 36 to 22½ for the first half-year. It may that the Government of India may be asked to decide whether the withdrawal of an engine for one day in order that a small repair may be done in the running shed should be taken into account in calculating the average number of engines constantly under repair. It is possible that a difference of practice may exist on various lines in this respect.

5. The increase in expenditure is explained item by item in the statement accompanying the Agent's letter. In the Engineering Department the increase falls chiefly under the head of materials, being due

to the substitution of steel for iron rails between the British station and Veyarpady junction and to renewals with steel sleepers between Pothanore and Muddiserry. Excluding expenditure on the new Bhyaur bridge, and the temporary restoration of the damaged large bridges, the totals of abstract A for the last five half-years compare as follows:-

	Rs.
Second half 1873	5,99,250
First half 1874	5,50,862
Second half	5,78,312
First half 1875	6,13,949
Second half	7,21,762

6. In the Locomotive Department the high expenditure

in fuel has been dealt with in paragraph 3. The extra cost of repairs to carriages is chiefly due to the arrangements made in connection with the Royal visit, and there is a debit of Rs. 50,259 on account of 44 ballast wagons worn out and not replaced.

7. In all departments a considerable expenditure was incurred in connection with the visit of His Royal Highness the Prince of Wales.

I have the honour to be

Sir

Your most obedient servant

William Mitchell
Lieut. Col.

Cons. Engineer for Railways

No. 505

SP 5

MADRAS RAILWAY 39

AGENT AND MANAGER'S OFFICE.

Madras, 11th May 1876.

From

Robt B Elwin, Esqre

Agent and Manager, of the M R Co

To

Lieut Colo D. A. M Shaw Stewart, R E

Consulting Engineer for Railways.

Sir,

In reply to your letter of the 26th ultimo, No. 438, I have the honour to afford you the following explanations with reference to the points noticed by you in the Revenue Account of the Madras Railway for the half year ended the 31st of December 1875.

2. The increase in the Traffic train mileage is explained in paragraph 4 of the Traffic Manager's Half-yearly report.

3. The Locomotive Superintendent writes as follows with regard to the greater consumption of fuel per train mile.

"The excess in the quantity of fuel con-
"sumed per train mile is I believe, mainly
"to be attributed to the increased gross ton
"mileage of the last half year as compared
"with any previous period, but I am not

× Copy Enclosed.

RAILWAY DEPARTMENT.

From

The Consulting Engineer

for Railways,

To

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

Dated 19th May 1876

Received 19th May 1876

Consulting No. 243

Submitting letter from the Agent M. Ry Co forwarding explanatory explanations for the increase exhibited in the Revenue Account of the Railway for half year

No 354

Cir 13-9-76. Rtd 21-9-76

Reply to Ltr 19-5-76.

No. 3628

P. W. 1876 Department

"yet in possession of returns which
"will enable me to put this Statement
"accurately in figures."

4. The falling off in the 3rd Class traffic is explained in paragraph 13 of the Traffic Manager's Half year Report.

× Copy enclosed.

5 The increase in the average carrying rate per ton mile of Construction materials during the half year was apparently caused by the greater number of cases in which the minimum rate operated during that period.

6. As to the average number of Engines under repair at any one time during this period the Locomotive Superintendent writes as follows:—

"The number of Engines constantly
"under repair at any one time has been
"calculated in accordance with the rule
"laid down at foot of the revised form,
"but I find on investigation that the
"return has been unduly swelled by the
"addition of all the trivial repairs which
"are continually on hand in the running
"sheds. These seldom occupy more than
"one day at a time per Engine, and should
"I think, be excluded from the return.
"The average number of Engines continually
"under repair in Perambore Works calculated

"according to rule, is 21½ and the average num
"ber in the running sheds excluding any repair
"occupying less than 2 days is one. The
"average for the whole line becomes thus re-
"duced from 36 to 22½".

7. The Chief Auditor offers the follow
explanation with reference to the amounts
referred to in the 5th paragraph of your letter—

"I beg to state that as a matter
"of fact the above sum (Rs. 8337.8.7) is the
"smallest outstanding we have ever had at
"a corresponding date.

"The sum of Rs. 2675 13.10 consists
"of two items in dispute and under correspond
"ence with the Great Indian Peninsula.

"The outstandings on the 26th of April
"amounted to Rs. 3371 1.2 made up of the above
"named sum of Rs. 2675.13.10 and a Balance due by
"Public Companies, to Rs. 695.3.4
Rs. 3371.1.2 "

8 I enclose a Statement of the ex-
planations called for in the 6th paragraph
of your letter.

I have the honour to be
Sir
Your most obedient Servant
J. Agent and Manager.

P. W. 3628/76

MADRAS RAILWAY

From

The Agent and Manager

To

The Consulting Engineer for Railways

Dated 12th July 1876

Read 12th July 1876

No. 705

Submitting Explanations in the Reference noted in the Margin

Chief Engineer
Telegraph Engineer
Traffic Manager
Loco. Supt
Chief Auditor
Chief Accountant
Consulting Physician
with enclosures
by ch: Engineer
report with Summary
abstract.

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,

Madras, 2nd August 1876.

No. 378

From

LIEUT.-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,

Fort Saint George.

SIR,

With reference to the Order of Government under date 18 July 1876, No 1810, I have the honour to submit Reports from Heads of Departments of the Madras Railway, for the half year ended 31st December 1875. These have been somewhat delayed in this office for reference in the preparation of the Administration Report for the official year,

10

which

which will shortly be submitted.

2. A report of the Agent and Manager on the transactions of the official year is also enclosed, and I request that these papers may be all printed together as usual.

I have the honor to be

Sir

Your most obedt Servt.

W. Macdonald Lt Col. R.E.

Com: Engineer for Railways.

89-2-76 & 12 357
-30-5-76 - 1345
-18-7-76 - 1570.

P. W. 1876 Department

P. 5530

G.O. No. 2527 dt 21-9-76

No. 354a.—

Cir-18-9-76. Rect 21-9-76

Desp to Ct 31-8-76.

Railway Department.

From

The Consulting Engineer

for Railways,

To

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

Dated 2 Aug 1876
Received 3 Aug 1876
No. 37

Submitting for information the Report and Abstract Statements of the Working of Railways in the Madras Presidency during the year 1875-76.

Railway
No 2

India Office, London
3rd August, 1876.

My Lord Duke,

The Revenue Account of the Madras Railway Company for the half year ending 31st December last, received with your Grace's letter, No. 6, of the 16th June, 1876, shows the following results.

Gross earnings	Rs 32,11,240 · 6 · 3
Working expenses	23,08,869 · 8 · 9
Net receipts	9,02,370 · 13 · 6

The working expenses thus

His Excellency,
The Honorable,
The Governor in Council,
Fort St George.

13

thus amount to 71.90
of the gross receipts;
and the net receipts
represent an income
of only about 1/¼
per cent. per annum.
on the Capital
outlay. I observe that
while the earnings
have remained almost
stationary for some
years, the working
expenses have been
steadily increasing.
Your Grace has called
for detailed explanations
of the causes of this
increase, and it can
scarcely be doubted
that

that the investigation
set on foot will result
in shewing that a
far more economical
system of working may
be substituted for the
one at present in force.
I shall be glad to be
informed of the result
of the enquiries which
Your Grace has judiciously
caused to be instituted.

I have the honor to be,
My Lord Duke,
Your Grace's most obedient
humble Servant,
Salisbury

No 13.
P.W.D.
96-LP76 Railway
No [illegible] 3 August 76

The
Letter to Fort St George
No 3.

G-C No 2527 of 21-9-76

No 3540

Cir-13-9.76. Rta 21-9 76
D.L. Shut. 48 May.

Rud at Ootd 27 Augt 76

52

Madras Railway Company.
Chief Engineers Office.
Madras 4th April 1876.

To

The Chairman and Directors
Madras Railway Company
London

Gentlemen

I have the honour to submit my report for the half year ending 31st December 1875.

2 The Way and Works generally are in good condition. Full details of the state of the permanent way are given in the Acting Deputy Chief Engineers reports.

3 The average cost of maintenance is still excessive having amounted to Rupees 918-11-6 per mile for the half year. The extra expenditure as shown in the Acting Deputy Chief Engineers reports was Rupees 22,669-11-5 which is equal to a charge of Rupees 257-4-11 per mile. This would give Rupees 661-5-7 as the expenditure on ordinary maintenance.

4 Fears were entertained by the late Deputy Chief Engineer that it would be necessary to renew a large portion of the rails on the 78 Division South West line during the present year. I am however glad to say that although the

1

proportion of rails requiring to be renewed is naturally increasing year by year there is no sign of a general collapse.

New Bridges

5 Sanction of Government has not yet been received for Bulding the new 230 feet girder at Badgoody referred to in Mr Anderson's last report The season is now so far advanced that it is doubtful whether this work can be completed before the rains commence.

Kheyair Bridge

6. Not much progress has been made with this bridge during the half year all the bylinders with the exception of four have been sunk to rock and little can be done till the Pneumatic Appiaratus now in use at the Huggry is available Sanction for raising the piers and for four additional openings was received in November last and these works are now in progress.

Permaur Bridge

7. I found it necessary to alter the position of one of the temporary trestle piers of this bridge and also to have the trestles generally screwed deeper, when this is done this portion of the bridge will be more capable of resisting floods than it ever was before

The borings in the bed of this river are nearly completed Rock is found at an average depth of about 50 feet and is overlaid by beds of clay and sand in many places alternating Hence that it will be necessary to rebuild this bridge and I shall as soon as the borings are completed forward a report on the subject

Huggry Bridge

8 The progress of the works at this bridge has been satisfactory The Resident Engineer has succeeded in getting natives to work freely as Divers, and in the Pneumatic Appiaratus and as these new work for one eighth of the wages of a European Ste the cost of levelling the foundations will be considerably reduced.

9 17 of the piers are now bedded into the rock in 9 others the levelling of the rock foundations is nearly completed the remaining eight have not been commenced owing to our stock of bylinders being exhausted As however some have just been received for the Kheyair I propose transferring them to the Huggry and complete the latter bridge as rapidly as possible

Protective Works

10 The Protective works at the Palar, Ponny Goriattum and Naggery Rivers

have, as you are aware, been stopped since May last. In November the Government of India called for Plans and Estimates of new bridges over these rivers together with Sections of the Strata forming their beds.

11. As the old borings made with imperfect tools are not trustworthy, new ones will have to be made and as soon as the Borers now employed on the North West Line are available I shall have this work commenced. Plans and Estimates for new bridges will be prepared afterwards.

12. In connection with the question the Consulting Engineer has asked that consideration should be given to a proposal to alter our line so as to pass close to the Towns of Arcot and Vellore rejoining the old line beyond Mailpatty and thus avoiding the Poney and Gorattuny rivers. This I believe was the original route proposed by the Engineers of the Company. If it can be proved that branch lines to Arcot and Vellore will pay their cost Deviation though somewhat more costly would I think be preferable to the branches. The comparative cost estimated roughly is as follows

Protective

Protective Works and Branch Lines		Diversion	
Cost of Protective works for Poney Gorattuny and Palar bridges as sent in for sanction	7,98,885	Cost of diverted line including Earthwork Bridges & Permanent way 4 miles at 70,000 Rupees per mile	34,320
Branch Lines to Arcot and Vellore 7 miles at 70,000 Rupees	4,91,000	Cost of a bridge across the Palar river near the town of Arcot	7,94,880
Two large bridges over Palar River to Arcot and Vellore	1589760	Extra Station accommodation at Ranipett & Vellore	4,0000
Two small Stations at end of branch lines leading into Arcot and Vellore at 50,000 Rupees	100,000	Deduct 50 per cent of the value of girders in bridges in line proposed to be abandoned 4 miles at 3000 Rupees	1,47,000
Rs	29,78,645	Deduct 50 per cent of the value of permanent way materials in line proposed to be abandoned 4 miles at 13,200 Rs	46,800
Balance against the proposed Scheme	7,21,435	Deduct 50 per cent of the value of stores that can again be utilised in Vellore Station	16,000
		do Arcot & Gorattuny Stations	40,000
		do Tiruvellore Station	20,000 919,800
Rs	3,705,50		Rs 37,05,080

Showing a balance of Rs 7,21,435 against the proposed scheme. If however Government purchase, as is proposed, the old bridges over the Poney, Palar and

For all time rivers the amount would be very considerably reduced. In this Estimate I have credited the diversion with Rupees 919.800 the value of the material that would be available for sale or for renewals should the Diversion be constructed.

Electric Telegraph.

13 The working of the Telegraph has been as usual satisfactory, and the cost of maintenance as will be seen by the report of the Telegraph Engineer herewith forwarded less than the average.

I have &c
(signed) W. R. Robinson
Ag Chief Engineer

True Copy
H. J. Lowth
Agents & Manager

M 5580/1876.

Madras Railway

Electric Telegraph Department

Report for the half-year ending 31st December 1875.

During the past half year the wooden posts between Salem and Erode were removed and Siemens Iron Poles fixed instead. The fittings in the offices at Salem and Erode have been altered and rearranged in consequence of the alterations to the buildings and the various tests and experiments required by Government were made with the experimental train fitted with the apparatus for inter communication in trains, and the system was tested to the Royal Train which carried the Prince of Wales from Trichinopoly to Madras.

The interruptions to communication are given in the following table

Comparative statement of the interruptions to communication during the half year ending 31st December 1874 and 1875.

	5 Wire Line		4 Wire Line		Total
	Interruptions caused by the neglect and carelessness of the Signallers	Accidental Interruptions	Interruptions caused by the neglect & carelessness of the Signallers	Accidental interruptions	
½ year ending 31st Dec 1874	60	13	4	5	28
½ year ending 31st Dec 1875	10	1	0	13	25

of these Registry was the cause of 4, notwithstanding all the precautions that have been taken, and I fear it will be impossible entirely to prevent occasional interruption from this cause.

The cost of maintenance of Lines and Stations deducting extraordinary expenditure unconnected with the actual cost of maintenance for the half year, as explained in schedule A is given in the form enclosed, schedule B.

The question of the advisability, or otherwise of the transfer of six Lines of Telegraph to the Government Telegraph Department is one that has been already discussed at great length, and the transfer has been unanimously disapproved of by the principal Officers of the Company in India. The expenditure has again arisen and I now wish to deal with it entirely from a financial point of view. The rules that must follow a divided responsibility, in a matter so immediately connected with the Traffic management have been already clearly pointed out, and strongly urged on the attention of the Board.

The present proposal is chiefly that the Government Telegraph Department should purchase the Company's existing Telegraph Lines, and there charge the Company, for the use of certain wires, such a sum as should cover

1st The interest on the purchase money at the rate 5 per cent per annum.

2d The annual maintenance charge of

Rupees 70-8-0 per mile of wire handed over to the Company for their own use. The total Revenue expenditure on account of our Telegraphs for the year 1875 is Rupees 64,96=15=0 from this however should be deducted the sum of Rupees 28035-6-5, which a reference to schedule A will explain to be an account charged to Revenue, but which cannot be said to be fairly a portion of the cost of maintaining the Telegraph for that year for this Province namely 36937-8-6 we maintained for one year 1810 miles of wire and 87 Stations containing the following instruments &c.

23 Morse instruments complete, including printing instruments relay, Galvanometer, Lightning protectors, Keys and Batteries

7 Sounders complete, including Sounder, Relay, Galvanometer, Lightning Protectors, Keys and Batteries

100 Needle instruments including instrument Lightning Conductors and Batteries.

30 Needle instruments for practising including instruments and Batteries

1 Block instruments including instruments Lightning Conductors Bells and Batteries

1 Bells including Bell ringing Key, Lightning Conductors and Batteries

1 Platform clocks including all the arrangements by which the Clocks are daily corrected automatically

by a current from Madras. The clocks are also kept in order and wound by the Department making in all 186 complete sets of apparatus scattered over a length of 859 Miles of Railway

This expenditure small as it is will I hope be still further reduced now that the new Needle instruments and Batteries have been generally adopted, but it would scarcely be diminished at all by transferring the maintenance of the wires to Government, since the Inspectors whom we must employ for the technical supervision of the offices can at present do any ordinary Repairs and remedy any trifling defects that may arise in the lines. The only charge that could be abolished by such transfer would be that attending the occasional employment of a Subdistrict and Gang of men amounting to about Rupees 100 per month.

If the Government on the contrary, the transfer would be most advantageous they would possess a line of poles along the Railway for the value of which they would be receiving 5 per cent interest. On these poles Government wires could be erected at a comparatively small cost. Passes for men and stores engaged in the maintenance of the lines would doubtless be granted, and the charge made for maintaining our wires would amply cover the maintenance of their own, for of course the same men would be employed for maintaining both systems of wires

We may therefore conclude that this transfer is one which, while giving great advantages to Government would not only confer none whatever on ourselves, but on the contrary, would involve the Company in an additional outlay of nearly Rupees 20,000 per annum in addition to the interest on the purchase money, which we should be unable to curtail in any important degree our own expenditure

I have been given to understand that the Government Telegraph Department is not at all desirous, and in fact in most cases, has refused to undertake the technical supervision and maintenance of the Railway offices but simply wishes to obtain possession of the lines. It is sufficiently obvious that the reason for this is that, while the Government would secure great advantage by the transfer of the lines, they would obtain none whatever by taking over the offices, but on the contrary it would probably give them much trouble, and undoubtedly give rise to disputes and difficulties with the Railway Authorities. It is also highly improbable that officers however highly qualified in Telegraphic matters, but unacquainted with Railway working would appreciate, for a considerable time, the peculiar necessities of a Railway, or be able in many cases to meet them, nor would they have the same interest in doing so as an officer in the actual service of the Company.

The fact of two lines of Telegraph having been erected along portions of the

Ftr-

Schedule B

MADRAS RAILWAY.

Abstract of Cost of Maintaining Electric Telegraph during the half Year ending 31st December 1875

Date	Maintenance of Line								Maintenance of Stations								Grand Total	No of miles open	Expenditure per mile	No of Stations open	Expenditure per Station	
	Superintendence				General			Total.	Superintendence				General			Total.						
	Engineer	Inspector	Office Estabmt.	Pro of Chief Engineer's Estabmt	Labor	Materials	Carriage, &c		Engineer	Inspector	Office Estabmt	Pro of Chief Engineer's Estabmt	Labor	Materials	Carriage, &c							
	1	2	3	4			5		6		4		6	6								4
Half Year ending 31st December 1875	290514	2956 6 3	706.4 4		1467.3	252 4 5		7466 4.9	2905 14	2956.6.4	706 4 5		3341.5.3	1554 5 1		4464 4	18930 8.9					

Note. The Salaries of Engineer, Inspectors, Writers &c are divided equally between the maintenance of lines & Stations.

Pothanore
22d February 1876

To The Hg Chief Engineer
Madras Railway

True copy

Capt G. H. Winter
Telegraph Engineer

Agent & Manager.

Madras Railway

Locomotive Department

A statement of Rolling Stock finished up to the 30th June, that constructed during the half year ending 31st December 1875, and the stock in course of construction up to latter date.

Engines	Erected up to 30th June 1875	Constructed during the half year ending 31st December 1875	Reduction of Stock	Total stock Erected	In the course of erection on the 31st December 1875	Remarks
Passenger Locomotives						
Tender Engines Nos 1 and 2	2	"	"	2	"	
Tank Engines Nos 7 to 16	10	"	"	10		
Goods Locomotives						
Tender Engines Nos 3, 4 and 25 to 128	104	2	"	106		
Tank Engines Nos 5, 6 and 17 to 24	10	"	"	10		

Nil

Vehicles	Constructed up to 30th June 1875	Constructed during the half year ending 31st Dec 1875	Reduction of Stock	Total Stock Constructed	In the course of construction on the 31st Dec 1875	Remarks
Saloon for His Excellency the Governor	2			2		
Sleeping Carriages	4			4		
1st Class	15			15		
Double Saloon 1st Class Night Carriages	4			4	4	
2d Class Carriages	64			64		
[illegible]	181			181		
[illegible]	[illegible]			[illegible]		
Upper Storied Carriages	2			2		
Composite Carriages	25			25		
Night Composite Carriages	12			12		
Covered Carriages or Booty Class	40			40		
Invalid Carriages	2			2		
Engineer's Inspection Carriage with Brake	1			1		
Inspection Carriage for Consulting Engineer	1			1		
Open Goods Wagons						
Open Sided Goods Wagons	332			332		
High Sided Open Goods Wagons	1823	34		1857		
High Open Goods Wagons	5			5		
Ballast Wagons	200			200		
Coke	388		18	370		
Road	7			7		
Cattle	35			35		
Road Brake	22			22		
Covered Goods	48			48		
Carriage Trucks	30			30		
Timber	144			144		
Platform	6			6		
Water Trucks with Tank	4			4		
Passenger Luggage Vans	25			25		
Goods Brake Vans	60			60		
Gun Powder	3			3		
Oil Store	3			3		
Travelling Crane on Trucks	4			4		
Horse Boxes	50			60		
Total	3572	34	18	3588	4	

W. H. Irwin
Agent & Manager

I do hereby certify that the above statement is correct.

W. H. Dresthick
Locomotive Superintendent
8th April 1876

As you are putting it into type let the words
end be printed with
this ✕ pencil.

R.P.

7/9

Herewith S.P.

7/9

Vide Ms: 3628

GOVT OF MADRAS } 1876. { P W DEPT

V. SECRETARY.

Ootacamund, 28th August 1876.

OFFICE NOTE

To Offg. Consulting Engineer for Railways -

Orders on Consulting Engineer's letter No: 243 dated 18th May 1876 are being deferred pending receipt of the Traffic Manager's report promised in paragraph 2 of that letter. Attention was called to the subject in paragraph 2 of G. O. No: 1810 d/ 18th July. Please let us know when we may expect to receive the report.

Offg Sec'y
28.8.76.

Traffic Manager's Report is sent herewith to accompany this Office letter to Government No: 378 dated 2 Aug. 1876.

29 Aug 76 C.L.S.

OF 187

R 31-8-76.

Public Works Department

PROCEEDINGS of the MADRAS GOVERNMENT.

UNDER date the

READ the following —

From The Cons. Engr. for Railways } (No. 243 d/ 18th May 1876)

With this letter the Consulting Engineer submits the explanations of the Railway authorities on the enhanced cost of working as shown by the accounts of the Madras Railway for the 2nd half of 1875.

2. The causes of increase in the train mileage have been accounted for to a certain extent in the Consulting Engineer's Note on the Revenue Accounts, but the fuller explanation which may be expected

expected in the Traffic Managers report promised in para 2 of the Consulting Engineer's letter No 243 dated 18th May 1876 will be awaited.

3. The increase in the consumption of fuel is large, and cannot apparently be altogether attributed to enhanced train mileage. The number of lbs per train mile has increased from 36.55 during the 1st half of 1874 to 39.51 in the 2nd half of 1875 by a gradual but steady rise. This matter should be carefully enquired into by the Consulting Engineer in communication with the Railway officials and such measures taken on the causes of the increased

Consumption

K 31-8-76.

consumption being ascertained, as may seem necessary for checking the further growth of this important item of expenditure.

4. The question raised in para 4 of the Consulting Engineer's letter as to the method of calculating the average number of Engines constantly under repair will be referred for the orders of the Govt of India.

5. In the Engineering Department under the head of materials there is an increase of Rs 90,796 as compared with the corresponding period of the previous year. This increase is explained by the Company's Officers to be due

due to the substitution of steel for iron rails between the Central Station and the Veyasarapady junction, and to the relaying with iron pot sleepers, of a portion of the road between Pothanore and Maddikerry. Comparing the total expenditure however in the Engineering Department with that for the previous half year an excess of Rs 107,833 is shown. Presuming that the causes of this additional outlay are of an exceptional character and are not likely to recur, the subject may rest. But if this His Grace the Governor in Council would wish to

× Rs 721,782
613,949
107,833

to be specifically agreed.

(G.C. Docket No. dy

Copy of the above forwarded for the information of the Govt. of India in continuation of docket No. 345 dated 30th May 1876.

Comg. Engr. for Rys

12

Gospel ush-
f.o. 26 May 75. № 1444
15 Oct — 2968
Desp. № 8 of 1875-
f.o. 26 Jany 76. 245
9 Feby - 356. & 357.
30 May - 1845
Desp. № 6 of 1876
18 July 76. № 870.

1691-8-76.

Letters from the Consulting Engineer for Railways
Nos. 243 of 18th May and 378 of 2nd August 1876.

Despatch from the Secretary of State for
India No. 3 of 3rd August 1876.

FOR ORDERS.

When the Revenue Accounts of the Madras Railway for the half year ending 31st December 1875 came under review the attention of Government was attracted to the increase of the working expenses which had been steadily rising without any corresponding enhancement of the Traffic Receipts: the earnings having in fact remained almost stationary for some years. During the half year in question

the

the working expenses amounted to 71.90 of the gross receipts, while the net receipts represented an income of only 1¼ per cent per annum on the Capital outlay. The Consulting Engineer was requested to obtain from the Company detailed explanations of the causes of the increase under all heads. Vide G.O. № 1346 dated 30th May 1876. Meanwhile however, during the passage of the papers through the Press, the Consulting Engineer submitted a letter from the Agent and Manager furnishing explanations of the increases in certain items of Revenue expenditure which were touched upon in the Note on the Revenue Accounts, and promised further information with the

× Letter № 243 dy 18th May 1876

the Traffic Managers report on the operations of his Department which was then due. The report in question has since come to hand together with reports of the operations of the other Departments of the Company for the official year 1875-76.

with Cons.g Engr.s letter № 378 dy 2d August 1876.

The Government of India as well as the Secretary of State have noticed the increase of expenditure, and are anxious to learn the result of the investigations which the Govt. ordered to be made.

× Letter № 1708 R dy 6th July 1876.

On receipt of the Consulting Engineer's letter № 243 dated 18th May 1876 a draft order was put forward in which the points embraced by the papers were reviewed, but as the

Desp № 3 of 3d Augt 1876.

explanations

explanations were professedly incomplete without the Traffic Managers report the whole subject was ordered to be kept back. The papers are now received dated in a complete form for such orders as may be considered necessary.

FOR ORDERS.

5530

5626

6874

Major Genl R.E.

Secretary to Govt P.W.D.

Dy Secy

Dept 16/9

Secy 25/9

Dr Atty

P.W. Dept 18 85

I, The Most Honble the Secretary of State for India

My Lord Marquis,

We have the honor to acknowledge the receipt of your Lordships Despatch No. 3 dated 3rd August 1876 remarking on the enhanced working expenses of the Madras Railway, and in reply to forward the accompanying copy of Proceedings No. 2527 dated 21st Sept 1876 which, with the papers recorded therewith, explain the causes which have operated to unduly burden the working expenses, while

18 . the

the Traffic Receipts have remained almost stationary

Forwarding copy of Pro ceedings dated 21st Sept. 1876, recording papers explaining the causes which have led to the increase in the working expenses of the M. R. for the half year ending 31st Dec. 1875.

K. Watts

No. 2527 Public Works Department

PROCEEDINGS of the MADRAS GOVERNMENT.

UNDER date the 21st Sept. 1876.

READ the following:—

Consg. Engr. for Rys. (His No. 243 of 18th May 1876)

— do — do — (— 378 — 2d Aug.)

Secy. of State for India (— 3 — 3d —)

With his letter of the 18th May 1876 No. 243 the Consulting Engineer submits the explanations of the Railway authorities on the enhanced cost of working as shown by the accounts of the Madras Railway for the 2d half of 1875.

2. The causes of increase in the train mileage and the falling off in third class passenger traffic have been accurately ascertained upon

15

to

to a certain extent in the Consulting Engineer's Note on the Revenue Account, and are more fully explained in the Traffic Manager's Report on the operations of the Dept. for the half year ending December 1875 which is recorded above

× dated 18th April 1876

3. The increase in the consumption of fuel is large, and cannot apparently be altogether attributed to enhanced ton mileage. The number of lbs per traffic train mile has increased from 36.55 during the 1st half of 1874 to 39.51 in the 2nd half of 1875 by a gradual but steady rise. This matter should be carefully enquired into by the Consulting Engineer in communication with the Railway Officials and such measures taken, on the

Causes

causes of the increased consumption being ascertained, as may seem necessary for checking the further growth of this important item of expenditure.

4. With respect to the question raised in para 4 of the Consulting Engineer's letter as to the method of calculating the average number of Engines constantly under repair, it is desirable that the Consulting Engineer ascertain the practice on other Railways in India.

5. In the Engineering Department under the head of materials there is an increase of Rs 90796 as compared with the corresponding period of the previous year. This increase is explained, by the Company's Officers, to be due to the substitution of steel for

iron

iron rails between the Central Station and the Veyasaipady Junction; and to the relaying with iron pot sleepers of a portion of the road between Pothanore and Moddikerry. Comparing the total expenditure however in the Engineering Department with that for the previous half year an excess of Rs 107833 is shown. Presuming that the causes of this additional outlay are of an exceptional character and are not likely to recur, the subject may rest. But if this Hon. Grace the Governor in Council would wish to be specifically informed.

H.E. Docket No. 2528 dt 21st Sept 76

Copy of the above forwarded for the — Consg Engr for Rys. V

Dest'd 18/10/76

* Rs 7,21,782
- 6,13,949
= 107833

95 1/2

information of the Govt of India in continuation of docket No 1345 dated 30th May 1876.

Dest'd 18/10/76

30 spare Copies

Dest'd in a Boy by Ameltaramy Pillay

outturn 25/10/76

17

98 5-539 3528 6874

Govt. of 1876 Madras.

PUBLIC WORKS.

To The Comr Genl of Ports

Dated

Issued

Recd Encl

G. O 21st Sept. 1876, No. 2526 252

Nos. 352/57

Revenue Accounts

Dues Rs 8?

half year ending

31st December 1875

Passing orders on papers submitted by the Comr & Inspr. Genl. of Ports explaining the increases ~~which~~ noticed in certain of the Harbours noticed the ——

Sent per Rly 19-10-76