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Report 02.111

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Report to the Landcare Committee
from Fraser Oliver, Eastern Senior Ranger, Parks & Forests

Tunnel Gully Culvert, Pakuratahi Forest

1. Purpose

To advise Councillors of the completion of the Tunnel Gully culvert repair works, approved by the Policy & Finance Committee at the six month review.

2. Background

The Tunnel Gully culvert is located just below the top car park in the Tunnel Gully recreation reserve. Its purpose is to provide vehicle access to the upper car park of the Tunnel Gully recreation area and the summit of Mount Climie, which houses important radio communication transmitters. The culvert allows Collins Stream to pass underneath the Rimutaka Incline formation.

The armco culvert was 17 metres long by 2.5 metres in diameter and constructed approximately 26 years ago. It is made of galvanised steel and has the appearance of a corrugated iron tube.

The culvert failed on Tuesday 11 December 2001 causing significant road subsidence. The failure occurred shortly after two periods of abnormally high rainfall.

After discovery of a large chasm on the evening of 11 December 2001, we closed the road and removed the old culvert to prevent further damage and ensure public safety. We also notified all the operators of the communication transmitters and arranged alternative access for the construction period via Maymorn Road.

3. Discussion

The culvert failed because it had not been lined with concrete when it was installed. The lack of concrete protection allowed the river gravel to chip away the galvanising, which in turn led to rust corrosion of the base.

We sought advice from Flood Protection and Technical Services staff who recommended a suitable design and contractors to implement the works. The replacement culvert uses concrete blocks (purchased from Flood Protection) to form a robust headwall. This avoided the need for a pre-cast headwall which would have cost an extra \$25,000-\$30,000. We chose to use a concrete pipe which is better suited to the site and will be able to withstand the constant rumble of metal over the surface. The replacement concrete pipe had to be specially made and trucked from Auckland.

Council saved considerable material and transporting costs by using metal from our own quarry in the Pakuratahi Forest.

We lodged a claim with the Council's insurers to recover the costs of replacing the culvert. The insurers eventually rejected our claim. After considerable discussion it was felt by the assessor that replacement of the culvert would fall into the category of general maintenance due to its age and condition.

Total cost of the job was \$85,875. \$3,000 over initial estimates primarily due to extra compaction costs.

4. **Communications**

A press release will be supplied to the *Upper Hutt Leader*.

5. **Recommendations**

That the Landcare Committee:

- (1) **receive** the report.
- (2) **note** the contents of the report.

Report prepared by:

Approved for submission:

FRASER OLIVER
Eastern Senior Ranger

BRUCE ANDRELL
Manager, Parks and Forests (Operations)

ROB FORLONG
Divisional Manager, Landcare

Attachment 1 : Photos of Tunnel Gully Culvert Repair