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Report to the Landcare Committee
from Bruce Andrell, Manager, Parks and Forests (Operations)

October 2000 Flood Damages : Parks and Forests

1. Purpose

- (1) To inform the Landcare Committee of the flood damage incurred, and repairs required, following the flood event of Friday, 29 September to Monday, 2 October 2000.
- (2) To advise the Landcare Committee that any additional funding requirements will be considered by Council through the six month financial review process. Parks and Forests (Operations) will attempt to absorb the costs of the flood damages, where possible.

2. Flood Event

On Friday, 29 September a westerly front brought heavy rain over all parks and forests catchments until midday Monday, 2 October 2000. Heavy and localised downpours affected some of the parks and forests particularly badly, requiring remedial work to be undertaken.

3. Flood Damage Assessment

Park and Forest Rangers closed the affected areas during the event and have subsequently completed flood damage assessments. Flood Protection (Operations) staff assessed the river damage and provided advice on the remedial works. Minor damages have been repaired as part of normal maintenance and are not included in this report. Notable flood damage includes:

Kaitoke Regional Park

Kaitoke Regional Park has been affected by the flooding of the Pakuratahi and Hutt Rivers in three locations.

- (1) Pakuratahi River has shifted and is a threat to the river protection plantings and structures above the Waterworks Road entry bridge. The affected area requires the river be diverted back to the true-right bank and additional debris fences installed on the true-left bank.
- (2) The Pakuratahi River has cut into the true-right bank, eroding a 100 metre section of grass bank and associated willow plants in the Kaitoke campground area. The river needs to be diverted back towards the true-left bank and the true-right bank, inter-planted with willow poles to help prevent further erosion of the campground.
- (3) The Hutt River has scoured the foundations of the gabion basket protection wall at the Pakuratahi Forks car park. Large boulders protecting the car park area have been carried away by the high flows and scoured out the gabion basket foundations. If left the Pakuratahi Forks toilet and adjacent car park are under threat from another flood event in the Hutt River.

Proposed remedial works include:

- installing another wire cable along the base of the wall;
- re-meshing the gabion baskets; and
- replace rocks at the base of the structure to protect it from further erosion.

Resource consents will be needed before these works can be undertaken.

Hutt River Trail

Fortunately, the flood event occurred prior to the annual work programme starting on the Hutt River Trail. The annual work programme was assessed prior and post the flood event. Over half the area affected by the flood event can be repaired utilising the annual maintenance funding. The balance of the flood repairs have been identified as additional to the annual work programme. The major areas affected by the flood event were:

- the Taita/Silverstream Gorge which had significant sections of the track washed completely away; and
- significant sections of the track surface was washed away and scoured at multiple locations including: adjacent to the Melling substation; south of Kennedy Good Bridge; and the Silverstream area.

Rimutaka Incline Walkway, Pakuratahi Forest

Four hundred metres of the Rimutaka Incline Walkway track surface has been scoured in the Summit Yard area. The track surface needs to be re-graded and metalled back to its original profile. The water tables also need to be re-instated.

The Pakuratahi River has cut into the bank on the true-right causing a slip just downstream of the Ladle Bend bridge. The site requires remedial work, to prevent further erosion of the walkway formation. This includes diverting the river back to the true-left bank and planting of the exposed slip face. The outer shoulder of the Walkway formation is unstable and cannot support motor vehicle traffic without the

potential of further slumping. The appropriate remedial options need to be explored with the Historic Places Trust and Upper Hutt City Council. Options include:

- moving the walkway over to the left to avoid further damage to the outer edge of the slip (however, we do not favour this option as it will change the alignment of the historic railway formation; or
- retaining the slip face (the favoured option, although it may cost more).

Both options require drainage improvements to keep water off the unstable slope face.

Wainuiomata Recreation Area

The vehicle ford to the main loop track and gums recreation area has been washed out by the Wainuiomata River. The ford needs to be reinstated to enable staff to service the structures and maintain the track and recreation area.

Cannon Point Walkway, Akatarawa Forest (Bridge Road Track to Reservoir)

Approximately an 80 metre section, including a bridge, has been completely washed away on a section of the Cannon Point Walkway to the Water Reservoir. The valley floor at this point, is difficult to access, unstable and the stream is very volatile - moving its channel regularly. We propose a modest track diversion and removing the two affected bridges, while we consider the best cost effective long-term solution.

Whakatikei Road, Akatarawa Forest

Approximately four kilometres of the Whakatikei Road has been severely scoured. The road formation and water tables need to be reinstated, and an old log culvert replaced.

4. Estimated Cost of Flood Damage

The flood damage repair cost estimates for the parks and forests are summarised as follows:

Site	Repair Works	\$\$
Kaitoke Regional Park	• River repairs upstream of Waterworks Road bridge	2,700
	• River repair works adjacent to campground	5,000
	• River repair works Pakuratahi Forks car park	3,700
Hutt River Trail	• Rebuild Taita/Silverstream Gorge track • Resurface various affected sections of track	19,000
Rimutaka Incline Walkway	• Repair Summit Yard walkway track surface and re-instate water tables	2,000
	• Pakuratahi River repair at Ladle Bend bridge*	2,600
Wainuiomata Recreation Area	• Re-instate the washed out ford (design and build)	15,000
Akatarawa Forest	• Re-instate 4km of Whakatikei Road	8,500
	• Replace failed log culvert	1,500
All Above	• Obtain resource consents	7,000
	Sub-Total	67,000
	Contingency of 10%	6,700
	Total Estimate of Cost Repairs*	73,700

* Minimalist approach but subject to Historic Places Trust and resource consent application requirements. This may require more significant river protection and retaining systems.

5. **Management Strategy for Repairing Flood Damages**

The majority of minor damages throughout the network, have been repaired. I propose repairing the significant flood damages, outlined in this report, this financial year; as they significantly reduce service levels and some assets are at risk if left. Any additional funding requirements will be considered by Council as part of the six month review process. Rangers are currently preparing resource consent and Historic Places Trust consent applications. All the flood damage repairs can be completed within the current 2000/01 financial year. The work is to be managed directly by Parks and Forests (Operations) staff, with the assistance of Flood Protection (Operations), as an addition to the normal maintenance programme.

6. **Communication**

A press release will be prepared to coincide with the repair works.

7. **Recommendations**

That the Landcare Committee:

- (1) *receive the report and note the contents.*
- (2) *note that any additional funding requirements will be put forward for consideration by the Council as part of the six month review process.*

Report prepared by:

Approved for submission:

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