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 (3) Initials of the Referencer G

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. <u>2487</u>	Press Mis.
Dated <u>22nd Oct 1938</u>	

Not to be folded or roughly handled

No. 5. Read the following letter from Lieutenant-Colonel J. H. BELL, Chief Engineer ; to
J. D. BOURDILLON, Esq., Secretary to Government, dated 19th September 1859,
No. 5149.

With reference to the Proceedings of the Madras Government marginally noted, I have the
honor to forward the accompanying estimate,
amounting to Rupees 18,900 for connecting
the Tinnevely trunk cotton road with Tuticorin.

No. 1642, dated 5th July 1859.
1 Original report on trunk cotton road, dated 11th May 1859.
1 Statement of traffic.
1 Sketch shewing the present continuation of the trunk cotton road.
1 Plan of a proposed double line of granite road or tramway.
1 Abstract estimate.

2. The trunk cotton road of Tinnevely commences from the large town of Strevelipoottoore situated in the north east quarter of the district running thence nearly east towards and within $3\frac{1}{2}$ miles of the port of Tuticorin.

3. These $3\frac{1}{2}$ miles alluded to in paragraph 3* of the letter from the acting Chairman of the Chamber of Commerce, are one desert of sand, for improving which in some measure the original estimate provided, but without any permanent effect.

4. From May last, the District† Engineer passed over the whole line already made at a time when heavy rain falling afforded the best opportunity of judging of its condition, which he reports to be excellent, with the exception of a few small pieces here and there on which the material which had been applied consisting of decomposed gneiss, and containing a large proportion of perishable substance had become dust rendering the surface of the road after rain muddy ; this decomposed material has, however, been considerably cleared away.

5. The traffic along the line according to the last return‡ was 5,475 carts per annum, or 15 per diem, but it must be borne in mind, that cotton is only conveyed to the port of Tuticorin at a particular season.

6. The wear and tear to bullocks and carts consequent on the transit over the last $3\frac{1}{2}$ miles is excessive ; bullocks are frequently injured and sometimes rendered totally useless for further service owing to the severe strain in dragging heavy loads, and it is only under promises of comparatively high rates of pay on that account that cart-owners can be induced to enter into engagements with the cotton merchants in the interior.

7. The proposed double line of granite road or tramway across this deep tract of sand, will be formed of three lines of granite sunk to the depth of $1\frac{1}{2}$ foot in the sand, the centre one 2 feet broad, the outer ones 1 foot each in breadth, and the intervals to be filled in with a bed of coral nine inches in depth, with a layer of an admixture of sand and mud above three inches in thickness as a road-way for the bullocks.

8. The estimate amounting to Rupees 1,000, including an item for extra establishment, sundries, planting hedge, and drainage, &c., for the formation of so short (3 miles 3 furlongs 135 yards) a portion of road may appear very high, but owing to the entire absence of any road material in the neighbourhood of Tuticorin, it has been found quite impossible to reduce the rates ; the coral stone is deposited on the beach at Tuticorin at eight annas per cubic yard, average distance to be carted $1\frac{1}{2}$ mile, the total cost will, therefore, be $1\frac{1}{2}$ Rupees per cubic yard.

9. Two dams, one tunnel and a platform bridge are the only works needed, the first three at a trivial cost, the last at Rupees 900, consisting of six vents each of 6 feet by $2\frac{1}{2}$ feet, to be built across a shallow back-water flooded during spring tides.

10. Government are so fully aware of the necessity of completing a road of such importance, on which so much money has already been expended, and which must be considered very imperfect so long as the $3\frac{1}{2}$ miles complained of remain in their unsatisfactory and inefficient state, that it seems superfluous to add any reason for forwarding so large an estimate, under the present rules of restricted expenditure.

11. The estimate has been examined, found correct and the rates as are required for that locality.

12. The work is urgently required, and I beg, therefore, to solicit the sanction of Government, for the entry of the estimate amounting to Rupees (18,900) eighteen thousand and nine hundred, in the budget for 1860-61.

No. 6. ORDER THEREON, 22nd October 1859, No. 2487.

In this letter the Chief Engineer replies to the order of the 5th July 1859 No. 1642 wherein he was required to report on a letter from the acting Chairman of the Madras Chamber of Commerce complaining of the condition of the trunk cotton road of Tinnevely and its abrupt termination at a point three and a half miles from Tuticorin.

2. With respect to the condition of the road, Colonel Bell states that the acting District Engineer, Lieutenant Payne, inspected the road throughout about six months ago; that he found it "in very excellent condition, with the exception of a few small pieces here and there;" and that measures have been taken for the repair of these exceptional parts. With respect to the continuation of the road to Tuticorin, the Chief Engineer supports the recommendation of the acting District Engineer, concurred in, apparently, by the Collector, that this should be effected by means of a double line of granite road or tramway, the outlay on which is estimated at Rupees 18,900.

3. The proposed tramway is to consist of three lines of broken granite, three feet six inches apart, the centre one being two feet broad and the two others one foot, and all eighteen inches deep; the two intervening spaces to be filled in two feet deep with coral, covered over with a mixture of sand and clay. The cost would amount to Rupees 5,400 a mile; and the advantages at the best would be only those of a metalled road. It appears to Government that there are objections to such a tramway, arising from the liability of the wheels to get off the narrow tracks laid down for them; and also that in practice serious inconvenience would be felt from the unequal composition of the path for the bullocks, which would travel partly on the hard granite and partly on the soft clay and sand. The Government would be averse therefore to sanction a road of this novel kind without actual trial of a short distance; but it has been suggested that, instead of such a tramway, it would be cheaper, as well as better, to lay down a single line of light railway. It is suggested that it might be formed of bar-iron one inch square, welded together in one continuous length, and laid on longitudinal wooden sleepers.

4. A railway intervening in the middle of a line of ordinary transport would obviously be inconvenient; but the same objection does not apply to a piece of railway as the termination of such a line, especially when, as probably in the present case, the tract to be so traversed is unfavorable to cattle transport from want of fodder. Before passing an order, therefore, on the present plan, the Governor in Council resolves to refer this suggestion to the Chief Engineer, with the request that he will report his opinion upon it, with a careful estimate of the cost of such a railway as is proposed, and a general statement of the supplementary arrangements necessary for working it and of their cost.

(Signed) J. D. BOURDILLON,
Secretary to Government.

Central Office of Public Works
Fort St. George 19 September 1859

N^o 5149

From,

The Chief Engineer.

To,

The Secretary to Government.

-Public Works Department

"Public"

Sir,

With reference to the Proceedings
of the Madras Government marginally noted
N^o 1642 dated 5th July 1859.
I have the honor to forward the accompanying
Estimate amounting to Rupees 18,900 for
connecting the Tinnevely Trunk Cotton Road
with Tuticorin.

The Trunk Cotton Road of Tinnevely
commences from the large Town of Strevellipottore
situated in the North East Quarter of the
District running thence nearly East towards
and within 3½ miles of the Port of Tuticorin.

These 3½ miles alluded to in Para
3 of the letter from the Acting Chairman
of the Chamber of Commerce are one desert
of sand for improving which in some measure
the original Estimate provided but without
any

4th July 1859

any permanent effect.

4. From May last the District Engineer ^{*Vide report dated 11th May 1859} passed over the whole line already made at a time when heavy Rain falling afforded the best opportunity of judging of its condition which he reports to be excellent with the exception of a few small pieces here and there on which the Material which had been applied consisting of decomposed gneiss, and containing a large proportion of perishable substance had become dust rendering the surface of the Road after Rain muddy; this decomposed Material has however been considerably cleared away.

5. The Traffic along the line according to the last return was 5475 carts ^{*Here with forwarded.} per annum or 15 per diem but it must be borne in mind that Cotton is only conveyed to the Port of Tuticorin at a particular season.

6. The wear and tear to Bullocks and Carts consequent on the Transit over the last 3 1/2 Miles is excessive; Bullocks are frequently injured and sometimes rendered totally useless for further service owing to the severe strain in dragging heavy loads, and it is only under promises of comparatively high rates of Pay on that account that cart owners

owners can be induced to enter into engagements with the Cotton Merchants in the Interior.

7. The proposed double line of Granite Road & Tramway across this deep tract of sand, will be formed of three Lines of Granite sunk to the depth of 1 1/2 Foot in the sand, the centre one 2 Feet broad, the outer ones 1 Foot each in breadth and the intervals to be filled in with a bed of Coral 9 Inches in depth, with a layer of an admixture of sand and mud above 3 Inches in thickness as a Roadway for the Bullocks.

8. The Estimate amounting to Rupees 18,900 including an item for extra establishment, Sundries, planting hedge, and Drainage ^{Rs. 200} for the formation of so short a ^{part of the Road} (3-3-135) a portion of Road may appear very high but owing to the entire absence of any Road Material in the neighbourhood of Tuticorin it has been found quite impossible to reduce the rates; the Coral Stone is deposited on the Beach at Tuticorin at 8 Annas per cubic Yard, average distance to be carted 1 1/2 Mile, the total cost will therefore be 1 1/4 Rupees per cubic Yard.

Two

9. Two Dams, one Tunnel and a Platform Bridge are the only Works needed the first three at a trivial cost the last at Rupees 900 consisting of 6 Vents each of 6 Feet by $2\frac{1}{2}$ Feet to be built across a shallow Backwater flooded during Spring Tides.

10. Government are so fully aware of the necessity of completing a Road of such importance, on which so much money has already been expended, and which must be considered very imperfect so long as the $3\frac{1}{2}$ Miles complained of remain in their unsatisfactory and inefficient state, that it seems superfluous to add any reason for forwarding so large an Estimate, under the present rules of restricted expenditure.

11. The Estimate has been examined, found correct and the rates as are required for that locality.

12. The work is urgently required and I beg therefore to solicit the sanction of Government for the entry of the Estimate amounting to Rupees (18,900) Eighteen thousand and nine hundred in the Budget for 1860/61.

I have the honor to be
Sir,

Your Most Obedient Servant

H. Bell Lt. Col.
Chief Engineer

Central Office of P. W.
Fort Saint George
19 September 1859

H. Bell Lt. Col.

To Mr. Chief Eng. Lt. Col. Birch
at the Madras

P.M.D.

2487

Proceedings of the Madras Government
Under dated No 22^o Octr 1859

Read the following
letter from the Chief
Engineer

Submits for sanction and
entry in the Budget for 1860
an estimate amounting to (Rupees 19 Sept. 1859) 18900
Rupees 18900 for connecting
the Trunk Cotton Road with
Tuticorin in the District
of Tinnevely.

In this letter
the Ch. Engineer replies
to the order of the 5th
July 1859 No 1642 where
in he was required ^{to report}
on a letter from the
Ag. Chairman of the
Madras Chamber of
Commerce complain-
ing of the condition of
the Trunk Cotton Road
of Tinnevely and
its

W
Lg

Wll

See note to file

Ord. No 1859 Sept 14th
No 2480

From the Chief Engineer
to the Secretary to Government
Tuticorin District

Dated 19th September 1859
No 51149

Enclosure 5th Sept 1859
No 2487. 72nd October 1859
Submitted for sanction and
entry in the Budget for
1860/61 an estimate
amounting to Rupees 18900
for connecting the trunk
Cotton Road with Tuticorin
in the District of Tinnevely.

218 G.O. No 121

its abrupt termination
at a point three and
a half miles from the termin-

2. With respect to the con-
dition of the road, Col. Dill
states that the Dist.
Engineer, Lieut. Payne,
inspected the road
throughout about
six months ago; that
he found it "in very
excellent condition,
with the exception
of a few small pieces
here and there," and that
"no serious im-
pedement to traffic"
measures ^{have been} ~~are~~ ~~have~~
ever been taken for
the repair of these
exceptional parts
of the road. With
respect to the con-
tinuation of the ^{the road} ~~the~~ ~~road~~ ~~to~~ ~~the~~ ~~termin-~~
the

the Dist. Engineer supports
the recommendation of
the Asst. Dist. Engineer,
concurred in, apparently
by the Collector, that
this should be effected
by means of a double
line of granite road
or tramway, the outlay
on which is estimated
at Rs 18,900.

3. The proposed tramway is to con-
sist of three lines of broken granite,
3 feet broad apart, the centre
one being two feet broad and
the two others one foot, and all
18 inches deep, the two intervening
spaces to be filled in two feet
deep with coral, covered over
with a mixture of sand and
clay. The cost would amount
to Rs 10,000 a mile, and the
advantages at the best would
be only those of a metalled
road. It appears to me that

~~The cost of the~~
~~proposed road would~~
~~be Rs 5,000 a mile,~~
~~a very high rate for~~
~~an ordinary road,~~
and there are objections
^{such as} ~~to the kind of~~ ~~tram-~~
~~way, proposed, arising~~
from the liability of
the wheels to get

11

off the narrow tracks
laid down for them, and also that in practice serious
inconvenience would be felt
from the unequal composition
of the path for the bullocks,
which would travel partly
on the hard granite and
partly on the soft clay and
sand. The Government would
be averse therefore to sanction
a road of this novel kind
without actual trial of
a short distance, but it has
been suggested
that instead
of such a tramway,
it would be cheaper,
as well as better,
to lay down a single
line of light rail-
way. It is suggested
that it might be
formed of bar-iron
one inch square,
welded together
in one continuous
length, and laid
on longitudinal
wooden sleepers.

3

A railway
intervening in the
middle

It is said the
road is by rail
2 1/2 miles - and
is not a road - I should
say the present
rail suffices -

2

middle of a line of
ordinary transport
would obviously be in-
convenient; but the same
objection does not
apply to a piece of
railway as the ter-
mination of such
a line, especially
when, as probably
in the present case,
the track to be so
traversed is unfavor-
able to cattle
transport from want
of fodder. Before
passing an order,
therefore, on the
present plan, the
Govt. in Council resolves
to refer this suggestion
to the Chief Engineer,
with

with the request that
he will report his
opinion upon it,
with a careful
estimate of the cost
of such a railway as
is proposed, and a general
statement of the exp-
lementary arrange-
ments necessary for
working it and of
their cost.

10 Copies
To the Chief Engineer. Dispt. 29. 5
Chamber of Commerce with reference
to their Chairman's letter of the 4th
July 1859 - V

Pro: 8th July, 1859-37-38.

Public Works 1859 Sept.
Pro: of Govt. 31st October.

N^o 2487.

Pro: of the Madras Government.
D^d 22nd October/59.

From the Chief Eng^r 2nd June/60
C^o 1366 in case in Pro.
29 June
No 1375.

Disapproving the plan
proposed for connecting the
train to Cotton road with
Tuticorin in Tinnevely.

No 5+6.

c 18 Oct 1859