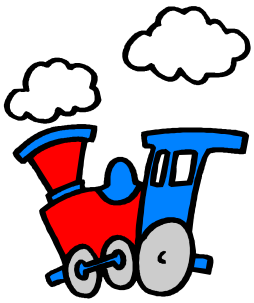
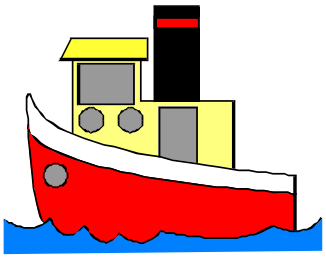


Wheels and Floats



Newsletter August 2017

TAURANGA MODEL MARINE AND ENGINEERING CLUB INC.

The Secretary
PO Box 15589
Tauranga 3112

Palmerville Station Phone 578 7293

Miniature Railway Memorial Park
Open to Public, weather permitting
Sundays in Summer: 10am to 4pm approximately
Winter. 10am to 3pm approximately
Website: www.tmmec.org.nz

MEETINGS
General Members Meeting every first Tuesday 7pm.
Committee Meeting every second Thursday at 7pm.
Maintenance Tuesday mornings from 9am.
Engineering discussions Tuesday evenings 7.30pm.

COMMITTEE

President:	Peter Jones	543 2528
Vice President:	Russell Prout	5482881
Club Captain	Bruce McKerras	5770134
Secretary:	Rachael Duncan	
Treasurer:	Owen Bennett	544 9807
Committee:	Warren Belk, Shane Marshall, John Stent, Jason Flannnery Bruce McKerras.	
Boiler Committee:	Peter Jones, Bruce McKerras, John Heald, Russell Prout.	
Safety Committee:	Warren Karlsson, Bruce Harvey, Peter Jones, Russell Prout, Mark Duncan	
Editor:	Roy Robinson 07 5491182 royrobkk@gmail.com	

CONVENERS

Workshop:	John Nicol
Track :	Bruce Harvey, John Stent, Russell Prout
Marine:	Warren Belk
Librarian:	John Nicol
Rolling Stock:	
Website:	Murray de Lues
Driver Training:	
Club Captain:	Bruce McKerras

OPERATORS 2017

3 September	B Fitzpaterick
10 September	B Harvey
17 September	P Jones
24 September	W Karlsson
1 October	R Salisbury
8 October	B McKerras
12 October	G Barnes
22 October	N Bush
29 October	M de Lues
5 November	B Fitzpatrick
12 November	B Harvey

President's Report

Greetings members.

A couple of things came up at our last club night, firstly the open weekend is not that far away and we will need help to make our visitors welcome over the two days. The model display organised by Shane is always popular with the public and is planned to happen again this year, so Shane will be looking for assistance. Once again our kitchen ladies will be looking for help.

Christmas is not far away, Shane Marshall has organised the last two floats and wants someone else to have a go. Suggested perhaps a long low trailer with a fabricated station on top to give

the public a better view of our locomotives etc. So if this is something you would be keen on organizing for our club this year we would love to hear from you.

Members indicated that our usual annual get together should be held in the new year as it was this year and Bruce Harvey has offered his residence as the venue once again, thank you Bruce.

Our club room security is important, and as most members know there are security locks that have 12 registered keys that cannot be copied without authority. The keys are stamped 1 to 12 and registered to members who hold them, that register is maintained by the club secretary and it is important that if keys are handed around the changes are notified to the secretary. The keys are the property of the club and replacements are expensive.

The weather has not been kind to planners for working B's, thankfully the first drainage upgrade to tunnel two is complete and working well. The city council is working on a new entrance to the park behind our club rooms to remove the short cut currently available to motor cycles. The Council have finished the low fence on the Northern side of the viaduct, which looks good, a flash new white picket fence. However we have been told the drainage up grade to No1 tunnel is now our problem, so plans are in place for working B's to get that job complete. Our stage one and two ground level track work has been in place for thirty and twenty years respectively so there is some maintenance work to be done to replace sleepers. Always plenty to do.

Warren Karlsson has taken on the maintenance of Kiwirail and Silverfern, these two are the mainstay of our fleet at the moment. Warren requested funds from our management committee to purchase components for a spare bogie to be manufactured. This will allow a programmed change out as preventative maintenance and his request was approved. The alternative is lengthy delays removing bogies and carrying out repairs, always a hassle even if you have the right parts available, which is generally not the case.

Happy modelling

Peter Jones.

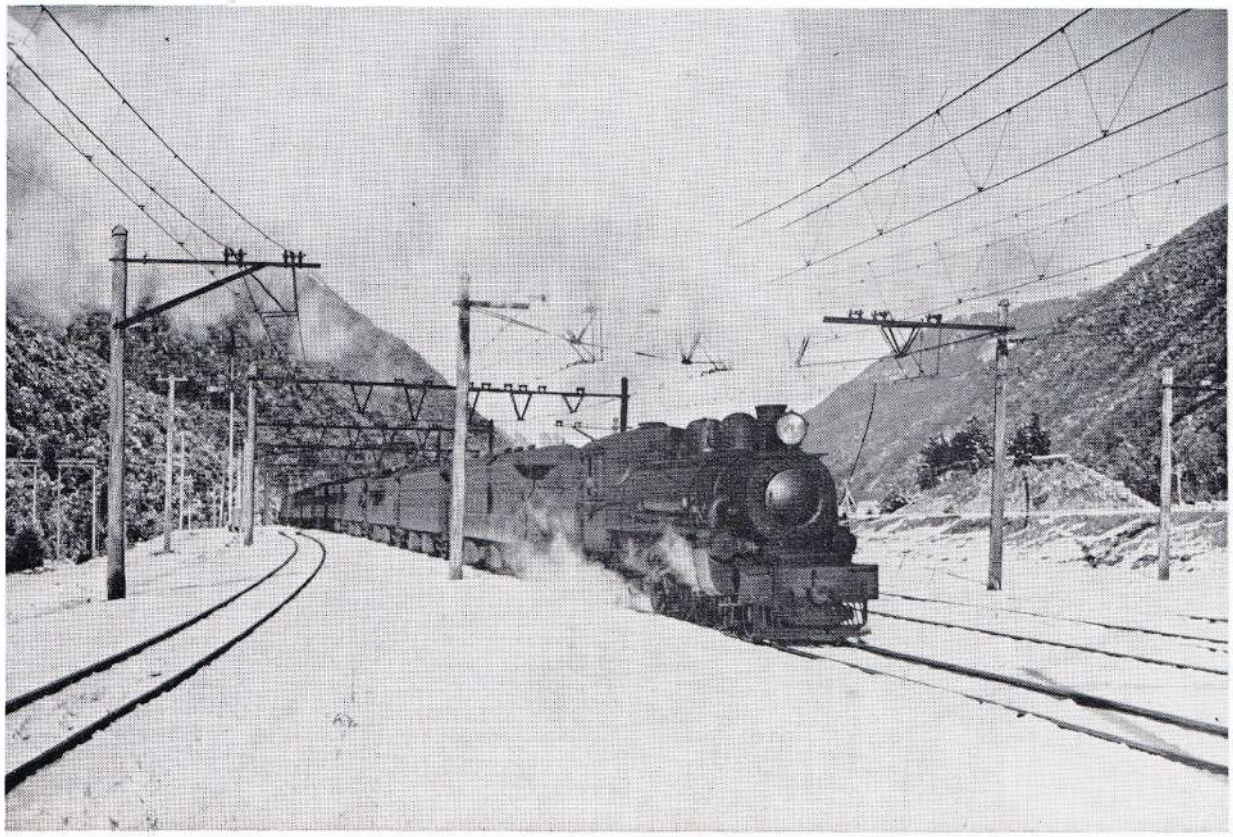
From the Editor

No articles from members this month. I’m sure you will notice the “thin” mag so please put pen to paper and send it off to me.

Missing in action. Would the person who removed the labelling machine from the filing cabinet PLEASE return it immediately!!!!!!!! Roy

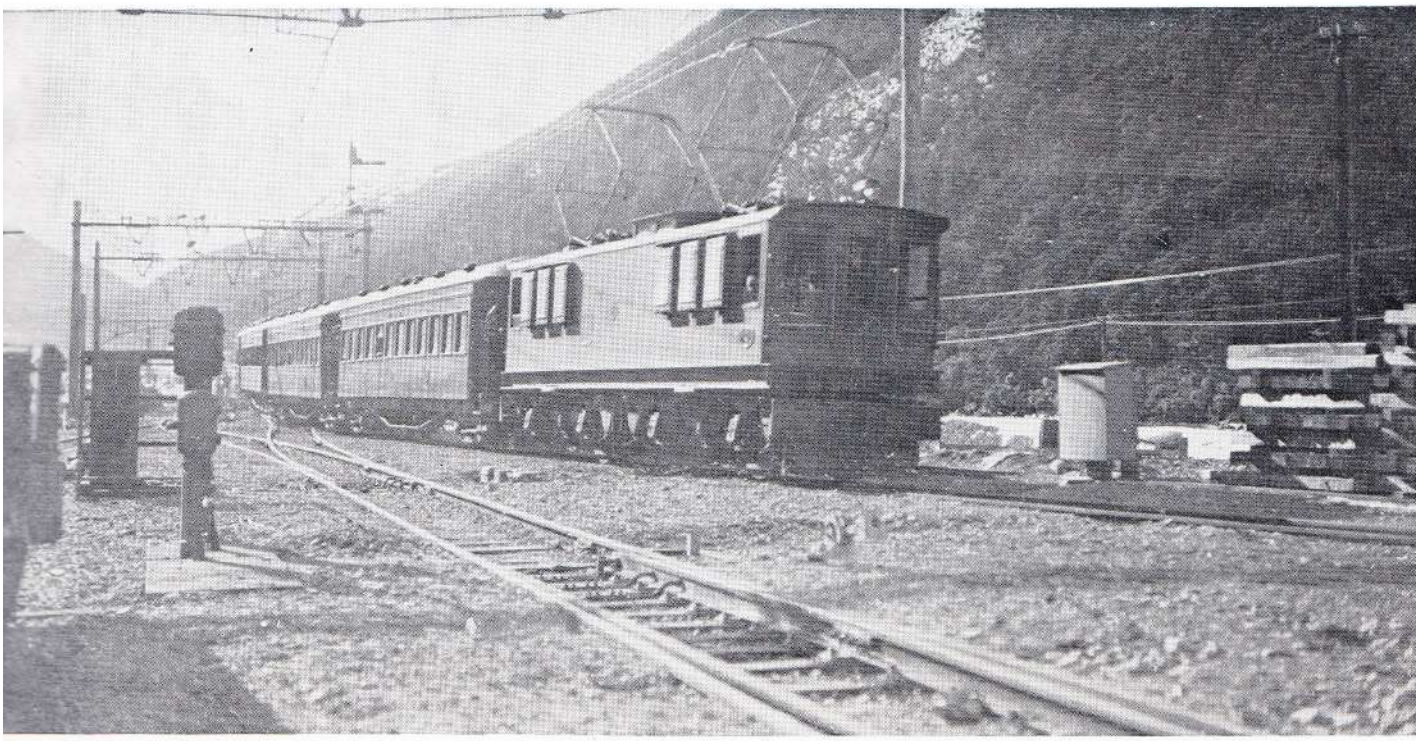
Arthur's Pass Tunnel

Part 3



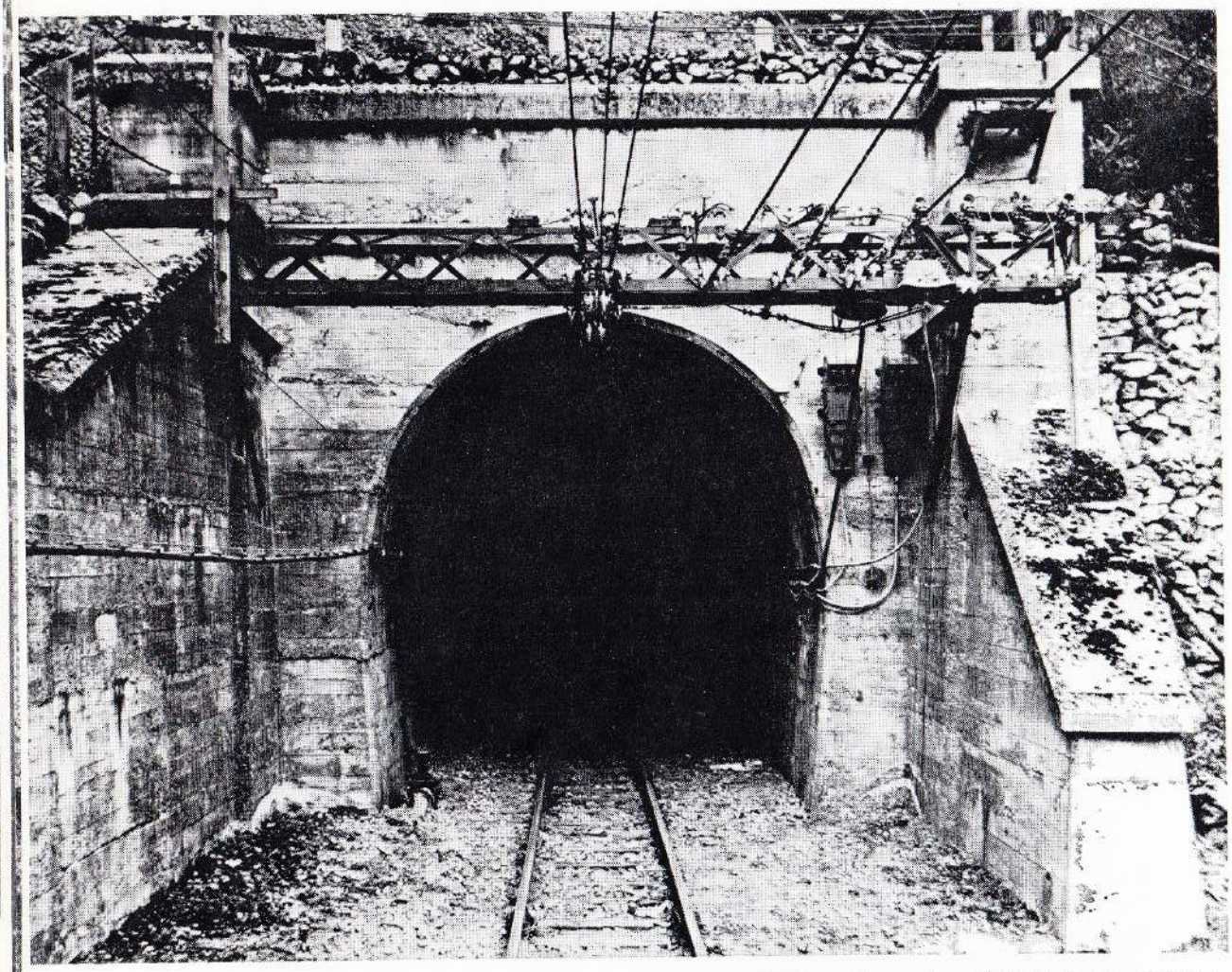
Photograph: N.Z. Railways Publicity

An "Ab" class Pacific arrives at Arthur's Pass in the snow with a passenger train from Christchurch about 1939. For many years the 10 a.m. Christchurch-Greymouth express required about 6½ hours to cover the 145 miles.



Photograph: W. W. Stewart

One of the five 50-ton electric locomotives supplied by English Electric in 1922 arriving at Arthur's Pass with the first through express train from Greymouth to Christchurch in August 1923. Then class "E", each locomotive could haul 140 tons up the 1 in 33 gradient. The maximum authorised speed was 25 m.p.h.



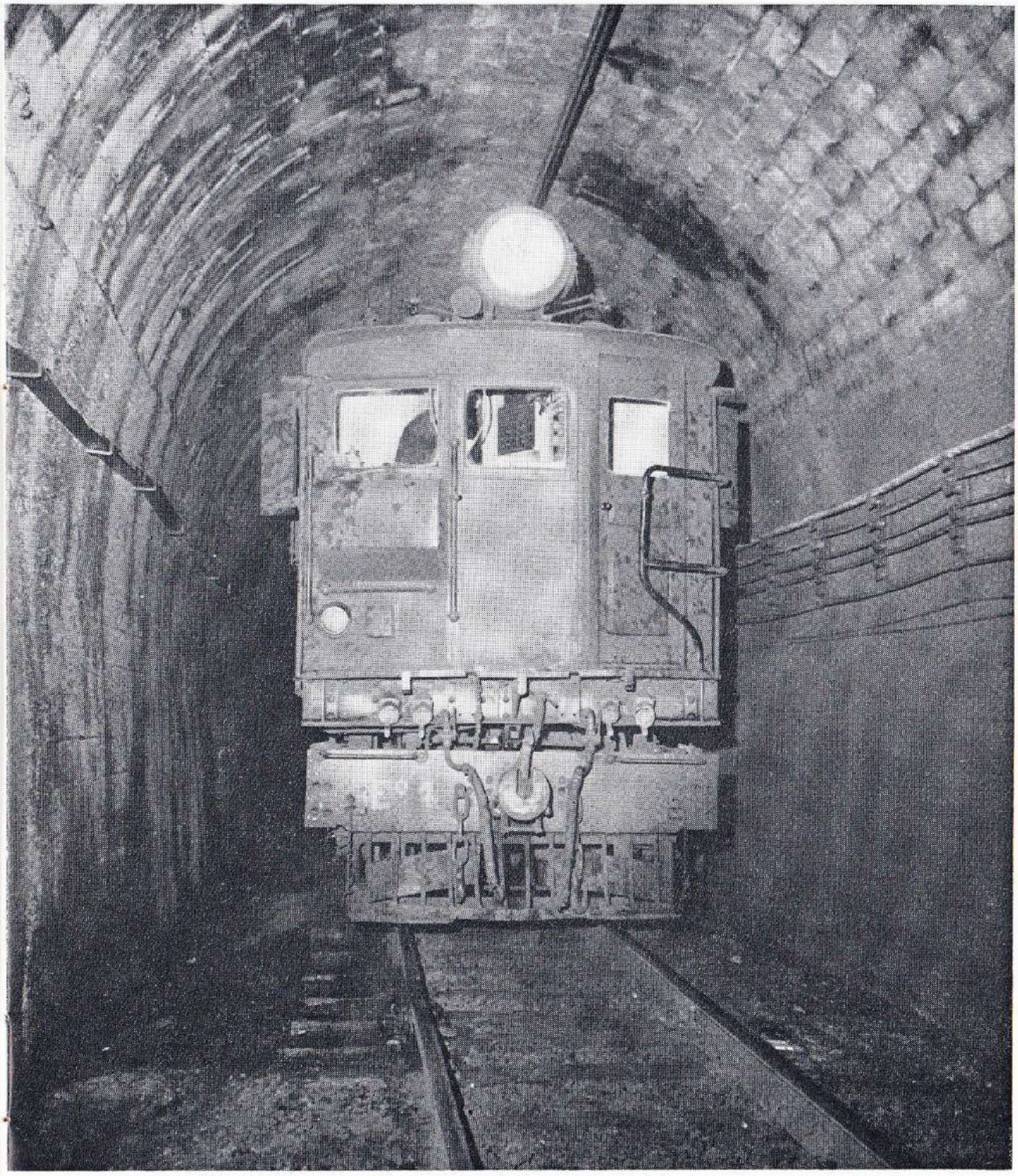
Photograph: courtesy N.Z. Railways Publicity

ABOVE: The western portal of the Otira Tunnel shortly after its completion in 1923.

At both ends of the tunnel water for drilling, drinking, etc., was supplied to all faces. The men employed at the tunnel were housed, and change-rooms, baths, drying-rooms, etc., were provided at the portals. A hospital was erected and equipped at Otira, and at the Arthur's Pass end arrangements were made for special trains in case of accidents.

The progress of the work was slow, and the estimated time for completion, and also the estimated cost, were considerably exceeded. A large part of the work was done during the war period. Wages rose 50 to 60 per cent. The cost of the material was in some cases more than doubled; cement, for instance, rose from £4 per ton to £9 and £10 per ton, and was at times almost unprocurable. In fact, on one occasion the concreting-work had to be stopped for a short time as no cement was available. The supply of skilled underground workers was never equal to the demand, and, although good wages were paid, the works were never more than half-manned. In parts the rock proved much harder than was anticipated, and at different times falls of rock at the parts previously mentioned delayed the work.

As previously stated, the work was taken over from the contractors by the Public Works Department in December, 1912. At that time the bottom headings had been driven for a length of two miles and a third, and the tunnel was completed and lined for about a mile and three-quarters. From that time steady progress was made. On the 7th May, 1918, the men at the



Photograph: N.Z. Railways Publicity

Arthur's Pass end of the tunnel heard the sound of the firing of the charges used in the bottom heading at the Otira end. Keen interest was aroused; and on the 29th June the sound of the rock-drills working on the face at the Otira end was heard by the Arthur's Pass workers, who were about 200 ft. away. Shortly after this, on the 20th July, the bottom headings met — 3 miles 68 chains 10 links having been driven from the Otira end, and 1 mile 37 chains 0.8 links from the other end.

The meeting of the headings showed that the surveys had been made and the tunnel

Photograph: courtesy N.Z. Railways Publicity

The power house at Otira, brought into use in 1923, housed three marine-type, water-tube, hand-fired boilers and two geared turbine-driven generators of 1,600 kilowatts capacity. It supplied power to the railway at a pressure of 1,500 volts, direct current.

driven with remarkable accuracy; the difference between the actual length and the calculated length was 36 in., the difference in level was only 1⅛ in., and the alignment was extremely accurate, being only ¾ in. out. By way of comparison: In the Mont-Cenis Tunnel, seven miles and a half long, the error in direction was found to be nil, the error in levels to be 1 ft., and the actual length to be 15 ft. in excess of the calculated length.

On the 21st August, 1918, the final barrier in the bottom heading was shot away by a charge fired by Sir William Fraser, then Minister of Public Works; and about three years afterwards the whole of the excavation and lining was completed.

Arthur's Pass Tunnel is the seventh-longest tunnel in the world, and the longest in the British Empire (in 1923).

Serious and fatal accidents have been few: there have been occasional falls of rock, as mentioned above, delaying the work and increasing the cost. At the east end, for 1000 ft. or more from the portal, the tunnel runs close to the river, under a steep hillside, and with very little cover in places. In May, 1910, at a point where the arch was within 30 ft. of the surface, and the roof was very thin rock covered with clayey gravel, the weight of ground broke through the timbering of completed excavation for 50 ft. along the tunnel and ran to the surface. Some men were caught in this fall, one of whom died later. Two men, free and unhurt, were imprisoned in the bottom heading beyond the break for four days, while an adit was driven from the river side to get them out. Conversation with them was carried on through the 5 in. air-main, through which also they were provided with dry clothes and food. They were none the worse for their experience.

Owing to the steep grade and the difficulty of dealing effectively with the smoke from steam-locomotives, it was decided to electrify the tunnel. Several schemes were considered — hydro-electric power against steam for the generating plant; the electrification of a considerable length of the line on each side of the tunnel; the electrification of the tunnel only; and several other alternatives. It was finally decided to electrify the track from Otira to Arthur's Pass, a distance of about eight miles and three-quarters.

The End