

STAFF REPORT

TO: Chairman and Members, Engineering Services Committee
FROM: Philip Drummond, Roading/Rivers Asset Engineer
REFERENCE: R600
DATE: 12 July 2006
SUBJECT: **RIVERS RATING REVIEW: PROJECT BRIEFING PAPER**

1 PURPOSE

The purpose of this report is to update the Engineering Services Committee on progress with the rivers rating review. This is an interim report and will be followed up with more detailed financial rating analysis at the next Committee meeting.

2 HISTORY OF THE CURRENT TDC RIVER RATING SYSTEM

In 1992 the Tasman District Council (TDC) was required to take over a number of Regional Council functions with the demise of the Nelson-Marlborough Regional Council (NMRC). TDC was required to become a Unitary Authority and was vested with the management of rivers throughout the area and all that this role implies.

The TDC did not have a river rating system as such. The council took on the role by carrying out the functions it thought necessary and funded the work from a grant charged to General Rates.

By 1996 a River Rating system had been researched and refined by a public consultation process. A system involved the simpler zoning than had been in place with the former Nelson Catchment Board and its replacement body, the NMRC. The system, current to this time, includes X, Y and Z zonings (see table attached).

- X Those areas that enjoy the direct benefit of an official stopbanking system that has been built to a recognised standard.
- Y Those areas that enjoy the benefit of some other form of public funded protection works such as heavy rock protection works and some forms of engineered willow protection works.
- Z All other areas of the rateable TDC district.

Funding of these works is levied on the basis that 50% of the funding shall come from the River Z areas and the rest from the River X & Y areas. Initially the X-Y river rates were weighted (100/80) to reflect the difference in level of service being provided. By

2003 a resolution of Council had varied this share to make the balance between X & Y equal. This has the effect that River Rates are at the present time are raised 50% from the X and Y area collectively and the remaining 50% from the greater Z area. Rates are calculated on Land Value.

The X & Y rating areas are denoted by the River Rating Classification system that has defined approximately 285 km of main river systems as the classified river system. The areas rated are also defined by an inundation line assessed to map the areas that would be flooded by a 2% (AEP) Annual Exceedance Probability (50yr) flood. For River X areas the area assumes that there are no stop-banks in place. In River Y areas it is assumed that the water level rises above any rock and willow influenced protection works and spreads out across adjacent land. River Z areas are not influenced by flooding from the Classified River System up to the 2% AEP level from a classified section of the river system.

Each of the classified river sections and the individual property titles were assessed to apportion the area of land in each river rating zone. This was a time consuming task at the time involving the use of draughting equipment and paper based plans. There are many titles that are part one zone and part another. The totals were checked against recorded title areas.

3 REVIEW OF THE TDC RIVER RATING BOUNDARIES

The River Rating review initially looked at the validity of the current boundaries of each zone. An investigation of river bank status, land use change since the 1996 review, envisaged changes to river maintenance objectives and methods, and the understanding of day to day expectation of ratepayers, members of River Care Groups, river users and the general public.

The AMP (Activity Management Plan) Rivers requires that the Asset Engineer manage the maintenance program to the extent of the annual flood and the channel that equates to this flow. An annual flood is an event that statistically occurs once every 2.33 years and has an AEP of 100%.

There is a ground swell expectation (gained from discussions with the groups underlined above) that rivers should be managed in a way that provides an ever increasing capacity to pass a flood without overflowing onto adjacent land. This is coupled by a strong feeling that individuals along the river banks should not exclusively fund the measures needed to achieve this objective. Some methods for achieving this may be in conflict with the principles of the Resource Management Act 1991. For instance the management of wider issues relating to the preservation of water resources may need to be considered.

Two major issues exist.

Firstly it is recognised that a major change to riparian planting is needed. The annual maintenance funding spent on riparian management is the greatest proportion of the total budget. It has been recognised that a major threat to economising the budget is the continued existence of tall crack willows in many low erosion risk areas and the recent identification of seeding problem with crack willow. All crack willow clones introduced to New Zealand in the 1960's were of the male variety. During the last 2

years a self seeding infestation has been identified in reaches of the Upper Motueka. It is intended to search for the source of any introduced female trees during the spring of 2006 and the success of the changes in riparian management begun in 2005 depends on eradication of seed promoting female variations.

Secondly it also depends on the removal of crack willows in the upper reaches of the catchments from which many small twigs and branches emanate during storms and floods. These simply float down stream and establish in areas where they may not be desirable. Since many of these river tributaries are currently within the River Z zone it is almost impossible for the Asset Engineer Rivers to get a comprehensive buy-in to a River Z 50/50% cost sharing agreement with all landowners along any single section of river. This will form the major part of the proposed additional lengths of classified river.

It has been found that no section of the current 285 km of classified rivers should be removed. Indeed there are good reasons to extend the length by about 58 additional kilometres. The accurate mapping of the proposed additional areas has not yet been carried out.

4 FUNDING FROM RATES

In this review the original plans have been carefully transposed and digitally edited to create an accurate GIS data based reference. A method has been developed by the TDC I.S. Department to run versions of the River X, Y, and Z zonings to get updated area based valuations of land within each zone.

As noted earlier the funding raised by the river rating system is generated from the X, Y and Z rating zones. The amounts spent on river maintenance in the X and Y areas exceed the rates levied. The budgets are topped up from the river rates collected in the River Z areas. This is achieved on the premise that ratepayers in the River Z area are also credited with making use of the wider river system within the district, particularly the larger waterways.

Landowners in the River Z areas are required to make contact with TDC staff when they have a river erosion problem. Where the work qualifies for assistance a contract is entered into that provides up to 50% of the funding required for approved works from the River Z budget. This budget has limited funding from which allocations can be approved.

Records of actual expenditure in each of the rivers for the last 5 years have been analysed. This shows that the classified river systems require top up funding from River Z rates income. This varies because there is an annual need to assess the requirements of individual reaches for work associated with flooding in recent times and the success of stop gap remedial works carried out immediately after the events. Some years the need is greater in one area more so than another. Flexibility is a necessary requirement to achieve the best district wide response.

The rivers activity is run as a closed account fund and is partly managed as an essential insurance scheme. This requires that from year to year a sum is put aside in a classified rivers disaster fund that provides remedial funding after events that greatly exceed to annual flood expectation. In the same manner funds from the River

Z rates are used each year to make up the totals required for funding river works in both X and Y areas.

5 FURTHER REVIEW WORK

As noted above additional work is proceeding to complete the river rating review and should be available at the next Committee meeting. Work areas include:

- Suggested amendments to existing X, Y and Z rating boundaries.
- Ongoing appropriateness/limitations of the X, Y, Z system.
- Review of X, Y and Z land rating differentials, particularly with respect to levels of service.
- Analysis of classified rivers expenditure and rating income based on individual rivers/river sections.
- Consideration of capital funding options for major capital/upgrade works.

6 RECOMMENDATION

THAT this report be received.

Philip Drummond
Asset Engineer Rivers/Roads