No. 338. Read the following endorsement of the Secretary to Government, Public Works Department, dated Ootacamund, 6th September 1871:—

Read the following letter from the Superintending Engineer, 8th Division, to the Secretary to Government, Public Works Department, dated Madura, 28th August 1871 No. 1,922.

In obedience to the [illegible] calling on me to report upon the present exact condition of certain Local Fund roads in the Madura District, I have the honour to observe—

1 Letter from the Collector of Madura, with one enclosure.
1 Letter from the Madura Range Officer.

1. Mr. Leggatt specifies the seven roads noted marginally as those for terming the condition of which as "disgraceful" he regrets having been censured by Government. His letter No. 230, dated 25th July 1871, is enclosed for information.

Road from Teroomungalum to junction with road No. XIII. near Pullaputty, *via* Sholavandan.
Do. from Teroomungalum to Ooslemputty.
Do. ,, Teroopavanum to Meyloor.
Do. ,, Tovariman to Malakal.
Do. ,, Vundyoor to Thooroomboor.
Do. ,, Sindooputty to junction with road No. XX.
Do. from Madura to Shevagungah.

2. I have inspected several of these roads; indeed, I may say *vidi tantum*, and I confess I can see little object in attempting to bolster up the condition of the district roads; the more especially considering that application for double travelling allowance has actually been made to Government, on the score of the unsatisfactory state of several of the remaining roads in the district, *i.e.*, roads not included in Mr. Leggatt's list (*vide* G. O., 10th August 1870, No. 1,905) wherein Lieutenant Christie, R.E., states, in paragraph 5 of his letter printed therewith, "from the Peranai anicut "to Meyloor there is scarcely (with the exception of the trunk road which is of "no use to me) a single road in a state fit for wheeled traffic; in fact, my bandies, "as often as not have to go altogether across country, and breakages are in conse-"quence very frequent."

3. With regard to Mr. Arbuthnott's alleged excuse for the present unsatisfactory state of the road from Madura to Shevagungah, namely, that the water-way allowed was wholly insufficient, I would simply call the attention of Government to the fact corroborated by the Acting Collector, that this is the first time that so important a defect has ever been brought to the notice of this department. That the floods of November 1869 were very disastrous in their effects in this division is notorious. But I can only say that, after examining every yard of the road on two separate occasions, and I do not imagine that Mr. Arbuthnott has ever himself been over the road by day-light, I was unable to discover that the stated lack of water-way is the cause of the unfortunate appearance of this "road." Indeed, the general effete aspect of the track has a strangely desolate appearance; nor road nor avenue is there to encourage the traveller over that parched up plain.

4. With regard to the other Local Fund roads in the district, it appears to me too early in the day to particularise their defects. They more nearly resemble the Irish beggar's coat, which our Royal Mistress has declared to consist of a number of holes tacked together.

5. To satisfy Government, however, that the bad state of the district roads of Madura is not an idle fiction, emanating from what passes for the brains of this department, I forward a letter,* with its enclosure just received from the Collector. From this enclosure it will be seen what a poor opinion Mr. Bliss, the Sub-Collector [illegible] the Revenue Department [illegible] Butlagoondoo and Dindigul. [illegible]g as is Mr. Bliss's condemnation of this work, I do not hesitate to say that his strictures are more than justified.

* No. 1,544, dated 19th August 1871.

6. I take the opportunity of mentioning that the fine roads for which the Town of Madura has been for so many years celebrated are rapidly deteriorating under the charge of the Municipality. One officer here has assured me that in consequence of the many ruts into which the roads have, through neglect and the absence of skilled superintendence, been allowed to wear, he is no longer able to drive about the place as he was wont to do, as the jolting he now receives is more than he can stand or rather sit.

TRANSFERRED to the Revenue Department, with reference to the endorsement in that department on the Proceedings of the Board of Revenue, dated 25th May 1871, No. 2,130.

(Signed) J. CARPENDALE, Colonel, R.E.,
Secretary to Government, P.W.D.

No. 339. ORDER THEREON, 25th September 1871, No. 1,675.

Local Funds, No. 2.
Civil Works.

ORDERED to be communicated to the Board of Revenue, with reference to their Proceedings of 25th May 1871, No. 2,130. The Government do not, however, see that any good object can be attained by pursuing this controversy any further. All roads have now been transferred to the charge of the Local Fund Boards of which Superintending Engineers are members, and it will rest with them to adopt measures for maintaining or placing the district roads in a satisfactory condition for traffic.

2. The attention of the Collector of Madura, as President of the Municipality, should be directed to the state of the roads in that town which is condemned by the Superintending Engineer.

(True Extract.)

(Signed) W. HUDLESTION,
Secretary to Government.

To the Board of Revenue.
,, the Department Public Works.
,, the Financial Department.

Exd. F. R. Bantleman.

Madura Range Office
No. 230 Thattaicolum
25th July 1871.

From,
The Assistant Engineer
In Charge of Madura Range
To
The Superintending Engineer
S. Division

Sir

In reply to your Memo dated 8th instant No. 1167, on G. O. No. 1732 dated 28th ultimo, I have the honor to specify in the margin the Local Fund Roads in this Range for which I regret having been censured for terming their condition as "disgraceful", but after the 6th I have sustained in going over most of these roads in the way of breakage of carriages, furniture, crockery &c. I did so feelingly.

2. The Honorable Mr. Arbuthnot never could have

Road from Sivagangam to junction with Road No. 9 near Pallapatty, via Thiruvandanam.
Do from Sivagangam to Sriviliputty.
Do from Sivaganam to Manjore.
Do from Tevaram to Uttakkal.
Do from Tandigoor to Thoroomoor.
Do from Vindampatty to junction with Road No. 20.
Do from Madura to Thirupuvanam.

have gone over these Roads himself or I am sure would never have penned the letter he has done to the Revenue Board.

3. You have yourself gone over some of the Roads I have enumerated, but these are comparatively excellent, in condition to what the others are.

4. Since your visit over the Road between Madura and Sheragungah as noticed by you in your letter No. 92 dated 6th April 1871; On the G.O under reference, I regret to state I was obliged to go over it myself on the 24th April 1871. The Road was cut up into such frightful gullies that my Coach in which I was travelling in Capsized, and (barring my having been nearly killed) was so much damaged that the repairs to it alone cost me Rupees 48, besides a loss in the destruction of a lot of articles I had with me in the conveyance.

5 I had to walk into Sheragungah a distance of about 12 miles after this accident. To return into Madura I had to do so by Palkee which cost me Rupees 13, and having had to return the Palkee to the owner at Sheragungah entailed a further expense of Rupees 5.

The milage allowance I got on this occasion was Rs 27, deducting this amount from the actual cost to me of the Journey left me out of pocket Rupees 39.

I have &c.

(Sig.d) G. R. Leggatt
Assistant Engineer in ch:
of Madura Range

(True Copy)

Rich.d Roberts Lieut.t Col.l R.E.
A.g Superintending Engineer
8th Div.n

Comp.d

Collector's Office Madura

No 1544 — 19th August 1871 Dept 2 No 2 Augt 1871

From, The Acting Collector of Madura

To The Actg Superintendent Engineer Southern Circle Trichinopoly

Sir, With reference to the enclosed original letter from the Acting Asst Collector dated 12th August 1871 No 294, I have the honor to request you to depute a Competent Officer to mark a Montagh examination of the road mentioned Communication between Batlagunda and Dindigul as requested by Mr Ogilvie in Para 2 of his letter.

2. I also request you to inform the Engineer Officer that Mr Lawrence may Engage a subordinate for the necessary field survey.

I have &c
Sd/ W. Mc. Dakae
Actg Collector

Encl 1 as

Received 21st Augt 1871

Endorsement

Ent. 3 Encl as letter from the Supt Engineer S.C. No 1922 dated 28th August 1871.

Ex. G. 25 Septr/71 No 1675

P.W. 4097/71.

Mr Leggatts letter

R 2889/71

In Govt Rs No 2299/71

Enc: 2. Original letter from the Asst. Engineer &c. to the Secretary to Government D.P.W. No 1922 dated 28th August 1871.

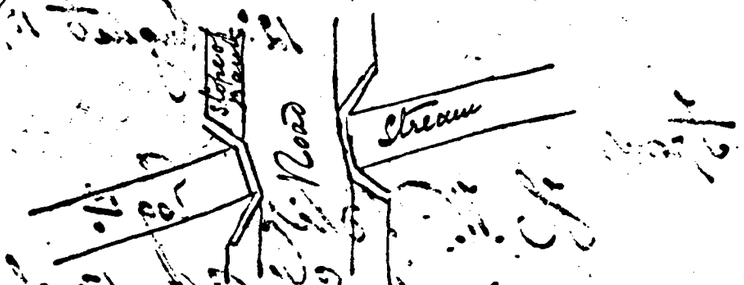
G.O. 25 Sept. 1871 No 1675

P.W. 4097/71

Collectors letter R 2889/71

Int. Govt. Rec. No 2299/71

small streams which cross the road obliquely have been built crooked, thus. —

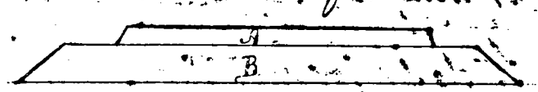


in the same way as you may have noticed some of the bridges between Madura and Jovarinna. This is not only ugly to look at but practically narrows the road way, and is not at all necessary but may be avoided by the simple expedient of laying the Coursing stones in the line of the road instead of as has been done at right angles to the side walls of the culverts.

5. Almost Continuously along the whole length under construction (16 miles) no care has been taken to utilize the material taken out of the road ditches and placed in the centre of the road to raise it; in such a way as to leave the top surface of the road of the full width provided in the Estimate.

The banks have been raised to the full width, and the metalling and gravelling raised thereon to the width allowed for them which is less than the full width. The result is that the top of the road is only 2 feet broad instead of 5 or 6. This is too narrow to accommodate the traffic and the result must be that the gravelling and metalling being unprotected at the sides will get cut to pieces and wasted. Instead of this care should of course have been taken to preserve a sufficient quantity of material while forming the banks to allow of their edges being filled up to the surface level after the metalling and gravel had been applied and consolidated. The following are rough sections of the banks as they are and as they should have been.

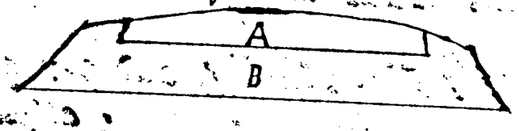
I. As they are



A Gravel
B Earth bank

II

II As they should have been.



A Gravel
B. Earth bank

The Consequence of the neglect of the Jaibdars and Mastries to have this important point attended to at the time is that a considerable amount of fresh material will be required for earthing up the sides of the road which there may be difficulty in Compelling the Contractors to furnish without payment.

6. In many places no care has been taken to make the road way straight and in the Centre of the avenues though before construction was commenced I had pegs put down all along the centre line and satisfied myself by a careful personal inspection that they had been put down accurately. To straighten the road now will not cost much but it may be difficult to get the Contractors to do it for nothing.

7. In several places I ascertained that the full amount of metalling provided in the Estimate had not been put on the road. The Contractors will be found of Course only for what they have put on, but in as much as metalling was allowed only where the soil was too bad for gravel alone to stand the traffic and as in each case the smallest thickness only of metalling that it was thought would be sufficient was, from motives of economy, provided for, I am clear that the provision of any less quantity will not improbably be found to be an entire waste of the money spent on providing it, since metalling not thick enough to keep the bandy wheels from cutting through into the soil below is of no more use, though far more costly, than no metalling at all. To have allowed less than the full quantities of metal to be put on the road is neglect of a kind that cannot be remedied except at great cost, since to do

do any thing effectual the gravel above it must be taken off (much being wasted in the process) the full quantity of metal made up and the whole repacked and the gravel (with a considerable proportion of fresh gravel added) replaced and retamped.

8. Generally speaking from the 5th to the 16th miles the masonry is, as far as I can judge, of the most inferior description, but has almost all been passed and paid for at full rates by the Jasildar, Nellacottah Deputy Jasildar, and the Maistries. I do not expect such persons to be able to distinguish minute differences in the quality of such materials as chunam and bricks, but it does not require a professional education or much experience to tell one that Chunam and bricks are bad in the extreme when the former crumbles between one's fingers almost as easily as a cracknel biscuit

might

might, and the latter break into fragments when dropped on the ground from the height of one's head. Nor can the want of professional experience be accepted as an excuse for men who would no doubt have been able to distinguish good work from bad if they were building houses for themselves but who pass for Government and pay full rates for brick and Chunam work in which it is exceptional for any mortar at all to have been applied between the bricks as they lie in the courses, and in which in a great many instances the mortar has not adhered to the bricks at all, owing I believe to the bricks not having been wetted before they were laid. This was the state of the brick and Chunam parapet of two bridges which I inspected and which had fortunately not been plastered; and no doubt in many others the plaster conceals equally bad work.

9.

9. In one of these cases I put a crow bar into a drain hole in the parapet of a bridge and with the leverage thus afforded two not very strong natives upset the whole thing into the nullah below. I should add that the wall broke even in falling and that when it struck the sand some 5 feet below it was shattered to pieces in a way that I am certain any experienced Engineer would consider proved the work to be infamous.

10. I dug a hole about a foot deep by the side of a wing wall of the same bridge to see what the foundations were like. The Estimate provided them 2 feet thick and the wingwall 1½ feet thick, so that there would be a projection of 3 inches broad all round the wall. As it was, there was no projection at all, and as far as I could ascertain the foundations (so called) which should have been of large stones accurately fitted and laid in chunam really consist of small stones (down to half the size of my fist) laid in mud. I am not sure indeed whether any foundations at all were ever dug out and filled in even in the way I describe, or whether what I pulled out from under the wing wall were only the natural stones lying undisturbed in their mother earth, but of this I could not make quite certain as I had no proper tools or labourers to make a searching examination. My omission to do so is moreover of no importance as I feel sure that you will agree with me that before any thing further is done to the road a thorough examination of it must be made by a competent officer of the D.P.W., for which I request you will arrange with the Superintending Engineer.

11. When the road has thus been properly inspected and reported on the responsibility of the Tasildar and Deputy Tasildar can be determined with reference to any explanation they

they may be able to submit. For the present I have only to ask you to confirm as President of the Local Fund Board the verbal announcement I made yesterday to Maistry Ramasamy Iyengar, who is responsible for the crooked bridges above-mentioned and for the bridge specially referred to above in paras 9 and 10 that he was to consider himself suspended until the whole matter was cleared up.

The Local Fund Maistry is paid through the Range Officer, to whom I request your order of suspension may be sent.

I have &c.

(Sd.) S. W. Bliss.

A. Sub-Collector

(True Copy)

Rice Rogers Lieut. Col. R.E.

Superintending Engineer &c.

Camp
1880

No 1922 Assistant Engineer's Office 8th Dr
Madura 28th August 1871

From
Lieut. Col. W. A. Roberts R.E.
Superintending Engineer 8th Dr.

To
The Colonel J. Campbell R.E.
Secretary to Government of Madras

Encls. 3 Paddam

Sir,

I have the honor to forward herewith for the information of Government a sketch of the Paddam tank in the Sivaganga Zemindary, which I have surveyed and levelled in accordance with the instructions contained in your No 1922 dated 8th instant.

2. The Paddam tank is situated in the Sivaganga Zemindary about 14 miles to the South West of Madura. It is one of the largest tanks in the Zemindary and is capable of irrigating about 1000 acres of land. The supply is derived from the Vaigai river which flows about 1½ miles to the East of the tank. The Vaigai is however only a river in name for the greater part of the year, and the supply to the tank is very precarious. The tank is also fed by the drainage from a small catchment area of about 2 square miles.

3. The tank bund is 1½ miles in length and is in a very ruinous condition. The sluice is also in a very bad state of repair. The bund requires to be raised about 3 feet in order to give a sufficient supply of water to the ayacut. The sluice requires to be entirely rebuilt.

4. The estimate for the repairs of the tank bund and sluice is Rupees 10,000.

5. I have the honor to be Sir Your most obedient Servant

Signed W. A. Roberts Lieut. Col.
Superintending Engineer 8th Dr.

Encs: 1 Ink d letter from the Asst. Engr 8th Dr to the Secretary to Govt. Dpt dt 28th August 1871 No 1922.

G. O. 25 Septr 1871 No 1675.

P. R. 4097/71

Mr Blessé's letter.
R 2889/71

In Govt Rel No 2 29/9/71

№ 230 dated 25th July 1871 is enclosed for information.

2. I have inspected several of these roads - indeed I may say *Vidi tantum*. - And I confess I can see little object in attempting to bolster up the condition of these District Roads, the more especially considering that application for double travelling allowance has actually been made to Government on the score of the unsatisfactory state of several of the remaining roads in the District ie roads not included in Mr Liggatts list vide G.O. 10th August 1870. № 1905 wherein Lieut. Christie, RE. states, in para 5 of his letter printed therewith "From the Periamai Ancut "to Meglur there is scarcely (with "the exception of the Trunk Road "which is of no use to me) "a single road in a state fit for "wheeled traffic; in fact my bandies "as often as not have to go altogether "across country, and breakages are "in consequence very frequent."

3. With regard to Mr Arbuthnott's alleged excuse for the present unsatisfactory state of the Road from Madura to Sheragungah, viz:- that the water-way allowed was wholly insufficient, I would simply call the attention of Government to the fact, corroborated by the acting Collector, that this is the first time that so important a defect has ever been brought to the notice of this Department. That the floods of November 1869 were very disastrous in their effects in this Division is notorious. But I can only say that after examining every yard of the road on two separate occasions, and I do not imagine that Mr Arbuthnott has ever himself been over the road by day light, I was unable to discover

that the stated lack of water-way is the cause of the unfortunate appearance of this road. Indeed the general effects aspect of the tracks has a strangely desolate appearance, nor road nor avenue is there to encourage the traveller over that parched up plain.

4. With regard to the other Local and Road in the District, it appears to me too early in the day to particularize their defects - they more nearly resemble the Irish beggar's coat which our Royal Mistress has declared to consist of a number of holes sacked together.

5. To satisfy Government, however, that the bad state of the District roads of Madura is not an idle fiction emanating from what passes for the brains of this Department, I forward a letter with its enclosure just received from the Collector.

* No. 1544. Dated 19 Dec. 1871

from this enclosure it will be seen what a poor opinion Mr. Bliss, the Sub Collector, has of the road now constructing by the Revenue Department between Puttagoundan and Dindigul. Strong as is Mr Bliss's condemnation of this work, I do not hesitate to say that his strictures are more than justified.

6. I take the opportunity of mentioning that the fine roads for which the Town of Madura has been for so many years celebrated, are rapidly deteriorating under the charge of the Municipality. One officer here has assured me that in consequence of the many pits into which the roads have, through neglect and the absence of skilled superintendence, been allowed to wear, he is no longer able to drive about the place as he was wont to do, as the jolting

her now receives is more than
he can stand, or rather sit.

I have the honor to be
Sir
Your Most Obt. Servant
Robt. Lieut. Col. &c
Superintg. Engineer 8th Dn

C. No 2889.

No 1675

Rev. Dept.

29

25 Sept 71

From the Supg: Engineer 8: Division

No 1922. 28 Augt 1871.

[illegible]

[illegible]

[illegible] Board the Council [illegible] the Board Rev. [illegible] & their Procs of 25 May 71 No 2130. [illegible] do not however see that any good object can be attained by pushing the controversy any further. All roads have now been transfd to the charge of the Local Fd Board of which Supt Engrs are members, and it will rest with them to adopt measures for maintaining or placing ~~them~~ the roads in a satisfactory condition for traffic.

The attention of

[illegible initials]

Procs 10 Augt 71 Nos 155-156
" 28 June 71 — 495-496

Transferred to the Revenue Dept with reference to the endorsement in that Dept on the Proceedings of the Board of Revenue dated 25 May 71, No 2130.

[illegible signature]

Col R.E.

Secy to Govt. P.W.D.

Ootacamund

1 Sept 71

No 338

C.O. 6 Sept 71. R. 25 Sept
[illegible] 2 Oct 71

~~Pdg~~ 1871 Sept. ~~[illegible]~~

From

The Supg Engineer 8 Div

To the Secretary to the Govt. P.W.D.

8 Oct 1870 - 25 Sept 1871

Dated 28 Aug 1871

Received 31

Enclosures 3

Furnishes report regarding the condition of Local Fund Roads in the Madura District required in G.O. No 1732 dated 28 June 1871.

Transferred

×Recd from Bd. October 1871.

1838–389

4. C

Conclusion of Lecture 4

Practical application of the Doctrine

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c20: Sept 1870. R. 25 Sept