M.R.O. 1—10,006—28-2-50.

(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. 2786-87 Press
B.P.—No. Mis.—

Dated 17-10-1876 —195—.

Not to be folded or roughly handled

No. 265. 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, 9th October 1876, No. 486 :—

ADVERTING to the Proceedings of Government, under date the 11th July 1876, No. 1,759, I have the honor to enclose a letter* from the Agent of the Madras Railway, giving cover to a report from the Acting Chief Engineer upon the nature of the ballast now on the railway between Palghaut and Beypore.

* No. 1,023, dated 7th October 1876.

2. Mr. Robinson represents that, for a distance of 53 miles west from Palghaut, the ballast is now suitable for use with Greeves' cast iron bowl sleepers ; but that sand will have to be substituted to a considerable extent over the remaining distance. The cost of the additional ballast required between Palghaut and Beypore is estimated at Rupees 17,494.

From R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Madras, 7th October 1876, No. 1,023.

IN acknowledging the receipt of your letter of the 31st of July last, No. 808, with which you forwarded to me copies of Proceedings of Government, under date the 24th of April 1876, No. 1,027, and the 11th of July 1876, No. 1,759, I have the honor to submit, for the information of His Grace the Governor in Council, the copy of a report† accompanied by an estimate from the Acting Chief Engineer, in which that officer conclusively shows the suitableness of the ballast now upon the section of the line between Palghaut and Beypore, for the use of Greaves' iron bowl sleepers.

† No. 704, dated 3rd October 1876.

2. Mr. Robinson has gone so fully into the question that it appears unnecessary for me to do more than submit the estimate for the favorable consideration and sanction of Government.

From W. R. ROBINSON, Esq., Acting Chief Engineer, to R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, dated Madras, 3rd October 1876, No. 704.

YOUR endorsement on Consulting Engineer's letter No. 808 of 31st July 1876.

I have had a minute inspection of the line between Palghaut and Beypore made by the Resident Engineer, and have also gone over the division myself, and am able to state that from Palghaut to within 2½ miles of Tiroor (a distance of 53 miles) the ballast now on the road is suitable for pot sleepers. The only extra ballast that will be required on this portion of the line will be the quantity necessary to make up for the difference in bulk between iron and wooden sleepers, viz., 205 cubic yards per mile. Along the whole of this part of the line an ample supply of good sand ballast can be procured from the Ponany and from its tributaries.

2. The Deputy Secretary to the Government of India in his letter of the 20th June, No. 1,523 R., quotes a statement of Mr. Anderson's made in 1869, that from Palghaut to Beypore "the ballast was principally rough laterite." This was quite true in 1869 ; but since then the rough laterite has been broken up, and laterite having been found to make a hard road even with wooden sleepers, its use was abandoned in 1870 and sand ballast substituted. The ballast now on the line consists of a mixture of sand and laterite well suited for iron sleepers.

3, From the 385th mile to $\frac{387}{7}$ the Resident Engineer reports a large proportion of clay in the ballast, I should in any case have ordered a large proportion of this ballast to be removed and replaced by sand, as the road is reported bad in wet weather. I shall, however, include the cost in my estimate for renewing with iron sleepers.

4. From Tiroor to Beypore the road is still laid on coarse laterite, with the exception of the 402nd mile, where there is a large admixture of sand. Sand ballast is, however, procurable at $\frac{379}{8}$, $\frac{395}{5}$, $\frac{396}{4}$, $\frac{403}{7}$ and at Beypore, and I believe when in demand other depôts will be discovered. On this portion of the line I propose excavating two parallel trenches 3 feet wide by 2 feet deep and filling them with sand for the reception of the iron sleepers. In doing this the coarser portion of the laterite can be removed and the finer only reserved. This system was approved of by Sir John Hawkshaw in his letter of the 15th of November 1871.

5. Owing probably to the fact that laterite ballast was originally used, the price of ballast has been higher on the 4th division than on any other. It used to be 5-6 per cubic yard, but is now reduced to 4-6, and the Resident Engineer informs me that he will be able to reduce it to 4 Annas. In estimating, however, for the ballast necessary between Tiroor and Beypore, I have thought it better to estimate at the present rate, as the places where sand is procurable are far apart. I append an estimate of the additional cost of ballast necessary to render the road suitable for pot sleepers.

The Consulting Engineer will see from the above statements that there is no necessity for altering the form of our present iron sleepers.

Nos. 266 & 267. ORDER THEREON, 17th October 1876, No. 2,786.

RAILWAY, No. 22.

ORDERED that these papers be forwarded to the Government of India.

(Here enter No. 2,787, dated 17th October 1876.)

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. E. C. Shunker.
Spare Copies

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 17*th October* 1876.

No. 268.

No. 2,787.

FROM

MAJOR-GENERAL G. W. WALKER, R.E.,
Secretary to the Government of Madras,
Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
Public Works Department.

RAILWAY, No. 23.

SIR,—I am directed to acknowledge the receipt of your letter, No. 1,523 R., dated 20th June 1876, in which it is stated that if His Excellency the Governor in Council is satisfied that ballast suitable for use with Greaves' cast iron bowl sleepers is procurable at a moderate cost on the section of the Madras Railway between Palghaut and Beypore, the Government of India will no longer oppose the adoption of that form of sleepers. In reply, I am to forward the accompanying correspondence, from which it will be observed that the Chief Engineer of the Company, after an inspection of the line, reports that suitable ballast can be procured on the section of the line in question at a cost estimated at Rupees 17,494, which is not considered excessive. I am to request sanction to the additional outlay proposed, and authority for the transmission home of the alternative indent forwarded with my letter, No. 1,028, dated 24th April 1876, for iron materials.

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

Major-General, R.E.,
Secretary to Government.

Exd. E. C. Shunker.
Spare Copies

Govt. of Madras

PUBLIC WORKS.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA.

Dated October 17th.

Read

Read

Read

G. O., 17th October 1876, No. 2,087.

OUTSIDE.

No. 222.

FORWARDING correspondence on the subject of the cost of relaying the section of the Madras Railway between Palghaut and Beypore with iron pot-sleepers, and requesting sanction to the additional outlay involved in the proposal.

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,

Madras, 9 October 1876.

No. 486

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,

Adverting to the Proceedings of Government under date the 11th July 1876 No 1759 I have the honour to enclose a letter from the Agent of the Madras Railway, forwarding copies to a report from the Acting Chief Engineer upon the nature of the ballast now on the railway between Palghaut and Beypore.

Mr Robinson represents that, for a distance of 53 miles west from Palghaut, the ballast is now unsuitable for use with Greenes cast-iron bowl

No 1023 9 Oct/76

bmvb sleepers; but that sand will
have to be substituted to a considerable
extent over the remaining distance.
The cost of the additional ballast re-
quired between Palghat and Beypore
is estimated at Rs 17,494.

I have the honourable

Gov-10-76 to 1600 Nos
- 4-4-76 - 1224 Nos
- 11-2-76 - 1757.

P.W.D.
10 OCT 76
No. 7267

No 6

No 2786. Public Works Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 17th Octr 1876

Read the following:—

From

The Consg Engr for Railways } (G.C. No 486 d/9th Octr 1876)

Ordered that all these papers be forwarded to the Government of India

(G.C. No 2787 d/17th Octr 1876.

To the Sy to the Govt of India

Sir

I am directed to acknowledge the receipt of your letter No 1523 R dated 20th June 1876 in which it is stated that if His Excellency the Governor in Council is satisfied

Consg Engr for Rys
Dept 30-10-76

RAILWAY DEPARTMENT.

From

The Consulting Engineer
for Railways,

To

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

Dated 9th October 1876.
Received 10th October 1876.
No. 486.

Sir,

I have the honor to forward herewith for the information of Government a copy of a letter from the Secretary of State for India, No. 265 of 1876, dated 20th June last, on the subject of the Railway Department.

Dept to Govt 10-10-76.

No 265

satisfied that ballast suitable for use with Greaves cast iron bowl sleepers is procurable at a moderate cost on the Section of the Madras Railway between Palghaut and Beypoor, the Govt of India will no longer oppose the adoption of that form of sleepers. In reply I am to forward the accompanying correspondence from which it will be observed that the Chief Engineer of the Company, after an inspection of the line reports that suitable ballast can be procured on the Section of the line in question at a cost estimated at Rs 174494, which is not considered excessive. I am to request sanction to the

the additional outlay proposed, and authority for the transmission Home of the alternative Indent forwarded with my letter No. 1028 dated 24th April 1876 for iron materials.

Dft

Go Nos 2786 & 2787
with the Estimate
Desp. 30-10-76

7267 II

Govt. of 1876 Madras.

PUBLIC WORKS.

To Mr. Chief Engr. for Irrs.

Dated

Issued

Recd. Encl.

G. O., 17 Oct. 1876, No. 2796/777

Nos. 2652 58

Relaying the section B. the Madras By. between Palghaut and Beyporr with Iron pot sleepers

Forwarding copies correspondence on the subject of the cost of relaying the section of the Madras By. between Palghaut and Beyporr with Iron pot sleepers and regarding sanction to the additional outlay involved in the proposals.

The sanction of the Govt. of India required to the additional outlay involved in the proposals for ——

Chief Engr. Rlys. 21-10-76

Supdt.