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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2563	Press
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Dated 21 8	18 10 7

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[Signature]

*Proceedings of the Madras Government, Public Works Department,
21st August 1867.*

No. 507. Read the following Proceedings of the Madras Government in the
Legislative Department:—

Communicating draft Bill to provide for the
prevention of injury to lines of Railway from
the escape or overflow of water from irriga-
tion works in Zemindary and other lands. } (Here enter 11th August 1867, No. 191.)

No. 508. ORDER THEREON, 21st August 1867, No. 2,563.

RAILWAY, No. 22.

Communicated to the Consulting
Engineer for Railways, who will furnish
the information required in paragraph 3.

(True Extract.)

(Signed) J. H. M. SHAW STEWART, Major, R. E.,
Under Secretary to Government.

To the Consulting Engineer for Railways.

Ed. S. T. Augustin.

Read the following papers:—

No. 6. Proceedings of Government in the Public Works Department.

Directing the Legislative Department to prepare, in communication with the Consulting Engineer for Railways, the draft of a Bill to prevent damage or injury to Railway works by the bursting of tank embankments in Zemindary estates. (Dated 19th July 1867, No. 2171).

No. 7. Draft Bill prepared by the Acting Assistant Secretary, Legislative Department.

A

BILL

To provide for the prevention of injury to Lines of Railway from the escape or overflow of water from irrigation works in Zemindary and other lands.

Whereas it is expedient to provide for the prevention of injury to lines of Railway from the escape or overflow of water from irrigation works situated upon the lands of Zemindars and other proprietors of land; It is enacted as follows:—

1. It shall be the duty of Zemindars and other proprietors of land and of all landholders paying revenue directly to, or holding rent free land directly from, the Government, to take such order as to the repair and management of existing tanks, river and channel embankments, irrigation channels, sluices, weirs, revetments and other artificial works of a like description upon, or flowing through, their lands, that Railway lines may not be endangered by the escape or overflow of water from such works.

2. Zemindars and other proprietors of land and landholders as aforesaid shall be liable to the payment of damages caused by neglect or omission to perform the duty imposed upon them by this Act, at the suit of any Railway Company whose property may be damaged by reason of the escape or overflow of water proceeding from works of the description mentioned in the first Section of this Act.

3. It shall be lawful for the Government, whenever it shall see fit, to appoint competent Officers to inspect and report upon the state of all tanks and other works of the description mentioned in Section 1 of this Act, which may be situated sufficiently near to any Railway to be likely to cause injury to the line and other works of such Railway, from the escape or overflow of water as aforesaid.

4. It shall be lawful for the Government to authorize such Officers to repair and enlarge existing works or to construct new works for the proper security of existing works, whenever the same shall be necessary for the purpose of preventing the escape or overflow of water as aforesaid upon the property of any Railway Company.

5. Zemindars and other proprietors of land and landholders as aforesaid, upon whose land works of the description mentioned in Section 1 are situated, shall be liable to repay to the Government all charges and expenses which may be incurred by the Government under the preceding Section of this Act, upon or about the construction, repair or enlargement of such works as aforesaid; and the Government shall be entitled to recover such charges and expenses by Civil Suit.

No. 8.

MEMORANDUM.

I think it very necessary that the limits of the responsibility of Zemindars in regard to the maintenance of their irrigation works should be clearly defined. My own view, which does not appear to be negatived by the instructions of the Supreme or Local Government, is that the Zemindars should be obliged to maintain existing irrigation works in a state of efficiency up to the *standard of the original design*.

2. Nearly all the existing irrigation works are more or less imperfect. In great floods many of them are injured; and, if it were considered essential that they should be rendered absolutely secure, there is no saying what expenditure would have to be incurred. It has been the practice to construct the irrigation works on such a scale as will enable them to act efficiently in ordinary seasons, and to let them take their chance from extraordinary floods. Supposing such floods to occur on the average once in ten years, or even at less intervals, the loss or injury which they may cause to the irrigation works may be of less importance than the outlay which would have been required in the first instance, had it been considered essential to construct the works on a sufficiently large scale to enable them to withstand extraordinary floods. In short, it is often, if not generally, more economical to construct the works imperfectly, in an engineering point of view, than perfectly.

3. Take, for example, a river embankment. We may suppose the Native rulers to have constructed an embankment along the Cauvery for the protection of the irrigated land in the Delta. They may have considered it quite sufficient to provide for the control of the ordinary river floods, for which an embankment of moderate height may have sufficed, and rather than go to the expense of constructing it of so massive a character as to enable it to withstand all floods, they may have preferred having the Delta lands occasionally inundated.

4. A line of Railway is carried through the lands which may thus be liable to occasional flooding. Are the proprietors of the river embankment in justice responsible for any damage which the Railway may sustain? In my opinion the river embankment being there (or supposed for the sake of illustration to be there), and designed to serve a certain purpose, no more could in justice be required from the proprietors than to insist on their *maintaining* the work, and which the Railway Company, when they commenced operations, might reasonably expect would be maintained, seeing that it was a permanent protection to the District, and that the necessity for it could never be done away with. The proper maintenance of the embankment was necessary for its efficiency, considered only as a protective irrigation work; and the Railway Company might, I think, reasonably expect that it should be kept up in a proper state of repair. But any risk they were liable to, beyond this, I consider, they took with their eyes open; and, if an extraordinary flood breached the embankment and injured the Railway, I consider that the loss should properly fall on the Railway Company, and not on the proprietors of the embankment.

5. It has to be observed that Section 4 of the Draft Bill provides for the repair and *enlargement* of existing works, and for the *construction of new works* which may be necessary for the proper security of existing works. In some cases, irriga-

tion works may be considered to be in a permanent state of insecurity, and they cannot then be considered efficient for the irrigation purposes only. For example, most tanks which are not provided with calingulahs or waste weirs are liable to be breached even in ordinary seasons. In some cases, the surplus water may be disposed of by forming an outlet at the extremity of the embankment; and where the soil is favorable, such temporary escapes may answer the purposes of masonry waste weir, but they most evidently require more supervision than the latter, and, if they are neglected, breaches are liable to be of frequent occurrence. Section 4 of the Draft Bill would give the Government the power to construct masonry escapes on such situations. Another class of work which might be required for the "proper security of existing works" is the addition of rough stone revetment to the earthen slope of a tank embankment, which, in some parts of the country, would be a very expensive operation.

6. I am doubtful of the justice of throwing the expense of such works on the proprietors. It would perhaps be sufficient for Government to authorize their Officers to carry out such *repairs*, and to employ such establishment as might be necessary, and to recover the charges from the proprietors.

MADRAS, 5th August 1867. (Signed) J. C. ANDERSON, Lieut.-Colonel, R. E.,
Consulting Engineer for Railways.

No. 9.

ORDER THEREON, 14th August 1867, No. 191.

The Governor in Council resolves to refer the Draft Bill, and the papers accompanying it, to the Revenue and Public Works Departments.

2. The Board of Revenue will be requested to favor Government, at an early date, with their views on the subject upon which legislation is proposed.

3. The Consulting Engineer for Railways will also be directed to submit a Memorandum showing the number of irrigation works in Zemindary estates on the lines of Railway constructed, or under construction, in this Presidency, to which the proposed legislation will be applicable, and a brief statement showing the damage which has, up to the present time, been sustained by the Railway from such works.

(True Extract)

Ag. Asst. Secy. to Govt.
Legislative Department.

To the Revenue Department.
" Public Works Department.

Exd. J. H. Burns.

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