

STAFF REPORT

TO: Chairman and Members, Engineering Services Committee
FROM: Philip Drummond, Asset Engineer Rivers/Roads
REFERENCE: R510
DATE: 23 August 2006
SUBJECT: **AOMP RIVERS: SUSTAINABLE GRAVEL MANAGEMENT**

1 PURPOSE

The purpose of this report is to inform Council on how the Engineering Department will proceed with managing the AOMP Rivers including the gravel management schedule as presented by the Asset Engineer Rivers.

2 CURRENT SITUATION

The AOMP Rivers is set up each year in accordance with the Rivers AMP to carry out a district wide AOMP rivers management program. The program was circulated to interested parties; Iwi, Fish & Game, DoC and the TDC Rivers Scientist for comment. During the last two months the River Scientist has released his assessment of the sustainability of gravel report for all major rivers in the district and has more recently commented on aspects of the AOMP Rivers. No comments have been received from the other parties.

A copy of our finalised AOMP Rivers for the 2006-2007 year has been forwarded to the Manager E & P for information, in accordance with NN010109 condition 19.2. Copies will also be sent to DoC, Fish & Game and Iwi. This script follows that notification.

The comments from Scientist Rivers indicate that there are very few sites in the draft AOMP where the River Scientist is prepared to support gravel extraction from the system. A program of gravel relocation effectively below the mean annual flood level is recommended in lieu of extraction. The additional net cost of implementing this alternative river management method is considered to be in the order of \$100,000 in 2006-2007 and has not been allowed for in this year's budget.

At the current time the Global Consent (NN010109) does not permit us to carry out work within the wetted waterway, or effectively re-locate gravel below the mean annual flood level. What can be done to relocate gravel is very limited if we cannot enter the waterway and we have no additional budget to undertake such a radical change to our methodology in the current year. The Rivers budget cannot comfortably adjust to this regime in 2006-07 as there is an unmanageable financial implication. We have to work within the terms of the Global Consent and expedite the AOMP Rivers in a cost effective manner without undue delays.

3 ENGINEERING SERVICES PROPOSED MANAGEMENT ACTION

Discussion has been held with the Manager Environment and Planning to determine how the foregoing might affect compliance with NN010109 consent for river bank protection, channel stabilization measures and maintenance. The following information sets out how we intend managing the situation.

In accordance with NN010109 Clause 19.2 the Engineering Department will take into consideration the River Scientist's comments when directing the manner and method in which tasks are carried out. The greatest change in methodology requested by the River Scientist relates to minimising the amount of gravel permanently extracted from the active river system by relocating worked gravel below the mean annual flood level (active channel). Relocation of gravel within the river bed requires new methodology development and an extension of the current resource consent conditions (or a new consent) to allow working within the active waterway.

It is our contention that the immediate application of the River Scientist's specific suggestion on zero extraction would leave us in a position that will frustrate the purpose of the consent. We would not be able to undertake the range of river management activities that the consent was issued to permit. This will unreasonably jeopardise the current and long term river maintenance management policy's objectives.

Relocation of gravel for river management purposes might be achieved over the longer term by placing the material in wetted waterways in a loosened manner to aid transportation during floods. There are very few ways of relocating gravel below the mean annual flood level without entering the waterway. The suggested change to our methodology could be accommodated by a variation to the Global Consent NN010109 which would give us the ability to work within the wetted waterway. However gravel relocation cannot be undertaken the short/medium term in the absence of formal planning approvals, and consents for this new activity may be very difficult, and perhaps impossible to achieve.

It is suggested that quantities of gravel extracted as part of a river management process in 2006-2007 will be very similar to the range experienced in the last three years. This has been controlled by the use of an authorisation under the NN010109 Global Consent after liaison between Engineering and Environment and Planning Compliance staff. Gravel sources will refer directly to the locations noted in the AOMP Rivers.

The desired river management result that currently involves gravel extraction is generally one of meander adjustment and rock work minimisation. A natural consequence of meander adjustment is an increase to gravel transport rates as a result of slightly increasing gradients and will help to supply the lower reaches of each river with gravel.

The current practice of managing each meander work site identified in the AOMP is generally as follows. A portion of each meander is left in place to maintain the stability of the accepted single thread stream pattern. Another portion is left in such a manner as to promote the river flood cycle to move it downstream. The third portion is removed as gravel extraction to provide a manageable solution to the river engineering problem at that site.

In general this work has been successfully carried out under the terms and conditions of the current Global Consent (NN010109) during the last few years. The Engineering Department of Council will continue to operate the AOMP Rivers in accordance with the consent conditions.

We have suggested that an initial meeting of key Engineering and Environment & Planning staff be held to discuss possible operational river management methods which were not contemplated under NN010109, and how this might allow future draft AOMPs to be developed.

4 RECOMMENDATION

THAT this report be received.

Philip Drummond
Asset Engineer Rivers/Roads