

# 20

## Schedules



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## **1. Schedule of natural and human use values of Otago's surface water bodies**

This schedule identifies some of the natural and human use values of Otago's lakes and rivers. These are the characteristics of a water body which are important to, or are an essential part of, ecological communities, or are enjoyed or utilised by people and communities. The values are identified by geographic subregion and by individual water bodies, or groups of water bodies, within each subregion (see Maps A1-A8 for subregions).

The identification of natural and human use values supported by Otago's lakes and rivers provides a mechanism for recognising the existence of values which need to be taken into account and given appropriate protection in managing water use and land use activities (see Policy 5.4.2). The opportunity to provide such protection will arise when preparing or reviewing regional and district plans under the Resource Management Act, and when considering applications for resource consents.

This schedule of natural and human use values is divided into five parts:

- (a) Schedule 1A: Natural values (page 20-6);
- (aa) Schedule 1AA: Otago Resident Native Freshwater Fish – Threat Status (page 20-47)
- (b) Schedule 1B: Water supply values (page 20-48);
- (c) Schedule 1C: Registered historic places (page 20-51);
- (d) Schedule 1D: Spiritual and cultural beliefs, values and uses of significance to Kāi Tahu (page 20-53).

The natural values identified in Schedule 1A are specifically related to Part II of the Resource Management Act but are limited to the attributes of the aquatic ecosystem that support indigenous flora and fauna, trout and salmon, and the regionally significant presence of gamebirds. The outstanding features and landscapes relate to those in Part II of the Act or those identified in the Water Conservation (Kawarau) Order, which this Plan recognises.

Natural and human use values are not limited to those characteristics identified in the schedule. The natural character and amenity values of lakes and rivers are also important natural and human use values, which are given particular regard to by Policies 5.4.8 and 5.4.9. The non-listing of values in Schedule 1A is not to be taken as meaning that an area, value or habitat is not important or worthy of protection.

Some water bodies may be wholly or partly wetland, with regionally significant wetland values. These water bodies may be identified in Schedule 9.

This schedule is not intended to represent a comprehensive or exhaustive list of natural and human use values. It contains information available during the preparation process of this Plan. There is now additional information available for many water bodies, however there may still be lakes or rivers for which there is no

## SCHEDULE 1: NATURAL AND HUMAN USE VALUES OF OTAGO'S SURFACE WATER BODIES

or insufficient information. Water bodies not included in the schedule, but in close proximity to those that have values identified, may share similar values.

Conversely, identification of a particular value for a river does not necessarily mean that value occurs at every point throughout that river. Identification does, however, provide a starting point, in identifying what values are expected to occur.

## 1A Schedule of natural values

The following schedule identifies natural values supported by Otago's lakes and rivers. These include ecosystem values, outstanding natural features and landscapes, areas of significant indigenous vegetation and significant habitat of indigenous fauna, and areas with a high degree of naturalness.

The areas of significant indigenous vegetation and significant habitat of indigenous fauna are included where they meet criteria under Policy 10.5.2 of the Regional Policy Statement for Otago. Other scheduled values are established to provide certainty and to meet the requirements of the Objectives and Policies in Chapter 6 of the Regional Policy Statement for Otago.

The values are identified by geographic subregion and by individual water bodies, or groups of water bodies, within each subregion (see Maps A1–A8 for subregions).

Note the codes for ecosystem values in Column 2 of Schedule 1A are given in Table 3.

**Table 3: Codes for ecosystem values supported by lakes and rivers**

| Ecosystem Value                                                              | Code                                                                                               | Explanation                                                                                                                                                                                 |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Physical Characteristics</b>                                              |                                                                                                    |                                                                                                                                                                                             |
| Size                                                                         | <b>Psize</b>                                                                                       | Large water bodies supporting high numbers of particular species, or habitat variety, which can provide for diverse life cycle requirements of a particular species, or a range of species. |
| Unimpeded access                                                             | <b>Ppass</b>                                                                                       | Access within the main stem of a catchment through to the sea or a lake unimpeded by artificial means, such as weirs, and culverts.                                                         |
| Substrata:<br>Macrophyte<br>Boulder<br>Gravel<br>Sand<br>Silt/mud<br>Bedrock | <b>Pplant</b><br><b>Pboulder</b><br><b>Pgravel</b><br><b>Psand</b><br><b>Psilt</b><br><b>Prock</b> | Refers to the bed composition of importance for resident biota.                                                                                                                             |
| <b>Habitat Characteristics</b>                                               |                                                                                                    |                                                                                                                                                                                             |
| Spawning areas                                                               | <b>Hspawn</b>                                                                                      | Refers to presence of significant fish spawning areas: (t)=trout; (s)=salmon.                                                                                                               |
| Juvenile rearing areas                                                       | <b>Hjuve</b>                                                                                       | Refers to presence of significant areas for development of juvenile fish: (t)=trout; (s)=salmon.                                                                                            |
| Riparian vegetation                                                          | <b>Hriparian</b>                                                                                   | Refers to presence of riparian vegetation of significance to aquatic habitats.                                                                                                              |

# SCHEDULE 1A: NATURAL VALUES

| Ecosystem Value                         | Code                                                          | Explanation                                                                                                                                                           |
|-----------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Freedom from biological nuisances       | <b>Exoticfree</b><br><b>Weedfree</b><br><br><b>Willowfree</b> | Refers to absence of:<br>exotic species of fish;<br>aquatic pest plants (eg Lagarosiphon) identified in the Pest Management Strategy for Otago 2009;<br>Crack willow. |
| <b>Species Characteristics</b>          |                                                               |                                                                                                                                                                       |
| Exotic game fish: trout, salmon         | <b>Trout</b><br><b>Rtrout</b><br><b>Salmon</b>                | Refers to significant presence of trout.<br>Refers to regionally significant presence of trout.<br>Refers to significant presence of salmon.                          |
| Fishery values: eels                    | <b>Eel</b>                                                    | Refers to significant presence of eels.                                                                                                                               |
| Indigenous fish diversity               | <b>Fishdiv</b>                                                | Refers to presence of a significant range of indigenous fish species.                                                                                                 |
| Indigenous fish – rare species          | <b>Rarefish</b>                                               | Refers to presence of indigenous fish species threatened with extinction.                                                                                             |
| Indigenous waterfowl diversity          | <b>Birddiv</b>                                                | Refers to presence of a significant range of indigenous waterfowl.                                                                                                    |
| Indigenous waterfowl - rare species     | <b>Birdrare</b>                                               | Refers to presence of indigenous waterfowl threatened with extinction.                                                                                                |
| Indigenous Invertebrates diversity      | <b>Invdiv</b>                                                 | Refers to presence of a significant range of indigenous invertebrates.                                                                                                |
| Indigenous Invertebrates - rare species | <b>Invrare</b>                                                | Refers to presence of indigenous invertebrates threatened with extinction.                                                                                            |
| Indigenous- aquatic vegetation          | <b>Sigveg</b>                                                 | Refers to presence of significant indigenous aquatic vegetation.                                                                                                      |
| Gamebirds                               | <b>Gbird</b>                                                  | Refers to regionally significant presence of gamebirds.                                                                                                               |

Note that all map references given in Schedule 1A refer to the NZMS 260 series.

# SCHEDULE 1A: NATURAL VALUES

| North Otago subregion                                                                             |                                                                                                                                                                                                                         |                                                 |                                                                                                              |                                                                       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <i>Water body</i>                                                                                 | <i>Ecosystem Values</i>                                                                                                                                                                                                 | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                         | <i>Areas with a high degree of naturalness</i>                        |
| Welcome Creek                                                                                     | Hspawn(t), Weedfree, Trout, Salmon, Invdiv in headwaters                                                                                                                                                                |                                                 |                                                                                                              |                                                                       |
| Unnamed former tributary of the Pacific Ocean a.k.a. Temby Swamp Stream                           | Ppass, Pgravel, Hspawn(t), Hjuve(t), Trout                                                                                                                                                                              |                                                 |                                                                                                              |                                                                       |
| Waiareka Creek                                                                                    | Weedfree, Hspawn (inanga spawning below J42:435586)                                                                                                                                                                     |                                                 |                                                                                                              |                                                                       |
| Kakanui River (note, the Kakanui-Kauru Alluvium Aquifer forms an integral part of the water body) | Psize, Ppass, all substrata, Weedfree, Hspawn(t), (inanga spawning below J42:443574), Hjuve, Trout, Eel, Rarefish, Fishdiv, Willowfree, Hriparian upstream of I41:275733, Invrare (North branch) upstream of I41:110675 |                                                 | Significant habitat for longjaw galaxiid and koaro.<br>Significant habitat for lamprey (uncommon in Otago).  | A high degree of naturalness above Clifton Falls.                     |
| Kauru River                                                                                       | Pgravel, Weedfree, Rarefish, Fishdiv                                                                                                                                                                                    |                                                 | Significant habitat for longjaw galaxiid.                                                                    |                                                                       |
| Kurinui Creek a.k.a. Big Kuri Creek                                                               | Weedfree, Invrare upstream of J42:334392                                                                                                                                                                                |                                                 |                                                                                                              |                                                                       |
| Waianakarua River                                                                                 | Ppass, Pgravel, Hjuve, Hriparian, Weedfree, Hspawn (inanga spawning downstream of J42:403485), Rarefish, Fishdiv, Eel                                                                                                   |                                                 | Significant habitat for koaro.                                                                               | A high degree of naturalness above afforested areas of the catchment. |
| South Branch Waianakarua                                                                          | Ppass, Pgravel, Hjuve, Hriparian, Weedfree, Fishdiv, Invrare upstream of J42:305410                                                                                                                                     |                                                 |                                                                                                              |                                                                       |
| Shag River (Waihemo) (note, the Shag Alluvium Aquifer forms an integral part of the water body)   | Psize, Ppass all substrata, Weedfree, Hspawn (inanga spawning below J43:351233), Trout(t), Eel, Rarefish, Invdiv in mid reaches                                                                                         |                                                 | Significant habitat for flathead galaxiid and koaro.<br>Significant habitat for lamprey (uncommon in Otago). |                                                                       |
| Siberia Creek                                                                                     | Weedfree, Rarefish                                                                                                                                                                                                      |                                                 | Significant habitat for flathead galaxiid.                                                                   |                                                                       |

# SCHEDULE 1A: NATURAL VALUES

| North Otago subregion                                          |                                                                               |                                                 |                                                                                                      |                                                |
|----------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                              | <i>Ecosystem Values</i>                                                       | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                 | <i>Areas with a high degree of naturalness</i> |
| Unnamed tributary of the Shag River (Waihemo) a.k.a. Deem Burn | Weedfree, Rarefish                                                            |                                                 | Significant habitat for koaro upstream of I42:224388.                                                |                                                |
| Pigroot Creek                                                  | Pboulder, Hriparian, Weedfree, Invrare upstream of I42:072530                 |                                                 |                                                                                                      |                                                |
| Happy Valley Creek                                             | Weedfree, Rarefish                                                            |                                                 | Significant habitat for flathead galaxiid.                                                           |                                                |
| Tipperary Creek                                                | Weedfree, Rarefish                                                            |                                                 | Significant habitat for hybrid galaxiid species.                                                     |                                                |
| Deepdell Creek                                                 | Weedfree, Rarefish                                                            |                                                 | Significant habitat for flathead galaxiid.                                                           |                                                |
| Trotters Creek                                                 | Weedfree, Hriparian, Hjuve, Fishdiv, Rarefish. Invrare upstream of J42:330322 |                                                 | Significant habitat for giant kokopu and koaro. Significant habitat for lamprey (uncommon in Otago). |                                                |
| Pigeon Creek                                                   | Weedfree, Hriparian, Hjuve, Fishdiv, Rarefish, Invrare upstream of J42:335339 |                                                 | Significant habitat for giant kokopu.                                                                |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Maniototo subregion                                 |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                              |                                                |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                   | <i>Ecosystem Values</i>                                                                                                                                                                               | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                         | <i>Areas with a high degree of naturalness</i> |
| Taieri River upstream of Tiroiti                    | Psize, Pgravel, Ppass, Hspawn(t&s), Hjuve, Weedfree, Eel, Trout downstream of Paerau weir, Hriparian, Trout, Birddiv, Invdiv, Rarefish upstream of Paerau weir, Invrare upstream of H43:544013, Gbird | <p>a) Deep gorge (Taieri Falls) cut into distinct rocky scarp, schistose landscape, in main stem between H43:110567 and Canadian Flat.</p> <p>b) Deep gorge (Paerau Gorge) cut into distinct rocky scarp, schistose landscape, in main stem from Paerau Reservoir to NZMS 260 H42:369727.</p> <p>c) Scroll plain (Serpentine Flat) consisting of a meandering channel pattern and oxbow lakes and wetlands, from confluence with Bonds Creek to Paerau Reservoir.</p> <p>d) Scroll plain consisting of a meandering channel pattern and oxbow lakes and wetlands, from confluence with Linn Burn to confluence with Shepherds Hut Stream.</p> | <p>Significant habitat for flathead galaxiid, including tributaries upstream of Paerau weir.</p> <p>Significant habitat for lamprey (uncommon in Otago).</p> |                                                |
| Ailsa Creek                                         | Weedfree, Rarefish                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Significant habitat for flathead galaxiid.                                                                                                                   |                                                |
| Bullocky Creek                                      | Weedfree, Rarefish                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Significant habitat for flathead galaxiid.                                                                                                                   |                                                |
| Elbow Creek                                         | Weedfree, Rarefish                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Significant habitat for flathead galaxiid.                                                                                                                   |                                                |
| Unnamed tributary of the Taieri River at H43:600125 | Weedfree, Rarefish                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Significant habitat for flathead galaxiid.                                                                                                                   |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Maniototo subregion                                          |                                                                                      |                                                 |                                                                                      |                                                    |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------|
| <i>Water body</i>                                            | <i>Ecosystem Values</i>                                                              | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>     |
| Horse Burn                                                   | Weedfree, Rarefish                                                                   |                                                 | <i>Significant habitat for flathead galaxiid.</i>                                    |                                                    |
| Rock and Pillar Creek                                        | Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree, Invrare upstream of H43:772290       |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Styx Creek                                                   | Weedfree, Hspawn(t), Hjuve(t), Hriparian, Exoticfree, Invrare upstream of H43:744254 |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Logan Burn                                                   | Weedfree, Hspawn, Hjuve, Hriparian, Trout                                            |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Shepherds Hut Creek, McHardies Creek and Loganburn Reservoir | Hriparian, Hspawn(t), Hjuve                                                          |                                                 |                                                                                      |                                                    |
| Linn Burn                                                    | Pboulder, Weedfree, Rarefish, Invrare upstream of H43:603294                         |                                                 | <i>Significant habitat for flathead galaxiid.</i>                                    | A high degree of naturalness above 600 metres asl. |
| Totara Creek                                                 | Weedfree, Trout (lower reaches), Rarefish, Invrare upstream of H42:595338            |                                                 | <i>Significant habitat for unidentified galaxiid species.</i>                        | A high degree of naturalness above 600 metres asl. |
| Sow Burn                                                     | Weedfree, Hspawn, Hjuve, Hriparian, Salmon, Trout                                    |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Cambridge Creek (tributary of the Sow Burn)                  | Weedfree, Rarefish                                                                   |                                                 | <i>Significant habitat for flathead galaxiid.</i>                                    | A high degree of naturalness above 900 metres asl. |
| Ewe Burn                                                     | Hspawn(t), Weedfree, Rarefish, Trout                                                 |                                                 | <i>Significant habitat for roundhead galaxiid.</i>                                   |                                                    |
| Pig Burn                                                     | Hspawn, Hjuve, Trout                                                                 |                                                 |                                                                                      |                                                    |
| Kye Burn                                                     | Psize, Ppass, Weedfree, Hriparian, Hspawn(t), Hjuve, Rarefish, Eel, Trout            | Areas of old gold sluicing landscapes.          | <i>Significant habitat for flathead galaxiid and roundhead galaxiid.</i>             | A high degree of naturalness above 900 metres asl. |

# SCHEDULE 1A: NATURAL VALUES

| <b>Maniototo subregion</b> |                                                    |                                                 |                                                                                                                           |                                                |
|----------------------------|----------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>          | <i>Ecosystem Values</i>                            | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                      | <i>Areas with a high degree of naturalness</i> |
| Healy Creek                | Weedfree, Rarefish, Fishdiv                        |                                                 | <i>Significant habitat</i> for unique community of flathead and roundhead galaxiids. Type locality for flathead galaxiid. |                                                |
| Little Kye Burn            | Weedfree, Hspawn(t), Trout, Rarefish               |                                                 | <i>Significant habitat</i> for roundhead galaxiid.                                                                        |                                                |
| Swin Burn                  | Weedfree, Hspawn(t), Hjuve(t), Hriparian, Rarefish |                                                 | <i>Significant habitat</i> for roundhead galaxiid.                                                                        |                                                |

SCHEDULE 1A: NATURAL VALUES

| Central Otago subregion                                |                                                                                                             |                                                 |                                                                                                                      |                                                    |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| <i>Water body</i>                                      | <i>Ecosystem Values</i>                                                                                     | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                 | <i>Areas with a high degree of naturalness</i>     |
| Clutha River/Mata-Au between Alexandra and Lake Wanaka | Psize, Prock, Pgravel, Hspawn(t&s), Hriparian, Hjuve(t&s), Trout, Eel, Salmon, Rarefish, Birddiv            |                                                 | Significant habitat for flathead galaxiid (tributaries).                                                             |                                                    |
| Chapmans Gully                                         | Invrare upstream of G42:237420                                                                              |                                                 |                                                                                                                      | A high degree of naturalness above 900 metres asl. |
| Luggate Creek                                          | Weedfree, Rarefish, Invrare upstream of F40:040924                                                          |                                                 | Significant habitat for koaro.                                                                                       |                                                    |
| Princess Burn                                          | Weedfree, Invrare upstream of F40:064925                                                                    |                                                 |                                                                                                                      |                                                    |
| Manuherikia River main stem                            | Pgravel, Hspawn(t), Hjuve, Hriparian, Weedfree, Eel, Trout, Invdiv in mid reaches, Birdrare above Falls Dam |                                                 | Significant habitat: Areas of importance to internationally uncommon species - black fronted tern - above Falls Dam. |                                                    |
| Rocks Creek                                            | Weedfree, Invrare upstream of H40:620976                                                                    |                                                 |                                                                                                                      |                                                    |
| Unnamed tributary of the Manor Burn at G42:435365      | Weedfree, Rarefish                                                                                          |                                                 | Significant habitat for roundhead galaxiid.                                                                          |                                                    |
| Chatto Creek                                           | Pboulder, Hspawn, Hriparian, Weedfree, Trout, Eel, Rarefish                                                 |                                                 | Significant habitat for roundhead galaxiid.                                                                          |                                                    |
| Devonshire Creek                                       | Pboulder, Hriparian, Hspawn, Hjuve, Trout                                                                   |                                                 |                                                                                                                      |                                                    |
| Ophir Drainage Channel                                 | Weedfree, Rarefish                                                                                          |                                                 | Significant habitat type locality for roundhead galaxiid.                                                            |                                                    |
| Dunstan Creek                                          | Pgravel, Weedfree, Hriparian, Hjuve(t), Hspawn(t), Trout in lower reaches                                   | Old gold sluicing landscapes at Blue Lake.      |                                                                                                                      | A high degree of naturalness above 900 metres asl. |
| Ida Burn and Pool Burn                                 | Hspawn, Hjuve, Trout, Eel                                                                                   |                                                 |                                                                                                                      |                                                    |
| Donald Stuarts Creek                                   | Pgravel, Weedfree, Exoticfree, Invrare upstream of H41:508840                                               |                                                 |                                                                                                                      | A high degree of naturalness above 900 metres asl. |
| Dovedale Creek                                         | Weedfree, Rarefish                                                                                          |                                                 | Significant habitat for roundhead galaxiid.                                                                          |                                                    |

# SCHEDULE 1A: NATURAL VALUES

| Central Otago subregion     |                                                                                                                                                   |                                                 |                                                                                      |                                                    |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------|
| <i>Water body</i>           | <i>Ecosystem Values</i>                                                                                                                           | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>     |
| Earnsclough or Fraser River | Pgravel, Hspawn(t), Hjuve(t), Hriparian (except in lower reaches), Weedfree, Trout, Eel, Exoticfree in headwaters, Invrare upstream of F42:098420 |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Bannock Burn                | Pgravel, Hjuve, Hspawn, Eel, Trout                                                                                                                |                                                 |                                                                                      |                                                    |
| Low Burn                    | Pboulder, Weedfree, Hspawn(t), Hjuve(t)                                                                                                           |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Sheepskin Creek             | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for flathead galaxiid.</i>                                    |                                                    |
| Schoolhouse Creek           | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for flathead galaxiid.</i>                                    |                                                    |
| Lindis River                | Pgravel, Weedfree, Hspawn(t), Hjuve(t), Eel, Trout                                                                                                |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| John Bull Creek             | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |
| Amisfield Burn              | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |
| Cardrona River              | Pboulder, Psand, Pgravel, Hspawn, Hjuve, Weedfree, Trout, Eel, Rarefish, Invrare (mid to upper reaches)                                           |                                                 | <i>Significant habitat for flathead galaxiid</i>                                     | A high degree of naturalness above 900 metres asl  |
| Spotts Creek                | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |
| Timber Creek                | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |
| Branch Burn                 | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |
| Boundary Creek              | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |
| Wrights Gully               | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |
| Maori Gully                 | Weedfree, Rarefish                                                                                                                                |                                                 | <i>Significant habitat for koaro.</i>                                                |                                                    |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                                                |                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                      |                                                |
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| <i>Water body</i>                                              | <i>Ecosystem Values</i>                                                                | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i> |
| Kawarau River<br><i>between Lake Dunstan and Lake Wakatipu</i> | Psize, Pgravel, Prock, Trout, Salmon, Eel, Rarefish, Weedfree upstream of Lake Dunstan | Outstanding:<br>(a) for its wild, scenic characteristics;<br>(b) natural characteristics, in particular the return flow in the upper section when the Shotover River is in flood;<br>(c) for scientific values, in particular the return flow in the upper section when the Shotover is in flood;<br>(d) for recreational purposes, in particular rafting, jet boating and kayaking.<br>Spectacular and rugged river gorge, schistose landscape, fast flowing white water and rapids, old gold sluicing landscape, from confluence with Arrow River to Lake Dunstan. | <i>Significant habitat</i> for koaro including many tributaries.                     |                                                |
| Soho Creek                                                     | Weedfree, Invrare upstream of F41:866830                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                      |                                                |
| Lake Hayes                                                     | Psand, Psilt, Weedfree, Hriparian, Eel, Trout                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                      |                                                |
| Lakes Johnson, Luna, Kirkpatrick and Dispute                   | Hriparian, Eel, Trout                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                      |                                                |
| Horne Creek                                                    | Weedfree, Hspawn(t), Hjuve(t), Ppass, Trout in lower reaches                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                      |                                                |
| Moke Lake                                                      | Hriparian, Weedfree (also free of Elodea), Eel, Trout, Sigveg                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <i>Significant vegetation:</i> Rare association of aquatic plants.                   |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                                  |                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                   |                                                |
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| <i>Water body</i>                                | <i>Ecosystem Values</i>                                                                       | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                              | <i>Areas with a high degree of naturalness</i> |
| Lake Wakatipu                                    | Psize, Pplant, Weedfree, Hjuve(t&s), Hriparian, Eel, Trout, Salmon, Sigveg, Rarefish, Invrare | <p>Outstanding:</p> <p>(a) as a fishery;</p> <p>(b) for its scenic characteristics;</p> <p>(c) for scientific value, in particular water clarity, and bryophyte community;</p> <p>(d) for recreational purposes, in particular boating;</p> <p>(e) for historical purposes;</p> <p>(f) for significance in accordance with tikanga Maori, in particular sites at the head of the lake, and the legend of the lake itself.</p> <p>Scenic values within the wider landscape context of the surrounding mountains, particularly:</p> <ul style="list-style-type: none"> <li>• clear blue colour of the water,</li> <li>• river deltas, and</li> <li>• beaches, particularly uncommon beach features between Rat Point and White Point.</li> </ul> | <p><i>Significant habitat</i> for koaro including many tributaries.</p> <p><i>Significant vegetation:</i> Rare association of aquatic plants.</p> |                                                |
| Unnamed tributary of Lake Wakatipu at F42:747392 | Weedfree, Invrare                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                   |                                                |
| One Mile Creek                                   | Weedfree, Invrare upstream of E41:665659                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                   |                                                |
| Gorge Creek                                      | Weedfree, Invrare upstream of E41:408857                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                   |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                                                            |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                |                                                    |
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| <i>Water body</i>                                                          | <i>Ecosystem Values</i>                                                                         | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                                                           | <i>Areas with a high degree of naturalness</i>     |
| Wye, Kingston and Staircase Creeks                                         | Pboulder, Hriparian, Weedfree, Rarefish, Ppass in Staircase Creek only, Hspawn in lower reaches |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Significant habitat for koaro.                                                                                                                                                                 | A high degree of naturalness above 900 metres asl. |
| Streams from west and south of Richardson Mountains                        | Pboulder, Weedfree, Hjuve, Hspawn, Hriparian                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                | A high degree of naturalness above 900 metres asl. |
| Buckler Burn, Precipice Creek or Temple Burn, Twelve Mile Creek or Ox Burn | Pboulder, Weedfree, Hspawn(t), Hjuve(t), Hriparian                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                | A high degree of naturalness above 900 metres asl. |
| Rees River                                                                 | Psize, Ppass, Hspawn(t), Hjuve(t), Weedfree, Hriparian, Eel, Salmon, Trout, Birddiv, Birdrare   | <p>Outstanding:</p> <p>(a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters;</p> <p>(b) Natural and physical qualities and characteristics that contribute to aesthetic coherence;</p> <p>(c) as habitat for wildlife;</p> <p>(d) for its scenic characteristics;</p> <p>(e) for significance in accordance with tikanga Maori, in particular sites at the mouth of the river.</p> <p>High level of naturalness - free from significant interference by human practices, from confluence with Hunter Creek to its source.</p> <p>System of braided gravel river channels, in main stem from Lake Wakatipu</p> | Significant habitat: Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from Lake Wakatipu to confluence with Hunter Creek. |                                                    |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                           |                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                           |                                                                           |
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| <i>Water body</i>                         | <i>Ecosystem Values</i>                                                                                     | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                                                                                                                                                                                      | <i>Areas with a high degree of naturalness</i>                            |
|                                           |                                                                                                             | to confluence with Hunter Creek.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                           |                                                                           |
| Earnslaw Burn                             | Ppass, Hspawn, Hriparian, Hjuve, Trout, Weedfree, Salmon, Birddiv, Birdrare                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                           | A high degree of naturalness within Mount Aspiring/Tititea National Park. |
| Diamond Lake, Diamond Creek and Lake Reid | Ppass, Psand, Hspawn(t&s), Hjuve(t&s), Weedfree, Hriparian, Eel, Trout, Salmon (Quinnat), Birddiv, Rarefish | Outstanding<br>(a) as habitat for wildlife and quinnat salmon;<br>(b) as a fishery.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Significant habitat for koaro.                                                                                                                                                                                                                                                                                            |                                                                           |
| Diamond Lake tributary at E40:447978      | Weedfree, Rarefish                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Significant habitat for koaro.                                                                                                                                                                                                                                                                                            |                                                                           |
| Dart River/Te Awa Whakatipu               | Psize, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Salmon, Birddiv, Birdrare                     | Outstanding:<br>(a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters;<br>(b) Natural and physical qualities and characteristics that contribute to aesthetic coherence;<br>(c) Natural and physical qualities and characteristics that contribute to cultural attributes;<br>(d) Biological and genetic diversity of ecosystems;<br>(e) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience;<br>(f) as habitat for wildlife;<br>(g) for its scenic characteristics;<br>(h) for its natural characteristics, in | Significant habitat:<br>Presence of a breeding population of threatened endemic species - blue duck - above Beans Burn confluence to its source.<br>Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from Lake Wakatipu to confluence to Beans Burn. |                                                                           |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion   |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                      |                                                                           |
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| <i>Water body</i> | <i>Ecosystem Values</i>                                                         | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>                            |
|                   |                                                                                 | <p>particular natural turbidity;</p> <p>(i) scientific value, in particular natural turbidity;</p> <p>(j) for significance in accordance with tikanga Maori, in particular sites at the mouth of the river.</p> <p>High level of naturalness - free from significant interference by human practices above Beans Burn confluence to its source.</p> <p>System of braided gravel river channels with delta, in main stem from Lake Wakatipu to confluence with Beans Burn.</p>                                                          |                                                                                      |                                                                           |
| Route Burn        | Psize, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Birddiv, Birdrare | <p>Outstanding:</p> <p>(a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters;</p> <p>(b) Natural and physical qualities and characteristics that contribute to aesthetic coherence;</p> <p>(c) Natural and physical qualities and characteristics that contribute to cultural attributes;</p> <p>(d) Natural and physical qualities and characteristics that contribute to recreational attributes;</p> <p>(e) Biological and genetic diversity of ecosystems;</p> |                                                                                      | A high degree of naturalness within Mount Aspiring/Tititea National Park. |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                      |                                                                   |
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| <i>Water body</i>              | <i>Ecosystem Values</i>                                                      | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                                                            | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>                    |
|                                |                                                                              | <p>(f) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience.</p> <p>High level of naturalness - free from significant interference by human practices.</p>                                                                                                                                                                                                                                                                 |                                                                                      |                                                                   |
| Greenstone River, Caples River | Psize, Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Birdrare | <p>Outstanding:</p> <p>(a) Natural and physical qualities and characteristics that contribute to people's appreciation of pleasantness of waters;</p> <p>(b) natural and physical qualities and characteristics that contribute to recreational attributes;</p> <p>(c) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience.</p> <p>High level of naturalness - free from significant interference by human practices.</p> |                                                                                      | A high degree of naturalness within National Park and DoC estate. |
| Lochy River                    | Ppass, Weedfree, Hspawn, Hjuve, Eel, Trout                                   | <p>Outstanding:</p> <p>(a) as a fishery;</p> <p>(b) for recreational purposes, in particular fishing.</p> <p>Wild and scenic characteristics, in main stem from Lake Wakatipu to its source.</p>                                                                                                                                                                                                                                                                           |                                                                                      | A high degree of naturalness above 900 metres asl.                |
| Collins Creek                  | Hspawn(t), Hjuve(t)                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                      |                                                                   |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                                                                         |                                                                                                     |                                                                                                                                                                                       |                                                                                                                                                                                                                                                            |                                                                           |
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| <i>Water body</i>                                                                       | <i>Ecosystem Values</i>                                                                             | <i>Outstanding natural feature or landscape</i>                                                                                                                                       | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                                                                                                                       | <i>Areas with a high degree of naturalness</i>                            |
| Streams flowing to Lake Wakatipu between Halfway Bay and Elfin Bay, including Von River | Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Rarefish                               | Outstanding:<br>(a) as a fishery;<br>(b) for recreational purposes, in particular fishing.<br><br>Wild and scenic characteristics, in Von main stem from Lake Wakatipu to its source. | <i>Significant habitat</i> for roundhead galaxiid (Von catchment).                                                                                                                                                                                         | A high degree of naturalness above 900 metres asl.                        |
| Bullock Creek                                                                           | Hspawn(t), Hjuve(t), Trout                                                                          |                                                                                                                                                                                       |                                                                                                                                                                                                                                                            |                                                                           |
| Lake Wanaka                                                                             | Psize, Psand, Eel, Trout, Salmon, Sigveg, Rarefish, Invrare                                         | Scenic values within the wider landscape context of the surrounding mountains, particularly the unmodified lake level, water quality and colour of the water.                         | <i>Significant vegetation</i> : Rare association of aquatic plants.                                                                                                                                                                                        |                                                                           |
| Unnamed tributary of the Motatapu River at F40:825058                                   | Weedfree, Invrare                                                                                   |                                                                                                                                                                                       |                                                                                                                                                                                                                                                            |                                                                           |
| Unnamed tributary of the Motatapu River at F40:827055                                   | Weedfree, Invrare                                                                                   |                                                                                                                                                                                       |                                                                                                                                                                                                                                                            |                                                                           |
| Matukituki River                                                                        | Psize, Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Hriparian, Eel, Trout, Birddiv, Birdrare, Rarefish | System of braided gravel river channels, in main stem from Lake Wanaka to its source.                                                                                                 | <i>Significant habitat</i> : Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from Lake Wanaka to its source.<br><br><i>Significant habitat</i> for koaro including many tributaries. | A high degree of naturalness within Mount Aspiring/Tititea National Park. |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                                        |                                                                                          |                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                            |                                                                                                                                     |
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| <i>Water body</i>                                      | <i>Ecosystem Values</i>                                                                  | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                     | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                                                                                                                                                                                       | <i>Areas with a high degree of naturalness</i>                                                                                      |
| Streams flowing off West Wanaka, including Albert Burn | Ppass, Hspawn, Hjuve, Hriparian, Weedfree, Trout                                         |                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                            | A high degree of naturalness within Mount Aspiring/Tititea National Park.<br><br>A high degree of naturalness above 900 metres asl. |
| Wilkin River                                           | Psize, Pgravel, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Trout, Eel, Birddiv, Birdrare | High level of naturalness - free from significant interference by human practices above Kerin Forks to its source.<br><br>System of braided, gravel river channels, in main stem from confluence with Makarora River to Kerin Forks | <i>Significant habitat:</i><br>Presence of a breeding population of threatened endemic species - blue duck - above upper forks to source.<br><br>Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem from confluence with Makarora River to Kerin Forks. | A high degree of naturalness within Mount Aspiring/Tititea National Park.                                                           |
| Young River                                            | Psize, Ppass, Hriparian, Hspawn, Hjuve, Trout, Eel                                       |                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                            | A high degree of naturalness within Mount Aspiring/Tititea National Park.                                                           |
| Makarora River                                         | Psize, Ppass, Pgravel, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Birddiv, Birdrare | System of braided, gravel river channels with delta, in main stem between Lake Wanaka and confluence with Blue River.                                                                                                               | <i>Significant habitat:</i><br>Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - in main stem between Lake Wanaka and confluence with Blue River.                                                                                                                   | A high degree of naturalness within Mount Aspiring/Tititea National Park.                                                           |
| Brady Creek                                            | Weedfree, Rarefish                                                                       |                                                                                                                                                                                                                                     | <i>Significant habitat for</i> koaro.                                                                                                                                                                                                                                                                                      |                                                                                                                                     |
| Lake Hawea                                             | Psize, Psand, Weedfree, Hjuve(t&s), Eel, Trout, Salmon                                   | Scenic values within the wider landscape context of the surrounding mountains, particularly colour of the water.                                                                                                                    |                                                                                                                                                                                                                                                                                                                            |                                                                                                                                     |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion   |                                                                                                                |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                     |
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| <i>Water body</i> | <i>Ecosystem Values</i>                                                                                        | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                       | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                                                                                                                                                                                         | <i>Areas with a high degree of naturalness</i>                                                                                      |
| Hunter River      | Psize, Pgravel, Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Birddiv, Birdrare                 | High level of naturalness - free from significant interference by human practices between Long Flat Creek confluence and its source<br><br>System of braided, gravel river channels, in main stem from Lake Hawea to confluence with Long Flat Creek.                                                                                                 | <i>Significant habitat:</i><br>Presence of a breeding population of threatened endemic species - blue duck - between Long Flat Creek confluence and its source. Areas of importance to internationally uncommon species - black fronted tern, wrybill, banded dotterel - from Lake Hawea to confluence with Long Flat Creek. | A high degree of naturalness within Mount Aspiring/Tititea National Park.<br><br>A high degree of naturalness above 900 metres asl. |
| Dingle Burn       | Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Birdrare                                                |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                              | A high degree of naturalness above 900 metres asl.                                                                                  |
| Timaru River      | Ppass, Hspawn, Hjuve, Hriparian, Weedfree, Trout, Invrare between G39:308280 and G39:313294 (incl tributaries) |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                              | A high degree of naturalness above 900 metres asl.                                                                                  |
| Hawea River       | Psize, Weedfree, Hspawn, Hjuve, Trout, Salmon, Eel                                                             |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                     |
| Shotover River    | Pgravel, Pboulder, Psand, Prock, Psize, Weedfree, Hriparian, Birddiv, Birdrare                                 | Outstanding:<br>(a) for its wild and scenic characteristics;<br>(b) for its natural characteristics, in particular the high natural sediment load and active delta at confluence with Kawarau River;<br>(c) scientific value, in particular the high natural sediment load and active delta at confluence with Kawarau River;<br>(d) for recreational | Lochnagar and Lake Creek, outstanding:<br>(a) Essential characteristics that determine the ecosystem's integrity, form, functioning and resilience.<br><br><i>Significant habitat:</i><br>Areas of importance to internationally uncommon species - black fronted tern, banded dotterel - in main stem between               | A high degree of naturalness above 900 metres asl.                                                                                  |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion   |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      |                                                    |
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| <i>Water body</i> | <i>Ecosystem Values</i>                                                                                                  | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                                                                                           | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>     |
|                   |                                                                                                                          | <p>purposes, in particular rafting, kayaking and jet boating;</p> <p>(e) for historical purposes, in particular gold mining.</p> <p>Spectacular and rugged river gorge, schistose landscape, fast flowing white water and rapids, old gold sluicing landscape, in main stem between confluence with Iron Stone Stream and Arthur Point.</p> <p>Wild and scenic characteristics, from confluence with Iron Stone Stream to its source.</p> | Arthur Point and its source.                                                         |                                                    |
| Carmichaels Creek | Weedfree, Rarefish                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                           | <i>Significant habitat</i> for koaro.                                                |                                                    |
| Deep Creek        | Weedfree, Rarefish                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                           | <i>Significant habitat</i> for koaro.                                                |                                                    |
| Skippers Creek    | Weedfree, Rarefish                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                           | <i>Significant habitat</i> for koaro.                                                |                                                    |
| Mill Creek        | Pgravel, Psand, Hspawn, Hjuve, Weedfree, Rarefish                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                           | <i>Significant habitat</i> for roundhead galaxiid.                                   | A high degree of naturalness above 900 metres asl. |
| Arrow River       | Psize, Psand, Pgravel, Ppass, Hspawn, Hjuve, Weedfree, Trout                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Roaring Meg       | Pboulder, Weedfree, Hriparian, Invrare upstream of F41:026844                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Nevis River       | Psize, Ppass, Prock, Pgravel, Psand, Hspawn, Hjuve, Weedfree, Eel, Trout, Birddiv, Birdrare, Invdiv above Nevis Crossing | <p>Main stem gorge from Nevis Crossing to Kawarau River confluence:</p> <p>Outstanding</p> <p>(a) for its wild, characteristics;</p> <p>(b) for recreational purposes, in particular fishing and kayaking.</p>                                                                                                                                                                                                                            |                                                                                      | A high degree of naturalness above 900 metres asl. |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                                    |                                          |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                      |                                                |
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| <i>Water body</i>                                  | <i>Ecosystem Values</i>                  | <i>Outstanding natural feature or landscape</i>                                                                                                                                                                                                                                                                                                                     | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i> |
|                                                    |                                          | <p>Main stem above Nevis Crossing to source:<br/>Outstanding<br/>(a) for its scenic, characteristics;<br/>(b) for recreational purposes, in particular fishing.</p> <p>High level of naturalness above Nevis Crossing to its source.</p> <p>Spectacular river gorge, white water and rapids, in main stem from Nevis Crossing to confluence with Kawarau River.</p> |                                                                                      |                                                |
| Unnamed tributary of the Nevis River at F43:820261 | Hriparian, Weedfree, Rarefish            |                                                                                                                                                                                                                                                                                                                                                                     | <i>Significant habitat for roundhead galaxiid.</i>                                   |                                                |
| Sproules Creek                                     | Weedfree, Rarefish                       |                                                                                                                                                                                                                                                                                                                                                                     | <i>Significant habitat for koaro.</i>                                                |                                                |
| Schoolhouse Creek                                  | Weedfree, Invrare upstream of F42:870478 |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                      |                                                |
| Unnamed tributary of the Nevis River at F42:921450 | Weedfree, Rarefish                       |                                                                                                                                                                                                                                                                                                                                                                     | <i>Significant habitat for roundhead galaxiid.</i>                                   |                                                |
| Unnamed tributary of the Nevis River at F42:951492 | Weedfree, Invrare upstream of F42:003487 |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                      |                                                |
| Unnamed tributary of the Nevis River at F42:954541 | Weedfree, Rarefish                       |                                                                                                                                                                                                                                                                                                                                                                     | <i>Significant habitat for roundhead galaxiid.</i>                                   |                                                |
| Nevis Burn                                         | Weedfree, Invrare upstream of F42:870524 |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                      |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Lakes subregion                                    |                                                                       |                                                 |                                                                                      |                                                   |
|----------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------|
| <i>Water body</i>                                  | <i>Ecosystem Values</i>                                               | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>    |
| Unnamed tributary of the Nevis River at F42:959529 | Weedfree, Rarefish                                                    |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                   |
| Doolans Creek Left Branch                          | Weedfree, Invrare upstream of F42:860561                              |                                                 |                                                                                      |                                                   |
| Rastus Burn                                        | Pboulder, Weedfree, Hspawn, Hriparian, Invrare upstream of F41:806641 |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl |

# SCHEDULE 1A: NATURAL VALUES

| Roxburgh subregion                                             |                                                                                                                           |                                                 |                                                                                      |                                                    |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------|
| <i>Water body</i>                                              | <i>Ecosystem Values</i>                                                                                                   | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>     |
| Clutha River/Mata-Au <i>between Alexandra and Island Block</i> | Psize, Psand, Pgravel, Prock, Hjuve, Eel, Trout, Salmon, Birddiv, Hspawn(s) below Roxburgh dam, Sigveg below Roxburgh dam |                                                 | Significant habitat for lamprey (uncommon in Otago)                                  |                                                    |
| Obelisk Creek                                                  | Weedfree, Invrare upstream of G42:175339                                                                                  |                                                 |                                                                                      |                                                    |
| Elbow Creek                                                    | Weedfree, Rarefish                                                                                                        |                                                 | Significant habitat for koaro.                                                       |                                                    |
| Coal Creek                                                     | Weedfree, Invrare upstream of G42:170321                                                                                  |                                                 |                                                                                      |                                                    |
| Teviot River                                                   | Pboulder, Weedfree, Willowfree (in upper reaches), Hjuve(t&s), Hspawn(t&s), Hriparian, Trout                              |                                                 |                                                                                      |                                                    |
| Lake Onslow                                                    | Hriparian, Hjuve(t), Hspawn(t), Trout                                                                                     |                                                 |                                                                                      |                                                    |
| Unnamed tributary of Lake Onslow at G43:458137                 | Weedfree, Rarefish                                                                                                        |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                    |
| Black Jacks Creek                                              | Weedfree, Invrare upstream of G43:210086                                                                                  |                                                 |                                                                                      |                                                    |
| Benger Burn                                                    | Pboulder, Weedfree, Hspawn(t&s), Hriparian, Rarefish                                                                      |                                                 | Significant habitat for koaro.                                                       | A high degree of naturalness above 900 metres asl. |
| Tima Burn                                                      | Weedfree, Rarefish                                                                                                        |                                                 | Significant habitat for koaro.                                                       |                                                    |
| Streams flowing from Old Man Range /Kopuwai                    | Pboulder, Hspawn(t), Weedfree, Hriparian                                                                                  |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |

# SCHEDULE 1A: NATURAL VALUES

| Strath Taieri subregion                                |                                                                                                            |                                                 |                                                                                                                                                                                                                                   |                                                    |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| <i>Water body</i>                                      | <i>Ecosystem Values</i>                                                                                    | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                                                                                              | <i>Areas with a high degree of naturalness</i>     |
| Taieri River between Tiroiti and Pukerangi             | Psize, Ppass, Psand, Pgravel, Weedfree, Hspawn(t), Hjuve, Hriparian, Eel, Salmon, Rarefish, Fishdiv, Trout |                                                 | Significant habitat for flathead galaxiid (including many tributaries). Significant habitat for lamprey (uncommon in Otago)<br><br>Significant habitat for Lower Taieri galaxiid and koaro in many tributaries below Middlemarch. |                                                    |
| Prices Creek                                           | Weedfree, Rarefish                                                                                         |                                                 | Significant habitat for roundhead galaxiid.                                                                                                                                                                                       |                                                    |
| Lug Creek                                              | Pboulder, Hriparian, Eel, Weedfree, Invrare upstream of H43:862280                                         |                                                 |                                                                                                                                                                                                                                   | A high degree of naturalness above 900 metres asl. |
| Cap Burn, Mare Burn, Scrub Burn and Six Mile (upper)   | Hriparian, Hspawn(t), Hjuve(t)                                                                             |                                                 |                                                                                                                                                                                                                                   |                                                    |
| Annetts Creek, Heeney Creek and House Creek            | Hriparian, Hspawn(t), Hjuve(t)                                                                             |                                                 |                                                                                                                                                                                                                                   |                                                    |
| Six Mile Creek (lower)                                 | Pgravel, Prock, Weedfree, Eel, Hriparian, Hspawn(t), Hjuve(t), Invrare upstream of H43:853243              |                                                 |                                                                                                                                                                                                                                   |                                                    |
| Last Creek, Nant Creek, Dewar Creek and Kirkland Creek | Pgravel, Hriparian, Hspawn(t), Hjuve(t)                                                                    |                                                 |                                                                                                                                                                                                                                   |                                                    |
| Nenthorn Stream                                        | Weedfree, Hspawn(t), Hjuve(t), Hriparian, Eel, Trout, Rarefish                                             |                                                 | Significant habitat for flathead galaxiid.                                                                                                                                                                                        |                                                    |
| Black Rock Stream                                      | Weedfree, Rarefish                                                                                         |                                                 | Significant habitat for flathead galaxiid.                                                                                                                                                                                        |                                                    |
| Manuka Stream                                          | Weedfree, Rarefish                                                                                         |                                                 | Significant habitat for flathead galaxiid.                                                                                                                                                                                        |                                                    |
| Washpool Stream                                        | Weedfree, Rarefish                                                                                         |                                                 | Significant habitat for flathead galaxiid.                                                                                                                                                                                        |                                                    |
| Deighton Creek                                         | Weedfree, Rarefish                                                                                         |                                                 | Significant habitat for flathead galaxiid.                                                                                                                                                                                        |                                                    |

# SCHEDULE 1A: NATURAL VALUES

| Strath Taieri subregion |                                                             |                                                 |                                                                                      |                                                    |
|-------------------------|-------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------|
| <i>Water body</i>       | <i>Ecosystem Values</i>                                     | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>     |
| Spratts Creek           | Weedfree, Rarefish                                          |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                    |
| Sutton Stream           | Pboulder, Weedfree, Hspawn(t), Hriparian, Hjuve, Trout, Eel |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |
| Burgan Stream           | Weedfree, Exoticfree, Rarefish                              |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                    |
| Stony Creek             | Weedfree, Rarefish, Invrare upstream of H44:603910          |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                    |
| Salt Lake (near Sutton) | Weedfree                                                    | A rare example of a natural salt lake.          |                                                                                      |                                                    |
| March Creek             | Pboulder, Pgravel, Psand, Psilt, Weedfree                   |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl. |

# SCHEDULE 1A: NATURAL VALUES

| Waikouaiti/Lammermoor subregion                                              |                                                                                                                                                                                                                                              |                                                                                                                                                          |                                                                                                                          |                                                     |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <i>Water body</i>                                                            | <i>Ecosystem Values</i>                                                                                                                                                                                                                      | <i>Outstanding natural feature or landscape</i>                                                                                                          | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                     | <i>Areas with a high degree of naturalness</i>      |
| Waikouaiti River (excluding South Branch)                                    | Psize, Ppass, Psand, Pgravel, Weedfree, Hspawn(t) (& inanga spawning between I43:240084 and I43:266087), Hjuve, Eel, Trout, Rarefish, Invrare between I43:183242 and I43:093297, and including tributaries between I43:148264 and I43:093297 |                                                                                                                                                          | Significant habitat for flathead galaxiid, hybrid galaxiid, banded kokopu and koaro.                                     |                                                     |
| Unnamed tributary of the Waikouaiti River at I43:097281                      | Weedfree, Rarefish                                                                                                                                                                                                                           |                                                                                                                                                          | Significant habitat for flathead galaxiid.                                                                               |                                                     |
| Back Creek                                                                   | Weedfree, Rarefish                                                                                                                                                                                                                           |                                                                                                                                                          | Significant habitat for flathead galaxiid.                                                                               |                                                     |
| Waikouaiti River South Branch                                                | Weedfree, Ppass, Hspawn(t), Hjuve, Hriparian, Trout, Rarefish, Fishdiv                                                                                                                                                                       |                                                                                                                                                          | Significant habitat for koaro.                                                                                           | A high degree of naturalness within Scenic Reserve. |
| Unnamed tributary of the Waikouaiti River a.k.a. Merton Stream at I43:244065 | Weedfree, Fishdiv, Rarefish                                                                                                                                                                                                                  |                                                                                                                                                          | Significant habitat for lamprey (uncommon in Otago).                                                                     |                                                     |
| Toll Bar Creek                                                               | Weedfree, Rarefish                                                                                                                                                                                                                           |                                                                                                                                                          | Significant habitat for koaro.                                                                                           |                                                     |
| Flat Stream                                                                  | Weedfree, Invrare in lower reaches                                                                                                                                                                                                           |                                                                                                                                                          |                                                                                                                          |                                                     |
| Taieri River between Pukerangi and Outram                                    | Psize, Ppass, Pgravel, Psand, Prock, Weedfree, Hspawn, Hjuve, Hriparian, Trout, Salmon, Eel, Fishdiv, Rarefish                                                                                                                               | Well defined, deep gorge (Taieri Gorge) cut into distinct rocky scarp, schistose landscape, in main stem between confluence with Ross Stream and Outram. | Significant habitat for Lower Taieri galaxiid (tributaries).<br><br>Significant habitat for lamprey (uncommon in Otago). |                                                     |
| Traquair Burn                                                                | Weedfree, Eel, Fishdiv                                                                                                                                                                                                                       |                                                                                                                                                          |                                                                                                                          |                                                     |
| Smugglers Creek                                                              | Weedfree, Rarefish                                                                                                                                                                                                                           |                                                                                                                                                          | Significant habitat (and type locality) for Lower Taieri galaxiid.                                                       |                                                     |

SCHEDULE 1A: NATURAL VALUES

| Waikouaiti/Lammermoor subregion                |                                                                                                                                                                             |                                                 |                                                                                      |                                                     |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|
| <i>Water body</i>                              | <i>Ecosystem Values</i>                                                                                                                                                     | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>      |
| Deep Stream                                    | Pgravel, Psize in lower reaches, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Rarefish, Eel, Trout, Invrare upstream of H44:605910                                             |                                                 | Significant habitat for Lower Taieri galaxiid.                                       | A high degree of naturalness above 900 metres asl.  |
| Clarkes Stream                                 | Weedfree, Rarefish                                                                                                                                                          |                                                 | Significant habitat for Lower Taieri galaxiid at H44:682930.                         |                                                     |
| Unnamed tributary of Deep Stream at H44:660958 | Weedfree, Rarefish                                                                                                                                                          |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                     |
| Unnamed tributary of Deep Stream at H44:678947 | Weedfree, Rarefish                                                                                                                                                          |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                     |
| Barbours Stream                                | Weedfree, Rarefish                                                                                                                                                          |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                     |
| Deep Creek                                     | Pgravel, Weedfree, Hspawn(t), Hjuve, Hriparian, Trout, Invrare upstream of H44:623987                                                                                       |                                                 |                                                                                      | A high degree of naturalness above 900 metres asl.  |
| Three O'clock Stream                           | Ppass, Weedfree, Hspawn(t), Hjuve, Hriparian, Willowfree, Trout, Rarefish, Fishdiv                                                                                          |                                                 | Significant habitat for flathead galaxiid and koaro.                                 |                                                     |
| Christmas Creek                                | Ppass, Pboulder, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Willowfree                                                                                                       |                                                 |                                                                                      | A high degree of naturalness within Scenic Reserve. |
| Lee Stream                                     | Psize, Ppass, Pgravel, Psand, Weedfree, Hspawn(t), Hjuve, Hriparian, Rarefish, Eel, Trout, Invrare upstream of I44:952867, and including tributaries upstream of I44:916868 |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                     |
| Black Rock Stream                              | Weedfree, Eel, Rarefish                                                                                                                                                     |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                     |
| Broad Stream                                   | Weedfree, Eel, Rarefish                                                                                                                                                     |                                                 | Significant habitat for koaro.                                                       |                                                     |
| Canton Creek                                   | Weedfree, Rarefish, Fishdiv                                                                                                                                                 |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                     |

# SCHEDULE 1A: NATURAL VALUES

| <b>Waikouaiti/Lammermoor subregion</b> |                                                                                  |                                                 |                                                                                      |                                                     |
|----------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|
| <i>Water body</i>                      | <i>Ecosystem Values</i>                                                          | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>      |
| Big Stream                             | Ppass, Pboulder, Hspawn(t), Hjuve(t), Willowfree, Weedfree, Eel, Rarefish, Trout |                                                 |                                                                                      | A high degree of naturalness within Scenic Reserve. |

# SCHEDULE 1A: NATURAL VALUES

| Coastal subregion                                                          |                                                                                                                                                                                                                             |                                                 |                                                                                                                                   |                                                                 |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <i>Water body</i>                                                          | <i>Ecosystem Values</i>                                                                                                                                                                                                     | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                              | <i>Areas with a high degree of naturalness</i>                  |
| Careys Creek                                                               | Pgravel, Weedfree, Hspawn(t), Hjuve(t), Rarefish, Fishdiv, Invdiv (upper reaches)                                                                                                                                           |                                                 | <i>Significant habitat</i> for koaro and banded kokopu. <i>Significant habitat</i> for lamprey (uncommon in Otago).               |                                                                 |
| Waitati River                                                              | Ppass, but major abstractions can result in very low flows in lower stretches, Pgravel, Weedfree, Hspawn(t) (&inanga spawning below I44:205925), Hjuve(t), Hriparian in headwaters, Trout, Rarefish, Invdiv (upper reaches) |                                                 | <i>Significant habitat</i> for koaro. <i>Significant habitat</i> for lamprey (uncommon in Otago).                                 | A high degree of naturalness within Silverpeaks Scenic Reserve. |
| Fergusons Creek                                                            | Weedfree, Invrare above I44:170896                                                                                                                                                                                          |                                                 |                                                                                                                                   |                                                                 |
| Wetherstons Creek                                                          | Weedfree                                                                                                                                                                                                                    |                                                 |                                                                                                                                   |                                                                 |
| Orokonui Creek                                                             | Weedfree, Hspawn(t), Hjuve(t), Rarefish, Fishdiv                                                                                                                                                                            |                                                 | <i>Significant habitat</i> for giant kokopu, koaro and banded kokopu. <i>Significant habitat</i> for lamprey (uncommon in Otago). |                                                                 |
| Foote Stream and Mihiwaka Stream                                           | Weedfree, Rarefish                                                                                                                                                                                                          |                                                 | <i>Significant habitat</i> for koaro and banded kokopu.                                                                           |                                                                 |
| Water of Leith                                                             | Pgravel, Weedfree, Hspawn(t&s), Hjuve(t&s), Hriparian, Rarefish, Salmon, Trout                                                                                                                                              |                                                 | <i>Significant habitat</i> for giant kokopu and banded kokopu.                                                                    |                                                                 |
| Streams entering Otago Harbour (except Water of Leith)                     | Weedfree, Hspawn, Rarefish, Fishdiv, Exoticfree                                                                                                                                                                             |                                                 | <i>Significant habitat</i> for koaro and banded kokopu.                                                                           |                                                                 |
| Unnamed tributary of Otago Harbour a.k.a. Deborah Bay Stream at I44:252876 | Weedfree, Rarefish                                                                                                                                                                                                          |                                                 | <i>Significant habitat</i> for koaro and banded kokopu.                                                                           |                                                                 |

# SCHEDULE 1A: NATURAL VALUES

| Coastal subregion                                                            |                                                                       |                                                 |                                                                                      |                                                |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                                            | <i>Ecosystem Values</i>                                               | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i> |
| Unnamed tributary of Latham Bay a.k.a. Latham Bay Stream at I44:280824       | Weedfree, Rarefish                                                    |                                                 | Significant habitat for banded kokopu.                                               |                                                |
| Unnamed tributary of Otago Harbour a.k.a. Macandrew Bay Stream at I44:233793 | Weedfree, Rarefish                                                    |                                                 | Significant habitat for banded kokopu.                                               |                                                |
| Unnamed tributary of Otago Harbour a.k.a. Otakou Stream at J44:318869        | Weedfree, Rarefish                                                    |                                                 | Significant habitat for banded kokopu.                                               |                                                |
| Unnamed tributary of Papanui Inlet at J44:332820                             | Weedfree, Hspawn, Invrare                                             |                                                 |                                                                                      |                                                |
| Unnamed tributary of the Pacific Ocean at J44:345808 (Papanui Beach)         | Weedfree, Hspawn, Invrare                                             |                                                 |                                                                                      |                                                |
| Robertsons Creek                                                             | Weedfree, Hspawn, Invrare                                             |                                                 |                                                                                      |                                                |
| Unnamed pond, Jones Creek at I44:115734                                      | Weedfree, Rarefish                                                    |                                                 | Significant habitat for banded kokopu.                                               |                                                |
| Unnamed tributary of the Pacific Ocean at I44:241763 (Boulder Beach)         | Weedfree, Hspawn, Fishdiv                                             |                                                 |                                                                                      |                                                |
| Tomahawk Lagoon                                                              | Psilt, Weedfree, Hriparian, Trout, Eel, Invrare                       |                                                 |                                                                                      |                                                |
| Otokia Creek                                                                 | Weedfree, Ppass, Hspawn, Hjuve, Rarefish                              |                                                 | Significant habitat for banded kokopu.                                               |                                                |
| Fern Stream                                                                  | Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Fishdiv, Rarefish, Birddiv |                                                 | Significant habitat for banded kokopu.                                               |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Coastal subregion                                                           |                                                                                                              |                                                 |                                                                                      |                                                |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                                           | <i>Ecosystem Values</i>                                                                                      | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i> |
| Flax Stream                                                                 | Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree, Fishdiv, Rarefish, Birddiv                            |                                                 | Significant habitat for banded kokopu.                                               |                                                |
| Unnamed tributary of the Taieri River a.k.a. Takitakitoa Stream             | Ppass, Psilt, Weedfree, Hspawn, Hjuve, Hriparian, Birddiv, Eel, Rarefish                                     |                                                 | Significant habitat for giant kokopu and banded kokopu.                              |                                                |
| Taieri River between Henley and the sea                                     | Psize, Ppass, Psilt, Psand, Weedfree, Hspawn, Hjuve, Hriparian, Rarefish, Fishdiv, Trout, Salmon, Eel, Gbird | Lower Taieri Gorge                              | Significant habitat for giant kokopu and banded kokopu.                              |                                                |
| Akatore Creek                                                               | Hspawn(t), Hjuve(t), Hriparian, Weedfree, Eel, Trout, Fishdiv, Rarefish, Exoticfree upstream of H45:878565   |                                                 | Significant habitat for koaro and banded kokopu.                                     |                                                |
| Bull Creek                                                                  | Hspawn, Hjuve, Hriparian, Weedfree, Fishdiv, Rarefish                                                        |                                                 | Significant habitat for koaro.                                                       |                                                |
| Big Creek                                                                   | Hspawn, Hjuve, Hriparian, Weedfree, Fishdiv, Rarefish                                                        |                                                 | Significant habitat for koaro.                                                       |                                                |
| Lower Tokomairiro River main stem                                           | Psand, Psilt, Pgravel, Pplant, Psize, Ppass, Hspawn(t), Hriparian, Hjuve(t), Eel, Trout, Fishdiv             |                                                 |                                                                                      |                                                |
| Wangaloa Creek                                                              | Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree, Birddiv                                               |                                                 |                                                                                      |                                                |
| Unnamed tributary of the Pacific Ocean a.k.a. Turnbolls Creek at H46:787366 | Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Exoticfree, Rarefish, Birddiv                                     |                                                 | Significant habitat for banded kokopu.                                               |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Taieri/Clutha Plains subregion                                                    |                                                                                                             |                                                 |                                                                                                                                             |                                                                              |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <i>Water body</i>                                                                 | <i>Ecosystem Values</i>                                                                                     | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                        | <i>Areas with a high degree of naturalness</i>                               |
| Taieri River between Outram and Henley                                            | Psize, Psilt, Ppass, Pgravel, Psand, Weedfree, Hjuve, Trout, Salmon, Eel, Birddiv, Fishdiv, Rarefish, Gbird |                                                 |                                                                                                                                             |                                                                              |
| Lakes Waipori/Waihola                                                             | Psize, Ppass, Psilt, Weedfree, Hspawn, Hjuve, Hriparian, Eel, Trout, Fishdiv, Birddiv, Birdrare, Rarefish   |                                                 | <i>Significant habitat:</i> Presence of variety of waterfowl and native fish, including a breeding population of fernbird and giant kokopu. |                                                                              |
| Mary Hill Creek                                                                   | Weedfree, Rarefish, Fishdiv                                                                                 |                                                 | <i>Significant habitat for</i> giant kokopu.                                                                                                |                                                                              |
| Lee Creek                                                                         | Ppass, Weedfree, Hspawn(t), Hjuve(t), Eel, Hriparian and Invrare above H44:898800                           |                                                 |                                                                                                                                             |                                                                              |
| Contour Channel and other West Taieri hill streams                                | Ppass, Weedfree, Hspawn(t), Hjuve(t), Eel, Hriparian in upper stretches                                     |                                                 |                                                                                                                                             | A high degree of naturalness above 900 metres asl                            |
| Mill Creek                                                                        | Weedfree, Eel, Rarefish                                                                                     |                                                 | <i>Significant habitat for</i> koaro.                                                                                                       |                                                                              |
| Meggat Burn                                                                       | Hspawn(t), Hjuve(t), Hriparian, Weedfree, Eel, Rarefish, Invrare upstream of H45:743693                     |                                                 | <i>Significant habitat for</i> banded kokopu.                                                                                               |                                                                              |
| Waipori River                                                                     | Ppass in lower stretches, Hspawn(t), Hjuve(t), Hriparian, Weedfree, Fishdiv, Eel, Rarefish, Trout           |                                                 | <i>Significant habitat for</i> koaro upstream of dam.                                                                                       | A high degree of naturalness above 900 metres asl and within Scenic Reserve. |
| Shepherd Stream                                                                   | Weedfree, Rarefish                                                                                          |                                                 | <i>Significant habitat for</i> Lower Taieri galaxiid.                                                                                       |                                                                              |
| Tributaries of Waipori River                                                      | Weedfree, Rarefish                                                                                          |                                                 | <i>Significant habitat for</i> dusky galaxiid and koaro. Munro's Dam Stream type locality for dusky galaxiid.                               |                                                                              |
| Lake Mahinerangi                                                                  | Weedfree, Hriparian, Trout, Rarefish                                                                        |                                                 | <i>Significant habitat for</i> koaro.                                                                                                       |                                                                              |
| Unnamed tributaries of Lake Mahinerangi at H44:709803, H44:714801, and H44:724797 | Weedfree, Rarefish                                                                                          |                                                 | <i>Significant habitat for</i> koaro.                                                                                                       |                                                                              |

# SCHEDULE 1A: NATURAL VALUES

| Taieri/Clutha Plains subregion                                                    |                                                                                                                                                 |                                                 |                                                                                                                                                              |                                                                                                |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <i>Water body</i>                                                                 | <i>Ecosystem Values</i>                                                                                                                         | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                         | <i>Areas with a high degree of naturalness</i>                                                 |
| Lammerlaw Stream                                                                  | Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish                                                                                              |                                                 | Significant habitat for koaro.                                                                                                                               |                                                                                                |
| North West Stream                                                                 | Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish                                                                                              |                                                 | Significant habitat for koaro.                                                                                                                               |                                                                                                |
| Nardoo Stream                                                                     | Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish                                                                                              |                                                 | Significant habitat for koaro.                                                                                                                               |                                                                                                |
| Unnamed tributary of Lake Mahinerangi at H44:705754                               | Weedfree, Rarefish                                                                                                                              |                                                 | Significant habitat for Lower Taieri galaxiid.                                                                                                               |                                                                                                |
| Unnamed tributary of Lake Mahinerangi at H44:720766                               | Weedfree, Rarefish                                                                                                                              |                                                 | Significant habitat for Lower Taieri galaxiid.                                                                                                               |                                                                                                |
| Unnamed tributary of Pioneer Stream at H44:703752                                 | Weedfree, Rarefish                                                                                                                              |                                                 | Significant habitat for Lower Taieri galaxiid.                                                                                                               |                                                                                                |
| Boundary Creek                                                                    | Hriparian, Hspawn, Hjuve                                                                                                                        |                                                 |                                                                                                                                                              |                                                                                                |
| Unnamed tributaries of Lake Mahinerangi at H44:775772, H44:778770, and H44:775770 | Weedfree, Rarefish                                                                                                                              |                                                 | Significant habitat for Lower Taieri galaxiid.                                                                                                               |                                                                                                |
| Verter Burn                                                                       | Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish                                                                                              |                                                 | Significant habitat for koaro.                                                                                                                               |                                                                                                |
| Post Office Creek                                                                 | Hspawn(t), Hjuve(t), Hriparian, Weedfree, Rarefish, Fishdiv                                                                                     |                                                 | Significant habitat for Lower Taieri galaxiid.                                                                                                               |                                                                                                |
| Silver Stream                                                                     | Pgravel, Weedfree, Trout, Eel, Hspawn(t), Hjuve(t), Invdiv (midreaches), Hriparian in upper catchment. Invrare upstream of I44:144849, Rarefish |                                                 | Significant habitat for koaro upstream of I44:114899 and including several tributaries. Significant habitat for lamprey (uncommon in Otago).                 | A high degree of naturalness above 900 metres asl and within Scenic Reserve and water reserve. |
| Whare Creek                                                                       | Weedfree, Eel, Rarefish                                                                                                                         |                                                 | Significant habitat for Lower Taieri galaxiid.                                                                                                               |                                                                                                |
| Upper Tokomairiro River main stem (including East and West Branches)              | Psize, Ppass, Pgravel, Hspawn(t), Hjuve(t), Trout, Eel, Rarefish, Hriparian in upper catchment                                                  |                                                 | Significant habitat for fernbird. Significant habitat for Lower Taieri galaxiid in tributaries. Significant habitat for lamprey (in East and West Branches). |                                                                                                |

# SCHEDULE 1A: NATURAL VALUES

| Taieri/Clutha Plains subregion                                              |                                                                                                                             |                                                 |                                                                                      |                                                |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                                           | <i>Ecosystem Values</i>                                                                                                     | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i> |
| Unnamed tributary of Fishers Stream at H45:706645                           | Weedfree, Rarefish                                                                                                          |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                |
| Unnamed tributary of the Tokomairiro River West Branch at H45:693655        | Weedfree, Rarefish                                                                                                          |                                                 | Significant habitat for Lower Taieri galaxiid.                                       |                                                |
| Unnamed tributary of the Tokomairiro River West Branch a.k.a. Nuggety Gully | Weedfree, Rarefish                                                                                                          |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                |
| Lovells Stream                                                              | Ppass, Hspawn(t), Hjuve(t), Trout, Eel                                                                                      |                                                 |                                                                                      |                                                |
| Lake Tuakitoto                                                              | Ppass, Psilt, Psand, Pplant, Psize, Weedfree, Hspawn, Hjuve(t), Hriparian, Trout, Eel, Birddiv, Birdrare, Rarefish, Fishdiv |                                                 | Significant habitat for giant kokopu. Also a breeding population of fernbird.        |                                                |
| Lake Kaitangata (and Lake Kaitangata/Lake Tuakitoto Drainage)               | Weedfree, Eel, Rarefish, Fishdiv                                                                                            |                                                 | Significant habitat for giant kokopu.                                                |                                                |
| Saddle Stream                                                               | Weedfree, Eel, Rarefish, Fishdiv                                                                                            |                                                 | Significant habitat for giant kokopu.                                                |                                                |
| McCrostities Drain                                                          | Weedfree, Eel, Rarefish, Fishdiv                                                                                            |                                                 | Significant habitat for giant kokopu.                                                |                                                |
| Clutha River /Mata-Au between Balclutha and the sea                         | Psize, Ppass, Psand, Pgravel, Hspawn(s), Hjuve(t&s), Trout, Eel, Salmon, Fishdiv, Rarefish, Gbird                           |                                                 |                                                                                      |                                                |
| Puerua River                                                                | Ppass, Psilt, Weedfree, Rarefish, Fishdiv, Hriparian, Hspawn(t), Hjuve(t), Eel                                              |                                                 | Significant habitat for giant kokopu (Puerua River deviation)                        |                                                |
| Glenomaru Stream                                                            | Weedfree, Hriparian, Hspawn(t), Hjuve(t), Invdiv in mid reaches                                                             |                                                 |                                                                                      |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Southwest Otago subregion                                |                                                                                                                                                                                             |                                                 |                                                                                                                                                                     |                                                |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                        | <i>Ecosystem Values</i>                                                                                                                                                                     | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                                                | <i>Areas with a high degree of naturalness</i> |
| Pomahaka River                                           | Psize, Ppass, Pgravel, Psand, Prock, Weedfree, Hspawn(t&s), Hjuve(t&s), Hriparian, Rtrout, Eel, Fishdiv, Invdiv, Invrare between G45:416466 and confluence with Clutha River/Mata-Au, Gbird |                                                 |                                                                                                                                                                     |                                                |
| Timber Creek                                             | Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Trout, Invrare upstream of G43:173032                                                                                                             |                                                 |                                                                                                                                                                     |                                                |
| Unnamed tributary of Flodden Creek a.k.a. Whisky Gully   | Weedfree, Invrare upstream of G45:216674                                                                                                                                                    |                                                 |                                                                                                                                                                     |                                                |
| Rankle Burn                                              | Weedfree, Invrare upstream of G45:274640                                                                                                                                                    |                                                 |                                                                                                                                                                     |                                                |
| Back Stream West Branch                                  | Weedfree, Invdiv                                                                                                                                                                            |                                                 |                                                                                                                                                                     |                                                |
| Bullock Creek                                            | Weedfree, Invrare upstream of G43:170093                                                                                                                                                    |                                                 |                                                                                                                                                                     |                                                |
| Waiwera River                                            | Pgravel, Ppass, Weedfree, Hspawn(t&s), Hriparian, Hjuve(t&s), Trout, Eel, Rarefish, Invdiv                                                                                                  |                                                 | Significant habitat for roundhead galaxiid.                                                                                                                         |                                                |
| Kaihiku Stream                                           | Pgravel, Hspawn(t), Hjuve(t), Eel, Trout, Invdiv (mid reaches)                                                                                                                              |                                                 |                                                                                                                                                                     |                                                |
| Clutha River /Mata-Au between Island Block and Balclutha | Psize, Ppass, Psand, Pgravel, Hspawn(t&s), Hjuve, Eel, Trout, Salmon, Sigveg, Birddiv, Rarefish, Fishdiv, Gbird between Balclutha and Tuapeka River mouth                                   | Beaumont and Rongahere Gorge.                   | Significant habitat: Remnant indigenous ecosystem at Birch Island.<br><br>Significant vegetation: Rare association of aquatic plants above confluence with Tuapeka. |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Southwest Otago subregion                                                 |                                                                                                |                                                 |                                                                                                                |                                                |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                                         | <i>Ecosystem Values</i>                                                                        | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                           | <i>Areas with a high degree of naturalness</i> |
| Unnamed tributary of the Clutha River/Mata-Au a.k.a. Raes Junction Stream | Rarefish                                                                                       |                                                 | Significant habitat for koaro.                                                                                 |                                                |
| Canadian Creek                                                            | Rarefish                                                                                       |                                                 | Significant habitat for koaro. Significant habitat for lamprey (uncommon in Otago).                            |                                                |
| Unnamed tributary of the Tuapeka River a.k.a. Konini Creek                | Weedfree, Rarefish                                                                             |                                                 | Significant habitat for roundhead galaxiid.                                                                    |                                                |
| Waitahuna River                                                           | Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Rarefish, Eel, Trout, Invrare upstream of H44:653760 |                                                 | Significant habitat for Waitahuna dusky galaxiid (in headwaters and upper tributaries), and flathead galaxiid. |                                                |
| Tuapeka River                                                             | Pgravel, Psize, Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Eel, Trout, Invdiv in upper reaches  |                                                 |                                                                                                                |                                                |
| Unnamed tributaries of the Tuapeka River upstream of G45:472668           | Weedfree, Rarefish                                                                             |                                                 | Significant habitat for flathead galaxiid and dusky galaxiid.                                                  |                                                |
| Wetherston Creek                                                          | Weedfree, Rarefish                                                                             |                                                 | Significant habitat for roundhead galaxiid.                                                                    |                                                |
| Corkscrew Road Stream                                                     | Weedfree, Rarefish                                                                             |                                                 | Significant habitat for roundhead galaxiid.                                                                    |                                                |
| Blackcleugh Burn                                                          | Weedfree, Invrare upstream of G45:340676                                                       |                                                 |                                                                                                                |                                                |
| Kuriwao Stream                                                            | Ppass, Hspawn(t), Hjuve(t), Trout, Eel                                                         |                                                 |                                                                                                                |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Southwest Otago subregion                             |                                                                               |                                                 |                                                                                      |                                                |
|-------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------|
| <i>Water body</i>                                     | <i>Ecosystem Values</i>                                                       | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i> |
| Mokoreta River (upper stretches, within Otago region) | Ppass, Hspawn(t), Hjuve(t), Trout, Eel                                        |                                                 |                                                                                      |                                                |
| Waipahi River (lower stretches, within Otago region)  | Pplant, Pgravel, Psize, Ppass, Weedfree, Hspawn(t&s), Hjuve(t&s), Rtrout, Eel |                                                 |                                                                                      |                                                |

# SCHEDULE 1A: NATURAL VALUES

| Catlins subregion                                                         |                                                                                                         |                                                                                             |                                                                                                                                         |                                                                          |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <i>Water body</i>                                                         | <i>Ecosystem Values</i>                                                                                 | <i>Outstanding natural feature or landscape</i>                                             | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i>                                                    | <i>Areas with a high degree of naturalness</i>                           |
| Catchments between Fleming River and Longbeach Creek (excl Tautuku River) | Weedfree, Ppass, Hspawn, Hjuve, Hriparian, Fishdiv, Birddiv                                             |                                                                                             |                                                                                                                                         | A high degree of naturalness within bushed catchments.                   |
| Tautuku River                                                             | Psize, Ppass, Weedfree, Hspawn, Hjuve, Hriparian, Fishdiv, Birddiv, Eel                                 | Scenic values with silver beech margins, from its mouth to its source.                      |                                                                                                                                         | A high degree of naturalness within bushed catchments.                   |
| Tautuku Bay Stream                                                        | Weedfree, Rarefish                                                                                      |                                                                                             | <i>Significant habitat for banded kokopu.</i>                                                                                           |                                                                          |
| Tahakopa River                                                            | Pgravel, Psize, Weedfree, Rarefish, Ppass, Hspawn(t), Hjuve(t), Hriparian, Trout, Eel, Fishdiv, Birddiv |                                                                                             | <i>Significant habitat for flathead galaxiid. Significant habitat for lamprey (uncommon in Otago).</i>                                  | A high degree of naturalness within bushed catchments.                   |
| Jumbo Creek                                                               | Rarefish                                                                                                |                                                                                             | <i>Significant habitat for koaro and banded kokopu.</i>                                                                                 |                                                                          |
| Gorge Creek                                                               | Rarefish                                                                                                |                                                                                             | <i>Significant habitat for flathead galaxiid.</i>                                                                                       |                                                                          |
| Unnamed tributary of the Tahakopa River at G47:268063                     | Weedfree, Rarefish                                                                                      |                                                                                             | <i>Significant habitat for flathead galaxiid.</i>                                                                                       |                                                                          |
| Maclennan River                                                           | Psize, Weedfree, Ppass, Hspawn(t), Hjuve(t), Hriparian, Trout, Eel, Fishdiv, Birddiv, Rarefish          | Scenic values with silver beech margins, from confluence with Tahakopa River to its source. | <i>Significant habitat for koaro. Significant habitat for lamprey (uncommon in Otago).</i>                                              | A high degree of naturalness within bushed catchments.                   |
| Waitangi Stream                                                           | Weedfree, Rarefish                                                                                      |                                                                                             | <i>Significant habitat for koaro.</i>                                                                                                   |                                                                          |
| Matai Stream                                                              | Weedfree, Rarefish, Fishdiv                                                                             |                                                                                             | <i>Significant habitat for roundhead galaxiid and banded kokopu.</i>                                                                    |                                                                          |
| Catlins River                                                             | Psize, Pgravel, Ppass, Weedfree, Hspawn(t), Hjuve(t), Hriparian, Trout, Eel, Rarefish, Fishdiv, Invdiv  | Scenic values with silver beech margins, from its mouth to its source.                      | <i>Significant habitat for giant kokopu, banded kokopu and roundhead galaxiid. Significant habitat for lamprey (uncommon in Otago).</i> | A high degree of naturalness within bushed catchments.                   |
| Purakaunui River                                                          | Pboulder, Ppass (below Falls), Weedfree, Eel                                                            | Purakaunui Falls.                                                                           |                                                                                                                                         | A high degree of naturalness within bush, apart from viewing structures. |

# SCHEDULE 1A: NATURAL VALUES

| <b>Catlins subregion</b>                             |                                                                                                               |                                                 |                                                                                      |                                                        |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------|
| <i>Water body</i>                                    | <i>Ecosystem Values</i>                                                                                       | <i>Outstanding natural feature or landscape</i> | <i>Significant indigenous vegetation and significant habitat of indigenous fauna</i> | <i>Areas with a high degree of naturalness</i>         |
| Frank Stream                                         | Weedfree, Rarefish                                                                                            |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                        |
| Wallis Stream                                        | Weedfree, Rarefish                                                                                            |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                        |
| Craggy Tor Stream                                    | Weedfree, Rarefish                                                                                            |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                        |
| Daphne Brook                                         | Weedfree, Rarefish                                                                                            |                                                 | Significant habitat for flathead galaxiid.                                           |                                                        |
| Tarwood Stream                                       | Weedfree                                                                                                      |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                        |
| Papatupu Stream                                      | Weedfree, Rarefish                                                                                            |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                        |
| Unnamed tributary of the Catlins River at G46:274228 | Weedfree, Rarefish                                                                                            |                                                 | Significant habitat for roundhead galaxiid.                                          |                                                        |
| McLaren Creek                                        | Weedfree, Rarefish, Fishdiv                                                                                   |                                                 | Significant habitat for giant kokopu, koaro, roundhead galaxiid and banded kokopu.   |                                                        |
| Owaka River                                          | Psize, Pgravel, Ppass, Weedfree, Hriparian, Hspawn(t), Hjuve(t), Fishdiv, Trout, Eel, Invdiv in upper reaches |                                                 |                                                                                      | A high degree of naturalness within bushed catchments. |
| Unnamed tributary of the Owaka River at H46:504119   | Weedfree, Rarefish, Fishdiv                                                                                   |                                                 | Significant habitat for giant kokopu.                                                |                                                        |
| Waipati (Chaslands) River                            | Hspawn(t), Hjuve(t), Trout, Eel                                                                               |                                                 |                                                                                      |                                                        |

## SCHEDULE 1A: NATURAL VALUES

## Sources for information contained in Schedule 1A

The outstanding natural features and landscapes, areas of significant indigenous vegetation and significant habitats of indigenous fauna identified in this schedule are derived from the following publications:

Allibone, R.M. (1997) Freshwater Fish of the Otago Region. Department of Conservation. Otago Conservancy Miscellaneous Report Series No. 36. (includes NIWA Freshwater Fish database for Otago rivers).

Biggs, BJ and Shand, BI (1985) Biological Communities and the Potential Effects of Power Developments in the Lower Clutha River - Otago. Report no. WS987, Ministry of Works and Development.

Clayton, J. (1993) Resource Evaluation and Operational Programme For Lakeweed: The Upper Clutha and Kawarau Catchment Areas. Prepared by NIWA Ecosystems for the Otago Regional Council.

Department of Conservation: Special Sites of Wildlife Interest.

Grindell, D.S. and P.A. Guest (eds) (1986) A list of Rivers and Lakes Deserving Inclusion in a Schedule of Protected Waters. Water and Soil Miscellaneous Publication, No. 97. National Water and Soil Conservation Authority, Wellington.

Grindell, D.S. (1984) A National Inventory of Wild and Scenic Rivers. Water and Soil Miscellaneous Publication, No. 68. National Water and Soil Conservation Authority, Wellington.

Kenny, J.A. and B.W. Hayward (eds) (1993) Inventory of Important Geological Sites and Landforms in the Otago region. Geological Society of New Zealand Miscellaneous Publication No. 77. Geological Society of New Zealand, Lower Hutt.

Lake Wanaka Preservation Act 1973.

Local Water Conservation (Lake Tuakitoto) Notice 1991.

Ministry for the Environment (1997) Water Conservation (Kawarau) Order 1997.

Water and Soil Conservation Authority (1982) A Draft for a National Inventory of Wild and Scenic Rivers. Part 1 - Nationally Important Rivers. Water and

## SCHEDULE 1A: NATURAL VALUES

Soil Miscellaneous Publication, No. 97. National Water and Soil Conservation Authority, Wellington.

SCHEDULE 1AA: OTAGO RESIDENT NATIVE  
FRESHWATER FISH THREAT STATUS

**1AA Schedule of Otago Resident Native Freshwater Fish - Threat Status**

| Common name                      | Scientific name                                          | Threat Status          |
|----------------------------------|----------------------------------------------------------|------------------------|
| Lowland longjaw galaxias         | <i>Galaxias cobitinis</i>                                | Nationally Critical*   |
| Canterbury mudfish (Kōwaro)      | <i>Neochanna burrowsius</i>                              | Nationally Critical    |
| Teviot flathead galaxias         | <i>Galaxias</i> 'Teviot'                                 | Nationally Critical*   |
| Dusky galaxias                   | <i>Galaxias pullus</i>                                   | Nationally Endangered* |
| Alpine galaxias                  | <i>Galaxias</i> aff. <i>paucispondylus</i> 'Manuherikia' | Nationally Endangered* |
| Eldon's galaxias                 | <i>Galaxias eldoni</i>                                   | Nationally Endangered* |
| Central Otago roundhead galaxias | <i>Galaxias anomalus</i>                                 | Nationally Vulnerable* |
| Clutha flathead galaxias         | <i>Galaxias</i> sp. D.                                   | Nationally Vulnerable* |
| Smeagol galaxias                 | <i>Galaxias</i> aff. <i>gollumoides</i> 'Nevis'          | Nationally Vulnerable* |
| Longfin eel (tuna)               | <i>Anguilla dieffenbachii</i>                            | Declining              |
| Giant kokopu (Taiwharu)          | <i>Galaxias argenteus</i>                                | Declining              |
| <i>Galaxias gollumoides</i>      | <i>Galaxias gollumoides</i>                              | Declining              |
| Lamprey (kanakana)               | <i>Geotria australis</i>                                 | Declining              |
| Torrentfish (Piripiripōhatu)     | <i>Cheimarrichthys fosteri</i>                           | Declining              |
| Koaro                            | <i>Galaxias brevipinnis</i>                              | Declining              |
| Inanga (inaka)                   | <i>Galaxias maculatus</i>                                | Declining              |
| Bluegill bully                   | <i>Gobiomorphus hubbsi</i>                               | Declining              |
| Redfin bully                     | <i>Gobiomorphus huttoni</i>                              | Declining              |

\*NB: Fish marked with an \* are only found in the Otago Region.

## 1B Schedule of water supply values

This schedule identifies existing water takes from lakes and rivers, where the water taken is used for public water supply purposes. The communities identified in the schedule have come to rely upon these water supplies to provide for their social, economic and cultural well being. Rule 12.1.3.1 provides for replacement consents for these takes as a controlled activity, to provide certainty for these communities. The water takes are identified by geographic subregion and by individual water bodies within each subregion (see Maps A1–A8 for subregions and site locations).

Water is also taken for private water supply throughout Otago, particularly for domestic supply to dwellings such as farm homesteads and associated buildings, usually without treatment. It is also consumed without treatment by musterers, anglers, trappers, cyclists, hunters and other backcountry users. Areas with a high degree of naturalness, identified in Schedule 1A, will often contain water bodies with relatively pristine water quality. Those that utilise the water without treating it take the risk that it may contain giardia or other pathogenic (disease causing) organisms.

### North Otago subregion

| Water body or Catchment                                                                   | Site No. | Water Supply Values                                             |
|-------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------|
| Kakanui River (note, the shallow aquifer forms an integral part of the water body)        | 1        | Windsor and Dunrobin Water Supplies at J41:325737               |
|                                                                                           | 2        | Weston and Enfield Water Supplies at J41:381667                 |
|                                                                                           | 3        | Reidston Water Supply at J42:405595                             |
|                                                                                           | 4        | Kakanui Water Supply at J42:430581                              |
| Kauru River                                                                               | 5        | Kauru Hill Water Supply at J41:314637                           |
| Kurinui Creek a.k.a. Big Kuri Creek                                                       | 6        | Hampden-Moeraki Water Supply at J42:364413                      |
| Shag River (Waihemo) (note, the shallow aquifer forms an integral part of the water body) | 7        | Dunback Water Supply at I43:274279                              |
|                                                                                           | 8        | Palmerston (including Blue Mountain) Water Supply at J43:317237 |
|                                                                                           | 9        | Goodwood Water Supply at J43:343234                             |
| Waianakarua River                                                                         | 10       | Herbert-Waianakarua Water Supply at J42:339507                  |

### Maniototo subregion

| Water body or Catchment | Site No. | Water Supply Values                                            |
|-------------------------|----------|----------------------------------------------------------------|
| Sow Burn                | 11       | Patearoa Water Supply at H42:786435                            |
| Ewe Burn                | 12       | Ranfurly Water Supply at H41:800689, H41:836770 and H41:794684 |

### Central Otago subregion

| Water body or Catchment                                   | Site No. | Water Supply Values                 |
|-----------------------------------------------------------|----------|-------------------------------------|
| Clutha River/Mata-Au<br><i>between Alexandra and Lake</i> | 13       | Clyde Water Supply at G42:199521    |
|                                                           | 14       | Cromwell Water Supply at G41:120670 |

# SCHEDULE 1B: WATER SUPPLY VALUES

| Water body or Catchment                | Site No. | Water Supply Values                                  |
|----------------------------------------|----------|------------------------------------------------------|
| <i>Wanaka (including Lake Dunstan)</i> |          |                                                      |
| Manuherikia River catchment            | 15       | St Bathans Water Supply at H40:592926 and H40:602938 |
|                                        | 16       | Omakau and Ophir Water Supplies at G41:427626        |

## Lakes subregion

| Water body or Catchment | Site No. | Water Supply Values                                    |
|-------------------------|----------|--------------------------------------------------------|
| Lake Wakatipu           | 17       | Queenstown Water Supply from E41:666653 and F41:719664 |
| Lake Hayes Tributary    | 18       | Lake Hayes Water Supply at F41:794738                  |
| Lake Wanaka             | 19       | Wanaka Water Supply at F40:033062 and F40:013057       |
| Lake Hawea              | 20       | Hawea Water Supply at G40:123153                       |

## Roxburgh subregion

| Water body or Catchment                                 | Site No. | Water Supply Values                               |
|---------------------------------------------------------|----------|---------------------------------------------------|
| Clutha River/Mata-Au between Alexandra and Island Block | 21       | Roxburgh Hydro Village Water Supply at G43:225194 |
| Benger Burn                                             | 22       | Ettrick Water Supply at G43:198030                |

## Waikouaiti/Lammermoor subregion

| Water body or Catchment | Site No. | Water Supply Values                              |
|-------------------------|----------|--------------------------------------------------|
| Deep Stream             | 23       | Dunedin Water Supply at H44:677992               |
| Deep Creek              | 24       | Dunedin Water Supply at H43:665037               |
| Fortification Creek Dam | 25       | Hindon Water Supply at I44:906923                |
| Waikouaiti River        | 26       | Waikouaiti Water Supply at I43:232079            |
| Waikouaiti River        | 27       | Mt Pleasant-Stoneburn Water Supply at I43:155263 |

## Coastal subregion

| Water body or Catchment | Site No. | Water Supply Values                                              |
|-------------------------|----------|------------------------------------------------------------------|
| Water of Leith          | 28       | Dunedin Water Supply at I44:152820 (Ross Creek)                  |
|                         | 29       | I44:153833 (Nicols Creek);                                       |
|                         | 30       | I44:160843 (Lower Morrisons Creek)                               |
|                         | 31       | I44:153849 (Upper Morrisons Creek); and                          |
|                         | 32       | I44:164857 (West Branch)                                         |
| Sullivans Dam           | 33       | Dunedin Water Supply at I44:172863                               |
| Rossville Reservoir     | 34       | Port Chalmers Water Supply at I44:233865 (Rossville intake); and |
|                         | 35       | I44:227879 (Cedar Farm intake)                                   |

## SCHEDULE 1B: WATER SUPPLY VALUES

|                   |    |                                                                                                                        |
|-------------------|----|------------------------------------------------------------------------------------------------------------------------|
| Waitati River     | 36 | Dunedin Water Supply at I44:158883 (Burns Creek);<br>I44:160873 (Jeffersons Creek); and<br>I44:159870 (Williams Creek) |
|                   | 37 |                                                                                                                        |
|                   | 38 |                                                                                                                        |
| Wetherstons Creek | 39 | Waitati Water Supply at I44:201882                                                                                     |

### Taieri/Clutha Plains subregion

| Water body or Catchment                                   | Site No. | Water Supply Values                                                                         |
|-----------------------------------------------------------|----------|---------------------------------------------------------------------------------------------|
| Taieri River <i>between Outram and Henley</i>             | 40       | Outram Water Supply at I44:955804                                                           |
| Mill Creek                                                | 41       | West Taieri Water Supply at H44:833730                                                      |
| Meggat Burn                                               | 42       | North Bruce Water Supply at H45:743693                                                      |
| Silver Stream catchment                                   | 43       | Dunedin Water Supply at I44:096859;<br>I44:105844;<br>I44:105848; and<br>I44:105850         |
|                                                           | 44       |                                                                                             |
|                                                           | 45       |                                                                                             |
|                                                           | 46       |                                                                                             |
| Tokomairiro River East Branch                             | 47       | Milton Water Supply at H45:746529                                                           |
| Clutha River/Mata-Au <i>between Balclutha and the sea</i> | 48       | Bruce Water Supply at H46:619343<br>Kaitangata and Wangaloa Water Supplies at<br>H46:667308 |
|                                                           | 49       |                                                                                             |
| Puerua River                                              | 50       | Richardson Water Supply at H46:510257                                                       |

### Southwest Otago subregion

| Water body or Catchment                                        | Site No. | Water Supply Values                                                           |
|----------------------------------------------------------------|----------|-------------------------------------------------------------------------------|
| Pomahaka River                                                 | 51<br>52 | Glenkenich Water Supply at G44:103754<br><i>[Repealed – 1 June 2015]</i>      |
| Waipahi River                                                  | 63       | Waipahi Rural Stock Water Supply at G45:196488                                |
| Timber Creek                                                   | 53       | Moa Flat Water Supply at G43:172033                                           |
| Greens Creek                                                   | 54       | Rural Water Supply at G44:104752                                              |
| Unnamed tributary of Flodden Creek a.k.a. Whisky Gully         | 55       | Tapanui Water Supply at G45:223660                                            |
| Back Stream West Branch                                        | 56       | <i>[Repealed – 1 June 2015]</i>                                               |
| Clutha River/Mata-Au <i>between Island Block and Balclutha</i> | 57       | Richardson Water Supply at G45:491435<br>Balclutha Water Supply at H46:580363 |
|                                                                | 58       |                                                                               |
| Waitahuna River                                                | 59       | Balmoral 1 and 2 and Tuapeka East Water Supplies at H45:523564                |
| Bungtown Creek                                                 | 60       | Lawrence Water Supply at H44:573773                                           |
| Tuapeka River                                                  | 61       | Tuapeka Water Supply at G44:491742                                            |
| Bluejacket Gully                                               | 62       | Lawrence Water Supply at H44:543747                                           |

## 1C Schedule of registered historic places

This schedule identifies registered historic places which occur in, on, under or over the beds or margins of Otago's lakes and rivers. Historic places are an important cultural resource as they provide links with Otago's history and heritage.

There are other sites, buildings, places and areas of heritage value on the beds or margins of Otago rivers or lakes that are not identified in this schedule. The New Zealand Historic Places Trust retains information about important but unregistered historic values.

The registered historic places are identified by geographic subregion and by individual water bodies within each subregion (see Maps A1–A8 for subregions).

### North Otago subregion

| Water body                     | Registered Historic Places                                                                |
|--------------------------------|-------------------------------------------------------------------------------------------|
| Oamaru Creek                   | Japanese Red Bridge, Oamaru Public Gardens<br>Thames Street Bridge, Thames Street, Oamaru |
| Kakanui River                  | Clarks Flourmill, including dam, gate and race, SH 1, Maheno                              |
| McCormicks Creek               | McCormick's Creek Bridge, SH 85, Dunback                                                  |
| Waianakarua River North Branch | Graves Dam, Breakneck Road, Waianakarua<br>Turnbull Thompson Bridge, SH 1, Waianakarua    |
| Waianakarua River South Branch | Waianakarua Bridge, SH 1, Waianakarua                                                     |

### Maniototo subregion

| Water body | Registered Historic Place                                                          |
|------------|------------------------------------------------------------------------------------|
| Hog Burn   | Naseby Historic Area, Naseby – various culverts and crossings in or over the river |

### Central Otago subregion

| Water body                                                    | Registered Historic Places                                                     |
|---------------------------------------------------------------|--------------------------------------------------------------------------------|
| Clutha River/Mata-Au <i>between Alexandra and Lake Wanaka</i> | Bridge Piers, SH8, Alexandra<br>Earnscliffe Bridge and Piers, Clyde            |
| Manuherikia River                                             | Shakey Bridge, Alexandra<br>Daniel O'Connell Bridge, Ophir Bridge Road–, Ophir |
| Lake Dunstan                                                  | Old Bannockburn Bridge Foundations (submerged).<br>Cromwell Bridge, Cromwell   |

# SCHEDULE 1C: REGISTERED HISTORIC PLACES

## Lakes subregion

| Water body     | Registered Historic Places                                                                            |
|----------------|-------------------------------------------------------------------------------------------------------|
| Kawarau River  | Kawarau Falls bridge and dam, Frankton, Queenstown<br>Kawarau Gorge Suspension Bridge, SH 6, Gibbston |
| Luggate Creek  | Luggate Flourmill, Luggate                                                                            |
| Horne Creek    | Horne Creek Bridge, Ballarat Street, Queenstown                                                       |
| Shotover River | Oxenbridge Tunnel, Arthurs Point, Queenstown<br>Edith Cavell Bridge, Arthurs Point, Queenstown        |
| Mill Creek     | Wakatipu Flourmill Complex, Speargrass Flat Road.<br>Butel's Flourmill, Millbrook                     |
| Murdochs Creek | Bullendale Battery and Dynamo, Skippers catchment                                                     |
| Stony Creek    | "Murphy's Creek" suspended pipe over Stony Creek,<br>Skippers catchment                               |

## Roxburgh subregion

| Water body                                                     | Registered Historic Places                                                                             |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Clutha River/Mata-Au <i>between Alexandra and Island Block</i> | Four Span Steel Truss Bridge, Millers Flat<br>Old bridge piers at Roxburgh, adjacent to current bridge |

## Strath Taieri subregion

| Water body                                        | Registered Historic Place |
|---------------------------------------------------|---------------------------|
| Taieri River <i>between Tiroiti and Pukerangi</i> | Hyde Bridge, SH 87, Hyde  |

## Coastal subregion

| Water body     | Registered Historic Places                                                                                                                       |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Water of Leith | George Street Bridge, George Street, Dunedin<br>Cast Iron Footbridge, University of Otago, Dunedin<br>Stone Bridge, University of Otago, Dunedin |
| Ross Creek     | Earth Dam, Burma Road, Dunedin<br>Valve Tower and Jetty, Burma Road, Dunedin                                                                     |

## Taieri/Clutha Plains subregion

| Water body                                                | Registered Historic Places                                                                |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Clutha River Mata-Au <i>between Balclutha and the sea</i> | Blair Railway Bridge, SH 91, Balclutha<br>Balclutha Bridge, SH 1, Balclutha               |
| Pioneer Stream and Reef Creek                             | Otago Pioneer Quartz Historic Reserve containing many<br>relics of former mining activity |

## 1D Schedule of spiritual and cultural beliefs, values and uses of significance to Kāi Tahu

This schedule identifies the spiritual or cultural beliefs, values or uses associated with water bodies of significance to Kāi Tahu. The values are identified by geographic subregion and by individual water bodies, or groups of water bodies, within each subregion (see Maps A1–A8 for subregions). Note that the codes for these values are given in Table 4. Kāi Tahu provided the information that appears in this schedule.

Where an activity will require a resource consent, Policy 5.4.2 will apply. This means that where an activity is to occur with respect to any water body for which this schedule identifies a particular spiritual or cultural belief, value or use, it may be necessary for the applicant to consult with Kāi Tahu in a manner which is consistent with that set out in the document “Kāi Tahu Ki Otago - Natural Resource Management Plan”.

**Table 4: Code for Kāi Tahu beliefs, values and uses ascribed to water bodies**

| Code | Mana Interests:                                                                                                                                                                                                                                                                                       |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MA1  | <b>Kaitiakitanga</b> – the exercise of guardianship by Kāi Tahu in accordance with tikanga Maori* in relation to Otago’s natural and physical resources; and includes the ethic of stewardship.                                                                                                       |
| MA2  | <b>Mauri</b> – life force; for example the mauri of a river is most recognisable when there is abundance of water flow and the associated ecosystems are healthy and plentiful; a most important element in the relationship that Kāi Tahu have with the water bodies of Otago.                       |
| MA3  | <b>Waahi tapu and/or Waiwhakaheke</b> – sacred places; sites, areas and values associated with water bodies that hold spiritual values of importance to Kāi Tahu. (Note: Kāi Tahu should be consulted regarding the location of these places, sites, areas and values for a river identified as MA3). |
| MA4  | <b>Waahi taoka</b> – treasured resource; values, sites and resources that are valued and reinforce the special relationship Kāi Tahu have with Otago’s water resources.                                                                                                                               |

| Code | Access/Customary Use Interests:                                                                                                                                                                                                                                                     |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MB1  | <b>Mahika kai</b> – places where food is procured or produced. Examples in the case of waterborne mahika kai include eels, whitebait, kanakana (lamprey), kokopu (galaxiid species), koura (fresh water crayfish), fresh water mussels, indigenous waterfowl, watercress and raupo. |
| MB2  | <b>Kohanga</b> – important nursery/spawning areas for native fisheries and/or breeding grounds for birds.                                                                                                                                                                           |
| MB3  | <b>Trails</b> – sites and water bodies which formed part of traditional routes, including tauraka waka (landing place for canoes).                                                                                                                                                  |
| MB4  | <b>Cultural materials</b> – water bodies that are sources of traditional weaving materials (such as raupo and paru) and rongoa (medicines).                                                                                                                                         |
| MB5  | <b>Waipuna</b> – sources of water highly regarded for their purity, healing and health-giving powers.                                                                                                                                                                               |

\* the correct way of doing things, according to custom.

# SCHEDULE 1D: KĀI TAHU VALUES

| North Otago subregion                            |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                       | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Awamoko Stream                                   |     |     | ✓   | ✓   | ✓   |     | ✓   | ✓   |     |
| Landon Creek                                     |     |     |     | ✓   |     |     |     |     |     |
| Awamoa Creek                                     |     |     |     | ✓   |     |     |     | ✓   |     |
| Waiareka Creek                                   |     |     |     | ✓   | ✓   |     | ✓   | ✓   |     |
| Kakanui River                                    | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |
| Oamaru Creek                                     |     |     |     | ✓   | ✓   |     |     | ✓   |     |
| Kakaho Creek                                     |     |     |     | ✓   |     |     |     | ✓   |     |
| Kurinui Creek a.k.a. Big Kuri Creek              |     |     |     | ✓   |     |     | ✓   | ✓   |     |
| Ngutukaka Creek                                  |     |     |     | ✓   |     |     |     |     |     |
| Waiwherowhero Creek                              |     |     |     | ✓   |     |     |     |     |     |
| Waimataitai                                      |     |     |     | ✓   | ✓   |     |     | ✓   |     |
| Creeks between Waimataitai & Shag Point/Matakaea |     |     |     | ✓   |     |     |     |     |     |
| Stony Creek                                      |     |     |     | ✓   | ✓   | ✓   |     |     |     |
| Bobbys Head Creek                                |     |     | ✓   | ✓   |     |     |     |     |     |
| Most creeks between Bobbys Head & Pleasant River |     |     |     | ✓   |     |     |     |     |     |
| Shag River (Waihemo)                             | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |
| Waianakarua River                                | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |
| Pleasant River                                   |     |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Trotters Creek                                   | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |

| Maniototo subregion                                                                  |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                                                           | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Taieri River, upstream of Tiroiti                                                    | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Streams on the west-facing slopes of the Rock and Pillar Range, excluding Logan Burn |     |     |     | ✓   | ✓   |     |     |     |     |
| Kye Burn                                                                             | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |

| Central Otago subregion                                |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                             | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Clutha River/Mata-Au between Alexandra and Lake Wanaka | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Manuherikia River                                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Moa Creek                                              |     |     |     | ✓   |     |     |     |     |     |
| Other Manuherikia tributaries                          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Little Bremner Creek                                   |     |     |     | ✓   |     |     |     |     |     |
| Earnsclough or Fraser River                            |     |     |     | ✓   |     |     |     |     |     |
| Bannock Burn                                           |     |     |     | ✓   |     |     |     |     |     |
| Lindis River                                           |     |     |     | ✓   |     |     | ✓   | ✓   |     |
| Cardrona River                                         | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |

SCHEDULE 1D: KĀI TAHU VALUES

| Lakes subregion                                                                                     |     |     |     |     |     |     |     |     |     |
|-----------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                                                                          | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Kawarau River<br><i>between Lakes Dunstan and Wakatipu</i>                                          | ✓   | ✓   |     | ✓   |     |     | ✓   | ✓   |     |
| Lake Hayes                                                                                          |     |     |     | ✓   | ✓   |     |     |     |     |
| Lake Wakatipu                                                                                       | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Diamond Lake,<br>Diamond Creek and<br>Lake Reid                                                     |     |     |     | ✓   |     |     |     |     |     |
| Dart River/Te Awa<br>Whakatipu                                                                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Route Burn                                                                                          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Greenstone River,<br>Caples River                                                                   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Lochy River                                                                                         |     |     |     | ✓   |     |     |     |     |     |
| Streams flowing to<br>Lake Wakatipu<br>between Halfway Bay<br>and Elfin Bay,<br>including Von River |     |     |     | ✓   |     |     |     |     |     |
| Lake Wanaka                                                                                         | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Matukituki River                                                                                    | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Streams flowing off<br>West Wanaka,<br>including Albert Burn                                        |     |     |     | ✓   | ✓   |     |     |     |     |
| Makarora River                                                                                      | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Lake Hawea                                                                                          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Hunter River                                                                                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Dingle Burn                                                                                         |     |     |     | ✓   |     |     |     |     |     |
| Timaru River                                                                                        |     |     |     | ✓   |     |     |     |     |     |
| Hawea River                                                                                         | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Shotover River                                                                                      | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Arrow River                                                                                         | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Roaring Meg                                                                                         | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |     |     |
| Nevis River                                                                                         | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |     |     |

| Roxburgh subregion                                                    |     |     |     |     |     |     |     |     |     |
|-----------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                                            | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Clutha River/Mata-Au<br><i>between Alexandra<br/>and Island Block</i> | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Teviot River                                                          |     |     |     |     | ✓   |     |     |     |     |
| Lake Onslow                                                           |     |     |     | ✓   | ✓   |     |     |     |     |
| Minzion Burn                                                          |     |     |     | ✓   |     |     |     |     |     |

| Strath Taieri subregion                               |     |     |     |     |     |     |     |     |     |
|-------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                            | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Great Moss Swamp                                      |     |     |     | ✓   | ✓   |     |     |     |     |
| Red Swamp Creek                                       |     |     |     | ✓   |     |     |     |     |     |
| Taieri River <i>between<br/>Tiroiti and Pukerangi</i> | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Nenthorn Stream                                       | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Deighton Creek                                        |     |     |     | ✓   |     |     |     |     |     |

# SCHEDULE 1D: KĀI TAHU VALUES

|                                                                                                 |  |  |  |   |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------|--|--|--|---|--|--|--|--|--|
| Streams flowing on west side of Taieri Ridge                                                    |  |  |  | ✓ |  |  |  |  |  |
| Lug Creek, Wandle Creek and other streams flowing on the east side of the Rock and Pillar Range |  |  |  | ✓ |  |  |  |  |  |

| Waikouaiti/Lammermoor subregion                       |     |     |     |     |     |     |     |     |     |
|-------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                            | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Taieri River <i>between Pukerangi and Outram</i>      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   |     |
| Three O'clock Stream                                  |     |     |     | ✓   |     |     |     |     |     |
| Lee Stream                                            | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Ross Stream                                           |     |     |     | ✓   |     |     |     |     |     |
| Deep Stream (and Deep Creek)                          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   |     |
| Waikouaiti River (excluding South Branch)             | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Waikouaiti River South Branch                         | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Lower Waikouaiti River (estuary and tidal zone)       |     |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Hawksbury Lagoon                                      |     |     | ✓   | ✓   | ✓   | ✓   |     | ✓   |     |
| Streams between Karitane & Yellow Bluff (Te Pa Hawea) |     |     |     | ✓   |     |     |     |     |     |

| Coastal subregion                                                                         |     |     |     |     |     |     |     |     |     |
|-------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Water body                                                                                | MA1 | MA2 | MA3 | MA4 | MB1 | MB2 | MB3 | MB4 | MB5 |
| Streams between Summer Hill and Brighton, excluding Taieri and Tokomairi River main stems |     |     | ✓   | ✓   |     |     |     |     |     |
| Akatore River                                                                             |     |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Lower Tokomairi River main stem                                                           | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Taieri River <i>between Henley and the sea</i>                                            | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Unnamed tributary of the Taieri River a.k.a. Takitakitōa Stream                           | ✓   | ✓   |     | ✓   | ✓   | ✓   |     | ✓   |     |
| Otokia Creek                                                                              | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Deep Creek (Omimi)                                                                        |     |     |     | ✓   |     |     | ✓   |     |     |
| Evansdale Creek                                                                           |     |     |     | ✓   |     |     |     |     |     |
| Kaikorai Stream                                                                           | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |
| Otago Peninsula streams                                                                   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   | ✓   |
| Water of Leith                                                                            |     |     | ✓   | ✓   |     |     |     |     |     |
| Waitati River                                                                             |     |     |     | ✓   |     |     |     |     |     |

| <b>Taieri/Clutha Plains subregion</b>                              |            |            |            |            |            |            |            |            |            |
|--------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Water body</b>                                                  | <b>MA1</b> | <b>MA2</b> | <b>MA3</b> | <b>MA4</b> | <b>MB1</b> | <b>MB2</b> | <b>MB3</b> | <b>MB4</b> | <b>MB5</b> |
| Taieri River <i>between Outram and Henley</i>                      | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Lakes Waipori and Waihola, Sinclair Wetlands                       | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
| Contour Channel and other West Taieri hill streams                 |            |            |            |            | ✓          |            |            |            |            |
| Waipori River                                                      |            |            |            | ✓          | ✓          |            |            |            |            |
| Silver Stream                                                      | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |            |
| Owhiro Stream                                                      | ✓          | ✓          |            | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Upper Tokomairiro River main stem                                  |            |            |            |            | ✓          |            |            |            |            |
| Lovells Stream                                                     |            |            |            |            | ✓          |            |            |            |            |
| Lake Tuakitoto                                                     | ✓          | ✓          |            | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Clutha River/Mata-Au <i>between Balclutha and the sea</i>          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Waitepeka River, Puerua River including Glenomaru Stream tributary |            |            |            | ✓          | ✓          | ✓          | ✓          |            |            |

| <b>Southwest Otago subregion</b>                               |            |            |            |            |            |            |            |            |            |
|----------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Water body</b>                                              | <b>MA1</b> | <b>MA2</b> | <b>MA3</b> | <b>MA4</b> | <b>MB1</b> | <b>MB2</b> | <b>MB3</b> | <b>MB4</b> | <b>MB5</b> |
| Pomahaka River                                                 | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Waiwera River                                                  |            |            |            |            | ✓          |            |            |            |            |
| Clutha River/Mata-Au <i>between Island Block and Balclutha</i> | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Waitahuna River                                                |            |            |            |            | ✓          |            |            |            |            |
| Waipahi River (lower stretches within Otago region)            | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |

| <b>Catlins subregion</b>                                                       |            |            |            |            |            |            |            |            |            |
|--------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Water body</b>                                                              | <b>MA1</b> | <b>MA2</b> | <b>MA3</b> | <b>MA4</b> | <b>MB1</b> | <b>MB2</b> | <b>MB3</b> | <b>MB4</b> | <b>MB5</b> |
| Catchments between Fleming River and Longbeach Creek (excluding Tautuku River) |            |            | ✓          | ✓          | ✓          |            |            |            |            |
| Tautuku River                                                                  |            |            | ✓          | ✓          |            |            |            |            |            |
| Tahakopa River                                                                 | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| MacLennan River                                                                | ✓          | ✓          |            | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Catlins River                                                                  | ✓          | ✓          |            | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Owaka River                                                                    | ✓          | ✓          |            | ✓          | ✓          | ✓          | ✓          | ✓          |            |
| Karoro Creek                                                                   |            |            | ✓          | ✓          | ✓          |            |            |            |            |

## **2. Schedule of specified restrictions on the exercise of permits to take surface water**

This schedule provides specified minimum flows applying to the taking of surface water within primary and supplementary allocation from catchments identified in the B-series maps, and Welcome Creek. The schedule should be read in conjunction with the policies contained in section 6.4.

Schedule 2A specifies minimum flows that apply to the primary allocation water taken from catchments identified in the B-series maps. The last column of Schedule 2A also specifies the primary allocation limit in accordance with Policy 6.4.2(a) for the whole catchments of the rivers and lakes. The catchment areas for the primary allocation limits set by Policy 6.4.2(a) may be larger than those specified on the B-series maps.

Schedule 2B specifies minimum flows that apply to specified blocks of supplementary allocation for some catchments. Additional supplementary allocation may be granted under Policies 6.4.9 and 6.4.10.

Schedule 2 identifies minimum flows in litres per second and the site at which flows will be monitored. When the minimum flow is reached, consents to take water from the identified catchment will cease or will be suspended by the Otago Regional Council, in accordance with Policy 6.4.11 of this Plan. The flows listed in Schedule 2, which trigger suspension, use the instantaneous flow rates.

In accordance with Policy 6.4.1A, groundwater takes from aquifers listed in Schedule 2C and identified in the C-series maps, and other connected groundwater, are considered against primary or supplementary allocation provided for by Policies 6.4.2 and 6.4.9 and where listed in Schedules 2A and 2B, and may be subject to the minimum flows identified.

Schedule 2D identifies matters to be considered when making additions to these schedules through a plan change.

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE  
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**2A Schedule of specific minimum flows for primary allocation takes in accordance with Policy 6.4.3, and primary allocation limits in accordance with Policies 6.4.2(a) and 6.4.1A**

The following schedule:

1. Identifies the minimum flows that apply to the taking of surface water, which includes groundwater managed as surface water in terms of Policy 6.4.1A within primary allocation from the catchments shown in the B-series maps, Welcome Creek and aquifers shown in the C-series maps. The B-series maps identify the location of catchment area boundaries and numbered monitoring sites referred to in the schedule for setting and measuring the minimum flows.
2. Specifies the primary allocation limit in accordance with Policy 6.4.2(a). That limit is exceeded in catchments where the consented takes as at 28 February 1998 (or 19 February 2005 in the Welcome Creek catchment, or 7 July 2000 in the Waianakarua catchment) set a higher limit in accordance with Policy 6.4.2(b). The catchments in which the limit set by Policy 6.4.2(a) is exceeded by Policy 6.4.2(b) (as at 20 December 2008) are the Shag, Kakanui, Taieri, Lake Hayes, Luggate and Manuherikia.

| Catchment<br>See the B-series<br>maps                        | Minimum Flow<br>Monitoring Site<br>(with MS number)<br>See the B-series<br>maps | Minimum flow<br>(litres per second –<br>instantaneous<br>flow)                                                        | Primary Allocation<br>Limits in accord with<br>Policy 6.4.2(a)<br>(litres per second –<br>instantaneous flow)                           |
|--------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Kakanui catchment</b><br><b>(a) 1 October to 30 April</b> | Mill Dam (MS 3) and<br>McCones (MS 3b)                                          | 250 (300 for<br>secondary permits)<br>If 250 breached,<br>flow must return to<br>400 before taking<br>can recommence. | 750<br><i>Kakanui catchment<br/>from mouth to<br/>headwaters excluding<br/>the Waiareka Creek<br/>and Island Stream<br/>catchments.</i> |
| <b>(b) 1 May to 30 September</b>                             | Clifton Falls (MS 3a)<br>Mill Dam (MS 3) and<br>McCones (MS 3b)                 | 400 for primary and<br>secondary permits                                                                              |                                                                                                                                         |
| <b>Lake Hayes<br/>catchment area</b>                         | Mill Creek at Fish<br>Trap<br>(MS 7)                                            | 180                                                                                                                   | 260<br><i>Lake Hayes catchment<br/>from lake outlet to<br/>headwaters</i>                                                               |
| <b>Lake Tuakitoto<br/>catchment</b>                          | Lovells Creek at SH1<br>(MS 10)                                                 | 5                                                                                                                     | 30<br><i>Lake Tuakitoto<br/>catchment from<br/>confluence with<br/>Clutha/Mata-Au to<br/>headwaters</i>                                 |
| <b>Luggate catchment</b>                                     | SH6 Bridge<br>(MS 11)                                                           | 180 (1 November to<br>30 April)<br><br>500 (1 May to 30<br>October)                                                   | 500<br><i>Luggate catchment<br/>from confluence with<br/>Clutha/Mata-Au to<br/>headwaters</i>                                           |

**SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE  
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| <b>Catchment<br/>See the B-series<br/>maps</b>                                                                                  | <b>Minimum Flow<br/>Monitoring Site<br/>(with MS number)<br/>See the B-series<br/>maps</b> | <b>Minimum flow<br/>(litres per second –<br/>instantaneous<br/>flow)</b> | <b>Primary Allocation<br/>Limits in accord with<br/>Policy 6.4.2(a)<br/>(litres per second –<br/>instantaneous flow)</b> |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Lindis catchment</b>                                                                                                         |                                                                                            |                                                                          |                                                                                                                          |
| <b>Total Allocation<br/>Lindis River</b>                                                                                        | Lindis at Ardgour<br>Road<br>(MS 17)                                                       | 550 (1 October to<br>31 May)<br><br>1,600 (1 June to 30<br>September)    | 1,612                                                                                                                    |
| <b>Upstream of the<br/>Lindis Peak flow<br/>monitoring site.</b>                                                                | Lindis at Ardgour<br>Road<br>(MS 17)                                                       | 550 (1 October to<br>31 May)<br><br>1,600 (1 June to 30<br>September)    | 132                                                                                                                      |
| <b>Tributaries<br/>downstream of the<br/>Lindis Peak flow<br/>monitoring site (grid<br/>reference E:1323545<br/>N:5039400).</b> | Lindis at Ardgour<br>Road<br>(MS 17)                                                       | 550 (1 October to<br>31 May)<br><br>1,600 (1 June to 30<br>September)    | 265*                                                                                                                     |
| <b>Mainstem between<br/>the Lindis Peak flow<br/>monitoring site, and<br/>the Ardgour Road<br/>flow monitoring site.</b>        | Lindis at Ardgour<br>Road<br>(MS 17)                                                       | 550 (1 October to<br>31 May)<br><br>1,600 (1 June to 30<br>September)    | 1,104*                                                                                                                   |
| <b>Mainstem<br/>downstream of the<br/>Ardgour Road flow<br/>monitoring site.</b>                                                | Lindis at Ardgour<br>Road<br>(MS 17)                                                       | 550 (1 October to<br>31 May)<br><br>1,600 (1 June to 30<br>September)    | 138                                                                                                                      |

\* These figures include 28 l/s, which can be taken from either a tributary or mainstem downstream of Lindis Peak flow recorder, but not from both at the same time. This results in total allocation being 1,612 l/s for the Lindis catchment.

| <b>Catchment<br/>See the B-series<br/>maps</b>               | <b>Minimum Flow<br/>Monitoring Site<br/>(with MS number)<br/>See the B-series<br/>maps</b> | <b>Minimum flow<br/>(litres per second –<br/>instantaneous<br/>flow)</b> | <b>Primary Allocation<br/>Limits in accord with<br/>Policy 6.4.2(a)<br/>(litres per second –<br/>instantaneous flow)</b> |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Manuherikia River<br/>catchment upstream<br/>of Ophir</b> | Manuherikia River at<br>Ophir<br>(MS 8)                                                    | 820                                                                      | 3,200<br><i>Manuherikia catchment<br/>from confluence with<br/>Clutha/Mata-Au to<br/>headwaters</i>                      |
| <b>Pomahaka<br/>catchment<br/>(within Otago<br/>Region)</b>  | Burkes Ford<br>(MS 15)                                                                     | 3,600 (1 October to<br>30 April)<br><br>7,000 (1 May to 30<br>September) | 1,000<br><i>Pomahaka catchment<br/>from confluence with<br/>Clutha/Mata-Au to<br/>headwaters</i>                         |
| <b>Shag catchment<br/>(both minimum flows<br/>apply)</b>     | Goodwood Pump<br>(MS 1)<br>Craig Road (MS 2)                                               | 28<br><br>150                                                            | 280<br><i>Shag catchment from<br/>mouth to headwaters</i>                                                                |
| <b>Taieri River<br/>upstream of Paerau</b>                   | Paerau Dam<br>(MS 5a)                                                                      | 850                                                                      | 4,860<br><i>Taieri River catchment<br/>from mouth to<br/>headwaters.</i>                                                 |

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| <b>Catchment</b><br>See the B-series<br>maps                          | <b>Minimum Flow<br/>Monitoring Site<br/>(with MS number)</b><br>See the B-series<br>maps | <b>Minimum flow<br/>(litres per second –<br/>instantaneous<br/>flow)</b>                                                                                             | <b>Primary Allocation<br/>Limits in accord with<br/>Policy 6.4.2(a)<br/>(litres per second –<br/>instantaneous flow)</b>                         |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Taieri River<br/>catchment between<br/>Paerau and<br/>Waipiata</b> | Taieri River at<br>Waipiata<br>(MS 5)                                                    | 1,000                                                                                                                                                                |                                                                                                                                                  |
| <b>Taieri River<br/>catchment between<br/>Waipiata and Tiroiti</b>    | Taieri River at Tiroiti<br>(MS 5b)                                                       | 1,100                                                                                                                                                                |                                                                                                                                                  |
| <b>Taieri River<br/>catchment between<br/>Tiroiti and Sutton</b>      | Taieri River at Sutton<br>(MS 6)                                                         | 1,250                                                                                                                                                                |                                                                                                                                                  |
| <b>Taieri River<br/>catchment between<br/>Sutton and Outram</b>       | Taieri River at<br>Outram<br>(MS 6a)                                                     | 2,500                                                                                                                                                                |                                                                                                                                                  |
| <b>Trotters catchment</b>                                             | Mathesons Weir<br>(MS 12)                                                                | 10 (1 October to 30<br>April)<br><br>35 (1 May to 30<br>September)                                                                                                   | 15<br><i>Trotters catchment<br/>from mouth to<br/>headwaters</i>                                                                                 |
| <b>Waianakarua<br/>catchment</b>                                      | Browns Pump<br>(MS 13)                                                                   | 200 (1 October to<br>30 April)<br><br>400 (1 May to 30<br>September)                                                                                                 | 190<br><i>Waianakarua<br/>catchment from mouth<br/>to headwaters</i>                                                                             |
| <b>Waitahuna River<br/>catchment</b>                                  | Waitahuna River at<br>Tweeds Bridge<br>(MS 9)                                            | 450                                                                                                                                                                  | 650<br><i>Waitahuna catchment<br/>from confluence with<br/>Clutha/Mata-Au to<br/>headwaters</i>                                                  |
| <b>Waiwera catchment</b>                                              | Maws Farm<br>(MS 16)                                                                     | 280 (1 October to<br>30 April)<br>If 280 breached by<br>taking, flow must<br>return to 310 before<br>taking can<br>recommence.<br><br>400 (1 May to 30<br>September) | 150<br><i>Waiwera catchment<br/>from confluence with<br/>Clutha/Mata-Au to<br/>headwaters</i>                                                    |
| <b>Water of Leith<br/>catchment</b>                                   | Water of Leith at<br>University<br>Footbridge (MS 4)                                     | 94                                                                                                                                                                   | 140<br><i>Water of Leith<br/>catchment from mouth<br/>to headwaters</i>                                                                          |
| <b>Welcome Creek<br/>catchment</b>                                    | Steward Road                                                                             | 600                                                                                                                                                                  | 600<br><i>Welcome Creek<br/>catchment from<br/>confluence with<br/>Waitaki River to<br/>headwaters. (Also<br/>subject to Table<br/>12.1.4.2)</i> |

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE  
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**2B Schedule of supplementary allocation blocks and specific minimum flows in accordance with Policy 6.4.9(c)**

| Catchment<br>(See the B-series maps)<br>& Supplementary Block<br>Number                   | Minimum Flow<br>(litres per second – instantaneous<br>flow) at the monitoring site(s)<br>(See the B-series maps)                                                                                                                                                                                                                                                                                                                                               | Supplementary<br>Allocation Block<br>(litres per second –<br>instantaneous flow)                                                                                                  |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Kakanui catchment</b>                                                                  | For each minimum flow listed below:<br>1. At Mill Dam (MS 3) for takes downstream of Clifton Falls monitoring site; or<br>2. At both Mill Dam (MS 3) and Clifton Falls (MS 3a) for takes upstream of Clifton Falls monitoring site.                                                                                                                                                                                                                            |                                                                                                                                                                                   |
| <b>Kakanui catchment</b><br>(first supplementary allocation block)                        | 1 October to 30 April: 1,050                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1 October to 30 April: 300                                                                                                                                                        |
|                                                                                           | 1 May to 30 September: 1,500                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1 May to 30 September: 500                                                                                                                                                        |
| <b>Kakanui catchment</b><br>(subsequent supplementary allocation blocks)                  | All subsequent minimum flows corresponding to supplementary allocation blocks in the Kakanui catchment will be based on the following formula:<br><br>1 October to 30 April:<br>$1,050 + (300 \times \text{number of supplementary allocation block}^*)$<br><br>1 May to 30 September:<br>$1,500 + (500 \times \text{number of supplementary allocation block}^*)$<br><br>* 2 for the 2 <sup>nd</sup> , 3 for the 3 <sup>rd</sup> allocation block, and so on. | All subsequent supplementary allocation blocks in the Kakanui catchment will be based on the following sizes:<br><br>1 October to 30 April: 300<br><br>1 May to 30 September: 500 |
| <b>Lindis catchment</b><br>(first supplementary allocation block)                         | 1 May to 30 November: 2200<br>Ardgour Road (MS 17)                                                                                                                                                                                                                                                                                                                                                                                                             | 500                                                                                                                                                                               |
|                                                                                           | 1 December to 30 April: 1600<br>Ardgour Road (MS 17)                                                                                                                                                                                                                                                                                                                                                                                                           | 500                                                                                                                                                                               |
| <b>Lindis catchment</b><br>(second supplementary allocation block)                        | 1 May to 30 November: 2700<br>Ardgour Road (MS 17)                                                                                                                                                                                                                                                                                                                                                                                                             | 500                                                                                                                                                                               |
|                                                                                           | 1 December to 30 April: 2100<br>Ardgour Road (MS 17)                                                                                                                                                                                                                                                                                                                                                                                                           | 500                                                                                                                                                                               |
| <b>Pomahaka catchment (within Otago Region)</b><br>(first supplementary allocation block) | 13,000<br>At Burkes Ford (MS 15)                                                                                                                                                                                                                                                                                                                                                                                                                               | 500                                                                                                                                                                               |
| <b>Shag catchment</b><br>(first supplementary allocation block)                           | 650<br>At Craig Road (MS 2)                                                                                                                                                                                                                                                                                                                                                                                                                                    | 100                                                                                                                                                                               |
|                                                                                           | 401<br>At Goodwood Pump (MS 1)                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                   |
| <b>Shag catchment</b><br>(second supplementary allocation block)                          | 750<br>At Craig Road (MS 2)                                                                                                                                                                                                                                                                                                                                                                                                                                    | 100                                                                                                                                                                               |
|                                                                                           | 501                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                   |

SCHEDULE 2: SPECIFIED RESTRICTIONS ON THE  
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| Catchment<br>(See the B-series maps)<br>& Supplementary Block<br>Number         | At Goodwood Pump (MS 1)                                                                                          |                                                                                  |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|                                                                                 | Minimum Flow<br>(litres per second – instantaneous<br>flow) at the monitoring site(s)<br>(See the B-series maps) | Supplementary<br>Allocation Block<br>(litres per second –<br>instantaneous flow) |
| <b>Trotters catchment</b><br>(first supplementary<br>allocation block)          | 1 October to 30 April: 30<br>at Mathesons Weir (MS 12)                                                           | 15                                                                               |
|                                                                                 | 1 May to 30 September: 50<br>at Mathesons Weir (MS 12)                                                           | 15                                                                               |
| <b>Trotters catchment</b><br>(second supplementary<br>allocation block)         | 1 October to 30 April: 60<br>at Mathesons Weir (MS 12)                                                           | 30                                                                               |
|                                                                                 | 1 May to 30 September: 80<br>at Mathesons Weir (MS 12)                                                           | 30                                                                               |
| <b>Trotters catchment</b><br>(third supplementary<br>allocation block)          | 1 October to 30 April: 90<br>at Mathesons Weir (MS 12)                                                           | 30                                                                               |
|                                                                                 | 1 May to 30 September: 110<br>at Mathesons Weir (MS 12)                                                          | 30                                                                               |
| <b>Waianakarua catchment</b><br>(first supplementary<br>allocation block)       | 311<br>At Browns Pump (MS 13)                                                                                    | 100                                                                              |
| <b>Waiwera catchment</b><br>(first supplementary<br>allocation block)           | 600<br>At Maws Farm (MS 16)                                                                                      | 100                                                                              |
| <b>Welcome Creek<br/>catchment</b><br>(first supplementary<br>allocation block) | 1,000<br>At Steward Road (MS 14)                                                                                 | 400<br>(Also subject to Table<br>12.1.4.2)                                       |

**2C Schedule of aquifers where groundwater takes are to be considered as primary allocation, and subject to minimum flows of specified catchments in accordance with Policy 6.4.1A**

| Aquifer Name                            | Map Reference | Catchment to which primary or supplementary allocation limits apply, and minimum flows may apply* |
|-----------------------------------------|---------------|---------------------------------------------------------------------------------------------------|
| <b>Cardrona Alluvial Ribbon Aquifer</b> | C2 & C3       | Cardrona catchment upstream of the Mount Barker recorder site**                                   |
| <b>Kakanui-Kauru Alluvium Aquifer</b>   | C17 & C18     | Kakanui catchment*                                                                                |
| <b>Lindis Alluvial Ribbon Aquifer</b>   | C5 & C6       | Lindis catchment**                                                                                |
| <b>Lowburn Alluvial Ribbon Aquifer</b>  | C7            | Lowburn Stream**                                                                                  |
| <b>Pomahaka Alluvial Ribbon Aquifer</b> | C22 & C23     | Pomahaka catchment**                                                                              |
| <b>Shag Alluvium Aquifer</b>            | C19           | Shag catchment*                                                                                   |

\* as given in Schedules 2A and 2B.

\*\* as provided for by Policies 6.4.2, 6.4.3 and 6.4.9.

## **2D Schedule of matters to be considered when setting minimum flows and allocation limits**

Primary allocation limits and minimum flows will be added to Schedule 2A, to give effect to the objectives and policies in this Plan, through the plan change process following scientific investigation and consultation with the community and affected parties. The lists in 2D.1 and 2D.2 identify matters to which consideration will be given when setting these flows and limits. The lists are not exhaustive and consideration will be given to these and any other relevant matters.

**2D.1** When setting minimum flows in Schedule 2A for a catchment, consideration will be given to the following matters:

- (a) Any existing or previous minimum flow regime or residual flow;
- (b) The 7-day mean annual low flow;
- (c) Interaction among water bodies;
- (d) Ecological values, including the need for flow variability;
- (e) Demand for water, including community water supplies;
- (f) Existing water uses and associated infrastructure;
- (g) Environmental, social, cultural, recreational and economic costs and benefits of taking and using water before and after the implementation of a minimum flow regime; and
- (h) Any other relevant matter in giving effect to Part 2 of the Resource Management Act.

**2D.2** When setting primary allocation limits in Schedule 2A for a catchment, consideration will be given to the following matters:

- (a) Amount of water currently allocated as primary allocation;
- (b) Amount of water currently taken as primary allocation;
- (c) Any other existing taking and using of water;
- (d) The 7-day mean annual low flow;
- (e) Proposed minimum flow regime;
- (f) Possible sources of water;
- (g) Acceptable duration and frequency of rationing among consented water users; and
- (h) Social and economic benefits of taking and using water.

**Note:** For catchments not included in Schedule 2A, refer to Policy 6.4.4 for determining minimum flows and Policy 6.4.2 for identification of primary allocation.

### 3. Schedule of human use values of Otago's aquifers

Schedule 3A identifies the uses of groundwater from particular aquifers in Otago. These aquifers are identified on the C-series maps. Schedule 3B identifies the location of groundwater takes for the purpose of community water supply. The identification of these human use values provides a mechanism for recognising the existence of values which need to be taken into account and given appropriate protection in managing the taking of water and discharge of contaminants (see Policy 9.4.1). The opportunity to provide such protection will arise when considering applications for resource consents for these activities.

Those that utilise the groundwater do take the risk that it may not be suitable for human consumption due to the presence of contaminants.

#### 3A Schedule of human uses of particular aquifers

| Aquifer                        | Map                 | Values                                                                                                                                                                                           |
|--------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lower Waitaki Plains Aquifer   | C15, C16 & C17      | <ul style="list-style-type: none"> <li>– Human consumption without treatment</li> <li>– Stock drinking water supply and farm dairy water.</li> </ul>                                             |
| Papakaio Aquifer               | C15 & C17           | <ul style="list-style-type: none"> <li>– Irrigation</li> </ul>                                                                                                                                   |
| North Otago Volcanic Aquifer   | C15, C16, C17 & C18 | <ul style="list-style-type: none"> <li>– Irrigation</li> </ul>                                                                                                                                   |
| Kakanui-Kauru Alluvium Aquifer | C17 & C18           | <ul style="list-style-type: none"> <li>– Human consumption without treatment</li> <li>– Stock drinking water supply and farm dairy water</li> <li>– Irrigation</li> </ul>                        |
| Shag Alluvium Aquifer          | C19                 | <ul style="list-style-type: none"> <li>– Human consumption without treatment</li> <li>– Human consumption with treatment</li> <li>– Stock drinking water supply</li> <li>– Irrigation</li> </ul> |
| Ettrick Basin Aquifer          | C21                 | <ul style="list-style-type: none"> <li>– Human consumption without treatment</li> <li>– Stock drinking water supply and farm dairy water</li> <li>– Irrigation</li> </ul>                        |
| Roxburgh Basin Aquifer         | C20                 | <ul style="list-style-type: none"> <li>– Human consumption without treatment</li> <li>– Stock drinking water supply</li> <li>– Irrigation</li> <li>– Industrial</li> </ul>                       |
| Lower Taieri Aquifer           | C24 & C25           | <ul style="list-style-type: none"> <li>– Human consumption without treatment</li> <li>– Stock drinking water supply and farm dairy water</li> <li>– Irrigation</li> <li>– Industrial</li> </ul>  |

### 3B Schedule of groundwater takes for the purpose of community water supply

| Site No. | Community Water Supply Takes<br>(at NZMS 260 Series Map Grid Reference)                                                                                                       | Rate (litres per second) and<br>volume (cubic metres per<br>day) authorised                                |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1*       | Glenorchy Water Supply at E41:459-841.                                                                                                                                        | 63 l/s; 5400 m <sup>3</sup> /day                                                                           |
| 2*       | Arthurs Point Water Supply at E41:686-713.                                                                                                                                    | 49 l/s; 3385 m <sup>3</sup> /day                                                                           |
| 3*       | Dalefield Water Supply at F41:739-724.                                                                                                                                        | 6 l/s; 300 m <sup>3</sup> /day                                                                             |
| 4*       | Arrowtown Water Supply at:<br>F41:806-773;<br>F41:808-774; and<br>F41:809-774.                                                                                                | 108 l/s; 7800 m <sup>3</sup> /day                                                                          |
| 5*       | Cromwell Water Supply at G41:119-671.                                                                                                                                         | 210 l/s; 18,000 m <sup>3</sup> /day                                                                        |
| 6*       | Alexandra Water Supplies at:<br>G42:253-444;<br>G42:263-454; and<br>G42:271-442                                                                                               | 420 l/s; 21,600 m <sup>3</sup> /day<br>12.5 l/s; 675 m <sup>3</sup> /day<br>4 l/s; 345 m <sup>3</sup> /day |
| 7*       | Roxburgh Water Supply at G43:210-132.                                                                                                                                         | 58 l/s; 3000 m <sup>3</sup> /day                                                                           |
| 8*       | Dunedin and Outram Water Supplies at:<br>I44:956-803;<br>I44:956-805; and<br>I44:956-804.                                                                                     | Combined total take of<br>382 l/s; 33,000 m <sup>3</sup> /day                                              |
| 11       | Owaka Water Supply at H46:533-124.                                                                                                                                            | 4.4 l/s; 380 m <sup>3</sup> /day                                                                           |
| 12       | Mosgiel Water Supply at:<br>I44:048-789;<br>I44:042-779;<br>I44:036-776;<br>I44:048-789;<br>I44:036-788*;<br>I44:051-787;<br>I44:032-782;<br>I44:051-789; and<br>I44:042-784. | The combined total take shall<br>not exceed 10,104 m <sup>3</sup> /day.                                    |
| 13*      | Clydevale-Pomahaka Water Supply at G45:417-507.                                                                                                                               | 60 l/s; 5160 m <sup>3</sup> /day                                                                           |

\* Point of take located within 100 metres of a surface water body.

## SCHEDULE 4: ALLOCATION AND RESTRICTION REGIME FOR GROUNDWATER

### 4. Schedule of the allocation and restriction regime for groundwater

This schedule sets out restrictions that apply to the taking of groundwater from certain aquifers in Otago.

Schedule 4A identifies maximum allocation limits for the taking of groundwater from aquifers identified in the C-series maps, in accordance with Policy 6.4.10A2(a) of this Plan. Schedule 4B identifies water levels at which the taking of groundwater will be restricted in accordance with Policy 6.4.10A1(b) of this Plan. Schedule 4C identifies matters to be considered when making additions to these schedules through a plan change.

#### 4A Maximum allocation limits for groundwater takes from aquifers

| Aquifer Name                 | Map Reference       | Maximum Allocation Limit<br>(million cubic metres per year) |
|------------------------------|---------------------|-------------------------------------------------------------|
| Ardgour Valley Aquifer       | C6                  | 0.19                                                        |
| Bendigo Aquifer              | C6                  | 29                                                          |
| Cromwell Terrace Aquifer     | C7                  | 4                                                           |
| Lower Tarras Aquifer         | C5 & C6             | 18.8                                                        |
| North Otago Volcanic Aquifer | C15, C16, C17 & C18 | 7                                                           |

# SCHEDULE 4: ALLOCATION AND RESTRICTION REGIME FOR GROUNDWATER

## 4B Restrictions for groundwater takes

### 4B.1 Restriction levels for groundwater takes

Schedule 4B.1 identifies water levels at which the taking of groundwater will be restricted, and identifies the nature of the restriction, in terms of a reduction in the take of water authorised by water permits.

The aquifer maximum height refers to the historic record of the water level or pressure head after the recharge season. Note that the areas over which the restrictions apply are shown on Maps D1-D4.

| Aquifer<br>See Maps D1–D4              | Aquifer<br>Reference Bore<br>See Maps D1–<br>D4 | Aquifer<br>maximum<br>height<br>(metres above<br>datum) | Restriction levels<br>(metres above datum)                                            |                    |                     |
|----------------------------------------|-------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------|---------------------|
|                                        |                                                 |                                                         | 25% restriction<br>or response in terms<br>of Council recognised<br>rationing regime* | 50%<br>restriction | 100%<br>restriction |
| North Otago Volcanic                   | Websters Well                                   | 130.8                                                   | 126.0                                                                                 | 125.5              | 125.0               |
| Lower Taieri – West                    | Momona Bore                                     | 101.24                                                  | 100                                                                                   | 99.5               | 99                  |
| Lower Taieri – East                    | Harleys Well,<br>Piezo. 2                       | 112.5                                                   | 110.5                                                                                 | 110.0              | 109.5               |
| Ettrick Basin                          | Cemetery Bore                                   | 172.29                                                  | 170.29                                                                                | 169.79             | 169.29              |
| Roxburgh Basin<br>(Coal Creek Terrace) | White-Hall<br>Bore                              | 189.5                                                   | 188                                                                                   | 187.8              | 187.5               |

\* When the aquifer reaches this level there shall be either a 25% restriction or a water allocation committee, appointed by the Otago Regional Council, will implement a protocol to take all practical steps to curb the decline in the aquifer level so as to avoid a 50% restriction. If there is no water allocation committee or the water allocation committee does not use a protocol approved by the Council, the 25% water restriction will apply.

### 4B.2 Restriction for Cromwell Terrace Aquifer

There shall be no takes from the Cromwell Terrace Aquifer for irrigation purposes between 1 May and 31 August inclusive in each year.

Because the Cromwell Terrace Aquifer is hydraulically connected to Lake Dunstan, other restrictions may be imposed on resource consents to take water, to help maintain lake levels.

#### **4C Schedule of matters to be considered when setting maximum allocation limits and restriction levels for aquifers**

Maximum allocation limits and restriction levels for aquifers in Schedules 4A and 4B give effect to the objectives and policies in this Plan. Additional aquifers are added through the plan change process following scientific investigation and consultation with the community and affected parties. The lists in 4C.1 and 4C.2 identify matters to which consideration will be given when setting these volumes and levels. The lists are not exhaustive and consideration will be given to these and any other relevant matters. Restriction levels may not be needed for all aquifers.

**4C.1** When setting maximum allocation limits in Schedule 4A for an aquifer, consideration will be given to the following matters:

- (a) Physical properties of the aquifer;
- (b) The amount and characteristics of recharge to the aquifer;
- (c) Interaction with other aquifers;
- (d) Interaction with surface water bodies and their values;
- (e) The potential for contamination (including seawater intrusion);
- (f) The effects of taking groundwater on the aquifer (including results of computer modelling, where available);
- (g) Demand for water and existing water uses, including community water supplies;
- (h) Environmental, social, cultural, recreational and economic benefits of taking and using water; and
- (i) Any other relevant matter in giving effect to Part 2 of the Resource Management Act.

**4C.2** When setting restriction levels in Schedule 4B for an aquifer, consideration will be given to the following matters:

- (a) Physical properties of the aquifer;
- (b) Variance of groundwater levels in the aquifer;
- (c) The amount and characteristics of recharge to the aquifer;
- (d) The proposed or existing maximum allocation limit;
- (e) Interaction with surface water bodies and their values;
- (f) Any actual or potential effect of drawdown on groundwater quality; and
- (g) The environmental, social, cultural and economic effects of the restriction level on existing users of groundwater from the aquifer.

**Note:** For aquifers not included in Schedule 4A, refer to Policy 6.4.10A2(b) for determining a maximum allocation limit.

#### **4D Matters to be considered in calculating mean annual recharge**

For any aquifer not included in Schedule 4A the setting of the maximum allocation limit will involve calculating the mean annual recharge of the aquifer (see Policy 6.4.10.A2(b)). The mean annual recharge is a statistical value based on the past climate, aquifer hydrology, soil properties, irrigation practice and other factors with direct influence over groundwater recharge.

This schedule sets out the matters to which consideration will be given when calculating the mean annual recharge of an aquifer.

##### **4D.1 Sources of aquifer recharge**

Sources of aquifer recharge may include:

- (a) Land surface recharge due to rainfall excess.
- (b) Land surface recharge due to irrigation excess, which should be based on the application of irrigation at an efficient rate.
- (c) Land surface recharge due to intermittent runoff flowing over the land surface.
- (d) Surface water recharge due to river infiltration.
- (e) Surface water recharge due to wetland, pond or lake infiltration.
- (f) Through-flow from any other aquifer.

The mean annual recharge can arise from a single recharge source or a combination of recharge sources, in which case the mean annual recharge is based on the combined recharge from all relevant sources.

##### **4D.2 Methods for calculating aquifer recharge**

Methods for calculating aquifer recharge from various recharge sources may include:

- (a) Daily soil moisture balance for the calculation of land surface recharge.
- (b) Daily soil moisture balance for calculation of irrigation recharge.
- (c) Differences between surface water flows measured at different flow monitoring sites for the determination of bed infiltration passing to an aquifer.
- (d) Direct measurement of land surface recharge using subsoil measuring devices such as lysimeters.
- (e) Calibrated recharge estimation using unsaturated zone matric potential or saturated zone water table height fluctuation.
- (f) Environmental tracers such as isotopes (radioactive or stable) and conservative anions.
- (g) Groundwater computer modelling, especially where calibration and parameter estimation can be used to constrain initial estimates of surface water contributions and land surface recharge.

## 5. Schedule of limits to instantaneous take of groundwater

### 5A Schedule of equations to determine stream depletion effects of the take of groundwater

#### Requirement to determine stream depletion on surface water

The Bekesi and Hodges<sup>1</sup> equations are used to determine whether a proposed groundwater take may have an effect on nearby surface water that is greater than 5 litres per second.

The Bekesi and Hodges equations are preferred to other equations reported in the literature as they are less demanding of hydrogeological data, and allow a reasonable relationship to be calculated empirically, which can be transposed to determine the threshold distance between the point of groundwater take and the surface water body. These equations consider pumping occurs over 30 days, and assumes a 90 percentile confidence. Which equation is used depends on the proposed maximum rate of take ( $Q$  in litres per second):

$$\begin{array}{ll} \text{Where } 5 \text{ l/s} \leq Q \leq 25 \text{ l/s} & r = 65 \times Q \\ \text{Where } Q > 25 \text{ l/s} & r = 1138 \times \log Q \end{array}$$

$r$  = distance between abstraction structure and surface water body (metres)

If  $r$  is greater than the actual distance from the point of groundwater take to the surface water body, then the stream depletion effect is considered to be greater than 5 litres per second. However, there may be exceptions to the empirical relationship (see below).

#### Calculation of stream depletion effect and allocation to surface water

The Jenkins<sup>2</sup> equations are used to calculate the stream depletion effects (or  $Q_s$ ) which will be considered against the available allocation of the relevant surface water body.

$$Q_s = Q_w \text{erfc}(U)$$

$$U = -(r^2 S / 4 T t)$$

Where:

- $Q_s$  is the rate of stream depletion (cubic length per time)
- $Q_w$  is the pumping rate of the well (cubic length per time)
- $r$  is the perpendicular distance from the point of groundwater take to the surface water body (length)
- $S$  is the storativity (or specific yield) of the aquifer (dimensionless)
- $T$  is the transmissivity of the aquifer (square length per time)
- $t$  is time
- 'erfc( $U$ )' refers to the Complementary Error Function of  $U$

## SCHEDULE 5: LIMITS TO INSTANTANEOUS GROUNDWATER TAKES

Where subsurface intake structures have a bore head in a different location from the position of the intake screen, the closest part of the intake screen or gallery should be used for the purpose of measuring the distance to the surface water body in terms of Policy 6.4.1A(c) and the equations set out above.

### **Situations where stream depletion effect is unlikely**

There are a number of situations where the stream depletion effect of groundwater is not likely to be valid; these include hydrological factors related to the depth of the bore screen. In addition, the Bekesi and Hodges, or Jenkins equations have situations where they are less valid or have violated their basic assumptions. The situations referred to above are summarised as follows:

Where the adjacent surface water body;

- (a) Has an impermeable bed; or
- (b) Is ephemeral, or dry for extended periods, containing or conveying water only in episodes of high runoff; or
- (c) Is separated from the underlying water table by an unsaturated zone, decoupling the interaction into a one-way loss of surface water from the surface water body.

Where the groundwater system;

- (a) Has very low permeability (e.g. schist fractured rock aquifers. Although the low permeability will calculate a very low stream depletion effect in the Jenkins equation, this is not considered in the empirical Bekesi and Hodges equations); or
- (b) Has very steep gradients or perched water tables adjacent to surface water body boundaries; or
- (c) Does not influence surface water due to the depth of the bore or well screen.

These situations are often not immediately discernible and may require a higher level of assessment to distinguish the nature of connection between groundwater and surface water. Where an applicant seeks that Policy 6.4.1A should not apply, and that the take should be considered as a full groundwater take under the provisions of 12.2, then the applicant may apply to take groundwater as a discretionary activity under Rule 12.2.4.1.

### **Use of analytical equations other than the Jenkins Equation:**

The use of analytical equations will be accepted over the equations given above, when an applicant can clearly demonstrate:

- 1) That the analytical equation is derived from, or is otherwise comparable to, the Jenkins Equation; and
- 2) That this equation is in common use for the purpose, and shares a degree of acceptance in such use amongst groundwater professionals.

## SCHEDULE 5: LIMITS TO INSTANTANEOUS GROUNDWATER TAKES

### Use of numerical groundwater flow models:

The use of numerical groundwater flow models will be accepted over the equations given above, when an applicant can clearly demonstrate:

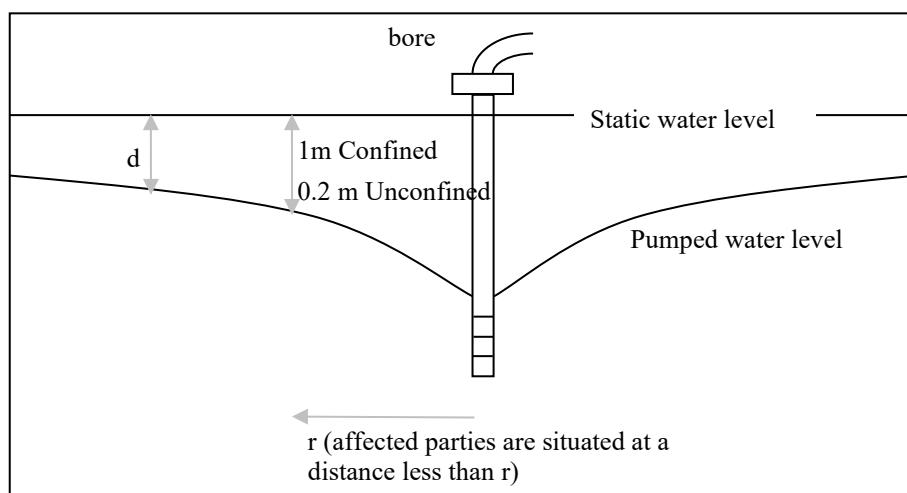
- 1) That the numerical method is validated or potentially validated at a generic level against either the Theis Equation or the Jenkins Equation; and
- 2) That the model is in common use for the purpose, and shares a degree of acceptance in such use among groundwater professionals.

<sup>1</sup> Bekesi, G; and Hodges, S. 2006: The protection of groundwater dependent ecosystems in Otago, New Zealand. Hydrogeology Journal. Vol. 14, No 8, December 2006, pp 1696–1701.

<sup>2</sup> Jenkins, C T, 1977: Computation of rate and volume of stream depletion by wells. In “Techniques of Water Resource Investigations of the United States Geological Survey”. Chapter D1, Book 4, 3<sup>rd</sup> Edition. USGS, Department of Interior, Washington DC.

### 5B Schedule of method for identifying groundwater takes potentially affected by bore interference

This schedule is the method for identifying parties likely to be affected by bore interference when a new application to take groundwater is received. The significance of any interference may result in limits being placed through conditions on permits to take groundwater, depending on distance from another bore, and may limit the instantaneous take of groundwater from any one bore in order to maintain existing access to water.



The radius will be determined using a significant interference of  $d \geq 1$  m for confined aquifers or  $d \geq 0.2$  m for unconfined aquifers, and the ‘Theis’ equation:

$$d = QW(u)/4\pi T \text{ where } u = r^2 S / 4Tt$$

Also where:

**d** is the interference

SCHEDULE 5: LIMITS TO INSTANTANEOUS  
GROUNDWATER TAKES

- Q** is the pumping rate from the bore  
**W(u)** is the "well equation", approximated by a Taylor series:  
$$-0.5772 - \ln(u) + u - \frac{u^2}{2 \cdot 2!} + \frac{u^3}{3 \cdot 3!} - \dots$$
  
**r** is the distance from the pumping bore  
**S** is specific yield/storativity of the unconfined/confined aquifer  
**t** is the time or duration of pumping  
**T** is the transmissivity of the aquifer

For clarification, the variables required for the 'Theis' equation will be quantified as follows:

- Q** from the consent application: maximum daily volume  
**r** from maps, aerial photos, or preferably GPS coordinates  
**T and S** from pumping tests or conservative estimates  
**t (in days)** from consent application: maximum annual volume divided by the maximum daily volume

If a variable cannot be estimated from the consent application or the applicant did not supply the information, the Council will estimate it on an environmentally conservative basis.

## SCHEDULE 6: WATER BODIES WHERE DAMMING IS PROHIBITED

### 6. Schedule of water bodies where damming is prohibited

This schedule identifies water bodies in Otago, or parts of water bodies, in which the damming of water is prohibited in accordance with Policy 8.5.2, and Rules 12.3.1.1, 12.3.1.2, and 12.3.1.3 of this Plan. Note that the damming of water for stockwater supply purposes is not prohibited in some of the identified water bodies. Such management of these water bodies is required by the Water Conservation (Kawarau) Order 1997.

| Water body                                                                                                                      | Grid references                                  | Type of dam prohibited                                |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------|
| Kawarau River main stem from Scrubby Stream to the Lake Wakatipu control gates.                                                 | F41:035680 to F41:738667                         | Any dam.                                              |
| Shotover River main stem                                                                                                        | At or about F41:765680 to E40:662173             | Any dam.                                              |
| Dart River/Te Awa Whakatipu main stem from Lake Wakatipu to its confluence with Beans Burn.                                     | At or about E41:438853 to E40:375077             | Any dam.                                              |
| Rees River main stem from Lake Wakatipu to its confluence with Hunter Creek.                                                    | At or about E41:448852 to E40:499117             | Any dam.                                              |
| Diamond Lake, Diamond Creek and Lake Reid.                                                                                      | At or about E40:435975; E41:444963 to E40:450918 | Any dam.                                              |
| Lake Wanaka and Upper Clutha River/Mata-Au                                                                                      | F40:050089 to F40:088067                         | All dams other than for the duration of an emergency. |
| Pomahaka River, including its tributaries, from its sources to its confluence with the Clutha River/Mata-Au.                    | Confluence at G45:447453                         | All dams other than for stockwater supply purposes.   |
| Waipahi River from its source to its confluence with the Pomahaka River.                                                        | Confluence at G45:194520                         | All dams other than for stockwater supply purposes.   |
| Lower Clutha River/Mata-Au from its confluence with the Pomahaka River to the sea at the mouths of the Matau and Koau Branches. | G45:447453 to H46:667263 and H46:642239          | All dams other than for stockwater supply purposes.   |

# SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION DREDGE MINING

## 7. Schedule of water bodies sensitive to suction dredge mining

This schedule identifies water bodies in Otago, or parts of water bodies, that are sensitive to bed disturbance caused by suction dredge mining due to their unique value for fish spawning or rearing, or their importance for water supply. Suction dredge mining in the identified water bodies, and during any identified time period, will require a resource consent under Rule 13.5.3.1 of this Plan (see Policy 8.6.3). The water bodies identified support values that need to be taken into account when considering consent applications to suction dredge. See Maps E1-E9 for areas affected and their numbers.

| North Otago subregion |                       |                                  |          |
|-----------------------|-----------------------|----------------------------------|----------|
| Water body            | Values                | Grid References                  | Area No. |
| Waianakarua River     | Native fish diversity | Catchment upstream of J42:370472 | 1        |

| Maniototo subregion                                                                      |                     |                                             |          |
|------------------------------------------------------------------------------------------|---------------------|---------------------------------------------|----------|
| Water body                                                                               | Values              | Grid References                             | Area No. |
| Ewe Burn                                                                                 | Native fish habitat | Catchment upstream of H42:808587            | 2        |
| Kye Burn                                                                                 | Native fish habitat | Catchment upstream of I42:946585            | 3        |
| Sow Burn                                                                                 | Fisheries values    | Catchment upstream of H42:785532            | 4        |
| Pig Burn                                                                                 | Fisheries values    | Catchment upstream of H42:828532            | 5        |
| Taieri River<br>(Between Hore's Bridge and Long Point) <i>From 1 March to 31 October</i> | Fisheries values    | Main stem between H42:713380 and H42:744352 | 6        |
| Waimonga Creek                                                                           | Native fish habitat | Catchment upstream of H42:542308            | 7        |
| Waimonga Creek                                                                           | Native fish habitat | Catchment upstream of H43:542299            | 8        |
| Totara Creek                                                                             | Native fish habitat | Main stem between H42:620342 and 553304     | 9        |
| Linn Burn                                                                                | Native fish habitat | Catchment upstream of H42:655323            | 10       |
| McPhees Creek                                                                            | Native fish habitat | Catchment upstream of H43:729211            | 11       |
| McHardys Creek                                                                           | Fisheries values    | Catchment upstream of H43:710151            | 12       |
| Shepherds Hut Creek                                                                      | Fisheries values    | Catchment upstream of H43:645123            | 13       |
| Unnamed tributary of the Logan Burn                                                      | Native fish habitat | Catchment upstream of H43:614115            | 14       |
| Taieri River                                                                             | Native fish habitat | Catchment upstream of H43:549027            | 15       |

| Central Otago subregion                       |                     |                                  |          |
|-----------------------------------------------|---------------------|----------------------------------|----------|
| Water body                                    | Values              | Grid References                  | Area No. |
| Cardrona River                                | Fisheries values    | Catchment upstream of F40:087067 | 16       |
| Unnamed tributary of the Clutha River/Mata-Au | Native fish habitat | Catchment upstream of G40:207933 | 17       |
| Cluden Stream                                 | Fisheries values    | Catchment upstream of G40:342942 | 18       |
| Dunstan Creek                                 | Fisheries values    | Catchment upstream of H41:545745 | 19       |
| Manuherikia River                             | Fisheries values    | Catchment upstream of H41:661902 | 20       |
| Gate Creek                                    | Fisheries values    | Catchment upstream of H41:664901 | 21       |

**SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION  
DREDGE MINING**

| <b>Central Otago subregion</b> |                  |                                                       |                 |
|--------------------------------|------------------|-------------------------------------------------------|-----------------|
| <b>Water body</b>              | <b>Values</b>    | <b>Grid References</b>                                | <b>Area No.</b> |
| Earnsclough or Fraser River    | Fisheries values | Catchment upstream of G42:160507                      | 22              |
| Earnsclough or Fraser River    | Fisheries values | Main stem between G42:200490 and Clutha River/Mata-Au | 23              |
| Cranky Woman Creek             | Fisheries values | Catchment upstream of H42:572378                      | 24              |
| Manor Burn Creek               | Fisheries values | Catchment upstream of G43:447243                      | 25              |

| <b>Lakes subregion</b>                |                     |                                                  |                 |
|---------------------------------------|---------------------|--------------------------------------------------|-----------------|
| <b>Water body</b>                     | <b>Values</b>       | <b>Grid References</b>                           | <b>Area No.</b> |
| All rivers flowing into Lake Wakatipu | Fisheries values    | -                                                | 26              |
| All rivers flowing into Lake Wanaka   | Fisheries values    | -                                                | 27              |
| All rivers flowing into Lake Hawea    | Fisheries values    | -                                                | 28              |
| Skippers Creek                        | Native fish habitat | Catchment upstream of E41:690896                 | 29              |
| Moke Creek                            | Fisheries values    | Catchment upstream of E41:609701 (both branches) | 30              |
| Lake Kirkpatrick outlet stream        | Fisheries values    | Main stem between Lake Kirkpatrick and Moke Lake | 31              |
| Mill Creek                            | Fisheries values    | Catchment upstream of Lake Hayes                 | 32              |
| Hayes Creek                           | Fisheries values    | Main stem between Lake Hayes and Kawarau River   | 33              |
| Nevis River                           | Fisheries values    | Catchment upstream of F41:979644                 | 34              |

| <b>Roxburgh subregion</b>        |                     |                                  |                 |
|----------------------------------|---------------------|----------------------------------|-----------------|
| <b>Water body</b>                | <b>Values</b>       | <b>Grid References</b>           | <b>Area No.</b> |
| Benger Burn                      | Native fish habitat | Catchment upstream of G43:253006 | 35              |
| Tima Burn                        | Native fish habitat | Catchment upstream of G44:293999 | 36              |
| Unnamed tributary of Lake Onslow | Native fish habitat | Catchment upstream of G43:451133 | 37              |

| <b>Strath Taieri subregion</b> |                     |                                         |                 |
|--------------------------------|---------------------|-----------------------------------------|-----------------|
| <b>Water body</b>              | <b>Values</b>       | <b>Grid References</b>                  | <b>Area No.</b> |
| Cap Burn                       | Fisheries values    | Main stem between I42:959462 and 955462 | 38              |
| Mare Burn                      | Fisheries values    | Main stem between I42:971432 and 975432 | 39              |
| Lug Creek                      | Fisheries values    | Catchment upstream of H43:880257        | 40              |
| Stoney Creek                   | Native fish habitat | Catchment upstream of H43:712088        | 41              |
| Nenthorn Stream                | Native fish habitat | Catchment upstream of I43:944054        | 42              |

**SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION  
DREDGE MINING**

| <b>Waikouaiti/Lammermoor subregion</b> |                                                                    |                                               |                 |
|----------------------------------------|--------------------------------------------------------------------|-----------------------------------------------|-----------------|
| <b>Water body</b>                      | <b>Values</b>                                                      | <b>Grid References</b>                        | <b>Area No.</b> |
| Deep Creek                             | Water Supply                                                       | Catchment upstream of H43:665037              | 43              |
| Deep Stream                            | Native fish habitat<br>Water Supply                                | Catchment upstream of H44:683996              | 44              |
| Lee Stream/Canton Stream               | Native fish habitat                                                | Main stem between H44:761909 and 701915       | 45              |
| Black Rock Stream                      | Native fish habitat                                                | Catchment upstream of H44:744883              | 46              |
| Smugglers Creek                        | Native fish habitat                                                | Catchment upstream of I44:936830              | 47              |
| Taieri River                           | Water supply values<br>(land instability threat to water pipeline) | Main stem between I44:009868 and 976830       | 48              |
| Christmas Creek                        | Fisheries values                                                   | Main stem between I44:038953 and 039955       | 49              |
| Three O'clock Stream                   | Fisheries values                                                   | Main stem between I44:024974 and Taieri River | 50              |
| Three O'clock Stream                   | Native fish habitat                                                | Main stem between I43:111096 and 077138       | 51              |
| Waikouaiti River                       | Native fish habitat<br>Water Supply                                | Catchment upstream of I43:232079              | 52              |

| <b>Coastal subregion</b>                    |                       |                                  |                 |
|---------------------------------------------|-----------------------|----------------------------------|-----------------|
| <b>Water body</b>                           | <b>Values</b>         | <b>Grid References</b>           | <b>Area No.</b> |
| Burns Creek                                 | Water Supply          | Catchment upstream of I44:158883 | 53              |
| Jeffersons Creek                            | Water Supply          | Catchment upstream of I44:160873 | 54              |
| Williams Creek                              | Water Supply          | Catchment upstream of I44:159870 | 55              |
| Sullivans Dam intake                        | Water Supply          | Catchment upstream of I44:172863 | 56              |
| Water of Leith, West Branch                 | Water Supply          | Catchment upstream of I44:164857 | 57              |
| Morrisons Creek                             | Water Supply          | Catchment upstream of I44:160843 | 58              |
| Nicols Creek                                | Water Supply          | Catchment upstream of I44:153833 | 59              |
| Ross Creek                                  | Water Supply          | Catchment upstream of I44:152820 | 60              |
| Orokonui Creek                              | Native fish diversity | Catchment upstream of I44:221921 | 61              |
| Wetherstons Creek (Waitati River tributary) | Water Supply          | Catchment upstream of I44:201882 | 62              |
| Rossville reservoir intake                  | Water Supply          | Catchment upstream of I44:233865 | 63              |
| Sawyers Bay Stream                          | Native fish habitat   | Catchment upstream of I44:235851 | 64              |
| Unnamed tributary of Otago Harbour          | Native fish habitat   | Catchment upstream of I44:277825 | 65              |
| Weipers Creek                               | Native fish habitat   | Catchment upstream of I44:281792 | 66              |
| Big Creek                                   | Native fish habitat   | Catchment upstream of H45:864482 | 67              |

**SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION  
DREDGE MINING**

| <b>Taieri/Clutha Plains subregion</b> |                                       |                                         |                 |
|---------------------------------------|---------------------------------------|-----------------------------------------|-----------------|
| <b>Water body</b>                     | <b>Values</b>                         | <b>Grid References</b>                  | <b>Area No.</b> |
| Unnamed tributary of Waipori River    | Native fish habitat                   | Catchment upstream of H44:553814        | 68              |
| Unnamed tributary of Waipori River    | Native fish habitat                   | Catchment upstream of H44:563813        | 69              |
| Stony Creek                           | Native fish habitat                   | Catchment upstream of H44:606839        | 70              |
| Nardoo Stream                         | Native fish habitat                   | Catchment upstream of H44:649831        | 71              |
| North West Stream                     | Native fish habitat                   | Catchment upstream of H44:697840        | 72              |
| Unnamed tributary of Pioneer Stream   | Native fish habitat                   | Catchment upstream of H44:703752        | 73              |
| Unnamed tributary of Lake Mahinerangi | Native fish habitat                   | Catchment upstream of H44:722768        | 74              |
| Shepherd Stream                       | Native fish habitat                   | Main stem between H44:737737 and 725736 | 75              |
| Unnamed tributary of Shepherd Stream  | Native fish habitat                   | Catchment upstream of H44:724728        | 76              |
| Unnamed tributary of Shepherd Stream  | Native fish habitat                   | Catchment upstream of H44:732732        | 77              |
| Unnamed tributary of Waipori River    | Native fish habitat                   | Catchment upstream of H44:749756        | 78              |
| Unnamed tributary of Waipori River    | Native fish habitat                   | Catchment upstream of H44:765750        | 79              |
| Unnamed tributary of Waipori River    | Native fish habitat                   | Catchment upstream of H44:780741        | 80              |
| Unnamed tributary of Waipori River    | Native fish habitat                   | Catchment upstream of H44:777756        | 81              |
| Unnamed tributary of Waipori River    | Native fish habitat                   | Catchment upstream of H44:782746        | 82              |
| Mill Creek                            | Water Supply                          | Catchment upstream of H44:833730        | 83              |
| Verter Burn                           | Native fish habitat                   | Catchment upstream of H44:794799        | 84              |
| Silver Stream                         | Native fish diversity<br>Water Supply | Catchment upstream of H44:039789        | 85              |
| Meggat Burn                           | Water Supply                          | Catchment upstream of H45:744693        | 86              |
| Tokomairiro River West Branch         | Fisheries values                      | Catchment upstream of H45:747487        | 87              |
| Lake Tuakitoto                        | Native fish habitat                   | Catchment upstream of H45:647407        | 88              |
| Unnamed tributary of Lake Tuakitoto   | Native fish habitat                   | Catchment upstream of H46:660392        | 89              |
| Saddle Stream                         | Native fish habitat                   | Catchment upstream of H46:657389        | 90              |
| McCrosties Drain                      | Native fish habitat                   | Catchment upstream of H46:654372        | 91              |
| Lake Tuakitoto                        | Native fish habitat                   | Catchment upstream of H46:687369        | 92              |

| <b>Southwest Otago subregion</b>         |                     |                                                |                 |
|------------------------------------------|---------------------|------------------------------------------------|-----------------|
| <b>Water body</b>                        | <b>Values</b>       | <b>Grid References</b>                         | <b>Area No.</b> |
| Tuapeka River                            | Water Supply        | Catchment upstream of G44:491742               | 93              |
| All streams flowing into the Phoenix Dam | Water Supply        | Catchment upstream of Dam at H44:545755        | 94              |
| Waitahuna River                          | Native fish habitat | Catchment upstream of H44:624790               | 95              |
| Tuapeka Creek                            | Fisheries values    | Main stem between H44:508721 and Tuapeka River | 96              |

**SCHEDULE 7: WATER BODIES SENSITIVE TO SUCTION  
DREDGE MINING**

|                 |                                                         |                                                                                                |     |
|-----------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------|-----|
| Tuapeka River   | Fisheries values                                        | Catchment between G45:471669 and Clutha River/Mata-Au, including all tributaries of this reach | 97  |
| Waitahuna River | Fisheries values                                        | Main stem between H45:619659 and Clutha River/Mata-Au                                          | 98  |
| Pomahaka River  | Native fish habitat<br>Fisheries values<br>Water Supply | Catchment upstream of G45:445453                                                               | 99  |
| Waiwera River   | Native fish habitat                                     | Catchment upstream of G46:283301                                                               | 100 |

| <b>Catlins subregion</b>            |                     |                                  |                 |
|-------------------------------------|---------------------|----------------------------------|-----------------|
| <b>Water body</b>                   | <b>Values</b>       | <b>Grid References</b>           | <b>Area No.</b> |
| Unnamed tributary of Mokoreta River | Native fish habitat | Catchment upstream of G46:214247 | 101             |
| Catlins River                       | Native fish habitat | Catchment upstream of G46:274228 | 102             |
| Unnamed tributary of Catlins River  | Native fish habitat | Catchment upstream of G46:380169 | 103             |
| Frank Stream                        | Native fish habitat | Catchment upstream of G46:400141 | 104             |
| Matai Stream                        | Native fish habitat | Catchment upstream of G47:404059 | 105             |
| Unnamed Creek                       | Native fish habitat | Catchment upstream of G47:457046 | 106             |
| MacKenzie Stream                    | Native fish habitat | Catchment upstream of G47:469051 | 107             |
| Waitere Stream                      | Native fish habitat | Catchment upstream of G47:485043 | 108             |
| Unnamed tributary of Catlins Lake   | Native fish habitat | Catchment upstream of H47:561074 | 109             |
| Unnamed tributary of Owaka River    | Native fish habitat | Catchment upstream of H46:553143 | 110             |
| Burnt Scrub Creek                   | Native fish habitat | Catchment upstream of H46:595183 | 111             |
| Unnamed Creek                       | Native fish habitat | Catchment upstream of H46:600175 | 112             |
| Nugget Stream                       | Native fish habitat | Catchment upstream of H46:631160 | 113             |

## 8. Schedule of requirements for discharge of animal wastes

This schedule establishes requirements for the discharge of contaminants from any waste collection system onto production land. If these requirements are met, in addition to the conditions set out in Rules 12.C.1.1 and the discharge is not prohibited under 12.C.0.2, such a discharge is a permitted activity under this Plan.

The schedule specifies a maximum application depth, a maximum application rate and a minimum return period.

- The **maximum application depth** is the amount of animal waste that can be applied at any one time.
- The **maximum application rate** is the speed at which animal waste can be applied.
- The **minimum return period** is the time which should expire before animal waste is reapplied to the same land.

These requirements vary depending on the soil type as each soil type has a different capacity to assimilate contaminants. The requirements will ensure that this assimilative capacity is not exceeded by the discharge of animal waste.

| ANIMAL WASTE APPLICATION FOR VARIOUS<br>SOIL TYPES UNDER PASTURE COVER |                                                 |                             |                          |
|------------------------------------------------------------------------|-------------------------------------------------|-----------------------------|--------------------------|
| Soil Type                                                              | Maximum<br>Application Depth<br>at any One Time | Maximum<br>Application Rate | Minimum<br>Return Period |
| Sand and loamy sand                                                    | 25mm                                            | 32mm/hr                     | 15 days                  |
| Sandy loam and fine<br>sandy loam                                      | 25mm                                            | 20mm/hr                     | 15 days                  |
| Silt and sandy silt loam                                               | 25mm                                            | 17mm/hr                     | 20 days                  |
| Clay and clay loam                                                     | 25mm                                            | 10mm/hr                     | 20 days                  |
| Peat                                                                   | 25mm                                            | 17mm/hr                     | 15 days                  |

Note: The values in this table are based on soil moisture under 50% saturation. Any person applying animal waste on soils exceeding 50% saturation will need to adjust their application depth and rate accordingly, to avoid breaching rule conditions.

The following conversions may be useful:

- Amounts in mm to litres per hectare: multiply by 10,000.
- Amounts in mm/hr to litres per hectare per hour: multiply by 10,000.

## SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT WETLANDS AND WETLAND MANAGEMENT AREAS

### **9. Schedule of identified Regionally Significant Wetlands and Wetland Management Areas**

This schedule lists Otago's identified Regionally Significant Wetlands and Wetland Management Areas. An identified Regionally Significant Wetland or Wetland Management Area is one that has been mapped in Maps F1–F63 and contains one or more regionally significant wetland values (see Chapter 10).

The ORC holds an inventory on wetlands, including all Regionally Significant Wetlands listed in Schedule 9, as well as some wetlands that are not included in this Schedule. The inventory is available on the ORC website. The inventory is intended for information purposes only. It is not incorporated by reference in this plan and does not form part of this plan or any other regulatory document. It is a stand-alone repository for data and information and has no legal effect.

In addition, GIS (geographical information systems) data on wetland extents can be made available on request.

SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT  
WETLANDS AND WETLAND MANAGEMENT AREAS

**Index to Otago's Identified Regionally Significant Wetlands and Wetland Management Areas**

| #   | Wetland Name                                      | Map |
|-----|---------------------------------------------------|-----|
| 1   | Akatore Creek Swamp                               | F42 |
| 2   | All Day Bay Lagoon                                | F60 |
| 3   | Andersons Pond Margins                            | F52 |
| 4   | Aramoana Saltmarsh                                | F53 |
| 6   | Belmont Inland Saline Wetland Management Area     | F22 |
| 7   | Bendigo Wetland                                   | F16 |
| 8   | Big Boggy Swamp                                   | F1  |
| 9   | Black Rock Marshes                                | F63 |
| 10  | Black Swamp                                       | F29 |
| 11  | Blackcleugh Burn Swamp                            | F28 |
| 12  | Blackmans Inland Saline Wetland Management Area   | F12 |
| 13  | Blair Fen                                         | F31 |
| 14  | Blair Swamp                                       | F31 |
| 15  | Boundary Creek Fen                                | F27 |
| 16  | Braeside Swamp                                    | F57 |
| 17  | Bungtown Bog                                      | F47 |
| 18  | Butterfield Wetland                               | F2  |
| 172 | Cairn Road Bog                                    | F35 |
| 19  | Camp Stream Swamp                                 | F40 |
| 20  | Campbells Reserve Pond Margins                    | F3  |
| 21  | Cannibal Bay Road Swamp                           | F36 |
| 22  | Catlins River Wetland                             | F33 |
| 23  | Chapman Road Inland Saline Wetland                | F16 |
| 24  | Cheetwood Road Wetlands                           | F38 |
| 25  | Church Hill Wetland Complex                       | F6  |
| 26  | Clachanburn Marsh                                 | F22 |
| 27  | Clifton Hill Marshes                              | F29 |
| 28  | Clutha Matau Wetlands                             | F37 |
| 29  | Clutha River Mouth Lagoon                         | F37 |
| 30  | Conroys Dam Inland Saline Wetland Management Area | F16 |
| 31  | Conroys Road Inland Saline Wetland Complex        | F16 |
| 87  | Coutts Gully Swamp                                | F42 |
| 32  | Cross Eden Creek Marsh Complex                    | F14 |
| 33  | Culcairn Oxbow Marsh                              | F38 |
| 34  | Devils Bridge Wetland                             | F59 |
| 35  | Diamond Lake Wetland                              | F3  |
| 36  | Dingle Lagoon                                     | F1  |
| 37  | Dunard Inland Saline Wetland Management Area      | F11 |
| 38  | Dunvegan Fen Complex                              | F34 |
| 39  | East Benhar Swamp                                 | F39 |
| 40  | Ellison Saltmarsh                                 | F56 |
| 41  | False Islet Wetland Management Area               | F36 |
| 42  | Fernhill Marsh                                    | F51 |
| 43  | Finegand Lagoon Marsh                             | F38 |

**SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT  
WETLANDS AND WETLAND MANAGEMENT AREAS**

| <b>#</b> | <b>Wetland Name</b>                                  | <b>Map</b> |
|----------|------------------------------------------------------|------------|
| 44       | Flat Top Hill Ephemeral Wetlands                     | F17        |
| 45       | Fortification Creek Wetland Management Area          | F27        |
| 46       | Fortification Stream Headwaters Swamp                | F52        |
| 47       | Frasers Stream Headwaters Marsh Complex              | F40        |
| 48       | Galloway No. 1 Inland Saline Wetland Complex         | F12        |
| 49       | Galloway No. 2 Inland Saline Wetland Management Area | F12        |
| 50       | Gilmour Road Marsh                                   | F13        |
| 51       | Glendhu Swamp                                        | F28        |
| 52       | Glenorchy Lagoon Wetland                             | F8         |
| 53       | Glyn Wye Wetland Management Area                     | F51        |
| 54       | Governors Point Swamp                                | F43        |
| 55       | Great Moss Swamp                                     | F26        |
| 56       | Harrington Mill Road Swamp                           | F31        |
| 57       | Hawkdun Runs Road Marsh                              | F18        |
| 58       | Hawksbury Lagoon                                     | F56        |
| 59       | Hazeldale Fens                                       | F49        |
| 60       | Henley Swamp                                         | F44        |
| 61       | Hoopers Inlet Swamp                                  | F54        |
| 62       | Hukihuki Swamp                                       | F32        |
| 63       | Hungerford Point Saltmarsh                           | F32        |
| 64       | Hut Creek Swamps                                     | F18        |
| 65       | Island Block Pond Marshes                            | F15        |
| 66       | Jennings Creek Marsh                                 | F53        |
| 67       | John O’Groats Hill Fen                               | F28        |
| 68       | Kaikorai Lagoon Swamp                                | F57        |
| 69       | Kakaho Creek Swamp                                   | F60        |
| 70       | Kemp Road Lagoon                                     | F60        |
| 71       | Kinloch Wetland                                      | F3         |
| 72       | Kirk Creek Headwaters Marsh Complex                  | F15        |
| 73       | Kirkwoods Creek Wetland Management Area              | F14        |
| 74       | Kuriwao Saddle Fen Complex                           | F49        |
| 75       | Lake Hayes Margins                                   | F7         |
| 76       | Lake Reid Wetland                                    | F3         |
| 77       | Lake Tuakitoto Wetland                               | F39        |
| 78       | Lake Wilkie Swamp                                    | F32        |
| 79       | Lamb Hill Fen Complex                                | F53        |
| 80       | Laws Road Swamp                                      | F11        |
| 81       | Lenz Reserve Wetlands                                | F32        |
| 82       | Little Boggy Swamp                                   | F51        |
| 83       | Little Stoney Bog                                    | F4         |
| 84       | Loch Loudon Fen Complex                              | F46        |
| 85       | Loch Luella Fen Complex                              | F46 & F47  |
| 86       | Long Gully Marsh                                     | F12        |
| 88       | Lower Manorburn Dam Margins                          | F13        |
| 89       | Lower Otokia Creek Marsh                             | F54        |
| 91       | Macfarlane Road Oxbow Swamp                          | F30        |
| 92       | MacLennan River Podocarp Swamp Complex               | F50        |

SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT  
WETLANDS AND WETLAND MANAGEMENT AREAS

| #   | Wetland Name                                       | Map |
|-----|----------------------------------------------------|-----|
| 93  | Makarora Flat Swamp Complex                        | F1  |
| 94  | Malones Dam Margins                                | F28 |
| 95  | Marana Swamp                                       | F30 |
| 96  | Matakauri Wetland                                  | F4  |
| 97  | Matukituki Bluff Ephemeral Wetland Management Area | F2  |
| 98  | Matukituki Valley Wetland Management Area          | F5  |
| 99  | Maungatua Summit Wetland Management Area           | F58 |
| 100 | McGregor Swamp                                     | F56 |
| 101 | McKays Triangle Wetland                            | F54 |
| 102 | McLachlan Road Marsh                               | F56 |
| 103 | Measly Beach Wetland Complex                       | F41 |
| 104 | Middle Swamp                                       | F27 |
| 105 | Minaret Bay Swamp                                  | F1  |
| 106 | Moa Creek Inland Saline Wetland                    | F12 |
| 107 | Moke Creek Swamp                                   | F4  |
| 108 | Moke Lake Bog                                      | F4  |
| 109 | Molyneux Bay Swamp                                 | F37 |
| 110 | Mount Nicholas Lagoon                              | F7  |
| 111 | Murrays Road Inland Saline Wetland Management Area | F51 |
| 112 | Nenthorn Ridge Wetland Management Area             | F59 |
| 113 | Nevis Red Tussock Fen                              | F17 |
| 114 | Office Creek Seepage                               | F58 |
| 115 | Okia Flat Wetland Management Area                  | F63 |
| 116 | Old Dunstan Road Swamp                             | F52 |
| 117 | Otanomomo Tuatiki Reserve                          | F33 |
| 118 | Otokia Swamp                                       | F57 |
| 119 | Paddys Rock Ephemeral Tarn                         | F59 |
| 120 | Papanui Inlet Saltmarsh                            | F61 |
| 121 | Patearoa Inland Saline Wetland                     | F22 |
| 122 | Peat Moss Hills Fen Complex                        | F55 |
| 123 | Pleasant River Estuary Wetland Complex             | F62 |
| 124 | Pomahaka River Oxbow Marsh (Dalvey School Road)    | F29 |
| 125 | Pomahaka River Oxbow Marsh (Koi Creek)             | F29 |
| 126 | Ratanui Swamp                                      | F33 |
| 127 | Red Bank Wetland Management Area                   | F62 |
| 128 | Reefs Pond Margins                                 | F52 |
| 129 | Rigney Pond Margins                                | F15 |
| 130 | Rockdale Inland Saline Wetland Management Area     | F11 |
| 131 | Rocky Hill Tidal Marshes                           | F43 |
| 132 | Samson Hill Marshes                                | F31 |
| 133 | Scaifes Lagoon                                     | F2  |
| 134 | Schoolhouse Flat Red Tussock Fen                   | F17 |
| 135 | Shag Point Dam Margins                             | F59 |
| 136 | Shag River Estuary Swamp                           | F59 |
| 137 | Shotover River Confluence Swamp                    | F8  |
| 138 | Signal Hill Swamp                                  | F8  |
| 139 | Stirling Marsh Complex                             | F39 |

**SCHEDULE 9: IDENTIFIED REGIONALLY SIGNIFICANT  
WETLANDS AND WETLAND MANAGEMENT AREAS**

| <b>#</b> | <b>Wetland Name</b>                      | <b>Map</b> |
|----------|------------------------------------------|------------|
| 140      | Stuarts Marsh                            | F50        |
| 141      | Styx Ephemeral Wetland Management Area   | F13        |
| 142      | Sutton Salt Lake Wetland Management Area | F55        |
| 143      | Swampy Summit Swamp                      | F53        |
| 144      | Tahakopa Bay Podocarp Swamp              | F50        |
| 145      | Tahakopa Marsh Complex                   | F36        |
| 146      | Tahakopa River Bogs                      | F50        |
| 147      | Takitoa Swamp                            | F43        |
| 148      | Tautuku River Mouth Marsh                | F32        |
| 173      | Tavora Wetland                           | F61        |
| 171      | Te Hua Taki Wetland                      | F61        |
| 149      | Te Matai Marsh Complex                   | F63        |
| 150      | The Neck Wetlands                        | F2         |
| 151      | Three Stones Fen Complex                 | F49        |
| 152      | Timber Creek Seepage                     | F11        |
| 153      | Tokomairiro River Swamp                  | F48        |
| 154      | Tomahawk Lagoon                          | F54        |
| 155      | Totara Creek Inland Saline Wetland       | F22        |
| 157      | Trig Y Bogs                              | F30        |
| 158      | Two Stone Hill Stream Swamp              | F40        |
| 159      | Upper Black Stream Marshes               | F13        |
| 160      | Upper Tahakopa Swamps                    | F31        |
| 161      | Upper Taieri Wetlands Complex            | F19 to F25 |
| 162      | Upper Waiareka Creek Swamp               | F61        |
| 163      | Von Valley Wetland Complex               | F9 & F10   |
| 164      | Waianakarua River Estuary Swamp          | F60        |
| 165      | Waikouaiti River Estuary Wetland Complex | F56        |
| 166      | Waipori Boot Swamp                       | F44 & F45  |
| 167      | Waipori/Waiholā Wetlands Complex         | F44 & F45  |
| 168      | Wairepo Creek Marsh Complex              | F34        |
| 169      | Whareakeake Marsh                        | F53        |
| 170      | Willowburn Bog                           | F30        |

**10.** *[Repealed – 1 October 2013]*

SCHEDULE 11: [REPEALED]

**11.** *[Repealed – 1 March 2012]*

## 12. Schedule of coastal marine area boundaries

This schedule, and the accompanying maps, identify the boundary of the coastal marine area at Otago's river mouths. Water on the landward side of the identified boundary is subject to the provisions of this Plan, while water on the coastal side is subject to the provisions of the Regional Plan: Coast.

### Waitaki District

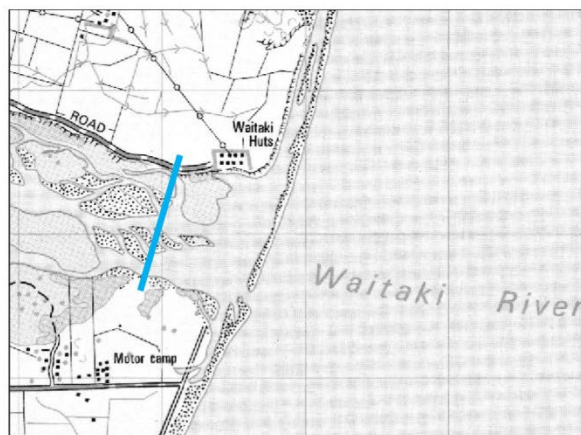
| Water body                                | Description of mouth and boundary *                                                                            | Mouth grid reference                | Boundary grid reference               |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------|
| 1. Waitaki River                          | The "mouth" where it enters the sea, the "boundary" five times the width of the mouth upstream.                | J41 (Edition 1 1984):636837, 636835 | J41 (Edition 1 1984):630844, 628837   |
| 2. Awamoa Creek                           | The "mouth" where it enters the sea, the "boundary" at the downstream side of the Beach Road bridge.           | J41 (Edition 1 1984):47608, 476608  | J41 (Edition 1 1984):475608, 476608   |
| 3. Kakanui River                          | The "mouth" where it enters the sea, the "boundary" at the downstream side of the Kakanui Point Road bridge.   | J42 (Edition 1 1984):449559, 448555 | J42 (Edition 1 1984):443564, 445564   |
| 4. Orore Creek                            | The "mouth" where it enters the sea, the "boundary" at the downstream side of the Waianakarua Road bridge.     | J42 (Edition 1 1984):437531, 437530 | J42 (Edition 1 1984):436531, 437530   |
| 5. Bow Alley Creek                        | The "mouth" where it enters the sea, the "boundary" at the downstream side of the Waianakarua Road bridge.     | J42 (Edition 1 1984):424503, 425504 | J42 (Edition 1 1984):423505, 423506   |
| 6. Waianakarua River                      | The "mouth" where it enters the sea, the "boundary" five times the width of the mouth upstream.                | J42 (Edition 1 1984):421482, 421484 | J42 (Edition 1 1984):419483, 419484   |
| 7. Kurinui Creek a.k.a. Big Kuri Creek    | The "mouth" where it enters the sea, the "boundary" five times the width of the mouth upstream.                | J42 (Edition 1 1984):395403, 396404 | J42 (Edition 1 1984):393404, 394405   |
| 8. Kuriiti Creek a.k.a. Little Kuri Creek | The "mouth" where it enters the sea, the "boundary" five times the width of the mouth upstream.                | J42 (Edition 1 1984):394401, 394399 | J42 (Edition 1 1984):393399, 393400   |
| 9. Waiwhero-whero Creek                   | The "mouth" where it enters the sea, the "boundary" at the downstream side of the footbridge.                  | J42 (Edition 1 1984):397375, 398375 | J42 (Edition 1 1984):397374, 398374   |
| 10. "Kemp Road" Creek                     | The "mouth" where it enters the sea, the "boundary" at the lower limit of the lagoon.                          | J42 (Edition 1 1984):421330, 420330 | J42 (Edition 1 1984):419322, 421323   |
| 11. Trotters Creek                        | The "mouth" where it enters the sea, the "boundary" five times the width of the mouth upstream.                | J42 (Edition 1 1984):412325, 414327 | J42 (Edition 1 1984):412325, 413326   |
| 12. Back Creek                            | The "mouth" where it enters the sea, the "boundary" at the downstream side of the State Highway 1 Road bridge. | J42 (Edition 1 1984):404315, 405316 | J42 (Edition 1 1984):404315, 405316   |
| 13. Tarapuke Creek                        | The "mouth" where it enters the sea, the "boundary" at the downstream side of the State Highway 1 Road bridge. | J42 (Edition 1 1984):397305, 398306 | J42 (Edition 1 1984):397305, 398306   |
| 14a. Shag River - northern arm            | The "mouth" where it enters the estuary, the "boundary" five times the width of the mouth upstream.            | J43 (Edition 1 1980):377240, 377239 | J43 (Edition 1 1980):376238, 377237   |
| 14b. Shag River - southern arm            | The "mouth" where it enters the estuary, the "boundary" five times the width of the mouth upstream.            | J43 (Edition 1 1980):377231, 377230 | J43 (Edition 1 1980):374 230, 375 229 |

## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

| Water body      | Description of mouth and boundary<br>*                                                              | Mouth grid<br>reference             | Boundary grid<br>reference          |
|-----------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| 15. Stony Creek | The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream. | J43 (Edition 1 1980):358200, 359201 | J43 (Edition 1 1980):357201, 357200 |

\* Taken from the NZMS 260 series of 1:50,000 scale maps.

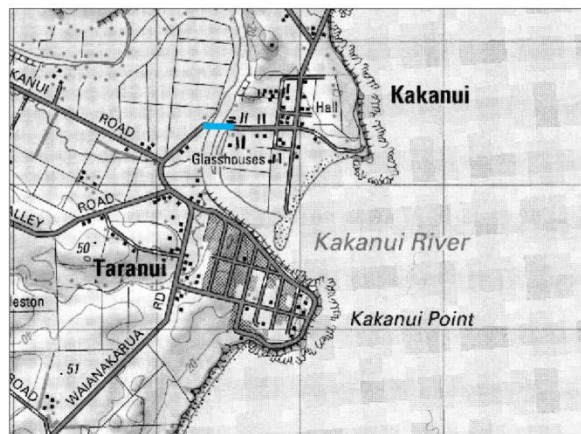
## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



**1 Waitaki River**



**2 Awamoa Creek**



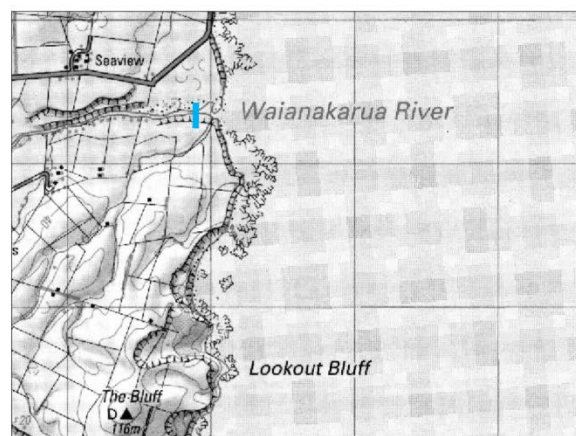
**3 Kakanui River**



**4 Orore Creek**

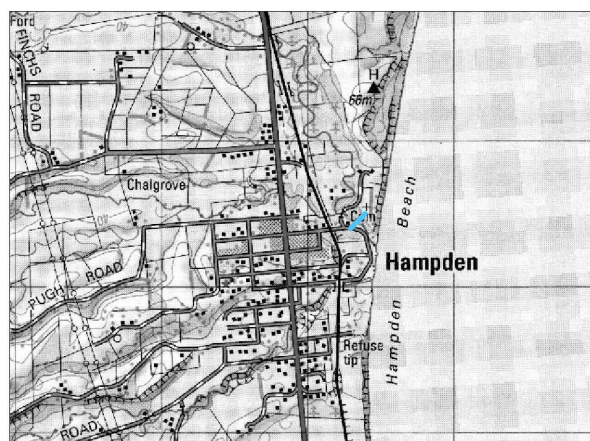


**5 Bow Alley Creek**

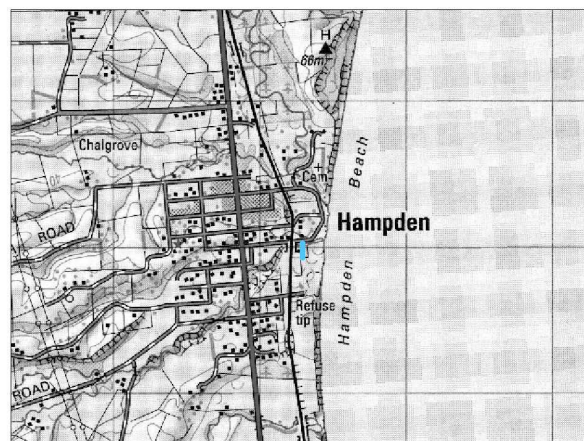


**6 Waianakarua River**

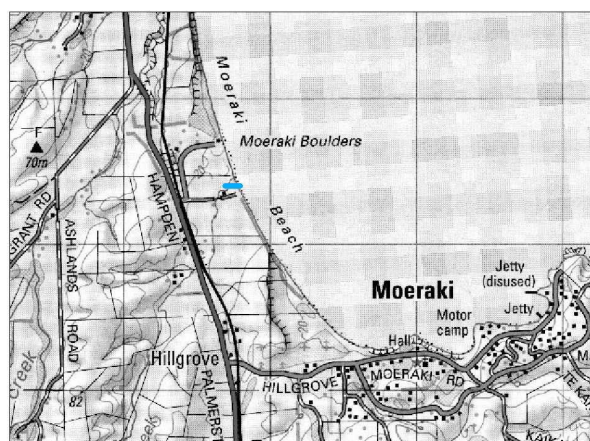
## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



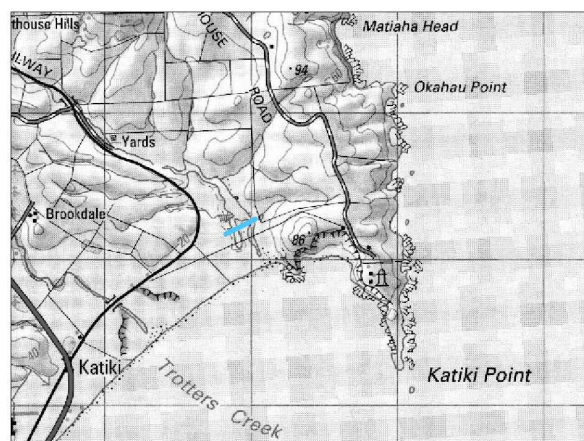
**7 Kurinui Creek a.k.a. Big Kuri Creek**



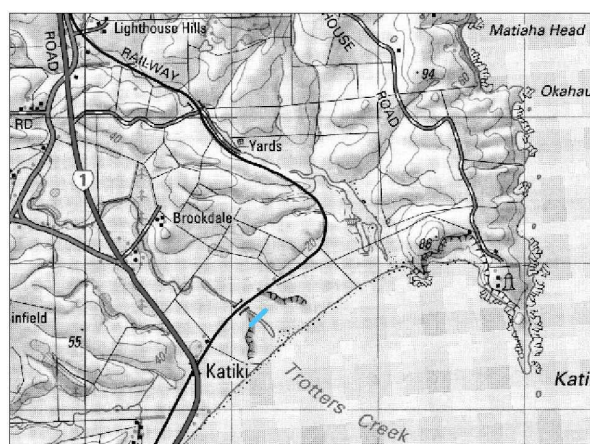
**8 Kuriiti Creek a.k.a. Little Kuri Creek**



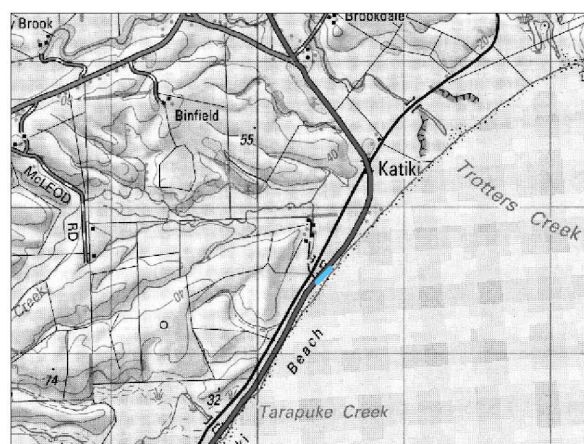
**9 Waiwherowhero Creek**



**10 "Kemp Road" Creek**

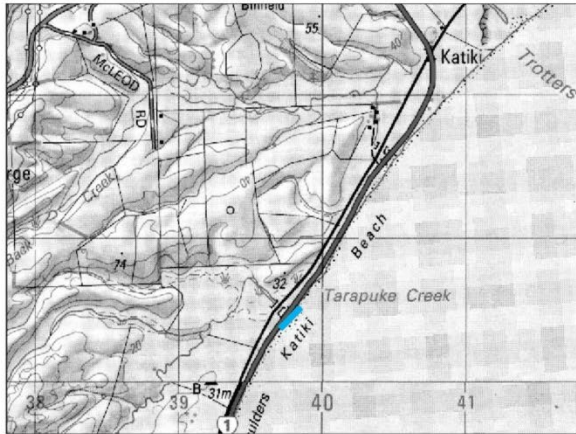


**11 Trotters Creek**

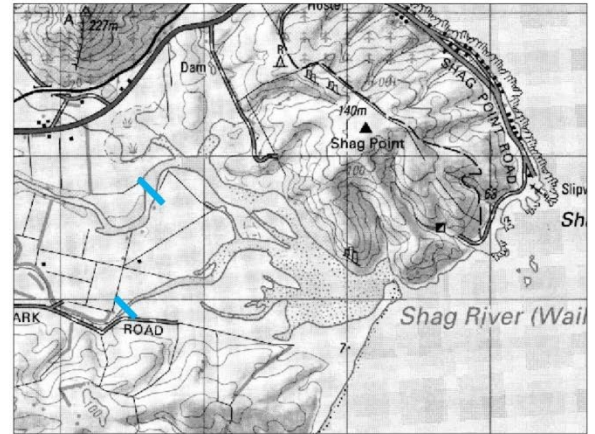


**12 Back Creek**

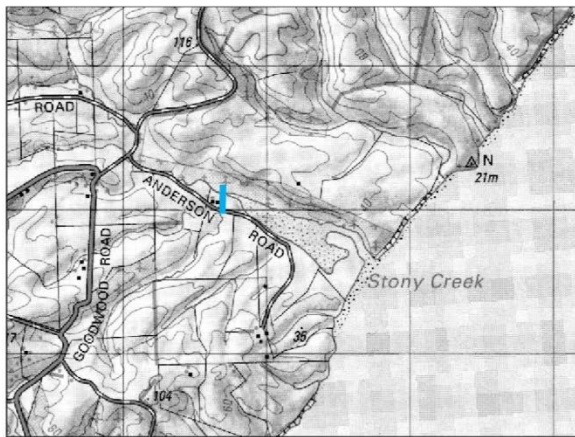
## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



**13 Tarapuke Creek**



**14 Shag River**



**15 Stony Creek**

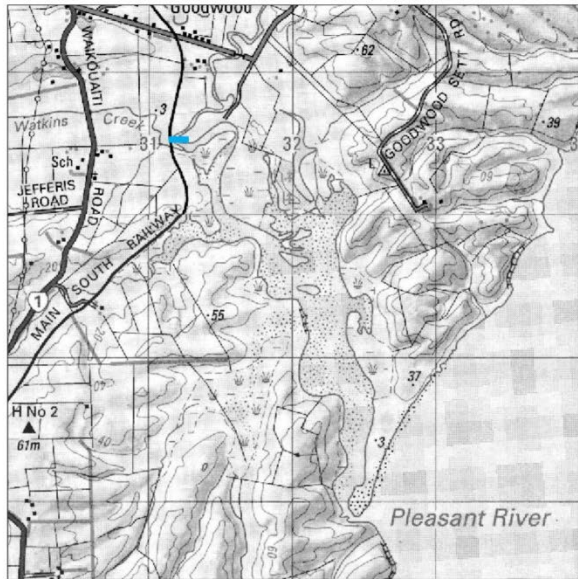
# SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

## Dunedin City

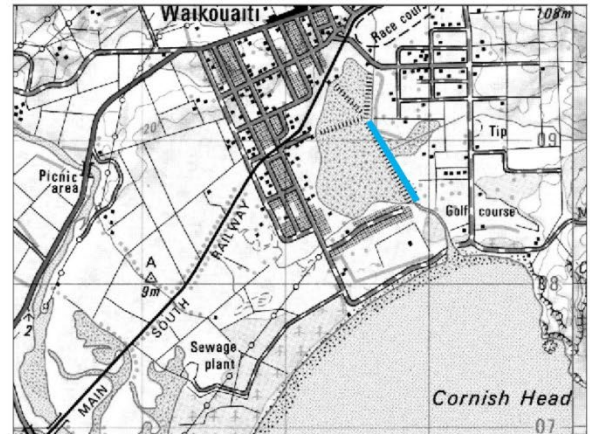
| Water body               | Description of mouth and boundary *                                                                                                                            | Mouth grid reference                    | Boundary grid reference                 |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| 16. Pleasant River       | The “mouth” where it enters the estuary, the “boundary” adjacent to the south end of the railway bridge.                                                       | J43 (Edition 1 1980):315156, 315157     | J43 (Edition 1 1980):311155, 312155     |
| 17. Hawksbury Inlet      | The “mouth” where it enters the sea, the “boundary” running along the causeway edge to include the Eastern arm in the coastal marine area.                     | I43 (Edition 1 1981):437531, 437530     | I43 (Edition 1 1981):286091, 289086     |
| 18. Waikouaiti River     | The “mouth” where it enters the estuary, the “boundary” at the downstream side of the State Highway 1 Road bridge.                                             | I43 (Edition 1 1981):265085, 267085     | I43 (Edition 1 1981):266087, 266089     |
| 19. Careys Creek         | The “mouth” where it enters Blueskin Bay, the “boundary” adjacent to the northern end of the railway bridge.                                                   | I44/J44 (Edition 2 1987):208954, 209954 | I44/J44 (Edition 2 1987):208956, 209956 |
| 20. Waitati River        | The “mouth” where it enters Orokonui Inlet, the “boundary” five times the width of the mouth upstream.                                                         | I44/J44 (Edition 2 1987):216926, 21 925 | I44/J44 (Edition 2 1987):214924, 215923 |
| 21. Drivers Creek        | The “mouth” where it enters the sea, the “boundary” at the downstream side of the metalled road bridge parallel to Long Beach.                                 | I44/J44 (Edition 2 1987):269923, 270922 | I44/J44 (Edition 2 1987):268921, 269920 |
| 22. Water of Leith       | The “mouth” where it enters the sea, the “boundary” at the downstream side of the railway bridge.                                                              | I44/J44 (Edition 2 1987):178787, 179788 | I44/J44 (Edition 2 1987):176789, 178789 |
| 23. ‘Marne Street’ Creek | The “mouth” where it enters Anderson’s Bay Inlet, the “boundary” at the downstream side of the Marne Street Road bridge.                                       | I44/J44 (Edition 2 1987):179766, 180765 | I44/J44 (Edition 2 1987):179766, 180765 |
| 24. Tomahawk Lagoon      | The “mouth” where it enters the sea, the “boundary” at the downstream side of the Tomahawk Road bridge.                                                        | I44/J44 (Edition 2 1987):189750, 191750 | I44/J44 (Edition 2 1987):189751, 190751 |
| 25. Kaikorai Stream      | The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream. The boundary around the estuary is mean high water spring. | I44/J44 (Edition 2 1987):082733, 082735 | I44/J44 (Edition 2 1987):084736, 083737 |
| 26. Taylors Creek        | The “mouth” where it enters the sea, the “boundary” at the downstream side of the Brighton Road bridge.                                                        | I44/J44 (Edition 2 1987):041708, 043709 | I44/J44 (Edition 2 1987):039708, 040709 |
| 27. Otokia Creek         | The “mouth” where it enters the sea, the “boundary” at the downstream side of the Brighton Road bridge.                                                        | I45 (Edition 1 1980):031701, 031699     | I45 (Edition 1 1980):030699, 030700     |
| 28. Tutu Stream          | The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge DCC 47.                                                          | I45 (Edition 1 1980):981652, 982654     | I45 (Edition 1 1980):980652, 981654     |
| 29. Reids Stream         | The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge DCC 48.                                                          | I45 (Edition 1 1980):966633, 967634     | I45 (Edition 1 1980):966633, 967634     |
| 30. Unnamed              | The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge DCC 49.                                                          | I45 (Edition 1 1980):954612, 955614     | I45 (Edition 1 1980):954612, 955614     |

\* Taken from the NZMS 260 series of 1:50,000 scale maps.

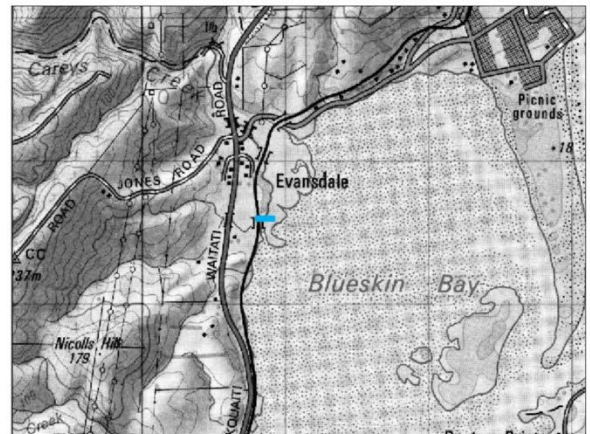
## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



**16 Pleasant River**



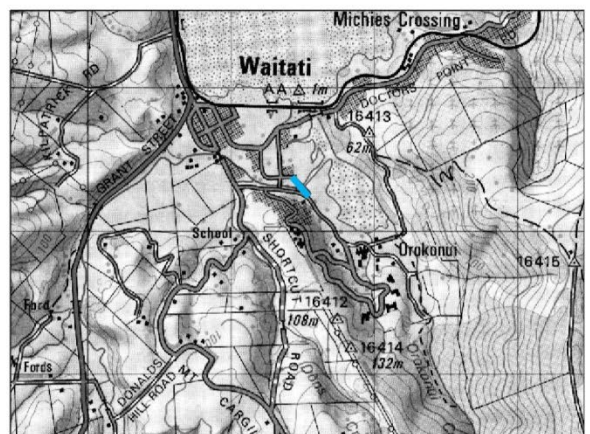
**17 Hawksbury Inlet**



**19 Careys Creek**

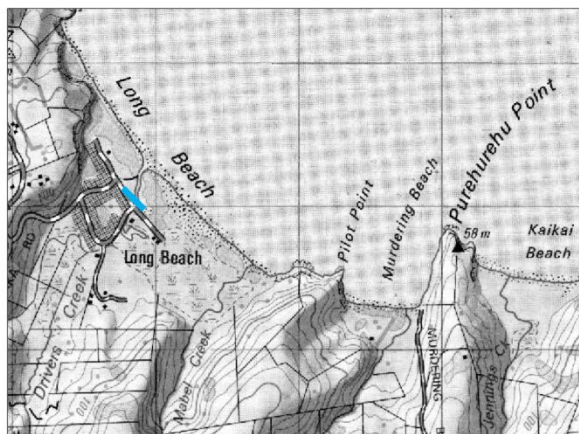


**18 Waikouaiti River**

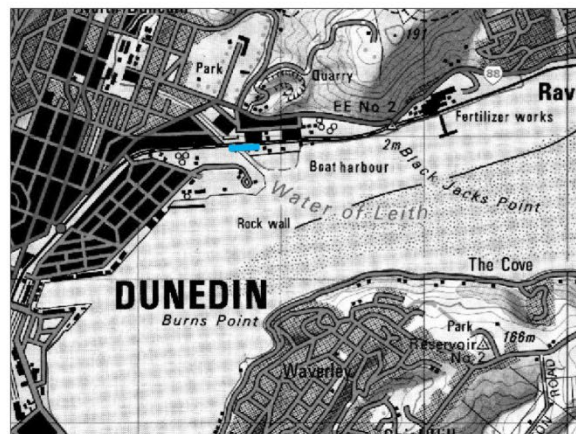


**20 Waitati River**

## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



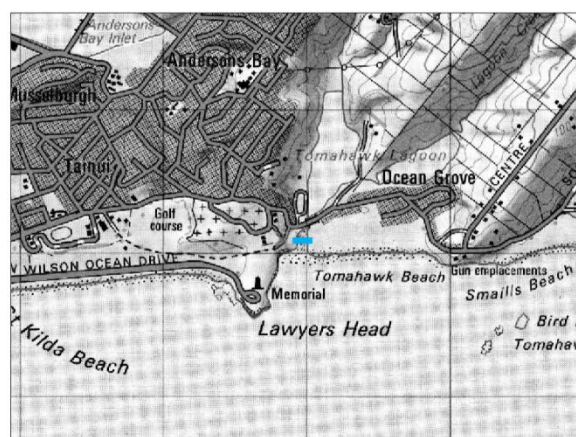
21 Drivers Creek



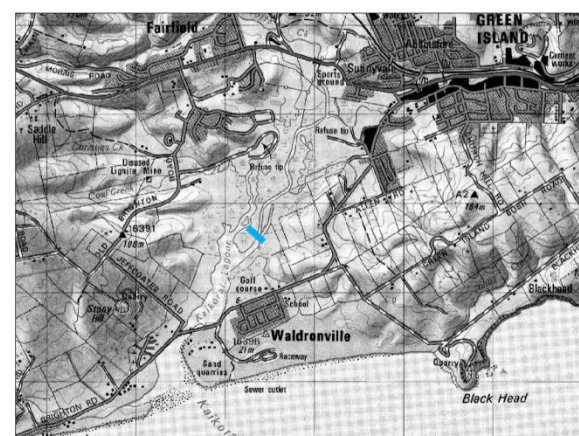
22 Water of Leith



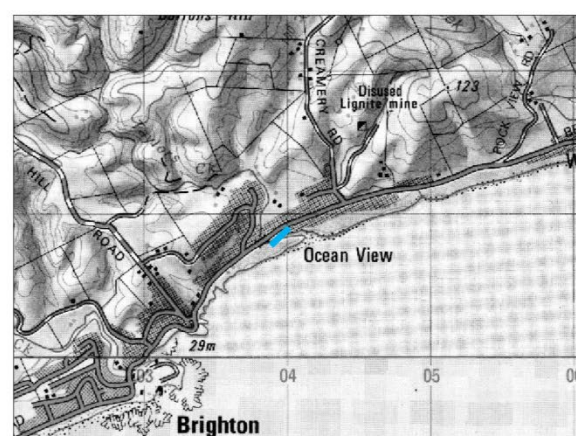
23 "Marne Street" Creek



24 Tomahawk Lagoon



25 Kaikorai Stream



26 Taylors Creek

## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



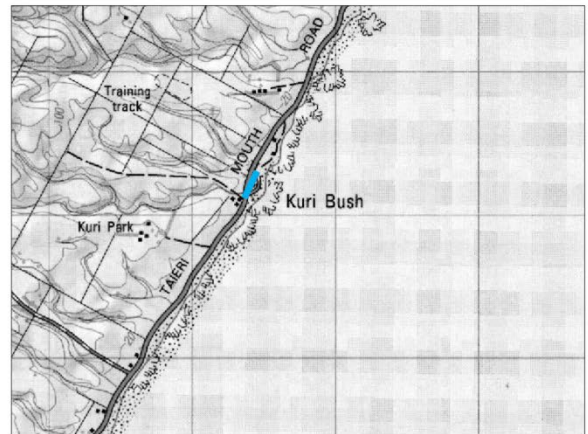
**27 Otokia Creek**



**28 Tutu Stream**



**29 Reids Stream**



**30 Unnamed**

# SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

## Clutha District

| Water body                              | Description of mouth and boundary *                                                                                                                            | Mouth grid reference                | Boundary grid reference                             |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------|
| 31. Taieri River                        | The “mouth” where it enters the sea, the “boundary” at the downstream side of the road bridge at Taieri Mouth.                                                 | I45 (Edition 1 1980):930575, 936582 | I45 (Edition 1 1980):923581, 925582                 |
| 32. Duckbend Creek                      | The “mouth” where it enters the sea, the “boundary” at the downstream side of the road Sawmill Road bridge.                                                    | I45 (Edition 1 1980):930570, 930568 | I45 (Edition 1 1980):926567, 927569                 |
| 33. Akatore Creek                       | The “mouth” where it enters the estuary, the “boundary” five times the width of the mouth upstream.                                                            | I45 (Edition 1 1980):905516, 906515 | I45 (Edition 1 1980):904516, 905515                 |
| 34. Bull Creek                          | The “mouth” where it enters the sea, the “boundary” at the picnic area.                                                                                        | H45 (Edition 1 1981):882439, 884440 | H45 (Edition 1 1981):882439, 883441                 |
| 35. Tokomairiro River                   | The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.                                                                | H45 (Edition 1 1981):882439, 884440 | H45 (Edition 1 1981):882439, 883441                 |
| 36. Wangaloa Creek                      | The “mouth” at the first constriction, the “boundary” at the second constriction.                                                                              | H45 (Edition 1 1981):785357, 786356 | H45 (Edition 1 1981):782353, 781354                 |
| 37. Washpool Creek                      | The “mouth” where it enters the sea, the “boundary” at the downstream side of the Wangaloa Mouth Road bridge.                                                  | H46 (Edition 1 1981):752324, 754325 | H46 (Edition 1 1981):751326, 752326                 |
| 38. Clutha River/Mata-Au - Matau Branch | The “mouth” where it enters the sea, the “boundary” five times the width of the mouth upstream.                                                                | H46 (Edition 1 1981):665262, 668263 | H46 (Edition 1 1981):660264, 660267                 |
| 39. Clutha River/Mata-Au - Koau Branch  | The “mouth” where it enters the sea, the “boundary” along the causeway and five times the width of the mouth upstream.                                         | H46 (Edition 1 1981):639239, 641241 | H46 (Edition 1 1981):639247, 642249, 640242, 639245 |
| 40. Karoro Creek                        | The “mouth” where it enters the sea, the “boundary” at the downstream side of the Kaka Point road bridge.                                                      | H46 (Edition 1 1981):623184, 624183 | H46 (Edition 1 1981):621185, 623184                 |
| 41. Nugget Stream                       | The “mouth” where it enters the sea, the “boundary” at the Nuggets Road bridge.                                                                                | H46 (Edition 1 1981):635162, 636164 | H46 (Edition 1 1981):634162, 635164                 |
| 42. Owaka River                         | The “mouth” where it enters the Catlins River, the “boundary” at the downstream side of the Pounawea bridge.                                                   | H46 (Edition 1 1981):552110, 554110 | H46 (Edition 1 1981):551113, 553113                 |
| 43. Catlins River                       | The “mouth” where it enters the Catlins ‘Lake’, the “boundary” at the downstream side of the Ratanui bridge.                                                   | G46 (Edition 1 1981):500495, 501493 | G46 (Edition 1 1981):491082, 490083                 |
| 44. MacLennan River                     | The “mouth” where it enters the MacLennan River, the “boundary” at the downstream side of the State Highway 92 Road bridge between Centre Road and Puaho Road. | G47 (Edition 1 1983):392011, 391013 | G47 (Edition 1 1983):393013, 392015                 |
| 45. Tahakopa River                      | The “mouth” where the MacLennan River enters, the “boundary” five times the width of the mouth upstream.                                                       | G47 (Edition 1 1983):390014, 390011 | G47 (Edition 1 1983):385014, 385015                 |
| 46. Fleming River                       | The “mouth” where it enters the Tautuku River, the “boundary” five times the width of the mouth upstream.                                                      | G47 (Edition 1 1983):346961, 347962 | G47 (Edition 1 1983):346962, 347963                 |

## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES

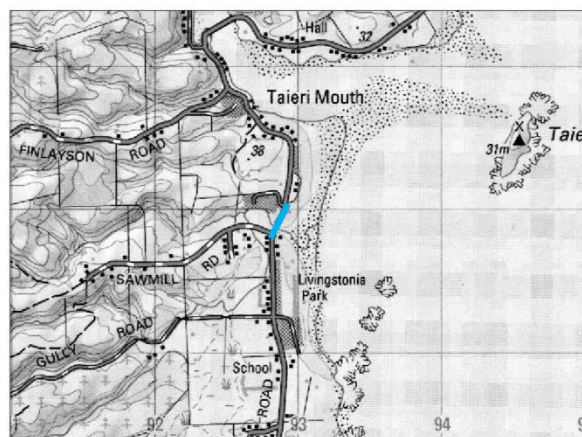
| Water body         | Description of mouth and boundary *                                                                         | Mouth grid reference                | Boundary grid reference             |
|--------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| 47. Tautuku River  | The “mouth” where the Fleming River enters, the “boundary” at the constriction upstream.                    | G47 (Edition 1 1983):346962, 347961 | G47 (Edition 1 1983):345960, 346961 |
| 48. Hukihuki Creek | The “mouth” where it enters the Waipati estuary, the “boundary” five times the width of the mouth upstream. | G47 (Edition 1 1983):291927, 292926 | G47 (Edition 1 1983):293928, 294927 |
| 49. Waipati River  | The “mouth” where it enters Waipati estuary, the “boundary” five times the width of the mouth upstream.     | G47 (Edition 1 1983):284925, 294924 | G47 (Edition 1 1983):281924, 291924 |

\* Taken from the NZMS 260 series of 1:50,000 scale maps.

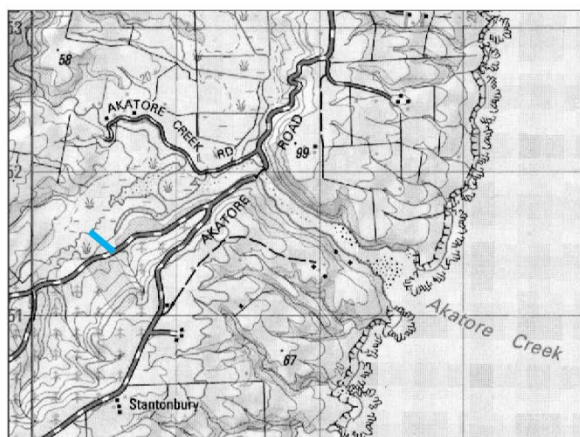
## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



**31 Taieri River**



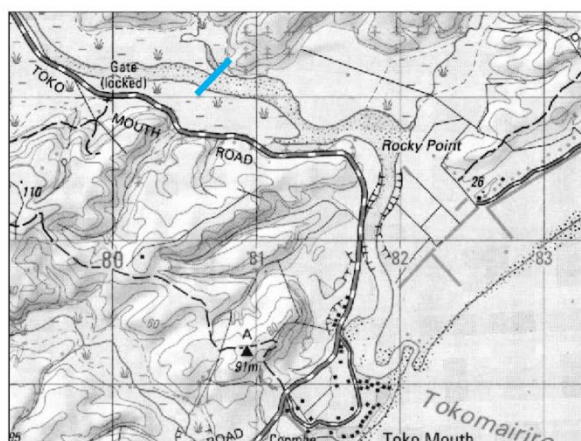
**32 "Sawmill Road" Creek**



**33 Akatore Creek**



**34 Bull Creek**



**35 Tokomairiro Stream**

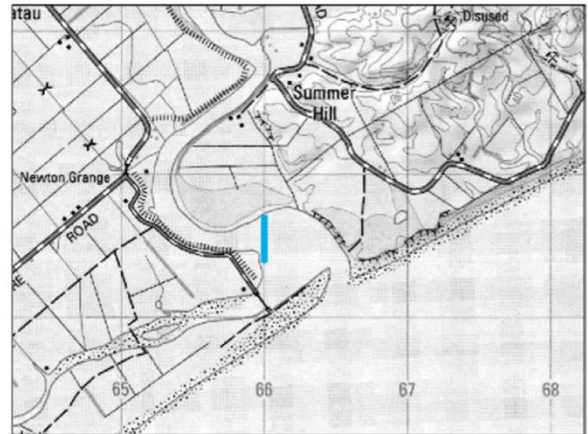


**36 Wangaloa Creek**

## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



**37 Washpool Creek**



**38 Clutha River/Mata-Au – Matau Branch**



**39 Clutha River/Mata-Au – Koau Branch**



**40 Karoro Creek**

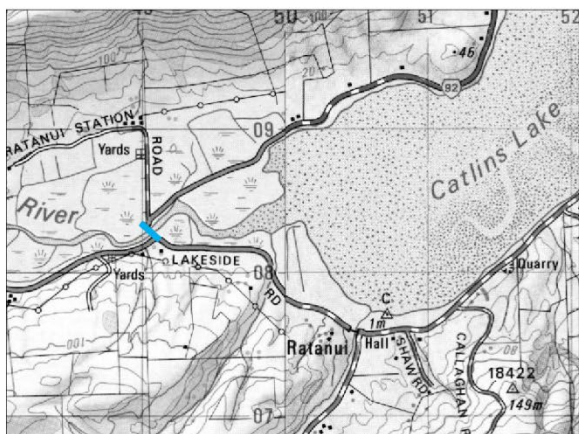


**41 Nugget Stream**



**42 Owaka River**

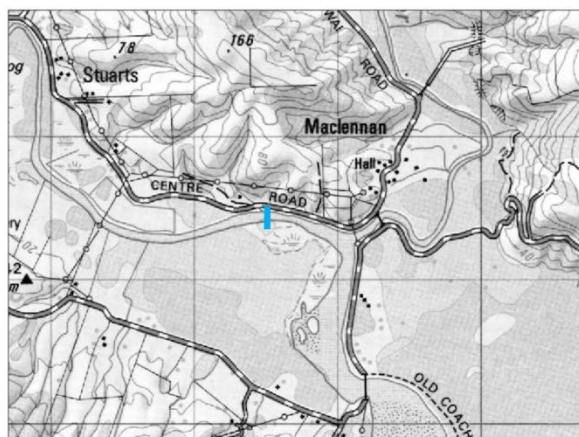
## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



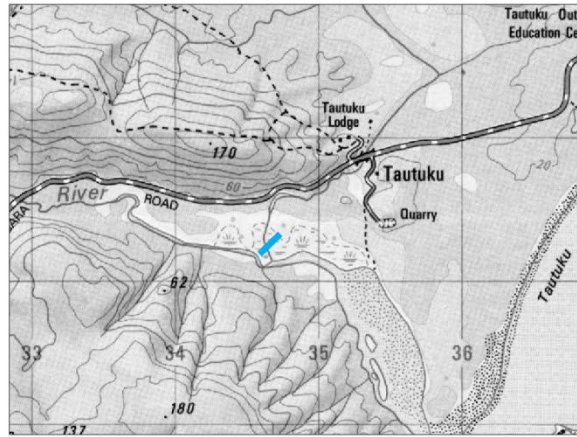
**43 Catlins River**



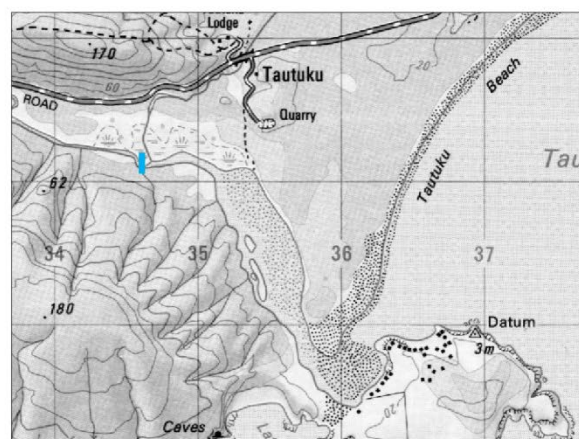
**44 Macleannan River**



**45 Tahakopa River**



**46 Fleming River**

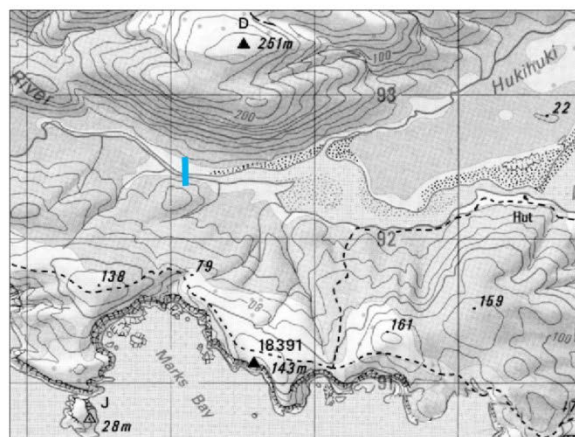


**47 Tautuku River**



**48 Hukihuki Creek**

## SCHEDULE 12: COASTAL MARINE AREA BOUNDARIES



**49 Waipati River**

### 13. Schedule of transitional provisions repealed by this Regional Plan: Water

The Otago Regional Council had an existing Regional Plan for Otago (commonly referred to as the Transitional Regional Plan), constituted by Section 368 of the Resource Management Act 1991. The Transitional Regional Plan was made up of notices, authorisations, bylaws, determinations, and resolutions in operation at the time of the enactment of the Resource Management Act (1 October 1991). These instruments were deemed to form rules in the Transitional Regional Plan, some of which related to the management of Otago's water bodies.

This Plan deletes the provisions of the Transitional Regional Plan relating to water management within Otago, as identified in this schedule.

| Repealed provision of Transitional Regional Plan                                                                                   | Regional Plan: Water provision replacing                                     |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Local Water Conservation (Lake Tuakitoto) Notice 1991: 3 "Regionally Significant Features"                                         | Schedule 1A; Schedule 9.                                                     |
| Local Water Conservation (Lake Tuakitoto) Notice 1991: 4 "Minimum Lake Level"                                                      | Policy 6.5.1; Rules 12.1.1.1 and 12.3.1.4.                                   |
| Local Water Conservation (Lake Tuakitoto) Notice 1991: 5.(1) "Water Rights and General Authorisations"                             | Policy 5.4.2.                                                                |
| Local Water Conservation (Lake Tuakitoto) Notice 1991: 5.(2) "Water Rights and General Authorisations"                             | No equivalent provision.                                                     |
| Local Water Conservation (Lake Tuakitoto) Notice 1991: 5.(3) "Water Rights and General Authorisations"                             | No equivalent provision.                                                     |
| Local Water Conservation (Lake Tuakitoto) Notice 1991: 6 "Limit of Notice"                                                         | Rule 12.1.2.1; covered by Section 14(3) of the Resource Management Act 1991. |
| Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 3 "Regionally Significant Features" | Schedule 1A.                                                                 |
| Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 4 "Right to dam not to be granted"  | Rule 12.3.1.3; Schedule 6.                                                   |
| Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 5 "Water Rights (General):-(1)"     | Policy 5.4.2.                                                                |
| Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 5 "Water Rights (General):-(2)"     | No equivalent provision.                                                     |
| Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 5 "Water Rights (General):-(3)"     | No equivalent provision.                                                     |
| Local Water Conservation (Pomahaka River and tributaries, and Lower Clutha River) Notice 1989: 6 "Limit of Notice"                 | Rule 12.1.2.1; covered by Section 14(3) of the Resource Management Act 1991. |
| Record of Determination of Appeal: Kakanui River minimum flow 4 September 1991                                                     | Schedule 2; Policies 6.4.2 and 6.4.3; Rule 12.1.4.3.                         |

SCHEDULE 13: TRANSITIONAL PROVISIONS REPEALED

| Repealed provision of Transitional Regional Plan                                   | Regional Plan: Water provision replacing                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Otago Catchment Board and Regional Water Board, General Authorisations 1988</b> |                                                                                                                                                                                                                                                                                                                                                 |
| General Authorisation 1: “Minor Agricultural Uses”                                 | Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.                                                                                                                                                                                                                                                                                                        |
| General Authorisation 2: “Irrigation Scheme Distribution”                          | Rules 12.1.4.1, 12.2.2.2, 12.11.2.1 and 12.11.2.3.                                                                                                                                                                                                                                                                                              |
| General Authorisation 3: “School Supply”                                           | Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.                                                                                                                                                                                                                                                                                                        |
| General Authorisation 4: “Spray Mixing”                                            | Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.                                                                                                                                                                                                                                                                                                        |
| General Authorisation 5: “Earthworks”                                              | Rules 12.1.2.2 to 12.1.2.5 and 12.2.2.2.                                                                                                                                                                                                                                                                                                        |
| General Authorisation 6: “Septic Tank Effluent”                                    | Rules 12.6.1.3 and 12.6.1.4.                                                                                                                                                                                                                                                                                                                    |
| General Authorisation 7: “Tracer Dye Discharge”                                    | Rule 12.11.3.1.                                                                                                                                                                                                                                                                                                                                 |
| General Authorisation 8: “Swimming Pool Discharge”                                 | Rule 12.11.2.1.                                                                                                                                                                                                                                                                                                                                 |
| General Authorisation 9: “Prospecting and Casual Mining”                           | Rules 12.1.2.2 to 12.1.2.5, 12.2.2.2, and 12.11.2.3.                                                                                                                                                                                                                                                                                            |
| General Authorisation 10: “Stormwater/ Drainage Discharges”                        | Rules 12.1.2.6, 12.3.2.2, 12.4.1.1, 12.4.1.2 and 12.5.1.1.                                                                                                                                                                                                                                                                                      |
| General Authorisation 11: “Herbicides”                                             | Rules 12.7.1.1 to 12.7.1.4.                                                                                                                                                                                                                                                                                                                     |
| General Authorisation 12: “Drilling”                                               | Rules 12.1.2.2 to 12.1.2.5, 12.2.2.2, 12.2.2.3 and 12.9.1.1.                                                                                                                                                                                                                                                                                    |
| General Authorisation 13: “Minor Dams”                                             | Rule 12.3.2.1.                                                                                                                                                                                                                                                                                                                                  |
| General Authorisation 14: “Farm Wastes Disposal”                                   | Rules 12.8.1.2 to 12.8.1.4.                                                                                                                                                                                                                                                                                                                     |
| General Authorisation 15: “Incidental Damming and Diversion”                       | Rules 12.3.2.1 and 12.3.2.3.                                                                                                                                                                                                                                                                                                                    |
| General Authorisation 16: “Land Stability Drainage”                                | Rules 12.1.2.6, 12.3.2.2, 12.5.1.1 and 12.11.2.3.                                                                                                                                                                                                                                                                                               |
| <b>Otago Catchment Board and Regional Water Board, Bylaw 1988</b>                  |                                                                                                                                                                                                                                                                                                                                                 |
| Clause 1, “General”, except as it relates to Section 3                             | No equivalent provision                                                                                                                                                                                                                                                                                                                         |
| Clause 2.1, “Maintenance of watercourses and defences against water”               | No equivalent provision                                                                                                                                                                                                                                                                                                                         |
| Clause 2.2, “Crossings”                                                            | Rules under 13.1 to 13.3, 13.5 (as it applies to the bed of a lake or river);<br>Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision.                                         |
| Clause 2.3, “Alteration to Watercourse”                                            | Rules under 13.4 and 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision.                                                                                                                                                                                                                                     |
| Clause 2.4, “Construction of a defence against water”                              | Rules under 13.2 and 13.3 (as it applies to the bed of a lake or river);<br>Rules under 14.3 (as it applies to land outside of the bed of a lake or river).                                                                                                                                                                                     |
| Clause 2.5, “Removal of shingle, sand, or other material”                          | Rules under 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision.                                                                                                                                                                                                                                              |
| Clause 2.6, “Vegetation”                                                           | Rules under 13.6 (as it applies to the bed of a lake or river), otherwise no equivalent provision.                                                                                                                                                                                                                                              |
| Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.1                     | Rules under 12.3; and 13.1 to 13.6, (as it applies to the bed of a lake or river), otherwise no equivalent provision;<br>Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision. |

# SCHEDULE 13: TRANSITIONAL PROVISIONS REPEALED

| Repealed provision of Transitional Regional Plan                                                                       | Regional Plan: Water provision replacing                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.2                                                         | Rules under 13.2 (as it applies to the bed of a lake or river);<br>Rules under 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision.                                             |
| Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.3                                                         | Rules under 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision;<br>Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision. |
| Clause 2.7, “Obstructions and impairment of efficiency”: 2.7.4                                                         | Rules under 13.5 (as it applies to the bed of a lake or river), otherwise no equivalent provision;<br>Rules under 14.3 and 14.4 (as it applies to land outside of the bed of a lake or river, but within seven metres of the margin of any lake, or of the top of the bank of any river), otherwise no equivalent provision. |
| Clause 2.8, “Access, damage etc.”                                                                                      | No equivalent provision.                                                                                                                                                                                                                                                                                                     |
| Clause 4, “Dams”: 4.1, “Construction and alteration”                                                                   | Rules under 12.3, 13.2 and 13.3.                                                                                                                                                                                                                                                                                             |
| Clause 4, “Dams”: 4.2, “Maintenance and removal”                                                                       | Rules under 13.3 and 13.4.                                                                                                                                                                                                                                                                                                   |
| Clause 5, “Underground water”: 5.1 to 5.7                                                                              | Rules under 12.2 and 14.1.                                                                                                                                                                                                                                                                                                   |
| Clause 5, “Underground water”: 5.8, “Control of pile driving, dredging etc”                                            | As it applies to the bed of a lake or river, Rules under 13.5.<br>Rules under 14.2.                                                                                                                                                                                                                                          |
| Clause 5, “Underground water”: 5.9, “Pollution of underground water”: 5.9.1                                            | Rules under 12.4 to 12.13.                                                                                                                                                                                                                                                                                                   |
| Clause 5, “Underground water”: 5.9, “Pollution of underground water”: 5.9.2                                            | Rules under 14.1 and 14.2.                                                                                                                                                                                                                                                                                                   |
| First Schedule                                                                                                         | No equivalent provision.                                                                                                                                                                                                                                                                                                     |
| Second Schedule                                                                                                        | No equivalent provision.                                                                                                                                                                                                                                                                                                     |
| Fifth Schedule                                                                                                         | No equivalent provision.                                                                                                                                                                                                                                                                                                     |
| Sixth Schedule                                                                                                         | No equivalent provision.                                                                                                                                                                                                                                                                                                     |
| Eighth Schedule                                                                                                        | No equivalent provision.                                                                                                                                                                                                                                                                                                     |
| <b>Waitaki Catchment Board and Regional Water Board, Bylaw Confirming Resolution, Hilderthorpe Floodway Bylaw 1988</b> |                                                                                                                                                                                                                                                                                                                              |
| Clauses 1 to 10                                                                                                        | No equivalent provision                                                                                                                                                                                                                                                                                                      |
| <b>Taieri River Trust Bylaw No.1 1960</b>                                                                              |                                                                                                                                                                                                                                                                                                                              |
| Clauses 1 to 30                                                                                                        | No equivalent provision                                                                                                                                                                                                                                                                                                      |

**14.** *[Repealed – 1 March 2012]*

## 15. Schedule of characteristics and numerical limits and targets for Good Quality Water in Otago lakes and rivers

**Table 15.1 Characteristics indicative of Good Quality Water**

| Characteristic         | Description                                                                                                                                                                                                                                      | Contaminant effect                                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Clarity</b>         | When standing in knee-deep water, the bed is easily and clearly seen.                                                                                                                                                                            | Sediment reduces the clarity of water, and has an adverse effect on freshwater fish and invertebrate habitat.                                                                                         |
| <b>Colour</b>          | Water-colour is not altered by contamination.<br>Some rivers have natural colour such as tannin-stain.                                                                                                                                           | A change in colour can be indicative of contamination by sediment or organic matter, linked to potentially high concentrations of DRP, NNN, ammoniacal nitrogen or <i>E coli</i> .                    |
| <b>Sediment</b>        | Riffles and runs are free of obvious clay and silt deposits.<br>Walking across a riffle or run should not produce an obvious plume.<br>Some rivers are naturally high in sediment.                                                               | Sediment affects the colour of water, and has an adverse effect on freshwater fish and invertebrate habitat, and can result in high concentrations of phosphorus, and allow <i>E coli</i> to persist. |
| <b>Smell</b>           | Water is odourless.                                                                                                                                                                                                                              | Smell can be indicative of contamination from a source high in ammoniacal nitrogen or <i>E coli</i> or the decay of excessive amounts of algae which limits people's opportunity to appreciate water. |
| <b>Algae</b>           | Filamentous algae in rivers should cover less than 30% of the river bed.<br>Floating algae occurring in lakes and rivers should not reduce water clarity.<br>Algal growth in rivers or lakes should not cause slime on the surface of the water. | Excessive nitrogen and phosphorus contribute to algal growth which has an adverse effect on freshwater fish and invertebrate habitat, amenity and recreation values, and angling opportunities.       |
| <b>Bank appearance</b> | Functioning riparian margins: <ul style="list-style-type: none"> <li>▪ Vegetation is healthy.</li> <li>▪ Banks are stable.</li> <li>▪ No obvious livestock disturbance.</li> </ul>                                                               | Healthy riparian margins mitigate sediment and nutrient discharges, and provide habitat for invertebrates.                                                                                            |

**Table 15.2 Receiving water numerical limits and targets for achieving Good Quality Water**

The limits for Groups 1, 2 and 3 are achieved when 80% of samples collected at a site, when flows are at or below median flow, over a rolling 5-year period, meet or are better than the limits in Schedule 15.

A target date of 31 March 2025 is set when the contaminant concentration does not meet the limit as at 31 March 2012.

**Table 15.2.1: Receiving Water Group 1**

|                                                                                                            | Nitrate-nitrite<br>nitrogen | Dissolved<br>reactive<br>phosphorus | Ammoniacal<br>nitrogen | <i>Escherichia coli</i> | Turbidity     |
|------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------|------------------------|-------------------------|---------------|
|                                                                                                            | 0.444 mg/l                  | 0.026 mg/l                          | 0.1 mg/l               | 260 cfu/100 ml          | 5 NTU         |
| <b>Catlins</b>                                                                                             | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2025 |
| <b>Careys Creek</b>                                                                                        | 31 March 2012               |                                     |                        |                         |               |
| <b>Kaikorai</b>                                                                                            | 31 March 2012               | 31 March 2012                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| <b>Leith</b>                                                                                               | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| <b>Mokoreta</b> (within Otago)                                                                             | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| <b>Owaka</b>                                                                                               | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2025           | 31 March 2025 |
| <b>Pomahaka</b> , downstream of Glenken                                                                    | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2025           | 31 March 2025 |
| <b>Tahakopa</b>                                                                                            | 31 March 2012               | 31 March 2012                       | 31 March 2012          | 31 March 2025           | 31 March 2025 |
| <b>Tokomairiro</b>                                                                                         | 31 March 2012               | 31 March 2012                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| <b>Tuapeka</b>                                                                                             | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Waitahuna</b>                                                                                           | 31 March 2012               | 31 March 2012                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| <b>Waitati</b>                                                                                             | 31 March 2012               | 31 March 2012                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| <b>Waiwera</b>                                                                                             | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| Any unlisted tributary on the true right bank of the <b>Clutha/Mata-Au</b> , south of Judge Creek          | 31 March 2012               |                                     |                        |                         |               |
| Any unlisted tributary on the true left bank of the <b>Clutha/Mata-Au</b> , south of the Tuapeka catchment |                             |                                     |                        |                         |               |
| Any unlisted catchment that discharges to the <b>coast</b> , south of Taieri Mouth                         |                             |                                     |                        |                         |               |

# SCHEDULE 15: GOOD QUALITY WATER

**Table 15.2.2: Receiving Water Group 2**

|                                                                                                                                                                            | Nitrate-nitrite<br>nitrogen | Dissolved<br>reactive<br>phosphorus | Ammoniacal<br>nitrogen | <i>Escherichia coli</i> | Turbidity     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------|------------------------|-------------------------|---------------|
|                                                                                                                                                                            | 0.075 mg/l                  | 0.01 mg/l                           | 0.1 mg/l               | 260 cfu/100 ml          | 5 NTU         |
| <b>Cardrona</b>                                                                                                                                                            | 31 March 2012               |                                     |                        |                         |               |
| <b>Clutha/Mata-Au</b> and any<br>unlisted<br>tributary<br>(Luggate to<br>mouth,<br>including Lake<br>Roxburgh, and<br>excluding<br>tributaries<br>described in<br>Group 1) | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2025 |
| <b>Fraser</b>                                                                                                                                                              | 31 March 2012               |                                     |                        |                         |               |
| <b>Kakanui</b>                                                                                                                                                             | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Kawarau</b><br>downstream of<br>the Shotover<br>confluence                                                                                                              | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Lake Dunstan</b>                                                                                                                                                        | 31 March 2012               |                                     |                        |                         |               |
| <b>Lindis</b>                                                                                                                                                              | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Luggate</b>                                                                                                                                                             | 31 March 2012               |                                     |                        |                         |               |
| <b>Manuherikia</b>                                                                                                                                                         | 31 March 2012               | 31 March 2025                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Mill Creek</b><br>(tributary to<br>Lake Hayes)                                                                                                                          | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Pomahaka,</b><br>upstream of<br>Glenken                                                                                                                                 | 31 March 2012               |                                     |                        |                         |               |
| <b>Shag</b>                                                                                                                                                                | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Shotover</b>                                                                                                                                                            | 31 March 2012               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | Exempt        |
| <b>Taieri</b>                                                                                                                                                              | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2025           | 31 March 2025 |
| <b>Trotters</b>                                                                                                                                                            | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Waianakarua</b>                                                                                                                                                         | 31 March 2025               | 31 March 2012                       | 31 March 2012          | 31 March 2012           | 31 March 2012 |
| <b>Waikouaiti</b>                                                                                                                                                          | 31 March 2012               |                                     |                        |                         |               |
| <b>Waipori</b>                                                                                                                                                             |                             |                                     |                        |                         |               |
| <b>Waitaki</b><br>tributaries<br>within Otago                                                                                                                              | 31 March 2025               | 31 March 2025                       | 31 March 2012          | 31 March 2025           | 31 March 2012 |
| Any unlisted<br>catchment that<br>discharges to<br>the <b>coast</b> , north<br>of Taieri Mouth                                                                             | 31 March 2012               |                                     |                        |                         |               |

# SCHEDULE 15: GOOD QUALITY WATER

**Table 15.2.3: Receiving Water Group 3**

|                                                | Nitrate-nitrite nitrogen | Dissolved reactive phosphorus | Ammoniacal nitrogen | <i>Escherichia coli</i> | Turbidity |
|------------------------------------------------|--------------------------|-------------------------------|---------------------|-------------------------|-----------|
|                                                | 0.075 mg/l               | 0.005 mg/l                    | 0.01 mg/l           | 50 cfu/100 ml           | 3 NTU     |
| Clutha/Mata-Au, above Luggate                  | 31 March 2012            |                               |                     |                         |           |
| Dart                                           | 31 March 2012            | 31 March 2012                 | 31 March 2012       | 31 March 2012           | Exempt    |
| Kawarau, upstream of the Shotover confluence   | 31 March 2012            |                               |                     |                         |           |
| Matukituki                                     | 31 March 2012            | 31 March 2012                 | 31 March 2012       | 31 March 2012           | Exempt    |
| Tributaries to Lakes Hawea, Wakatipu, & Wanaka | 31 March 2012            |                               |                     |                         |           |

The limits for Groups 4 and 5 are achieved when 80% of samples collected at a site, over a rolling 5-year period, meet or are better than the limits in Schedule 15.

A target date of 31 March 2025 is set when the contaminant concentration does not meet the limit as at 31 March 2012.

**Table 15.2.4: Receiving Water Group 4**

|                        | Total nitrogen | Total phosphorus | Ammoniacal nitrogen | <i>Escherichia coli</i> | Turbidity     |
|------------------------|----------------|------------------|---------------------|-------------------------|---------------|
|                        | 0.55 mg/l      | 0.033 mg/l       | 0.1 mg/l            | 126 cfu/100 ml          | 5 NTU         |
| Lake Hayes             | 31 March 2012  | 31 March 2025    | 31 March 2012       | 31 March 2012           | 31 March 2012 |
| Lake Johnson           | 31 March 2025  | 31 March 2025    | 31 March 2012       | 31 March 2012           | 31 March 2012 |
| Lake Onslow            | 31 March 2012  | 31 March 2025    | 31 March 2012       | 31 March 2012           | 31 March 2025 |
| Lake Tuakitoto         | 31 March 2025  | 31 March 2025    | 31 March 2012       | 31 March 2025           | 31 March 2025 |
| Lake Waipori & Waiholā | 31 March 2025  | 31 March 2025    | 31 March 2012       | 31 March 2012           | 31 March 2025 |

**Table 15.2.5: Receiving Water Group 5**

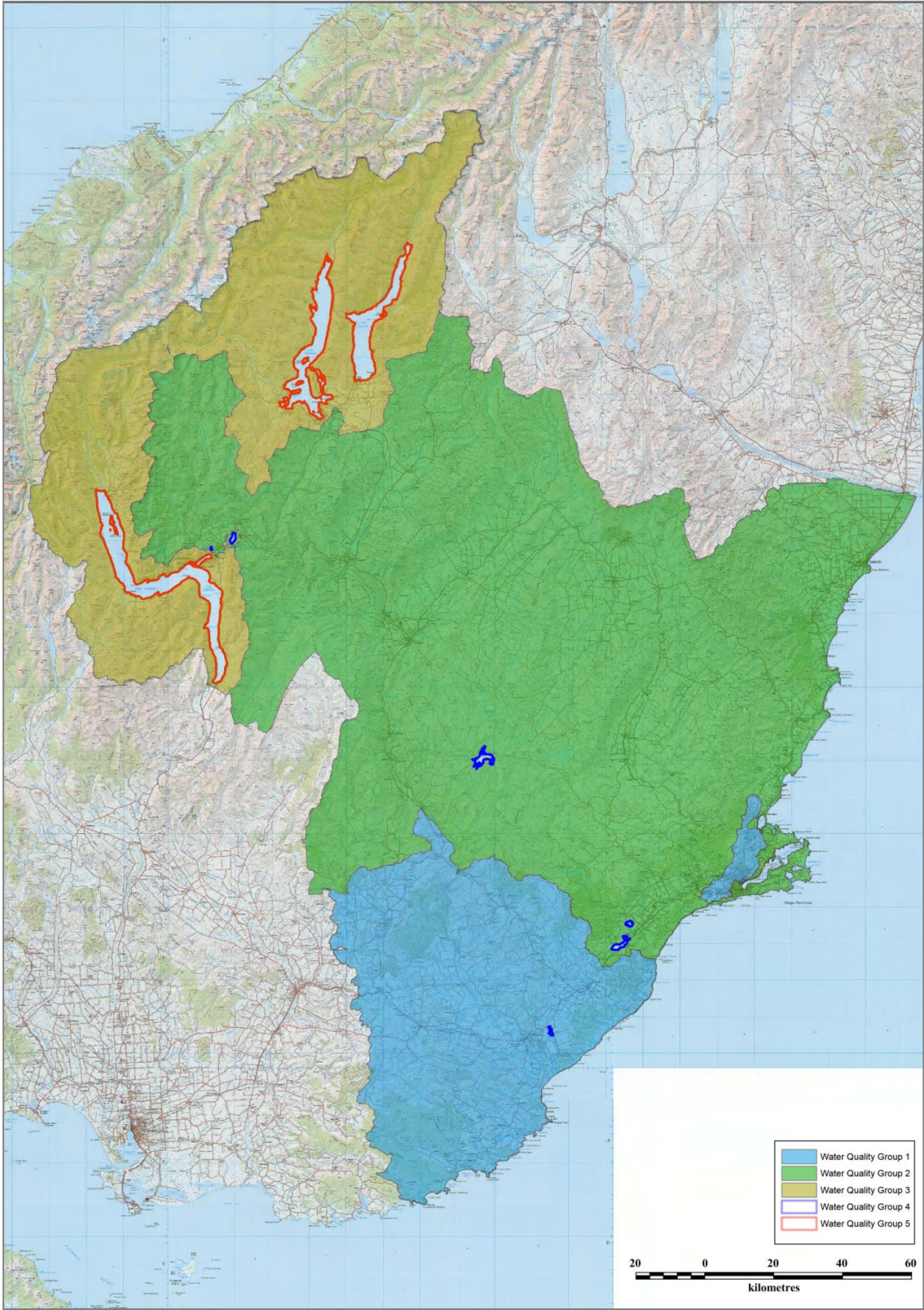
|               | Total Nitrogen | Total Phosphorus | Ammoniacal nitrogen | <i>Escherichia coli</i> <sup>3</sup> | Turbidity     |
|---------------|----------------|------------------|---------------------|--------------------------------------|---------------|
|               | 0.1 mg/l       | 0.005mg/l        | 0.01 mg/l           | 10 cfu/100 ml                        | 3 NTU         |
| Lake Hawea    | 31 March 2012  |                  |                     |                                      |               |
| Lake Wakatipu | 31 March 2012  | 31 March 2025    | 31 March 2012       | 31 March 2012                        | 31 March 2012 |
| Lake Wanaka   | 31 March 2012  |                  |                     |                                      |               |

mg/l = milligrams per litre

cfu/100 ml = colony-forming units per 100 millilitres

NTU = nephelometric turbidity units

Map 15.1      Receiving Water Groups



**Table 15.3     Aquifer Concentration Limits**

| Aquifer/Zone | Aquifer N concentration limit (mg/l) | Reason for Limit |
|--------------|--------------------------------------|------------------|
| *            | *                                    | *                |

\* To be populated following aquifer studies

SCHEDULE 16: [REPEALED]

**16.** *[Repealed – 21 August 2025]*

**17. ~~Schedule of rules applying to plantation forestry in Otago~~*[Repealed – 24 September 2026]***

~~The Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017 (NES PF) came into effect on 1 May 2018. The regulation set out rules for core plantation forestry activities and apply to any forest larger than one hectare, planted specifically for commercial activities and harvest. In general, the standards prevail over rules in regional and district plans, however, in some cases stricter rules in this Plan may apply.~~

~~The standards are online here:~~

~~<http://www.legislation.govt.nz/regulation/public/2017/0174/latest/whole.html>.~~<sup>†</sup>

~~In this Plan, stricter rules apply that give effect to Objective A1 of the National Policy Statement for Freshwater Management: *To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the use and development of land, and of discharges of contaminants.*~~

~~Stricter Water Plan rules are applied:~~

- ~~• In accordance with Regulation 6 of the NES PF;~~
- ~~• To achieve Objective 7.A.2 in the Water Plan, in accordance with Policy 7.B.2 in the Water Plan; and~~
- ~~• In particular, to protect indigenous non-migratory fish such as galaxiid species, which are classified as threatened and are particularly vulnerable to habitat disturbance and sedimentation.~~

~~For this reason, some rules in sections 12.C and 13.5 of this Plan prevail over the NES PF in accordance with Section 43A(1) of the RMA.~~

~~A summary of the rules that apply to plantation forestry in Otago is in Table 17.1 below.~~

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<sup>†</sup> ~~Link to Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017, retrieved 29 March 2018.~~

**SCHEDULE 17: ~~[REPEALED] RULES APPLYING TO  
PLANTATION FORESTRY IN OTAGO~~**

**Table 17.1—Rules for Plantation Forestry in Otago**

| <b>National Environmental Standards for Plantation Forestry (Part 2)</b>                                                                     | <b>Regional Plan: Water for Otago</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subpart 1—Afforestation</b><br>All regulations apply                                                                                      | Not applicable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Subpart 8—Replanting</b><br>All regulations apply                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Subpart 2—Pruning and thinning to waste</b><br>All regulations apply                                                                      | <b>Chapter 12: Rules Water Take, Use &amp; Management</b><br><br><b>12.C—Other discharges</b><br><br><b>12.C.1—Permitted activities: No resource consent required</b><br><br><b>12.C.1.1—(d) (e) (f), excluding (iii)</b><br><br><b>12.C.2—Restricted discretionary activities: Resource consent required</b><br><br><b>12.C.2.1</b><br><br><b>12.C.2.2</b><br><br><b>12.C.2.4</b><br><br><b>12.C.3—Discretionary activities: Resource consent required</b><br><br><b>12.C.3.2</b> |
| <b>Subpart 3—Earthworks</b><br>All regulations apply, except 26 replaced (see opposite and 13.5 rules below in relation to ephemeral rivers) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Subpart 5—Forest quarrying</b><br>All regulations apply, except 56 (1) replaced (see opposite)                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Subpart 6—Harvesting</b><br>All regulations apply, except 65 replaced (see opposite).                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Subpart 7—Mechanical land preparation</b><br>All regulations apply, except 74 (6) replaced (see opposite)                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Subpart 9—Ancillary activities</b><br>All regulations apply, except 90 replaced (see opposite)                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

*Table continues next page.*

SCHEDULE 17: ~~[REPEALED] RULES APPLYING TO  
PLANTATION FORESTRY IN OTAGO~~

**Table 17.1 Rules for Plantation Forestry in Otago** *continued*

| National Environmental Standards for Plantation Forestry (Part 2)                                                                                                                                                                            | Regional Plan: Water for Otago                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Subpart 3—Earthworks</b></p> <p>All regulations apply (except 26 replaced, see above). In addition to 28(2), 13.5.3.1 rule opposite also applies for ephemeral flow paths.</p>                                                         | <p><b>Chapter 13: Rules: Land Use on Lake or River Beds or Regionally Significant Wetlands</b></p> <p><b>13.5—Alteration of the bed of a lake or river, or of a Regionally Significant Wetland</b></p> <p><b>13.5.1—Permitted activities: No resource consent required.</b></p> <p><b>13.5.1.1 (g)</b></p> <p><b>13.5.3—Discretionary activities: Resource consent required</b></p> <p><b>13.5.3.1</b></p> |
| <p><b>Subpart 4—River crossings</b></p> <p>All regulations apply. In addition to 44, 13.5.1.1(g) rule opposite applies, if this rule cannot be met then 13.5.3.1 applies.</p>                                                                |                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>Subpart 6—Harvesting</b></p> <p>All regulations apply. In addition to 68(3), rule 13.5.3.1 opposite applies if logs are to be dragged through streams less than 3 metres wide.</p>                                                     |                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>Subpart 9—Ancillary activities</b></p> <p>All regulations apply. In addition to 89, 13.5.1.1(g) rule opposite applies, if this rule cannot be met then 13.5.3.1 applies.</p>                                                           |                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>Subpart 10—General provisions</b></p> <p>All regulations apply. In addition to 97, rule 13.5.3.1 opposite also applies to any bed disturbance outside fish spawning seasons as defined by the Fish Spawning Indicator.<sup>2</sup></p> |                                                                                                                                                                                                                                                                                                                                                                                                            |

<sup>2</sup> This is an online mapping tool developed by the Ministry for Primary Industries, which can be found on its website: <https://www.mpi.govt.nz/growing-and-harvesting/forestry/national-environmental-standards-for-plantation-forestry/fish-spawning-indicator/>

## SCHEDULE 18: SCHEDULE OF POND DROP TEST REQUIREMENTS AND CRITERIA

### 18. Schedule of pond drop test requirements and criteria

This schedule outlines the requirements for undertaking pond drop tests on animal effluent storage facilities that are part of an animal effluent system and the pass criteria for drop test results.

#### Requirements

- A minimum of 24 hours of accurate data within a single test period.
- Total test error of less than  $\pm 1$  mm.
- Continuous readings are to be taken over the entire test period at not more than 10 second intervals.
- Any change in pond fluid level over the test period needs to be accounted for.
- Ponds must be at or over 75% design depth (excluding freeboard) before a test can be undertaken.
- The level of sludge or crust on the pond during the test should be minimal so that it does not impact on test results.
- The pond surface is not frozen during any part of the testing.
- An anemometer is installed for the duration of the test and only data obtained when the wind speed does not exceed 50 kilometres per hour (14 m per second) at the test site is used in the test results.

#### Table 18.1 Maximum allowable pond level change

When tested in accordance with the requirements above, the animal effluent storage facility is considered to meet the pond drop test criteria if the maximum pond level change does not exceed the following:

| Maximum design depth of pond (m)<br>excluding freeboard | Maximum allowable pond level<br>change (mm per 24 hours) |
|---------------------------------------------------------|----------------------------------------------------------|
| <0.5                                                    | 1.2                                                      |
| 0.5 to 1.0                                              | 1.4                                                      |
| 1.0 to 1.5                                              | 1.6                                                      |
| 1.5 to 2.0                                              | 1.8                                                      |
| >2.0                                                    | 2.0                                                      |

# SCHEDULE 19: SCHEDULE OF PROGRESSIVE IMPLEMENTATION OF ANIMAL EFFLUENT STORAGE REQUIREMENTS

## 19. Schedule of progressive implementation of animal effluent storage requirements

Many animal effluent storage facilities in Otago will need to be upgraded to meet the requirements of this Plan. The intent of this Schedule is to stage implementation of the Plan's requirements according to the environmental risk posed by existing animal effluent storage facilities. To assess this risk, Schedule 19 provides two calculations that will determine the current storage volume available on a landholding (in days) as follows:

- Schedule 19A sets out the calculations required to determine days of storage available on a landholding.
- Schedule 19B sets out the date by which a complete resource consent application must be lodged with the Otago Regional Council under Rule 14.7.3.1 (and correspondingly Rule 14.7.1.2 ceases to apply). A complete application is one that is not determined as being incomplete by the Otago Regional Council pursuant to section 88 of the Resource Management Act 1991.

For clarity, this calculation under Schedule 19A does not determine the volume of the storage facility under section 14.7, it only determines the date that applications must be received.

### 19A Storage calculation

Two calculations are required to determine the current minimum number of days of animal waste storage available on a landholding. These are set out below.

#### Step One: Daily waste volume

To calculate the daily waste volume per farm, use the following formula:

$$\text{Daily waste volume (m}^3\text{)} = \text{Maximum number of cows milked per day} \times 0.05^{\wedge} \times \text{Maximum number of times per day that cows are milked during milking season}$$

<sup>^</sup> being 0.05 cubic metres (50 litres per cow per day)

For example:

During milking season, Farm A milks 500 cows twice per day. Using the formula above:

$$\text{Daily waste volume (m}^3\text{)} = 500 \times 0.05 \times 2$$

$$\text{Daily waste volume (m}^3\text{)} = 50$$

# SCHEDULE 19: SCHEDULE OF PROGRESSIVE IMPLEMENTATION OF ANIMAL EFFLUENT STORAGE REQUIREMENTS

## Step Two:

To calculate the minimum number of days of storage available, use the following formula:

$$\begin{aligned} \text{Days of storage available} &= \text{Actual storage volume (m}^3\text{)} \div \text{Daily waste volume (m}^3\text{)} \\ &^{\wedge} \text{ determined assuming that the storage facility is empty.} \end{aligned}$$

For example:

As calculated above, Farm A has a daily waste volume of 50 m<sup>3</sup>. The farm has a storage pond with a storage volume of 1000 m<sup>3</sup>. Using the formula above:

$$\begin{aligned} \text{Days of storage available} &= 1000 \div 50 \\ \text{Days of storage available} &= 20 \end{aligned}$$

Using the table in Schedule 19B, Otago Regional Council must receive a complete resource consent application under Rule 14.7.3.1 from Farm A no later than two years from the date Plan Change 8 is made operative.

## 19B Application dates

The following table sets out the dates by which complete resource consent applications must be received under Rule 14.7.3.1 (and correspondingly Rule 14.7.1.2 ceases to apply). The “application date” is the date Plan Change 8 is made operative, plus the number of years in the “year” column below.

| Days of storage available as calculated in accordance with Schedule 19A | Year |
|-------------------------------------------------------------------------|------|
| 0 – 10                                                                  | 0.5  |
| 11 – 40                                                                 | 2    |
| 41+                                                                     | 3    |

## **20. Schedule defining Suitably Qualified Persons**

A suitably qualified person for the purposes of this schedule is a person who has been certified by the Otago Regional Council as being appropriately qualified and experienced in accordance with the requirements below.

### **Requirements – Animal Effluent systems**

For the purposes of Rules 14.7.1.1(b) and 14.7.1.1A(b) and Schedule 21(2)(j), a Suitably Qualified Person has either:

- (a) A relevant tertiary qualification in agricultural engineering, natural resources engineering or civil engineering and at least five years' professional experience in designing and constructing effluent management systems; or
- (b) A relevant equivalent qualification (for example, international qualifications) and at least five years' professional experience in designing and constructing effluent management systems; or
- (c) At least ten years' professional experience in designing and constructing effluent management systems.

### **Requirements – Calculations using the Dairy Effluent Storage Calculator**

For the purposes of Rules 14.7.1.1(a) and 14.7.2.1(a), a Suitably Qualified Person has:

- (a) For undertaking a calculation using the Dairy Effluent Storage Calculator, at least five years' relevant professional experience in designing effluent management systems, and
- (b) For determining a conversion factor for animals that are not dairy cows, a relevant scientific tertiary qualification or relevant research experience.

## 21. Schedule of management plan requirements

- (1) A management plan for the purpose of preventing the unauthorised discharge of liquid or solid animal effluent to water is:
  - (a) Prepared by the landholding owner or their agent and retained on the landholding, identifying the matters set out in clause 2 below;
  - (b) Reviewed at least once every 12 months by the landholding owner or their agent, and the outcome of the review documented; and
  - (c) Provided to the Otago Regional Council upon request.
- (2) The management plan must contain the following:
  - (a) Physical address of where the animal effluent system is located, and the land where liquid or solid animal effluent is to be applied;
  - (b) A description of the landholding ownership, and the contact details of the owner and the person in charge;
  - (c) Legal description(s) of the landholding;
  - (d) A list of all the relevant resource consents held for the landholding and their expiry dates;
  - (e) A map(s) or aerial or satellite photograph(s) showing the locations of:
    - (i) The boundaries of the landholding;
    - (ii) The location of any dairy shed, animal effluent storage facilities, and any other components of an animal effluent system;
    - (iii) Lakes, rivers, natural wetlands, bores, soak holes, the coastal marine area, water supply for human consumption and dwellings within the landholding;
    - (iv) The area of land where liquid or solid animal effluent is to be applied, and in relation to this area:
      - Soil types and their risk profile<sup>3</sup>;
      - Any critical source areas and the locations of known subsurface drains;
  - (f) Operational procedures for using and maintaining the animal effluent system and for managing the discharge of animal effluent;
  - (g) Inspection, monitoring and reporting requirements and timeframes;
  - (h) The records of pond drop tests of the animal effluent storage facility undertaken at least every five years (excluding above-ground tanks, bladders, solid animal effluent storage facilities and an animal effluent storage facility with a leak detection system);

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<sup>3</sup> A digital soil map for New Zealand can be found online at <https://smap.landcareresearch.co.nz/>

SCHEDULE 21: SCHEDULE OF MANAGEMENT PLAN  
REQUIREMENTS

- (i) Contingency measures to prevent the discharge of liquid or solid animal effluent to a water body, an artificial watercourse, or the coastal marine area, either directly or indirectly;
- (j) Identification of measures to be taken to respond to a leak and the timeframe for response; including, for animal effluent storage facilities with a leak detection system where a leak is detected, a requirement for an assessment by a Suitably Qualified Person to be undertaken as soon as practicable and no later than two months of the detection to determine whether the leak is within the normal operating parameters of the pond; and
- (k) Responses to any other system failures or emergencies, including timeframes for response.



# 21

## Glossary

Terms marked with an asterisk \* are terms defined by the Resource Management Act 1991.

In this Plan, the spelling of Māori words using ng and k is interchangeable (for example Ngāi Tahu and Kāi Tahu).

|                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Abandoned structure</b>                                                                                                               | A structure that is no longer required or utilised for the purpose for which it was erected or placed.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Access strip*</b>                                                                                                                     | Means a strip of land created by the registration of an easement in accordance with Section 237B (of the Resource Management Act 1991) for the purpose of allowing public access to or along any river, or lake, or the coast, or to any esplanade reserve, esplanade strip, other reserve, or land owned by the local authority or by the Crown (but excluding all land held for a public work except land held, administered or managed under the Conservation Act 1987 and the Acts named in the First Schedule to that Act). |
| <b>Adverse effect</b>                                                                                                                    | A detrimental effect.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Aerial discharge</b>                                                                                                                  | The discharge of any agrichemical from any aircraft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b><u>Agricultural and horticultural activities</u></b><br><i>(definition only applies where term is <u>underlined</u> in this Plan)</i> | All activities involved with the primary industries of agriculture and horticulture, including common stock drinking-water schemes, but excludes processing agricultural and horticulture produce.                                                                                                                                                                                                                                                                                                                               |
| <b>Allocation limit</b>                                                                                                                  | The maximum flow or quantity of water in a water body, which is able to be allocated to resource consents for taking.                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Alluvium</b>                                                                                                                          | Sediment including rock, gravel, sand or silt material deposited by flowing water on floodplains and in lake and river beds, as a result of alluvial processes.                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Alteration of the bed</b>                                                                                                             | Any bed disturbance, reclamation or deposition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Amenity values*</b>                                                                                                                   | Means those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.                                                                                                                                                                                                                                                                                                                            |
| <b>Animal effluent storage facility</b>                                                                                                  | A pond, tank, or structure primarily used for the containment or storage of animal effluent, but excludes any ancillary structures for the collection, conveyance or treatment of liquid or solid animal effluent, such as sumps, stone traps and weeping walls.                                                                                                                                                                                                                                                                 |
| <b>Animal effluent system</b>                                                                                                            | Means the collection, storage, or treatment, of liquid or solid animal effluent.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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| <b>Animal waste</b>                                                                                                 | Faeces or urine from any animal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Annual renewable yield</b>                                                                                       | <i>[Repealed – 1 March 2012]</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b><u>Annual volume</u></b><br><i>(definition only applies where term is <u>underlined</u> in this Plan)</i>        | The volume of water that can be taken or diverted in any 12-month period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Anticipated environmental result</b>                                                                             | The intended result or outcome on the environment as a consequence of implementing the policies and methods.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b><u>Any other activities</u></b><br><i>(definition only applies where term is <u>underlined</u> in this Plan)</i> | Activities that are not <u>agricultural and horticultural activities</u> , <u>hydro-electricity generation</u> , <u>industrial and commercial activities</u> , <u>tourism and recreation facilities</u> , or <u>town and community water supplies</u> .                                                                                                                                                                                                                                                                                    |
| <b>Aquatic plant</b>                                                                                                | Any plant species that grows in water and is either totally or predominantly submerged in water.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Aquifer</b>                                                                                                      | A geological formation capable of holding water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Aquifer compression</b>                                                                                          | A reduction in an aquifer's capacity to hold water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Archaeological site</b>                                                                                          | Any place in New Zealand that <ul style="list-style-type: none"> <li>(a) EITHER –             <ul style="list-style-type: none"> <li>(i) Was associated with human activity that occurred before 1900; or</li> <li>(ii) Is the site of the wreck of any vessel where that wreck occurred before 1900; and</li> </ul> </li> <li>(b) Is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand.</li> </ul> <p>- defined by Section 2 of the Historic Places Act 1993.</p> |
| <b>Artesian pressure</b>                                                                                            | The pressure of water in a confined aquifer resulting in water level rise above the bottom of the confining layer.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Assessed maximum annual take</b>                                                                                 | The sum of the takes of groundwater as calculated under Method 15.8.3.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| <b>Assimilative capacity</b> | The ability of a water body to assimilate contaminants without adversely affecting the natural and human use values supported by the water body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Augmentation</b>          | Increasing the supply of available water through the active management of water resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Back-flow</b>             | The return of water to the source water body, through the device used to take water, including back-siphoning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Bed*</b>                  | Means, - <ul style="list-style-type: none"> <li>(a) In relation to any river-               <ul style="list-style-type: none"> <li>(i) For the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the river cover at its annual fullest flow without overtopping its banks;</li> <li>(ii) In all other cases, the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and</li> </ul> </li> <li>(b) In relation to any lake, except a lake controlled by artificial means, -               <ul style="list-style-type: none"> <li>(i) For the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the lake cover at its annual highest level without exceeding its margin;</li> <li>(ii) In all other cases, the space of land which the waters of the lake cover at its highest level without exceeding its margin; and</li> </ul> </li> <li>(c) In relation to any lake controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level; and</li> <li>(d) In relation to the sea, the submarine areas covered by the internal waters and the territorial sea.</li> </ul> |
| <b>Bed disturbance</b>       | Any activity which affects the bed or bank of a water body and includes any excavation, dredging, drilling, tunnelling, and any widening, deepening or altering of the course of the water body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Bedform</b>               | The topography or shape of the bed of a lake or river.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Bed material</b>          | The sand, gravel or other alluvium forming part of the bed of a lake or river.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Benthic invertebrate</b>  | An animal without a backbone (e.g. snail, crustacean, worm, insect) living on, under, or within the bed material of a water body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>BOD<sub>5</sub></b>       | The quantity of oxygen consumed by microbial and chemical processes over a five day period at 20 degrees.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <b>Bore</b>                                 | Every device or means, including any well or pit, which is drilled or constructed for the purpose of taking groundwater, or which results in groundwater being taken, other than piezometers or other monitoring devices used for water sampling purposes only.                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Bore interference</b>                    | The reduced ability of users in a localised area to take water from a bore, due to the taking of water from another bore, reducing the pressure and/or the level of groundwater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Bunding</b>                              | Constructing an embankment or low wall (usually concrete) designed to contain accidental spillage of a stored liquid.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>CFU</b>                                  | Colony-Forming Units, an indication of faecal contamination.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Cleanfill</b>                            | A natural material such as sand, gravel and rock, and such other materials as concrete, brick or demolition products that are free of soluble materials and are therefore not subject to biological or chemical breakdown.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Coastal marine area*</b>                 | Means the foreshore, seabed, and coastal water, and the air space above the water - <ul style="list-style-type: none"> <li>(a) Of which the seaward boundary is the outer limits of the territorial sea:</li> <li>(b) Of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of - <ul style="list-style-type: none"> <li>(i) One kilometre upstream from the mouth of the river; or</li> <li>(ii) The point upstream that is calculated by multiplying the width of the river mouth by 5.</li> </ul> </li> </ul> |
| <b>Conditions*</b>                          | In relation to plans and resource consents, includes terms, standards, restrictions, and prohibitions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Consent authority*</b>                   | Means a regional council, a territorial authority, or a local authority that is both a regional council and a territorial authority, whose permission is required to carry out an activity for which a resource consent is required under the Resource Management Act 1991.                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Conspicuous change in visual clarity</b> | A visual change in water clarity of more than 40%.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Consumptive use</b>                      | Where a use results in a net loss of water from the water body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Contact recreation</b>                   | Recreational activities involving contact with water; either primary (full immersion) or secondary (that which may result in some form of contact with water).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>Contaminant*</b>                      | Includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy or heat - <ul style="list-style-type: none"> <li>(a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or</li> <li>(b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.</li> </ul>                                                                                                                                                                                    |
| <b>Contaminated land</b>                 | Land at which hazardous substances occur at concentrations above background levels and where assessment indicates that that land poses, or is likely to pose, an immediate or long-term hazard to human health or the environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Contravene*</b>                       | Includes fail to comply with.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Controlled activity*</b>              | If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a controlled activity, a resource consent is required for the activity and - <ul style="list-style-type: none"> <li>(a) The consent authority must grant a resource consent (except if Section 106 of the Act applies); and</li> <li>(b) The consent authority's power to impose conditions on the resource consent is restricted to the matters over which control is reserved (whether in its plan or proposed plan, a national environmental standard, or otherwise); and</li> <li>(c) The activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.</li> </ul> |
| <b>Controlled lake</b>                   | A lake where structures are used to manage the quantity of water leaving the lake.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Critical source area</b>              | Means a landscape feature such as a gully, swale, or depression that accumulates runoff from adjacent flats and slopes and delivers contaminants to surface water bodies such as rivers, lakes, and artificial watercourses (excluding subsurface drains, and artificial watercourses that do not connect to natural water bodies).                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Dairy Effluent Storage Calculator</b> | Means the Dairy Effluent Storage Calculator available from <a href="http://www.dairynzdesc.co.nz">http://www.dairynzdesc.co.nz</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Dam</b>                               | A structure used or to be used for the damming of any water, or water body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Datum</b>                             | The fixed level for basing subsequent level measurements, in this case datum means Otago Metric Datum, which is the Dunedin Vertical Datum (DVD 1958) plus 100 metres.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <b>Deemed permit</b>           | A mining privilege in respect of water (see Appendix 2).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Defence against water</b>   | Any dam, weir, bank, carriageway, groyne, or reservoir, and any structure or appliance of any kind which has or may have the effect of stopping, diverting, controlling, restricting, or otherwise regulating the flow or spread or subsidence, in or out of a water body, of water including flood waters, which is specifically established for the purpose of flood hazard mitigation.                                                                                                                                                                                            |
| <b>Deposition</b>              | The deposit of any substance, other than water or waterborne contaminants (discharge), or fill material (reclamation).                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Discharge*</b>              | Includes emit, deposit, and allow to escape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Discretionary activity*</b> | <p>If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a discretionary activity, a resource consent is required for the activity and -</p> <ul style="list-style-type: none"> <li>(a) The consent authority may decline the consent or grant the consent with or without conditions; and</li> <li>(b) If granted, the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.</li> </ul> |
| <b>Disposal field</b>          | That part of a constructed on-site waste water treatment system where the effluent is discharged to land.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>District plan*</b>          | <ul style="list-style-type: none"> <li>(a) Means an operative plan approved by a territorial authority under Schedule 1 of the Resource Management Act 1991; and</li> <li>(b) Includes all operative changes to the plan (whether arising from a review or otherwise).</li> </ul>                                                                                                                                                                                                                                                                                                    |
| <b>Divert</b>                  | In relation to the diversion of water, is the process of redirecting the flow of water from its existing course to another.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Down-hole pump test</b>     | A test conducted to determine aquifer or bore characteristics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Drain</b>                   | Artificial channel or subsurface conduit (e.g. mole drain, tile drain or drainage tunnel) constructed to either lower the watertable or divert water, excluding a water race.                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Drainage water</b>          | Water collected by and discharged from a drain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| <b>Drilling</b>                        | <p>The process of creating a hole in the ground with a drill to a depth greater than 1 metre. This does not include hole creation for the purpose of:</p> <ul style="list-style-type: none"> <li>• The construction of a bore;</li> <li>• The erection of fences or overhead utilities; or</li> <li>• The placement of building foundations.</li> </ul>                                                                                                                                                                                                                                                                                                                                                             |
| <b>Drill hole</b>                      | The hole created by drilling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Drinking-water supply reservoir</b> | A reservoir which is used primarily for the purpose of storing a supply of drinking water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Earthworks</b>                      | Means the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand and rock); but excludes gardening, cultivation, and disturbance of land for the installation of fence posts.                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Ecosystem</b>                       | A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Effect*</b>                         | <p>In the Resource Management Act 1991, unless the context otherwise requires, the term effect includes -</p> <ul style="list-style-type: none"> <li>(a) Any positive or adverse effect; and</li> <li>(b) Any temporary or permanent effect; and</li> <li>(c) Any past, present, or future effect; and</li> <li>(d) Any cumulative effect which arises over time or in combination with other effects -</li> </ul> <p>regardless of the scale, intensity, duration, or frequency of the effect, and also includes -</p> <ul style="list-style-type: none"> <li>(e) Any potential effect of high probability; and</li> <li>(f) Any potential effect of low probability which has a high potential impact.</li> </ul> |
| <b>Effluent</b>                        | Liquid waste, including liquid leaching from solid waste.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Enforcement order*</b>              | Means an order made under Section 319 of the Resource Management Act 1991 for any purposes set out in Section 314 of the Act; and includes an interim enforcement order made under Section 320 of the Act.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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| <b>Environment*</b>                                                                                                       | Includes - <ul style="list-style-type: none"> <li>(a) Ecosystems and their constituent parts, including people and communities; and</li> <li>(b) All natural and physical resources; and</li> <li>(c) Amenity values; and</li> <li>(d) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.</li> </ul>                                                                                                                                                                                                                                                                |
| <b><u>Environmental flow and level regimes</u></b> <i>(definition only applies where term is underlined in this Plan)</i> | The flow-sharing, allocation limits and minimum flows and levels established by the Water Plan as specified in Rule 12.1.4.4A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Erosion</b>                                                                                                            | The processes of the wearing away of the land surface (including the land that forms the bed of a lake or river) by natural agents and the transport of the material that results.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Esplanade reserve*</b>                                                                                                 | Means a reserve within the meaning of the Reserves Act 1977 - <ul style="list-style-type: none"> <li>(a) Which is either -             <ul style="list-style-type: none"> <li>(i) A local purpose reserve within the meaning of Section 23 of that Act, if vested in the territorial authority under Section 239 of the Resource Management Act 1991; or</li> <li>(ii) A reserve vested in the Crown or a regional council under Section 237D of the Resource Management Act 1991; and</li> </ul> </li> <li>(b) Which is vested in the territorial authority, regional council, or the Crown for a purpose or purposes set out in Section 229 of the Resource Management Act 1991.</li> </ul> |
| <b>Esplanade strip*</b>                                                                                                   | Means a strip of land created by the registration of an instrument in accordance with Section 232 of the Resource Management Act 1991 for a purpose or purposes set out in Section 229 of the Act.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Excavation over a groundwater protection zone</b>                                                                      | The digging and removal of a volume of earth material from below the topsoil horizon in excess of 10 cubic metres, or to a depth of greater than 1 metre, but does not include that required for bore construction, or for the erection of fences, overhead utilities or foundations for buildings, or for land cultivation.                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Exotic plant</b>                                                                                                       | A plant which is not native to New Zealand. These may include introduced plants which have been brought in by accident or design.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Extraction</b>                                                                                                         | Removal of material from the lake or river system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| <b>Faecal coliform</b>                                                                                      | A type of bacteria associated with animal excrement that indicates faecal pollution. If the faecal coliform count is high there may be disease-causing organisms present.                                         |
| <b>Fauna</b>                                                                                                | All the animal life of a given place.                                                                                                                                                                             |
| <b>Fertiliser</b>                                                                                           | Any proprietary substance specifically manufactured for use in increasing the nutrient status of land. Excludes compost, effluent or seaweed.                                                                     |
| <b>Financial contribution</b>                                                                               | A contribution as set out in Section 108(9) of the Resource Management Act.                                                                                                                                       |
| <b><u>Fisheries and wildlife</u></b> <i>(definition only applies where term is underlined in this Plan)</i> | Activities relating to the management and enhancement of habitats of fish and indigenous wildlife.                                                                                                                |
| <b>Flood carrying capacity</b>                                                                              | The capacity of any channel to convey flood waters.                                                                                                                                                               |
| <b>Flooding of any other person's property</b>                                                              | Where a discharge of water or contaminants on one property causes inundation on another property.                                                                                                                 |
| <b>Flora</b>                                                                                                | All the plant life of a given place.                                                                                                                                                                              |
| <b>Flushes</b>                                                                                              | Wet or damp areas of ground where the watertable intersects the land surface. Characterised by the presence of wetland species such as Sphagnum, and a greener, more lush appearance than surrounding vegetation. |
| <b>Ford</b>                                                                                                 | Any modification of the bed to establish a crossing by which any vehicle, livestock, or persons may traverse through any water body.                                                                              |
| <b>Galaxias</b>                                                                                             | The genus name of members of the native fish family Galaxiidae, which includes inanga (whitebait) and banded kokopu.                                                                                              |
| <b>Galaxiid</b>                                                                                             | A member of the native fish family Galaxiidae.                                                                                                                                                                    |
| <b>Grassed swale</b>                                                                                        | An open artificial water body or drain with gently-sloping walls of permeable material that conducts water only when the substrate is saturated.                                                                  |
| <b>Groundwater</b>                                                                                          | Water that occupies or moves through openings, cavities or spaces in geological formations under the ground.                                                                                                      |

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| <b>Groundwater protection zone</b>                                                                      | An area of land in which land use and water use activities are to be managed to protect the underlying groundwater resource.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Hapu</b>                                                                                             | Sub-tribe, extended whanau.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Hazardous substance</b>                                                                              | <p>Unless expressly provided otherwise by regulations, any substance -</p> <p>(a) With one or more of the following intrinsic properties:</p> <ul style="list-style-type: none"> <li>(i) Explosiveness:</li> <li>(ii) Flammability:</li> <li>(iii) A capacity to oxidise:</li> <li>(iv) Corrosiveness:</li> <li>(v) Toxicity (including chronic toxicity):</li> <li>(vi) Ecotoxicity, with or without bioaccumulation; or</li> </ul> <p>(b) Which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified in paragraph (a) of this definition.</p> <p>- defined by Section 2 of the Hazardous Substances and New Organisms Act 1996.</p> |
| <b>Herbicide</b>                                                                                        | Substance toxic to plants and used to kill or control plants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>High degree of naturalness</b>                                                                       | Retaining characteristics not significantly modified by human beings or non-indigenous plants or animals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Historic place</b>                                                                                   | Any land (including an archaeological site); or any building or structure (including part of a building or structure); or any combination of land and a building or structure that forms part of the historical and cultural heritage of New Zealand and lies within the territorial limits of New Zealand; and includes anything that is in or fixed to such land.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hydrological values</b>                                                                              | The natural processes of an ecosystem in providing regulated water flow and enhanced water quality.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Impervious strata</b>                                                                                | A layer of soil, rock or other natural material which does not allow the percolation of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b><u>In-catchment needs</u></b> <i>(definition only applies where term is underlined in this Plan)</i> | Water requirements of users where the water is taken or diverted for use within the Waitaki catchment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Indigenous species</b>                                                                               | A New Zealand native species that is, or is thought to have been, naturally existing within the catchment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| <b><u>Industrial and commercial activities</u></b><br><i>(definition only applies where term is <u>underlined</u> in this Plan)</i> | Industrial and commercial activities (but excluding hydro-electricity generation) that are not served by a reticulated town and community water supply.                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Industrial or trade premises*</b>                                                                                                | Means -<br>(a) Any premises used for any industrial or trade purposes; or<br>(b) Any premises used for the storage, transfer, treatment, or disposal of waste materials or for other waste-management purposes, or used for composting organic materials; or<br>(c) Any other premises from which a contaminant is discharged in connection with any industrial or trade process -<br>but does not include any production land.<br>In this plan, the phrase ‘industrial or trade premises’ includes any structure associated with electricity generation. |
| <b>Industrial or trade process*</b>                                                                                                 | Includes every part of a process from the receipt of raw material to the dispatch or use in another process or disposal of any product or waste material, and any intervening storage of the raw material, partly processed matter, or product.                                                                                                                                                                                                                                                                                                           |
| <b>Industrial or trade waste</b>                                                                                                    | Waste from an industrial or trade premises, that is derived from an industrial or trade process.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Instantaneous take</b>                                                                                                           | All takes of water occurring at a particular time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Intake structure</b>                                                                                                             | The device by which water is taken from a water body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Intensive winter grazing</b>                                                                                                     | Has the same meaning as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Intrinsic values*</b>                                                                                                            | In relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including -<br>(a) Their biological and genetic diversity; and<br>(b) The essential characteristics that determine any ecosystem’s integrity, form, functioning, and resilience.                                                                                                                                                                                                                                            |
| <b>Issue</b>                                                                                                                        | A matter of concern to the region’s community regarding activities affecting some aspect of natural and physical resources and the environment of the region.                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Iwi</b>                                                                                                                          | Tribe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| <b>Iwi authority*</b>                                                                                      | Means the authority which represents an iwi and which is recognised by that iwi as having authority to do so. (The iwi authority for the Otago region is Te Runanga O Ngāi Tahu).                                                                                                                                                                                                                                                                                                                                                             |
| <b>Iwi management plan</b>                                                                                 | A relevant planning document, such as the Kāi Tahu Ki Otago Natural Resource Management Plan, recognised by an iwi authority affected by this Plan, to which local authorities shall have regard.                                                                                                                                                                                                                                                                                                                                             |
| <b>Kāi Tahu</b>                                                                                            | Descendants of Tahu, the tribe. The manawhenua of the Otago region. (Also known as Ngāi Tahu).                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b><u>Kāi Tahu or Ngāi Tahu</u></b> <i>(definition only applies where term is underlined in this Plan)</i> | The collection of individuals who descend from the primary hapū of Waitaha, Ngāti Mamoe, and Ngāi Tahu, namely Kāti Kurī, Kāti Irakehu, Kāti Huirapa, Ngāi Tuahuriri and Kāi Te Ruahikihiki.                                                                                                                                                                                                                                                                                                                                                  |
| <b>Kaitiaki</b>                                                                                            | Guardians.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Kaitiakitanga*</b>                                                                                      | Means the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Maori in relation to natural and physical resources; and includes the ethic of stewardship.                                                                                                                                                                                                                                                                                                                                                    |
| <b>Kanakana</b>                                                                                            | The primitive parasitic native fresh water lamprey, <i>Geotria australis</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Kokopu</b>                                                                                              | Native fish species of the Galaxiid family, including banded kokopu ( <i>Galaxias fasciatus</i> ) and giant kokopu ( <i>G. argenteus</i> ), sometimes referred to as ‘native trout’.                                                                                                                                                                                                                                                                                                                                                          |
| <b>Koura</b>                                                                                               | Native fresh water crayfish of the genus <i>Paranephrops</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Lake Tuakitoto</b>                                                                                      | The variable and more or less continuous body of water commonly known as Lake Tuakitoto, including Robson’s Lagoon, situated at and about map reference NZMS260 H46:650370. The shoreline of the lake is defined as the variable extent of surface water, as it is observed at any particular time, whether of natural extent or whether restricted by any floodbank.                                                                                                                                                                         |
| <b>Lake*</b>                                                                                               | Means a body of fresh water which is entirely or nearly surrounded by land.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Land*</b>                                                                                               | <ul style="list-style-type: none"> <li>(a) Includes land covered by water and the air space above land; and</li> <li>(b) In a national environmental standard dealing with a regional council function under Section 30 of the Resource Management Act 1991 or a regional rule, does not include the bed of a lake or river; and</li> <li>(c) In a national environmental standard dealing with a territorial authority function under Section 31 of the Act or a district rule, includes the surface of water in a lake or river.</li> </ul> |

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| <b>Land-based discharge</b>   | The discharge of any agrichemical from any thing other than any aircraft.                                                                                                                                                                                                                                                                                                                                             |
| <b>Land drainage</b>          | The removal of water from in or on land.                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Landholder</b>             | Includes land owner, lessee and occupier.                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Landholding</b>            | <p>(1) For land subject to the Land Transfer Act 1952, land in:</p> <ul style="list-style-type: none"> <li>(i) A single certificate of title; or</li> <li>(ii) Two or more adjoining certificates of title, with a common occupier.</li> </ul> <p>(2) For land not subject to the Land Transfer Act 1952, all contiguous land last acquired under one instrument of conveyance and occupied by a common occupier.</p> |
| <b>Lawful take of water</b>   | Any take under Section 14(3) of the Resource Management Act, any take exercised under Rules 12.1.2.1 to 12.1.2.6, or 12.2.2.1 to 12.2.2.3 of this Plan, any take exercised under the Transitional Regional Plan rule constituted by General Authorisations 1 to 5, 9 and 12, and any take under any resource consent or deemed permit under the Resource Management Act 1991.                                         |
| <b>Leachate</b>               | A liquid contaminant resulting from the liquid being exuded from or percolated through some more-or-less solid matter.                                                                                                                                                                                                                                                                                                |
| <b>Legal public access</b>    | Includes legal roads, marginal strips, esplanade reserves, esplanade strips, access strips and Walkways.                                                                                                                                                                                                                                                                                                              |
| <b>Line</b>                   | A wire or conductor (including a fibre optic cable) used or intended to be used for telecommunication or transmission of electricity.                                                                                                                                                                                                                                                                                 |
| <b>Liquid animal effluent</b> | Faeces and urine from land-based animals, including associated process water, wash-down water, contaminants and sludge but excluding solid animal effluent. For the purposes of this definition, it does not include incidental animal effluent present in livestock processing waste streams.                                                                                                                        |
| <b>Local authority</b>        | A term that collectively describes regional councils, city councils, and district councils.                                                                                                                                                                                                                                                                                                                           |
| <b>Long-drop toilet</b>       | An unlined hole or pit excavated for the disposal of human sewage, which is not subject to any treatment or flushing.                                                                                                                                                                                                                                                                                                 |

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| <b>Macro-invertebrate Community Index (MCI)</b>                                                                            | An index of the proportion of sensitive to tolerant species (designed to assess the effects of nutrient enrichment in stoney streams, but also affected by dissolved oxygen, temperature and physical habitat features), among the community of benthic invertebrates that can be seen with the naked eye (see Appendix 1). |
| <b>Mahika kai</b>                                                                                                          | Places where food is procured or produced, examples in the case of waterborne mahika kai include eels, whitebait, kanakana, kokopu, koura, fresh water mussels, indigenous waterfowl, watercress and raupo.                                                                                                                 |
| <b>Main stem</b>                                                                                                           | The principal course of a river (i.e. does not include tributaries).                                                                                                                                                                                                                                                        |
| <b>Mana</b>                                                                                                                | Authority, influence or prestige.                                                                                                                                                                                                                                                                                           |
| <b>Manawhenua*</b>                                                                                                         | Means customary authority exercised by an iwi or hapu in an identified area.                                                                                                                                                                                                                                                |
| <b>Margin</b>                                                                                                              | Land alongside a river or lake.                                                                                                                                                                                                                                                                                             |
| <b>Mauri</b>                                                                                                               | Life force; for example the mauri of a river is most recognisable when there is abundance of water flow and the associated ecosystems are healthy and plentiful; a most important element in the relationship that Kāi Tahu have with the water bodies of Otago.                                                            |
| <b>Maximum allocation limit</b>                                                                                            | The quantity of groundwater as established under Policy 6.4.10A2.                                                                                                                                                                                                                                                           |
| <b>MCI</b>                                                                                                                 | See Macroinvertebrate Community Index.                                                                                                                                                                                                                                                                                      |
| <b>Mean annual recharge</b>                                                                                                | The quantity of groundwater recharge as calculated by Schedule 4D.                                                                                                                                                                                                                                                          |
| <b>Mean high water springs</b>                                                                                             | The average line of spring high tide.                                                                                                                                                                                                                                                                                       |
| <b>Method</b>                                                                                                              | The practical action by which a policy is implemented.                                                                                                                                                                                                                                                                      |
| <b><u>Micro hydro-electricity generation</u></b><br><i>(definition only applies where term is underlined in this Plan)</i> | The generation of hydro-electricity not exceeding a capacity of 50 Kilowatts continuous output.                                                                                                                                                                                                                             |
| <b>Minimum flow</b>                                                                                                        | The flow below which the holder of any resource consent to take water must cease taking water.                                                                                                                                                                                                                              |
| <b>Mining privilege</b>                                                                                                    | See Appendix 2.                                                                                                                                                                                                                                                                                                             |

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| <b>Mixing zone</b>                     | An area of water associated with a discharge within which any standards or requirements relating to water quality are set aside to enable reasonable mixing to occur. (See Reasonable mixing).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Mouth*</b>                          | <p>For the purpose of defining the landward boundary of the coastal marine area, means the mouth of a river either -</p> <ul style="list-style-type: none"> <li>(a) As agreed and set between the Minister of Conservation, the regional council, and the appropriate territorial authority in the period between consultation on, and notification of, the proposed regional coastal plan; or</li> <li>(b) As declared by the Environment Court under Section 310 of the Resource Management Act 1991 upon application made by the Minister of Conservation, the regional council, or the territorial authority prior to the plan becoming operative, -</li> </ul> <p>and once so agreed and set or declared shall not be changed in accordance with Schedule 1 of the Act or otherwise varied, altered, questioned, or reviewed in any way until the next review of the regional coastal plan, unless the Minister of Conservation, the regional council, and the appropriate territorial authority agree.</p> |
| <b>Natural and human use values</b>    | Characteristics of a water body which are important to, or are an essential part of, ecological communities, or are enjoyed or utilised by people and communities. While some of these values are identified in Schedule 1, natural character, amenity values, existing lawful uses, and archaeological sites will be identified on a case-by-case basis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Natural and physical resources*</b> | Includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Natural hazard*</b>                 | Means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslide, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Noa</b>                             | Free from tapu or other restriction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Non-biodegradable</b>               | Unable to be decomposed by living organisms present in the particular receiving environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Non-complying activity*</b>         | <p>If an activity is described in the Resource Management Act 1991, regulations (including a national environmental standard), a plan, or a proposed plan as a non-complying activity, a resource consent is required for the activity and the consent authority may -</p> <ul style="list-style-type: none"> <li>(a) Decline the consent; or</li> <li>(b) Grant the consent, with or without conditions, but only if the consent authority is satisfied that the requirements of Section 104D of the Act are met and the activity must comply with the</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                               |

requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.

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| <b>Non-consumptive take **</b>              | <p>A take is non-consumptive when:</p> <ol style="list-style-type: none"> <li>(1) The same amount of water is returned to the same water body at or near the location from which it was taken; and</li> <li>(2) There is no significant delay between the taking and the returning of the water.</li> </ol> <p>** as defined in the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010</p>                                                             |
| <b>Non-point source discharge</b>           | <p>A discharge of water or contaminant that enters a water body from a diffuse source, such as land runoff or infiltration.</p>                                                                                                                                                                                                                                                                                                                                                     |
| <b>Notified use</b>                         | <p>Any right in respect of natural water which was notified under Section 21 (2) or 21 (2A) of the Water and Soil Conservation Act 1967 (an 'existing authority' under Section 386(1)(b) of the Resource Management Act 1991).</p>                                                                                                                                                                                                                                                  |
| <b>Objective</b>                            | <p>The desired result, end state, situation or condition that is aimed for.</p>                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Occupier*</b>                            | <p>Means -</p> <ol style="list-style-type: none"> <li>(a) The inhabitant occupier of any property; and</li> <li>(b) <i>[Repealed]</i></li> <li>(c) For the purposes of Section 16 of the Resource Management Act 1991, in relation to any land (including any premises and any coastal marine area), includes any agent, employee, or other person acting or apparently acting in the general management or control of the land, or any plant or machinery on that land.</li> </ol> |
| <b>On-site waste water treatment system</b> | <p>Any system, such as a septic tank, designed to treat household liquid effluent including sewage within the boundary of the property on which the effluent was generated, and includes the treatment system and any attached disposal field.</p>                                                                                                                                                                                                                                  |
| <b>Open pile(d)</b>                         | <p>The nature of a structure's supporting piles whereby no significant hindrance to the passage of water or sediment is caused.</p>                                                                                                                                                                                                                                                                                                                                                 |
| <b>Operative*</b>                           | <p>In relation to a policy statement or plan, or a provision of a policy statement or plan, means that the policy statement, plan, or provision -</p> <ol style="list-style-type: none"> <li>(a) Has become operative - <ol style="list-style-type: none"> <li>(i) In terms of clause 20 of Schedule 1 of the Resource Management Act 1991; or</li> <li>(ii) Under Section 86F of the Act; and</li> </ol> </li> <li>(b) Has not ceased to be operative.</li> </ol>                  |

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| <b>Papatipu Runanga</b>          | The Papatipu Runanga and their takiwa for the Otago Region are described in the schedule to the Te Runanga o Ngāi Tahu Act 1996.                                                                                                                                                                                                                                              |
| <b>Percent probability flood</b> | A flood event which has a particular probability of being exceeded in any 12 month period.                                                                                                                                                                                                                                                                                    |
| <b>Permitted activity*</b>       | If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a permitted activity, a resource consent is not required for the activity if it complies with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.   |
| <b>Person*</b>                   | Includes the Crown, a corporation sole, and also a body of persons, whether corporate or unincorporate.                                                                                                                                                                                                                                                                       |
| <b>Pest plant</b>                | Any plant specified as a pest in a pest management strategy written under the Biosecurity Act 1993.                                                                                                                                                                                                                                                                           |
| <b>Pesticide</b>                 | A substance or mixture of substances used to kill or control unwanted species of plants, animals or other organisms.                                                                                                                                                                                                                                                          |
| <b>Policy</b>                    | The course of action to achieve the objective.                                                                                                                                                                                                                                                                                                                                |
| <b>Point source discharge</b>    | A discharge of water or contaminant that enters a water body at a definable point, often through a pipe or drain.                                                                                                                                                                                                                                                             |
| <b>Primary allocation</b>        | The quantity of water established under Policy 6.4.2.                                                                                                                                                                                                                                                                                                                         |
| <b>Production land*</b>          | <p>(a) Means any land and auxiliary buildings used for the production (but not processing) of primary products (including agricultural, pastoral, horticultural, and forestry products):</p> <p>(b) Does not include land or auxiliary buildings used or associated with prospecting, exploration, or mining for minerals - and “production” has a corresponding meaning.</p> |
| <b>Prohibited activity*</b>      | <p>If an activity is described in the Resource Management Act 1991, regulations (including a national environmental standard), a plan, or a proposed plan as a prohibited activity, -</p> <p>(a) No application for a resource consent may be made for the activity; and</p> <p>(b) The consent authority must not grant a consent for it.</p>                                |
| <b>Proposed plan*</b>            | <p>In the Resource Management Act 1991, unless the context otherwise requires, proposed plan -</p> <p>(a) Means a proposed plan, a variation to a proposed plan or change, or a change to a plan proposed by a local authority that has been notified under clause 5 of Schedule 1 but has not become operative in terms of clause 20 of Schedule 1; and</p>                  |

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|                                                   | (b) Includes a proposed plan or a change to a plan proposed by a person under Part 2 of Schedule 1 that has been adopted by the local authority under clause 25(2)(a) of Schedule 1.                                                                                                                                                                                                                                                                                                                                                    |
| <b>Protective soil mantle</b>                     | A layer of soil, rock or other natural material which reduces the percolation of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Public notice*</b>                             | <p>(a) Means a notice published in a newspaper circulating in the entire area likely to be affected by the proposal to which the notice relates; and</p> <p>(b) If a local authority also publishes a notice on an Internet site to which the public have free access, includes that notice.</p>                                                                                                                                                                                                                                        |
| <b>Rahui</b>                                      | Restrictions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Reasonable mixing</b>                          | The process where undiluted effluent disperses through receiving waters. Mixing results in a mixing zone where the concentration of contaminants varies from that in the effluent to that of the fully mixed receiving water. Reasonable mixing may be said to have occurred at some point between the point of discharge and the point at which the effluent is completely mixed with the receiving water. Beyond the reasonable mixing zone, the effluent and water mix complies with any water quality standards for the water body. |
| <b>Reclamation</b>                                | The permanent infilling of a water body or part of a water body with sand, rock, quarry material, concrete, or other similar material, for any purpose, and includes any embankment or causeway, but does not include any structure above water where that structure is supported by piles, or any deposition of material or infilling that is not permanent.                                                                                                                                                                           |
| <b>Regional plan*</b>                             | <p>(a) Means an operative plan approved by a regional council under Schedule 1 (including all operative changes to the plan (whether arising from a review or otherwise)); and</p> <p>(b) Includes a regional coastal plan.</p>                                                                                                                                                                                                                                                                                                         |
| <b>Regionally Significant Wetland</b>             | See Policy 10.4.1A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Regionally significant wetland value</b>       | See Policy 10.4.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Registered community drinking water supply</b> | A drinking water supply, which is registered under Section 69J of the Health Act and serves a community of more than 25 people for more than 60 days a year.                                                                                                                                                                                                                                                                                                                                                                            |

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| <b>Registered Historic Place</b>           | Any Historic Place registered under Part II of the Historic Places Act 1993.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Residential development</b>             | Means the preparation of land for, and construction of, development infrastructure and buildings (including additions and alterations) for residential activities and includes retirement villages. It excludes camping grounds, motor parks, hotels, motels, backpackers' accommodation, bunkhouses, lodges and timeshares.<br><br>The terms development infrastructure, residential activity, and retirement village are defined in the National Planning Standards.                                                                                                                                                                                                                                                                                        |
| <b>Residual flow</b>                       | Refer to Policy 6.4.7.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Resource consent</b>                    | A consent for an activity as set out in Section 87 of the Resource Management Act 1991; and includes all conditions to which the consent is subject.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Restricted discretionary activity*</b>  | If an activity is described in the Resource Management Act 1991, regulations (including any national environmental standard), a plan, or a proposed plan as a restricted discretionary activity, a resource consent is required for the activity and -<br><ul style="list-style-type: none"> <li>(a) The consent authority's power to decline a consent, or to grant a consent and to impose conditions on the consent, is restricted to the matters over which discretion is restricted (whether in its plan or proposed plan, a national environmental standard, or otherwise); and</li> <li>(b) The activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.</li> </ul> |
| <b>Reticulated system, or reticulation</b> | The means by which water, stormwater, sewage or other waterborne contaminant is collected and delivered prior to discharge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Riparian vegetation</b>                 | The terrestrial plants growing on the bed or margin of a water body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>River*</b>                              | Means a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal).                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Runanga</b>                             | Local representative groups or community system of organisation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Sediment trap</b>                       | An excavated or bunded area in the bed of an ephemeral or intermittently flowing river designed and constructed solely for the purpose of allowing sediment to drop from the water column.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Seven-day (“7-day”) mean annual low flow</b> | <p>The seven-day low flow in any year is determined by calculating the average flow over seven consecutive days for every seven consecutive day period in the year, and choosing the lowest.</p> <p>When this is done for every year of record, the seven-day mean annual low flow can be determined by adding the lowest seven-day low flows for every year of record and dividing by the number of years in the record.</p> |
| <b>Small dam</b>                                | <p>A dam:</p> <ul style="list-style-type: none"> <li>(a) Where the size of the catchment upstream of the dam is no more than 50 hectares; and</li> <li>(b) where the water stored immediately upstream of the dam is no more than 3 metres deep; and</li> <li>(c) where the volume of water stored by the dam is no more than 20,000 cubic metres.</li> </ul>                                                                 |
| <b>Soil contamination</b>                       | Occurs where the discharge of a contaminant reduces the primary productive capacity of soil.                                                                                                                                                                                                                                                                                                                                  |
| <b>Solid animal effluent</b>                    | Solid excreta from land-based animals that cannot be pumped and sprayed, including bedding material and manure, but does not include dead animals or animal parts.                                                                                                                                                                                                                                                            |
| <b>Stand-off pad</b>                            | Any purpose-built uncovered area, located on production land, for the confinement of stock in order to avoid damage to their usual pasture.                                                                                                                                                                                                                                                                                   |
| <b>Stormwater</b>                               | The water running off from any impervious surface such as roads, carparks, roofs, and sealed runways.                                                                                                                                                                                                                                                                                                                         |
| <b>Structure*</b>                               | Means any building, equipment, device, or other facility made by people and which is fixed to land; and includes any raft.                                                                                                                                                                                                                                                                                                    |
| <b>Suction dredging; Suction dredge mining</b>  | Any activity utilising a motor, pump, and hose within a river bed.                                                                                                                                                                                                                                                                                                                                                            |
| <b>Suitably Qualified Person</b>                | Has the meanings set out in Schedule 20.                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Sullage</b>                                  | The waste water from sinks, basins, baths, showers and similar appliances, but not including toilet wastes (sometimes referred to as grey water).                                                                                                                                                                                                                                                                             |
| <b>Supplementary allocation</b>                 | A volume of water established under Policies 6.4.9 or 6.4.10 which is able to be taken subject to a supplementary allocation minimum flow set under those policies.                                                                                                                                                                                                                                                           |
| <b>Suspended solids</b>                         | Particulate matter carried in suspension within water.                                                                                                                                                                                                                                                                                                                                                                        |

|                                                                                                                                  |                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Taking</b>                                                                                                                    | In relation to the taking of water, is the process of extracting the water for any purpose and for any period of time.                                                                                                              |
| <b>Taoka</b>                                                                                                                     | Treasures.                                                                                                                                                                                                                          |
| <b>Tapu</b>                                                                                                                      | Sacred.                                                                                                                                                                                                                             |
| <b>Tarn</b>                                                                                                                      | Small mountain lake or pool, often formed in a cirque basin.                                                                                                                                                                        |
| <b><u>Technical efficiency</u></b><br><i>(definition only applies where term is <u>underlined</u> in this Plan)</i>              | Using a resource in a way that any given output is produced at least cost, including avoiding waste.                                                                                                                                |
| <b>Territorial local authority</b>                                                                                               | A term that collectively describes city councils and district councils, but not regional councils.                                                                                                                                  |
| <b>The Act</b>                                                                                                                   | The Resource Management Act 1991.                                                                                                                                                                                                   |
| <b>To Dam</b>                                                                                                                    | In relation to the damming of water, is the process of impounding the water for any purpose and for any period of time, as in a reservoir.                                                                                          |
| <b><u>Tourism and recreation facilities</u></b><br><i>(definition only applies where term is <u>underlined</u> in this Plan)</i> | Tourism and recreation facilities that are not served by a reticulated town and community supply, such as hotels, lodges, restaurants and ski fields.                                                                               |
| <b><u>Town and community water supply</u></b> <i>(definition only applies where term is <u>underlined</u> in this Plan)</i>      | Reticulated water supplies servicing urban areas, rural-residential and residential subdivisions including all commercial and industrial premises and schools and other educational facilities located within the reticulated area. |
| <b>Trace amount of any contaminant</b>                                                                                           | A contaminant is present in a quantity that is incapable of practicable measurement.                                                                                                                                                |
| <b>Transmissivity</b>                                                                                                            | The degree to which an aquifer allows water to pass through it.                                                                                                                                                                     |
| <b>Treaty of Waitangi (Te Tiriti o Waitangi)</b>                                                                                 | The same meaning as the word “Treaty” as defined in Section 2 of the Treaty of Waitangi Act 1975.                                                                                                                                   |

|                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Upland bogs</b>                                                                                        | A wet or spongy high altitude area of ground chiefly composed of decaying vegetable matter or peat.                                                                                                                                                                                                                                                                                                                                               |
| <b>Use</b>                                                                                                | <i>[Repealed – 1 March 2012]</i>                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Vegetation</b>                                                                                         | Includes any trees, shrubs, plants or grasses.                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Vessel</b>                                                                                             | Every description of ship, boat, ferry, or craft used in navigation, whether or not it has any means of propulsion, and regardless of that means; and includes: a barge, lighter, or other like vessel; a hovercraft or other thing deriving full or partial support in the atmosphere from the reactions of air against the surface of the water over which it operates; a submarine or other thing used in navigation whilst totally submerged. |
| <b>Waahi taoka</b>                                                                                        | Treasured resource; values, sites and resources that are valued and reinforce the special relationship Kāi Tahu have with Otago’s water resources.                                                                                                                                                                                                                                                                                                |
| <b>Waahi tapu</b>                                                                                         | Sacred places; sites, areas and values associated with water bodies that hold spiritual values of importance to Kāi Tahu.                                                                                                                                                                                                                                                                                                                         |
| <b><u>Waitaki catchment</u></b><br><i>(definition only applies where term is underlined in this Plan)</i> | <p>(a) Means the area of land bounded by watersheds draining into the Waitaki River; and</p> <p>(b) Includes aquifers wholly or partially within that area of land.</p>                                                                                                                                                                                                                                                                           |
| <b>Walkway</b>                                                                                            | A formal Walkway created under the New Zealand Walkways Act 1975.                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Water*</b>                                                                                             | <p>(a) Means water in all its physical forms whether flowing or not and whether over or under the ground:</p> <p>(b) Includes fresh water, coastal water, and geothermal water:</p> <p>(c) Does not include water in any form while in any pipe, tank, or cistern.</p>                                                                                                                                                                            |
| <b>Water allocation committee</b>                                                                         | Refer to Policy 6.4.12.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Water body*</b>                                                                                        | Means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area.                                                                                                                                                                                                                                                                               |
| <b>Water conservation order*</b>                                                                          | Has the meaning set out in Section 200 of the Resource Management Act 1991.                                                                                                                                                                                                                                                                                                                                                                       |

|                            |                                                                                                                                                                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>“Water Info” phone</b>  | The telephone service by which the Otago Regional Council provides frequently-updated information on water body condition including river flows.                                                                                                                                                |
| <b>Water race</b>          | An artificial channel used for conveying water for various uses, but not for the drainage of land.                                                                                                                                                                                              |
| <b>Water supply values</b> | The existence of a take for human consumption, which people and communities have come to depend upon.                                                                                                                                                                                           |
| <b>Water user group</b>    | Refer to Policy 5.4.12.                                                                                                                                                                                                                                                                         |
| <b>Wet bed</b>             | That part of the bed of a lake or river which is covered by water.                                                                                                                                                                                                                              |
| <b>Wetland*</b>            | Includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.<br><br>In this plan, ‘wetland’ excludes any wetland constructed for the purpose of water quality management. |
| <b>Whanau</b>              | Family.                                                                                                                                                                                                                                                                                         |
| <b>Whanui</b>              | Large, extended, broad.                                                                                                                                                                                                                                                                         |

# 22

## Appendices

## 1 The Macroinvertebrate Community Index

The most widely used and effective form of biological monitoring in streams and rivers is the sampling and analysis of the invertebrate life (aquatic insects, crustaceans, snails, worms etc.) living on the bed or amongst aquatic plants. These invertebrates are almost always found in abundance in such habitats, they are easy to collect, and with suitable resources they are easy to identify.

Typically there are 15 to 30 distinct “species” (or taxa) of invertebrates at most stream or river sites. The composition of these communities is dependent on physical habitat characteristics, water quality and biological factors. If physical habitat quality is kept consistent (e.g. sampling is undertaken in fast-flowing, shallow stony “riffles” rather than slow flowing pools or backwaters) water quality tends to become the factor determining community composition.

Some “tolerant” invertebrate species are able to inhabit degraded waters such as algae-smothered habitats or nutrient enriched or low oxygen waters. Other species are highly sensitive to such conditions and are almost always found in cool, “clean” (low-nutrient), high-oxygen waters.

The fresh water biological index referred to in this Plan (see Policy 7.6.2) is the Macroinvertebrate Community Index (MCI). The MCI was developed for New Zealand stony streams by Dr John Stark in 1985, using a British system (the BMWP Index) which assigned sensitivity scores to particular fresh water invertebrate species. These scores relate to the ability of each species to tolerate nutrient enrichment and associated water quality degradation. The scores range from one (for the most tolerant species) to ten (for the most sensitive species). For example, the “swimming mayfly” has a sensitivity score of 9, while the common sandfly has a sensitivity score of 3.

An MCI value is calculated simply by averaging the sensitivity scores for the species found at one site, and multiplying this average by a scaling factor of 20. A high MCI value (over 100) is generally indicative of good water quality, although it will vary depending upon the river type, as shown in Table 5.

**Table 5: MCI ranges for different stream and river habitat types**

| River type               | Habitat quality (MCI score) |                |             |
|--------------------------|-----------------------------|----------------|-------------|
|                          | High quality                | Medium quality | Low quality |
| Stony riffle             | 100 - 130                   | 80 - 100       | 60 - 80     |
| Fine sandy/gravelly runs | 90 - 110                    | 70 - 90        | 50 - 70     |
| Weedy/muddy runs/pools   | 80 - 100                    | 60 - 80        | 40 - 60     |

The MCI value can therefore be used to indicate the state of water quality in Otago’s streams and rivers.

The expected MCI scores for the water bodies identified in Policy 7.6.2, as well as the actual observed MCI scores, are shown in Table 5. The expected MCI scores become the target for enhancing water quality in the identified water bodies.

**Table 6: Water bodies with degraded water quality for aquatic habitats.**

| Water body              | Habitat type      | Average observed MCI score | Expected MCI score |
|-------------------------|-------------------|----------------------------|--------------------|
| Hayes Creek             | Weedy/muddy runs  | 67                         | > 70               |
| Lower Horne Creek       | Stony riffle      | 76                         | > 80               |
| Lower Kaikorai Stream   | Stony riffle      | 70                         | > 80               |
| Lower Taieri River      | Weedy/muddy pools | 69                         | > 70               |
| Lower Waipori River     | Weedy/muddy pools | 68                         | > 70               |
| Lower Tokomairiro River | Weedy/muddy pools | 69                         | > 70               |
| Lower Owaka River       | Stony run         | 76                         | > 80               |
| Lower Waiareka Creek    | Weedy/muddy pools | 68                         | > 70               |
| Lower Kaihiku Stream    | Stony riffle      | 74                         | > 80               |
| Lower Wairuna River     | Stony riffle      | 79                         | >80                |

## **2 Mining privileges in respect of water (deemed permits)**

A number of Otago water bodies are subject to the taking of water through the exercising of mining privileges in respect of water (“mining privileges” for short, but now known as “deemed permits”). Mining privileges were issued under the Mining Act 1926, and earlier mining legislation, and provided for the taking, damming and discharging of water. However, as gold mining declined, this water was increasingly used for irrigation. The Crown acquired a number of the higher priority, significant mining privileges which were being used for irrigation schemes, and these were then disposed of to the community irrigation groups.

Under Section 413 of the Resource Management Act, all mining privileges were deemed to become either a water permit (for the taking or damming of water), or a discharge permit (for the discharge of contaminants) on the same terms and conditions as the original mining privilege. Under Section 415 and 416 of the Act, compensation must be paid for the acquisition of any such deemed permit, or any restriction of its ability to be exercised.

As provided by Section 413(3), deemed permits expire on 1 October 2021, the thirtieth anniversary of the date of commencement of the Act, at which time they will lose their priority and there shall no longer be any liability for compensation as a result of loss or restriction of the rights. After 1 October 2021, resource consent is required in place of a deemed permit to take water and Section 124 of the Act applies.

Deemed permits can, however, be restricted by an abatement notice, enforcement order or by a Water Shortage Direction issued under Section 329 of the Resource Management Act.

## **2A Water management groups**

Water management groups, established in terms of Policy 6.4.12A, provide the opportunity for groups to become more responsible for managing their taking by allowing for individual or shared consents to be managed by the group. Lists 2A.1 and 2A.2 set out the Council's requirements for the approval and features of such groups. The form of the group is not otherwise limited by the Council and the group may also exercise other roles to meet member needs.

### **2A.1 List of criteria for approval of a water management group**

For a group to be approved by the Council as a water management group with authority and responsibility for specified resource consents (including deemed permits), the Council must be satisfied that:

- (a) A schedule has been provided that specifies the resource consents which are to be managed by the water management group; and
- (b) The water management group has an appropriate form and rules; and
- (c) The water management group seeks to be granted authority and responsibility to manage the specified consents; and
- (d) The water management group is able to provide documentary evidence that their members, including scheduled consents holders, agree to be bound by the group.

### **2A.2 Other features of a water management group**

A water management group which has been approved by the Council in terms of List 2A.1 above:

- (a) May have a terminating date or criteria;
- (b) May apply to have other resource consents included within its management;
- (ba) May have the whole or any part of the interest in a consent transferred to it;
- (c) Must have amendments of its form and rules approved by the Council;
- (d) May have its authority to manage the specified consents revoked, in part or in full, either;
  - (i) On its request; or
  - (ii) On receipt of not less than 6 months' written notice by the Council;
- (e) Must report annually to the Council on the operation of the group; and
- (f) May have a rationing regime approved by the Council.

Note: This Appendix is reproduced from the Ngāi Tahu Claims Settlement Act 1998 for public information purposes only and does not represent Otago Regional Council policy, nor does it form part of this Plan.

### 3 Ngāi Tahu Claims Settlement Act Statutory Acknowledgements

#### Introduction

Statutory acknowledgements are recorded in the Ngāi Tahu Claims Settlement Act 1998 (the NTCS Act) for several water bodies, mountains and coastal features in the Otago Region.

The following pages contain the text from the Schedules to the NTCS Act (as extracted from Brookers New Zealand Statutes) that describe the statutory acknowledgement sites that occur in Otago. Each schedule contains:

- The statutory area involved,
- A standard preamble,
- A description of the Ngāi Tahu association with the site, and
- Standard statements of purposes, and limitations on effect, of the statutory acknowledgement.

These acknowledgements comprise a statement made by Te Runanga o Ngāi Tahu of the particular cultural, spiritual, historic and traditional association of Ngāi Tahu (Kāi Tahu) with these areas.

Part 12 of the NTCS Act provides details of statutory acknowledgements, and the responsibilities relating to them. Section 208 of that act requires that local authorities have regard to these statutory acknowledgements in resource consent processing under Sections 93 to 94(C) of the Resource Management Act 1991 (Notification of resource consents), in deciding whether Te Runanga o Ngāi Tahu is a person who may be adversely affected by the granting of a resource consent for activities within, adjacent to or impacting directly on the statutory area.

Section 211 of the NTCS Act enables Ngāi Tahu to cite these acknowledgements in submissions, or in proceedings before consent authorities or the Environment Court. In these proceedings, the contents of the 'Ngāi Tahu association with the site' part of the acknowledgement in question is not binding on the consent authority (e.g. the Regional Council), but may be taken into account.

Section 220 of the NTCS Act requires that all regional policy statements, district plans and regional plans have information recording those statutory acknowledgements for areas covered by the policy statement or plan attached to them. The attachment of this information may be by way of reference, or be set out in full (as is the case here). This is for the purpose of public information only and does not form part of the policy statement or plan.

## APPENDIX 3 : N G Ā I T A H U C L A I M S S E T T L E M E N T A C T S T A T U T O R Y A C K N O W L E D G E M E N T S

**Note:** This Appendix is reproduced from the Ngāi Tahu Claims Settlement Act 1998 for public information purposes only and does not represent Otago Regional Council policy, nor does it form part of this Plan.

### **Index:**

The statutory acknowledgement areas for Otago are arranged as follows –

| Statutory Acknowledgement area                   | Page no. |
|--------------------------------------------------|----------|
| Tititea (Mount Aspiring)                         | 22-8     |
| Pikirakatahi (Mount Earnslaw)                    | 22-10    |
| Lake Hawea                                       | 22-12    |
| Lake Wanaka                                      | 22-14    |
| Whakatipu Wai Maori (Lake Wakatipu)              | 22-17    |
| Te Wairere (Lake Dunstan)                        | 22-20    |
| Ka Moana Haehae (Lake Roxburgh)                  | 22-23    |
| Mata-Au (Clutha River)                           | 22-25    |
| Pomahaka River                                   | 22-28    |
| Kakaunui River                                   | 22-29    |
| Waiholo/Waipori Wetland                          | 22-32    |
| Te Tauraka Poti (Merton Tidal Arm)               | 22-35    |
| Kuramea (Lake Catlins)                           | 22-37    |
| Matakaea (Shag Point)                            | 22-39    |
| Tokata (The Nuggets)                             | 22-41    |
| Te Tai O Arai Te Uru (Otago Coastal Marine Area) | 22-44    |

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## SCHEDULE 62

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR TITITEA (MOUNT ASPIRING)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the mountain known as Tititea (Mount Aspiring), located in the Mount Aspiring National Park, as shown on Allocation Plan MS 2 (SO 24665).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Tititea as set out below.

#### **Ngāi Tahu Association with Tititea**

As with all principal maunga (mountains), Tititea is imbued with the spiritual elements of Raki and Papa, in tradition and practice regarded as an important link to the primeval parents. Tititea is a prominent and majestic peak, clearly visible from a number of vantage points in the south, and its role in Ngāi Tahu's creation stories gives rise to its tapu status. From the heights above Te Ana-au (Lake Te Anau), it is a particularly impressive sight when the sun is setting.

The most common Ngāi Tahu name for the mountain known to Pakeha as Mount Aspiring is Tititea, referring to the mountain's white peak. It is not unusual, however, for places and physical features to have more than one name, reflecting the traditions of the successive iwi who peopled the land. Other names for the mountain include 'Makahī Ta Rakiwhanoa' (referring to a wedge belonging to Tu Te Rakiwhanoa) and 'Otapahu', which may refer to a type of dogskin cloak.

The Bonar Glacier is known as Hukairoroa Ta Parekioire (which refers to the long, hard glacial ice and crevasses formed by Parekioire). Parekioire was a giant who used to stalk up and down the South and North Islands taking titi (muttonbirds) northwards and returning with kumara. The lakes represent his footprints and the frozen splashes from his footsteps in the south were transformed into glaciers.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The area was part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land.

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The mauri of Tititea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the area.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Tititea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Tititea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Tititea as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Tititea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Tititea.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

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Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Tititea.

## SCHEDULE 51

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR PIKIRAKATAHI (MOUNT EARNSLAW)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the area known as Pikirakatahi (Mount Earnslaw), as shown on Allocation Plan MS 4 (SO 24666).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Pikirakatahi as set out below.

#### **Ngāi Tahu Association with Pikirakatahi**

The creation of Pikirakatahi (Mt Earnslaw) relates in time to Te Waka o Aoraki, and the efforts of Tu Te Rakiwhanoa. It is said that during its formation a wedge of pounamu was inserted into this mountain, which is the highest and most prominent peak in this block of mountains. The mountain is also linked to the travels of Rakaihautu, who dug out the great lakes of the interior with his ko (a tool similar to a spade), known as Tu Whakaroria and later renamed Tuhiraki at the conclusion of the expedition.

The origins of the name 'Pikirakatahi' have been lost, but it is known that many places and physical features have more than one name, reflecting the traditions of the successive iwi who peopled the land. It is, however, likely that the name relates to Rakaihautu or subsequent people, as most of the prominent lakes, rivers and mountains of the interior take their name from the journey of Rakaihautu.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Pikirakatahi was of crucial significance to the many generations that journeyed to that end of Whakatipu-wai-maori (Lake Wakatipu) and beyond. Staging camps for the retrieval of pounamu were located at the base of the mountain, while semi-permanent settlements related to the pounamu trade were located closer to the lake.

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Pikirakatahi stands as kaitiaki (guardian) over the pounamu resource and marks the end of a trail, with the tohu (marker) to the pounamu resource sitting opposite on Koroka (Cosmos Peak). The tupuna (ancestors) had considerable knowledge of whakapapa, traditional trails, places for gathering kai (food) and other taonga, ways in which to use the resources of the land, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The retrieval of large amounts of pounamu from this source, so far inland and over a range of physical barriers, attests to the importance of this resource to the economy and customs of the iwi over many generations. The people would also gather native birds for kai, and firewood with which to cook and provide warmth, from the forests covering the lower flanks of Pikirakatahi. Strategic marriages between hapu strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the mountain. It is because of these patterns of activity that Pikirakatahi continues to be important to runanga located in Otago, Murihiku and beyond. These runanga carry the responsibilities of kaitiaki in relation to the area, and are represented by the tribal structure, Te Runanga o Ngāi Tahu.

The mauri of Pikirakatahi represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with Pikirakatahi.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 212, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Pikirakatahi, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);
- (c) To empower the Minister responsible for management of Pikirakatahi or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Pikirakatahi as provided in section 211 (clause 12.2.5 of the deed of settlement).

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### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Pīkirakatahi (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Pīkirakatahi.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Pīkirakatahi.

## **SCHEDULE 30**

Sections 205 and 206

### **STATUTORY ACKNOWLEDGEMENT FOR LAKE HAWEA**

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the lake known as Hawea, the location of which is shown on Allocation Plan MD 37 (SO 24718).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Lake Hawea, as set out below.

#### **Ngāi Tahu Association with Lake Hawea**

Hawea is one of the lakes referred to in the tradition of 'Nga Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatu (Nelson). From Whakatu, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu

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taking another southwards by an inland route. On his inland journey southward Rakaihautu used his famous ko (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Hawea.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The name Hawea may derive from Hawea, tupuna (ancestor) of the Waitaha hapu, Ngati Hawea.

Hawea was traditionally noted as a rich tuna (eel) fishery, with many thousands of the fish once being caught, preserved and transported back to the kainga nohoanga (settlements) of coastal Otago.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Hawea, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Hawea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of Life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the lake.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Hawea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Lake Hawea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Lake Hawea as provided in section 211 (clause 12.2.5 of the deed of

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settlement).

### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Lake Hawea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Hawea.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Hawea.

## **SCHEDULE 36**

Sections 205 and 206

### **STATUTORY ACKNOWLEDGEMENT FOR LAKE WANAKA**

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the Lake known as Wanaka, the location of which is shown on Allocation Plan MD 38 (SO 24719).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Lake Wanaka, as set out below.

#### **Ngāi Tahu Association with Lake Wanaka**

Wanaka is one of the lakes referred to in the tradition of 'Nga Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe

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at Whakatu (Nelson). From Whakatu, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward Rakaihautu used his famous ko (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Wanaka.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The name ‘Wanaka’ is considered by some to be a South Island variant of the word ‘wananga’ which refers to the ancient schools of learning. In these schools Ngāi Tahu tohunga (men of learning) would be taught whakapapa (genealogies) which stretched back to over a hundred generations and karakia incantations) for innumerable situations. All of this learning they would be required to commit to memory.

Wanaka was traditionally noted as a rich tuna (eel) fishery, with many thousands of the fish once being caught, preserved and transported back to the kainga nohoanga (settlements) of coastal Otago.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Wanaka, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

In 1836 an eeling party was attacked by Te Puoho, a rangatira (chief) of the North Island Ngati Tama iwi. Te Puoho had plans of conquering Te Wai Pounamu, beginning his campaign at the southern end of the island. He compared his strategy to boning an eel which is started at the tail end of the fish. Having travelled down Te Tai Poutini (the West Coast) to Jackson Bay, Te Puoho crossed Haast Past into Wanaka and Lake Hawea where he found a Ngāi Tahu eeling party which he captured at Makarora. Two infant girls were captured and eaten. Te Puoho suspected this family was an outpost and so he gave instructions for two guards to follow a young teenager called Pukuharuru who was ordered to show them where the main camp was. However, Pukuharuru managed to escape after dark and alert his father, Te Raki. Te Raki killed the two guards, who were lost without their guide, and the Wanaka families managed to escape the region.

Te Puoho continued his campaign at Tuturau where there were other families fishing. However, some of the people managed to escape to Tiwai Point near Bluff where they lit a warning fire. This fire alerted the southern forces and, under the leadership of Tuhawaiki, Ngāi Tahu prepared to meet Te Puoho at Tuturau. After discussing the situation with the tohunga, Ngāi Tahu were assured of victory. While

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the priests chanted their karakia to the gods of war, the heart of the enemy chief appeared before Ngāi Tahu in the firelight, carried by the wings of a bird. With this omen that the gods of war were on the side of Ngāi Tahu, they attacked Te Puoho the next morning.

Te Puoho was shot by a young Ngāi Tahu called Topi and his army was taken captive. The head of Te Puoho was cut from his body and stuck on a pole facing his home in the north. Wanaka is therefore noted in history for its part in what was to be the last battle between North and South Island tribes.

The mauri of Wanaka represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the lake.

#### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Wanaka, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Lake Wanaka or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Lake Wanaka as provided in section 211 (clause 12.2.5 of the deed of settlement).

#### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Lake Wanaka (as described in this statutory acknowledgement) than that

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person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Wanaka.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Wanaka.

## SCHEDULE 75

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR WHAKATIPU WAI MAORI (LAKE WAKATIPU)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the Lake known as Whakatipu-wai-maori (Lake Wakatipu), the location of which is shown on Allocation Plan MD 39 (SO 24720).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Whakatipu-wai-maori, as set out below.

#### **Ngāi Tahu Association with Whakatipu-wai-maori**

The name Whakatipu-wai-maori originates from the earliest expedition of discovery made many generations ago by the tupuna Rakaihautu and his party from the Uruao waka. Rakaihautu is traditionally credited with creating the great waterways of the interior of the island with his famous ko (a tool similar to a spade), known as Tu Whakaroria and renamed Tuhiraki at the conclusion of the expedition.

There are many traditions relating to the lake. One of the most famous tells that the hollow which forms the bed of the lake was created when the people known as Te Rapuwai came upon the giant tipua (ogre) Matau as he lay there in a deep sleep. Matau had been responsible for the disappearance of many small hunting parties and had entrapped a beautiful maiden, Manata. The father of Manata offered her in marriage to the man who could bring her safely home. Matakauri, who was in love with Manata ventured forth, discovering that Matau slept when the northwest wind blew. Matakauri selected a day when the wind was blowing the right way and set forth. He found Manata and, using his mere, he attempted to sever the bonds which

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held her, but try as he would he failed. Manata began to sob bitterly, and as her tears fell on the cords, they melted away. Matakauri carried Manata back to the village where they became man and wife. However, Matakauri knew that while Matau lived no maiden was safe, so he set forth when again the northwest wind blew, and set fire to the large growth of bracken that acted as a bed for the giant. Matau was smothered in flames, the fat from his body augmenting the fire, until the blaze was so fierce that it burned a hole more than 1,000 feet deep. The snow on the surrounding hills melted and filled the hole, which is known today as Lake Wakatipu.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Whakatipu-wai-maori once supported nohoanga and villages which were the seasonal destinations of Otago and Murihiku (Southland) whanau and hapu for many generations, exercising ahi ka and accessing mahinga kai and providing a route to access the treasured pounamu located beyond the head of the lake. Strategic marriages between hapu strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the lake. It is because of these patterns of activity that the lake continues to be important to runanga located in Murihiku, Otago and beyond. These runanga carry the responsibilities of kaitiaki in relation to the area, and are represented by the tribal structure Te Runanga o Ngāi Tahu.

The lake also supported permanent settlements, such as the kaika (village) Tahuna near present-day Queenstown, Te Kirikiri Pa, located where the Queenstown gardens are found today, a Ngati Mamoe kaika near the Kawarau Falls called O Te Roto, and another called Takerehaka near Kingston. The Ngati Mamoe chief Tu Wiri Roa had a daughter, Haki Te Kura, who is remembered for her feat of swimming across the lake from Tahuna, a distance of some three kilometres.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

A key attraction of the lake was the access it provided to seasonal campsites and the pounamu located at the head of the lake at the Dart and Routeburn River catchments, from which countless generations gathered inaka and koko-takiwai pounamu and transported it back to coastal settlements for fashioning into tools, ornaments and weapons.

Waka and mokihi were the key modes of transport for the pounamu trade, travelling the length and breadth of Whakatipu-wai-maori. Thus there were numerous

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tauranga waka (landing places) on the lake and the islands upon it (Matau and Wawahi-waka). The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the lake. The lake was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the roto (lake).

Whakatipu-wai-maori is an important source of freshwater, the lake itself being fed by hukawai (melt waters). These are waters with the highest level of purity and were accorded traditional classifications by Ngāi Tahu that recognised this value. Thus it is a puna (spring) which sustains many ecosystems important to Ngāi Tahu. The mauri of Whakatipu-wai-maori represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the lake.

#### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Whakatipu-wai-maori as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Whakatipu-wai-maori or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Whakatipu-wai-maori as provided in section 211 (clause 12.2.5 of the deed of settlement).

#### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity

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under any statute, regulation, or bylaw; and

- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Whakatipu-wai-maori (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Whakatipu-wai-maori.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Whakatipu-wai-maori.

## SCHEDULE 61

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR TE WAIRERE (LAKE DUNSTAN)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the lake known as Te Wairere (Lake Dunstan), the location of which is shown on Allocation Plan MD 490 (SO 24729)

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Te Wairere as set out below.

#### **Ngāi Tahu Association with Te Wairere**

The name 'Te Wairere' refers to the speed with which the river once ran at this point.

The whole of the Mata-au (Clutha River), on which Te Wairere lies, was part of a mahinga kai trail that led inland and was used by Otago hapu including Kati Kuri, Ngati Ruahikihiki, Ngati Huirapa and Ngai Tuahuriri. The river was used as a highway into the interior, and provided many resources to sustain travellers on that journey. The river was a significant indigenous fishery, providing tuna (eels), kanakana (lamprey) and kokopu in the area over which Te Wairere now lies. Manu

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(birds), including moa, were taken from areas adjoining the river, over which the lake now lies.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The waterway was also very important in the transportation of pounamu from inland areas down to settlements on the coast, from where it was traded north and south. Because of its location at the confluence of Mata-au and Kawarau Rivers, Te Wairere was an important staging post on journeys inland and down-river. A tauranga waka and nohanga sited at the junction of the two rivers acted as such a staging post. As a result of this history of use and occupation there are a number of wahi taonga (including rock shelters and archaeological sites) in the area, some of which are now under the waters of the lake. Wahi tapu are important as places holding the memories and traditions of Ngāi Tahu tupuna.

The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The waterway was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the waterway.

The mauri of Te Wairere represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the lake.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Wairere, as provided in sections 208 to

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210 (clause 12.2.4 of the deed of settlement); and

- (c) To empower the Minister responsible for management of Te Wairere or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Te Wairere as provided in section 211 (clause 12.2.5 of the deed of settlement).

#### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Te Wairere (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Wairere.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Wairere.

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## SCHEDULE 22

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR KA MOANA HAEHAE (LAKE ROXBURGH)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the lake known as Ka Moana Haehae (Lake Roxburgh), the location of which is shown on Allocation Plan MD 491 (SO 24730).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Ka Moana Haehae, as set out below.

#### **Ngāi Tahu Association with Ka Moana Haehae**

The name Ka Moana Haehae refers to the joining of two waterways. In this case it refers to the confluence of the Mata-au and Manuherikia Rivers over which the lake lies.

The whole of the Mata-au (Clutha River), on which Ka Moana Haehae lies, was part of a mahinga kai trail that led inland and was used by Otago hapu including Ngati Kuri, Ngati Ruahikihiki, Ngati Huirapa and Ngai Tuahuriri. The river was used as a highway into the interior, and provided many resources to sustain travellers on that journey. The river was a significant indigenous fishery, providing tuna (eels), kanakana (lamprey) and kokopu in the area over which Ka Moana Haehae now lies. Manu (birds), including moa, were taken from areas adjoining the river, over which the lake now lies.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The waterway was also very important in the transportation of pounamu from inland areas down to settlements on the coast, from where it was traded north and south. Thus there were numerous tauranga waka (landing places) along it. The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The waterway was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues

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to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the waterway.

The mauri of Ka Moana Haehae represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the lake.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Ka Moana Haehae, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Ka Moana Haehae or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Ka Moana Haehae as provided in section 211 (clause 12.2.5 of the deed of settlement).

### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Ka Moana Haehae (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Ka Moana Haehae.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

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Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Ka Moana Haehae.

## SCHEDULE 40

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR MATA-AU (CLUTHA RIVER)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the River known as Mata-au (Clutha River), the location of which is shown on Allocation Plan MD 122 (SO 24727).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to the Mata-au, as set out below.

#### **Ngāi Tahu Association with the Mata-au**

The Mata-au river takes its name from a Ngāi Tahu whakapapa that traces the genealogy of water. On that basis, the Mata-au is seen as a descendant of the creation traditions. For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

On another level, the Mata-au was part of a mahinga kai trail that led inland and was used by Otakou hapu including Ngati Kuri, Ngati Ruahikihiki, Ngati Huirapa and Ngai Tuahuriri. The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The river was also very important in the transportation of pounamu from inland areas down to settlements on the coast, from where it was traded north and south. Thus there were numerous tauranga waka (landing places) along it. The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The river was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including

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camping overnight and gathering kai. Knowledge of these trails continue to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The Mata-au is where Ngāi Tahu's leader, Te Hautapunui o Tu, established the boundary line between Ngāi Tahu and Ngati Mamoe. Ngati Mamoe were to hold mana (authority) over the lands south of the river and Ngāi Tahu were to hold mana northwards. Eventually, the unions between the families of Te Hautapunui o Tu and Ngati Mamoe were to overcome these boundaries. For Ngāi Tahu, histories such as this represent the links and continuity between past and present generations, reinforce tribal identity, and document the events which shaped Ngāi Tahu as an iwi.

Strategic marriages between hapu further strengthened the kupenga (net) of whakapapa, and thus rights to travel on and use the resources of the river. It is because of these patterns of activity that the river continues to be important to runanga located in Otago and beyond. These runanga carry the responsibilities of kaitiaki in relation to the area, and are represented by the tribal structure, Te Runanga o Ngāi Tahu.

Urupa and battlegrounds are located all along this river. One battleground, known as Te Kauae Whakatoro (downstream of Tuapeka), recalls a confrontation between Ngāi Tahu and Ngati Mamoe that led to the armistice established by Te Hautapunui o Tu. Urupa are the resting places of Ngāi Tahu tupuna and, as such, are the focus for whanau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently protected by secret locations.

The mauri of Mata-au represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the river.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Mata-au, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of the Mata-au or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of

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Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Mata-au as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Mata-au (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Mata-au.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Mata-au.

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## SCHEDULE 52

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR POMAHAKA RIVER

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the River known as Pomahaka, the location of which is shown on Allocation Plan MD 12 (SO 24726).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to the Pomahaka River, as set out below.

#### **Ngāi Tahu Association with the Pomahaka River**

The Pomahaka was an important mahinga kai for Ngati Mamoe and Ngāi Tahu kainga (settlements) in the Catlins and Tautuku areas. The river was particularly noted for its kanakana (lamprey) fishery. Other mahinga kai associated with the river included weka and other manu (birds).

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Pomahaka, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of the Pomahaka represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the river.

#### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Pomahaka River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);

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- (c) To empower the Minister responsible for management of the Pomahaka River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Pomahaka River as provided in section 211 (clause 12.2.5 of the deed of settlement).

### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Pomahaka River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Pomahaka River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Pomahaka River.

## **SCHEDULE 23**

Sections 205 and 206

### **STATUTORY ACKNOWLEDGEMENT FOR KAKAUNUI RIVER**

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the River known as Kakaunui, the location of which is shown on Allocation Plan MD 120 (SO 24725).

#### **Preamble**

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Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to the Kakaunui River, as set out below.

#### **Ngāi Tahu Association with the Kakaunui River**

The creation of the Kakaunui relates in time to Te Waka o Aoraki, and the further shaping of the island by Tu Te Rakiwhanoa and his assistants including Marokura who stocked the waterways and Kahukura, who stocked the forests. For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi. The origin of the name 'Kakaunui' has been lost, but is likely to refer to swimming in the river.

There was a tauranga waka (landing place) at the mouth of the Kakaunui, which was an important part of the coastal trails north and south. The river was also a part of the seasonal trail of mahinga kai and resource gathering and hapu and whanau bonding. The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The Kakaunui was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The Kakaunui was a noted indigenous fishery, offering tuna (eel), inaka (whitebait), kanakana (lamprey), kokopu and other species. Other materials provided by the river included raupo, harakeke and watercress. The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Kakaunui, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

These mahinga kai resources supported both semi-permanent and seasonal occupations, including a kainga on the northern bank of the river near Maheno. The surviving rock art remnants and rock shelters are a particular taonga of the area, providing a unique record of the lives and beliefs of the people who travelled the river.

The mauri of the Kakaunui represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the river.

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### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Kakaunui River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of the Kakaunui River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Kakaunui River as provided in section 211 (clause 12.2.5 of the deed of settlement).

### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Kakaunui River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Kakaunui River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Kakaunui River.

## **SCHEDULE 70**

Sections 205 and 206

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## STATUTORY ACKNOWLEDGEMENT FOR WAIHOLA/WAIPORI WETLAND

### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the Wetland known as Waihola/Waipori, the location of which is shown on Allocation Plan MD 55 (SO 24721).

### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Waihola/Waipori, as set out below.

### **Ngāi Tahu Association with Waihola/Waipori**

The Waihola/Waipori wetlands were once one of the most significant food baskets in the Otago region, and featured in the seasonal activity of the coastal settlements as far away as the Otago Peninsula and harbour area, Purakaunui and Puketeraki. The wetlands were once much larger in water area and deeper than at present, connected by a labyrinth of waterways and having a gravel bed which has now been overlaid by silt and mud.

The names Waihola/Waipori are likely of Waitaha derivation, with 'hola' being the Waitaha form of 'hora' meaning flat, spread out or widespread. Waipori may in fact be a misrecording of Waipouri, which is used in many older manuscripts, being a reference to the dark, tanin-stained water the wetland receives from Waipori River, a heavily wooded catchment.

The Waihola/Waipori area was visited and occupied by Waitaha, Ngati Mamoe and Ngāi Tahu in succession, who through conflict and alliance, have merged in the whakapapa (genealogy) of Ngāi Tahu Whanui. The wetland supported a number of pa within its environs and nearby. For example, Whakaraupuka, the pa of the Ngati Mamoe chief Tukiauwau was located in the area now known as Sinclair Wetlands, although Tukiauwau eventually relocated further to the south as the southward movement of his Ngāi Tahu foes became uncomfortably close.

There were also many nohoanga (temporary campsites) located within the complex, used by food gathering parties which would travel to the lakes and camp on the fringes for two to three days to gather kai; to eel, hunt water fowl and gather flax. There were also permanent or semi-permanent settlements located in a number of locations around the lakes, some on islands in the wetlands system.

A number of other settlements further afield were also dependent on the mahinga kai resources of Waihola/Waipori for sustenance, including Tu Paritaniwha Pa near Momona, Omoua Pa above Henley, Maitapapa (Henley area), the kaik south of Henley and Takaaihitau near the old Taieri Ferry bridge, in addition to other settlements adjacent to the Taieri River up and downstream of the wetlands. Otakou

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and Puketeraki hapu would also make seasonal visits to gather resources and strengthen and maintain the kupenga (net) of whakapapa on which their rights to use those resources were based.

There is an account which tells of a sudden flood which required people trapped on the bank at a place called Whakaraupo, on the network of waterways that link Waihola with Waipori, to hastily construct a mokihi out of raupo to reach safety. A meeting place was opened here in 1901 by the locals, the house was named Te Waipounamu.

For Ngāi Tahu, histories such as these reinforce tribal identity and solidarity and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Waihola/Waipori was a key mahinga kai resource for Ngāi Tahu based along the Otago coastal region, where an abundance of tuna (eel), inaka (whitebait), patiki (flounder) and other indigenous fish were available. Waterfowl and fibre resources such as harakeke and raupo were also easily accessible from the wetlands. Spearing, setting hinaki and nets, and bobbing for eel were regular activities on the wetlands in the season. The gathering of young ducks in the moult, and the catching of herons, pukeko and other birds supplemented the broad range of kai available from the wetlands.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Waihola/Waipori, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The attractiveness of Waihola/Waipori as a mahinga kai was enhanced by their accessibility. With the direct link to the Taieri River, access via the Taieri to villages on the banks of the Taieri River, upstream and down, and access by waka to the coast and northward to Otakou, kai and other resources gathered from the wetlands could be transported back to these home bases with relative ease.

The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the wetlands. Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetlands.

Because of the long history of use of Waihola/Waipori as a mahinga kai, supporting permanent and temporary settlements, there are numerous urupa, wahi tapu and wahi taonga associated with the wetlands. These are all places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently

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protected by secret locations. Urupa are the resting places of Ngāi Tahu tupuna and, as such, are a particular focus for whanau traditions.

The mauri of Waihola/Waipori represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the wetlands. The wetlands represent, in their resources and characteristics, a strong element of identity for those who had manawhenua (tribal authority over the area) whose tupuna were nurtured on the food and resources of the wetlands for generations.

#### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Waihola/Waipori, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Waihola/Waipori or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Waihola/Waipori as provided in section 211 (clause 12.2.5 of the deed of settlement).

#### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Waihola/Waipori (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Waihola/Waipori.

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Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Waihola/Waipori.

## SCHEDULE 60

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR TE TAURAKA POTI (MERTON TIDAL ARM)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the Wetland known as Te Tauraka Poti (Merton Tidal Arm), the location of which is shown on Allocation Plan MD 56 (SO 24722).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Te Tauraka Poti, as set out below.

#### **Ngāi Tahu Association with Te Tauraka Poti**

Te Tauraka Poti, fed by the streams known as Kirikiri Whakahoro and Kokonui, was a major mahinga kai for kainga and pa located on the coast north of the Otago Peninsula. The wetlands were a rich source of kai, including tuna (eels), mohoa (black flounder), giant kokopu and water fowl. The wetlands were particularly valued as a spawning ground for inaka (whitebait).

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Te Tauraka Poti, the relationship of people with the wetland and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

As a result of this history of use, there are a number of wahi taonga within the wetland area, including middens and other evidence of occupation. These are important as places holding the memories of Ngāi Tahu tupuna.

Te Tauraka Poti formed an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai.

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Knowledge of these trails continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetland.

Much of Te Tauraka Poti's continuing significance to Ngāi Tahu lies in the fact that it is the only remaining wetland area of any significance in the vicinity. The mauri of Te Tauraka Poti represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the wetland.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Tauraka Poti, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);
- (c) To empower the Minister responsible for management of Te Tauraka Poti or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Te Tauraka Poti as provided in section 211 (clause 12.2.5 of the deed of settlement).

### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Te Tauraka Poti (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Tauraka Poti.

Note: This Appendix is reproduced from the Ngāi Tahu Claims Settlement Act 1998 for public information purposes only and does not represent Otago Regional Council policy, nor does it form part of this Plan.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Tauraka Poti.

## SCHEDULE 28

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR KURAMEA (LAKE CATLINS)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the Lake known as Kuramea (Lake Catlins), the location of which is shown on Allocation Plan MD 134 (SO 24728).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Kuramea, as set out below.

#### **Ngāi Tahu Association with Kuramea**

Kuramea is the traditional name for the waterway now known as Catlins Lake.

The lake and estuary were significant sources of mahinga kai, supporting a number of nohoanga (settlements) in the vicinity. Tuna (eels), inaka (whitebait), tuaki (cockles), pupu (mudsnails), pipi and flatfish were taken from Kuramea. The lake was also a source of raranga (weaving) materials including harakeke and paru (mud used in dying).

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of Kuramea, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

As a result of this history of use, there are a number of wahi taonga within the wetland area, including middens and other evidence of occupation. These are important as places holding the memories of Ngāi Tahu tupuna. In particular, a number of archaeological finds within the wetlands confirm the area's history as a wake (canoe) building area.

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The mauri of Kuramea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the lake.

#### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Kuramea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Kuramea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Kuramea as provided in section 211 (clause 12.2.5 of the deed of settlement).

#### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Kuramea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Kuramea.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Kuramea.

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## SCHEDULE 41

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR MATAKAEA (SHAG POINT)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the area known as Matakaea Recreation Reserve and Onewhenua Historic Reserve, as shown on Allocation Plan MS 9 (SO 24686).

#### **Preamble**

Under section 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Matakaea.

#### **Ngāi Tahu Association with Matakaea**

The name Matakaea recalls the tradition of the Arai Te Uru canoe, which capsized off Moeraki. From Moeraki, the crew managed to swim ashore leaving the cargo to be taken ashore by the waves. The crew members fled inland and were transformed into the mountains which form the Southern Alps.

The Arai Te Uru tradition is also important because it explains the origins of kumara. The story originally began with Roko i Tua who came to Aotearoa and met the Kahui Tipua. The Kahui Tipua gave Roko i Tua mamaku (tree fern) to eat. However Roko i Tua preferred the kumara that he had in his belt which he took out and soaked in a bowl of water. The Kahui Tipua tasted the kumara and asked where it was from. Roko i Tua replied saying that the kumara came from 'across the sea'.

The Kahui Tipua then made a canoe and, under the leadership of Tu Kakariki, went to Hawaiiiki and returned with the kumara to Aotearoa. The Kahui Tipua planted the kumara but the crop failed. However, Roko i Tua had also sailed to Hawaiiiki on the canoe called Arai Te Uru. Roko i Tua landed at Whangara, Hawaiiiki, and learnt the karakia (incantations) and tikanga (customs) connected with planting kumara. Roko i Tua then gave his canoe to two crew members called Pakihiwitahi and Hape ki Tua Raki. The Arai Te Uru returned under the leadership of these two commanders and eventually foundered off the Moeraki Coast at Matakaea.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The Matakaea area has been occupied for many centuries and is the site of numerous urupa and wahi tapu. Urupa are the resting places of Ngāi Tahu tupuna (ancestors)

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and, as such, are the focus for whanau traditions. Urupa and wahi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently protected by secret locations.

The mauri of Matakaea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the area.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Matakaea, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To empower the Minister responsible for management of Matakaea or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Matakaea as provided in section 211 (clause 12.2.5 of the deed of settlement).

### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Matakaea (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Matakaea.

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Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Matakaea.

## SCHEDULE 64

Sections 205 and 206

### STATUTORY ACKNOWLEDGEMENT FOR TOKATA (THE NUGGETS)

#### **Statutory Area**

The statutory area to which this statutory acknowledgement applies is the area known as Tokata (The Nuggets), as shown on Allocation Plan MS 10 (SO 24699).

#### **Preamble**

Under sections 206, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Tokata as set out below.

#### **Ngāi Tahu Association with Tokata**

The creation and shaping of Tokata and the surrounding coastline relates in time to Te Waka o Aoraki, and the subsequent efforts of Tu Te Rakiwhanoa. The name Tokata is a reference to the Nuggets, however, the individual nuggets also carry their own names: Te Ana Puta has a cave in it, Pae Koau is frequented by shags, three small nuggets on the north side are known collectively as Makunui and support a large seal colony, while the nugget furthest out to sea is Porokaea. The hill on which the lighthouse stands is known to Ngāi Tahu as Taumata o Te Rakipokia, and a cave on the north side of this hill is Te Ana o Katiwairua. For Ngāi Tahu, such traditional names and their associated histories reinforce tribal identity and solidarity, and continuity between generations, and document the events that have shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The great explorer Rakaihautu passed by this area of the Otago coast on his journey northward, and the area was subsequently visited and occupied by Waitaha, Ngati Mamoe and Ngāi Tahu in succession, who through conflict and alliance, have merged in the whakapapa (genealogy) of Ngāi Tahu Whanui. This area of the Otago coast has many reminders of the uneasy relationships that once existed between Ngati Mamoe and Ngāi Tahu. Skirmishes between the two iwi occurred intermittently just to the north. However, one battle occurred within the area referred to as Tokata after which some of the fallen were cooked. As a result of this activity, this area is now a wahi tapu. Such wahi tapu are the resting places of Ngāi Tahu tupuna (ancestors) and, as such, are the focus for whanau traditions. These are

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places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently protected by secret locations.

Tokata is a significant physical marker on the South Otago coast, with waka (canoes) voyaging south and north, or out to sea on fishing expeditions utilising it as a bearing marker. It also acted as a pointer to the safe tauranga waka (landing place) in Kaimataitai Bay, just to the north. The tupuna had an intimate knowledge of navigation, sea routes, safe harbours and landing places, and the locations of food and other resources on the coast. Tokata therefore formed an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whanau and hapu and is regarded as taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land and sea. Tokata also marks the south-eastern boundary of the Otakou Sale Deed area, marked out in 1844.

A variety of mahinga kai (principally kaimoana - seafood) is available at Tokata. The extensive rocky intertidal zone provides paua, kutai (mussels) and koura (crayfish) in abundance. The fur seal, leopard seal and sea lion all rest here, with their pups forming a ready source of kai in days gone by. Gull eggs, koau (shags) and titi (muttonbirds) were also harvested in the area. An excellent rimurapa (kelp) resource was utilised for making poha (storage bags), capable of preserving the titi for up to two years. Excellent fishing grounds seaward of Tokata supplied the resources of the coast.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the land and sea, the relationship of people with the coastline and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Tokata represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the area.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory

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acknowledgement in relation to Tokata, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

- (c) To empower the Minister responsible for management of Tokata or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
- (d) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Tokata as provided in section 211 (clause 12.2.5 of the deed of settlement).

#### **Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Tokata (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Tokata.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Tokata.

### **SCHEDULE 103**

Sections 205, 312 and 313

#### **STATUTORY ACKNOWLEDGEMENT FOR TE TAI O ARAI TE URU (OTAGO COASTAL MARINE AREA)**

##### **Specific Area**

The statutory area to which this statutory acknowledgement applies is Te Tai o Arai Te Uru (the Otago Coastal Marine Area), the Coastal Marine Area of the Moeraki, Dunedin Coastal and Molyneaux constituencies of the Otago region, as shown on

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SO Plans 24250, 24249, and 24252, Otago Land District and as shown on Allocation Plan NT 505 (SO 19901).

### **Preamble**

Under section 313, the Crown acknowledges Te Runanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Te Tai o Arai Te Uru as set out below.

### **Ngāi Tahu Association with Te Tai o Arai Te Uru**

The formation of the coastline of Te Wai Pounamu relates to the tradition of Te Waka o Aoraki, which foundered on a submerged reef, leaving its occupants, Aoraki and his brothers, to turn to stone. They are manifested now in the highest peaks in the Ka Tiritiri o Te Moana (the Southern Alps). The bays, inlets, estuaries and fiords which stud the coast are all the creations of Tu Te Rakiwhanoa, who took on the job of making the island suitable for human habitation.

The naming of various features along the coastline reflects the succession of explorers and iwi (tribes) who travelled around the coastline at various times. The first of these was Maui, who fished up the North Island, and is said to have circumnavigated Te Wai Pounamu. In some accounts the island is called Te Waka a Maui in recognition of his discovery of the new lands, with Rakiura (Stewart Island) being Te Puka a Maui (Maui's anchor stone). A number of coastal place names are attributed to Maui, particularly on the southern coast.

The great explorer Rakaihautu travelled overland along the coast, identifying the key places and resources. He also left many place names on prominent coastal features. Another explorer, Tamatea, sailed along the Otago coast in the waka Takitimu. After the waka eventually broke its back off the coast of Murihiku, Tamatea and the survivors made their way overland back to the North Island, arriving at the coast by the place Tamatea named O-amaru (Oamaru).

Place names along the coast record Ngāi Tahu history and point to the landscape features which were significant to people for a range of reasons. For example, some of the most significant rivers which enter the coastal waters of Otago include: Waitaki, Kakaunui, Waihemo (Shag), Waikouaiti, Kaikarae (Kaikorai), Tokomairiro, Mata-au (Clutha), Pounawea (Catlins). Estuaries include: Waitete (Waitati), Otakou (Otago), Makahoe (Papanui Inlet), Murikauhaka (Mate-au and Koau estuaries), Tahaukupu (Tahakopa estuary), Waipatiki (Wapati Estuary). Islands in the coastal area include Okaihe (St Michaels Island), Moturata (Taieri Island), Paparoa, Matoketoke, Hakinikini, and Aonui (Cooks Head).

Particular stretches of the coastline also have their own traditions. The tradition of the waka (canoe) Arai Te Uru and its sinking at the mouth of the Waihemo (Shag River) has led to the coastal area of Otago being known as Te Tai o Araiteuru (the coast of Arai Te Uru). Accounts of the foundering, the wreckage, and the survivors of this waka are marked by numerous landmarks almost for the length of the Otago

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coast. The boulders on Moeraki coast (Kai Hinaki) and the Moeraki pebbles are all associated with the cargo of gourds, kumara and taro seed which were spilled when the Arai Te Uru foundered.

For Ngāi Tahu, traditions such as these represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Because of its attractiveness as a place to establish permanent settlements, including pa (fortified settlements), the coastal area was visited and occupied by Waitaha, Ngāti Mamoe and Ngāi Tahu in succession, who, through conflict and alliance, have merged in the whakapapa (genealogy) of Ngāi Tahu Whānui. Battle sites, urupa and landscape features bearing the names of tupuna (ancestors) record this history. Prominent headlands, in particular, were favoured for their defensive qualities and became the headquarters for a succession of rangatira and their followers. Notable pa on the Otago coast include: Makotukutuku (Oamaru), Te Raka-a-hineatea (Moeraki), Te Pa Katata, Pa a Te Wera, (Huriawa Peninsula), Mapoutahi (Purakaunui), Pukekura (Taiaaroa Head), Moturata (Taieri Island). The estuaries from the Waitaki River to the Chaslands also supported various hapu.

Tupuna such as Waitai, Tukiaua, Whaka-taka-newha, Rakiiamo, Tarewai, Maru, Te Aparangi, Taoka, Moki II, Kapo, Te Wera, Tu Wiri Roa, Taikawa, Te Hautapanuiotu among the many illustrious ancestors of Ngāti Mamoe and Ngāi Tahu lineage whose feats and memories are enshrined in the landscape, bays, tides and whakapapa of Otago.

The results of the struggles, alliances and marriages arising out of these migrations were the eventual emergence of a stable, organised and united series of hapu located at permanent or semi-permanent settlements along the coast, with an intricate network of mahinga kai (food gathering) rights and networks that relied to a large extent on coastal resources. Chiefs such as Korako (several), Tahatu, Honekai, Ihutakuru, Karetai, Taiaaroa, Potiki, Tuhawaiki, and Pokene being some among a number who had their own villages and fishing grounds. Otago Peninsula (Muaupoko) had many kaunga nohoanga with a multitude of hapu occupying them. At one time up to 12 kainga existed in the lower Otago harbour, some larger and more important than others.

The whole of the coastal area offered a bounty of mahinga kai, including a range of kaimoana (sea food); sea fishing; eeling and harvest of other freshwater fish in lagoons and rivers; marine mammals providing whale meat and seal pups; waterfowl, sea bird egg gathering and forest birds; and a variety of plant resources including harakeke (flax), fern and ti root. In many areas the reliance on these resources increased after the land sales of the 1840s and 1850s, and the associated loss of access to much traditional land-based mahinga kai.

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Many reefs along the coast are known by name and are customary fishing grounds, many sand banks, channels, currents and depths are also known for their kaimoana. One example is Poatiri (Mt Charles - Cape Saunders) the name of which refers to a fish hook. Poatiri juts out into the Pacific, close to the continental shelf, and is a very rich fishing ground. Another example is Blueskin Bay which was once a kohanga (breeding ground) for the right whale, although it is well over 150 years since it has seen this activity.

Other resources were also important in the coastal area. Paru (black mud used for dying) was obtained from some areas. Some of the permanent coastal settlements, such as those at the mouth of the Mata-au (Clutha River), and at Otakou and Purakaunui, were important pounamu manufacturing sites. Trading between these villages to the south and north via sea routes was an important part of the economy.

The Otago coast was also a major highway and trade route, particularly in areas where travel by land was difficult. Pounamu and titi were traded north with kumara, taro, waka, stone resources and carvings coming south. Travel by sea between settlements and hapu was common, with a variety of different forms of waka, including the southern waka hunua (double-hulled canoe) and, post-contact, whale boats plying the waters continuously. Hence tauranga waka (landing places) occur up and down the coast in their hundreds and wherever a tauranga waka is located there is also likely to be a nohoanga (settlement), fishing ground, kaimoana resource, rimurapa (bull kelp - used to make the poha, in which titi were and still are preserved) with the sea trail linked to a land trail or mahinga kai resource. The tupuna had a huge knowledge of the coastal environment and weather patterns, passed from generation to generation. This knowledge continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the coast.

Numerous urupa are being exposed or eroded at various times along much of coast. Water burial sites on the coast, known as waiwhakaheketupapaku, are also spiritually important and linked with important sites on the land. Places where kaitangata (the eating of those defeated in battle) occurred are also wahi tapu. Urupa are the resting places of Ngāi Tahu tupuna and, as such, are the focus for whanau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently protected in secret locations.

The mauri of the coastal area represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whanui with the coastal area.

### **Purposes of Statutory Acknowledgement**

Pursuant to section 215 and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

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- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Tai o Arai Te Uru, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
- (c) To enable Te Runanga o Ngāi Tahu and any member of Ngāi Tahu Tainui Whanui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Te Tai o Arai Te Uru as provided in section 208 (clause 12.2.5 of the deed of settlement).

**Limitations on effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215, -

- (a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty or function by any person or entity under any statute, regulation, or bylaw; and
- (b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Te Tai o Arai Te Uru (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Tai o Arai Te Uru.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights and interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Tai o Arai Te Uru.

***Brooker's Editorial Note***

*It appears that the above reference (in (c) of 'Purposes') to "section 208" should be read as a reference to "section 211" because cl 208 of the Ngāi Tahu Claims Settlement Bill, relating to the use of statutory acknowledgement with submissions, became s 211 of this Act.*

APPENDIX 3 : N G Ā I T A H U C L A I M S S E T T L E M E N T  
A C T S T A T U T O R Y A C K N O W L E D G E M E N T S

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