



Riparian Margins

What Are Riparian Margins?

Riparian Margins are a strip of land identified along the edges of natural watercourses including streams, lakes and wetlands. The protection and planting of Riparian Margins plays an important role in minimising stream bank erosion, protecting ecosystems and enhancing water quality.

Riparian margins are one of the Natural Areas identified in the Operative District Plan, and are similar to a setback from a road or side boundary, but apply where a stream features on a property. The riparian margin remains the property of the owner, but there are Rules within the Operative District Plan about what can be done within them.

Riparian Margins are one of the six Natural Areas in the Operative District Plan. The other Natural Areas are: General Natural Area, Managed Natural Area, Coastal Natural Area, and Protected Natural Area. These Natural Areas are collectively known as the GreenNetwork.

The Benefits Of Riparian Margins

The benefits of well-vegetated riparian margins are:

- Improvements in water quality – vegetation traps sediment, reduces nitrate concentrations in water and allows water to be absorbed more easily into the soil which then filters the water before it enters the stream;
- Reductions in water temperature;
- The minimisation of the potential for stream bank erosion by helping retain the banks and by reducing the velocity of storm water;
- Reduction of flood impacts;
- Provides food, cover and habitat for plants, animals, birds and fish;
- Landscape enhancement; and
- Maintenance of cultural values.

Riparian Margins therefore have a key role to play in maintaining and enhancing the City's Green Network.

In 1999 the Council received presentations on "Mega Trends", which included a section on climate change.

The key impacts of climate change for the Council were the increased risk of flooding and erosion and the need to expand the storm water network.

Riparian margins are one of a number of "soft engineering" solutions available to reduce the adverse effects of increased flooding. Soft engineering solutions include a combination of the following techniques:

- Low impact development;
- Riparian corridor replanting and restoration;
- Removal of inappropriate vegetation (weeds such as willows) and replanting; and
- Designing new development to mimic pre-development storm water run-off patterns.

These address soil run-off, contamination from discharges, aquatic weeds, increased water temperature and loss of riparian vegetation.

The Council endorses this approach and recognises that there is a direct correlation between providing adequate vegetated riparian margins and reducing the need for costly "hard engineering" solutions. Hard engineering includes stormwater detention ponds or other forms of storm water treatment and disposal (for example piping and culverts for watercourses).

Many of the water quality and flooding problems now facing the City would have been averted if adequate riparian margin management had been part of the original development design. Further, the need for expensive upgrading of stormwater systems in existing urban areas could have been reduced.

The Resource Management Act 1991

The Resource Management Act 1991 places a specific duty on councils to protect lakes, rivers and their margins (section 6 of the Act). The current approach to riparian margins in the Operative District Plan is the culmination of current scientific trends, stream surveys, knowledge about flooding throughout the City, and guidelines produced by the National Institute of Water and Atmospheric Research (NIWA), the Department of Conservation (DoC) and the Auckland Regional Council (ARC).

The Operative District Plan Rules

In 1995 the Council surveyed the condition of riparian margins in the City. This survey collected information such as the stability of stream banks, vegetation types and a visual assessment of pollution. The survey covered all lakes, wetlands and streams (greater than half of one metre in width) where those stream banks were not covered in native vegetation.

The Operative District Plan applies various riparian margin widths to the surveyed stream banks. Depending on their physical characteristics, riparian margins vary in width from five to twenty metres. The margin is measured from the waters edge at times of normal flow, over the contours of the land, and applies to both sides of the waterway. The width depends upon the qualities of the waterway, the potential flooding risks and the environment surrounding the stream.

The Operative District Plan Rules aim to retain the riparian margins as a natural landscape feature. Therefore the Rules limit vegetation clearance, earthworks, impermeable surfaces (i.e. surfaces that water cannot go through such as concrete), stock grazing and building in the riparian margins.

Cumulative Effect

The Riparian Margins rules have been developed to minimise the effects of flooding and erosion, protect ecosystems and to improve water quality. New development (with its disturbance of natural run off patterns and increased impermeable surfaces) generally increases storm water run off, creating a greater risk of flooding and damage downstream from the development.

Waitakere City Council's Approach

Waitakere City Council's approach to riparian margins has been endorsed by the Ministry for the Environment in its report Ecological Assessment of Riparian Areas: A Review of Riparian Assessment Methods: December 1998. In particular the Report states that:

"The Waitakere City method is comprehensive and has proved useful, and could form the basis of a method for other parts of the country if it were modified to incorporate other types of waterway and habitat."

The ARC has expressed the view that Waitakere City Council's approach to riparian management is innovative and effective in achieving multiple objectives. A number of other Councils around the region are currently introducing policies that aim to protect and enhance waterways and water quality, and that avoid or mitigate future problems with water quality and flooding.

Variation 71 To The Proposed District Plan

The Council has undertaken a variation to the Proposed District Plan that relates to riparian margins. Variation 71 inserted additional Riparian Margin Natural Areas into the Plan. These new areas were introduced after further survey work identified additional streams where Riparian Margins Natural Areas were appropriate. This Variation did not amend the Plan's Policies or Rules about Riparian Margins.

Ecological Linkage Opportunity Areas

Riparian Margins should not be confused with Ecological Linkage Opportunity Areas. Ecological Linkages are areas where the Council considers that it would be desirable to connect patches of remnant

bush and establish connections along streams and around the coast.

The Ecological Linkages are treated as General Natural Areas in the Operative District Plan. The General Natural Area has the least restrictive rules. The Council encourages planting in these areas, but there is no obligation on landowners to do so under the Operative District Plan. If a development is planned for a site that has Ecological Linkage Opportunities, then those areas of opportunity are usually viewed by the Council as suitable for reserves.

Esplanade Reserves And Strips

Esplanade Reserves are created when land next to a stream at least 3 metres wide (at mean (average) fullest annual flow) or next to the coast is subdivided. Esplanade reserves are owned by Council.

Esplanade Strips have the same purpose as esplanade reserves (that is, providing public access and protecting the stream) but the ownership remains with the landowners. Esplanade strips are subject to an easement (a right for others to travel over private property) which provides public access and recreational use of the strip.

Riparian margins should not be confused with esplanade reserves and strips. Esplanade reserves and strips are sometimes known as the "Queen's Chain". Esplanade reserves and strips seek to contribute to the protection of conservation values, enable public access to and recreational use of the reserves and strips.

Riparian margins are quite different in that ownership of the riparian margin remains with the property owner. A riparian margin does not confer a right of public access. Riparian margins form part of the Operative District Plan's Natural Area Rules and apply to private as well as public owned land.

Waitakere City Council Assistance

Through the Green Network Community Assistance Fund, Waitakere City Council currently offers:

- Advice about riparian margin management;
- Up to 200 free plants;
- Free weed spray vouchers and weed only bins;
- Fencing funds;
- Covenanted help – covenants make you eligible to apply for rates relief under the Council's current rates relief policy; and
- Free ginger bags, and free ginger disposal at the Refuse Transfer Station at The Concourse, Henderson.

This brochure is only a **guide** to riparian margins. The Rules that relate to riparian margins are found in the Policy Section and Volume One of the Operative District Plan. If you have any queries, or require further information please ask the Civic Centre Counter Staff or telephone the Council Call Centre on (09) 839 0400.