

(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. *1176-77* Press
Mis.

133-35

Dated *27-1-77* 1877.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
27th April 1871.*

No. 433. Read the following letter from the Deputy Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 5th April 1871, No. 155:—

I HAVE the honour to submit, for the consideration of Government, the correspondence marginally noted, on the subject of the formation width and excessive rate for iron-work estimated for the Neilgherry branch.

Consulting Engineer's letter No. 117, Agent's letters Nos. 207 and 115.

2. The Agent and Manager, entirely concurring in the views of the Chief Engineer "that the second foot of ballast is required to give stability to the road, and can on no account be reduced with prudence," trusts that His Excellency the Governor in Council will be pleased to invite a reconsideration of the question by the Government of India, pending which the construction of the line is postponed. It will be observed that the attention of the Board of Directors has, in accordance with the wishes of the Government of India, been drawn to the excessive rate entered in the estimates for iron-work.

From the Acting Consulting Engineer for Railways, to the Agent and Manager of the Madras Railway Company, dated Madras, 17th February 1871, No. 117.

I HAVE the honour to forward copy of G. O., No. 467, of the 15th instant, communicating the instructions of the Government of India, that the formation width of the Neilgherry branch is to be reduced to 18 feet by allowing a depth of ballast of 18 inches instead of 2 feet.

2. I have also to request your attention to paragraph 3 of letter from the Government of India, suggesting that you should bring to the notice of the Board of Directors the high price of iron-work, namely, Rupees 330-15-9, as shown in the Chief Engineer's letter No. 535, dated 10th October 1870.

From the Agent and Manager of the Madras Railway Company, to the Acting Consulting Engineer for Railways, dated Madras, 21st February 1871, No. 115.

I HAVE the honour to inform you that upon the receipt of your letter No. 117, dated the 17th instant, giving cover to G. O., No. 467, of the 15th idem, I communicated to the Chief Engineer an expression of my opinion that, looking at the experience we have had in the use of pot-sleepers, we ought to be able to satisfy the Government of India that an alteration of the formation width of the Neilgherry branch to 18 feet by reducing the depth of ballast from 2 feet to 18 inches would be a most mistaken course, inasmuch as the success of a pot-sleeper road is almost entirely a question of ballast.

2. I have now the honour to solicit your attention to the enclosed copy* of Mr. Anderson's reply to my letter, from which it will be observed

* No. 94, 20th February 1871.

and remarks that "it is not only necessary that the ballast used should be of a particular quality, but it is also absolutely essential that a sufficient cushion, so to speak, should be interposed between the bottom of the iron sleeper and the formation of the railway. This cushion of ballast should in no case be less than one foot in thickness. To reduce it would be to risk a greatly increased per-centage of breakage and to insure a hard, bad road. The second foot of ballast is required to give stability to the road and can on no account be reduced with prudence."

3. Mr. Anderson, therefore, begs for a reconsideration of the subject, and as I entirely concur in the views he has expressed, I trust that His Excellency the Governor in Council will be pleased to invite a reconsideration of the question by the Government of India, pending which no progress with the earthwork will be made.

*Proceedings of the Madras Government, Public Works Department,
27th April 1871.*

4. With regard to the observations of the Government of India as to the rate charged for iron-work, and to the suggestion that the question should be brought to the notice of the Directors

* File letter No. 535, 10th October 1870.

by me, I have the honour to state that the information upon which the Chief Engineer* based his estimate was supplied by the Company's Store-keeper, who omitted to mention that the consignment he instanced was received in Madras in 1865, whereas he should have quoted from a consignment received in 1870, which gives a very different result as shown below—

February 1865.—Ship Minden, 10 girders—

Invoice value £ 1,050 15 11

Freight, etc. „ 386 10 3

Insurance „ 18 11 5

£1,455 17 7 at 1s. 10d. per rupee

Rupees 15,882 2 1

Government duty „ 84 9 11

Raft hire „ 429 12 11

Cooly hire „ 90 0 0

For 10 girders „ 16,497 11 11

For one girder „ 1,649 11 11

January 1870.—Ship Chalmers, 4 girders—

Invoice price £ 291 2 6

Freight, etc. „ 59 18 7

Insurance „ 4 5 10

£355 6 11 at 1s. 10d. per rupee

Rupees 3,276 2 0

Government duty „ 27 3 2

Raft hire „ 123 7 0

Cooly hire „ 30 3 0

Materials for landing „ 366 3 8

For 4 girders „ 4,363 8 10

For one girder „ 1,090 14 2

5. The difference between the cost of girders supplied in 1865 and in 1870 will be found in the items "Invoice value" and "Freight," and though I am not prepared to say that iron can now be obtained upon as favourable terms as those quoted in 1870, I think it is reasonable to suppose that the rates ruling last year are more likely to apply to the present for the Neilgherry branch than those paid in 1865. I regret the inadvertence, and trust that the explanation which I have thus given will be satisfactory to the Government of India. The attention of my Board will be drawn to this correspondence by the outgoing mail.

From the Chief Engineer, to the Agent and Manager of the Madras Railway Company, dated Madras, 20th February 1871, No. 94.

Yours, No. 637, of this date, forwarding Consulting Engineer's letter No. 117, of 18th instant, with instructions from the Government of India.

2. It is much to be regretted that the Supreme Government should insist upon a reduction in the ballast to be used on the Neilgherry branch from 2 feet as given in our estimate to 18 inches. There is perhaps no Railway in existence where cast-iron bowl-sleepers have been more extensively and more successfully employed than on ours, and all my experience goes to prove that the success of a pot-sleeper road is almost entirely a question of ballast. It is not only necessary that the ballast used should be of a particular quality, but it is also absolutely essential

*Proceedings of the Madras Government, Public Works Department,
27th April 1871.*

that a sufficient cushion, so to speak, should be interposed between the bottom of the iron sleeper and the formation level of the railway. This cushion of ballast should in no case be less than one foot in thickness, to reduce it would be to risk a greatly increased per-centage of breakage and to ensure a hard, bad road.

3. The second foot of ballast is required to give stability to the road, and can on no account be reduced with prudence. I therefore beg for a reconsideration of this subject. The width of the formation is decided by the depth of ballast, and while this question remains unsettled I am unable to make any progress with the earthwork of the branch.

From the Agent and Manager of the Madras Railway Company, to the Acting Consulting Engineer for Railways, dated Madras, 4th April 1871, No. 207.

ADVERTING to your letter No. 136, of the 28th ultimo, I have the honour to inform you that

* No. 172, dated 31st March 1871.

I learn from the Chief Engineer* that the total difference that would appear in the cost of iron-work for the Neilgherry branch, if the estimates were based upon the average rates for 1870 instead of those for 1865, would be Rupees 32,243-9-2, assuming the same allowances for contingencies over and above the actual cost, when landed in Madras, to have been made in both cases.

2. The price of iron-work continually varies, so that it is impossible to say what approximate cost per ton is most likely to be correct, and it is probable that the rates for 1865 may be as correct a basis for our estimate as those for 1870. The rates entered in our estimates in no wise affect the prices that the Board are likely to contract for at home. We select the highest rates to ensure our estimates not being exceeded in matters over which we can exercise no control.

No. 434. ORDER THEREON, 27th April 1871, No. 1,176.

RAILWAY, No. 58.

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

(Here enter No. 1,177, dated 27th April 1871.)

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Acting Consulting Engineer for Railways.

Exd. S. T. Augustin.

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 27th April 1871.

No. 435.

No. 1,177.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

RAILWAY, No. 59.

SIR,—With reference to your letter of the 25th January 1871, No. 128-R, determining the formation width of the roadway of the Neilgherry branch of the Madras Railway and noticing the excessive rate charged in the estimate for iron-work, I am directed to invite the attention of the Government of India to the accompanying correspondence from which it will be observed that the Chief Engineer, arguing from the experience acquired by an extensive use of bowl-sleepers on this Railway, strongly deprecates any reduction of the roadway provided in the estimate originally submitted. In inviting the notice of the Government of India to the decided expression of opinion by the Company's officers on this subject, I am to request a reconsideration of the question, and it will be seen that, pending the further orders of that Government, operations have been suspended on the earthworks of the branch.

* No. 115, dated 21st February 1871.

2. Paragraph 4 of the Agent's letter* explains the excessive provision for iron-work.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) CHARLES A. ORR, Colonel, R.E.,
Secretary to Government.

Railway Department. Cons. Engr's Office.

No 117.

From Captain H. L. Prendergast, R. E.,
Acting Cons. Engr for Railways

To R. B. Elwin Esquire,
Agent and Manager,
Madras Railway Co.

Sir,
I have the honour to forward copy of G. O. No 467 of the 15th instant, communicating the instructions of the Government of India, that the formation width of the Nilgerry branch is to be reduced to 18 feet, by allowing a depth of ballast of 18 inches instead of 2 feet.

2. I have also to request

your attention to paragraph 2 of letter from the Government of India, suggesting that you should bring to the notice of the Board of Directors the high price of iron work, namely, Rs 30.15.9 as shown in the Chief Engineer's letter No. 535 dated 10th October 1870.

I have, &c, &c,
(Signed) H. L. Prendergast, Captⁿ, R.E.,
A^d Cons. Engr for Railways

(True copy)

C. J. Smith, Captain, R.E.,
D^y Consulting Engineer for Railways.

No. 115

MADRAS RAILWAY.

AGENT AND MANAGERS' OFFICE.

Madras, 21st February 1871.

From

Robert D. Elwin Esq^r.
Agent and Manager. M. R. Co.

To

Major H. L. Prendergast R.E.
A^d Consulting Engineer for Railways.

SIR,

I have the honor to inform you that upon the receipt of your letter No. 117 dated the 17th instant giving answer to G. O. No. 467 of the 15th idem, I communicated to the Chief Engineer an expression of my opinion that looking at the experience we have had in the use of Pot sleepers we ought to be able to satisfy the Government of India that an alteration of the formation width of the Steady heavy Branch to 18 feet by reducing the depth of ballast from 2 feet to 18 inches, would be a most mistaken course, in as much as the success of a Pot sleeper road is almost entirely a question of ballast.

I have now the honor to solicit your attention to the enclosed copy of Mr. Anderson's reply to my letter, from which it will be observed that he fully shares my fears upon the subject and remarks that "it is not only necessary that the ballast used should be of a particular quality, but it is also absolutely essential that

No. 94-20th
Feb 1871

"a sufficient cushion, so to speak, should
"be interposed between the bottom of the
"iron sleepers and the formation of the Railway.
"This cushion of ballast should in no case
"be less than one foot in thickness. To reduce
"it would be to risk a greatly increased
"percentage of breakages and to insure a
"hard bad road. The second foot of
"ballast is required to give stability to the
"road and can on no account be reduced
"with prudence".

3. Mr. Anderson therefore begs for
a reconsideration of the subject and as
I entirely concur in the views he has expressed
I trust that His Excellency the Governor
in Council will be pleased to invite a
reconsideration of the question by the
Government of India, pending which no
progress with the Cartwork will be made.

4. With regard to the observations
of the Government of India as to the rate
charged for Iron work, and to the suggestion
that the question should be brought to the
notice of the Directors by me, I have the
honor to state that the information upon
which the Chief Engineer based his estimate
was supplied by the Company's Storekeeper
who omitted to mention that the consignment
he instanced was received in Madras in
1865 whereas he should have quoted from
a consignment received in 1872 which gives
a very different result as shown below.

Order letter
a 535-10 Oct
1870

1865

Feb'y. ship "Mindan" — 10 grinders

Invoice value to 1050. 15. 11

Freight $\frac{1}{10}$ — 386. 10. 3

Insurance — 18. 11. 5

Rs 1455. 17. 7 at $\frac{1}{10}$ per rupee
Rs 13882. 5. 1

Government Duty — 84. 9. 11

Raft hire — 400. 12. 11

Cooly hire — 90. 0. 0

For 10 grinders — Rs. 16457. 11. 11

For one grinder — 1645. 12. 5

1870.

Jan'y. ship "Chalmers" 4 Grinders

Invoice price — to 291. 2. 6

Freight $\frac{1}{10}$ — 59. 18. 7

Insurance — 4. 5. 10

to 355. 6. 11 at $\frac{1}{10}$ per rupee
Rs. 3876. 8. 8

Government Duty — 27. 3. 2

Raft hire — 123. 7. 0

Cooly hire — 30. 3. 0

Materials for landing — 306. 3. 8

For 4 grinders — Rs. 4868. 8. 10

For one grinder — Rs. 1090. 14. 2

5. The difference between the cost of grinders supplied in 1865 and in 1870 will be found in the items "Invoice value" and "Freight" and though I am not prepared to say that I can ^{now} be obtained upon as favorable terms as those quoted in 1870 I think it is reasonable to suppose

8878
that the rates ruling last year are more likely to apply to the Indent for the Kailash Branch than those paid in 1865. I regret the inadvertence and trust that the explanation which I have there given will be satisfactory to the Government of India. The attention of my Board will be drawn to this correspondence by the outgoing mail.

I have the honor to be
Sir
Yours most obedient servant.

W. J. R. Smith
Agent & Manager.

MADRAS RAILWAY.

From

The Agent and Manager.

To

The Consulting Engineer

for Railways.

Per

Recd

1st

No

Madras Railway Company,
Chief Engineer's Office,
Madras, 20th Feb'y 1871.

The Agent and Manager,
Dear Sir,

Yours of 6th of this date forwarding
Consulting Engineer's letter No. 117 of 18th instant
with instructions from the Government of India.

It is much to be regretted that the
Supreme Government should insist upon a
reduction in the ballast to be used on the
Mylapore Branch from 2' as given in our
estimate to 18". There is perhaps no railway in
existence where Cast Iron bowl sleepers have
been more extensively and more successfully
employed than on ours, and all my experience
goes to prove that the success of a foot sleeper
road is almost entirely a question of ballast.
It is not only necessary that the ballast used
should be of a particular quality but it is
also absolutely essential that a sufficient
cushion so to speak, should be interposed
between the bottom of the iron sleeper and the
formation level of the Railway. This cushion
of ballast should in no case be less than
one foot in thickness, to reduce it would
be to risk a greatly increased per centage
of breakage, and to ensure a hard, bad
road.

2. The second foot of ballast is
required to give stability to the road and can
on no account be reduced with prudence.
I therefore beg a re-consideration of

MADRAS RAILWAY

From

The Agent and Manager.

The Consulting Engineer

for Madras

From 21st of February 1871
Recd 22nd "

No 116

Notwithstanding attention to the
reduction of the ballast
from the heavy iron
sleepers to the
reduction of the formation
level of the heavy iron
sleepers to 18" and
the heavy iron sleepers to
the heavy iron sleepers
from 21st of February 1871
No 116

this subject. The width of the formation is decided by the depth of ballast, and while this question remains unsettled I am unable to make any progress with the Earthwork of the branch.

Yours faithfully,
Hof Penelope Anderson,
Chief Engineer.

True Copy
Hof Penelope Anderson
Agent & Manager

Compd toms

No. 207.

MADRAS RAILWAY.

AGENT AND MANAGERS OFFICE

MADRAS, 4th April 1871.

From

Robert B. Chinn Esq.
Agent and Manager M. R. Co.

To

Major H. B. Brudenell Esq.
Consulting Engineer for Railways.

SIR,

Copy of
31st March
1871.

Adverting to your letter of the 28th ultimo, I have the honor to inform you that I have from the Chief Engineer that the total difference that would appear in the cost of iron work for the A. & B. Branch if the Estimates were based upon the average rates for 1870 instead of those of 1865 would be Rs. 32,213. 9.2 assuming the same allowances for contingencies over and above the actual cost when landed in Madras to have been made in both cases.

2. The price of Ironwork continually varies so that it is impossible to say what approximate cost per ton is most likely to be correct and it is probable that the Rates for 1865 may be as correct a basis for our Estimate as those for 1870. The rates entered in our Estimates in no wise affect the prices that the Board are likely to contract for at home. We select the highest rates to ensure our Estimates

not being exceeded in matters over which
we can exercise no control.

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

Wm. P. M. W. L.
Agent & Manager.

Railway Department

Consulting Engineers Office

N^o 155.

From,

Captain C. S. Smith R.E.,

Dy. Cons. Eng^r for Railways.

To,

Colonel C. A. Orr R.E.,

Secretary to Government
Public Works Department
Fort Saint George.

Sir,

I have the honour to submit
for the consideration of Government the
correspondence marginally noted, on the
subject of the formation width and
excesses for iron-work estimated for
the Neilgherry Branch.

2. The Agent and Manager entirely

concurring

Cons. Eng^r
Letter N^o 117.
Agents letters
N^o 207 & 116.

MAIDRAS RAILWAY
From
14th April 1871
The Agent and Manager

The Consulting Engineer

for Railways

14th April 1871.
R. L. Orr

No. 207

Replying to the enquiry
contained in Cons. Eng^r's
letter N^o 136. as to the
estimated cost of the
iron work for the
Neilgherry Branch.
Messrs. Smith & Co.

concurring in the views of the Chief
Engineer, "that the second foot of ballast
is required to give stability to the road,
and can on no account be reduced
with prudence" trusts that His
Excellency the Governor in Council will
be pleased to invite a reconsideration
of the question by the Government of
India pending which the construction
of the line is postponed. It will
be observed that the attention of the
Board of Directors has, in accordance
with the wishes of the Government
of India, been drawn to the ex-
cessive rate entered in the estimates
for iron-work.

SB

Madras }
April 1871 }

I have the honour to be

Sir

Your most obedient servant.

Smith Captain &c,
Dy. Comr. Engineer for Railways

Public Works Department

No 1176

Proceedings of the Madras Government

Under date the 27th March/71

Read the following

From The Dy Consulting Engineer
for Railways

N. E. No 155 of 8th April 1871

Ordered that
these papers be forward-
ed to the Government
of India.

To The Asst. Commr. Engrs.
for Railways.

Desps 28/4/71

No 1177

To The Secretary to the
Government of India

With reference to
your letter of the 25th
January 1871 No 128 M.
determining the forma-
tion width of the roadway
of the Kelgherry branch
of the Madras Railway
and

[Faint signature]

Ch 1403
Ch 1490 A-190

conferences on
the subject of the
formation with a
reference note for
more work attached
for the Kelgherry branch
Ch 1476-1172-27 March

1818
No 155
The Secretary to Govt.
for Railways
D. W. Capt.
Date 25th April 71
No 10

And noticing the excessive rate charged in the Estimate for iron work, I am directed to invite the attention of the Govt of India to the accompanying correspondence from which it will be observed that the Chief Engineer, arguing from the experience acquired by an extensive use of bowl sleepers on this Railway, strongly deprecates any reduction of the roadway provided in the estimate originally submitted - In inviting the notice of the Govt of India

India to the decided expression of opinion by the Company's officers on this subject, I am to request a reconsideration of the question, and it will be seen that, pending the further orders of that Govt, operations have been suspended on the earthworks of the Branch.

Paragraph 4 of the Agent's letter explains the excessive provision for iron work.

[Signature]

Recd 28/6/71 with copy
of Genl 1176 of 1871.

* No. 115 of 21st Feb 1871.

Pro 16 February 1871 348-349
" 15 " 348-349

Govt of 1871 Madras.

PUBLIC WORKS.

to the Consulting Eng^r
for Railways

For the Road 1871
1498 of 1-6-71

Notes

Notes

27th April 1876-1179-

1

No. 182-404 & 405

Madras Railway

to the Consulting Eng^r

for Railways

to the Consulting Eng^r

for Railways

to the Consulting Eng^r

for Railways

to the Consulting Eng^r

for Railways

to the Consulting Eng^r

for Railways

to the Consulting Eng^r

for Railways

1017 April 19th