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NZILA RESENE PRIDE OF PLACE LANDSCAPE ARCHITECTURE AWARDS 2010

LANDSCAPE PLANNING CATEGORY CITATIONS

Riverscape and Flow Assessment Guidelines

Sustainability Award of Excellence

Boffa Miskell Ltd

Highly relevant and topical.

Demonstrates strong specialist and technical merit that will be a useful tool for LAs.

Photos follow



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32

Selection of investigation sites

In many water allocation investigations (especially level 2 and 3 investigations) it will not be appropriate for the landscape specialist to investigate the entire length of a waterway in detail. Only in level 1 investigations (high in-stream values and high degrees of hydrological alteration) are aerial overviews and on-river access along the length of the waterway likely to be justified. In level 2 investigations more detailed assessment of natural character, landscape and amenity values is normally undertaken for a limited number of representative sites, eg minimum flow sites identified by councils. If there are existing resource consents, it is generally advisable to consider investigating existing minimum flow sites. It will be necessary to limit detailed site investigations to specific locations along the river. The selection of these will involve considerations such as the ease, reliability and legality of access. If the river is to be viewed in a range of flows then safe access in all conditions will be important.

Public access to many waterways is concentrated at certain points along their length. Generally, it is appropriate to include these high use areas in any assessment particularly if they are also representative of areas up or down stream.

It will be necessary to consider the nature of all human contact to ensure adequate assessment sites. For example jet-boating and bank-side fishing may occur along much of a river, whereas, informal access may be limited to places with vehicle access.

The selection of a number of sites that are representative of all the major lengths of a river and that relate to the experience of all users will be particularly significant in the most important (level 1) investigations. This may involve access to private land. In level 2 and 3 investigations it may be appropriate to select a limited number of accessible key sites.

The WAP and other landscape related flow research¹³ has shown that certain river stretches are more sensitive to low flow and perceived landscape impacts than others. For example water level changes in waterways with single thread 'V' cross sections will generally be more apparent than in braided rivers or in river reaches with near vertical banks such as gorge sections. The selection of sensitive stretches will be suitable as flow assessment sites as they will illustrate 'worst case' effects of any flow reductions.

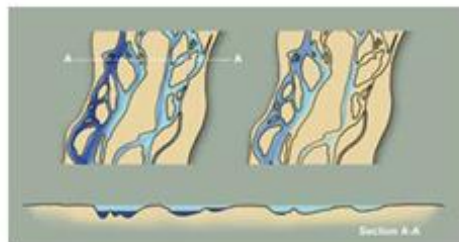


Fig 11: Flow changes in braided rivers are often difficult to detect due to the highly dynamic nature of the channel and their wide river bed.

¹³ eg Flow Guidelines for Instream Values Volumes A & B Ministry for the Environment 1998



Fig 12: The wetted surface area changes significantly with a reduction of flow in single thread rivers with shelving banks, which makes differences in flow more detectable than in rivers with steep banks.



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Fig 26: This page shows a number of images used in the natural character survey undertaken as part of this WAP research. The natural character rating shows the median of scores given by focus group participants and the key attributes listed as reason to allocate the rating:



Natural character rating: 12%
 Key attributes: modified cross/ long section, stock access



Natural character rating: 70%
 Key attributes: localised bank modification, natural context



Natural character rating: 10%
 Key attributes: flow modification, man-made structure



Natural character rating: 85%
 Key attributes: clear water, swift flow, natural channel



Natural character rating: 95%
 Key attributes: unmodified wetland and landscape context, native plant species



Natural character rating: 60%
 Key attributes: weed infestation on banks, native vegetation in landscape context