

Public Works (1893) Department.

RAILWAY BRANCH.

G.O., No. 902 R

DATED 24th May

[Despatch Abstract.]

Milgiri Railway—Laying down certain instructions relating to damages caused during blasting operations in connection with the—

[illegible][illegible]

Exd. A. D. Xavier.
Spare Copies

RAILWAY.

Gobt. of {1893} Madras.
PUBLIC WORKS.

Dated May, 24th.

Recd.

Encl.

G.O., 24th May 1893, No. 902 R.

MAY.

Nilgiri Railway

Laying down certain instructions relating to damages caused during blasting operations in connection with the —.

9

10TH SEPTEMBER 1892, No. 2181 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From the Consulting Engineer for Railways, dated 5th September 1892, No. 666 A.
From the Secretary and Agent, Nilgiri Railway Company (Limited), to the Consulting Engineer for Railways, dated Coonoor, 23rd August 1892, No. 281.

With reference to your endorsement, No. 603, dated 3rd August 1892, and more particularly to para. 2 of the Government Order thereon, dated 15th idem, I have the honour to inform you that the contractor regrets his inability to recognise that the liability for damage done by blasted rock flying about rests upon him. In his view, and in this opinion I must express my concurrence, he can no more control damage done by flying rock than he can the damage done by a rolling boulder or sliding earth. All reasonable care he assures me will be exercised in every instance, but he is unable to accept such a subdivision of the damage likely to be done by spoil.

Submitted for the orders of Government with reference to G.O., No. ²⁰⁰³ A. R., dated 15th August 1892.

ORDER—dated 10th September 1892, No. 2181 R., Public Works.

The contractor's contention cannot be accepted. The Government is bound to provide land for spoil banks; but partly because of the impossibility of doing this owing to the steepness of the slopes and partly because of the greater cheapness, it has arranged to pay damage done by spoil discharged down the slopes, but this has nothing to do with damage caused in blasting which must be controlled by the contractor.

(True Extract.)

(Signed) F. B. WALKER,
Offg. Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
„ Examiner, Guaranteed Railway Accounts.
„ Examiner, Public Works Accounts.
„ Revenue Department.
„ Collector of Nilgiris.
„ Secretary and Agent, Nilgiri Railway Company.

Exd. S. J. Pereira.
Spare Copies

RAILWAY.

Govt. of {1892} Madras.
PUBLIC WORKS.

Dated September, 10th.

Recd.

Encl.

G.O., 10th Sept. 1892, No. 2181 R.

SEPTEMBER.

Nilgiri Railway

Holding the contractor liable for damages
caused in blasting in connection with the —.

9

15TH AUGUST 1892, No. $\frac{2003}{A}$ R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

From the Consulting Engineer for Railways, dated Madras, 18th June 1892, No. 490.
From the Collector of Nilgiris, dated Ootacamund, 29th June 1892, No. 1592-G.

From the Consulting Engineer for Railways, dated Madras, 3rd August 1892, No. 603.

From the Secretary and Agent, Nilgiri Railway Company (Limited), to the Consulting Engineer for Railways, dated Coonoor, 16th July 1892, No. 221.

I have the honour to acknowledge receipt of your No. 1418, dated 21st June 1892, and forward herewith a specimen plan prepared as requested of the land required in the Hill Grove estate modified by the verbal instructions received in Coonoor.

2. It appears to me that the proposal to take up vertical slips of B class land would not dispose of the question of damage done by spoil, but would rather tend to complicate it, because, unless strips are taken up of a considerable width, and in some instances of a length quite down to the river, damage will be inevitable to coffee trees beyond the boundaries of these strips.

3. The accompanying plan must not therefore be considered to include all the land which may possibly be required for spoil.

4. Nor, in considering this question of spoil, must two other important points be forgotten:—

(1) That the Company cannot admit any liability for damage done by spoil outside the lands taken up, and

(2) That the contractor will not accept the loss which he will sustain by paying for additional land.

5. A solution of the question, however, seems to be offered in the proposal which has been under discussion, viz., that the Company should take up a minimum amount of permanent land and no class B land at all.

6. On this basis, with the contractor using his best endeavours to minimise any damage done by the deposit of spoil, I believe the Government would find it advantageous to pay, in the first instance, for as little land as possible.

7. In conclusion, I would be allowed to point out that the delay in settling this question is very detrimental to the progress of the work, as several sub-contractors, to whom lengths have been let during last month, have been, and are, unable to commence, and I fear this delay will lead to a repetition of the loss which was sustained at the latter part of last year by the departure of large gangs of coolies who were unwilling to wait any longer for work.

8. And, as bearing upon this matter, I would be allowed to avail myself of this opportunity to inform you that when the Company agreed that the three years allowed for the completion of the railway should date from the 1st January last, it was not foreseen that so much delay would ensue in making over the necessary land.

Note by the Deputy Consulting Engineer for Railways, dated 21st July 1892.

[Disposal of spoil in coffee estates, Nilgiri Railway.]

"I have inspected the length of the Nilgiri Railway between chains 303 and 334 with the view of determining the best way of disposing of the spoil taken out of cuttings in coffee estate. The difficulty does not admit of satisfactory solution, and it is impossible to lay down any hard-and-fast line, as each case must be dealt with according to the condition of ground obtaining. As a general rule earth and gravelly soil should be thrown directly out of the cutting and allowed to slide down the hill side, the slopes of which are so steep that it is unlikely the spoil will lodge and cover up the coffee bushes. Boulders should, as far as possible, be removed at the ends of cuttings when they can be used in banks or allowed to roll down the nullas and so do no mischief. It will probably be convenient to the contractor to dispose of the boulders in this manner, as being most frequently below the surface they can be rolled down the grade of the cutting more easily than lifted out at the sides. When this is not feasible on the score of lead, shallow channels might be cut below and adjacent to the excavation to catch the boulders and prevent them travelling. Where boulders are too numerous to permit this being done, it will, I think, be advisable to let them roll down the hill and pay compensation for any resulting damage to the coffee. In this connection it must be remembered that in some places the narrow fringe of vegetation skirting the ghât road is the only protection that at present exists to prevent the boulders reaching it, and that to ensure the safety of the road and its traffic it will be necessary to supplement the vegetation by a more efficient obstacle. The disposal of the material thus temporarily restrained from travel must be considered and dealt with when the earthwork of the railway is finished.

The proposal to take up strips of land on which to deposit spoil is not feasible except where a flat area is adjacent to the alignment. The earth and boulders would never rest on the slopes usually met with, and the coffee would be as much damaged as by throwing the spoil direct on the estate, so that in addition to acquiring large areas of temporary land compensation might also have to be paid for damaged coffee. A certain amount of spoil could perhaps be got rid of by depositing it between the bank and the hills on the up-side.

Submitted for the consideration and orders of Government in continuation of this office endorsement, dated 18th June 1892, No. 490.

2. In regard to the question of the acquisition of further land in coffee estates for the Nilgiri Railway, it was arranged at the Conference held at Coonoor on 13th June that, pending the receipt of the orders of Government, the Collector should defer making offers for the large and expensive acquisitions in Benhope, Karambâdi and Barliyâr estates until the question of spoil-banks and liability for damages outside land acquired should be settled. In Benhope and Barliyâr large areas of very expensive temporary land were entered in the notifications that had issued. The result of the offers made for the less valuable estates was that 32 acres of land were acquired at a cost, including houses and severance, of Rs. 12,440, being at the rate of Rs. 390 per acre, which is very moderate compared with prices already paid. The total amount to be paid for land acquired up to date is Rs. 67,000.

3. In the three valuable estates of Benhope, Karambâdi and Barliyâr where, under the original plans providing temporary land, a large total outlay was involved, revised plans are being made excluding all temporary land. It will probably be necessary in these cases to cancel the original notifications and to issue new ones.

4. As to the question of disposal of spoil on steep slopes, a plan is submitted showing a typical case of taking up strips of temporary land, with a view to provide for spoil. The site was inspected by Captain Shelley, R.E., whose report is attached. It will be seen that he does not consider the proposal to be feasible, as the earth and boulders would never rest on the slopes usually met with, and the coffee would be as much damaged as by throwing the spoil directly on to the estate, so that in addition to acquiring large areas of temporary land compensation might also have to be paid for damaged coffee.

5. He recommends that, as a general rule, gravelly soil and earth should be thrown directly out of cuttings and allowed to slide down the hill side, the slopes being so steep that it is unlikely the spoil will lodge and cover up the coffee bushes; and that boulders be, as far as possible, removed at ends of cuttings where they will roll down the nullas and do little mischief. Where this cannot be done, he thinks they should be allowed to roll down the hill side, compensation being paid for any damage done.

6. On the whole I am of opinion that the best plan in such cases would be for Government to take up only permanent land and to agree to pay for damage done by spoil, the Engineer-in-Chief on behalf of the contractor undertaking to keep this to a minimum. This arrangement would be cheaper to Government than taking up for spoil large areas of land which might even then not effect the object thoroughly. A large saving can be made by cutting out the temporary land in the three estates for which new plans are being prepared, probably more than sufficient to pay for all damages. The Collector very strongly recommends this course.

7. There is also the question of providing for the safety of traffic on the ghât road, which runs below the line, and down to which boulders will in some cases roll. Captain Shelley suggests the erection of some obstacle above the road, but this would probably be costly. It might only be required in certain parts, which could perhaps be decided by investigation.

8. I do not think the Company has any ground of complaint as regards the making over of land. It has received possession of all except where the line passes through some coffee estates and between the Bhavâni and Mettupâlaiyam where the acquisition is delayed pending a settlement of the alignment.

ORDER—dated 15th August 1892, No. $\frac{2003}{A}$ R., Public Works.

On consideration of the papers now submitted the Government is prepared, where the line of Nilgiri Railway passes through coffee estates, to pay compensation for damage done by spoil thrown on to coffee land, and by boulders rolling down the steep slopes. It looks, however, to the contractor and the Engineer-in-Chief to see that the points at which spoil is 'discharged' are as few, and as little injurious, as possible.

2. The Government cannot accept any liability for damage done by blasted rock flying about, that being, in its opinion, the business of the contractor.

3. The Collector will arrange for the assessment and payment of damages, and will submit to Government his proposals as circumstances develop and it becomes possible to form an opinion as to the best means of dealing with the question.

4. The notification published at pages 392, 393 and 530, 531 of the *Fort St. George Gazette*, dated 29th March and 26th April 1892, respectively, will be cancelled in respect of the land in the Benhope, Karambâdi and Barliyâr estates, for which new plans and schedules are being prepared omitting all temporary land, and a revised notification for these estates will be issued.

(True Extract.)

(Signed) W. H. COAKER, Lieut.-Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
" Examiner, Guaranteed Railway Accounts.
" Public Works Accounts.
" Revenue Department.
" Collector of Nilgiris.
" Secretary and Agent, Nilgiri Railway Company.

Exd. J. Moses.

Spare Copies.

RAILWAY.

Govt. of {1892} Madras.
PUBLIC WORKS.

Dated August, 15th.

Recd.

Encl.

G.O., 15th Aug. 1892, No. 2003
A R.

AUGUST.

Land

Passing orders on the correspondence in regard to the question of the acquisition of further — in coffee estates for the Nilgiri Railway.

Am.

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No. 902 R 7 24.5

Recd J.O. 2181 R

10 Sept. 1892 —

J.O. 2003 R

15 Aug 1892 —

In continuation & explanation of the above — The Madras government ~~is~~ ^{has} followed ~~to rule~~ that under P.W.D. Code Vol I Chapt. IX para 33 all responsibility for public safety shall rest with the contractor during the blasting operations in connection with the Nilgiri Railway — ~~but then he draws~~ Rules ~~shall~~ ^{be drawn} up by the engr. in chief & submitted to the Com. for approval & shall be when sanctioned strictly enforced —

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may

the conduct of the operations is

2. Damage to property from blasting which can be reasonably foreseen such as the breaking of trees & bushes, damage to houses, bridges &c. lying in the immediate vicinity of the work

will come under the same category as damage done by spoil thrown on to coffee & tea land and by boulders rolling down the steep slopes - in which Govt. is prepared to pay compensation -

3. The Collector will in all cases arrange for the assessment and payment of damages -

F.N.U. 21/5/93

902 R 7 14/5/93

Station _____ date _____ 18 .

OFFICE NOTE.

From

To

- To - Mr. Secy. Nilgiri Ry. Coy. *Depd 26/5/93*
 - " Collector of Nilgiri *Depd 26/5/93*
 - " Revenue Dept. *Depd 26/5/93*
 - " Engr. to Ry. Accy *Depd 26/5/93*
 - " do - P.W. Dept.
 - " Engr. in Chief, S. Dept. *Depd 26/5/93*
 - " Nilgiri Ry. Co.
 - " Chief Engineer P.W. Dept. *Depd 26/5/93*
- 26/6/93

PUBLIC WORKS SECRETARIAT,
RAILWAY BRANCH.

902 R 7 24 May 1893.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

again
Read the following

Proceedings of the Madras Govt. } (S.L. No. 2003 R 2 10 Aug 92)
P.W. D. }
Do - (" 2181 R - 10 Sept 92)

In continuation and explanation of the above, the Madras Government observes that under P.W. D. Code Volume I Chapter IX para 33 all responsibility for public safety shall rest with the Contractor during the blasting operations in connection with the Nilgiri Railway. Rules for the conduct of these operations should be drawn up by the Engineer in Chief and submitted to the Consulting Engineer for approval.

Dr. Nagappa

2. Damage to property from blasting which can be reasonably foreseen such as the breaking of trees and bushes, damage to houses, bridges &c. lying in the immediate vicinity of the work will come under the same category as damage done by spoil thrown on to coffee and tea land and by boulders rolling down the steep slopes, for which Government is prepared to pay compensation.

3. The Collector will in all cases arrange for the assessment and payment of damages.

Signed / F. R. Bennett
 Secy. to Govt. of India
 Ry. Branch.

2. The Secy. Agent Chitgarh
 1. Collector of Chitgarh
 1. Revenue Department
 1. Ex. Engr. Pz. Accs.
 1. Ex. P. & A. Accs.
 1. Ex. in. Chief Chitgarh
 1. Chief Engineer, P. & A.
 26/54

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 No. 902 R 24 May 1893