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PARLIAMENT OF TASMANIA.

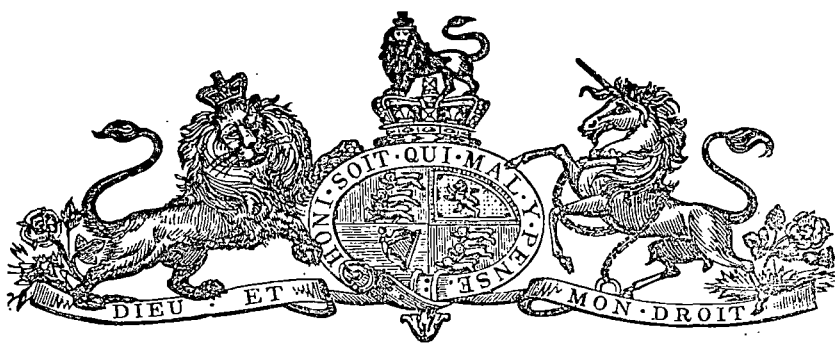
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## RAILWAY CONSTRUCTION:

MEMO. OF ENGINEER-IN-CHIEF ON REPORT FROM  
GENERAL MANAGER.

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Laid upon the Table by the Minister of Lands, August 22, and ordered by the  
House of Assembly to be printed, August 28, 1890.



*Tasmanian Government Railways,  
Engineer-in-Chief's Office, Hobart, 1st August, 1890.*

SIR,

THE Report of the General Manager for 1890, just laid before Parliament contains complaints of so grave a character regarding the construction of our Railways that it becomes imperative for me to take notice of them in justice to all concerned, and to ask you as Minister of my Department to afford the same publicity to the defence that has been given to the attack upon it. To make my replies as clear as possible I will place them side by side with the various statements made, as hereunder given :—

Page 7—General working  
“expenses abnormally  
large.”

On the same page, Manager states, “decrease in working expense is marked.”

Page 7—“Disregard of their  
financial success, the en-  
deavour to force upon my  
Department lines ineffi-  
ciently constructed, regard-  
less of all consequences.”

This exaggerated language is totally unwarranted by the facts. Since Manager was appointed in no one instance has a line been opened until his requirements, reasonable or otherwise, have been complied with, or his demands for payment in lieu thereof met, while formal official tests and examinations have been made until he was satisfied; to meet his views, I have had work done in alterations at increased cost after his signed requirements had been fully complied with.

Page 7—“Unnecessary steep  
grades.”

A non-professional man may be excused for falling into error here, but Manager was made officially acquainted with grades and curves of recent lines to which the criticism refers long before their construction was entered upon, and should have threshed out the matter in time. I could not have done otherwise than has been done without being unusually extravagant in first cost.

Page 7—“Weak section of  
rail.”

This is 3 lbs. per yard lighter than on all other lines except Scottsdale, but the additional sleepers give much more aggregate stiffness to the road than the same amount spent on rails. Though light, the road is perfectly safe for a rate of speed of 25 miles per hour as maximum, and has safely carried the traffic hitherto without a single mishap that I have heard of.

Page 7—“Inferior timber  
work.”

Report states, on page 8, bridges are in good order; on page 9, bridges are all in good condition (Derwent Valley Railway). Again, bridges stand well (Fingal Railway); on page 10, bridges and culverts substantially constructed . . . in timber. As the large majority of bridges are in timber, the details above quoted are at variance with general statement on page 7.

Page 7—“Box culverts.”

One or two instances are quoted unfairly as general instances all over the railways.

Page 7—“Shortness of bal-  
last.”

Quantity provided is same in all, except Parattah and Oatlands Line. The quantity below surface of sleepers is exactly the same in depth and width as Government standards in South Australia and New Zealand, and, except for width, due to difference of gauge, the same as light lines in Victoria according to Government drawings.

Page 7—“Bad class of  
sleepers.”

This should read “percentage of bad sleepers”—it is not correct to speak of them as generally bad. A few thousands have decayed out of several hundreds of thousands.

Page 8—Character of “per-  
manent way demands a full  
and expensive mainten-  
ance.”

Is it expected that partial maintenance should suffice; the labour is only normal.

Page 9—"Fences."

Mersey Line was opened with old fences on old portion, but cost was not charged to Working Expenses when they were renewed; neither was addition to patent wire fence on Fingal Line so charged.

Page 9—Derwent Valley Line.

Loss was due largely to neglect of Maintenance in not protecting bank known to be of light material as arranged when line was handed over, but the cost did not fall on Working Expenses.

Page 10—"Fences."

Lines elsewhere in equally rough countries, as New Zealand, are not fenced through unoccupied Crown Lands; but the cost of this (some £2000) is being charged against vote, and not to Working Expenses.

Page 10 — "Fingal Line almost reconstructed since opening, both in earth-works, ballast, drainage work, and fencing."

This is such a preposterous statement that I only notice it as affording some clue to the spirit animating the whole Report.

Page 10—"As long as such a light line and inferior class of construction is adopted."

This is wholesale condemnation of narrow gauge lines in New Zealand, South Australia, Queensland, &c., to which our lines are quite equal. The remarks must be due to want of experience in Construction, and to an unreasonable expectation that the first cost of the line should be such as would allow of a maintenance approaching *nil* as next step after the "marked decrease" of cost actually experienced, without considering that the increased cost makes it so much harder to earn interest on the outlay—or else to a conviction that the speed of the excursion or the mixed trains is sometimes more than it ought to be, and beyond the maximum of 25 miles per hour for which the lines have been designed. I believe this latter opinion has largely to do with the endeavour to get a more costly construction. If a comparison is made between the cost of maintaining the much vaunted Western Line directly after its opening and the narrow gauge lines, it is altogether to the credit of the latter. The Western Line suffered from culverts bursting, from wholesale destruction by flood, and a special ballast train was out constantly for about the first 12 months; while the extension to Mersey had not a single ballast train out the first year, had less than the normal number of repairers, and the funds subsequently voted for extra ballast were found to be better applied in largely making up subsidence of earthwork instead. Moreover, the Western Line is constantly under water near Launceston, has within my experience been provided with numerous additional protective works, and has suffered from clay working up into ballast in common with other lines.

The manifest exaggeration, the inconsistent statements in the Report to which I have referred, and the impression given (for want of proper explanation) that various works were charged to Working Expenses which were really paid for out of "Construction," are all very unfair, while no credit is given at all for large direct gains to "Receipts" in connection with Construction. I have had ample opportunity of judging before lines were opened, and in periodical inspections thereof since, and am therefore well qualified to give an opinion. I now desire to place on record my denial of the accuracy of the Report as a fair statement of the condition of the lines as a whole where referred to as inefficiently constructed. Indeed, a reference to Returns No. 11 and 20 attached to Manager's Report will show that it carries its own refutation, for not only (see Return No. 11) are the Working Expenses per train mile *lower than in any other colony*, but the Working Expenses of the Tasmanian Railways (Return No. 20) have *steadily decreased for last five years* (as the new Permanent Way has become consolidated). I would ask how could this be, if lines had to be "*almost reconstructed*," and if the other exaggerated charges were more than such faults in detail—some quite unpreventable—that can be pointed out when sought for in the best lines in the world, but which, as Manager himself has conclusively shown, *do not affect* the Working Expenses appreciably.

I have the honor to be,

Sir,

Your obedient Servant,

J. FINCHAM, *M. Inst. C.E., Engineer-in-Chief.*

*The Hon. the Minister of Lands and Works.*

*Tasmanian Government Railways,  
Engineer-in-Chief's Office, Hobart, 21st July, 1890.*

ULVERSTONE EXTENSION.

SIR,

THE statements in the *Examiner* of 18th instant as to original cost involved in alterations advocated are so grossly misleading that they can only have come from some very incompetent source, and must be my excuse for protesting to you against them. The suggestion that the desired end could have been obtained for £5000 is too ridiculous.

The grade of 60 chains at 1 in 40 starts at Don Bridge (which is raised 40 feet above bed of river), follows a leading gully and crosses a saddle in the range; to do this has involved a summit cutting of 50,000 cubic yards,\* which is 34 feet deep. To get 1 in 50 would make the cutting 64 feet deep, and enormously increase its length and bulk, or involve a tunnel; and any deviation from existing route would, if practicable, so increase the cost as to make the adopted direct line the most advisable.

Our engines have proved themselves to be quite capable of hauling any normal load they are likely to have up a short 1-in-40 with fairly easy curves, and for an occasional abnormal load it is much better and cheaper to employ an extra engine than to pay the yearly interest on a large outlay that is unproductive most of the year.

The £200 referred to was fixed by the Manager himself as part of £250, and as a friendly arrangement to avoid divided authority while line was being got ready for opening.

Yours, &c.

J. FINCHAM, *Engineer-in-Chief.*

*The Hon. the Minister.*

\* Cost much above £5000.

*Tasmanian Government Railways,  
Engineer-in-Chief's Office, Hobart, 28th July, 1890.*

ULVERSTONE LINE—GRADE ON DON RANGE.

SIR,

FOLLOWING up my letter of 21st instant, I may add that the Manager was made officially acquainted with the grades and curves proposed on our lines when these were under survey, the information being furnished at his request.

Yours, &c.

J. FINCHAM, *Engineer-in-Chief.*

*The Hon. the Minister.*