

STAFF REPORT

TO: Chairman and Members, Engineering Services Committee

FROM: Roger Ashworth, Transportation Manager

REFERENCE: F351

DATE: 1 August 2007

SUBJECT: **FLOOD DAMAGE – 29 JUNE/1 JULY 2007**

1 PURPOSE

To obtain the Committee's approval for lodgement of a flood damage claim and approval of Council's Disaster Fund Allocation.

2 BACKGROUND

Heavy rain, particularly in the north-west area of Golden Bay, occurred over the weekend of 29 June/1 July 2007. At Aorere rainfall was recorded at 170mm in 48-hours, Kotinga 130mm in the same period and in the Limestone Road area a local farmer recorded 300mm in 18-hours.

3 COMMENT

Patrols were undertaken across the weekend and a detailed inspection of the more severe damage was undertaken on 2 July 2007.

Roads were affected by slips, drop-outs, fallen trees, scouring, flooding, damage to culverts and general debris at over 70 separate locations on 13 different roads. The cost of reinstatement at these locations, excluding the more significant items as detailed further in this report, was in the order of \$75,000 which is work that has been completed out of our general maintenance budget.

3.1 Significant Damage Sites

There are six locations where the damage is more extensive. Five of these were inspected on 6 July 2007 with some preliminary site investigation undertaken. Preliminary estimates have been prepared for proposed remedial works and are detailed below.

- **Dry Road Approx RP 11.3 & 11.5**

This location is approx 0.5 km over the causeway about halfway down the Westhaven Inlet.

The first site is a 20m long drop out which has reduced the road width by approximately a metre. The slope is about 30 degrees and comprised of generally wet silty clay. The alignment of the road lends towards cutting the bank on the inside and shifting the alignment over by about 2 m and forming a new water table.

The second failure is an historical slump over about 100m of road. A number of cracks have opened up in the road following a slip in the bush which has removed the toe support. Over the years as the road has slumped additional material has been used to raise the road and this adds to the driving force of the slump.

It is proposed to lower the road level by 1 metre and install a deep cut off drain on the up-hill side of the road to intercept ground water. This will be discharged to the adjacent culvert. Suitable material salvaged off the road will be spread along Dry Road as running course.

Contact has been made with DoC staff as this site is in the Kahurangi National Park, although it is likely that the work is in road reserve. Their initial response is favourable.

The preliminary estimate for these two sites is \$62,000.

- **Limestone Road Culverts 39 RP 4.2 & 57 RP 6.8**

There are 2 culverts where the 900 butt jointed pipes have separated. In both cases the width of the road has been reduced. The culverts are approx 23 m and 10 m long. Both require replacing with RCRRJ pipes and we will review upgrading the size to 1050 / 1200 if this is warranted. A bagged or rock headwall will also be constructed.

The preliminary estimate is \$42,000 for 1200 diameter pipes with headwalls.

- **Nguroa Road. Approx RP 5**

This a 15m long drop out with a moderately steep down slope and wet clayey materials. The road width has been reduced by about a metre.

For this site it is proposed to realign the road by excavating the outside of the curve forming new pavement, water table and installing a new culvert with a controlled discharge away from the existing slip. This is considered more economic than building a retaining wall. We have yet to contact the adjacent property owner but it is likely that the work will be within the road reserve.

The preliminary estimate is \$31,000.

- **Totaranui Road RP 3.83**

This slip is just before the top of the saddle and is on the downhill side of the road at a moderately tight left hand bend. The slip is about 20 m long and the slope is at about 30 degrees in Separation Point Granite Sandstone. The road has been reduced to 3.2m width.

There is an outcrop bluff of sandstone on the up hill side of the road estimated at 20–25m high with a property access track at the top.

Preliminary Geotechnical Investigations indicate firm material at about 1 m below the surface. It will be necessary to construct a wall and this is likely to be about 6 m high to reinstate the previous road width and shoulder. Recent slips in this material have been successfully remediated utilising earth reinforced retaining walls. This has the advantage of utilising the majority of the excavated material. Due to the available

width, the road will have to be closed for the construction period which should be about 2 weeks. This will require a 6 week public notification period.

Preliminary discussions have been held with DoC staff. No contact has been made with other land and business owners who would be affected by the closure.

The preliminary estimate is \$110,000.

4 FUNDING

Within the Tasman District Council's Finance Policy Contingency (copy attached), the first \$100,000 of any claim within a financial year is to be funded from the annual operating budgets.

In order to achieve \$100,000 in local share expenditure we need to expend \$204,000 of subsidised allocation. Therefore an application to Land Transport NZ for \$210,000 would break down as follows:

\$75,000 already committed – to comply with policy a further \$129,000 needs to be come from operating budget (2007/2008).

The policy would then allow the local share for the remaining \$6,000 to come from the general disaster fund (\$3060).

In order for our subsidised roading budgets to comply with policy and to cater for \$204,000 of funding we need to consider possible deferment of some capital projects. These have not been identified to date but may be seal extension or bridge renewal projects.

Fortunately the \$110,000 for special purpose roads is 100% subsidised.

5 SUMMARY

The timing of the works on Totaranui Road will have to consider the requirements of the local residents and businesses, holiday-makers and also the need to advertise the road closure which will take approximately 7-8 weeks.

All roads are currently passable however widths have been severely reduced and further slumping at the head scarp of some of the slips will further reduce the available road width and compromise road safety. Discussion is required with adjacent landowners to outline any potential land issues.

6 RECOMMENDATION

THAT Council lodge an application with Land Transport NZ for \$210,000 flood damage on local roads and \$110,000 on special purpose roads.

Roger Ashworth
Transportation Manager