Forest Management LTD

Resource Consent Application for Afforestation in the Taiko Stream Flow Sensitive Catchment.

Prepared for:

Peter and Margaret Evans

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1 INTRODUCTION

Forest Management Limited (FML) has been approached by Peter and Margaret Evans to consult on the planting of their afforestation project of 78.2ha in the Taiko Valley. To see if the project is compliant with national, regional and local authorities, an assessment on the National Environmental Standard for Plantation Forestry (NES-PF), Environment Canterbury's (ECAN) Land and Water Regional Plan (LWRP) and local district plans have been assessed.

As the property is in the Taiko flow sensitive catchment, a resource consent is required as planting in a flow sensitive catchment is a "controlled activity." To ensure the planting complies with Environment Canterbury's (ECAN) Land and Water Regional Plan (LWRP). Policy 5.73 of the LWRP to will be assessed to see if it can be met in the Pareora River catchment

2 LOCATION AND ACTIVITY

Property: Margaret Jane Evans, Peter Hanan Evans

Address: 28 Pareora Gorge Road, Maungati 7972

GPS Co-ordinates: 44°22'42.7"S 171°03'22.7"E

Land Title: 1. CB44A/1164 ; **2.** CB22K/1166 **3.** CB44A/1163; **4.** CB45B/231; **5.** CB34A/764

Description:

1. Fee Simple, 1/1, Lot 3 Deposited Plan 76918, 931,600 m2
2. Fee Simple, 1/1, Lot 2 Deposited Plan 3311, 760,809 m2
3. Fee Simple, 1/1, Lot 2 Deposited Plan 76918, 944,200 m2
4. Fee Simple, 1/1, Lot 2 Deposited Plan 78796, 610,100 m2
5. Fee Simple, 1/1, Rural Section 34502, 380,404 m2

Activity: Afforestation of 78.2 hectares of *Pinus radiata* in the Taiko Stream flow sensitive catchment.

3 COMPLIANCE

3.1 National Environmental Standard for Plantation Forestry

The NES-PF covers seven forestry activities as well as ancillary and general provisions such as harvesting and planting. The purpose of the NES-PF is to provide a national framework for plantation forestry to ensure environmental obligations are met. The NES-PF comes into effect as we are undertaking afforestation. Below are the sections stated in the NES-PF that are relevant to this activity and how they will be complied with to ensure the job is a permitted activity.

10. Permitted activity condition: notice

(1) The relevant regional council and territorial authority must be given written notice of—

(a) the location where the afforestation will occur and the proposed setbacks (including a description of how these were calculated); and

(b) the dates on which the afforestation is planned to begin and end.

The regional authority Environment Canterbury will be notified by way of the consent application. The territorial authority, the Timaru District Council will be notified by email as per requirement of 10.1.a and 10.1.b

(2) Notice under subclause (1) must be given at least 20 and no more than 60 working days before the date on which the afforestation is planned to begin.

The regional authority Environment Canterbury will be notified by way of the consent application. The territorial authority, the Timaru District Council will be notified by email as per requirement of 10.1.a and 10.1.b

11. Permitted activity condition: wilding tree risk and control

Calculator

(1) A wilding tree risk calculator score must be—

(a) applied to any land on which afforestation of a conifer species is proposed; and

(b) calculated in accordance with the wilding tree risk guidelines by a suitably competent person; and

(c) completed no more than 6 months before notice is given under regulation 10.

(2) In subclause (1), suitably competent person means a person with—

(a) tertiary qualifications in silviculture and forest ecology and at least 2 years' experience in the field of silviculture; or

(b) at least 5 years' experience in silviculture that includes forest establishment.

(3) Afforestation of a conifer species must not be carried out in an area with a wilding tree risk calculator score of 12 or more.

See attached Wilding risk calculation result of 0.

(4) The relevant regional council and territorial authority must be given a copy of the wilding tree risk calculator calculation sheet and score required under subclause (1) at the same time as notice is given under regulation 10.

The regional authority, Environment Canterbury will be notified by way of the consent application. The territorial authority, the Timaru District Council will be notified by email as per requirement of 10.1.a and 10.1.b

Control measures

(5) All wilding conifers resulting from the afforestation activity must be eradicated at least every 5 years after afforestation where established in wetlands or significant natural areas—

(a) on the same property on which the afforestation activity occurs; and

(b) on any other adjacent properties under the same ownership or management as that of the property on which the afforestation activity occurs.

Agreed.

12. Permitted activity condition: significant natural areas and outstanding features and landscapes

(1) Afforestation must not occur within a significant natural area or an outstanding natural feature or landscape.

Canterbury Maps Layer used for property identified as:

Land Title: *1. CB44A/1164 ; 2. CB22K/1166 3. CB44A/1163; 4. CB45B/231; 5. CB34A/764*
Description:

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5. *Fee Simple, 1/1, Rural Section 34502, 380,404 m2Land Parcel Title:*

Territorial Authority: Timaru District Council

There are identified significant natural areas (SNA) present on the property. Due to privacy reasons shapefiles for these areas were unable to be obtained but a physical report showing the locations was provided. These physical maps were used to as references when mapping the proposed afforestation. With the information provided all SNA areas have been mapped out to the best of the ability of the consultant with the information he was provided with. There is no intention to afforest these areas if the map is incorrect. All SNAs will have a buffer of 10m which will be excluded from afforestation.

13. Permitted activity condition: visual amenity landscapes

(1) Afforestation must not occur within a visual amenity landscape if rules in the relevant plan restrict plantation forestry activities within that landscape.

Canterbury Maps Layer used for property identified as:

Land Title: *1. CB44A/1164 ; 2. CB22K/1166 3. CB44A/1163; 4. CB45B/231; 5. CB34A/764*
Description:

1. *Fee Simple, 1/1, Lot 3 Deposited Plan 76918, 931,600 m2*
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Territorial Authority: Timaru District Council

Proposed afforestation area is not within a visual amenity landscape.

14. Permitted activity condition: setbacks

Territorial authority

(1) Afforestation must not occur—

(a)within 10 m of the boundary of an adjoining property that is not owned by the owner of the plantation forest or the land it is located on (unless that adjoining property is also plantation forest); or

Planting setback is 10 meters from the boundary of the adjoining property. Therefore, planting will not be within 10m of the boundary of an adjoining property.

(b) except in the case of a dwelling located on the same property as the proposed plantation forestry to be afforested, within the greater of—

(i) 40 m of a dwelling; and

No dwellings are within 40m of proposed afforestation.

(ii) a distance where the forest species when fully grown would shade a dwelling between 10 am and 2 pm on the shortest day of the year, except where topography already causes shading; or

No dwellings are within 40m of proposed afforestation.

(c) within 30 m of the boundary of land zoned in a district plan as a papakāinga or an urban area; or

Afforestation is not proposed within 30 m of the boundary of land zoned in a district plan as a papakāinga or an urban area.

(d) within 10 m of a significant natural area.

Afforestation is not proposed within 10m of a significant natural area.

(2) Afforestation must not occur where a plantation forest tree, when fully grown, could shade a paved public road between 10 am and 2 pm on the shortest day of the year, except where the topography already causes shading.

Proposed afforestation is not within the within shading distance of a public road.

Regional council

(3) Afforestation must not occur—

(a) within 5 m of—

(i) a perennial river with a bankfull channel width of less than 3 m; or

Appropriate planting setbacks have been applied. Therefore, afforestation will not occur within 5m of a perennial river with a bankfull channel width of less than 3 m.

(ii) a wetland larger than 0.25 ha; or

Appropriate planting setbacks have been applied. Therefore, afforestation will not occur within 5m of a wetland larger that 0.25ha.

(b) within 10 m of—

(i) a perennial river with a bankfull channel width of 3 m or more; or

Appropriate planting setbacks have been applied. Therefore, afforestation will not occur within 10m of a perennial river with a bankfull channel width of 3 m or more.

(ii) a lake larger than 0.25 ha; or

Appropriate planting setbacks have been applied. Therefore, afforestation will not occur within 10m of a lake larger that 0.25ha.

(iii) an outstanding freshwater body; or

Proposed afforestation area will not occur within 10m of an outstanding freshwater body.

(iv) a water body subject to a water conservation order; or

Proposed afforestation area will not occur within 10m of a water body subject to a water conservation order.

(v) a significant natural area; or

Proposed afforestation area will not occur within 10m of a significant natural area

(c) within 30 m of the coastal marine area.

Proposed afforestation area is greater than 30m from any coastal marine area

3.2 Land and Water Regional Plan

Although the NES-PF is the over-arching document that determines permitted forestry activities throughout New Zealand, there is a clause which states if any activity conducted in regional or district plans is not in or is more stringent than the NES-PF, then it supersedes the NES-PF. This is the case with Section 5.189 of the LWRP as shown below:

5.189: Any plantation forestry activity regulated by the Resource Management (National Environmental Standards for Plantation Forestry) Regulations including:

a) *the use, excavation, deposition or disturbance of lad, including in the bed of a lake or river, or in a wetland; or*
b) *the planting, replanting or clearance of vegetation, including in the bed of a lake or river, or in a wetland; or*
c) *the taking or diverting of water; or*
d) *the discharge of contaminants into water or onto or into land in circumstances where it may enter water;*

is a permitted activity, provided the following conditions are met:

1. *Planting of new areas does not occur within any Flow Sensitive Catchment listed in Sections 6 to 15 of this Plan; and*
2. *Within any Flow Sensitive Catchment listed in Sections 6 to 15 of this Plan:*
3. *the total area replanted does not exceed the area of harvest; and*
   a) *the replanting occurs in the same location or within the same area used as part of the rotation of the forestry operation as at 1 November 2010; and*
   b) *any replanting occurs within five years of the removal of the previous forest cover; and*
4. *The concentration of total suspended solids in the discharge does not exceed:*
   a. *50g/m^3 where the discharge is to any Spring-fed river, Banks Peninsula River, or to a lake, except when the background total suspended solids in the waterbody is greater than 50g/m^3 in which case the Schedule 5 visual clarity standards shall apply; or*
   b. *100g/m^3 where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100g/m^3 in which case the Schedule 5 visual clarity standards shall apply; and*
5. *The activity is not undertaken in any Indigenous Freshwater Species Habitat; and*
6. *The activity is not undertaken in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and*
7. *The activity does not reduce the area of a wetland; and*

8. *Any portable container used to store a hazardous substance (including fuel) is not located within:*
    a. *20 m of a surface water body or a bore; or*
    b. *a Community Drinking-water Protection Zone as set out in Schedule 1.*

Section 5.189 conditions are met under the proposed afforestation as per below:

2. *The activity does not include re-planting*

3. *Proposed afforestation will not cause suspended solids in the to exceed listed limits.*

4 *The activity is not proposed within an Indigenous Freshwater Species Habitat.*

5. *The activity is not proposed within an inanga spawning habitat.*

6. *The activity does not reduce the area of a wetland.*

7. *Any portable container used to store a hazardous substance will not be located within 20 m of a surface water body or a bore or a Community Drinking-water Protection Zone as set out in Schedule.*

Bullet 1 of Section 5.189 is unable to be met due to the Taiko Stream being a flow sensitive catchment listed in Section 14. This now makes the project a controlled activity which needs to comply with Section 5.73 of the LWRP in relation to planting in flow sensitive catchments.

5.73
The planting of new areas of plantation forest within any flow-sensitive catchment listed in Sections 6 to 15 is a controlled activity, provided the forest planting meets the following conditions:

1. *Existing areas of exotic tall vegetation, other than plantation forest, that is greater than 2 m tall and occupies more than 80% of the canopy cover and existed at 1 November 2010 may be planted in plantation forest; and*

    N/A as the planting area is pasture

2. *In catchments less than or equal to 50 km^2 in area the total area of land planted in plantation forest does not exceed 20% of the flow sensitive catchment or sub-catchment listed in Sections 6 to 15; and*

    Applicable as the Taiko Stream is <50km^2

3. *In any catchment greater than 50 km^2 in area the new area of planting, together with all other new areas of planting in the same flow sensitive catchment since 1 November 2012, will not cumulatively cause more than a five percent reduction in the seven day mean annual low flow, and/or more than a 10% reduction in the mean flow.*

    N/A as the Taiko Stream is <50km^2

The CRC reserves control over the following matter:

1. *The provision of information on the location, density and timing of planting.*

   May be applicable

3.3 Controlled Activity Criteria

The permitted activity rules relating to flow sensitive catchments that cannot be met have triggered the need for this resource consent. The proposed planting falls within the Taiko Stream flow sensitive catchment.

Since the Taiko Stream catchment is less than 50km^2 with an area of 3.753km^2, Section 5.73(2) of the LWRP is applicable and requires that total forest area within the catchment does not exceed 20% of the total area.

4 ASSESSMENT OF FOREST AREA IN THE TAIKO CATCHMENT

4.1 Existing and Potential Forests

The Taiko stream flow sensitive catchment has an area of 3.753km^2 which means to comply with the LWRP there must be less than 0.751km^2 of forest area within the catchment. Utilising the Land Cover Database (LCBD) and the Land Use and Carbon Analysis System (LUCAS) available from the Land Resource Information System (LRIS) through the creative commons license we were able to identify what existing forest area is present up to 2018. This came to approximately 146ha (0.146km^2). To identify any new afforestation from 2018 to the present day, Sarah Helleur at ECAN was contacted to see if any resource consents or NES-PF notifications were applied for. Sarah concluded that an additional 68ha of consents have been issued. Based on the data provided by LRIS and ECAN there is approximately 214ha (0.214km^2) of existing or potential forestry in the Taiko catchment which makes up 5.7% of the catchment area (Appendix 1).

4.2 Proposed Afforestation

Peter and Margaret proposed to plant 78.2ha on their 902ha property. When this proposal is combined with the existing forest resource in the catchment the total forest area would increase to 292.2ha (0.286km^2) and would make up 7.8% of the land area. Since this percentage is less than 20% of total catchment area this afforestation proposal complies with 5.73(2) and is therefore, a permitted activity.

5 POLICY AND OBJECTIVES

Canterbury's Regional Policy Statement Objectives 7.2.1, 7.2.3 7.2.4 and Policies 7.3.1, 7.3.3, 7.3.4, 7.3.5, 7.3.6 (Appendix 2) have been considered when applying for this resource consent to ensure that water quality and quantity is managed in a sustainable manner.

The proposed activity is consistent with these objectives and policies. This is supported by its ability to meet most of the permitted activity conditions stated in Section 5.189 and the NES-PF. The activities that were unable to be permitted were able to meet the criteria of a controlled activity under 5.73(2) and 5.73(3).

Additionally, the proposed afforestation's implications for water quality, enhancing freshwater environments, biodiversity and the protection of intrinsic value of waterbodies and their riparian zones have been considered alongside the close alignment these have with Ngāi Tahu's values. Positive outcomes for all the above aspects of water are achievable due to the planting setbacks applied from waterways within the proposed afforestation.

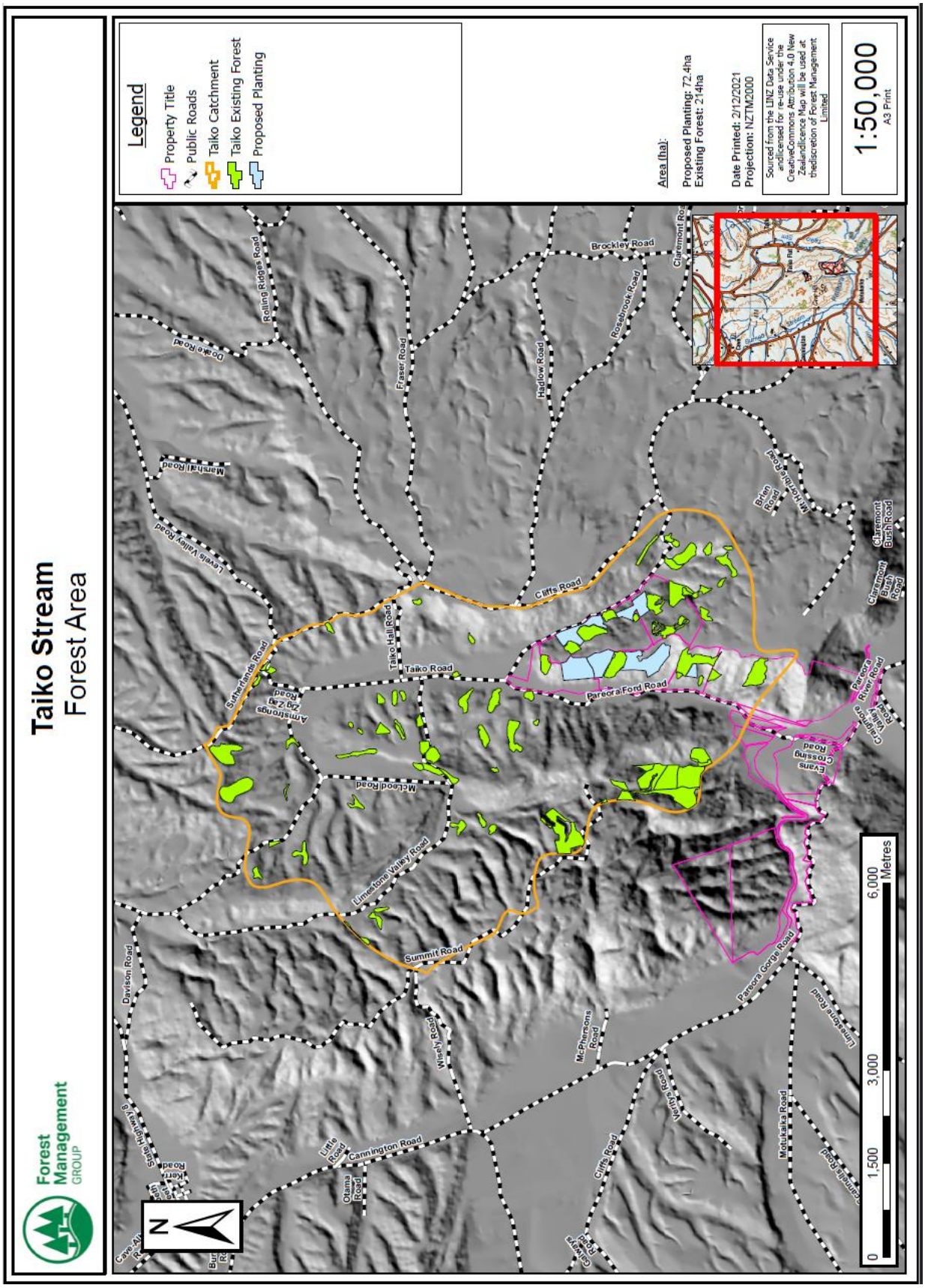
Removing these riparian areas from the current grazing land use will allow reversion back to native, creating multiple short and long-term benefits for water quality. These benefits will include, but not limited to; increased biodiversity due to a decrease in water temperature from canopy shading and increased water quality from the filtration affect from the buffer zone.

6 REFERENCES

Environment Canterbury . (2019). *Canterbury Land and Water Regional Plan.*

Environment Canterbury . (2020). *Canterbury Land and Water Regional Plan (Plan Change 7).*

7 APPENDIX 1 – TAIKO STREAM FOREST AREA



8 APPENDIX 2 – POLICY AND OBJECTIVES

Policy: 4.75 Flow Sensitive Catchments
Reduced effects arising from the interception of rainfall run-off on surface water flows in the flow sensitive catchments listed in Sections 6 to 15 is achieved by controlling the area, density and species of trees planted, except where tree-planting is required to control deep-seated soil erosion.

Objective: 7.2.1 Sustainable management of fresh water
The region's fresh water resources are sustainably managed to enable people and communities to provide for their economic and social well-being through abstracting and/or using water for irrigation, hydro-electricity generation and other economic activities, and for recreational and amenity values, and any economic and social activities associated with those values, providing:

1. the life-supporting capacity ecosystem processes, and indigenous species and their associated freshwater ecosystems and mauri of the fresh water is safe-guarded;
2. the natural character values of wetlands, lakes and rivers and their margins are preserved and these areas are protected from inappropriate subdivision, use and development and where appropriate restored or enhanced; and
3. any actual or reasonably foreseeable requirements for community and stockwater supplies and customary uses, are provided for.

Objective 7.2.3 Protection of intrinsic value of waterbodies and their riparian zones
The overall quality of freshwater in the region is maintained or improved, and the life supporting capacity, ecosystem processes and indigenous species and their associated fresh water ecosystems are safeguarded.

Objective 7.2.4 Integrated management of fresh water resources
Fresh water is sustainably managed in an integrated way within and across catchments, between activities, and between agencies and people with interests in water management in the community, considering:

1. the Ngāi Tahu ethic of Ki Uta Ki Tai (from the mountains to the sea);
2. the interconnectivity of surface water and groundwater;
3. the effects of land uses and intensification of land uses on demand for water and on water quality; and
4. kaitiakitanga and the ethic of stewardship; and
5. any net benefits of using water, and water infrastructure, and the significance of those benefits to the Canterbury region.

Policy 7.3.1 Adverse effects of activities on the natural character of fresh water
To identify the natural character values of fresh water bodies and their margins in the region and to:

1. preserve natural character values where there is a high state of natural character;
2. maintain natural character values where they are modified but highly valued; and
3. improve natural character values where they have been degraded to unacceptable levels;

unless modification of the natural character values of a fresh water body is provided for as part of an integrated solution to water management in a catchment in accordance with Policy 7.3.9, which addresses remedying and mitigating adverse effects on the environment and its natural character values.

Policy 7.3.3 Enhancing fresh water environments and biodiversity
To promote, and where appropriate require the protection, restoration and improvement of lakes, rivers, wetlands and their riparian zones and associated Ngāi Tahu values, and to:

1. identify and protect areas of significant indigenous vegetation and significant habitats, sites of significant cultural value, wetlands, lakes and lagoons/Hapūa, and other outstanding water bodies; and

2. require the maintenance and promote the enhancement of indigenous biodiversity, inland basin ecosystems and riparian zones; and
3. promote, facilitate or undertake pest control.

Policy 7.3.4 Water quantity

In relation to the management of water quantity:

1. to manage the abstraction of surface water and groundwater by establishing environmental flow regimes and water allocation regimes which:
    a. manage the hydrological connections of surface water, groundwater and the coastal environment;
    b. avoid long-term decline in groundwater levels and saltwater intrusion of coastal groundwater resources;
    c. protect the flows, freshes and flow variability required to safeguard the life-supporting capacity, mauri, ecosystem processes and indigenous species including their associated ecosystems and protect the natural character values of fresh water bodies in the catchment, including any flows required to transport sediment, to open the river mouth, or to flush coastal lagoons;
    d. provide for any existing or reasonably foreseeable needs of surface water or groundwater for individual, marae or community drinking water or stockwater supplies;
    e. support the exercise of customary uses, including any flows required to maintain wetlands or water quality for customary uses; and
    f. support any flow requirements needed to maintain water quality in the catchment; and, having satisfied the requirements in (a) to (f), provide for: recreational values (including the patterns and timing of flow variability desired by recreational users) and amenity values; and
    g. any actual or reasonably foreseeable demand for abstraction (for uses other than those listed in (d) above), unless Policy 7.3.4(2) applies; and
2. Where the quantum of water allocated for abstraction from a water body is at or exceeds the maximum amount provided for in an environmental flow and water allocation regime:
    a. avoid any additional allocation of water for abstraction or any other action which would result in further over-allocation;
    and
    b. set a timeframe for identifying and undertaking actions to effectively phase out over-allocation;
    and
    c. effectively addresses any adverse effects of over-allocation in the interim.

Policy 7.3.5 Water quantity and land uses

To avoid, remedy or mitigate adverse effects of land uses on the flow of water in surface water bodies or the recharge of groundwater by:

1. controlling the diversion of rainfall run-off over land, and changes in land uses, site coverage or land drainage patterns that will, either singularly or cumulatively, adversely affect the quantity or rate of water flowing into surface water bodies or the rate of groundwater recharge; and
2. managing the planting or spread of exotic vegetation species in catchments where, either singularly or cumulatively, those species are or are likely to have significant adverse effects on flows in surface water bodies.

Policy 7.3.6 Fresh water quality

In relation to water quality:

1. to establish and implement minimum water quality standards for surface water and groundwater resources in the region, which are appropriate for each water body considering:
    a. the values associated with maintaining life supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, and natural character of the water body;

b. any current and reasonably foreseeable requirement to use the water for individual, marae or community drinking water or stockwater supplies, customary uses or contact recreation;
c. the cultural significance of the fresh water body and any conditions or restrictions on the discharge of contaminants that may be necessary or appropriate to protect those values; and
d. any other current or reasonably foreseeable values or uses; and

2. to manage activities which may affect water quality (including land uses), singularly or cumulatively,to maintain water quality at or above the minimum standard set for that water body;and
3. where water quality is below the minimum water quality standard set for that water body, to avoid any additional allocation of water for abstraction from that water body and any additional discharge of contaminants to that water body, where any further abstraction or discharges, either singularly or cumulatively, may further adversely affect the water quality in that water body:
    a. until the water quality standards for that water body are met; or
    b. unless the activities are undertaken as part of an integrated solution to water management in the catchment in accordance with Policy 7.3.9, which provides for the redress of water quality within that water body within a specified timeframe.