

Extract from Options Report – Northland One Lane Bridges Replacement, May 2015 – pages 37-40

9 Darby and Joan Kauri Bridge, SH12

9.1 Background

This bridge is situated in the heart of the Waipoua Forest. Unlike other bridges, this was constructed not to span a valley or watercourse but to span over the root system of two adjacent ancient Kauri trees in 1966. The structure is more a series of piles with a ring beam and a deck built off that, rather than a *traditional* bridge. The bridge deck is punctuated with holes to allow rain water to penetrate from the road into the ground below. The bridge is 17.3m long with a bridge width of 4.4m; the estimated AADT is 319; with 6% HCV, as recorded by RAMM.

There are no plans in the forward works programme for major maintenance or upgrade to this bridge. Based on the year of construction and a 100 year design life the bridge has in excess of 50 years remaining life with the continuation of appropriate routine maintenance.



Aerial view of the Darby and Jones Bridge, SH12

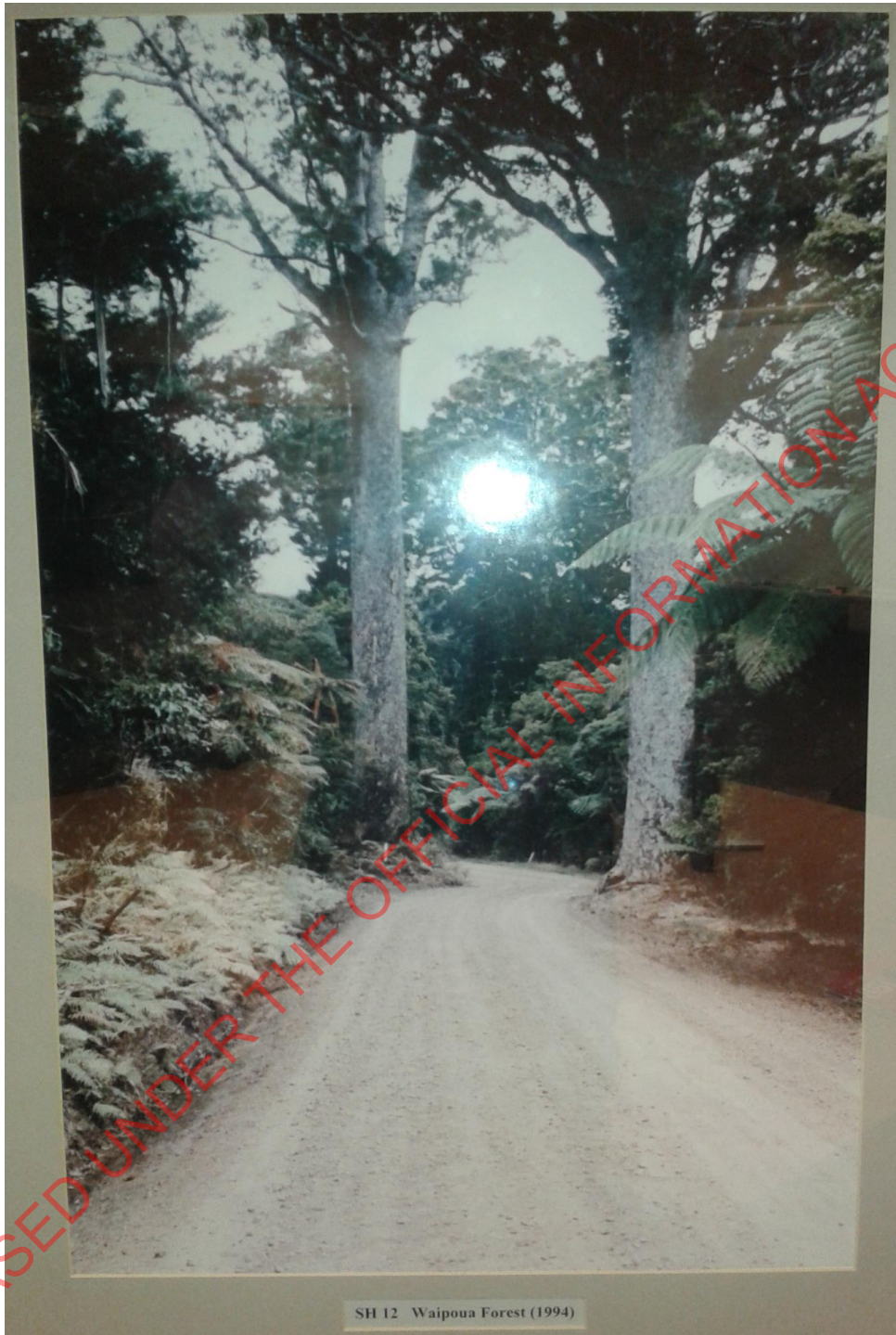


Photo taken in 1994 prior to the construct of the bridge and sealing of the road



View looking north toward the bridge



View looking south toward the bridge

9.2 Existing Issues

There are few issues with the current bridge alignment. The Waipoua Forest is a major tourist location and attracts many thousands of visitors each year. Many of these are foreign drivers and are likely to be driving campervans. The speed environment within the confines of the forest is slow, the road is narrow, windy and hilly with little opportunity to comfortably get over 50kph. Consequently, this reduced speed coupled with the hilly environment regulates queue lengths at the bridge.

Furthermore the whole of the Waipoua Forest is classified as contaminated land due to kauri dieback disease (PTA). This disease can lay dormant for years within the soil, only to be transferred by human traffic to a location near Kauri. The resultant devastation is clear to see with many once mighty trees standing naked and dead. Any works within the forest will require stringent Environmental Controls, coupled with DOC and MPI approvals to methodology not to mention Te Roroa's consent and buy into the project. The costs of disposing of any excavated material are significant, the only licenced hazardous waste site is in Auckland and failing that a local dump site within the forest is possible with Te Roroa's approval but was recently costed at over \$200,000 just to acquire approvals and consents and build the bund.

9.3 Options

9.3.1 Do Nothing

To leave the bridge insitu would not cause any major journey disruption to this low volume, charismatic road. The delays due to queue lengths are negligible and only run the risk of occurrence at peak holiday times. There would be no disturbance of the natural environment and the risk of spreading kauri dieback disease would not occur.

9.4 Key Issues

9.4.1 Threats and Weaknesses

The key risks or issues associated with this project are listed below:

- Significant risk of objection and public outcry from Te Roroa, DOC, Waipoua Forest Trust, Far North District Council and others to the felling of the tree
- Increased risk of the spread of PTA due to disturbance of the land
- Obtaining resource consent and designation of the forest as highway
- Significant Public Relations risk to the NZ Transport Agency if this option is pursued
- Potential threat to the NZ Transport Agency reputation due to questions over the value for money, sensibility of the project in the Waipoua forest
- Significant Environmental damage through construction activities to this ancient and historic forest