6.4 Resource management issues

6.4.1 Planting and clearance of vegetation

Chapter 6 addresses the following matters relating to planting and clearance of vegetation within the beds and margins of lakes and rivers:

(a) provision for planting and clearance activities, where appropriate; and

(b) managing the effects of such activities.

Section 13(1) of the RMA restricts the introduction or planting of any plant or part of any plant in, on, or under the bed of any lake or river unless such activities are expressly allowed by a rule in a regional plan, any relevant proposed regional plan, or a resource consent.

Not all activities associated with the planting and clearance of vegetation are going to have significant adverse effects on the environment. In many instances, the planting of vegetation within the beds and margins of lakes and rivers can be beneficial for flood protection, bank stability, amenity enhancement, restoration of natural character, and the enhancing of habitats of various indigenous flora and fauna. However, planting inappropriate plants, or plants in inappropriate locations, can result in a number of adverse effects. For example:

(i) creating or increasing undesirable plant infestation problems through the planting of inappropriate species or varieties;

(ii) restricting the passage of water and leading to increased risk of flood waters on surrounding lands or infrastructure within the bed;

(iii) adversely modifying local aquatic and terrestrial habitats, natural character, natural features and amenity values associated with the water body;

(iv) limiting access to and along lakes and rivers; and

(v) impacting on the relationship of Ngāi Tahu and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, mahinga kai and other taonga.

The location and manner in which clearance of vegetation from the beds and margins of lakes and rivers occurs can result in:

1. increased risk of flooding of surrounding land, for example as a result of debris blocking channels or the laying of harvest debris in rows that channel floodwaters inland;

2. the modification of water flow resulting in localised scouring, erosion and adverse impacts on the integrity of nearby structures and the banks of lakes and rivers as a result of trampling or pugging by grazing stock or the clearance of vegetation that benefits flood control;

3. modification to indigenous vegetation, aquatic and terrestrial habitats, natural character, natural features amenity values and the habitat of trout and salmon associated with the water body; or

4. adverse effects on the relationship of Ngāi Tahu and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, mahinga kai, and other taonga.

For matters relating to the aerial application of agrichemicals over the beds and margins of lakes and rivers, and other rules relating to discharges to air, see Chapter 3. See Chapter 4 for rules relating to discharges to water.

6.4.2 Structures in the beds and margins

Chapter 6 addresses the following matters relating to structures within the beds and margins of lakes and rivers:

(a) provision for the ongoing use or maintenance of lawfully established structures;

(b) protection of lawfully established structures from other activities in the bed;

(c) managing the effects of the use, erection, reconstruction, placement, alteration, extension, removal or demolition of any structure or part of any structure in, on or under the bed of any lake or river.

Section 13(1) of the RMA restricts the use, erection, reconstruction, placement, alteration, extension, removal or demolition of any structure or part of any structure in, on or under the bed of any lake or river unless such activities are expressly allowed by a rule in a regional plan, any relevant proposed regional plan or a resource consent. Accordingly, to avoid unnecessary resource consent applications it is necessary to identify the nature of activities that can be categorised as permitted activities.

Many structures in the beds and margins of rivers and lakes are important physical resources providing, for example:

(i) essential local and regional transport and communication links between communities;

(ii) generation, transmission and reticulation of electricity;

(iii) water supply reticulation;

(iv) protection against the effects of flooding;

(v) monitoring of environmental conditions, for example: water level recorders.

A large number have also been constructed for private use to support commercial operations or recreational activities. Not all structures are permanent. Some may be installed and used for short periods to support activities such as logging, extraction of bed materials or construction works.

New or altered structures that result in changes to bed levels or the direction and hydrodynamics of water flows can have major implications for the stability and operation of existing structures. Further, inappropriate structure design, construction, location of activities or mitigation measures within the beds and margins of lakes and rivers can:

1. result in increased risk of flooding of surrounding lands, localised scouring and erosion and adverse impacts on the integrity of existing lawfully established structures and the banks of rivers;

2. modify indigenous vegetation, aquatic and terrestrial habitats, natural character, natural features, amenity values or the habitat of trout and salmon associated with the water body; or

3. compromise the relationship Ngāi Tahu, as kaitiaki, have with their identified taonga such as wāhi tapu, indigenous flora and fauna, and access to mahinga kai.

Also of particular note are flood control structures. Considerable community effort and investment have been expended over many years to develop a network of flood control structures, e.g. stopbanks, to protect human safety, property, or other aspects of the environment. Activities within the bed and margins of lakes and rivers that potentially put these structures at risk need to be managed accordingly.

6.4.3 Disturbance of the bed

Section 13(1) of the RMA restricts the excavation, drilling, tunnelling, depositing of substances in, on or under the bed, reclamation, drainage or any other disturbance of the bed of a lake or river unless such activities are expressly allowed by a rule in a regional plan, any relevant proposed regional plan, or by a resource consent. Accordingly, to avoid unnecessary resource consent applications, it is necessary to identify the nature of disturbances that can be characterised as permitted activities.

Disturbance of the bed needs to be managed appropriately in order to avoid or mitigate any potential adverse effects, including:

(a) modification of the passage and hydrodynamics of water flow resulting in flooding of surrounding lands, localised scouring and erosion, adverse impacts on the banks of

lakes and rivers and the integrity of lawfully established structures as a result of the extent, location, duration or design of activities;

(b) modification of indigenous vegetation, aquatic and terrestrial habitats, natural character, natural features, amenity values or the habitat of trout and salmon, associated with the water body;

(c) compromising the relationship Ngāi Tahu, as kaitiaki, have with their identified taonga such as wāhi tapu, indigenous flora and fauna, and access to mahinga kai as a result of activity, timing, location or inappropriate remediation or mitigation measures;

(d) contributing contaminants to water (see Proposed NRRP Chapter 4, Water Quality).

Generally the braided beds of rivers within the Canterbury region carry a large supply of gravel. Stopbanking, has prevented these rivers from spreading their gravel over the floodplain, which results in aggradation of the bed and a reduction in flood carrying capacity of the river. In order to maintain the free flow of water it is necessary in some instances to disturb the bed in order to actively remove the built-up material.

Recreational use of the beds and margins of lakes and rivers can range from the passive enjoyment of their amenity and landscape values through to more intrusive activities such as use of trail bikes and four wheel drive vehicles. These activities have the potential to conflict with each other and with other aspects of the environment such as the nesting of indigenous birds or sites of significant indigenous vegetation. Because regional plans can only contain rules that relate to section 30 functions, a regional council cannot regulate activities such as the use of vehicles on the bed, if the only effect is on dry land or nesting birds (these are functions of a territorial authority under section 31(b)). However, under section 30(1)(a) a regional plan can contain non-regulatory methods relating to any matter that would help achieve integrated management.

6.4.4 Coastal erosion

Coastal currents and wave action continuously transport sediment along Canterbury beaches, mostly in a northward direction. If these coastal processes are not supplied with gravel to transport then sediment will be removed from the land instead. Thus, activities in beds of rivers that reduce the supply of sediment to the coast, particularly dams, could lead to accelerated coastal erosion.

Photographic, survey and topographical evidence reliably indicate that approximately 70 to 75 % of the Canterbury region's coast is in a long-term state of net erosion. While the rate of net erosion is site specific and varies throughout the region, the potential effects include the following:

(a) loss of productive land;

(b) threats to communities and key infrastructure (e.g. State Highway One) and buildings;

(c) impacts on the surrounding environment (e.g. modifying or destroying wetlands); and

(d) restrictions on human interaction with the coast (e.g. limiting opportunities for recreation, food gathering and spiritual needs); and

(e) loss of heritage sites.

From the perspective of minimising damage to people, property or the environment, Environment Canterbury has a responsibility to ensure ongoing monitoring of coastal erosion rates, and the activities that may influence these. There is also a need to appropriately manage activities that are known to initiate or increase the rate of coastal erosion, to avoid such effects.